YEAR BOOK

AUSTRALIA

No. 67, 1983

R. J. CAMERON

AUSTRALIAN STATISTICIAN

AUSTRALIAN BUREAU OF STATISTICS
CANBERRA, AUSTRALIA

ABS Catalogue No. 1301.0

This page was added on 03 December 2012 to included the Disclaimer below.
No other amendments were made to this Product

DISCLAIMER

Users are warned that this historic issue of this publication series may contain language or views which, reflecting the authors' attitudes or that of the period in which the item was written, may be considered to be inappropriate or offensive today.

CONTENTS

GENERAL INFORMATION

Symbols

The following *symbols*, where shown in columns of figures or elsewhere in tables mean:

n.a.	not available
n.y.a.	not yet available
–	nil or rounded to zero
. .	not applicable
n.p.	not available for separate publication (but included in totals where applicable)
p	preliminary—figure or series subject to revision
r	figures or series revised since previous issue
n.e.i.	not elsewhere included
n.e.c.	not elsewhere classified
———	break in continuity of series (where drawn across a column between two consecutive figures)
	m.—males; f.—females; p.—persons.

Other forms of usage

The following *abbreviations* are used for the titles of the Australian States and Territories and Australia: N.S.W. (New South Wales), Vic. (Victoria), Qld (Queensland), S.A. (South Australia), W.A. (Western Australia), Tas. (Tasmania), N.T. (Northern Territory), A.C.T. (Australian Capital Territory), Aust. (Australia).

In general, the *statistics in this volume relate to the States and Territories of Australia*, i.e. they exclude particulars of the External Territories of Australia, which, however, are specifically dealt with in Chapter 27, The Territories of Australia. A few series elsewhere include particulars of Papua New Guinea because of the nature of the subject-matter; these series are indicated.

Yearly periods shown as e.g. 1981 refer to the year ended 31 December 1981; those shown as e.g. 1980-81 refer to the year ended 30 June 1981. Other yearly periods are specifically indicated. The range of years shown in table heading, e.g. 1901 to 1980-81; indicates the period covered, but does not necessarily imply that each intervening year is included.

Values are shown in Australian dollars ($ or $A) or cents (c) unless another currency is specified.

Catalogue numbers. Throughout this book references are made to ABS publications. In each case the catalogue number is shown in brackets; this should be quoted when ordering these publications (*see* below).

Where figures have been rounded, *discrepancies may occur between sums of the component items and totals.*

Availability of ABS publications

Information regarding the availability of ABS publications can be obtained from the Information Services Section, Australian Bureau of Statistics, P.O. Box 10, Belconnen, A.C.T. 2616, Australia, phone (062) 52 6627, or from ABS offices in each capital city and in Darwin.

A complete list of ABS publications produced in Canberra and in each of the State Offices is contained in the ABS *Catalogue of Publications, Australia* (1101.0) which is available free of charge from any ABS office.

In some cases, the ABS can also make available information which is not published. This information may be made available in one or more of the following forms: microfiche, photocopy, data tape, computer printout, clerically—extracted tabulation. Generally, a charge is made for providing unpublished information. Inquiries may be made by contacting Information Services in the nearest ABS office.

Atlas of Australian Resources, Volume 3—Agriculture

Further information on Australia's agriculture (Year Book chapter 13) may be obtained from Volume 3 of the Atlas of Australian Resources. This volume has been published recently by the Division of National Mapping, Department of Resources and Energy. It covers pastures, livestock, crops and farms, and the maps have supplementary commentaries, tables, graphs and colour photographs.

PREFACE

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered, subject to the Constitution, 'to make laws for the peace, order, and good government of the Commonwealth, with respect to . . . Census and statistics.' In the exercise of this power a Census and Statistics Act was passed in 1905, and the Commonwealth Bureau of Census and Statistics was created in 1906. From the late 1960s it was increasingly evident that new statistical legislation was required to enable the Bureau to respond to the changing needs of Government. As a first step, the *Australian Bureau of Statistics Act 1975* came into operation on 3 May 1976 establishing: the Australian Bureau of Statistics (ABS) as the central statistical authority for the Commonwealth Government; the office of Australian Statistician; and the Australian Statistics Advisory Council (ASAC). Subsequently, major amendments to the *Census and Statistics Act 1905* came into effect in 1983. Their main purpose was to update administrative procedures and to authorise the Statistician, subject to strict confidentiality provisions which protect information relating to individuals and organisations, to release a wider range of information than had been possible under the original Act.

The first Official Year Book was published early in 1908. This is the sixty-seventh Year Book issued under the authority of the Commonwealth Government. The Year Book is the principal general reference work produced by the Central Office of the Australian Bureau of Statistics. It provides a comprehensive and detailed statistical review of all aspects of the economy and social conditions of Australia, and in addition contains descriptive matter dealing with Australia's history, geography, physiography, climate and meteorology, government, defence and repatriation services, and international relations.

Among the new or revised material in this issue, the following items may be specially mentioned:

Chapter 1. Pre-history, Federation and Constitution. A complete copy of the revised Constitution of the Commonwealth of Australia appears in every fifth issue of the Year Book and is included in this issue. There is also a special article on the Australian flag, its history and use.

Chapter 3. General Government. A model of the new Parliament House, presently under construction is illustrated on page 72. Details of the first Hawke Ministry and other recent changes in Commonwealth and State Parliamentary leadership are recorded in the Appendix: General Government on page 777.

Chapter 4. Defence. This chapter has been extensively revised to include an account of recent facilities development and defence industry and supply support in Australia. There is a new section covering the activities of the Department of Defence Support which was established in 1982.

Chapter 6. Demography. This chapter has been revised with information from the 1981 Census of Population and Housing.

Chapter 8. Manpower. Also revised with information from the 1981 Census. The section on earnings and hours of work has been extensively revised. A new section on employment and training programs has been added.

Chapter 10. Health. The section on the Australian Health Scheme has been re-written.

Chapter 11. Law and Order. This chapter has been re-structured. Information on the Human Rights Commission and the *Freedom of Information Act 1982* is included for the first time.

In the various chapters of the Year Book there are references to special articles, background material and items of historic interest which have appeared in previous issues.

Most of the statistics contained in the volume relate to the years ended June or December 1981 or 1982. More detailed and in many cases more recent statistics on subjects dealt with in the Year Book are available in other ABS publications. These publications are listed in the ABS *Catalogue of Publications, Australia* (1101.0).

My thanks are tendered to the responsible officers of the various Commonwealth and State Departments and Organisations who have kindly supplied material for the preparation of the Year Book.

R. J. CAMERON
Australian Statistician

Australian Bureau of Statistics
Canberra, A.C.T. 2600
April 1983

CHAPTER 1

PRE-HISTORY, FEDERATION AND CONSTITUTION

Pre-history

Man entered the Australian continent from the South-East Asian area during the last glaciation at least 40,000 years ago, when sea levels were lower than in recent times. Nevertheless, these first migrations would have entailed sea voyages of at least some 60 kilometres. Settlement was well established at least 25,000 to 30,000 years ago, and by 20,000 years ago almost all the continent was inhabited.

The original Australians lived as hunters and gatherers, using tools of wood, bone and stone. The archaelogical evidence indicates that originally there was a simple, pan-continental toolmaking tradition characterised by stone core tools and scrapers used to make further tools of wood. This tradition persisted until 5,000 to 6,000 years ago, when a series of new influences became apparent. A range of more specialised and sophisticated small tools was added to the old technology. The dingo, the only animal domesticated by the Aboriginals, also entered the continent at this time. These new influences never reached Tasmania, isolated for some 12,000 years by the post-glacial rising seas, where a few thousand Tasmanian Aboriginals maintained the culture of the late Pleistocene period until the European settlement of the island.

The Aboriginals probably achieved maximum exploitation of local resources within the limits of their technology. Population balance had apparently been attained long before European settlement, and anthropologists accept that there were at least some 250,000 to 300,000 Aborigines in Australia in 1788. They were divided into some 500 small groups, speaking a variety of languages and dialects. These 'tribes' were further divided into 'bands'—families or clusters of family groups—which formed the basic self-sufficient economic unit and ranged within territorial limits. Labour was divided between the sexes: the men hunted while the women foraged for the roots, seeds and small animals which formed a basic part of their subsistence. When abundant food or water supplies were available, or when ceremonial obligations demanded, local groups would congregate; in leaner times they scattered. Ceremonial exchanges of goods at these gatherings led to their wide dispersal. Religious and ceremonial activities related to the land were a vital part of Aboriginal life. There is evidence that they had developed the use of ochre as a ritual painting material as early as 25,000 years ago, while some forms of ritual burial were also practised at this time.

The physical barriers of distance and aridity within Australia itself were cause in part of the cultural isolation and linguistic diversity of its people. European exploration and settlement was for most Aboriginal societies their first contact with an outside culture. The impact of this settlement led rapidly to the disappearance of the traditional Aboriginal way of life in those areas where the colonists established themselves most successfully. More detailed notes on the early knowledge and discovery of Australia are given in Year Book No. 66.

The establishment of the Commonwealth of Australia

Federation

On 1 January 1901, the colonies, with the exception of New Zealand (*see* Year Book No. 63, page 5), 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' applied—being at the same time changed to that of 'States'.

Transfer of the Northern Territory to the Commonwealth

On 7 December 1907, the Commonwealth and the State of South Australia entered into an agreement for the transfer of the Northern Territory to the Commonwealth, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the Northern Territory Surrender Act, 1907 and by the Commonwealth Parliament under the *Northern Territory Acceptance Act* 1910. The Territory was formally transferred to the Commonwealth on 1 January 1911, and became the Northern Territory of Australia.

By Imperial Order in Council dated 23 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 on 10 May 1934, in the *Ashmore and Cartier Islands Acceptance Act* 1933, under the name of the Territory of Ashmore and Cartier Islands. The Act authorised 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. On the attainment of self-government by the Northern Territory on 1 July 1978, the Territory of Ashmore and Cartier Islands was retained as Commonwealth Territory.

The area of Ashmore Reef is approximately 150 square kilometres (to the limit of the reef), and it is situated 350 kilometres off the western coast of Australia and 850 kilometres west of Darwin. Cartier Island is approximately 9 square kilometres in area (to the limit of the reef), and is situated 290 kilometres off the western coast of Australia and 790 kilometres west of Darwin.

Transfer of the Australian Capital Territory to the Commonwealth

On 18 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 2,359 square kilometres 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 5 December 1910 a proclamation was issued vesting the territory in the Commonwealth on and from 1 January 1911. By the *Jervis Bay Territory Acceptance Act* 1915, an area of 73 square kilometres 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 4 September 1915.

The Constitution of the Commonwealth of Australia

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 Year Book up to and including No. 22

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, the *Constitution Alteration* (*Social Services*) 1946, the *Constitution Alteration* (*Aboriginals*) 1967, the *Constitution Alteration* (*Senate Casual Vacancies*) 1977, the *Constitution Alteration* (*Retirement of Judges*) 1977, and the *Constitution Alteration* (*Referendums*) 1977, is given hereunder. The text contains all the alterations of the Constitution which have been made up to and including 1 December 1977.

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

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

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

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian 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 Consititution 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 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 herein-after called "The Parliament," or "The Parliament of the Commonwealth."

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

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

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

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

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

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

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

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

PART II—THE SENATE

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

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

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

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

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

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

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

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

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

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

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of **three years,** and the places of those of the second class at the expiration of **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 **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 **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 **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, sitting and voting together, or, if there is only one House of that Parliament, that House, shall choose a person to hold the place until the expiration of the term. But if the Parliament of the State is not in session when the vacany 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 from the beginning of the next session of the Parliament of the State or the expiration of the term, whichever first happens.

Where a vacancy has at any time occurred in the place of a senator chosen by the people of a State and, at the time when he was so chosen, he was publicly recognized by a particular political party as being an endorsed candidate of that party and publicly represented himself to be such a candidate, a person chosen or appointed under this section in consequence of that vacancy, or in consequence of that vacancy and a subsequent vacancy or vacancies, shall, unless there is no member of that party available to be chosen or appointed, be a member of that party.

Where—

(a) in accordance with the last preceding paragraph, a member of a particular political party is chosen or appointed to hold the place of a senator whose place had become vacant; and

(b) before taking his seat he ceases to be a member of that party (otherwise than by reason of the party having ceased to exist),

he shall be deemed not to have been so chosen or appointed and the vacancy shall be again notified in accordance with section twenty-one of this Constitution.

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

If the place of a senator chosen by the people of a State at the election of senators last held before the commencement of the *Constitution Alteration (Senate Casual Vacancies)* 1977 became vacant before that commencement and, at that commencement, no person chosen by the House or Houses of Parliament of the State, or appointed by the Governor of the State, in consequence of that vacancy, or in consequence of that vacancy and a subsequent vacancy or vacancies, held office, this section applies as if the place of the senator chosen by the people of the State had become vacant after that commencement.

A senator holding office at the commencement of the *Constitution Alteration (Senate Casual Vacancies)* 1977, being a senator appointed by the Governor of a State in consequence of a vacancy that had at any time occurred in the place of a senator chosen by the people of the State, shall be deemed to have been appointed to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State that commenced or commences after he was appointed and further action under this section shall be taken as if the vacancy in the place of the senator chosen by the people of the State had occurred after that commencement.

Subject to the next succeeding paragraph, a senator holding office at the commencement of the *Constitution Alteration (Senate Casual Vacancies)* 1977 who was chosen by the House or Houses of Parliament of a State in consequence of a vacancy that had at any time occurred in the place of a senator chosen by the people of the State shall be deemed to have been chosen to hold office until the expiration of the term of service of the senator elected by the people of the State.

If, at or before the commencement of the *Constitution Alteration (Senate Casual Vacancies)* 1977, a law to alter the Constitution entitled "*Constitution Alteration (Simultaneous Elections)* 1977" came into operation, a senator holding office at the commencement of that law who was chosen by the House or Houses of Parliament of a State in consequence of a vacancy that had at any time occurred in the place of a Senator chosen by the people of the State shall be deemed to have been chosen to hold office—

(a) if the senator elected by the people of the State had a term of service expiring on the thirtieth day of June, One thousand nine hundred and seventy-eight—until the expiration or dissolution of the first House of Representatives to expire or be dissolved after that law came into operation; or

(b) if the senator elected by the people of the State had a term of service expiring on the thirtieth day of June, One thousand nine hundred and eighty-one—until the expiration or dissolution of the second House of Representatives to expire or be dissolved after that law came into operation or, if there is an earlier dissolution of the Senate, until that dissolution.

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

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

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

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

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

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

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

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

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

PART III—THE HOUSE OF REPRESENTATIVES

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

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

(i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators;

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

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

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

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

New South Wales	twenty-three;
Victoria	twenty;
Queensland	eight;
South Australia	six;
Tasmania	five;

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

New South Wales	twenty-six;
Victoria	twenty-three
Queensland	nine;
South Australia	seven;
Western Australia	five;
Tasmania	five.

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.

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 authorised 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:

(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, for whom it is deemed necessary to make special laws:

(xxvii) Immigration and emigration:

(xxviii) The influx of criminals:

(xxix) External affairs:

(xxx) The relations of the Commonwealth with the islands of the Pacific:

(xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:

(xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth:

(xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State:

(xxxiv) Railway construction and extension in any State with the consent of that State:

(xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State:

(xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides:

(xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law:

(xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia:

(xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any Department or officer of the Commonwealth.

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

(i) The seat of government of the Commonwealth, and all places acquired by the Commonwealth for public purposes:

(ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth:

(iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

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

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

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

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

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

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

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

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

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

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

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the house of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and 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 the members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

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

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

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

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

CHAPTER II

THE EXECUTIVE GOVERNMENT

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

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

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

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

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

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

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

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

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

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

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

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

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

(i) Shall be appointed by the Governor-General in Council:

(ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity:

(iii) Shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during their continuance in office.

The appointment of a Justice of the High Court shall be for a term expiring upon his attaining the age of seventy years, and a person shall not be appointed as a Justice of the High Court if he has attained that age.

The appointment of a Justice of a court created by the Parliament shall be for a term expiring upon his attaining the age that is, at the time of his appointment, the maximum age for Justices of that court and a person shall not be appointed as a Justice of such a court if he has attained the age that is for the time being the maximum age for Justices of that court.

Subject to this section, the maximum age for Justices of any court created by the Parliament is seventy years.

The Parliament may make a law fixing an age that is less than seventy years as the maximum age for Justices of a court created by the Parliament and may at any time repeal or amend such a law, but any such repeal or amendment does not affect the term of office of a Justice under an appointment made before the repeal or amendment.

A Justice of the High Court or of a court created by the Parliament may resign his office by writing under his hand delivered to the Governor-General.

Nothing in the provisions added to this section by the *Constitution Alteration (Retirement of Judges)* 1977 affects the continuance of a person in office as a Justice of a court under an appointment made before the commencement of those provisions.

A reference in this section to the appointment of a Justice of the High Court or of a court created by the Parliament shall be read as including a reference to the appointment of a person who holds office as a Justice of the High Court or of a court created by the Parliament to another office of Justice of the same court having a different status or designation.

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

(i) Of any Justice or Justices exercising the original jurisdiction of the High Court:

(ii) Of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council:

(iii) Of the Inter-State Commission, but as to questions of law only:

and the judgment of the High Court in all such cases shall be final and conclusive.

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

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

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

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

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

75. In all matters—

(i) Arising under any treaty:

(ii) Affecting consuls or other representatives of other countries:

(iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party:

(iv) Between States, or between residents of different States, or between a State and a resident of another State:

(v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth:

the High Court shall have original jurisdiction.

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.

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 Commenwealth; 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 subsection, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

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

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

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

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

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

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

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

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

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

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

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

103. The members of the Inter-State Commission—

(i) Shall be appointed by the Governor-General in Council:

(ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity:

(iii) Shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.

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

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

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

(a) the taking over of such debts by the Commonwealth;

(b) the management of such debts;

(c) the payment of interest and the provision and management of sinking funds in respect of such debts;

(d) the consolidation, renewal, conversion, and redemption of such debts;

(e) the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and

(f) the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.

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

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

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

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

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

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 new 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.

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.

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 authorise 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.

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 **and Territory** 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 **and Territory** 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.

In this section, "Territory" means any territory referred to in section one hundred and twenty-two of this Constitution in respect of which there is in force a law allowing its representation in the House of Representatives.

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.*)

THE AUSTRALIAN FLAG

(*Source:* Department of Administrative Services)

Introduction

The flag of Australia is the only flag to fly unchallenged throughout a whole continent. Until September 1945 it was the only flag proclaiming the administration of all the lands in a sector from the Equator to the Pole, embracing the Territories of Papua New Guinea and the vast Australian Antarctic Territory, as well as numerous islands in three oceans. Since 1975 the independent nation of Papua New Guinea has unfurled its own flag.

War and peace

The flag heralded Australia's entry into nationhood in 1901. It flew over the site for the national capital at Canberra in 1908, on the first ships of the new navy in 1910 and at the first Australian base on the Antarctic continent in 1911. Since 1953 it has been flown at Australian Antarctic bases.

In many ways, the flag was needed long before it was produced. At the first modern Olympic Games at Athens in 1896, for example, Australia won two gold medals, but no Australian flag was available for the victory ceremony. Four years later in Paris, an Australian victory was recognised by raising the Union Jack. The Australian National Flag did not appear until the 1908 Games. From that date it has been raised for medal winners at every Olympic Games. In 1956 it also flew with pride of place as the flag of the host nation at Melbourne.

The flag was carried to New Guinea at the outbreak of World War I by the naval and military force which captured the German colonies, by the cruiser Sydney in the first naval battle of the war, by the Anzacs who landed at Gallipoli and by the 'diggers' who spearheaded the victories in France in 1917-18.

It was seen around the world again in World War II. When Singapore was retaken in 1945, the first flag to fly was an Austalian flag made secretly in a prison camp, and it was worn by H.M.A.S. Hobart in Tokyo Bay when the Japanese surrender was signed on 2 September 1945.

Early flags in Australia

Before the twentieth century there was no Australian nation, and no Australian flag. The ships of other countries carried their flags along Australian coasts for 182 years before the first European settlement in 1788. The first known occasion was in 1606, when the Dutch vessel Duyfken entered the Gulf of Carpentaria and charted 200 miles of shoreline. Only 16 years later, the British flag appeared on the East Indiaman Tyral, which was wrecked off Western Australia.

Many Dutch and British navigators followed, so that the coast had seen many flags before Captain Cook made his first Australian landfall in 1770. Cook carried the British flag of the time along the whole length of the fertile east coast. At Botany Bay, adjacent to Sydney Harbour, he raised it on land each day, and at the northern most point of the continent he planted it on Possession Island and formally claimed all his discoveries in the name of the British Crown.

Eighteen years later, at Sydney Cove, Captain Arthur Phillip raised the flag again to make the beginning of permanent settlement. The Union Jack which Captain Cook and Captain Phillip planted in 1770 and 1788 was the old Union Flag of England and Scotland, bearing the red cross of St George on a white field, combined with the white diagonal cross of St Andrew on a blue field. This had been the flag of the United Kingdom since 1707, but when Ireland was added to the union in 1801, the red diagonal cross of St Patrick on a white field was included to form the present British flag.

The new 'Union Jack' flew in Australia for the whole of the nineteenth century. It was carried by the explorers who unlocked the continent, the mariners who circumnavigated it, and the founding fathers who established five more colonies on its coast. It also flew in Papua in 1884 when that country was annexed as an Australian dependency.

From the middle of the nineteeth century, a growing Australian nationalism brought forth many unofficial flags—all of them incorporating the constellation of the Southern Cross (Crux Australis), which was universally accepted as the emblem of the Great South Land.

In 1851, the Australasian Anti-Transportation League, which opposed the sending of convicts from Britain, adopted a flag remarkably like the Australian ensign of today. It carried the Union Jack on the upper hoist and the five stars of the Southern Cross in gold on the fly.

National fervour inspired more unofficial flags for the River Murray League's paddlewheel fleet (1853), the goldminers rebellion at Eureka (1854), the racial riots at Lambing Flat goldfields (1860-61), the first Royal Visit (1867) and the Federation League (1894). All of them featured the Southern Cross and most of them had the Union Jack in the hoist.

Need for a national flag

Until Federation, the Australian colonies used for official purposes the flags of Great Britain—the Union Flag (popularly called the Union Jack) and the three Ensigns of the United Kingdom; e.g. the Red Ensign, the Blue Ensign and the White Ensign. The necessity of a Commonwealth flag arose from the schemes of the British Government for the defence of Empire rather than from any vision of Australian nationhood.

The naval defence of the Australian colonies had from the time of the first settlement, been a function of the Royal Navy. In the 1880's however the Governments of the Australasian colonies agreed to contribute a portion of the cost of construction and annual maintenance of five naval ships to augment the British Fleet in Australian waters. These ships were under the direct control of the Admiral stationed at Sydney, and as ships of the Royal Navy, flew the Union flag and the White Ensign.

Soon after the establishment of responsible government in the Australian colonies in the 1850's, most of them assumed responsibility for their local defences. Under the Colonial Naval Defence Act of 1865, the Naval Discipline Act was extended to gun-boats raised and maintained by the several colonies. In order that such ships might be distinguished from those of the Royal Navy, the Act contained provisions for colonial ensigns.

It was provided under that Act that the Governor of a Colony afloat should emblazon the badge of his colony in the centre of the Union and that the proper colours of ships in the employ of colonial departments should be the British Blue Ensign with the badge of the colony in the fly. These provisions rendered it necessary for each of the Australian colonies to adopt a badge for its government ships.

However in 1900 the Colonial Office in London invited the attention of the Governor-General Designate to the necessity of a Commonwealth flag to enable the new Australian entity to comply with the provisions of legislation governing colonial naval forces and mercantile marine.

Competition for the National Flag and its aftermath

In 1900, prior to Federation, the Melbourne journal the *Evening Herald* held a competition with a prize of 25 pounds for the best design for a Federal Australian Flag; and eventually a prize design was selected. This design bears no resemblance to our present National Flag, and actually was a flag of stars and stripes on the pattern of the United States Flag.

Not to be outdone, another Melbourne journal *The Review of Reviews* in their issue of 20 November 1900 gave details of a competition for a design for a Federal Flag offering 50 pounds for the winning design. This Journal stated that the previous competition was purely local, but its competition would be open to the whole of Australia and overseas countries. However in April 1901 the Commonwealth Government in a Gazette dated 29 April 1901 announced details of an official competition.

The prize money for the Commonwealth Government competition was fixed at 200 pounds for the winning design. This amount included 75 pounds from the *Review of Reviews* journal, 50 pounds from a tobacco company, and the balance of 75 pounds from the Government of Australia. It was agreed that all designs previously entered in the *Evening Herald* competition would be included in the new 'National' competition which was also made world-wide and advertised in many forms in overseas countries.

The Commonwealth Government appointed seven judges, specially selected, representing the Army, Navy, Merchant Marine and Pilot Services and an expert in design, art and heraldry. The judges were:

Mr J. S. Blackham	Chief of staff of the Melbourne Herald who was Chief Executive Officer of the Competition
Captain C. J. Clare, CMG	of HMCS Protector, the South Australian cruiser, later the Naval Commandant of the Colonial Naval Force (South Australia)
Captain J. Edie,	Superintendant of Navigation, N.S.W.
Lieutenant (later Admiral) P. N. Hall-Thompson RN	of HMS Katoomba, a cruiser of the Royal Navy Squadron based at Sydney
Captain J. W. Evans, MHA	(later Premier, Speaker and Lieutenant-Governor of Tasmania)
Mr G. Stewart	an expert in heraldry
Captain J. A. Mitchell	formerly of the Victorian Pilot Service

A total of 32,823 designs was submitted to the judges, and the Prime Minister, the Hon. Edmund Barton announced that the prize money for the winning designs was to be equally divided between five persons whose designs were more or less similar.

Mr Ivor Evans, son of flag manufacturer Evan Evans of Melbourne, Victoria—aged 14 years
Mr William Stevens of Auckland, New Zealand—a merchant marine officer
Mr E. J. Nuttall of Melbourne, Victoria—an architect
Mr L. J. Hawkins of Sydney, New South Wales—aged 18 years
Mrs A. Dorrington of Perth, Western Australia—an artist relative of James Whistler

The first National Flag, 36 foot by 18 foot, made to the order of the Commonwealth Government flew above the Exhibition Building in Melbourne on 3 September 1901 when the competition results were announced.

The winning design was forwarded by the Governor-General to the Secretary of State for the Colonies in 1902. While the Southern Cross in the selected design was depicted by stars with points ranging from 9 to 5 (to denote their degree of brilliance) on a blue field, the Constellation in the approved design published in the Commonwealth Gazette of 20 February 1903 as having been approved by the King consists of four seven-pointed and one five-pointed stars. The star representative of the Federation of the six colonies, in the lower half of the hoist below the Union flag, was originally of six points. This was commonly called the *Commonwealth Star*. The Gazette published colour reproductions described as the *Ensign* and the *Merchant Flag* in blue and red respectively.

In 1908 after the Commonwealth of Australia had been granted armorial bearings, the British Government was requested to agree to an alteration in the design of the Commonwealth Star in the Flag by increasing the number of points from six to seven. It would thus be brought into line with the star in the Crest of the Commonwealth Coat of Arms. It was suggested, moreover, that the extra point would symbolize the Territory of Papua acquired on 1 September 1906, and any further territories that might be acquired later. Admiralty approval was notified in the Commonwealth Gazette on 19 December 1908.

For a few years prior to 1912 some flags were used with the number of points on the stars of the Southern Cross differing from that authorised in the 1903 Gazette.

The *British Navigation Act* 1912 (Section 406) reaffirmed the approved design of 1903, as amended in 1908, with the (Australian) Red Ensign being the proper colours for merchant ships registered in Australia and having the stars of the Southern Cross and Commonwealth Star with the same number of points as previously gazetted. (Commonwealth Gazette No. 18 of 23 March 1934 depicts the correct design and measurements of the Flag).

Use of Australian flags

For many years there was considerable misunderstanding in Australia and in other countries in regard to the use of the Australian flags, particularly the Australian Blue Ensign. This was due in the main to the lack of any statutory law governing the flying of national flags in Australia, although endeavours had been made from time to time to lay down some definite procedure for the use of Australian ensigns.

For many years the Australian Blue Ensign was regarded as an official flag for flying at Commonwealth establishments only. The Merchant Flag was often flown privately on land. However, on 15 March 1941, the Prime Minister, Mr Menzies, issued the following press statement.

> "The Official view is that there should be no unnecessary restriction placed on the flying of the Blue Ensign on shore. Its use on public buildings, by schools, and by the public generally would not only be permitted but appreciated, provided it is flown in a manner appropriate to the use of a national emblem. Australian merchant vessels will, of course, continue to fly the Commonwealth Red Ensign".

Further support for the more general use of the Australian Blue Ensign was given by the Prime Minister, Mr Chifley on 24 February 1947 when he issued a statement encouraging the flying of the flag.

Adoption of the Australian National Flag

In 1950, after an interdepartmental committee recommendation, Cabinet approved that the Australian Blue Ensign be adopted as the Australian National Flag. His Majesty King George VI gave formal approval in 1951.

In 1953 the Flags Act was passed in the Commonwealth Parliament formally establishing the Australian National Flag and the Australian Red Ensign. Thus the nomenclature of Australian Flags and Ensigns was changed and the Australian Blue Ensign became the Australian National Flag and the Australian Merchant Flag became the Australian Red Ensign.

The *Flags Amendment Act* 1981 which came into operation on 26 January 1982 formally amended the description of the Australian National Flag and removed the reference to the 'British Blue Ensign' in the Schedule.

Use of the Australian Red Ensign on ships and other craft

In 1981 the Shipping Registration Act was passed. This Act, which also came into operation on 26 January 1982, together with its associated Navigation Amendment Act, replaced the old 1894 United Kingdom Act relating to registration of shipping and the 1912 Navigation Act under which the Australian Red Ensign was authorised as the official colours for Australian merchant ships. Under the *Shipping Registration Act* 1981 the Australian Red Ensign remains the proper flag to be flown by Australian registered ships. However the Australian National Flag may be flown by Government ships, fishing vessels, pleasure craft and other small craft. These vessels may fly the Australian Red Ensign if they wish, but no ship may fly both the Australian National Flag and the Australian Red Ensign at the same time.

Her Majesty The Queen's Personal Flag for Australia

On 20 September 1962 Her Majesty gave her approval for the design of a personal flag for her use in Australia. It consists of a banner of the Commonwealth Arms in the proportion thirty-one by twenty-two, with a large gold seven-pointed star over all in the centre, charged with Her Majesty's initial 'E' in gold ensigned with the Royal Crown within a chaplet of gold roses on a blue roundel. Her Majesty's personal flag for Australia is used in the same manner as the Royal Standard in the United Kingdom and denotes Her Majesty's presence.

Governor-General's Flag

In Commonwealth of Australia Gazette No. 56 of 16 July 1936 it was notified that the Governor-General had adopted a personal flag for use in Australia. The flag, which is in the proportion of two to one has a royal blue background on which is the Royal Crest in gold (on a St Edward's Crown a lion statant guardant also crowned) with the words 'Commonwealth of Australia' in dark blue letters on a gold scroll below the Crest. The Governor-General's Flag is flown continuously whenever His Excellency is in residence. It is also flown on vehicles in which the Governor-General is travelling.

Flags of the Armed Services and Civil Aviation

It was not until 1967 that the Royal Australian Navy was given a specifically Australian ensign. Since 1910 Royal Australian Navy ships had flown the White Ensign of the Royal Navy. On 16 February 1967 the Governor-General Lord Casey signed a Proclamation proclaiming the Australian White Ensign as the ensign for the Royal Australian Navy. This was published in Commonwealth of Australia Gazette No. 18 of 1 March 1967.

The Australian Army uses the National Flag and has no individual flag or ensign of its own.

In 1948 the Royal Australian Air Force applied to His Majesty King George VI for an ensign based on the Royal Air Force ensign differenced by the addition of the Southern Cross and the Commonwealth Star in the same positions as on the Australian Blue Ensign. His Majesty's Royal Warrant for the adoption of this ensign by the RAAF was given in 1949. In 1981 Her Majesty Queen Elizabeth II approved an amendment to the Royal Air Force Ensign which added the stylised red Kangaroo to the centre of the Air Force roundel as depicted in aircraft of the RAAF. A proclamation by the Governor-General Sir Zelman Cowen under the *Flags Act* 1953 proclaiming the new Royal Australian Air Force Ensign was signed on 29 April 1982. This was published in Commonwealth of Australia Gazette S 89 of 6 May 1982.

In 1935 the Civil Air Ensign of the Commonwealth of Australia was authorised in Commonwealth of Australia Gazette No. 30 of 6 June 1935. This ensign was based on the Civil Air Ensign of the United Kingdom with the Commonwealth Star and the Southern Cross superimposed in yellow. In 1948 the Civil Air Ensign was re-gazetted in accordance with Regulations 11 (2) of the Regulation under the Air Navigation Act 1920-27 but with the stars in white. The Civil Air Ensign is used by the Department of Aviation on its buildings and at airports controlled by the Commonwealth.

Use and flying of the National Flag

The Australian National Flag should be displayed only in a manner befitting the national emblem; it should not be subjected to indignity or displayed in a position inferior to any other flag or ensign. The Flag normally takes precedence over all other national flags when flown in Australia. It should always be flown aloft and free. When the Australian National Flag is raised or lowered, or when it is carried past in a parade or review, all present should face the Flag, men should remove their hats and all should remain silent. Those in uniform should salute.

It is improper to use the Australian National Flag in any of the following ways:

as a covering of a statue, monument or plaque for an unveiling ceremony (a plain cover should be used);
as a table or seat cover;
allowing it to fall onto or lie upon the ground;
as a masking for boxes, barriers or intervening space between floor and ground level on a dais or platform.

The National Flag and representations of it should always be shown, represented or used in a dignified manner. It should not be defaced by way of printing or illustrations or masked by other objects, but displayed in a manner which may be described as 'aloft and free' whereby all symbolic parts of the Flag can be identified.

On days of national commemoration the Australian National Flag may be flown on any additional flagstaffs on public buildings. Special days of national significance are notified as they arise. The following occasions which occur annually are to be particularly noted:

1 January—anniversary of the establishment of the Commonwealth of Australia
26 January—Australia Day (and on the Monday holiday associated with Australia Day)
March—second Monday—Commonwealth Day
25 April—Anzac Day (flags to be flown at half-mast till noon then at the peak until the close of office business for a normal working day)
9 May—anniversary of the inauguration of Canberra as the Seat of Government (Canberra only)
June—Official Birthday of the Sovereign (the date being proclaimed annually) and on the second Monday The Queen's Birthday public holiday. (In Western Australia this is observed in October)
24 October—United Nations Day (see below)
11 November—Remembrance Day (flags should be flown at the peak from 8 a.m. to 10.30 a.m., at half-mast from 10.30 a.m. till 11.03 a.m. and at the peak from 11.03 a.m. until the close of office business for a normal working day)

Flags are flown at the half-mast position as a sign of mourning. The Flag is brought to the half-mast position by first raising it to the top of the mast and then immediately lowering it slowly to the half-mast position. The Flag should be raised again to the peak before being lowered for the day. The position of the Flag when flying at half-mast will depend on the size of the Flag and the length of the flagstaff. It is essential that it be lowered at least to a position recognisably 'half-mast' so as to avoid the appearance of a flag which has accidentally fallen away from the top of the mast owing to a loose flag rope. A satisfactory position for half-masting would normally be when the top of the Flag is one-third of the distance down from the top of the mast.

Flags should be flown at half-mast when directed by the Minister for Administrative Services.

There are special rules for flying of the United Nations Flag. All members of the United Nations have agreed that on United Nations day, 24 October, the United Nations Flag should be accorded the position of honour. If one position only is available, the United Nations Flag should be flown.

A diagram showing the specifications of the Australian National Flag and the Australian Red Ensign is reproduced below.

Government's free-issue scheme

In 1979 the Government extended the free-issue of National Flags, which had for many years been available only to schools, recognised youth organisations and national sporting bodies, to include many more groups and organisations concerned with community service, welfare, sporting, ethnic and religious activities in Australia. In 1980 the free-issue was further extended to include local government bodies, groups involved in historical, agricultural and pastoral pursuits, hospitals, ambulances and Australian exchange and scholarship students. By September 1982 over 20,000 flags had been issued free of charge to the community over the preceding three years.

Specifications of the Australian National Flag and Red Ensign

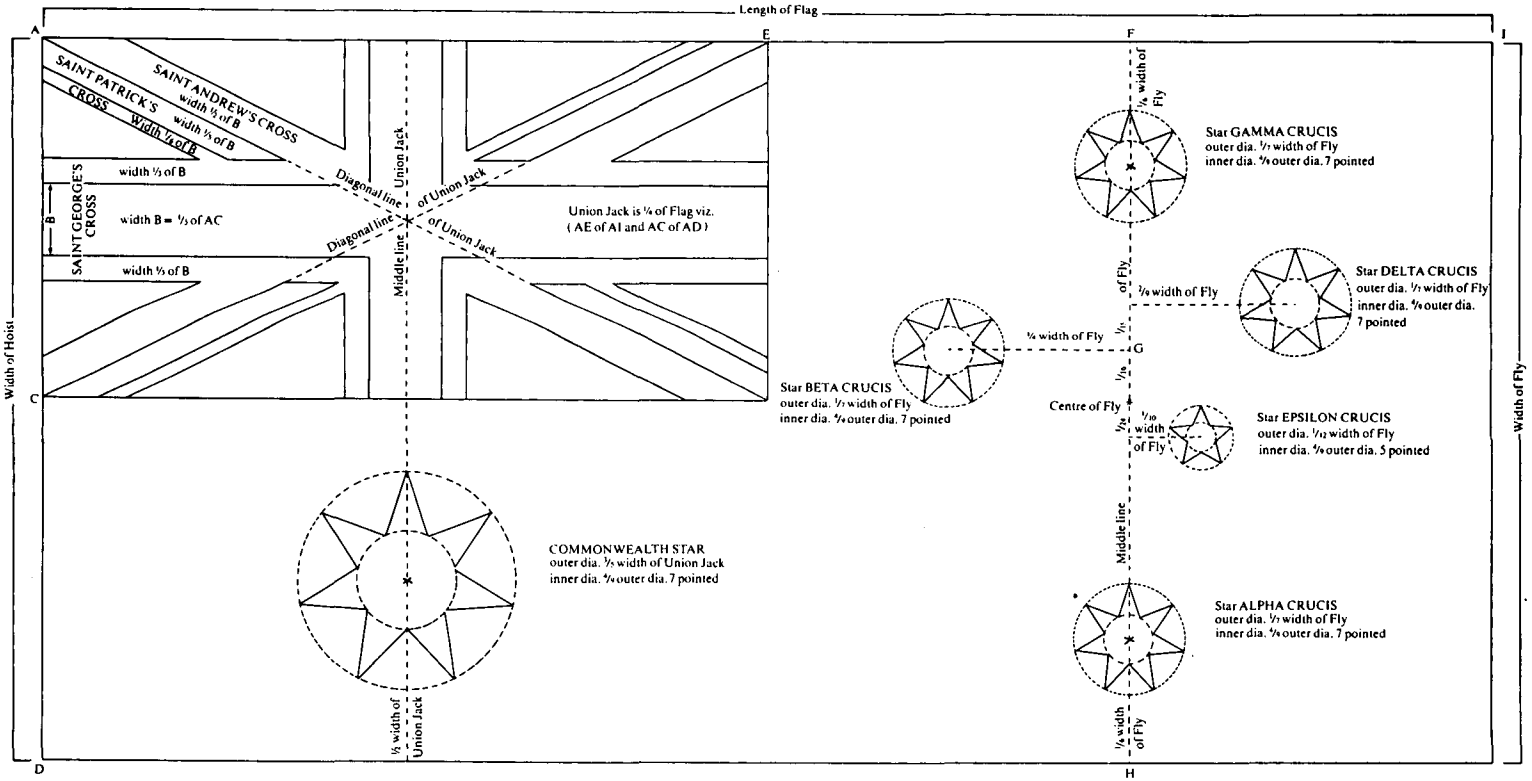


PLATE 2

FLAG OF AUSTRALIA

CHAPTER 2

CLIMATE AND PHYSICAL GEOGRAPHY OF AUSTRALIA

General description of Australia

This chapter has been prepared by the Bureau of Meteorology, Department of Science and Technology. It is mainly concerned with the climate of Australia, although some geographic comparisons and a summary of landform features influencing climate have been included together with a summary of atmospheric climate controls.

Position and area

Position. Australia, including Tasmania, comprises a land area of 7,682,300 square kilometres. The land lies between latitudes 10° 41′S. (Cape York) and 43° 39′S. (South Cape, Tasmania) and between longitudes 113° 09′E. (Steep Point) and 153° 39′E. (Cape Byron). The most southerly point on the mainland is South Point (Wilson's Promontory) 39° 08′S. The latitudinal distance between Cape York and South Point, Wilson's Promontory (South East Cape, Tasmania) is about 3,180 kilometres (3,680 kilometres) respectively and the longitudinal distance between Steep Point and Cape Byron is about 4,000 kilometres.

Area of Australia compared with areas of other countries. The area of Australia is almost as great as that of the United States of America (excluding Alaska), about 50 per cent greater than Europe (excluding U.S.S.R.) and 32 times greater than the United Kingdom. The following table shows the area of Australia in relation to areas of other continents and selected countries.

AREAS OF CONTINENTS AND SELECTED COUNTRIES

('000 square kilometres)

Country	*Area*	*Country*	*Area*
Continental divisions—		Country—	
Europe (*a*)	4,936	Australia	7,682
Asia (*a*)	27,532	Brazil	8,512
U.S.S.R. (Europe and Asia)	22,402	Canada	9,976
Africa	30,319	China	9,590
North and Central America and West Indies	24,247	Germany, Federal Republic of	248
South America	17,834	India	3,288
Oceania	8,504	Indonesia	1,919
		Japan	372
		Papua New Guinea	462
		New Zealand	269
		United Kindom	244
		United States of America (*b*)	9,363
Total, World excluding Arctic and Antarctic continents	**135,771**		

(*a*) Excludes U.S.S.R., shown below. (*b*) Includes Hawaii and Alaska.

Land forms

The average altitude of the surface of the Australian land mass is only about 300 metres. Approximately 87 per cent of the total land mass is less than 500 metres and 99.5 per cent is less than 1,000 metres. The highest point is Mount Kosciusko (2,228 metres) and the lowest point is Lake Eyre (-15 metres).

Australia has three major landform features: the western plateau, the interior lowlands and the eastern uplands. The western half of the continent consists of a great plateau of altitude 300 to 600 metres. The interior lowlands include the channel country of southwest Queensland (drainage to Lake Eyre) and the Murray-Darling system to the south. The eastern uplands consist of a broad belt of varied width extending from north Queensland to Tasmania and consisting largely of tablelands, ranges and ridges with only limited mountain areas above 1,000 metres.

The rivers of Australia may be divided into two major classes, those of the coastal plains with moderate rates of fall and those of the central plains with very slight fall. Of the rivers of the northern part of the east coast, the longest are the Burdekin and the Fitzroy in Queensland. The Hunter is the largest coastal river of New South Wales, and the Murray River, with its great tributary the Darling, drains part of Queensland, the major part of New South Wales, and a large part of Victoria, finally flowing 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 2,520 kilometres, about 650 being in South Australia and about 1,870 kilometres from South Australia to the source. The Darling from its junction with the Murray to its junction with the Culgoa is 1,390 kilometres. The Upper Darling (1,140 kilometres) incorporates the Barwon which commences at the junction of the Culgoa to its junction with the Weir River and the Macintyre River from its junction with the Weir to its source near Maybole. The rivers of the north-west coast of Australia (Western Australia) e.g. the Murchison, Gascoyne, Ashburton, Fortescue, De Grey, Fitzroy, Drysdale, and Ord are of considerable size. So also are those in the Northern Territory, e.g. the Victoria and Daly, and those on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert, and Mitchell. The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the country.

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 into a lake-like expanse. The second class, which are a characteristic of the interior lowlands are of considerable extent. The largest are Lake Eyre 9,500 square kilometres, Lake Torrens 5,900 square kilometres and Lake Gairdner 4,300 square kilometres.

For further information on the landforms and the geographical features of Australia 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.

Area, coastline, tropical and temperate zones, and standard times. The areas of the States and Territories and the length of the coastline were determined in 1973, by the Division of National Mapping, Department of National Resources, by manually digitising these features from the 1:250,000 map series of Australia. This means that only features of measurable size at this scale were considered. About 60,000 points were digitised at an approximate spacing of 0.5 kilometres. These points were joined by chords as the basis for calculation of areas and coastline lengths by computer.

The approximate high water mark coastline was digitised and included all bays, ports and estuaries which are open to the sea. In these cases, the shoreline was assumed to be where the seaward boundary of the title of ownership would be. In mangroves, the shoreline was assumed to be on the landward side. Rivers were considered in a similar manner but the decisions were rather more subjective, the line being across the river where it appeared to take its true form.

AREA, COASTLINE, TROPICAL AND TEMPERATE ZONES, AND STANDARD TIMES: AUSTRALIA

NOTE. *See* paragraphs above for methods of estimating area and coastline.

	Estimated area			*Percentage of total area in*		*Standard times*	
State or Territory	*Total*	*Percentage of total area*	*Length of coastline*	*Tropical zone*	*Temperate zone*	*Meridian selected*	*Ahead of G.M.T. (a)*
	km²		km				hours
New South Wales	801,600	10.43	1,900	..	100	150°E	(*b*)10.0
Victoria	227,600	2.96	1,800	..	100	150°E	(*b*)10.0
Queensland	1,727,200	22.48	7,400	54	46	150°E	10.0
South Australia	984,000	12.81	3,700	..	100	142°30'E	(*b*)9.5
Western Australia	2,525,500	32.87	12,500	37	63	120°E	8.0
Tasmania	67,800	0.88	3,200	..	100	150°E	(*b*)10.0
Northern Territory	1,346,200	17.52	6,200	81	19	142°30'E	9.5
Australian Capital Territory	2,400	0.03	35	..	100	150°E	(*b*)10.0
Australia	**7,682,300**	**100.00**	**36,735**	**39**	**61**	..	..

(*a*) Greenwich Mean Time. (*b*) Because of 'daylight saving' an hour should be added from late October to early March.

Climate of Australia

General

The climate of Australia is predominantly continental but the insular nature of the land mass is significant in producing some modification of the continental pattern.

The island continent of Australia is relatively dry with 50 per cent of the area having a median rainfall of less than 300 millimetres per year and 80 per cent less than 600 millimetres. Extreme minimum temperatures are not as low as those recorded in other continents because of the absence of extensive mountain masses and because of the expanse of ocean to the south. However, extreme maxima are comparatively high, reaching 50°C over the inland, mainly due to the great east-west extent of the continent in the vicinity of the Tropic of Capricorn.

Climatic discomfort, particularly heat discomfort, is significant over most of Australia. During summer, prolonged high temperatures and humidity around the northern coasts and high temperatures over the inland cause physical discomfort. In winter, low temperatures and strong cold winds over the interior and southern areas can be severe for relatively short periods.

Climatic controls

The generally low relief of Australia causes little obstruction to the atmospheric systems which control the climate. A notable exception is the eastern uplands which modify the atmospheric flow.

In the winter half of the year (May–October) anticyclones, or high pressure systems, pass from west to east across the continent and often remain almost stationary over the interior for several days. These anticyclones may extend to 4,000 kilometres along their west-east axes. Northern Australia is then influenced by mild, dry south-east trade winds, and southern Australia experiences cool, moist westerly winds. The westerlies and the frontal systems associated with extensive depressions travelling over the Southern Ocean have a controlling influence on the climate of southern Australia during the winter season, causing rainy periods. Cold outbreaks, particularly in south-east Australia, occur when cold air of Southern Ocean origin is directed northwards by intense depressions having diameters up to 2,000 kilometres. Cold fronts associated with the southern depressions, or with secondary depressions over the Tasman Sea, may produce large day-to-day changes in temperature in southern areas, particularly in south-east coastal regions.

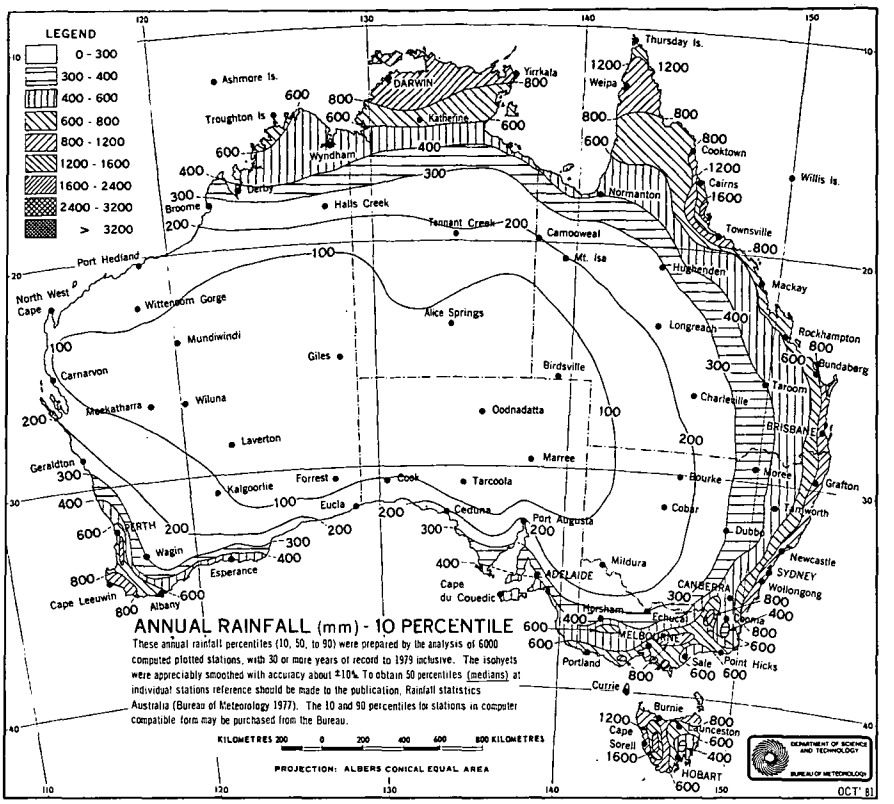
In the summer half of the year (November–April) the anticyclones travel from west to east on a more southerly track across the southern fringes of Australia directing easterly winds generally over the continent. Fine, warmer weather predominates in southern Australia with the passage of each anticyclone. Heat waves occur when there is an interruption to the eastward progression of the anticyclone (blocking) and winds back northerly and later north-westerly. Northern Australia comes under the influence of summer disturbances associated with the southward intrusion of warm moist monsoonal air from north of the inter-tropical covergence zone resulting in a hot rainy season.

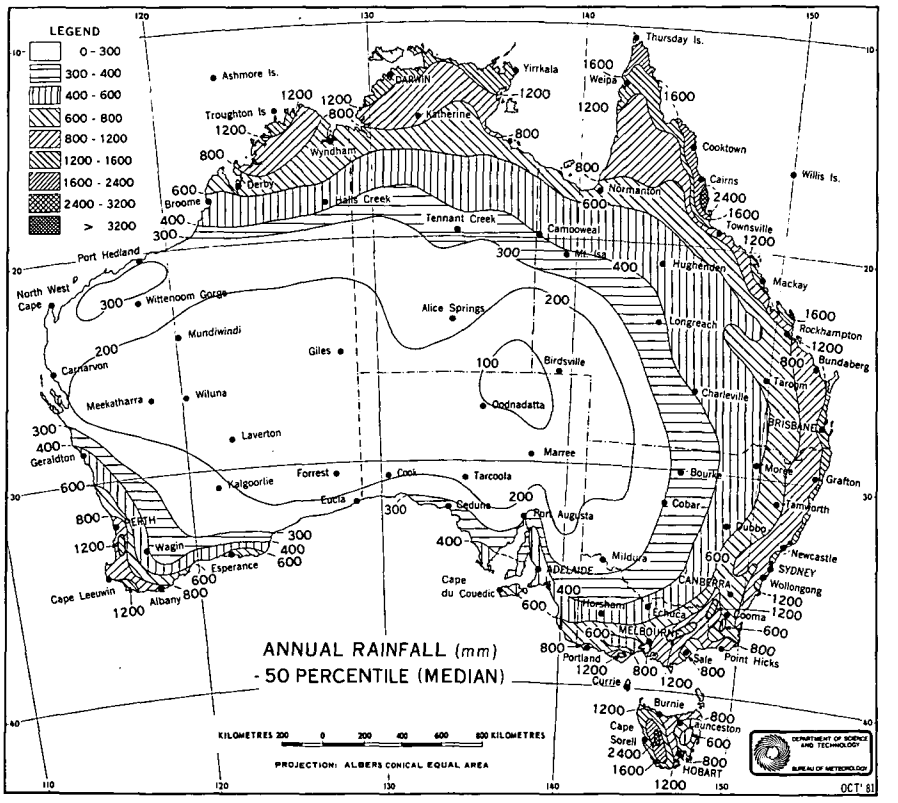
Tropical cyclones develop over the seas to the north-west and the north-east of Australia in summer between November and April. Their frequency of occurrence and the tracks they follow vary greatly from season to season. On the average, about three cyclones per season directly affect the Queensland coast, and about three affect the north and northwest coasts. Tropical cyclones approaching the coast usually produce very heavy rain in coastal areas. Some cyclones move inland, losing intensity but still producing widespread heavy rainfall. Individual cyclonic systems may control the weather over northern Australia for periods extending to three weeks.

Rainfall

Annual. The annual 10, 50 and 90 percentile* rainfall maps are shown on Plates 3–5 respectively. The area of lowest rainfall is east of Lake Eyre in South Australia, where the median (50 percentile) rainfall is only about 100 millimetres. Mulka has a median annual rainfall of 81 millimetres (57 years of record to 1980 inclusive). Another very low rainfall area is in Western Australia in the Giles-Warburton Range region, which has a median annual rainfall of about 150 millimetres. A vast region extending from the west coast near Shark Bay across the interior of Western Australia and South Australia to south-west Queensland and north-west New South Wales has a median annual rainfall of less than 200 millimetres. This region is not normally exposed to moist air masses for extended periods and rainfall is irregular, averaging only one or two days per month. However, in favourable synoptic situations, which occur infrequently over extensive parts of the region, up to 400 millimetres of rain may fall within a few days and result in widespread flooding.

* The amounts that are not exceeded by 10, 50 and 90 per cent of all recordings are the 10, 50 and 90 percentiles or the first, fifth and ninth deciles respectively. The 50 percentile is usually called the median.





PLATES 3 and 4

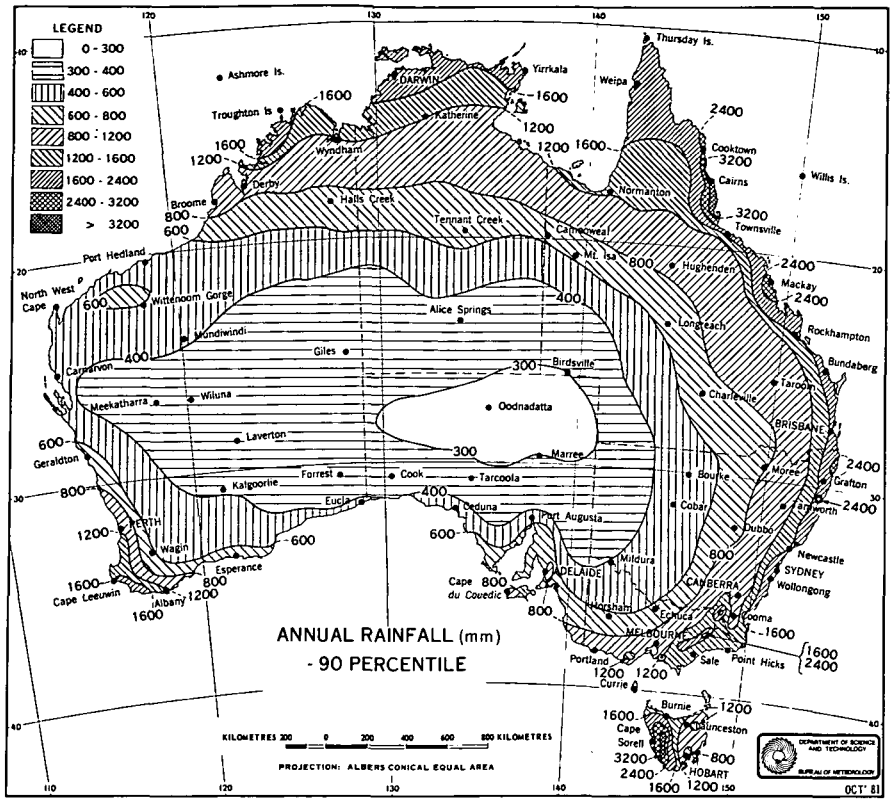


PLATE 5

The region with the highest median annual rainfall is the east coast of Queensland between Cairns and Cardwell, where Tully has a median of 4,203 millimetres (56 years to 1980 inclusive). The mountainous region of western Tasmania also has a high annual rainfall, with Lake Margaret having a median of 3,575 millimetres (68 years to 1980 inclusive). In the mountainous areas of north-east Victoria and some parts of the east coastal slopes there are small pockets with median annual rainfall greater than 2,500 millimetres, but the map scale is too small for these to be shown.

The Snowy Mountains area in New South Wales also has a particularly high rainfall. The highest median annual rainfall isohyet drawn for this region is 3,200 millimetres, and it is likely that small areas have a median annual rainfall approaching 4,000 millimetres on the western slopes above 2,000 metres elevation.

The following table shows the area distribution of the median annual rainfall.

AREA DISTRIBUTION OF MEDIAN ANNUAL RAINFALL: AUSTRALIA

(Per cent)

Median annual rainfall	*N.S.W.(a)*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust.*
Under 200 mm . . .	8.0	..	10.2	74.2	43.5	..	15.5	29.6
200 to 300 „ . . .	20.3	6.3	13.0	13.5	29.6	..	35.6	22.9
300 „ 400 „ . . .	19.0	19.2	12.3	6.8	10.5	..	9.0	11.2
400 „ 500 „ . . .	12.4	11.8	13.5	3.2	4.3	..	6.6	7.6
500 „ 600 „ . . .	11.3	14.1	11.6	1.8	3.1	12.2	5.8	6.6
600 „ 800 „ . . .	15.1	24.5	20.5	0.5	4.6	18.2	11.6	10.7
800 „ 1,200 „ . . .	11.3	17.7	12.6	..	3.7	25.0	9.6	7.7
Above 1,200 „ . . .	2.6	6.4	6.3	..	0.7	44.6	6.3	3.7
Total . . .	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(*a*) Includes Australian Capital Territory.

Seasonal. As outlined under the heading of Climatic controls, the rainfall pattern is strongly seasonal in character with a winter rainfall regime in the south and a summer regime in the north.

The dominance of rainfall over other climatic elements in determining the growth of specific plants in Australia has led to the development of a climatic classification based on two main parameters. These parameters are median annual rainfall and seasonal rainfall incidence. Plate 6, page 35, is a reduced version of the seasonal rainfall zones arising from this classification (*see* Bureau of Meteorology publication *Climatic Atlas of Australia, Map Set 5, Rainfall*, 1977).

Evaporation and the concept of rainfall effectiveness are taken into account to some extent in this classification by assigning higher median annual rainfall limits to the summer zones than the corresponding uniform and winter zones. The main features of the seasonal rainfall are:

(a) marked wet summer and dry winter of northern Australia;
(b) wet summer and relatively dry winter of south-eastern Queensland and north-eastern New South Wales;
(c) uniform rainfall in south-eastern Australia—much of New South Wales, parts of eastern Victoria and in southern Tasmania;
(d) marked wet winter and dry summer of south-west Western Australia and (to a lesser extent) of much of the remainder of southern Australia directly influenced by westerly circulation;
(e) arid area comprising about half of the continent extending from the north-west coast of Western Australia across the interior and reaching the south coast at the head of the Great Australian Bight.

The seasonal rainfall classification (*Climatic Atlas, Map Set 5*) can be further reduced to provide a simplified distribution of seven climatic zones shown in Plate 7.

Variability. The adequate presentation of rainfall variability over an extensive geographical area is difficult. Probably the best measures are found in tables compiled for a number of individual stations in some of the Climatic Survey districts. These tables show the percentage chances of receiving specified amounts of rainfall in monthly, seasonal or annual time spans. Statistical indexes of rainfall variation based on several techniques have been used to compile maps showing main features of the variability of annual rainfall over Australia.

One index for assessing the variability of annual rainfall is given by the ratio of the 90–10 percentile range to the 50 percentile (median value) i.e. Variability Index $= \left\{\frac{90 - 10}{50}\right\}$ percentiles. Variability based on this relationship (Gaffney 1975) is shown in Plate 8, page 37. The region of high to extreme variability shown in Plate 8, lies mostly in the arid zone with summer rainfall incidence, AZ(S), defined on Plate 6, page 35. In the winter rainfall zones the variability is generally low to moderate as exemplified by the south-west of Western Australia. In the tropics, random cyclone visitations cause extremely great variations in rainfall from year to year: at Onslow (Western Australia), annual totals varied from 15 millimetres in 1912 to 1,085 millimetres in 1961 and, in the four consecutive years 1921 to 1924, the annual totals were 566, 69, 682 and 55 millimetres respectively. At Whim Creek (Western Australia), where 747 millimetres have been recorded in a single day, only 4 millimetres were received in the whole of 1924. Great variability can also occur in the heavy rainfall areas: at Tully (Queensland), the annual rainfalls have varied from 7,898 millimetres in 1950 to 2,486 millimetres in 1961.

Rainday frequency. The average number of days per year with rainfall of 0.2 millimetres or more is shown in Plate 9, page 37.

The frequency of rain-days exceed 150 per year in Tasmania (with a maximum of over 200 in western Tasmania), southern Victoria, parts of the north Queensland coast and in the extreme south-west of Western Australia. Over most of the continent the frequency is less than 50 rain-days per year. The area of low rainfall with high variability, extending from the north-west coast of Western Australia through the interior of the continent, has less than 25 rain-days per year. In the high rainfall areas of northern Australia the number of rain-days is about 80 per year, but heavier falls occur in this region than in southern regions.

Intensity. The highest rainfall intensities for some localities are shown in the first table on page 38. These figures represent intensities over only small areas around the recording points because turbulence and exposure characteristics of the measuring gauge may vary over a distance of a few metres. The highest rainfall measured for one hour is 330 millimetres at Deeral, Queensland, 13 March 1936. The highest 24-hour (9 a.m. to 9 a.m.) falls are listed by States in the second table on page 38. Most of the very high 24-hour falls (above 700 millimetres) have occurred in the coastal strip of Queensland, where a tropical cyclone moving close to mountainous terrain provides ideal conditions

for spectacular falls. The highest 24-hour fall (1,140 millimetres) occurred at Bellenden Ker (Top Station) on 4 January 1979. Bellenden Ker (Top Station) has also recorded the highest monthly rainfall in Australia (5,387 millimetres in January 1979).

The highest annual rainfalls are listed by States in the following table.

HIGHEST ANNUAL RAINFALLS
(All years to 1980 inclusive)

State	*Station*	*Year*	*Amount*
			mm
New South Wales	Tallowwood Point	1950	4,540
Victoria	Mt Buffalo Chalet	1917	3,342
Queensland	Bellenden Ker (Top Station)	1979	11,251
South Australia	Aldgate State School	1917	1,851
Western Australia	Karnet	1964	2,601
Tasmania	Lake Margaret	1948	4,504
Northern Territory	Elizabeth Downs	1973	2,966

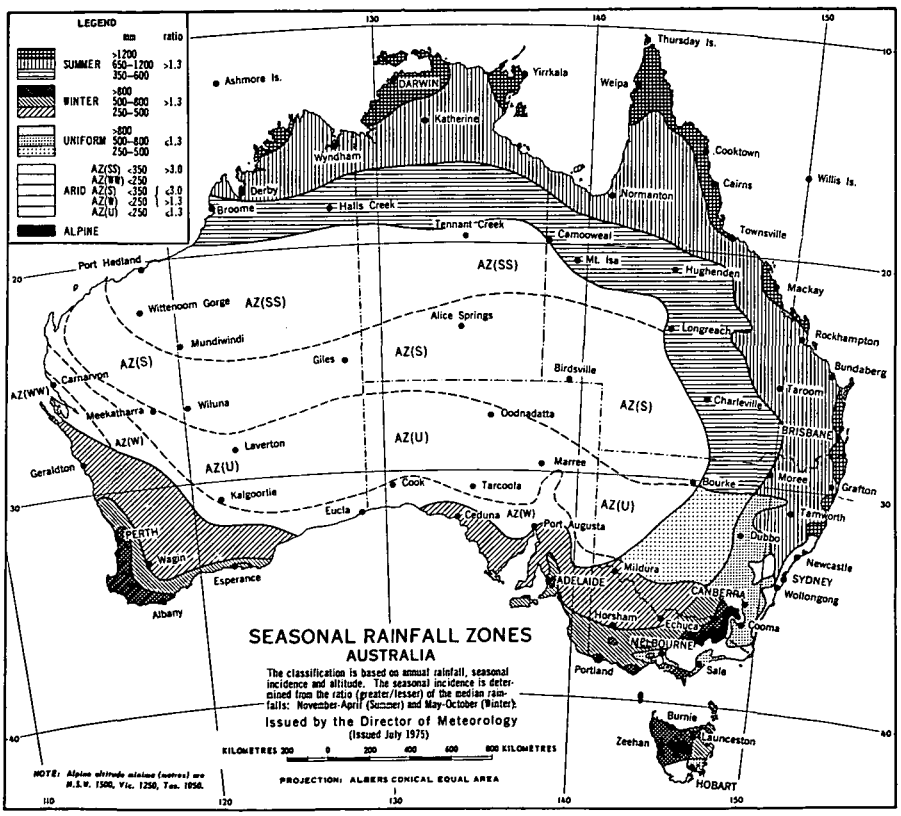
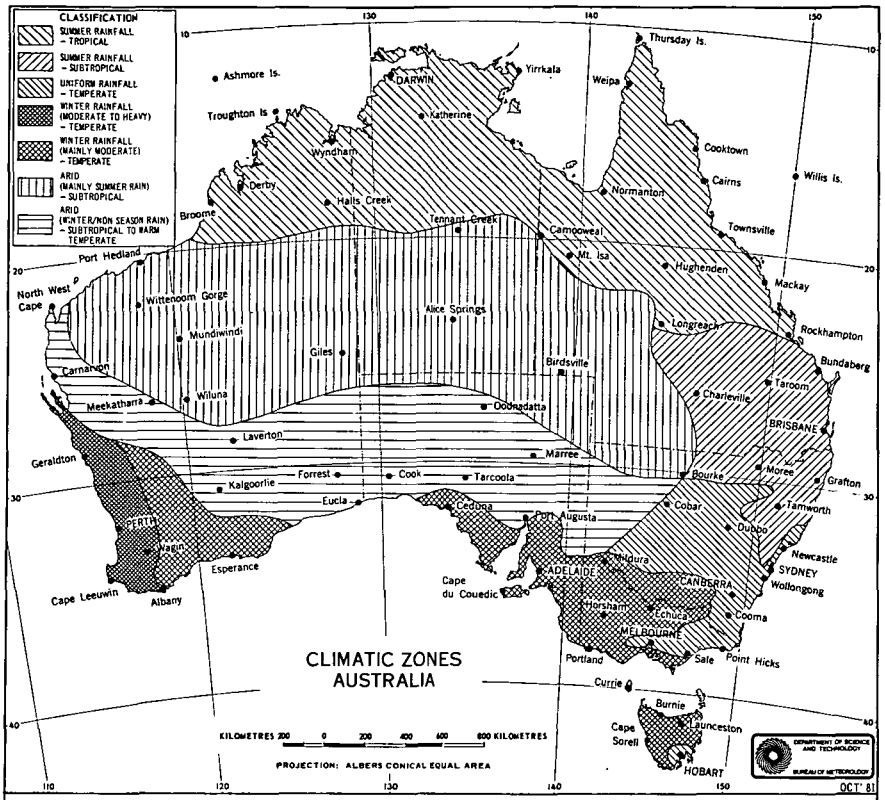


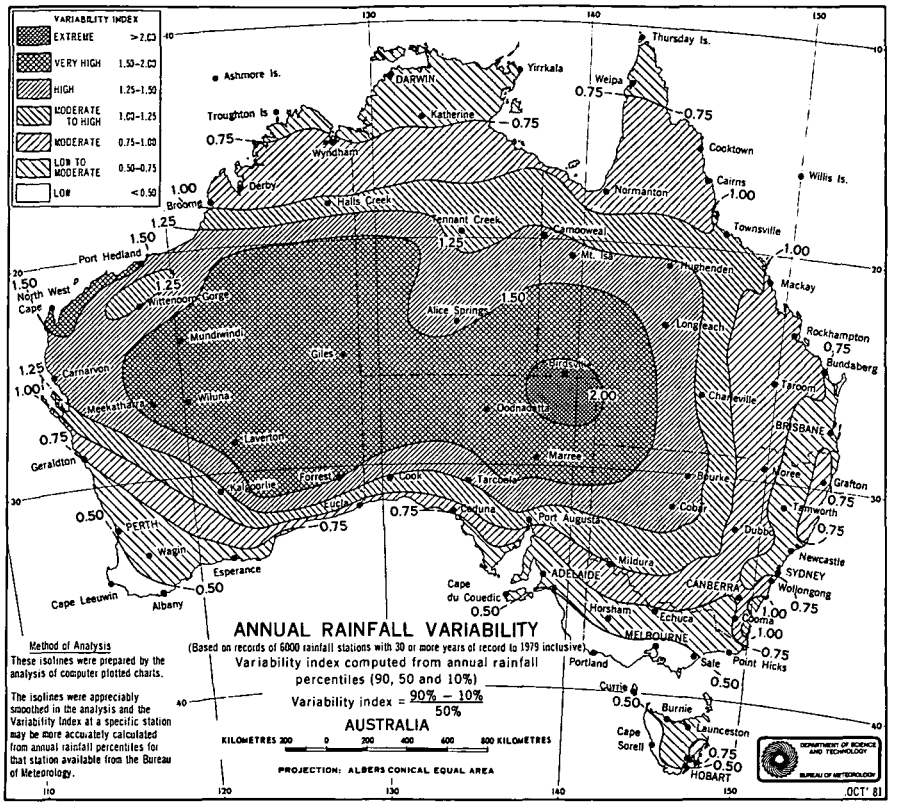
PLATE 6

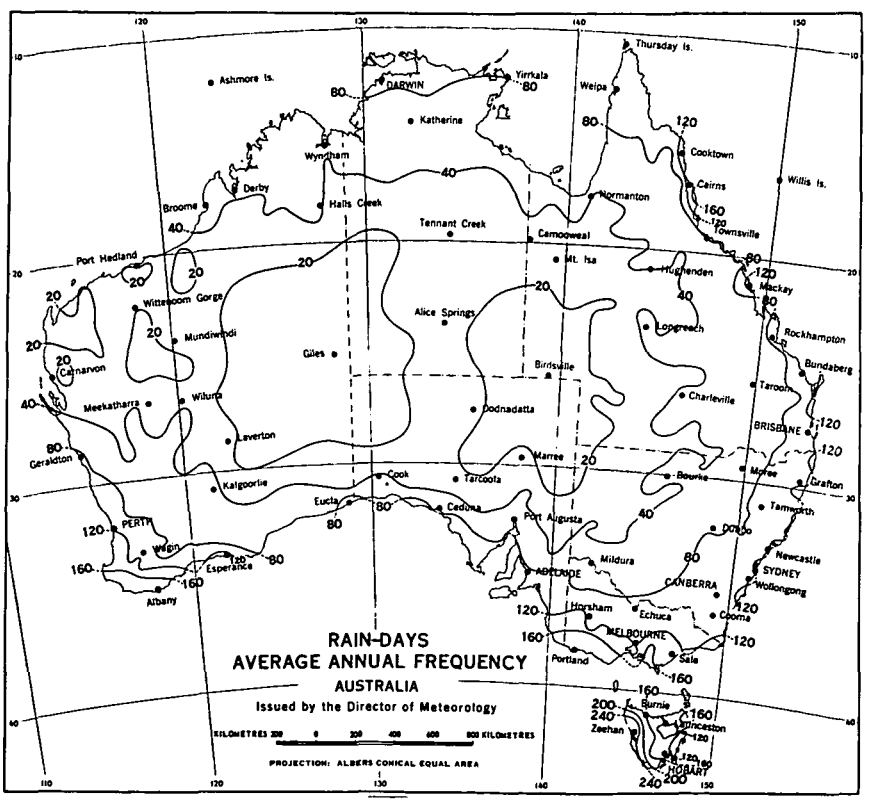


CLASSIFICATION	SEASONAL CHARACTERISTICS SUMMER	SEASONAL CHARACTERISTICS WINTER
Summer Rainfall – Tropical	Heavy periodic rains (heavier in coastal & highland areas) Hot generally Humid in coastal areas	Generally rainless Mild to warm Dry
Summer Rainfall – Subtropical	Heavy periodic rains (heavier in coastal & highland areas) Mainly hot Humid in highlands & coastal areas	Some significant rain Mild
Uniform Rainfall – Temperate	Mainly reliable rain Warm to hot	Mainly reliable rain Cool to cold
Winter Rainfall (moderate to heavy) – Temperate	Irregular rain, mostly light Warm to hot	Reliable rain (moderate to heavy) Cool to mild
Winter Rainfall (mainly moderate) – Temperate	Mostly light irregular rain Warm to hot	Reliable rain (mainly moderate) Cool to cold
Arid (mainly summer rain) – Subtropical	Variably rain Hot to extreme Very dry	Mainly irregular light rain Mild to warm Dry
Arid (winter or non-seasonal rain) – Warm Temperate to Subtropical	Very irregular rain Hot to extreme Very dry	Variable rain, mainly light Cool to mild Dry

[Reference:- Climatic Atlas of Australia, Map set 5, Bureau of Meteorology 1975]

PLATE 7





PLATES 8 and 9

HIGHEST RAINFALL INTENSITIES IN SPECIFIED PERIODS
(millimetres)
(*Source:* Pluviograph records in Bureau of Meteorology archives.)

Station	*Period of record*	*Years of complete records*	*Period in hours* 1	3	6	12	24
			mm	mm	mm	mm	mm
Adelaide	1897-1980	80	69	133	141	141	141
Alice Springs	1951-1980	28	75	77	87	108	150
Brisbane	1911-1980	67	88	144	182	265	327
Broome	1948-1979	32	112	157	185	313	351
Canberra	1932-1979	44	51	68	71	89	139
Carnarvon	1956-1979	24	32	63	83	95	108
Charleville	1953-1980	28	42	66	75	111	142
Cloncurry	1953-1975	20	59	118	164	173	204
Darwin (Airport)	1953-1980	25	88	138	214	260	277
Esperance	1963-1979	15	23	45	62	68	79
Hobart	1911-1980	67	28	56	87	117	168
Meekatharra	1953-1979	25	33	67	81	99	112
Melbourne	1878-1980	90	79	83	86	97	130
Mildura	1953-1977	23	49	60	65	65	91
Perth	1946-1980	33	32	38	47	64	93
Sydney	1913-1979	63	97	135	166	190	282
Townsville	1953-1980	26	88	158	235	296	319

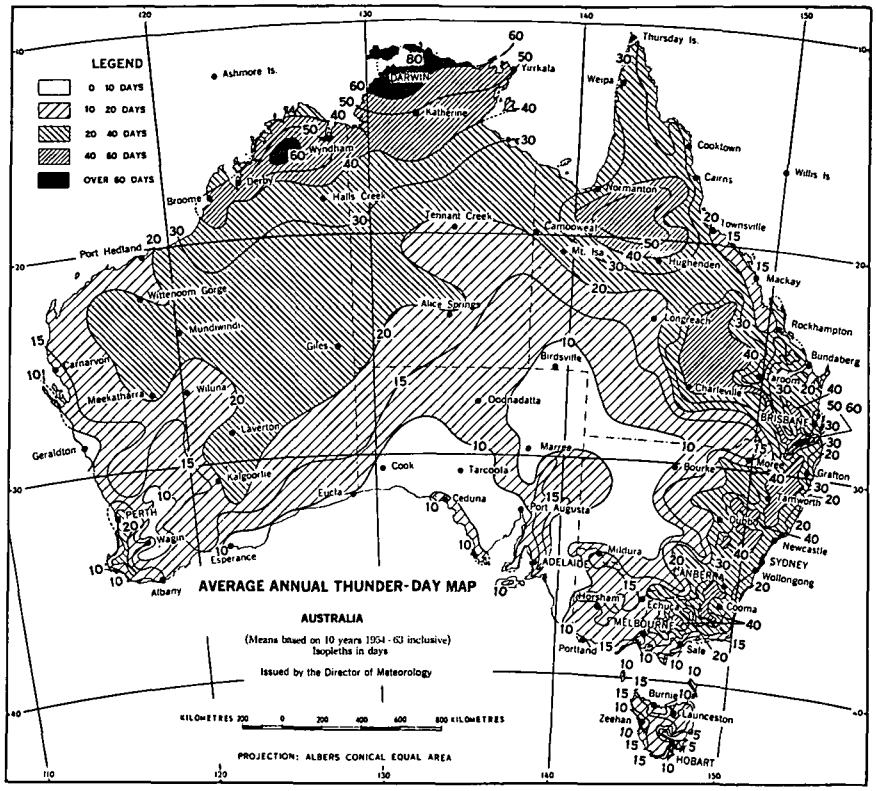
HIGHEST DAILY RAINFALLS
(All years to July 1981)

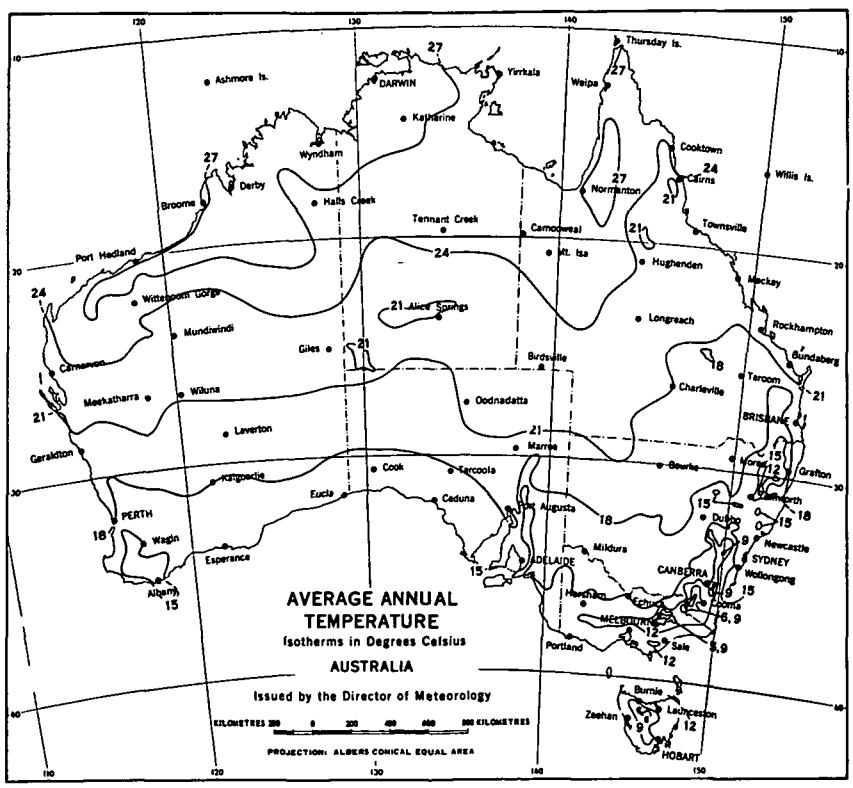
State	*Station*	*Date*	*Amount*
			mm
New South Wales	Dorrigo	21.2.1954	809
	Cordeaux River	14.2.1898	574
Victoria	Balook	18.2.1951	275
	Hazel Park	1.12.1934	267
Queensland	Bellenden Ker (Top Station)	4.1.1979	1,140
	Crohamhurst	3.2.1893	907
	Finch Hatton	18.2.1958	878
	Mount Dangar	20.1.1970	869
South Australia	Stansbury	18.2.1946	222
	Stirling	17.4.1889	208
Western Australia	Whim Creek	3.4.1898	747
	Kilto	4.12.1970	635
	Fortescue	3.5.1890	593
Tasmania	Cullenswood	22.3.1974	352
	Mathinna	5.4.1929	337
Northern Territory	Roper Valley	15.4.1963	545
	Groote Eylandt	28.3.1953	513

Thunderstorms and hail. A thunder-day at a given location is a calendar day on which thunder is heard at least once. Plate 10, page 39 shows isopleths (isobronts) of the average annual number of thunder-days which varies from 80 per year near Darwin to less than 10 per year over parts of the southern regions. Convectional processes during the summer wet season cause high thunderstorm incidence in northern Australia. The generally high incidence (40–60 annually) over the eastern upland areas is produced mainly by orographic uplift of moist air streams.

Hail, mostly of small size (less than 10 millimetres diameter), occurs with winter/spring cold frontal activity in southern Australia. Summer thunderstorms, particularly over the uplands of eastern Australia, sometimes produce large hail (greater than 10 millimetres diameter). Hail capable of piercing light gauge galvanised iron occurs at irregular intervals and sometimes causes widespread damage.

Snow. Generally, snow covers much of the Australian Alps above 1,500 metres for varying periods from late autumn to early spring. Similarly, in Tasmania the mountains are covered fairly frequently above 1,000 metres in these seasons. The area, depth and duration are highly variable and in the altitude range 500–1,000 metres no snow falls in some years. Snowfalls at levels below 500 metres are occasionally experienced in southern Australia, particularly in the foothill areas of Tasmania and Victoria, but falls are usually light and short-lived. In some seasons parts of the eastern uplands above 1,000 metres from Victoria to south-eastern Queensland have been covered with snow for several weeks. In ravines around Mt Kosciusko (2,228 metres) small areas of snow may persist through summer but there are no permanent snowfields.





PLATES 10 and 11

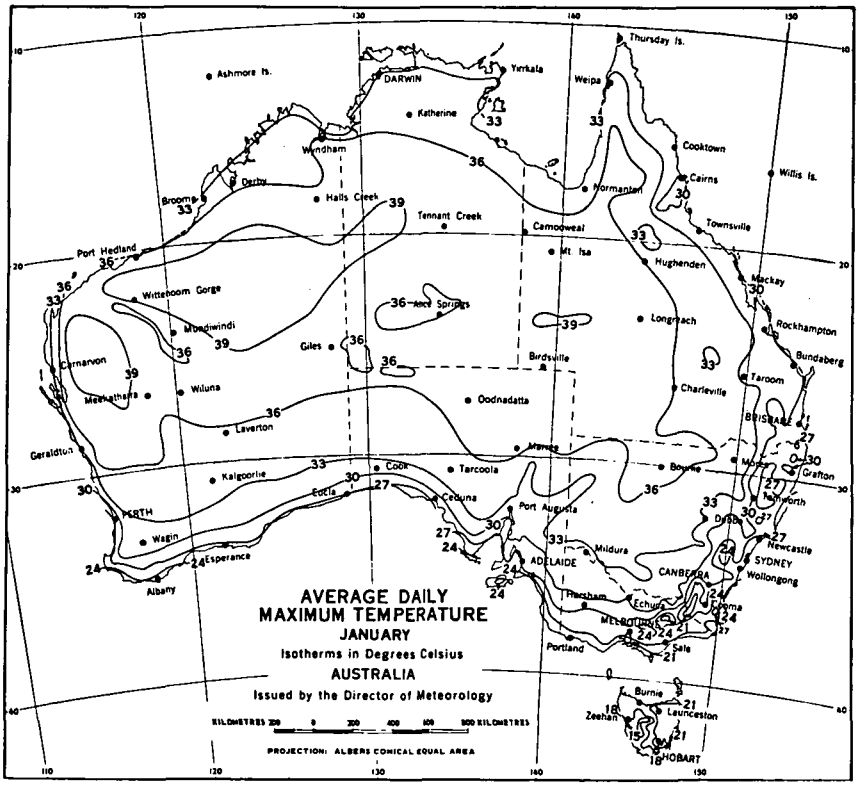


PLATE 12

Temperature

Average temperatures. Average annual air temperatures as shown in Plate 11, page 39 range from 28° C along the Kimberley coast in the extreme north of Western Australia to 4° C in the alpine areas of south-eastern Australia. Although annual temperature may be used for broad comparisons, monthly temperatures are required for detailed analyses.

July is the month with the lowest average temperature in all parts of the continent. The months with the highest average temperature are January or February in the south and December in the north (except in the extreme north and north-west where it is November). The slightly lower temperatures of mid-summer in the north are due to the increase in cloud during the wet season.

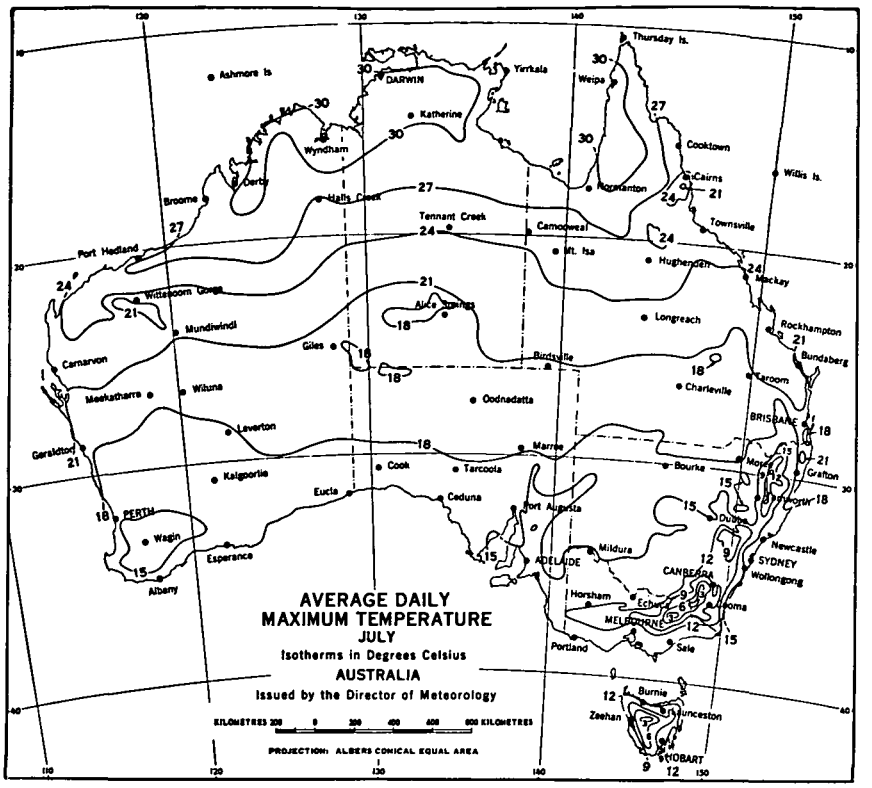
Average monthly maxima. Maps of average maximum and minimum temperatures for the months of January and July are shown in Plates 12–15 inclusive, pages 40–42.

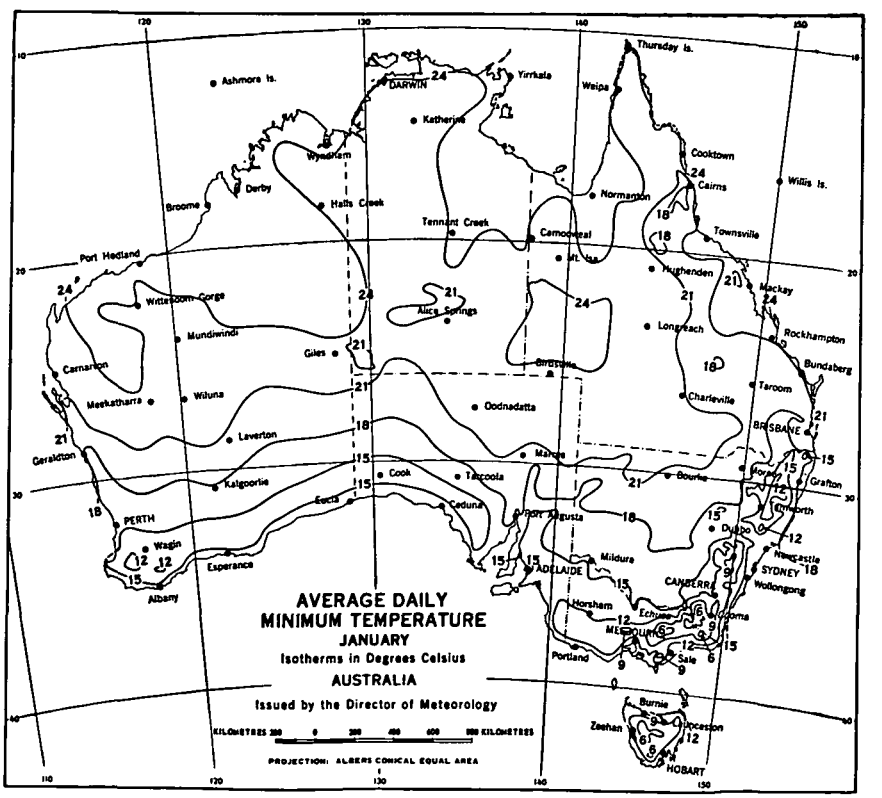
In January, average maximum temperatures exceed 35° C over a vast area of the interior and exceed 40° C over appreciable areas of the north-west. The consistently hottest part of Australia in terms of summer maxima is around Marble Bar, Western Australia (150 kilometres south-east of Port Hedland) where the average is 41° C and daily maxima during summer may exceed 40°C consecutively for several weeks at a time.

The marked gradients of isotherms of maximum temperature in summer in coastal areas, particularly along the south and west coasts, are due to the penetration inland of fresh sea breezes initiated by the sharp temperature discontinuities between the land and sea surfaces. There are also gradients of a complex nature in south-east coastal areas caused primarily by the uplands.

In July a more regular latitudinal distribution of average maxima is evident. Maxima range from 30°C near the north coast to 5° C in the alpine areas of the south-east.

Average monthly minima. In January average minima range from 27° C on the north-west coast to 5° C in the alpine areas of the south-east. In July average minima fall below 5° C in areas south of the tropics (away from the coasts). Alpine areas record the lowest temperatures; the July average is as low as–5° C.





PLATES 13 and 14

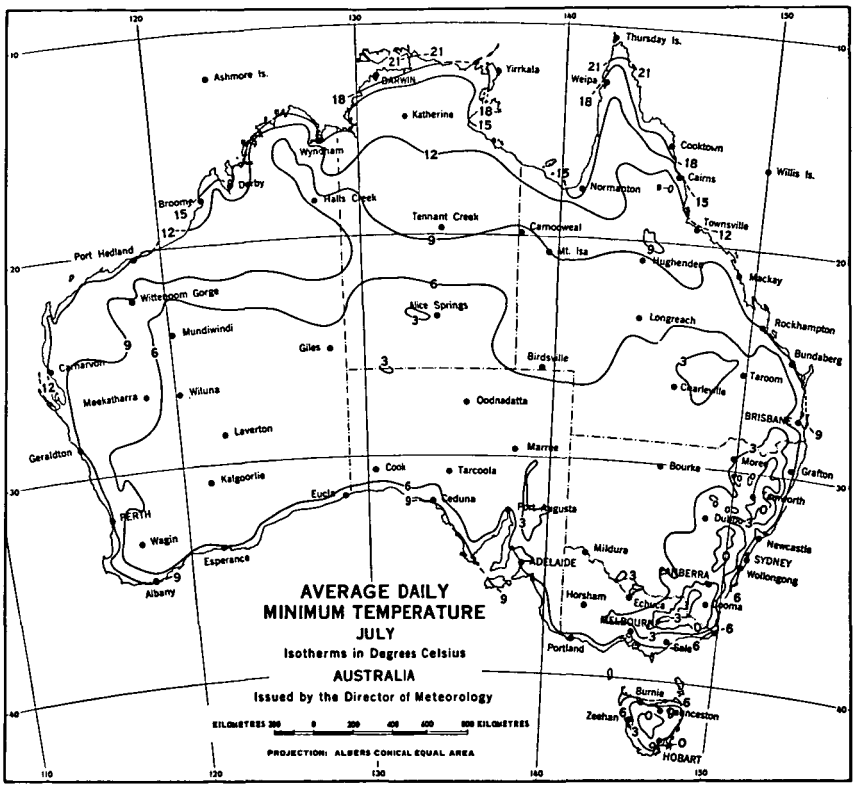


PLATE 15

Extreme maxima. Temperatures have exceeded 45°C at nearly all inland stations more than 150 kilometres from the coast and at many places on the north-west and south coasts. Temperatures have exceeded 50°C at some inland stations and at a few near the coast. It is noteworthy that Eucla on the south coast has recorded 50.7°C, the highest temperature in Western Australia. This is due to the long trajectory over land of hot north-west winds from the Marble Bar area. Although the highest temperature recorded in Australia was 53.1°C at Cloncurry (Queensland), more stations have exceeded 50°C in western New South Wales than in other areas due to the long land trajectory of hot winds from the north-west interior of the continent.

Extreme maximum temperatures recorded at selected stations, including the highest recorded in each State, are shown in the table below.

EXTREME MAXIMUM TEMPERATURES

(All years to July 1982)

Station	*°C*	*Date*	*Station*	*°C*	*Date*
New South Wales—			Western Australia—		
Bourke	52.8	17.1.1877	Eucla	50.7	22.1.1906
Walgett	50.1	2.1.1903	Mundrabilla	49.8	3.1.1979
Wilcannia	50.0	11.1.1939	Forrest	49.8	13.1.1979
Victoria—			Madura	49.4	7.1.1971
Mildura	50.8	6.1.1906	Tasmania—		
Swan Hill	49.4	18.1.1906	Bushby Park	40.8	26.12.1945
Queensland—			Hobart	40.8	4.1.1976
Cloncurry	53.1	16.1.1889	Northern Territory—		
Winton	50.7	14.12.1888	Finke	48.3	2.1.1960
Birdsville	50.0	24.12.1972	Jervois	47.5	3.1.1978
South Australia—					
Oodnadatta	50.7	2.1.1960	Australian Capital Territory—		
Kyancutta	49.3	9.1.1939	Canberra (Acton)	42.8	11.1.1939

Extreme minima. The lowest temperatures in Australia have been recorded in the Snowy Mountains, where Charlotte Pass (elevation 1,760 metres) has recorded -22.2°C at 14 July 1945 and 22 August 1947. Temperatures have fallen below -5°C at most inland places south of the tropics and at some places within a few kilometres of southern coasts. At Eyre, on the south coast of Western Australia, a minimum of -3.9°C has been recorded, and at Swansea, on the east coast of Tasmania, the temperature has fallen as low as -4.4°C.

In the tropics, extreme minima below 0°C have been recorded at many places away from the coasts as far north as Herberton, Queensland (-3.3°C). Even very close to the tropical coastline temperatures have fallen to 0°C, a low recording being -0.8°C for Mackay.

The next table shows extreme minimum temperatures recorded at specified stations, including the lowest recorded in each State.

EXTREME MINIMUM TEMPERATURES

(All years to July 1982)

Station	*°C*	*Date*
New South Wales—		
Charlotte Pass	-22.2	14.7.1945
		22.8.1947
Kiandra	-20.6	2.8.1929
Kosciusko Hotel	-14.4	3.7.1929
		6.7.1939
Cooma	-11.2	13.7.1898
Victoria—		
Mount Hotham	-12.8	13.8.1947
Omeo	-11.7	15.6.1965
Bairnsdale	-7.2	16.8.1896
Queensland—		
Stanthorpe	-11.0	4.7.1895
Mitchell	-9.4	15.8.1979
Nanango	-9.3	16.7.1918
South Australia—		
Yongalla	-8.2	20.7.1976
Kyancutta	-7.0	9.7.1960
Western Australia—		
Booylgoo	-6.7	12.7.1969
Wandering	-5.6	1.6.1964
Tasmania—		
Oatlands	-12.8	20.5.1902
Bothwell	-12.5	24.6.1972
Northern Territory—		
Alice Springs	-7.5	12.7.1976
Tempe Downs	-6.9	24.7.1971
Australian Capital Territory—		
Canberra	-10.0	19.7.1924
		11.7.1971

Heat waves. Periods with a number of successive days having a temperature higher than 40°C are relatively common in summer over parts of Australia. With the exception of the north-west coast of Western Australia, however, most coastal areas rarely experience more than three successive days of such conditions. The frequency increases inland, and periods of up to ten successive days have been recorded at many inland stations. This figure increases in western Queensland and north-western Western Australia to more than twenty days in places. The central part of the Northern Territory and the Marble Bar-Nullagine area of Western Australia have recorded the most prolonged heat waves. Marble Bar is the only station in the world where temperatures of more than 37.8°C (100°F) have been recorded on as many as 161 consecutive days (30 October 1923-7 April 1924).

Heat waves are experienced in the coastal areas from time to time. During 11-14 January 1939, for example, a severe heat wave affected south-eastern Australia: Adelaide had a record of 47.6°C on the 12th, Melbourne a record of 45.6°C on the 13th and Sydney a record of 45.3°C on the 14th.

The Kimberley district of Western Australia is the consistently hottest part of Australia in terms of annual average maximum temperature. Wyndham, for example, has an annual average maximum of 35.5°C.

Frost

For details *see* Year Book No. 63.

Humidity

Australia is a dry continent in terms of the water vapour content or humidity of the air and this element may be compared with evaporation to which it is related (*see* page 47). Humidity is measured at Bureau of Meteorology observational stations by a pair of dry and wet bulb thermometers mounted in a standard instrument screen. These measurements enable moisture content to be expressed by a number of parameters, two of which are vapour pressure and relative humidity.

Vapour pressure is an actual quantitative measure whereas relative humidity is a ratio (expressed as a percentage). Both of these are included here showing their respective applications but more detailed treatment is given to relative humidity because of its wider usage.

Vapour pressure. Vapour pressure is defined as the pressure exerted by the water vapour in the air; and it is a measure of the actual amount of water vapour present. The amount of water vapour does not normally vary greatly during the day, although afternoon sea breezes at coastal stations may bring in moisture to increase the vapour pressure temporarily by amounts up to 5 millibars. The 9 a.m. vapour pressure may be taken to approximate the mean value for the day.

The table on page 47 contains average 9 a.m. vapour pressures for selected stations. The annual averages range from 9.5 millibars at Hobart to 27.9 millibars at Thursday Island. At the high level station Kiandra (1,400 metres) the annual average is 7.9 millibars. Excluding Kiandra, monthly averages range from 6.7 millibars at inland stations in winter months to 30.9 millibars at Broome in February.

Vapour pressure together with corresponding air temperature have been used to measure climatic discomfort affecting human beings. Comfortable conditions are generally accepted as being within the vapour pressure range 7–17 millibars with respective air temperatures in the range 15–30°C. Above these limits heat discomfort increases and below them cold discomfort increases. The wet bulb temperature may also be used as a simple measure of heat discomfort when this temperature rises above 20°C.

Relative humidity. Relative humidity at a given temperature is the ratio (expressed as a percentage) of actual vapour pressure to the saturated vapour pressure at that temperature. As a single measure of human discomfort relative humidity is of limited value because it must be related to the temperature at the time.

Since the temperature at 9 a.m. approximates the mean temperature for the day (24 hours), the relative humidity at 9 a.m. may be taken as an estimate of the mean relative humidity for the day. Relative humidity at 3 p.m. occurs around the warmest part of the day on the average and is representative of the lowest daily values. Relative humidity on the average is at a maximum in the early morning when air temperature is minimal.

Relative humidity isopleths for January and July at 9 a.m. and 3 p.m. are shown in Plates 16–19 on pages 45–46, extracted from the *Climatic Atlas of Australia, Map Set 6, Relative Humidity,* 1978.

The main features of the relative humidity pattern are:

(a) over the interior of the continent there is a marked dryness during most of the year, notably towards the northern coasts in the dry season (May–October);

(b) the coastal fringes are comparatively moist, although this is less evident along the northwest coast of Western Australia where continental effects are marked;

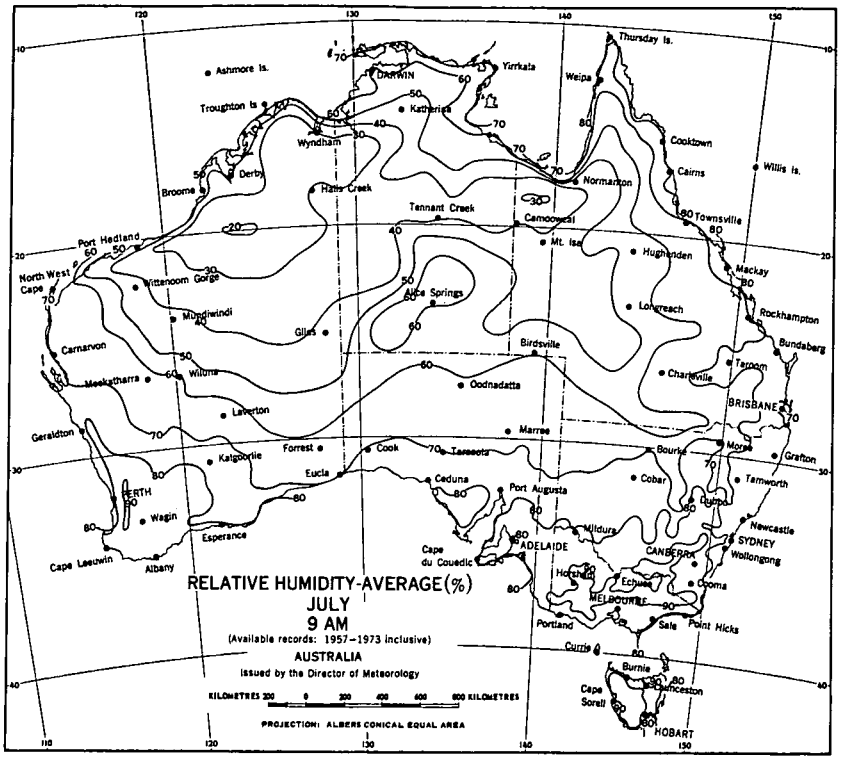
(c) in northern Australia the highest values occur during the summer wet season (December–February) and the lowest during the winter dry season (June–August);

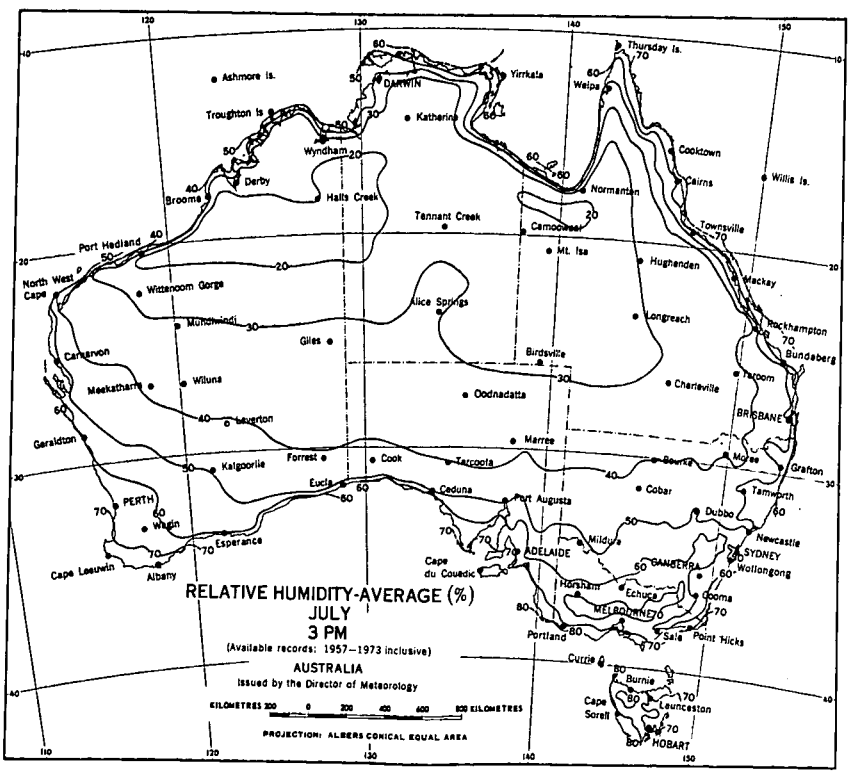
(d) in most of southern Australia the highest values are experienced in the winter rainy season (June–August) and the lowest in summer (December–February).

The table on page 47 contains average relative humidity at 9 a.m. for the year and for each month. Average annual figures on the table range from 34 per cent at Mundiwindi and Marble Bar to 79 per cent at Thursday Island illustrating the range of average relative humidity over Australia. Adelaide has the lowest value for a capital city with an annual average of 60 per cent, compared with Melbourne 69 per cent and Darwin 73 per cent.

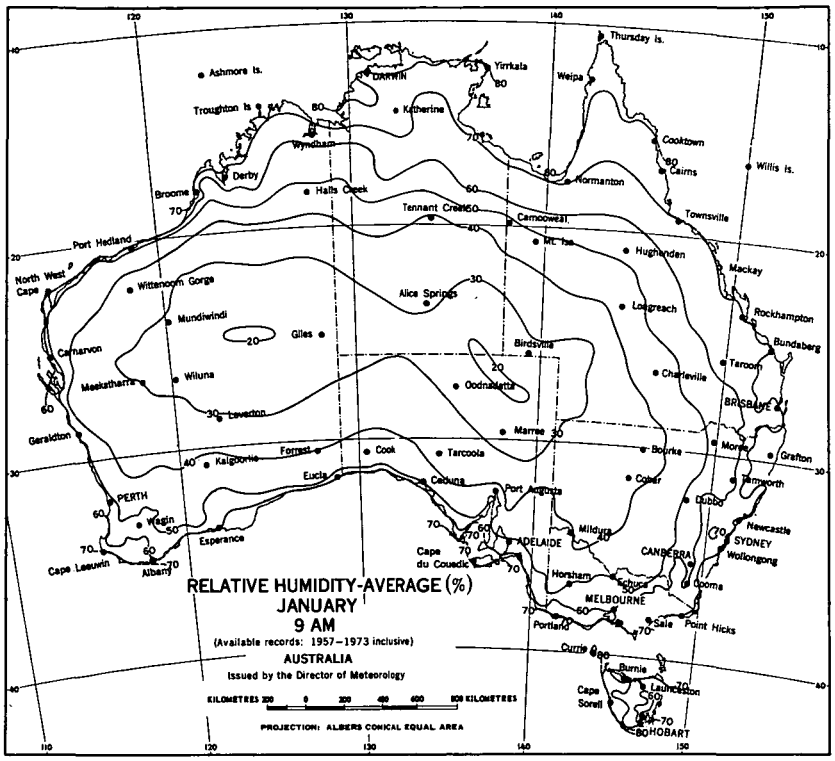
Monthly averages shown in the table range from 23 per cent at Mundiwindi in November to 89 per cent at Katanning in June and July. At Alice Springs monthly averages vary from 30 per cent in November to 66 per cent in the winter month of June when low temperatures have the effect of raising relative humidity over the interior. Broome varies from 46 per cent in August to 73 per cent in February, which is a marked seasonal change for a coastal station.

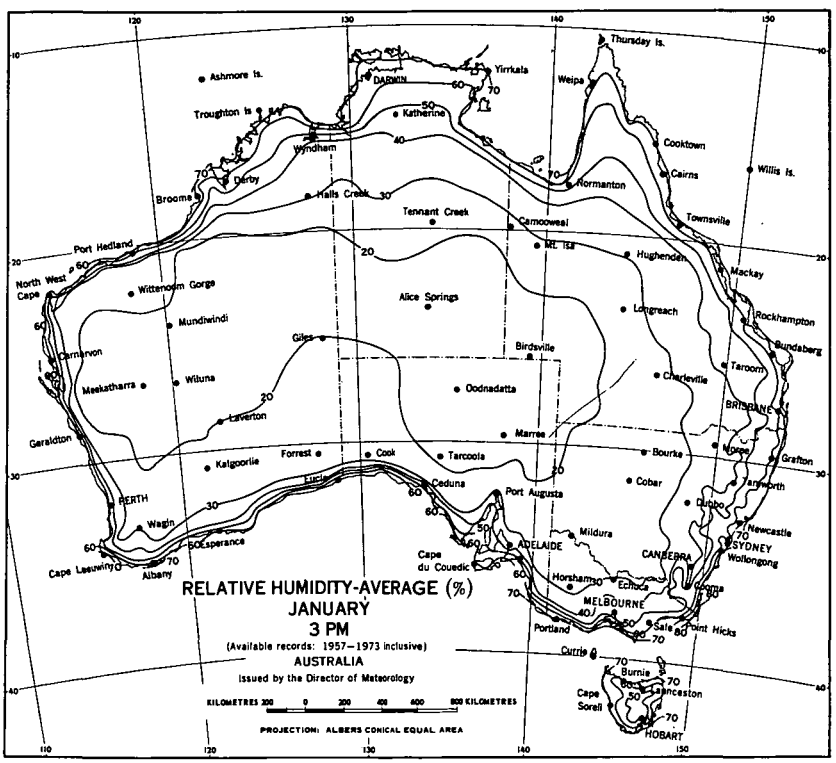
The pattern of variation of relative humidity differs from that of vapour pressure particularly in southern Australia. This is due to the difference in variation of the two parameters with temperature. If the amount of moisture in the air remains constant, vapour pressure decreases slightly with falling temperatures, whereas relative humidity increases. Perth for example has an average 9 a.m. vapour pressure of 14.7 millibars in January and 11.0 in August; and the respective average relative humidity figures (51 and 74 per cent respectively) show a reverse change.





PLATES 16 and 17





PLATES 18 and 19

AVERAGE VAPOUR PRESSURE AT 9 A.M.

(millibars)

NOTE. The averages in this and the next table may differ from previously published averages derived from average monthly and annual dry and wet bulb temperatures respectively. This is mainly due to the nature of psychometric formulae and also to differences in the period of record.

Station	*Period of record*	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Year*
Adelaide	1955-78	13.1	13.6	12.9	11.7	10.9	9.9	9.6	9.6	9.8	10.4	10.9	11.9	11.2
Alice Springs	1940-78	12.8	13.7	11.7	9.9	8.8	7.9	7.0	6.7	7.0	8.5	9.5	11.0	9.6
Armidale	1957-78	15.6	15.8	14.4	11.8	9.2	7.8	6.7	7.5	8.6	10.5	11.9	13.7	11.1
Brisbane	1951-78	21.7	22.2	21.3	18.1	14.1	11.9	10.7	11.1	13.1	15.5	17.7	19.8	16.4
Broome	1939-78	30.2	30.9	29.6	22.6	16.2	13.5	12.5	13.1	16.6	21.2	25.3	28.7	21.7
Canberra	1939-78	13.5	14.2	13.1	10.6	8.6	7.3	6.7	7.2	8.4	10.0	10.9	12.1	10.2
Carnarvon	1945-78	20.9	21.9	20.0	17.0	14.2	13.6	12.5	12.2	12.4	13.4	15.7	18.3	16.0
Ceduna	1939-78	14.0	14.5	13.8	12.4	11.2	9.9	9.4	9.8	10.4	10.8	11.6	12.9	11.7
Charleville	1942-78	17.3	18.4	16.4	12.9	10.7	9.5	8.3	8.3	9.1	11.1	12.0	14.7	12.4
Cloncurry	1939-75	21.2	22.8	18.7	13.8	11.0	9.4	8.0	7.7	8.6	11.2	13.2	17.3	13.6
Darwin	1941-78	30.4	30.5	30.2	26.8	21.5	17.8	17.4	20.1	24.4	27.2	28.9	29.9	25.4
Esperance	1957-69	16.1	16.9	15.8	14.7	12.8	12.1	11.1	11.0	11.8	12.6	13.5	14.8	13.6
Halls Creek	1944-78	21.7	22.2	18.6	13.0	10.8	8.8	7.5	7.4	8.4	11.5	14.4	18.7	13.5
Hobart	1944-78	11.3	11.6	11.2	10.0	9.0	8.1	7.7	7.7	8.2	9.0	9.6	10.7	9.5
Kalgoorlie	1939-78	13.6	14.3	13.7	12.3	10.9	9.9	9.1	9.1	9.2	10.0	11.1	12.3	11.3
Katanning	1957-78	13.6	14.4	13.6	12.9	11.5	10.6	9.7	10.0	10.4	10.9	11.2	12.2	11.7
Kiandra	1957-74	11.6	11.1	10.5	7.9	6.2	5.6	5.0	5.3	5.7	7.3	8.3	10.3	7.9
Marble Bar	1957-78	22.1	21.8	19.0	13.3	10.3	10.0	8.5	8.1	8.2	10.0	11.7	17.2	13.3
Melbourne	1955-78	13.7	14.7	13.8	11.9	10.5	9.5	8.8	9.0	9.7	10.6	11.4	12.4	11.3
Mildura	1946-78	13.5	14.3	13.4	11.8	10.6	9.3	8.7	9.1	9.8	10.7	11.2	12.1	11.2
Mundiwindi	1957-78	14.0	14.8	13.0	11.0	9.0	8.8	7.7	7.2	6.8	8.0	8.9	11.1	10.0
Perth	1942-78	14.7	15.2	14.7	13.6	12.4	11.9	11.1	11.0	11.4	11.2	12.4	13.6	12.8
Sydney	1955-78	19.1	20.0	18.8	15.1	11.8	10.5	9.0	9.6	11.0	13.1	14.9	17.2	14.2
Thursday Island	1950-78	30.5	30.7	30.6	29.5	28.3	26.1	24.7	24.7	25.1	26.6	28.3	29.9	27.9
Townsville	1939-78	27.2	27.7	26.3	22.4	18.8	15.6	15.2	15.9	17.7	20.7	23.5	25.5	21.4

AVERAGE RELATIVE HUMIDITY AT 9 A.M.

(per cent)

Station	*Period of record*	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Year*
Adelaide	1955-78	49	51	54	59	69	73	75	71	63	56	53	51	60
Alice Springs	1940-78	36	41	42	46	57	66	61	50	36	33	30	31	44
Armidale	1957-78	67	71	72	73	78	80	75	72	64	59	58	59	69
Brisbane	1951-78	67	68	70	69	68	69	66	62	60	59	58	60	64
Broome	1939-78	70	73	69	55	51	50	49	46	48	54	58	64	57
Canberra	1939-78	60	65	68	74	81	84	84	78	72	65	60	56	70
Carnarvon	1945-78	60	60	58	57	60	70	70	63	54	52	55	58	59
Ceduna	1939-78	55	59	62	68	77	82	81	77	66	56	54	54	65
Charleville	1942-78	49	54	54	54	63	71	66	56	45	41	37	41	52
Cloncurry	1939-75	53	61	53	45	47	50	45	37	31	30	32	41	43
Darwin	1941-78	82	84	83	76	67	63	64	68	71	70	73	77	73
Esperance	1957-69	62	67	66	71	76	81	82	76	71	65	62	62	70
Halls Creek	1944-78	51	55	44	33	36	35	31	25	22	25	30	40	35
Hobart	1944-78	58	62	65	69	75	78	78	73	65	62	60	55	67
Kalgoorlie	1939-78	48	54	56	62	70	76	75	68	56	50	46	45	58
Katanning	1957-78	59	65	69	77	85	89	89	87	82	70	60	57	74
Kiandra	1957-74	67	68	73	75	83	86	86	85	72	67	63	65	74
Marble Bar	1957-78	47	48	41	33	35	41	37	30	24	24	24	34	34
Melbourne	1955-78	61	65	67	71	77	81	80	75	69	64	62	61	69
Mildura	1946-78	50	56	61	70	82	88	86	79	68	59	53	49	66
Mundiwindi	1957-78	32	37	35	37	41	50	47	39	28	25	23	25	34
Perth	1942-78	51	53	57	65	72	78	78	74	68	50	54	51	63
Sydney	1955-78	68	71	72	70	70	73	68	66	63	61	62	65	67
Thursday Island	1950-78	83	85	85	82	81	80	79	78	75	73	73	77	79
Townsville	1939-78	73	76	74	69	67	66	66	63	60	61	64	66	67

Global radiation

For details *see* Year Book No. 63.

Sunshine, cloud and fog

Sunshine. Sunshine as treated here refers to bright or direct sunshine. Australia receives relatively large amounts of sunshine although seasonal cloud formations have a notable effect on its spatial and temporal distribution. Cloud cover reduces both incoming and outgoing radiation and thus affects sunshine, air temperature and other climatic elements at the earth's surface. Sunshine amounts at Australian capitals are included in the climatic tables, pages 58–65.

Average daily sunshine (hours) in January and July based on all available data to August 1974 is shown in plates 20 and 21, pages 49–50. Sunshine for April and October and annual amounts are included in the *Climatic Atlas, Map Set 4*. In areas where there is a sparsity of data, estimates of sunshine derived from cloud data were used. Most of the continent receives more than 3,000 hours of sunshine a year, or nearly 70 per cent of the total possible. In central Australia and the mid-west coast of Western Australia totals slightly in excess of 3,500 hours occur. Totals of less than 1,750 hours occur on the west coast and highlands of Tasmania; this amount is only 40 per cent of the total possible per year (about 4,380 hours).

In southern Australia generally the duration of sunshine is greatest about December when the sun is at its highest elevation and lowest in June when the sun is lowest. In northern Australia sunshine is generally greatest about August-October prior to the wet season and least about January-March during the wet season. The table below gives the 20, 50 and 80 percentiles of daily bright sunshine for the months of June and December at selected stations. These values give an indication of the variability of daily sunshine hours. Perth, for example, has a high variability of daily sunshine hours in the wet month of June (160 per cent) and a low variability in the dry month of December (30 per cent). Darwin has a low variability in the dry season month of June (15 per cent) and a high variability in the wet season month of December (85 per cent).*

BRIGHT SUNSHINE, VARIABILITY OF DAILY HOURS, JUNE AND DECEMBER
(20, 50 and 80 percentile values)

		June			*December*		
	Period of	*Percentile*			*Percentile*		
Station	*record*	*20*	*50*	*80*	*20*	*50*	*80*
Adelaide	1955–71	1.0	3.5	7.5	4.0	9.0	12.5
Alice Springs	1954–71	5.5	9.5	10.0	6.5	11.0	12.5
Brisbane	1951–71	2.5	8.0	9.5	4.0	8.5	11.5
Canberra	1957–71	2.0	5.0	7.0	4.0	9.5	12.0
Darwin	1951–71	9.0	10.0	10.5	3.5	7.5	10.0
Hobart	1955–71	0.5	3.0	6.0	2.5	7.0	10.5
Melbourne	1955–70	0.5	2.5	6.0	3.0	7.5	11.5
Perth	1945–71	1.0	4.0	7.5	8.5	11.0	12.0
Sydney	1955–71	0.5	6.0	8.0	1.5	7.5	11.0
Townsville	1957–71	4.5	9.0	10.0	5.0	9.5	11.0

Cloud. Seasonal changes in cloudiness vary with the distribution of rainfall. In the southern parts of the continent, particularly in the coastal and low lying areas, the winter months are generally more cloudy than the summer months. This is due to the formation of extensive areas of stratiform cloud and fog during the colder months, when the structure of the lower layers of the atmosphere favours the physical processes resulting in this type of cloud. Particularly strong seasonal variability of cloud cover exists in northern Australia where skies are clouded during the summer wet season and mainly cloudless during the winter dry season. Cloud coverage is greater near coasts and on the windward slopes of the eastern uplands of Australia and less over the dry interior.

The average monthly cloud amounts at Australian capitals are included in the climatic tables on pages 58–65. Darwin has the least average daily coverage of 3.2 eighths and Hobart the highest daily average of 5.0 eighths. The highest daily average for any month occurs at Darwin (5.9 eighths for January) and the lowest daily average is also at Darwin (1.1 eighths for August).

* Variability is given by $\frac{80-20}{50}$ (percentiles) expressed as a percentage

Fog. The formation of fog depends on the occurance of favourable meteorological elements—mainly temperature, humidity, wind and cloud cover. The nature of the local terrain is important for the development of fog and there is a tendency for this phenomenon to persist in valleys and hollows. The incidence of fog may vary significantly over distances as short as one kilometre.

Fog in Australia tends to be greater in the south than the north, although parts of the east coastal areas are relatively fog prone even in the tropics. Incidence is much greater in the colder months, particularly in the eastern uplands. Fog may persist during the day but rarely until the afternoon over the interior. The highest fog incidence at a capital city is at Canberra which has an average of 46 days per year on which fog occurs, 28 of which are in the period May to August. Brisbane averages 22 days of fog per year, 17 of which occur between April and September. Darwin averages only 3 days per year, June to September.

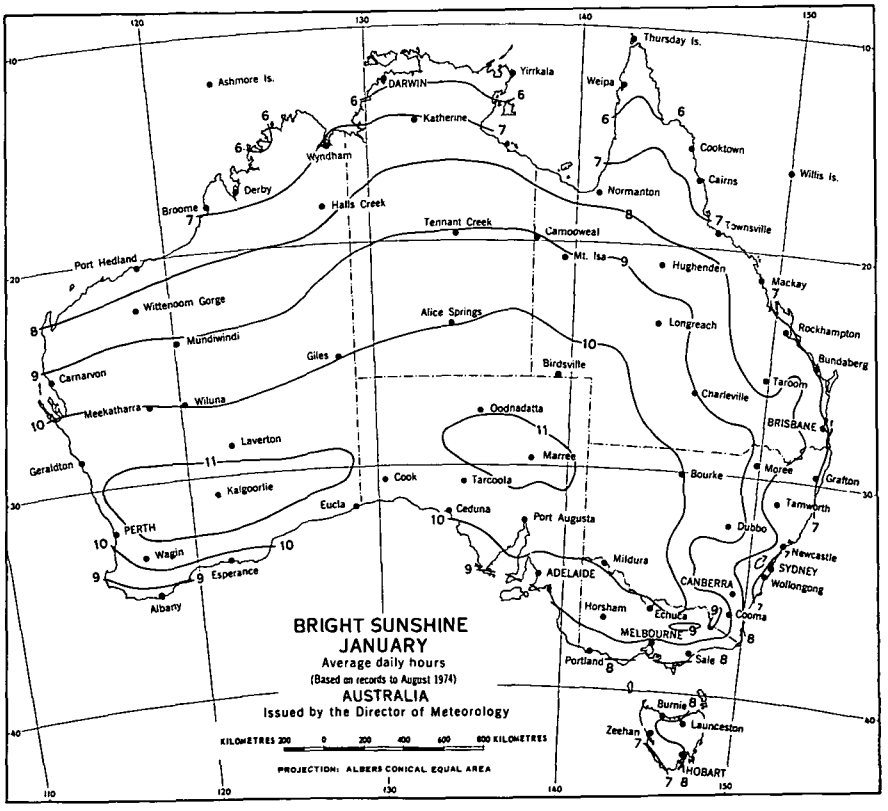


PLATE 20

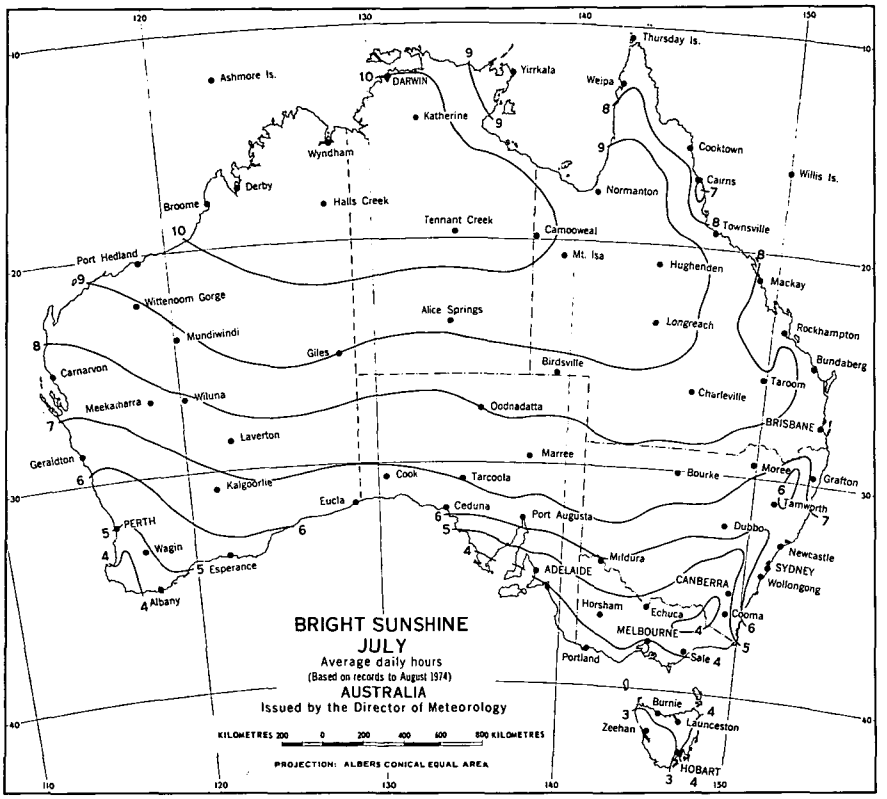


PLATE 21

Winds

The mid-latitude anticyclones are the chief determinants of Australia's two main prevailing wind streams. In relation to the west-east axes of the anticyclones these streams are easterly to the north and westerly to the south. The cycles of development, motion and decay of low pressure systems to the north and south of the anticyclones result in diversity of wind flow patterns. Wind variations are greatest around the coasts where diurnal land and sea breeze effects are important.

Wind roses for the months of January and July at 9 a.m. and 3 p.m. at selected stations are shown in Plates 22–25 inclusive, pages 51–52, extracted from *Climatic Atlas of Australia, Map Set 8*, 1979. The wind roses show the percentage frequency of direction (eight points of compass) and speed ranges of winds.

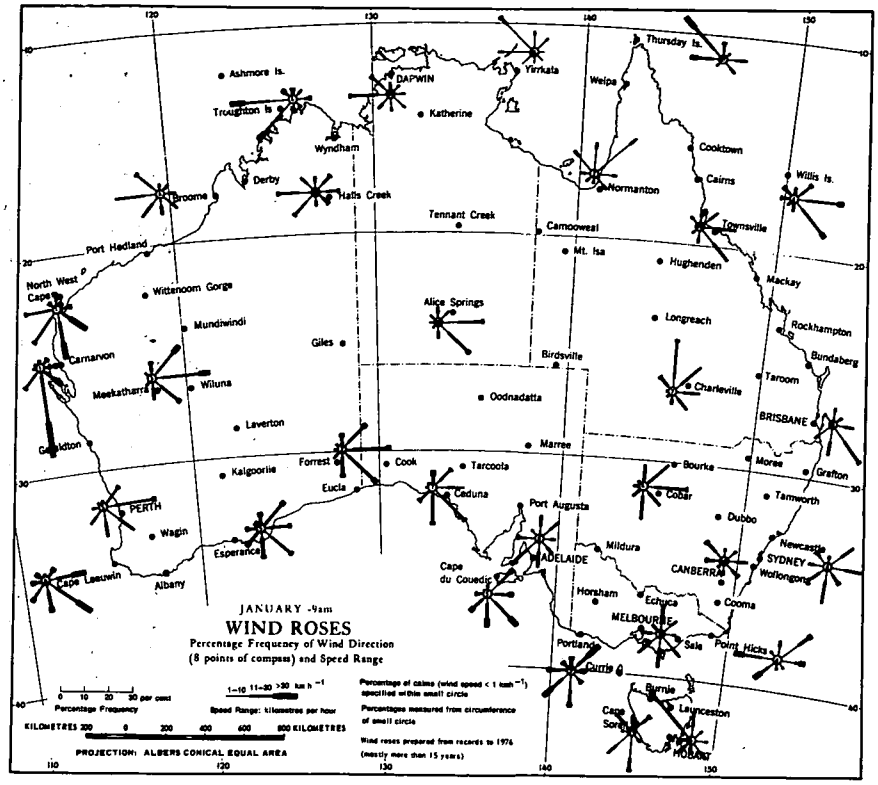
Orography affects the prevailing wind pattern in various ways such as the channelling of winds through valleys, deflection by mountains and cold air drainage from highland areas. An example of this channelling is the high frequency of north-west winds at Hobart caused by the north-west south-east orientation of the Derwent River Valley.

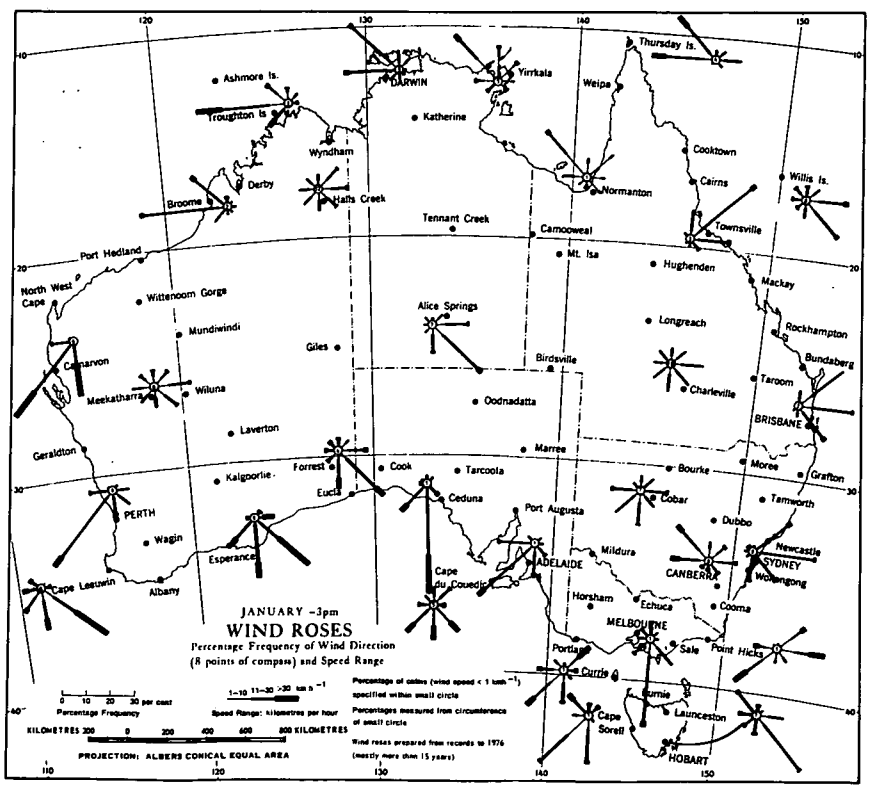
Average wind speeds and prevailing directions at Australian capitals are included in the climatic tables on pages 58–65. Perth is the windiest capital with an average wind speed of 15.6 kilometres per hour; Canberra is the least windy with an average speed of 5.8 kilometres per hour.

The highest wind speeds and wind gusts recorded in Australia have been associated with tropical cyclones. The highest recorded gust was 246 kilometres per hour during a cyclone at Onslow, Western Australia on 19 February 1975 and gusts reaching 200 kilometres per hour have been recorded on several occasions in northern Australia with cyclone visitations. The highest gusts recorded at Australian capitals were 217 kilometres per hour at Darwin and 156 kilometres per hour at Perth.

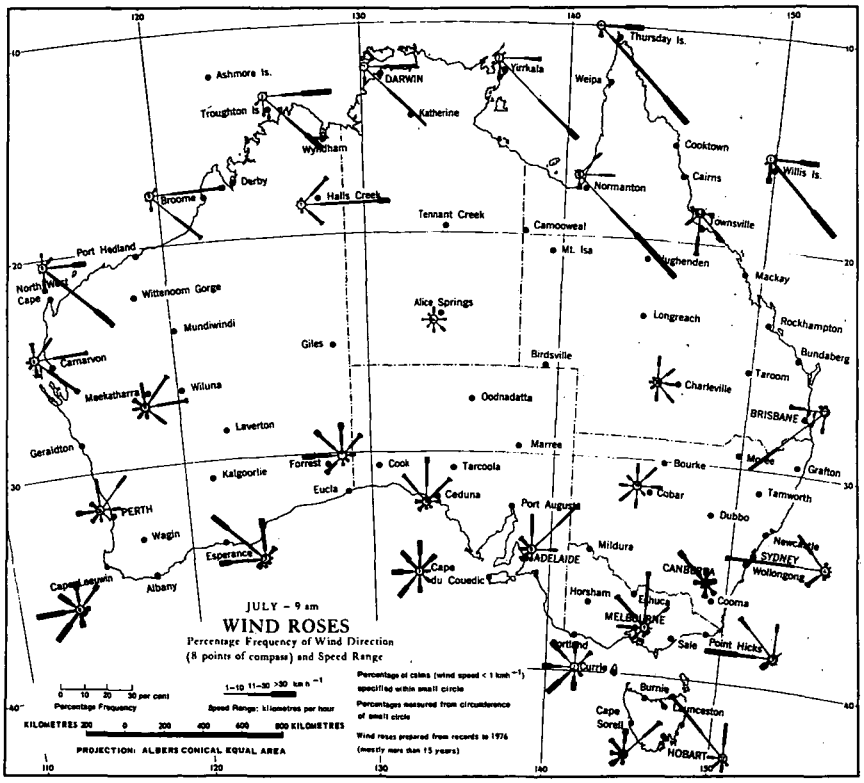
Estimates of the extreme wind gust expected in a given return period* have been derived for places through Australia (Whittingham, 1964). On this basis, for example, Darwin would have an extreme gust for a return period of 10 years of 140 kilometres per hour, Melbourne 135 and Perth 130.

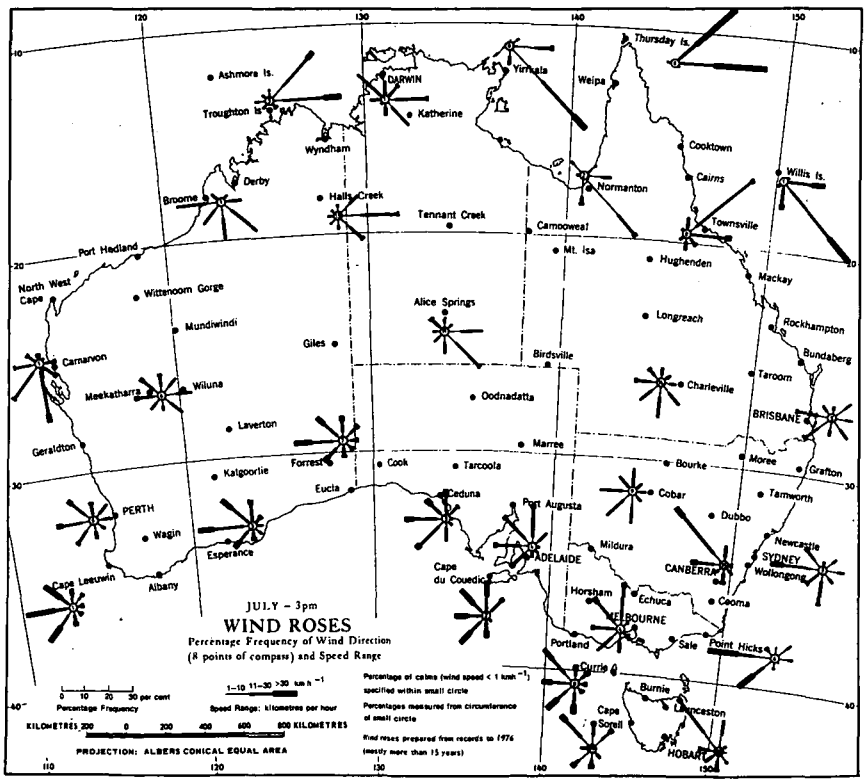
*Return period is the average period between successive occurrences equal to, or greater than, a given speed. For example the extreme wind gust for a return period of 10 years can be expected to occur once in 10 years on the average.





PLATES 22 and 23





PLATES 24 and 25

Floods

Widespread flood rainfall may occur anywhere in Australia but it has a higher incidence in the north and in the eastern coastal areas. It is most economically damaging along the shorter streams flowing from the eastern uplands eastward to the seaboard of Queensland and New South Wales. These flood rains are notably destructive in the more densely populated coastal river valleys of New South Wales—the Tweed, Richmond, Clarence, Macleay, Hunter and Nepean-Hawkesbury—all of which experience relatively frequent flooding. Although chiefly summer rains, they may occur in any season.

The great Fitzroy and Burdekin river basins of Queensland receive flood rains during the summer wet season. Much of the run-off due to heavy rain in north Queensland west of the eastern uplands flows southward through the normally dry channels of the network of rivers draining the interior lowlands into Lake Eyre. This widespread rain may cause floods over an extensive area, but it soon seeps away or evaporates, occasionally reaching the lake in quantity. The Condamine and other northern tributaries of the Darling also carry large volumes of water from flood rains south through western New South Wales to the Murray and flooding occurs along their courses at times.

Flood rains occur at irregular intervals in the Murray-Murrumbidgee system of New South Wales and Victoria, the coastal streams of southern Victoria and the north coast streams of Tasmania.

Droughts

Drought, in general terms, refers to an acute water shortage. This is normally due to rainfall deficiency but with other parameters contributing to the actual water availability. The best single measure of water availability in Australia is rainfall; although parameters such as evaporation and soil moisture are significant, or even dominant, in some situations.

Foley (1957) for the period from the commencement of rainfall records in Australia (about 1830) to 1955 lists seven major widespread droughts affecting extensive areas. The drought of 1895–1903 was probably the most disastrous of these in its effects on primary industry. Foley also distinguishes another five droughts affecting wide areas, but of lesser intensity (Foley, pp 204–5).

Gibbs and Maher (1967), having defined a drought year at a specified station as one with the year's rainfall in the first decile range, concluded that the occurrence of areas in the first decile range on annual decile maps for the period 1885–1965 corresponded rather well with drought areas discussed by Foley (1957).

The Bureau of Meteorology commenced the issue of statements on drought in June 1965. These *Drought Reviews* based on rainfall decile criteria are issued monthly when serious or severe deficiencies occur in any of the Australian rainfall districts.

A review of droughts in Australia to 1968 is included in the Year Book No. 54, 1968. That review contained a description of the severe drought of 1958–68, making use of the analysis of rainfall deciles. This drought which affected much of eastern Australia was one of the most widespread in recorded Australian history.

Since 1968 there have been a number of severe droughts defined by rainfall deficiencies based on decile analyses (*see Drought Review, Australia* series, 1968–81). Notable of these were the 1970–73 drought over the north-eastern goldfields and adjacent areas of Western Australia, the 1975–76 drought over a large part of south-eastern Australia, and the 1982 drought over Eastern Australia.

One method of assessing the incidence of rainfall deficiency is the analysis of the distribution of annual rainfalls less than the median (Gaffney 1975). The range between the 50 percentile (median) and the 10 percentile gives a measure of the variation in magnitude of annual rainfalls less than the median. The ratio of this range to the 30 percentile value may be used as an index of rainfall deficiency incidence or drought incidence, i.e.:

$$\text{Index of drought incidence} = \left\{\frac{50-10}{30}\right\} \text{ percentile}$$

For example, the indexes for Onslow (north-west coast of Western Australia) and similarly, for Cape Otway (south coast of Victoria) are derived thus:

$$\text{Index for Onslow} = \left\{\frac{201-65}{141}\right\} \text{ mm} = 0.96$$

$$\text{Index for Cape Otway} = \left\{\frac{884-723}{813}\right\} \text{ mm} = 0.19$$

Plate 26 shows the distribution of the index of drought incidence over Australia. The extension of high index values from the interior across New South Wales is significant; and another extension of high index across central Queensland is also notable. In Western Australia the high index over the interior is extensive; and the high values on the north-west coast are chiefly due to the dependence of rainfall on random cyclone tracks.

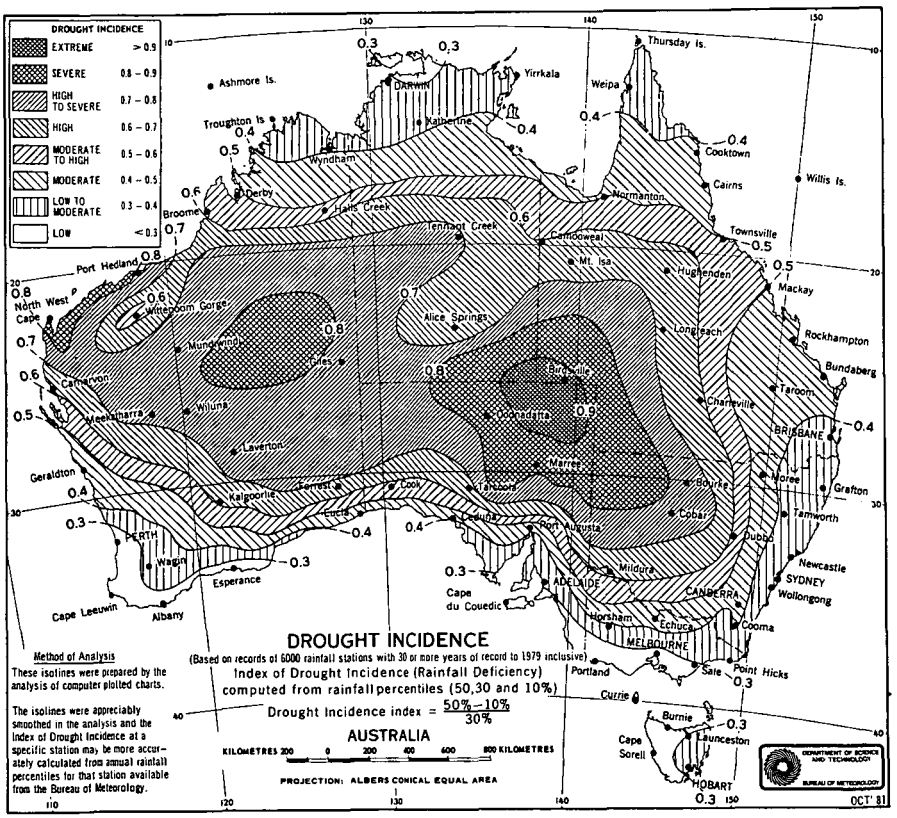


PLATE 26

Climatic discomfort

In Australia climatic discomfort is significant in most areas. During the summer half of the year (November–April) prolonged high temperatures and humidity around the northern coasts and high temperatures over the inland cause physical stress. In winter, low temperatures and strong cold winds over the interior and southern areas can be severe for relatively short periods. However, cold stress does not cause prolonged physical hardship in Australia at altitudes lower than 1,000 metres, that is, over more than 99 per cent of the continent.

The climatic variables determining physical discomfort are primarily air temperature, vapour pressure and wind. The complete assessment of physical discomfort also requires analyses of such parameters as thermal conductivity of clothing, vapour pressure at the skin and the metabolic heat rate arising from activity of the human body. The cooling system of the human body depends on evaporation of moisture to keep body temperature from rising to lethal levels as air temperature rises. Defining criteria of discomfort is difficult because personal reactions to the weather differ greatly according to a number of variables including health, age, clothing, occupation and acclimatisation (Ashton 1964). However, climatic strain has been measured experimentally and discomfort indexes based on the average response of subjects under specified conditions have been derived.

Effective Temperature. The effective temperature with respect to any environmental combination of temperature, humidity and wind is defined as the temperature of still, saturated air in which a normally clothed sedentary worker would feel the same level of comfort or discomfort.

Environment studies carried out at the research laboratories of the American Society of Heating, Refrigerating and Air Conditioning Engineers established values of effective temperature corresponding to various combinations of temperature, humidity and air movement. The results were published as a series of research reports commencing in 1923, and have been widely used to measure climatic discomfort (*see* 1960 report of the Society).

Normally clothed sedentary workers are mostly comfortable within a range of effective temperatures between 15°C and 27°C (air movement 5–8 metres per minute). At effective temperatures greater than 27°C, the majority of people feel heat discomfort and when less than 15°C they feel cold discomfort.

The table below contains the annual average frequency of effective temperature at 3 p.m. within specified limits at selected stations. The figures provide comparisons of daily occurrence of afternoon discomfort for the given environmental conditions.

CLIMATIC DISCOMFORT: EFFECTIVE TEMPERATURE

Annual average frequency of days when effective temperature at 3 p.m. is lower than 15°C (cold discomfort), within 15–27°C (comfort), and higher than 27°C (heat discomfort). Indoors, normally clothed sedentary workers, air movement 5–8 metres per minute.

		Average days per year		
Station	*Period of record*	*Less than 15°C*	*15–27°C*	*Greater than 27°C*
Adelaide	1955–72	128	234	3
Albury	1962–71	141	220	4
Alice Springs	1955–67	39	300	26
Brisbane	1951–70	6	356	3
Broome	1941–71	0	225	140
Canberra	1940–72	172	192	1
Carnarvon	1945–72	1	345	19
Ceduna	1955–71	77	279	9
Charleville	1942–72	28	316	21
Cloncurry	1940–72	1	268	96
Darwin	1955–69	0	225	140
Hobart	1944–67	239	126	0
Kalgoorlie	1940–72	66	281	18
Marble Bar	1957–71	0	220	145
Melbourne	1955–71	155	207	3
Mildura	1946–72	95	258	12
Perth	1944–71	57	302	6
Rockhampton	1940–72	2	337	26
Sydney	1955–72	69	295	1
Townsville	1941–69	0	333	32
Woomera	1954–72	73	279	13

Heat discomfort, on this index, is greatest in the north-west, where Marble Bar averages 145 days of high heat discomfort annually, and least in the south-east, where Hobart has only one day every five years. Cold discomfort is least in the north, where Townsville has one day of cold discomfort in ten years, and the greatest in the south-east, where Hobart has 239 days annually when the effective temperature is sufficiently low to cause discomfort. By the suitable choice of clothing discomfort can be decreased significantly on cold days. On cold days also, workers tend to take opportunities to move around, thus increasing metabolic heat rates.

Effective temperature is a useful index but its application is limited because available criteria relate only to indoor workers in sedentary occupations. Futhermore, at lower air temperatures the effective temperature gives excessive weight to humidity.

Relative strain index. The relative strain index derived by Lee and Henschel (1963) has been applied in Australia to measure heat discomfort (Department of National Development and Energy). The results obtained with Australian data are useful for purposes of comparison but interpretation of the actual results is tentative until empirical environmental studies are carried out in this region. In addition to temperature, humidity and air movement the relative strain index has facilities for incorporation of metabolic heat rate, net radiation and insulation of clothing. It has the advantage of being applicable to manual workers under shelter and expending energy at various metabolic heat rates.

The discomfort map plate 27, page 57, shows the average number of days per year when the relative strain index exceeds 0.3 discomfort level at 3 p.m. assuming standard conditions as defined (see table). Maximum discomfort generally occurs around 3 p.m. on days of high temperature.

A notable feature is the lower frequency of days of discomfort in Queensland coastal areas in comparison with the northern coastal areas of Western Australia. This is due to the onshore winds prevailing on the Queensland coast and the cooling effect of the adjacent eastern uplands. Lower frequencies on the Atherton Plateau in the tropics near Cairns show the advantage of altitude. Relatively low heat discomfort frequencies are evident in upland and coastal areas of south-east Australia. Tasmania is entirely in the zone of least discomfort, experiencing on the average less than one day of heat discomfort per year. In Western Australia most of the Kimberley region in the north lies in the highest discomfort zone with the frequencies decreasing southwards to a strip of lowest discomfort towards the south-west coast. A steep gradiant of discomfort frequency on the west coast shows the moderating effect of sea breezes.

The average annual frequency of days when the relative strain index at 3 p.m. exceeds specified discomfort levels is shown in the table below. The Sydney frequencies were derived from observations at the Regional Office of the Bureau of Meteorology, which is representative of eastern coastal suburbs; frequencies are higher in western suburbs. The Melbourne frequencies were derived from observations at the Bureau's Regional Office, which may be taken as fairly representative of inner northern and eastern suburbs; frequencies are lower in bayside suburbs. Similarly, in other capital city areas significant variations occur with distance from the coast.

HEAT DISCOMFORT

Average number of days per year when relative strain index (RSI) at 3 p.m. exceeds 0.3 (discomfort) and 0.4 (high discomfort) under standard conditions (indoors, manual activities, light clothing, air movement 60 metres per minute).

Station	*Peroid of record*	*Greater than*	
		0.3 RSI	*0.4 RSI*
Adelaide	1955–72	7	1
Albury	1962–71	8	1
Alice Springs	1955–67	50	4
Brisbane	1951–69	6	<1
Broome	1940–72	155	48
Canberra	1940–72	2	<1
Carnarvon	1945–72	23	3
Ceduna	1955–71	16	3
Charleville	1942–72	42	3
Cloncurry	1940–72	126	28
Darwin	1955–69	165	23
Hobart	1944–67	<1	<1
Kalgoorlie	1939–72	30	5
Marble Bar	1957–71	173	69
Melbourne	1955–71	6	1
Mildura	1946–72	19	3
Perth	1944–72	12	1
Rockhampton	1940–72	33	5
Sydney	1955–72	2	<1
Townsville	1941–69	36	4
Woomera	1954–72	25	3

At inland places, relatively low night temperatures have recuperative effects after hot days. Marble Bar, Western Australia (150 km south-east of Port Hedland) for example, has median minima night minimum temperatures 5–10°C lower than Darwin, except in December-February. Even in this latter period, although median minima at both stations are around 25° C, Marble Bar has median vapour pressures and relative humidities much lower than Darwin (by 10 millibars and 30 per cent respectively).

Acclimatised people would suffer discomfort less frequently than shown by the relative strain index figures. For example, Australians living in the north evidently experience less discomfort at high air temperatures than those in the south, if humidities are comparable.

Both direction and speed of prevailing winds are significant for the ventilation of buildings. In the tropics, for instance, windward slopes allow optimal air movement enabling more comfortable ventilation to be obtained. Regular sea breezes such as those experienced at Perth reduce discomfort although on some days their full benefit may not be experienced until after 3 p.m.

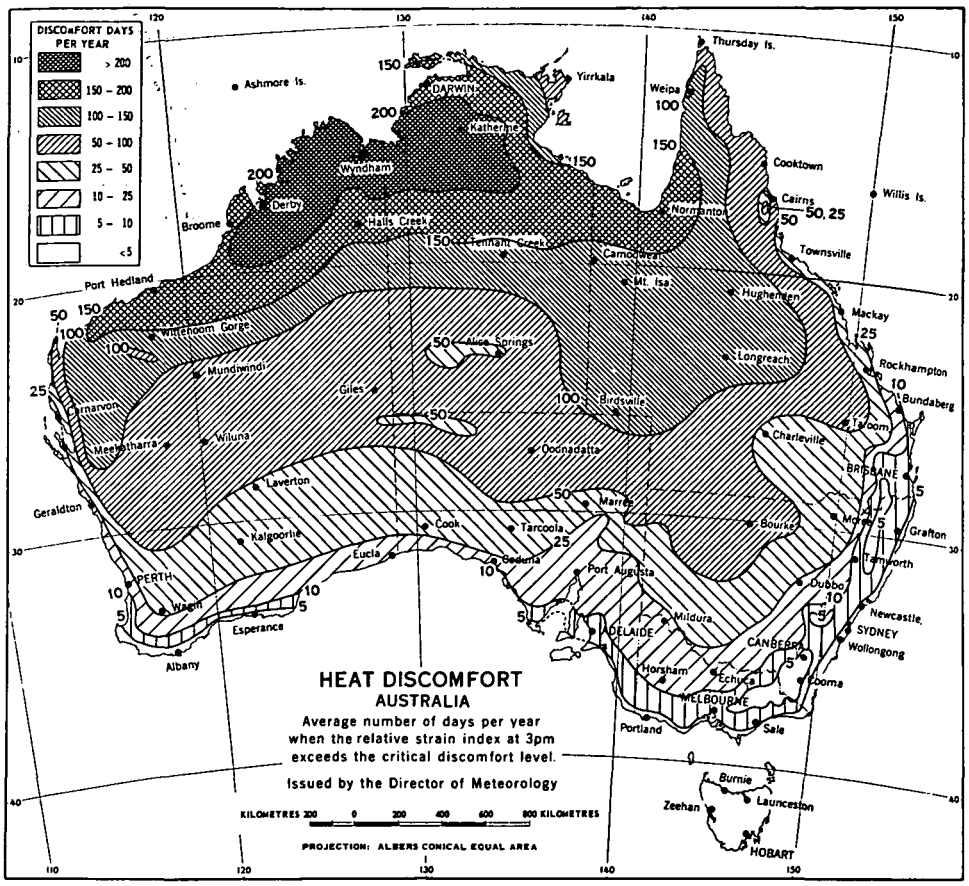


PLATE 27

Climatic data for capital cities

The averages for a number of elements determined from long-period observations at the Australian capitals to 1981 inclusive, are given in the following pages. Extremes generally cover all available data to July 1982 inclusive, whereas averages may only refer to present sites.

CLIMATIC DATA: SYDNEY, NEW SOUTH WALES

(Lat. 33° 52′ S., Long. 151° 12′ E. Height above M.S.L. 42 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 22 metres) Average (km/h)	Highest mean speed in one day (km/h)		Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amt evaporation (mm)	No. days thunder	Mean daily amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days
No. of years of record	72	25(b)		25(b)	62	25(b)	25(b)	7(c)	61	114	91
January	1,012.8	12.3	30.3	10/49	150	NE	NE	217	3.2	4.7	4.9
February	1,014.3	11.6	30.3	18/57	101	NE	ENE	177	2.5	4.8	4.5
March	1,016.4	10.5	33.3	10/44	93	WNW	ENE	157	1.6	4.4	5.7
April	1,018.3	10.2	36.2	24/44	116	W	ENE	126	1.3	4.1	7.5
May	1,018.7	10.5	33.8	18/55	135	W	ENE	94	0.8	3.9	7.7
June	1,018.7	11.6	36.0	10/47	135	W	WSW	85	0.8	4.0	8.0
July	1,018.6	11.5	34.3	20/51	109	W	WSW	93	0.7	3.5	10.7
August	1,017.8	12.1	39.6	9/51	113	WNW	WNW	116	1.3	3.3	10.7
September	1,017.1	11.6	35.1	23/42	131	WNW	NE	141	1.7	3.5	9.0
October	1,015.3	12.3	39.4	1/57	153	WNW	ENE	168	2.7	4.1	6.4
November	1,013.5	12.4	31.9	21/54	114	WNW	ENE	193	3.6	4.5	5.2
December	1,012.1	12.3	36.2	11/52	121	NE	ENE	252	3.8	4.6	4.9
Totals	..	..	..	..	..	..	..	**1,819**	**24.3**	..	**85.1**
Year Averages	**1,016.1**	**11.6**	..	..	..	WNW	ENE	..	..	**4.2**	..
Extremes	..	..	**39.6** 9/8/51		**153**	..	..	..	..	..	..

(a) Scale 0-8. (b) Years 1938-1962 inclusive. (c) Sydney Airport, Class-A Pan (1974-80).

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest		Lowest		Extreme temperature (°Celsius) Highest in sun		Lowest on grass		Mean daily hours sunshine
No. of years of record	123	123	123		123		123		84(a)		124	61
January	25.5	18.4	22.0	45.3	14/39	10.6	18/49	73.5	26/15	6.5	6/25	7.2
February	24.6	18.5	22.0	42.1	8/26	9.6	28/63*	76.3	14/39	6.0	22/33	6.8
March	24.5	17.4	21.0	39.2	3/69*	9.3	14/86*	70.2	10/26	4.4	17/13	6.3
April	22.2	14.5	18.3	33.0	(b)	7.0	27/64*	62.3	10/77*	0.7	24/09	6.3
May	19.4	11.3	15.3	30.0	1/19	4.4	30/62*	54.3	1/96*	-1.5	25/17	5.8
June	16.7	9.1	12.9	26.9	11/31	2.1	22/32	52.1	2/23	-2.2	22/32	5.3
July	15.9	7.9	11.9	25.7	22/26	2.2	12/90*	51.9	19/77*	-4.4	4/93*	6.3
August	17.5	8.8	13.1	30.4	24/54	2.7	3/72*	65.0	30/78*	-3.3	4/09	6.9
September	19.7	10.9	15.3	34.6	26/65	4.9	2/45	61.2	12/78*	-1.1	17/05	7.2
October	21.9	13.4	17.6	37.4	4/42	5.7	6/27	66.8	20/33	0.4	9/05	7.3
November	23.5	15.4	19.4	40.3	6/46	7.7	1/05	70.3	28/99*	1.9	21/67	7.6
December	25.0	17.3	21.1	42.2	20/57	9.1	3/24	73.5	27/89*	5.2	3/24	7.5
Year Averages	**21.4**	**13.6**	**17.4**	..	..	..	..	..	..	..	..	**6.7**
Extremes	..	..	..	**45.3**	14/1/39	**2.1**	22/6/32	**76.3**	14/2/39	**-4.4**	4/7/1893	..

(a) Records discontinued 1946. (b) 1/36 and 10/69.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m. Mean	Highest mean	Lowest mean	Rainfall (millimetres) Mean mthly	Mean no. of days of rain	Greatest monthly		Least monthly		Greatest in one day		Fog mean no. days
No. of years of record	100	106	106	106	123	123	123		123		123		61
January	18.8	67	78	58	102	13	388	1911	6	1932	180	13/11	0.3
February	19.2	70	81	60	115	13	564	1954	3	1939	226	25/73*	0.6
March	18.3	74	85	62	133	14	521	1942	8	1965	281	28/42	1.3
April	15.0	74	87	63	123	13	622	1861	2	1868	191	29/60*	1.9
May	11.9	75	90	63	122	13	585	1919	4	1957	212	28/89*	3.0
June	10.2	75	89	63	133	12	643	1950	4	1962	131	16/84*	2.4
July	9.6	74	88	59	102	11	336	1950	2	1970	198	7/31	1.9
August	9.5	68	84	54	78	11	378	1899	1	1885	140	22/71	1.5
September	11.3	66	79	48	68	11	357	1879	2	1882	145	10/79*	0.9
October	13.0	62	77	46	77	12	283	(a)	2	1971	162	13/02	0.6
November	15.0	61	79	42	79	12	517	1961	2	1915	133	27/55	0.5
December	17.6	64	77	51	78	12	402	1920	3	1979	126	9/70	0.4
Totals	..	..	..	..	**1,215**	**148**	..	..	..	..	..	..	**15.2**
Year Averages	**14.1**	**70**	..	..	..	..	..	..	..	..	..	..	..
Extremes	..	..	**90**	**42**	..	..	**643**	**6/1950**	**1**	**8/1885**	**281** 28/3/1942		..

(a) 1916 and 1959.

Figures such as 10/49, 28/63, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates marked with an asterisk(*) relate to nineteenth century.

CLIMATIC DATA: MELBOURNE, VICTORIA

(Lat. 37° 49′ S., Long. 144° 58′ E. Height above M.S.L. 35 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 28 metres) Average (km/h)	Highest mean speed in one day (km/h)		Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amt evaporation (mm)	No. days thunder	Mean daily amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days
No. of years of record	125	42(b)		69	72	63	63	15(c)	74	125	74
January	1,012.8	12.2	34.0	27/41	106	S	S	213	1.7	4.1	6.6
February	1,014.3	11.8	30.6	13/47	119	S	S	185	1.8	4.0	6.2
March	1,016.8	10.7	29.0	3/61	106	N	S	145	1.3	4.4	5.4
April	1,019.0	10.4	33.7	27/71	108	N	S	95	0.7	4.7	4.2
May	1,019.2	11.0	33.0	4/61	116	N	N	59	0.4	5.2	2.9
June	1,018.9	11.1	36.7	16/47	103	N	N	38	0.2	5.3	2.7
July	1,018.6	12.5	36.9	24/70	109	N	N	46	0.2	5.2	2.5
August	1,017.6	12.3	34.3	20/42	108	N	N	63	0.6	5.1	2.6
September	1,016.0	12.6	34.0	15/64	111	N	S	89	0.8	4.8	3.6
October	1,014.8	12.4	30.4	6/68	111	N	S	130	1.6	4.9	3.4
November	1,013.9	12.7	35.8	8/71	114	SW	S	155	1.9	4.9	3.1
December	1,012.4	12.6	33.8	12/52	104	S	S	198	2.2	4.5	4.2
Year Totals	..	..	..	..	..	..	..	**1,417**	**13.2**	..	**47.6**
Year Averages	**1,016.2**	**12.0**	..	..	..	N	S	..	..	**4.8**	..
Year Extremes	..	..	**36.9**	**24/7/70**	**119**	..	..	..	..	..	..

(a) Scale 0-8. (b) Early records not comparable. (c) Class-A Pan.

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest		Lowest		Extreme temperature (°Celsius) Highest in sun		Lowest on grass		Mean daily hours sunshine
No. of years of record	126	126	126		126		126		86(a)		122	52(b)
January	25.8	14.0	19.9	45.6	13/39	5.6	28/85*	81.4	14/62*	-1.0	28/85*	8.1
February	25.7	14.3	20.0	43.1	7/01	4.6	24/24	75.3	15/70*	-0.6	6/91*	7.5
March	23.7	12.9	18.3	41.7	11/40	2.8	17/84*	73.6	1/68*	-1.7	(c)	6.6
April	20.1	10.6	15.3	34.9	5/38	1.6	24/88*	66.7	8/61*	-3.9	23/97*	5.1
May	16.5	8.4	12.5	28.7	7/05	-1.2	29/16	61.4	2/59*	-6.1	26/16	3.9
June	13.9	6.7	10.3	22.4	2/57	-2.2	11/66*	53.9	11/61*	-6.7	30/29	3.4
July	13.3	5.7	9.5	23.1	30/75	-2.8	21/69*	52.1	27/80*	-6.4	12/03	3.7
August	14.8	6.4	10.6	25.0	20/85*	-2.1	11/63*	58.6	29/69*	-5.9	14/02	4.6
September	17.1	7.7	12.4	31.4	28/28	-0.6	3/40	61.2	20/67*	-5.1	8/18	5.5
October	19.5	9.3	14.4	36.9	24/14	0.1	3/71*	67.9	28/68*	-4.0	22/18	5.9
November	21.8	10.9	16.3	40.9	27/94*	2.4	2/96*	70.9	29/65*	-4.1	2/96*	6.5
December	24.1	12.6	18.4	43.7	15/76	4.4	4/70*	76.8	20/69*	0.7	1/04	7.3
Year Averages	**19.7**	**9.9**	**14.8**	..	..	..	..	..	..	..	..	**5.7**
Year Extremes	..	..	..	**45.6**	**13/1/39**	**-2.8**	**21/7/69***	**81.4**	**14/1/62***	**-6.7**	**30/6/29**	..

(a) Discontinued 1946. (b) Discontinued 1967. (c) 17/1884 and 20/1897.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m. Mean	Highest mean	Lowest mean	Rainfall (millimetres) Mean mthly	Mean no. of days of rain	Greatest monthly		Least monthly		Greatest in one day		Fog mean no. days
No. of years of record	74	74	74	74	126	126		126		126		123	124
January	13.0	61	68	50	48	8	176	1963	(a)	1932	108	29/63	0.1
February	14.1	63	77	48	49	7	238	1972	(a)	1965	87	26/46	0.3
March	13.3	66	79	50	53	9	191	1911	4	1934	90	5/19	0.7
April	11.8	72	82	66	58	11	195	1960	Nil	1923	80	23/60	1.7
May	10.4	78	88	69	58	14	142	1942	4	1934	51	15/74	3.5
June	9.4	83	92	73	50	14	115	1859	8	1858	43	21/04	4.4
July	8.9	81	87	73	48	15	178	1891	9	1979	74	12/91*	4.1
August	9.1	75	82	64	51	15	111	1939	12	1903	54	17/81*	2.2
September	9.5	68	76	59	58	14	201	1916	13	1907	59	23/16	0.8
October	10.5	63	72	52	68	14	193	1869	7	1914	61	21/53	0.4
November	11.4	61	73	52	60	12	206	1954	6	1895	73	21/54	0.2
December	12.5	60	72	48	58	10	182	1863	1	1972	100	4/54	0.2
Totals	..	..	..	..	**659**	**143**	..	..	..	..	..	..	**18.6**
Year Averages	**11.2**	**69**	..	..	..	..	..	..	..	..	..	..	..
Year Extremes	..	..	**92**	**43**	..	..	**238**	**2/72**	**Nil**	**4/23**	**108**	**29/1/63**	..

(a) Less than 1 mm.

Figures such as 27/41, 28/85, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates marked with an asterisk (*) relate to nineteenth century.

CLIMATIC DATA: BRISBANE, QUEENSLAND

(Lat. 27° 28′ S., Long. 153° 2′ E. Height above M.S.L. 41 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 32 metres) Average (km/h)	Highest mean speed in one day (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amt evaporation (mm)	No. days thunder	Mean daily amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days
No. of years of record	95	67	67	67	25(b)	25(b)	15(c)	95	95	74
January	1,011.7	11.9	31.8 23/47	109	SE	NE	181	4.4	4.9	3.2
February	1,012.5	11.6	37.3 21/54	108	SW	E	144	3.5	5.1	2.4
March	1,014.6	11.2	32.7 1/29	106	SW	SE	143	2.2	4.7	5.6
April	1,017.2	10.2	26.8 3/25	104	SW	SE	117	1.4	3.9	7.7
May	1,018.5	9.6	28.8 17/26	87	SW	SE	82	0.5	3.8	9.7
June	1,018.3	9.9	30.5 14/28	95	SW	W	65	0.5	3.6	10.4
July	1,018.9	9.6	35.4 13/54	111	SW	W	72	0.3	3.1	13.3
August	1,018.8	9.8	23.8 4/35	100	SW	NE	100	1.3	2.9	13.5
September	1,017.9	10.2	25.9 1/48	102	SW	NE	131	2.6	3.1	12.4
October	1,016.1	10.8	25.3 1/41	100	SW	NE	157	4.2	3.7	8.2
November	1,014.1	11.2	24.9 10/28	111	SE	NE	175	5.7	4.2	5.9
December	1,012.1	11.6	31.3 15/26	127	SE	NE	199	6.5	4.5	4.5
Year Totals	..	..	.. ..	..	..	..	1,565	33.3	..	97.1
Year Averages	1,015.9	10.6	.. ..	..	SW	ENE	..	..	4.0	..
Year Extremes	..	..	37.3 21/2/54	127	..	..	..	..	..	..

(a) Scale 0–8. (b) 1951–1976. (c) Class-A Pan.

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest		Lowest		Extreme temperature (°Celsius) Highest in sun		Lowest on grass		Mean daily hours sunshine
No. of years of record	95		95		95		95		50(a)		94	73
January	29.4	20.7	25.0	43.2	26/40	14.9	4/93*	76.2	2/37	9.9	4/93*	7.6
February	29.0	20.6	24.7	40.9	21/25	14.7	23/31	74.0	6/10	9.5	22/31	7.0
March	27.9	19.4	23.6	38.8	13/65	11.3	29/13	72.5	6/39	7.4	29/13	6.8
April	26.1	16.6	21.3	36.1	19/73	6.9	25/25	67.7	11/16	2.6	24/25	7.2
May	23.2	13.3	18.3	32.4	21/23	4.8	30/51	63.9	1/10	-1.2	8/97*	6.8
June	20.8	10.9	15.8	31.6	19/18	2.4	29/08	57.8	3/18	-3.7	23/88*	6.6
July	20.4	9.5	15.0	29.1	23/46	2.3	(b)	63.4	20/15	-4.5	11/90*	7.0
August	21.8	10.3	16.0	32.8	14/46	2.7	13/64	61.1	20/17	-2.7	9/99*	8.0
September	24.0	12.9	18.4	38.3	22/43	4.8	1/96*	68.6	26/03	-0.9	1/89*	8.3
October	26.1	15.8	20.9	40.7	30/58	6.3	3/99*	69.7	31/18	1.6	8/89*	8.2
November	27.8	18.2	22.9	41.2	18/13	9.2	2/05	72.4	7/89*	3.8	1/05	8.2
December	29.1	19.9	24.5	41.2	7/81	13.5	5/55	74.4	28/42	9.5	3/94*	8.2
Year Averages	25.5	15.7	20.5	..	..	..	..	..	..	..	..	7.5
Year Extremes	..	..	..	43.2	26/1/1940	2.3	..	76.2	2/1/1937	-4.5	11/7/1890	..

(a) 1887–1926, 1936–March 1947. (b) 12/1894 and 2/1896.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m. Mean	Highest mean	Lowest mean	Rainfall (millimetres) Mean mthly	Mean no. of days of rain	Greatest monthly		Least monthly		Greatest in one day		Fog mean no. days
No. of years of record	95	95	95	95	130	122	130		130		130		95
January	21.8	66	79	53	165	13	872	1974	8	1919	465	21/87*	0.5
February	22.1	69	82	55	164	14	1,026	1893	15	1849	270	6/31	0.5
March	21.1	71	85	56	145	15	865	1870	Nil	1849	284	14/08	1.1
April	17.5	70	80	56	86	11	388	1867	1	1944	178	3/72	2.1
May	14.3	71	85	59	71	9	410	1980	Nil	1846	149	9/80	2.9
June	12.0	72	84	54	68	8	647	1967	Nil	1847	283	12/67	2.8
July	10.9	70	88	53	56	7	330	1973	Nil	(a)	193	20/65	2.8
August	11.5	66	80	53	46	7	373	1879	Nil	(b)	124	12/87*	3.4
September	13.5	62	76	47	47	8	138	1886	(c)	(d)	80	12/65	2.4
October	15.9	60	72	48	75	9	456	1972	(c)	1948	136	25/49	1.1
November	18.2	60	72	45	99	10	413	1981	Nil	1842	143	8/66*	0.5
December	20.3	62	70	51	130	12	441	1942	9	1865	168	28/71*	0.3
Year Totals	..	..	..	..	1,153	123	..	..	..	..	..	..	20.5
Year Averages	16.3	67	..	..	..	..	..		..	..	..		..
Year Extremes	..	..	88	45	..	..	1,026	2/1893	Nil	Various	465	21/1/1887	..

(a) 1841 and 1951. (b) 1862, 1869, 1880 and 1977. (c) Less than 1 mm.

Figures such as 23/47, 4/93, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates marked with an asterisk (*) relate to nineteenth century.

CLIMATIC DATA: ADELAIDE, SOUTH AUSTRALIA

(Lat. 34° 46′ S., Long. 138° 35′ E. Height above M.S.L. 43 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 22 metres) Average (km/h)	Highest mean speed in one day (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amt evaporation (mm)	No. days thunder	Mean daily amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. of clear days
No. of years of record	121	20(b)	20(b)	20	63	24(c)	24(c)	12(d)	105	162	62
January	1,013.2	12.8	32.2	12/70	116	SW	SW	254	1.5	3.0	11.9
February	1,014.3	12.1	28.8	25/67	106	SSW	SW	216	1.1	3.0	10.8
March	1,017.2	11.4	30.7	24/64	126	NE	SW	180	0.8	3.2	10.7
April	1,019.9	11.4	37.4	10/56	130	NE	WSW	120	1.0	4.2	6.7
May	1,020.1	11.3	37.8	19/53	113	NE	WSW	79	1.0	4.7	4.5
June	1,019.9	11.6	29.7	16/70	108	NE	NW	56	0.9	5.0	3.8
July	1,020.8	11.8	32.9	13/64	148	NE	N	60	0.8	4.9	3.5
August	1,019.0	12.8	38.2	8/55	121	NE	W	78	1.1	4.2	4.6
September	1,017.7	13.2	34.9	16/65	111	NE	W	110	1.3	4.3	5.5
October	1,016.0	13.6	35.4	1/68	121	NE	WSW	164	1.9	4.3	5.6
November	1,015.0	13.9	36.3	14/68	130	SW	SW	196	2.0	3.9	6.5
December	1,013.3	13.5	31.1	18/69	121	WSW	SW	242	1.5	3.4	8.7
Totals	..	..	..	..	..	..	..	**1,751**	**14.9**	..	**82.6**
Year Averages	**1,017.1**	..	..	..	..	NE	SW	..	..	**4.0**	..
Extremes	..	..	**38.2**	**8/8/65**	**148**	..	..	..	..	..	..

(a) Scale 0–8. (b) Records of cup anemometer. (c) 1955–1978. (d) Class-A Pan.

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest		Lowest		Extreme temperature (°Celsius) Highest in sun		Lowest on grass		Mean daily hours sunshine
No. of years of record	122	122	122		125		125		54(a)		119	95
January	29.5	16.4	23.0	47.6	12/39	7.3	21/84*	82.3	18/82*	1.8	3/77	10.0
February	29.3	16.6	23.0	45.3	12/99*	7.5	23/18	76.9	10/00	2.1	23/26	9.3
March	26.8	15.1	21.0	43.6	9/34	6.6	21/33	78.9	17/83*	0.1	21/33	7.9
April	22.7	12.6	17.7	37.0	5/38	4.2	15/59*	68.3	1/83*	-3.5	30/77	6.0
May	18.7	10.3	14.5	31.9	4/21	2.7	(b)	64.6	12/79*	-3.6	19/28	4.8
June	15.8	8.3	12.1	25.6	4/57	0.3	(c)	59.3	18/79*	-6.1	24/44	4.2
July	15.0	7.3	11.1	26.6	29/75	-0.4	8/82(d)	56.9	26/90*	-5.5	30/29	4.3
August	16.4	7.8	12.1	29.4	31/11	0.2	17/59*	60.0	31/92*	-5.1	11/29	5.3
September	18.9	9.0	13.9	35.1	30/61	0.4	4/58*	71.4	23/82*	-3.9	25/27	6.2
October	22.0	10.9	16.5	39.4	21/22	2.3	20/58*	72.2	30/21	-3.0	22/66	7.2
November	25.1	12.9	19.1	45.3	21/65*	4.9	2/09	74.9	20/78*	-0.6	17/76	8.6
December	27.7	15.0	21.3	45.9	29/31	6.1	(e)	79.8	7/99*	-1.0	19/76	9.4
Year Averages	**22.3**	**11.9**	**17.1**	..	..	..	..	..	..	..	..	**6.9**
Extremes	..	..	..	**47.6**	**12/1/39**	**-0.4**	**24/7/08**	**82.3**	**18/1/62**	**-6.1**	**24/6/44**	..

(a) Discontinued 1934 incomplete 1931–1934. (b) 26/1895 and 24/04. (c) 27/1876 and 24/44. (d) Recorded at Kent Town. (e) 16/1861 and 4/06.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m. Mean	Highest mean	Lowest mean	Rainfall (millimetres) Mean mthly	Mean no. of days of rain	Greatest monthly		Least monthly		Greatest in one day		Fog mean no. days
No. of years of record	108	111	111	111	140	140		140		140		140	77
January	11.9	42	59	29	20	4	84	1941	Nil	(a)	58	2/89*	0.0
February	12.5	44	63	30	21	4	155	1925	Nil	(a)	141	7/25	0.0
March	12.0	48	62	29	24	5	117	1878	Nil	(a)	89	5/78*	0.0
April	11.5	57	72	37	44	9	154	1971	Nil	1945	80	5/60*	0.0
May	10.8	67	77	49	68	13	197	1875	3	1934	70	1/53*	0.4
June	10.0	75	84	63	72	15	218	1916	6	1958	54	1/20	1.1
July	9.5	76	87	66	66	16	138	1890	10	1899	44	10/65*	1.3
August	9.7	70	80	54	61	15	157	1852	8	1944	57	19/51*	0.6
September	10.0	61	72	44	51	13	148	1923	7	1951	40	20/23	0.2
October	10.2	52	67	29	44	11	133	1949	1	1969	57	16/08	0.0
November	10.5	45	64	31	31	8	113	1839	1	1967	75	12/60	0.0
December	11.3	42	56	31	26	6	101	1861	Nil	1904	61	23/13	0.0
Totals	..	..	..	..	**528**	**119**	..	..	..	..	..	..	**3.6**
Year Averages	**10.5**	**56**	..	..	..	..	..	..	..	..	..	..	..
Extremes	..	..	**87**	**29**	..	..	**218**	**6/1916**	**Nil**	(b)	**141**	**7/2/25**	..

(a) Various years. (b) December to April, various years.

Figures such as 3/55, 21/84, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates marked with an asterisk(*) relate to nineteenth century.

Note: In February 1977, the Adelaide Regional Office of the Bureau of Meteorology moved from West Terrace to Kent Town. Averages presented in this table are calculated from the observations recorded at West Terrace. Extremes recorded at Kent Town are marked.

CLIMATIC DATA: PERTH, WESTERN AUSTRALIA

(Lat. 31° 57′ S., Long. 115° 51′ E. Height above M.S.L. 19.5 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 22 metres) Average (km/h)	Highest mean speed in one day (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amt evaporation (mm)	No. days thunder	Mean daily amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days
No. of years of record	94	30(b)	82	68	30(b)	30(b)	12(c)	82	30(b)	30(b)
January	1,012.6	17.5	48.2 26/76*	81	E	SSW	285	0.9	2.3	14
February	1,013.0	17.2	40.8 4/73	113	ENE	SSW	242	0.7	2.5	13
March	1,015.2	16.2	51.9 28/75	113	E	SSW	213	0.7	2.8	12
April	1,017.9	13.7	50.7 25/00	130	ENE	SSW	132	0.9	3.4	9
May	1,017.9	13.5	44.5 8/73	119	NE	WSW	94	1.7	4.3	6
June	1,017.6	13.5	48.6 17/27	129	N	NW	69	1.8	4.7	5
July	1,018.8	14.2	53.9 20/26	137	NNE	W	75	1.5	4.5	5
August	1,018.8	15.1	51.3 15/03	156	N	WNW	87	1.3	4.5	6
September	1,018.4	15.1	45.9 11/05	109	ENE	SSW	118	0.7	3.9	8
October	1,017.0	16.1	43.0 6/16	105	SE	SW	173	0.7	3.8	8
November	1,015.5	17.2	48.2 26/75*	101	E	SW	216	0.8	3.1	9
December	1,013.4	17.7	44.5 24/75	103	E	SSW	275	0.9	2.6	13
Year Totals	..	..	.. ..	..	..	..	1,979	12.6	..	108
Year Averages	1,016.4	15.6	.. ..	..	E	SSW	..	..	3.5	..
Year Extremes	..	..	53.9 20/7/26	156	..	..	..	..	..	..

(a) Scale 0-8. (b) Standard thirty years normal (1911–1940). (c) Class-A Pan.

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest		Lowest		Extreme temperature (°Celsius) Highest in sun		Lowest on grass		Mean daily hours sunshine
No. of years of record	85	85	85		85		85		63(a)		84	81
January	29.6	17.7	23.5	44.7	12/78	9.2	20/25	80.7	22/14	4.2	20/25	10.5
February	29.9	17.9	23.7	44.6	8/33	8.7	1/02	78.7	4/34	4.3	1/13	10.1
March	27.8	16.6	22.2	41.3	14/22	7.7	8/03	75.0	19/18	2.6	(b)	9.0
April	24.5	14.1	19.2	37.6	9/10	4.1	20/14	69.4	8/16	-0.7	26/60	7.4
May	20.7	11.6	16.1	32.4	2/07	1.3	11/14	63.3	4/25	-3.9	31/64	5.9
June	18.2	9.9	14.1	28.1	5/75	1.6	22/55	57.5	9/14	-3.4	27/46	4.9
July	17.3	9.0	13.2	26.3	17/76	1.2	7/16	56.2	13/15	-3.8	30/20	5.3
August	17.9	9.1	13.5	27.8	21/40	1.9	31/08	62.3	29/21	-3.0	18/66	6.2
September	19.4	10.1	14.8	32.7	30/18	2.6	6/56	67.5	29/16	-2.7	(c)	7.2
October	21.2	11.5	16.3	37.3	29/67	4.2	6/68	71.8	19/54	-1.2	16/31	8.3
November	24.6	14.0	19.2	40.3	24/13	5.6	1/04	75.0	30/25	-1.1	6/71	9.7
December	27.3	16.2	21.7	42.3	31/68	8.6	29/57	76.0	11/27	3.3	29/57	10.6
Year Averages	23.2	13.1	18.2	..	..	..	..	..	..	..	..	7.9
Year Extremes	..	..	..	44.7	12/1/78	1.2	7/7/16	80.7	22/1/14	-3.9	31/5/64	..

(a) Records discontinued 1963. (b) 8/1903 and 16/1967. (c) 8/1952 and 6/1956.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m. Mean	Highest mean	Lowest mean	Rainfall (millimetres) Mean mthly	Mean no. of days of rain	Greatest monthly		Least monthly		Greatest in one day		Fog mean no. days
No. of years of record	30(a)	30(a)	85	85	106	102		106		106		102	79
January	14.8	51	63	41	8	3	55	1879	Nil	(b)	44	27/79*	0.2
February	14.7	51	65	43	12	3	166	1955	Nil	(b)	87	17/55	0.3
March	14.7	57	66	46	20	4	145	1934	Nil	(b)	77	9/34	0.6
April	13.4	61	75	51	45	8	149	1926	Nil	1920	67	30/04	0.9
May	12.4	70	81	60	124	14	308	1879	14	1964	76	17/42	1.3
June	11.4	75	85	68	183	17	476	1945	55	1877	99	10/20	1.4
July	10.9	76	88	69	174	18	425	1958	61	1876	76	4/91*	1.6
August	10.7	71	83	62	137	17	318	1945	12	1902	74	14/45	1.0
September	11.6	66	75	58	80	14	199	1923	9	1916	47	18/66	0.3
October	11.7	60	75	52	55	11	200	1890	1	1969	55	1/75	0.4
November	12.7	52	66	41	21	6	71	1916	Nil	1891	39	29/56	0.2
December	13.9	51	63	39	14	4	81	1951	Nil	(b)	47	3/51	0.2
Year Totals	..	..	..	..	873	119	..	..	..	..	..	..	8.1
Year Averages	12.7	62	..	..	..	..	..	..	..	..	..	..	..
Year Extremes	..	..	88	39	..	..	476	6/1945	Nil	(b)	99	10/6/20	..

(a) Standard thirty years normal (1911–1940). (b) Various years.

Figures such as 26/76, 29/56, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates marked with an asterisk (*) relate to nineteenth century.

CLIMATIC DATA: HOBART, TASMANIA

(Lat. 42° 53′ S., Long. 147° 20′ E. Height above M.S.L. 54 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 12 metres) Average (km/h)	Highest mean speed in one day (km/h)		Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amt evaporation (mm)	No. days thunder	Mean daily amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. of clear days
No. of years of record	96	71		71	96	30(b)	30(b)	16(c)	72	97	30(b)
January	1,010.6	12.7	33.5	30/16	130	NNW	SSE	159	1.0	5.0	1.9
February	1,012.9	11.5	40.6	4/27	121	NNW	SSE	131	0.9	4.9	2.3
March	1,014.3	11.0	34.4	13/38	127	NW	SSE	103	0.8	4.9	2.4
April	1,015.4	11.1	38.8	9/52	141	NW	W	67	0.3	5.0	1.7
May	1,015.5	10.5	35.4	21/65	135	NNW	NW	38	Nil	5.0	2.4
June	1,015.3	10.2	38.2	27/20	132	NW	NW	22	Nil	5.0	2.4
July	1,014.0	10.9	36.9	22/53	129	NNW	NNW	27	Nil	4.8	2.0
August	1,012.8	11.1	41.0	19/26	140	NNW	NW	46	0.1	4.9	2.1
September	1,011.4	12.6	43.0	28/65	150	NNW	NW	73	0.1	5.0	1.5
October	1,010.4	12.7	32.4	3/65	140	NNW	SW	109	0.4	5.2	1.0
November	1,009.8	12.9	34.1	18/15	135	NNW	S	126	0.6	5.3	1.3
December	1,009.3	12.6	37.7	1/34	122	NNW	SSE	152	0.8	5.3	1.1
Year Totals	..	..	..	..	..	..	..	**1,053**	**5.0**	..	**22.1**
Year Averages	**1,012.7**	**11.7**	..	..	..	NNW	W	..	..	**5.0**	..
Year Extremes	..	..	**43.0** 28/9/65		**150**	..	..	..	..	..	..

(a) Scale 0–8. (b) Standard thirty years normal (1911–1940). (c) Class-A Pan.

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest		Lowest		Extreme temperature (°Celsius) Highest in sun		Lowest on grass		Mean daily hours sunshine
No. of years of record	98	98	98		101		101		57(a)		95	86
January	21.4	11.6	16.5	40.8	4/76	4.5	9/37	71.1	(b)	-0.8	19/97*	7.9
February	21.5	11.8	16.6	40.2	12/99*	3.4	10/80*	73.9	24/68*	-2.0	—/87*	7.1
March	20.0	10.6	15.2	37.3	13/40	1.8	31/26	66.1	26/44	-2.5	30/02	6.3
April	17.1	8.8	12.9	30.6	1/41	0.6	14/63	61.1	18/93*	-3.9	—/86*	5.1
May	14.2	6.7	10.5	25.5	5/21	-1.6	30/02	53.3	(c)	-6.7	19/02	4.2
June	11.8	5.1	8.5	20.6	1/07	-2.8	25/72	50.0	12/94*	-7.7	24/63	3.9
July	11.5	4.4	7.9	21.0	30/75	-2.8	11/81	49.4	12/93*	-7.5	1/78	4.3
August	12.8	5.1	9.0	24.5	26/77	-1.8	5/62	54.4	—/87*	-6.6	7/09	5.0
September	14.9	6.2	10.6	28.2	29/73	-0.6	16/97*	58.9	23/93*	-7.6	16/26	5.8
October	16.8	7.6	12.2	33.4	24/14	0.0	12/89*	68.9	9/93*	-4.6	(d)	6.2
November	18.5	9.0	13.7	36.8	26/37	1.6	16/41	55.6	19/92*	-3.4	1/08	6.9
December	20.2	10.6	15.4	40.7	30/97*	3.3	3/06	71.9	10/39	-2.6	—/86*	7.3
Year Averages	**16.7**	**8.1**	**12.4**	..	..	..	..	..	..	..	..	**5.8**
Year Extremes	..	..	..	**40.8** 4/1/1976		**-2.8** 11/7/81		**73.9** 24/2/1868		**-7.7** 24/6/1963		..

(a) Period 1934–1938 not comparable; records discontinued 1946. (b) 05/1886 and 13/1905. (c) —/1899 and —/1893. (d) 1/1886 and 1/1899.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m. Mean	Highest mean	Lowest mean	Rainfall (millimetres) Mean mthly	Mean no. of days of rain	Greatest monthly		Least monthly		Greatest in one day		Fog mean no. days
No. of years of record	77(a)	88	89	89	100	100		101		101		101	69
January	11.0	59	81	45	48	11	150	1893	4	1958	75	30/16	0.1
February	11.7	63	83	49	41	10	171	1964	3	1914	56	1/54	Nil
March	11.0	65	78	52	47	11	255	1946	7	1943	88	17/46	0.3
April	10.0	70	84	57	54	13	248	1960	2	1904	133	23/60	0.3
May	8.8	75	86	61	49	14	214	1958	4	1913	47	3/73	1.1
June	7.9	78	91	61	58	15	238	1954	2	1979	147	7/54	1.7
July	7.6	78	87	72	53	15	157	1974	4	1950	64	18/22	1.4
August	7.9	73	86	59	52	16	161	1946	8	1892	65	2/76	0.6
September	8.3	66	81	52	52	15	201	1957	10	(e)	156	15/57	0.2
October	9.1	62	74	52	63	17	193	1947	10	1914	66	4/06	0.1
November	9.6	59	73	49	56	14	188	1885	9	(c)	94	30/85*	0.1
December	10.6	58	73	42	56	13	196	1916	5	(d)	85	5/41	0.1
Year Totals	..	..	..	..	**629**	**164**	..	..	..	..	..	..	**6.0**
Year Averages	**9.5**	**67**	..	..	..	..	..	..	..	..	..	..	..
Year Extremes	..	..	**91**	**42**	..	..	**255** 3/1946		**2**	(b)	**156** 15/9/57		..

(a) 1894–1970. (b) 4/1904 and 6/1979. (c) 1919 and 1921. (d) 1897, 1915 and 1931. (e) 1891 and 1951.

Figures such as 30/16, 12/99, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates marked with an asterisk (*) relate to nineteenth century.

CLIMATIC DATA: DARWIN, NORTHERN TERRITORY

(Lat. 12° 28′ S., Long. 130° 51′ E. Height above M.S.L. 30 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 36 metres) Average (km/h)	Highest mean speed in one day (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amt evaporation (mm)	No. days thunder	Mean daily amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. of clear days
No. of years of record	95	25		29(b)			13(c)	40	40	40
January	1,006.4	9.3	..	106	W	NW	185	13.9	5.9	Nil
February	1,006.4	10.6	..	101	W	NW	162	10.2	5.8	Nil
March	1,007.6	7.5	..	157	W	NW	172	10.6	5.2	1
April	1,009.6	8.8	..	67	SE	NW	189	4.0	2.9	4
May	1,010.9	9.6	..	62	SE	E	200	0.5	2.0	8
June	1,012.6	10.1	..	64	SE	E	189	Nil	1.4	13
July	1,013.1	8.9	..	62	SE	E	201	Nil	1.3	20
August	1,012.6	8.6	..	72	SE	NW	203	Nil	1.1	20
September	1,012.1	8.6	..	64	ENE	NW	232	1.0	1.8	11
October	1,010.6	9.8	..	85	NE	NW	254	5.3	2.7	6
November	1,008.7	8.6	..	117	NW	NW	230	11.8	3.9	2
December	1,007.4	9.8	..	217	NW	NW	205	14.2	4.9	2
Year Totals	..	..	..	..	..	..	**2,422**	**70.5**	..	**87**
Year Averages	**1,009.8**	**9.2**	..	..	SE	NW	..	..	**3.2**	..
Year Extremes	..	..	..	**217**	..	..	..	..	..	..

(a) Scale 0–8. (b) Several incomplete years. (c) Class-A Pan.

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest		Lowest		Extreme temperature (°Celsius) Highest in sun	Lowest on grass	Mean daily hours sunshine
No. of years of record	95	95	95		100(a)		100(a)	26(b)		26
January	31.7	24.7	28.2	37.8	2/82*	20.0	20/92*	75.6 26/42	..	5.9
February	31.4	24.5	27.9	38.3	20/87*	17.2	25/49	73.2 (c)	..	5.9
March	31.8	24.3	28.0	38.9	(d)	19.2	31/45	74.3 23/38	..	6.8
April	32.6	23.8	28.2	40.0	7/83*	16.0	11/43	72.8 1/38	..	8.6
May	31.8	21.8	26.8	39.1	8/84*	14.2	28/67	71.2 5/20	..	9.3
June	30.4	19.8	25.1	39.0	17/37	12.1	23/63	68.5 2/16	..	9.7
July	30.3	19.2	24.7	36.7	17/88*	10.4	29/42	68.9 28/17	..	9.8
August	31.2	20.5	25.8	37.0	30/71*	13.6	11/63	69.1 28/16	..	10.4
September	32.4	23.0	27.7	38.9	20/82*	16.7	9/63	69.5 (e)	..	10.0
October	33.0	24.9	28.9	40.5	17/92*	19.4	8/66	71.4 30/38	..	9.5
November	33.1	25.2	29.1	39.6	9/84*	19.3	4/50	77.0 14/37	..	8.6
December	32.5	25.1	28.8	38.9	20/82*	18.3	4/60	76.2 26/23	..	7.1
Year Averages	**31.8**	**23.1**	**27.4**	..	..	..	..	.. ..	..	**8.5**
Year Extremes	..	..	..	**40.5**	**17/10/1892**	**10.4**	**29/7/1942**	**77.0** **14/11/37**	..	..

(a) Years 1882–1941 at Post Office; 1942–1981 at Aerodrome; 1967–1973 at Regional office; sites not strictly comparable. (b) Records discontinued 1942. (c) 5/1938 and 23/1938. (d) 26/1883 and 27/1883. (e) 28/1916 and 3/1921.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m. Mean	Highest mean	Lowest mean	Rainfall (millimetres) Mean mthly	Mean no. of days of rain	Greatest monthly		Least monthly		Greatest in one day		Fog mean no. days
No. of years of record	85(a)	95	40(b)	40(b)	86(c)	79	116(d)		116(d)		116(d)		40
January	31.1	82	92	77	391	20	906	1981	68	1906	296	7/97*	Nil
February	31.1	84	89	77	330	20	815	1969	13	1931	279	18/55	Nil
March	30.7	84	97	76	260	19	1,014	1977	21	1911	241	16/77	Nil
April	27.0	76	88	66	103	8	603	1891	Nil	1950	158	4/59	Nil
May	21.8	68	80	50	14	1	356	1968	Nil	(e)	58	23/79	Nil
June	18.7	64	79	50	3	Nil	76	1973	Nil	(e)	36	0/02	0.4
July	17.6	64	75	48	1	Nil	65	1900	Nil	(e)	43	12/00	1.1
August	20.6	69	90	56	2	Nil	84	1947	Nil	(e)	80	2/47	0.8
September	24.7	71	82	64	13	2	130	1981	Nil	(e)	71	21/42	0.2
October	27.7	71	80	62	50	6	339	1954	Nil	(e)	95	28/56	Nil
November	29.3	73	80	67	126	11	399	1938	10	1870	120	19/51	Nil
December	30.5	77	83	72	243	17	665	1974	25	1934	279	25/74	Nil
Year Totals	..	..	..	..	**1,536**	**104**	..	..	..	..	..	..	**2.5**
Year Averages	**25.9**	**73**	..	..	..	..	..	..	..	..	..	..	..
Year Extremes	..	..	**89**	**47**	..	..	**1,014**	**3/77**	**Nil**	(f)	**296**	**7/1/1897**	..

(a) 1882-1941 at Post Office; 1942–1966 at Aerodrome; vapour pressure records discontinued after 1966. (b) 1942–1981 at Aerodrome. (c) 1869–1962 at Post Office; 8 years missing. (d) Highest or lowest at either Post Office, Aerodrome or Regional Office Sites. Regional Office (1964–1973). (e) Various years. (f) April to October. Various years.

Figures such as 2/82, 26/42, etc. indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to nineteenth century.

CLIMATIC DATA: CANBERRA, AUSTRALIAN CAPITAL TERRITORY

(Lat. 35° 19′ S., Long. 149° 11′ E. Height above M.S.L. 577 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 10 metres) Average (km/h)		Highest mean speed in one day (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amt evaporation (mm)	No. days thunder	Mean daily amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days
No. of years of record	43	48(b)		48(b)	43(c)	43(c)	43(c)	16(d)	43	43	43(e)
January	1,012.0	6.6	24	24/33	121	NW	NW	251	3.4	4.1	7.5
February	1,013.2	6.0	25	24/33	104	SE	NW	197	3.2	4.3	6.3
March	1,015.9	5.3	29	28/42	111	SE	NW	171	1.9	4.2	7.1
April	1,018.8	4.9	30	8/45	106	NW	NW	107	0.9	4.2	7.1
May	1,019.3	4.5	21	27/58	104	NW	NW	71	0.4	4.5	6.5
June	1,020.7	4.9	26	2/30	96	NW	NW	49	0.2	4.6	6.1
July	1,020.2	5.1	38	7/31	102	NW	NW	54	0.2	4.4	6.8
August	1,018.5	5.9	25	25/36	113	NW	NW	69	0.7	4.3	6.6
September	1,017.4	6.0	28	28/34	107	NW	NW	111	1.2	4.1	7.5
October	1,015.0	6.5	23	12/57	121	NW	NW	159	2.2	4.3	6.0
November	1,012.0	6.9	28	28/42	128	NW	NW	194	3.5	4.4	5.5
December	1,010.6	7.0	26	11/38	106	NW	NW	266	3.4	4.1	7.4
Totals	..	..	..	..	..	..	..	**1,697**	**21.2**	..	**80.4**
Year Averages	**1,016.1**	**5.8**	..	..	..	**NW**	**NW**	..	..	**4.3**	**6.7**
Year Extremes	..	..	**38**	**7/7/31**	**128**	..	..	..	..	..	..

(a) Scale 0–8. (b) Recorded at Forestry and Timber Bureau, Yarralumla, where a cup anemometer is installed. (c) Recorded at Meteorological office, R.A.A.F. Fairbairn, where a Dines Pressure Tube anemometer is installed. (d) Class-A Pan. (e) 1940–82. Formerly assessed over 37 year period at Yarralumla.

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest		Lowest		Extreme temperature (°Celsius) Highest in sun	Lowest on grass		Mean daily hours sunshine
No. of years of record	43	43	43		43		43			30	41(a)
January	27.6	13.1	20.3	41.4	31/68	1.8	1/56	..	-0.4	1/56	8.9
February	26.8	12.8	19.8	42.2	1/68	3.0	16/62	..	0.2	17/70	8.2
March	24.4	10.6	17.5	36.4	9/40	-1.1	24/67	..	-4.0	(b)	7.4
April	19.7	6.4	13.1	32.6	12/68	-3.6	27/78	..	-8.3	24/69	6.9
May	15.0	2.9	8.9	24.5	10/67	-7.5	30/76	..	-10.4	26/69	5.6
June	12.1	0.9	6.5	20.1	3/57	-8.5	8/57	..	-13.4	25/71	4.8
July	11.1	-0.3	5.4	19.7	29/75	-10.0	11/71	..	-15.1	11/71	5.2
August	12.7	0.8	6.7	21.6	24/54	-7.8	6/74	..	-12.8	11/69	6.1
September	15.9	2.9	9.4	28.6	26/65	-5.6	5/40	..	-10.6	12/71	7.4
October	19.1	5.9	12.5	32.7	13/46	-3.3	4/57	..	-6.2	4/57	7.9
November	22.4	8.4	15.4	38.8	19/44	-1.8	28/67	..	-6.3	28/67	8.7
December	26.2	11.1	18.7	38.8	21/53	1.1	18/64	..	-3.9	18/64	9.1
Year Averages	**19.4**	**6.3**	**12.9**	..	..	..	..	..	..	..	**7.2**
Year Extremes	..	..	..	**42.2(c)**	**1/2/68**	**-10.0**	**11/7/71**	..	**-15.1**	**11/7/71**	..

(a) Recorded at Forestry and Timber Bureau, Yarralumla. (b) 30/58 and 24/67. (c) Acton 42.8 on 11/1/39.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Rel. hum (%) at 9 a.m. Mean	Highest mean	Lowest mean	Rainfall (millimetres) Mean mthly	Mean no. of days of rain	Greatest monthly		Least monthly		Greatest in one day		Fog mean no. days
No. of years of record	43(a)	43	43	43	43	43		43		43		43	43
January	13.1	60	75	42	61	8	164	1941	1	1947	95	12/45	1.0
February	14.0	67	81	53	61	7	148	1977	Nil	1968	69	20/74	1.0
March	12.3	69	81	53	53	7	312	1950	1	1954	92	21/78	2.7
April	10.7	75	84	38	48	7	164	1974	1	1980	75	2/59	4.2
May	8.7	84	96	73	49	9	150	1953	Nil	1982	96	3/48	7.3
June	7.1	85	97	73	39	9	126	1956	4	1979	45	25/56	7.7
July	6.6	84	93	68	38	10	103	1960	4	(a)	35	10/57	7.9
August	7.1	80	92	58	45	12	156	1974	7	1944	48	29/74	5.0
September	8.1	72	82	55	52	10	151	1978	6	1946	43	8/78	3.8
October	9.3	65	82	50	69	12	161	1976	2	1977	105	21/59	3.0
November	10.7	61	76	38	62	10	135	1961	4	1977	64	9/50	1.3
December	12.3	59	74	43	52	8	215	1947	Nil	1967	87	30/48	0.6
Totals	..	..	..	..	**629**	**108**	..	..	..	..	..	..	**45.5**
Year Averages	**10.0**	**72**	..	..	..	..	..	..	..	..	..	..	..
Year Extremes	..	..	**97**	**38**	..	..	**312**	**3/50**	**Nil**	(b)	**105**	**21/10/59**	..

(a) 1970 and 1982. (b) 12/67, 2/68 and 5/82.

Data shown in the above tables relate to the Meteorological Office, R.A.A.F., Fairbairn, except where otherwise indicated, and generally cover years up to 1981.

Figures such as 24/33, 31/68, etc. indicate, in respect of the month of reference, the day and year of the occurrence.

References

Department of Science and Technology, Bureau of Meteorology (Melbourne) Publications

H. T. Ashton . . . . . *Meteorological Data for Air Conditioning in Australia*, Bulletin 47, 1964.

J. C. Foley . . . . . (i) *Frosts in the Australian Region*, Bulletin 32, 1945.
(ii) *Droughts in Australia*, Bulletin 43, 1945.

W. J. Gibbs and J. V. Maher . . . *Rainfall Deciles as Drought Indicators*, Bulletin 48, 1967.

C. E. Hounan . . . . . *Evaporation in Australia*, Bulletin 44, 1961.

H. E. Whittingham . . . . . *Extreme Wind Gusts in Australia*, Bulletin 46, 1964.

Other Bureau of Meteorology Publications

Review of Australia's Water Resources: Monthly Rainfall and Evaporation (for Australian Water Res. Council), 1968.

Climatic Atlas of Australia, Series of Map Sets 1–8 (commencing 1974 with Map Set 1—Temperature), 1974–79.

Climatic Averages, Australia, Metric Edition, 1975.

Rainfall Statistics, Australia, Metric Edition, 1977.

Drought Review, Australia (1965-82, No. 1-142).

General Publications

American Society of Heating, Refrigeration and Air Conditioning Engineers (Washington) *Physiological Principles in Heating, Ventilating and Air Conditioning Guide*, Vol. 38, 1960.

J. L. Baldwin . . . . . *Climates of the United States*, U.S. Department of Commerce, Washington, 1973.

Department of National Development and Energy (Canberra) . *Atlas of Australian Resources*, Second Series: 1970 Rainfall; 1973 Temperatures; 1973 Climate, 1970–73.

Egyptian Meteorological Authority (Cairo) . . . . . Annual Meteorological Reports, 1964–71.

D. O. Gaffney . . . . . *Rainfall Deficiency and Evaporation in relation to Drought in Australia*, ANZAAS Congress, Canberra, 1975.

R. D. Hoy and S. K. Stephens . . *The Measurement and Estimation of Lake Evaporation from Four Australian Water Storages*. In Proc. Hydro. Symp., Armidale, 19–21 May 1975, Inst. of Engineers, Australia, 1975.

D. H. K. Lee and A. Henschel . . *Evaluation of Environment in Shelters*. U.S. Department of Health, Education and Welfare (Cincinnati), 1963.

CHAPTER 3

GENERAL GOVERNMENT

Parliamentary government

Scheme of parliamentary government

Under section 1 of the Australian Constitution the legislative power of the Commonwealth of Australia 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, has such powers and functions as the Sovereign is pleased to assign to him. In each Australian State there is a State Governor, who is the representative of the Sovereign for the State. The Governor has such powers within the State as are conferred upon him by the Letters Patent constituting his office, and he exercises these powers in accordance with instructions issued to him by the Sovereign, detailing the manner in which his duties are to be fulfilled.

In the Commonwealth Parliament the Upper House is known as the Senate, and in the bicameral State Parliaments as the Legislative Council. The Legislature in each State was bicameral until 1922 when the Queensland Parliament became unicameral upon the abolition of the Upper House. In the Commonwealth Parliament the Lower House is known as the House of Representatives; in the State Parliaments of New South Wales, Victoria, Queensland and Western Australia as the Legislative Assembly; and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The extent of the legislative powers of each of the seven Parliaments is defined by the Australian and State Constitutions respectively. In those States that have a bicameral legislature, the Legislative Assembly or House of Assembly, as the case may be, is the larger House.

The members of the Parliaments of each State are elected by the people, the franchise extending to British subjects who are at least 18 years of age and possess certain residential qualifications. For the Commonwealth Parliament the qualifications for the franchise are identical for both Houses, extending to British subjects who have lived in Australia for six months continuously and who are not less than 18 years of age.

The Sovereign

On 7 February 1952, the then Governor-General of the Commonwealth of Australia 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 took place in Westminster Abbey on 2 June 1953. By the *Royal Style and Titles Act* 1973, which Her Majesty assented to in Canberra on 19 October 1973, the Commonwealth Parliament assented to the adoption by Her Majesty, for use in relation to Australia and its Territories, of the Style and Titles set forth in the Schedule to the Act. On the same day, also in Canberra, Her Majesty issued a Proclamation, under the Great Seal of Australia, appointing and declaring that Her Majesty's Style and Titles should henceforth be, in relation to Australia and its Territories, 'Elizabeth the Second, by the Grace of God Queen of Australia and Her other Realms and Territories, Head of the Commonwealth'.

The Governor-General

Powers and functions. As the Queen's representative in Australia, the Governor-General of the Commonwealth of Australia exercises certain prerogative powers and functions assigned to him by the Queen. Other powers and functions are conferred on him by the Australian Constitution. Powers that have been so assigned or conferred include, among others, the power to grant pardons and to remit fines for offences against the laws of the Commonwealth of Australia; to appoint certain officers in the

Diplomatic or Consular Service; to appoint times for holding the sessions of the Parliament, prorogue Parliament, and dissolve the House of Representatives; to cause writs to be issued for general elections of members of the House of Representatives; to assent in the Queen's name to a proposed law passed by both Houses of the Parliament or to withhold such assent, or to reserve the law for the Queen's pleasure, or to return the proposed law to the House in which it originated and transmit therewith any amendments which he may recommend; to exercise executive power; to choose and summon Executive Councillors, who hold office during his pleasure; and to appoint Ministers of State for the Commonwealth of Australia. In addition, the command-in-chief of the Defence Force of the Commonwealth of Australia is vested in the Governor-General as the Queen's representative.

Many Acts of the Commonwealth Parliament provide that the Governor-General may make regulations to give effect to the Act. The Governor-General may also be authorised by statute to issue proclamations—for example, to declare an Act in force. He has been given power by statute to legislate for certain of the Australian Territories. Under the conventions of responsible government obtaining in British Commonwealth countries, the Governor-General's functions are exercised generally on the advice of Ministers of State.

The present Governor-General is His Excellency Sir Ninian Stephen, A.K., G.C.M.G., G.C.V.O., K.B.E., K.St.J., who has held office since 29 July 1982.

Holders of office. The names of those persons who have held the office of Governor-General since the inception of the Commonwealth of Australia are listed in Year Book No. 61 and earlier Year Books.

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 Commonwealth of Australia. Administrators are appointed in the event of the death, incapacity, removal or absence from Australia of the Governor-General, or for the period between the departure of a Governor-General and the arrival of his successor. The names of those persons who have acted as Administrator are also listed in Year Book No. 61 and earlier Year Books.

Governors of the States

Powers and functions. The Queen is represented in each of the Australian States by a Governor, the office having been constituted by Letters Patent issued under the Great Seal of the United Kingdom on 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 by State Constitutions and other Imperial Acts, as well as under the Acts of the Parliaments of the States.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State, except those Bills reserved for the Royal Assent. The latter Bills include certain classes of Bills that are regulated by the State's Constitution 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.

Holders of office. The names of the present (October 1982) State Governors are as follows:

New South Wales—His Excellency AIR MARSHAL SIR JAMES ANTHONY ROLAND, K.B.E., D.F.C., A.F.C., K.St.J.

Victoria—His Excellency REAR ADMIRAL SIR BRIAN STEWART MURRAY, K.C.M.G., A.O.

Queensland—His Excellency COMMODORE SIR JAMES MAXWELL RAMSAY, K.C.M.G., C.B.E., D.S.C.

South Australia—His Excellency LT-GEN. SIR DONALD BEAUMONT DUNSTAN, K.B.E., C.B.

Western Australia—His Excellency REAR-ADMIRAL SIR RICHARD JOHN TROWBRIDGE, K.C.V.O., K.St.J.

Tasmania—His Excellency SIR JAMES PLIMSOLL, A.C., C.B.E.

The Cabinet and executive government

Detailed information is contained in Year Book No. 62, pages 64 and 65.

Commonwealth Government Ministries

Names and tenure of office, 1901 to 1980. The following list shows the name of each Commonwealth Government Ministry to hold office since 1 January 1901 and the limits of its term of office.

COMMONWEALTH GOVERNMENT MINISTRIES, 1901 TO NOVEMBER 1980

(i) BARTON MINISTRY, 1 January 1901 to 24 September 1903.
(ii) DEAKIN MINISTRY, 24 September 1903 to 27 April 1904.
(iii) WATSON MINISTRY, 27 April 1904 to 17 August 1904.
(iv) REID-MCLEAN MINISTRY, 18 August 1904 to 5 July 1905.
(v) DEAKIN MINISTRY, 5 July 1905 to 13 November 1908.
(vi) FISHER MINISTRY, 13 November 1908 to 2 June 1909.
(vii) DEAKIN MINISTRY, 2 June 1909 to 29 April 1910.
(viii) FISHER MINISTRY, 29 April 1910 to 24 June 1913.
(ix) COOK MINISTRY, 24 June 1913 to 17 September 1914.
(x) FISHER MINISTRY, 17 September 1914 to 27 October 1915.
(xi) HUGHES MINISTRY, 27 October 1915 to 14 November 1916.
(xii) HUGHES MINISTRY, 14 November 1916 to 17 February 1917.
(xiii) HUGHES MINISTRY, 17 February 1917 to 8 January 1918.
(xiv) HUGHES MINISTRY, 10 January 1918 to 9 February 1923.
(xv) BRUCE-PAGE MINISTRY, 9 February 1923 to 22 October 1929.
(xvi) SCULLIN MINISTRY, 22 October 1929 to 6 January 1932.
(xvii) LYONS MINISTRY, 6 January 1932 to 7 November 1938.
(xviii) LYONS MINISTRY, 7 November 1938 to 7 April 1939.
(xix) PAGE MINISTRY, 7 April 1939 to 26 April 1939.
(xx) MENZIES MINISTRY, 26 April 1939 to 14 March 1940.
(xxi) MENZIES MINISTRY, 14 March 1940 to 28 October 1940.
(xxii) MENZIES MINISTRY, 28 October 1940 to 29 August 1941.
(xxiii) FADDEN MINISTRY, 29 August 1941 to 7 October 1941.
(xxiv) CURTIN MINISTRY, 7 October 1941 to 21 September 1943.
(xxv) CURTIN MINISTRY, 21 September 1943 to 6 July 1945.
(xxvi) FORDE MINISTRY, 6 July 1945 to 13 July 1945.
(xxvii) CHIFLEY MINISTRY, 13 July 1945 to 1 November 1946.
(xxviii) CHIFLEY MINISTRY, 1 November 1946 to 19 December 1949.
(xxix) MENZIES MINISTRY, 19 December 1949 to 11 May 1951.
(xxx) MENZIES MINISTRY, 11 May 1951 to 11 January 1956.
(xxxi) MENZIES MINISTRY, 11 January 1956 to 10 December 1958.
(xxxii) MENZIES MINISTRY, 10 December 1958 to 18 December 1963.
(xxxiii) MENZIES MINISTRY, 18 December 1963 to 26 January 1966.
(xxxiv) HOLT MINISTRY, 26 January 1966 to 14 December 1966.
(xxxv) HOLT MINISTRY, 14 December 1966 to 19 December 1967.
(xxxvi) MCEWEN MINISTRY, 19 December 1967 to 10 January 1968.
(xxxvii) GORTON MINISTRY, 10 January 1968 to 28 February 1968.
(xxxviii) GORTON MINISTRY, 28 February 1968 to 12 November 1969.
(xxxix) GORTON MINISTRY, 12 November 1969 to 10 March 1971.
(xl) MCMAHON MINISTRY, 10 March 1971 to 5 December 1972.
(xli) WHITLAM MINISTRY, 5 December 1972 to 19 December 1972.
(xlii) WHITLAM MINISTRY, 19 December 1972 to 11 November 1975.
(xliii) FRASER MINISTRY, 11 November 1975 to 22 December 1975.
(xliv) FRASER MINISTRY, 22 December 1975 to 20 December 1977.
(xlv) FRASER MINISTRY, 20 December 1977 to 3 November 1980.
(xlvi) FRASER MINISTRY, 3 November 1980.

Names of Members of each Ministry to 3 November 1980. In Year Book No. 17, 1924, the names are given of each Ministry up to the Bruce-Page Ministry (9 February 1923 to 22 October 1929), together with the names of the successive holders of portfolios therein. Year Book No. 39 contains a list which covers the period between 9 February 1923, the date on which the Bruce-Page Ministry assumed power, and 31 July 1951, showing the names of all persons who held office in each Ministry during that period. The names of members of subsequent Ministries are listed in issues of the Year Book from No. 39 to No. 61 inclusive and in successive issues from No. 64.

This issue only shows particulars of the Fourth Fraser Ministry (at October 1982).

COMMONWEALTH AND STATE LEADERS OF THE GOVERNMENT, OCTOBER 1982

Commonwealth—The Rt Hon. J. M. Fraser, C.H., M.P. (Vic.) (L.P.)
New South Wales—The Hon. N. K. Wran, Q.C., M.P. (A.L.P.)
Victoria—The Hon. J. Cain, M.P. (A.L.P.)
Queensland—The Hon. J. Bjelke-Petersen, M.L.A. (N.P.)
South Australia—The Hon. D. O. Tonkin, M.P. (L.P.)
Western Australia—The Hon. Raymond James O'Connor, M.L.A. (L.P.)
Tasmania—The Hon. R. T. Gray, M.H.A. (L.P.)
Northern Territory—The Hon. P. A. E. Everingham, M.L.A. (C.L.P.)

THE FOURTH FRASER MINISTRY—AT OCTOBER 1982

(The State in which each Minister's electorate is situated and party affiliation are shown in parenthesis. Party affiliation is indicated by the use of the following abbreviations; L.P. Liberal Party of Australia; N.C.P. National Country Party of Australia).

**Prime Minister*—

THE RIGHT HON. MALCOLM FRASER, C.H., M.P. (Vic.) (L.P.)

**Deputy Prime Minister and Minister for Trade and Resources*—

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

**Treasurer*—

THE HON. JOHN HOWARD, M.P. (N.S.W.) (L.P.)

**Minister for Defence*—

THE RT HON. IAN SINCLAIR, M.P. (N.S.W.) (N.C.P.)

**Minister for National Development and Energy and Leader of the Government in the Senate*—

SENATOR THE HON. SIR JOHN CARRICK. K.C.M.G. (N.S.W.) (L.P.)

**Minister for Industry and Commerce*—

THE HON. ANDREW PEACOCK, M.P. (Vic.) (L.P.)

**Minister for Foreign Affairs*—

THE HON. A. A. STREET, M.P. (Vic.) (L.P.)

**Minister for Primary Industry*—

THE HON. P. J. NIXON, M.P. (Vic.) (N.C.P.)

**Vice-President of the Executive Council and Leader of the House*—

THE HON. SIR JAMES KILLEN, K.C.M.G., M.P. (Qld) (L.P.)

**Minister for Finance*—

SENATOR THE HON. DAME MARGARET GUILFOYLE, D.B.E. (Vic.) (L.P.)

**Attorney-General*—

SENATOR THE HON. PETER DURACK, Q.C. (W.A.) (L.P.)

**Minister for Social Security*—

SENATOR THE HON. F. M. CHANEY (W.A.) (L.P.)

**Minister for Aviation, Minister Assisting the Prime Minister in Federal Affairs and Public Service Matters and Deputy Leader of the House*—

THE HON. WAL FIFE, M.P. (N.S.W.) (L.P.)

**Minister for Employment and Industrial Relations*—

THE HON. IAN MACPHEE, M.P. (Vic.) (L.P.)

**Minister for Education*—

SENATOR THE HON. PETER BAUME (N.S.W.) (L.P.)

Minister for Transport and Construction—

THE HON. RALPH J. HUNT, M.P. (N.S.W.) (N.C.P.)

Minister for Defence Support and Minister Assisting the Minister for Defence—

THE HON. IAN VINER, M.P. (W.A.) (L.P.)

Minister for Science and Technology—

THE HON. DAVID THOMSON, M.C., M.P. (Qld) (N.C.P.)

Minister for Administrative Services—

THE HON. KEVIN NEWMAN, M.P. (Tas.) (L.P.)

Minister for Communications and Minister Assisting the Attorney-General—

THE HON. N. A. BROWN, Q.C., M.P. (Vic.) (L.P.)

Minister for the Capital Territory and Minister Assisting the Minister for Industry and Commerce—

THE HON. MICHAEL HODGMAN, M.P. (Tas.) (L.P.)

Minister for Veterans' Affairs and Minister Assisting the Treasurer—

SENATOR THE HON. TONY MESSNER (S.A.) (L.P.)

Minister for Home Affairs and Environment and Minister Assisting the Minister for Trade and Resources—

THE HON. D. T. MCVEIGH, M.P. (Qld) (N.C.P.)

Minister for Aboriginal Affairs and Minister Assisting the Minister for Social Security—

THE HON. IAN WILSON, M.P. (S.A.) (L.P.)

Minister for Health and Minister Assisting the Minister for National Development and Energy—

THE HON. J. J. CARLTON, M.P. (N.S.W.) (L.P.)

Minister for Immigration and Ethnic Affairs—

THE HON. JOHN HODGES, M.P. (Qld) (L.P.)

*Minister in the Cabinet.

COMMONWEALTH AND STATE LEADERS OF THE OPPOSITION, OCTOBER 1982†

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 October 1982.

Commonwealth—The Hon. W. G. Hayden, M.P. (A.L.P.)
New South Wales—J. R. A. Dowd, M.P. (L.P.)
Victoria—The Hon. L. H. S. Thompson, C.M.G. M.P. (L.P.)
Queensland—E. D. Casey, M.L.A. (A.L.P.)
South Australia—J. C. Bannon, M.P. (A.L.P.)
Western Australia—B. T. Burke, M.L.A. (A.L.P.)
Tasmania—The Hon. K. S. Wreidt, M.H.A. (A.L.P.)
Northern Territory—The Hon. R. Collins, M.L.A. (A.L.P.)

Numbers and salaries of Commonwealth Government Ministers

Under sections 65 and 66, respectively, of the Constitution of the Commonwealth of Australia 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 ($24,000), each provision to operate, however, 'until the Parliament otherwise provides'.

Subsequently the number and salaries have been increased from time to time, and at October 1982 the number of Ministers is twenty-six and ministerial salaries range from $17,300 for a Minister not in Cabinet to $42,400 for the Prime Minister. An additional ministerial allowance of $19,500 a year is payable to the Prime Minister, $11,500 a year to the Deputy Prime Minister, $9,750 a year to the Treasurer, the Deputy Leader of the Government Majority Party, the Leader of the House and the Leader of the Government in the Senate, and $8,000 a year to other Ministers.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (*see* page 78).

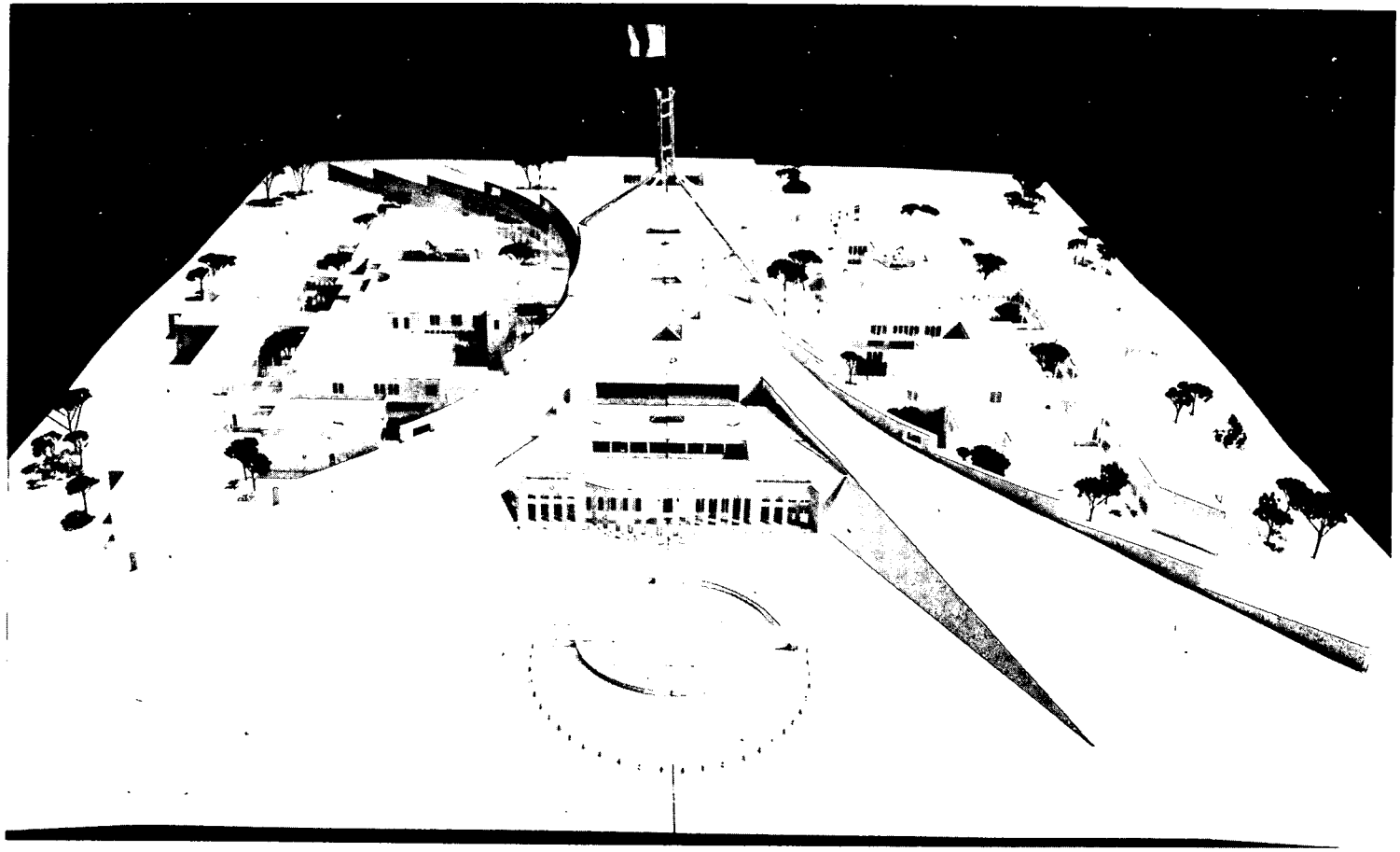
Parliaments and elections

The Commonwealth Parliaments

The first Parliament of the Commonwealth of Australia was convened by proclamation dated 29 April 1901 by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9 May 1901 by H.R.H. the Duke of Cornwall and York. 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.

† Party affiliation is indicated by the use of the following abbreviations: A.L.P.—Australian Labor Party; N.P.—National Party; L.P.—Liberal Party of Australia; N.C.P.—National Country Party of Australia.



Model of the new Parliament House, Canberra

The new Parliament House, presently under construction, is due to be completed in time for the 1988 Bicentennial Celebrations.

PLATE 28

COMMONWEALTH PARLIAMENTS

Number of Parliament	*Date of opening*	*Date of dissolution*
First	9 May 1901	23 November 1903
Second	2 March 1904	5 November 1906
Third	20 February 1907	19 February 1910
Fourth	1 July 1910	23 April 1913
Fifth	9 July 1913	30 July 1914 (*a*)
Sixth	8 October 1914	26 March 1917
Seventh	14 June 1917	3 November 1919
Eighth	26 February 1920	6 November 1922
Ninth	28 February 1923	3 October 1925
Tenth	13 January 1926	9 October 1928
Eleventh	6 February 1929	16 September 1929
Twelfth	20 November 1929	27 November 1931
Thirteenth	17 February 1932	7 August 1934
Fourteenth	23 October 1934	21 September 1937
Fifteenth	30 November 1937	27 August 1940
Sixteenth	20 November 1940	7 July 1943
Seventeenth	23 September 1943	16 August 1946
Eighteenth	6 November 1946	31 October 1949
Nineteenth	22 February 1950	19 March 1951 (*a*)
Twentieth	12 June 1951	21 April 1954
Twenty-first	4 August 1954	4 November 1955
Twenty-second	15 February 1956	14 October 1958
Twenty-third	17 February 1959	2 November 1961
Twenty-fourth	20 February 1962	1 November 1963
Twenty-fifth	25 February 1964	31 October 1966
Twenty-sixth	21 February 1967	29 September 1969
Twenty-seventh	25 November 1969	2 November 1972
Twenty-eighth	27 February 1973	11 April 1974 (*a*)
Twenty-ninth	9 July 1974	11 November 1975 (*a*)
Thirtieth	17 February 1976	8 November 1977
Thirty-first	21 February 1978	19 September 1980
Thirty-second	25 November 1980	

(*a*) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General under section 57 of the Constitution.

The thirty-first Parliament opened on 21 February 1978 and ended on 19 September 1980 when the House of Representatives was dissolved. Elections for the House of Representatives, Senators for the Australian Capital Territory and the Northern Territory, and Senators whose term expired on 30 June 1981 were held on 18 October 1980. Writs were issued by the Governor-General on 19 September 1980 for the House of Representatives elections in all States and Territories, and for the Senate elections in the Australian Capital Territory and Northern Territory. Writs for the Senate elections in the respective States were issued on the same date by the State Governors. For voting figures *see* page 76. For particulars of electors enrolled and of electors who voted in the several States and Territories at previous Commonwealth elections *see* Year Book No. 61 and earlier issues.

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, eighteen years of age or over and not disentitled on other grounds, who has resided in Australia for at least three years and who is, or is qualified to become, an elector of the Commonwealth Parliament. Qualifications for Commonwealth Parliament franchise are possessed by any British subject, not under eighteen years of age and not disentitled on other grounds, who has lived in Australia for six months continuously. Residence in a subdivision for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory except that the compulsory enrolment provisions do not relate to an Aboriginal native of Australia. A member of the Defence Force on service outside Australia who is not less than eighteen years of age, is a British subject and has lived in Australia for six months continuously is entitled to vote at Commonwealth Parliament elections even though he may not be enrolled. From a date which will be announced by proclamation, the right to enrol and vote and to nominate as a candidate for Parliament will apply only to Australian citizens, except that those other British subjects who are on the electoral roll at the time of the proclamation will keep their enrolment and voting rights. The States have agreed to introduce complementary changes to State franchise qualifications.

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

Commonwealth Parliaments and elections

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

The *Senate (Representation of Territories) Act* 1973 made provision for two Senators to be elected from both the Northern Territory and the Australian Capital Territory. Elections for the Territory Senators are held at the same time as general elections for the House of Representatives.

In accordance with the Constitution, the total number of State Members of the House of Representatives must be as nearly as practicable twice the number of State Senators. Consequent upon the increase in the size of the Senate in 1949, the number of State Members was increased from 74 to 121. In 1955 there were 122 State Members; in 1969, 123; in 1974, 124; in 1977, 121; in 1980, 122.

Redistribution of the States into electoral divisions have taken place in 1949, 1955, 1968, 1974 (Western Australia only), 1977 and 1979 (Western Australia only). The quota (or average number) of electors is the basis for electoral distribution, but the Distribution Commissioners may vary the enrolment of electorates by up to 10 per cent from the quota in order to take account of communities of interest, including economic, social and regional interests, means of communication and travel, the trend of population changes, physical features, and existing boundaries of electoral divisions and subdivisions. In addition, no electorate with an area of 5000 square kilometres or more may contain a greater number of electors than any electorate less than 5000 square kilometres in area.

The Chief Australian Electoral Officer determines the representation entitlements of the States during the twelfth month of the life of each Parliament. Determinations are based on the latest population statistics as provided by the Australian Statistician. Should the representation entitlement of a State change, the preparation of a redistribution is mandatory. The representation entitlements of the States at the four most recent determinations are shown in the following table:

REPRESENTATION ENTITLEMENTS OF THE STATES

State	*1972*	*1977*	*1979*	*1981*
New South Wales	45	43	43	43
Victoria	34	33	33	33
Queensland	18	19	19	19
South Australia	12	11	11	11
Western Australia	10	10	11	11
Tasmania	5	5	5	5
Total	**124**	**121**	**122**	**122**

Following the 1977 determination, Distribution Commissioners were appointed for all States in April and the proposed redistributions were approved by Parliament in October. The proposed redistributions came into effect by force of the *Commonwealth Electoral (Redistribution) Act* 1977. The election of 10 December 1977 was conducted on the basis of the new boundaries. Following the 1979 determination, Distribution Commissioners were appointed for Western Australia in April and the proposed redistribution was approved by Parliament in November 1979. The 1981 determination did not change the representation entitlement of any State, and therefore no mandatory redistribution arose.

From 1922 to 1968 the Northern Territory was represented in a limited capacity by one member in the House of Representatives. In May 1968 the Northern Territory Representation Act was amended to give full voting rights to the Member for the Northern Territory effective from 15 May 1968, the day on which the Act received Royal Assent.

From 1948 to 1967 the Australian Capital Territory was represented in a limited capacity by one member in the House of Representatives. The Member for the Australian Capital Territory has had full voting rights since 21 February 1967.

Following the passing of the Australian Capital Territory (House of Representatives) Act in October 1973 a Distribution Committee was appointed to distribute the Australian Capital Territory into two electoral divisions. On 19 March 1974, the Committee published an initial redistribution proposal. By early 1974 there was an indication that the House of Representatives would be dissolved before the Distribution Committee could complete its task. Accordingly the *Australian Capital Territory Representation (House of Representatives) Act* 1974 was enacted to provide that the Territory be divided into two electoral divisions, adopting the boundaries recommended by the Distribution Committee. The 1974 and subsequent House of Representatives elections were held on those boundaries.

Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. At elections for Senators the whole State constitutes the electorate. For the purpose of elections for the House of Representatives the State is divided into single electorates corresponding in number to 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 Year Book.

The *Commonwealth Electoral Act* 1948, enacted with the *Representation Act* 1948 which enlarged the Commonwealth Parliament (*see* page 74), changed the system of scrutiny and counting of votes in Senate elections from the alternative vote to that of proportional representation. The method of voting for both the Senate and the House of Representatives is preferential.

Particulars of voting at Senate elections and elections for the House of Representatives up to 1977 appear in earlier issues of the Year Book. Additional information is available in the *Election Statistics* issued by the Chief Australian Electoral Officer following each election and printed as Parliamentary Papers.

The numbers of electors and of primary votes cast for the major political parties in each State and Territory at the latest election for each House of the Commonwealth Parliament were as follows:

COMMONWEALTH PARLIAMENT ELECTIONS, 18 OCTOBER 1980

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
HOUSE OF REPRESENTATIVES ELECTION									
Electors enrolled	3,183,091	2,413,273	1,355,374	849,302	749,286	273,477	55,160	135,957	9,014,920
Number of votes recorded for—									
Australian Labor Party	1,357,556	1,016,617	535,846	348,649	286,259	118,336	17,426	68,916	3,749,605
Liberal Party	1,044,191	874,395	342,154	348,981	317,636	133,144	..	48,016	3,108,517
National Country Party(*a*)	307,400	109,506	273,668	10,937	15,837	..	18,805	..	736,153
Australian Democrats	166,144	183,212	66,502	68,857	48,076	3,732	2,509	7,001	546,033
Democratic Labor Party	..	25,456	..	..	..	..	..	..	25,456
Progress Party	6,869	..	10,171	..	..	..	..	..	17,040
Communist Party	8,155	1,902	..	1,261	..	..	..	..	11,318
Others	38,139	22,768	24,438	5,519	13,328	1,310	4,432	1,577	111,511
Informal votes	70,742	61,920	22,435	22,491	18,821	6,967	2,231	2,752	208,359
Total votes recorded	*2,999,196*	*2,295,776*	*1,275,214*	*806,695*	*699,957*	*263,489*	*45,403*	*128,262*	*8,513,992*
SENATE ELECTION									
Electors enrolled	3,183,091	2,413,273	1,355,374	849,302	749,286	273,477	55,160	135,957	9,014,920
Number of votes recorded for—									
Australian Labor Party	1,215,796	877,468	445,277	300,420	244,729	86,833	16,384	63,280	3,250,187
Liberal Party: National Country Party(*a*)(*b*)	1,139,825	831,703	..	..	..	..	..	..	1,971,528
Liberal Party(*b*)	..	..	266,407	319,088	283,429	96,098	19,129	46,267	1,030,418
National Country Party(*a*)(*b*)	..	..	309,622	7,419	25,937	..	..	..	342,978
Australian Democrats	187,507	231,113	115,429	96,662	58,538	7,780	4,113	10,663	711,805
Democratic Labor Party	..	31,766	..	..	..	..	..	..	31,766
Progress Party	2,260	..	3,399	..	2,593	..	..	..	8,252
Others	172,470	67,666	17,196	12,747	15,278	53,127	2,452	4,494	345,430
Informal votes	281,338	256,060	117,884	70,359	69,453	19,651	3,325	3,558	821,628
Total votes recorded	*2,999,196*	*2,295,776*	*1,275,214*	*806,695*	*699,957*	*263,489*	*45,403*	*128,262*	*8,513,992*

(*a*) The National Country Party is known in the various States as follows: New South Wales, South Australia and Western Australia—National Country Party; Victoria, Queensland and Tasmania—National Party. (*b*) In New South Wales and Victoria the Liberal Party and the National Country Party/National Party candidates stood as one group; in Tasmania and the Australian Capital Territory only the Liberal Party stood as a group; in Queensland, South Australia and Western Australia the National Party/National Country Party and the Liberal Party each stood as separate groups; in the Northern Territory there was a Country Liberal Party group only. In the Northern Territory the Country Liberal Party (CLP) is affiliated with both the National Country Party and the Liberal Party; the CLP MHR for the Northern Territory sits with the National Country Party while the CLP Senator for the Northern Territory sits with the Liberal Party. Accordingly, CLP votes in the Northern Territory have been allocated to the National Country Party in the House and to the Liberal Party in the Senate.

The State of the parties in each House at the commencement of the thirty-second Parliament was: *Senate*—Liberal Party 30, National Country Party 5, Australian Labor Party 26, Australian Democrats 2 and Independent 1; *House of Representatives*—Liberal Party 54, National Country Party 20 and Australian Labor Party 51. As a result of the Lowe by-election of March 1982, the state of the parties in the House of Representatives as at 1 August 1982 was Liberal Party 53, National Country Party 20, and Australian Labor Party 52.

Following the retirement of those Senators whose terms expired on 30 June 1981 the state of the parties in the Senate was: Liberal Party 28, National Country Party 3, Australian Labor Party 27, Australian Democrats 5 and Independent 1.

Referendums

In accordance with section 128 of the Constitution any proposed law for the alteration of the Constitution, in addition to being passed by an absolute majority of each House of Parliament must be submitted to a referendum of the electors in each State and Territory and must be approved by a majority of the electors in a majority of the States and by a majority of all the voters who voted before it can be presented for Royal Assent.

Since 1901 thirty-six proposals have been submitted to referendums and the consent of the electors has been received in eight cases: 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, the fourth in respect of Social Services in 1946 and the fifth in respect of Aboriginals in 1967. The remaining three proposals in relation respectively to Senate casual vacancies, maximum retirement age for justices of the High Court and judges of other Federal Courts and the right of electors in the Territories to vote in referendums for the alteration of the Constitution were approved in May 1977. In addition to referendums for alterations of the Constitution, other Commonwealth referendums have been

held—two prior to Federation regarding the proposed Constitution and two regarding military service during the 1914–1918 War. For further details of referendums *see* Year Book No. 52, pages 66–68, Year Book No. 60, pages 90–91, and Year Book No. 62, pages 72–73.

The Parliaments of the States

This section contains summarised information; for greater detail refer to State Year Books.

Membership of State Parliaments. The following table shows the party distribution in each of the various State Parliaments at September 1982.

STATE PARLIAMENTS: MEMBERSHIP, BY PARTY AFFILIATION, SEPTEMBER 1982

Party	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*
UPPER HOUSE						
Australian Labor Party (A.L.P.)	24	20	..	9	10	2
Independent (Ind.)	1	..	..	1	..	17
Liberal Party of Australia (L.P.)	12	20	..	11	18	..
National Country Party (N.C.P.)(*a*)	..	..	..	..	3	..
National Party (N.P.)	..	..	..	..	1	..
National Party of Australia (N.S.W.) (N.P.A.)	6	..	..	..	..	..
National Party of Australia (Victoria) (N.P.A.)	..	4	..	..	..	..
Australian Democrats (A.D.)	1	..	..	1	..	..
Total	**44**	**44**	(*b*)	**22**	**32**	**19**
LOWER HOUSE						
Australian Labor Party (A.L.P.)	69	49	25	20	23	14
Independent (Ind.)	3	..	1	..	..	1
Independent Labor (Ind. Lab.)	..	..	..	1	..	..
Liberal Party of Australia (L.P.)	14	24	22	24	26	19
National Country Party (N.C.P.)(*a*)	..	..	..	1	4	..
National Party (N.P.)	..	..	34	..	2	..
National Party of Australia (N.S.W.) (N.P.A.)	13	..	..	..	..	..
National Party of Australia (Victoria) (N.P.A.)	..	8	..	..	..	..
Australian Democrats (A.D.)	..	..	..	1	..	1
Total	**99**	**81**	**82**	**47**	**55**	**35**

(*a*) Formerly the National Alliance Party. (*b*) Upper House abolished in 1922.

For corresponding particulars for the Commonwealth Parliament, *see* page 76.

Number and salaries and allowances of members of the legislatures, Commonwealth parliaments, September 1981

COMMONWEALTH AND STATE PARLIAMENTS: MEMBERS AND ANNUAL SALARIES AND ALLOWANCES, SEPTEMBER 1982

Members in—	*Cwlth*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Total*
			NUMBER OF MEMBERS					
Upper House . . .	64	44	44	(*a*)	22	32	19	225
Lower House . . .	125	99	81	82	47	55	35	524
Total . . .	**189**	**143**	**125**	**82**	**69**	**87**	**54**	**749**
			ANNUAL SALARY (*b*) ($)					
Upper House . . .	(*c*)36,000	22,400	38,000	(*a*)	31,530	31,935	28,621	..
Lower House . . .	(*c*)36,000	32,000	38,000	37,700	31,530	31,935	28,621	..
			ELECTORAL ALLOWANCES ($)					
Upper House . . .	14,000	7,146	11,200–16,240	(*a*)	9,705	(*d*)9,750–20,650	(*d*)3,148–7,441	..
Lower House . . .	(*e*)14,000–20,300	(*d*)10,208–18,233	(*d*)11,200–16,240	(*d*)9,540–24,620	(*d*)6,105–22,590	(*d*)9,000–19,900	(*d*)4,293–10,017	..

(*a*) Abolished in 1922. (*b*) Basic rates (payable to backbenchers, etc.) only; additional rates apply for Ministers, etc. (*c*) Certain additional allowances are also provided for holders of parliamentary offices, etc. (*d*) Allowance payable depends on location of electorate and, for Victoria, Tasmania and Western Australia, size of electorate. In N.S.W. a special expense allowance for members of the Lower House of $4,077 or $5,094, is paid to members representing country electorates with members, of the Upper House, who reside in country districts, receiving $3,699 or $4,585 per annum. (*e*) A member of the House of Representatives representing an electorate of less than 5,000 square kilometres receives an electorate allowance at the rate of $14,000 p.a., a member representing an electorate with a population of 140,000 or more receives $17,000 p.a.; a member representing an electorate of 5,000 square kilometres or more receives an electorate allowance at the rate of $20,300 p.a.

Outlay on parliamentary government

The table below shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities; *it does not attempt to cover the expenditure on Commonwealth and State administration generally.* Only broad groups are shown, but even these are not entirely comparable because of differences in accounting procedures and in the presentation of accounts. Expenditure under the head of Governor-General or Governor includes salaries of Government House staffs and maintenance of residences, official establishments, grounds, etc., and expenditure on capital works and services.

OUTLAY ON PARLIAMENTARY GOVERNMENT, 1980–81
($'000)

Expenditure group	*Cwlth*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
Governor-General or Governor (*a*)	6,208	820	1,122	781	515	577	644	..	18,692
Ministry (*b*)		1,440	1,480	1,813	754	606	848	1,084	
Parliament—									
Upper House (*c*)	3,481	1,130	1,749	..	988	1,423	698	326	9,795
Lower House (*c*)	6,706	3,729	3,102	3,100	1,930	2,295	1,018	307	22,187
Both Houses (*d*)	29,348	10,264	9,176	4,713	2,854	4,602	3,493	2,804	66,534
Miscellaneous (*e*)	19,828	750	1,538	6,755	1,624	762	282	436	31,975
Total, Parliament	*59,363*	*15,873*	*15,565*	*14,568*	*7,396*	*9,082*	*5,491*	*3,153*	*130,490*
Electoral (*f*)	30,302	1,169	340	2,323	468	669	322	107	35,700
Royal Commissions, Select Committees, etc.	1,420	280	783	2	94	246	15	1	2,841
Grand Total	**97,293**	**19,582**	**19,290**	**19,487**	**9,227**	**11,180**	**7,319**	**4,345**	**187,723**

(*a*) Salaries and other expenses, including maintenance of house and grounds. (*b*) Salaries, travelling and other expenses as ministers. (*c*) Allowances to members (including ministers' salaries as members), travelling and other expenses. (*d*) Government contribution to members' superannuation funds, printing, reporting staff, library, etc. (*e*) Services, furniture, stores, etc. (*f*) Salaries, cost of elections, etc.

OUTLAY ON PARLIAMENTARY GOVERNMENT

Year	*Cwlth*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
				TOTAL ($'000)					
1975-76	53,680	12,454	12,541	7,839	5,207	6,333	3,031	..	101,086
1976-77	60,698	14,181	12,434	7,616	5,995	7,256	4,525	..	112,705
1977-78	69,830	16,846	13,412	9,823	7,554	8,096	4,650	..	130,210
1978-79	70,424	19,315	16,512	12,516	7,904	9,517	5,382	2,468	144,038
1979-80	74,037	17,794	17,460	13,822	8,922	10,544	6,439	3,629	152,647
1980-81	97,293	19,582	19,290	19,487	9,227	11,180	7,319	4,345	187,723
				PER HEAD OF POPULATION ($)					
1975-76	3.84	2.52	3.30	3.78	4.10	5.43	7.37	..	7.24
1976-77	4.30	2.85	3.25	3.61	4.68	6.09	10.95	..	7.99
1977-78	4.89	3.35	3.48	4.56	5.84	6.64	11.20	..	9.12
1978-79	4.88	3.81	4.26	5.69	6.08	7.66	12.89	22.60	9.98
1979-80	5.07	3.47	4.48	6.15	6.84	8.35	15.29	32.03	10.46
1980-81	6.57	3.76	4.91	8.44	7.03	8.70	17.21	36.36	12.68

Commonwealth Government Departments

For current detailed information on the Acts administered, the functions and the organisation of the Departments and Agencies of the Commonwealth Government *see* the *Commonwealth Government Directory* 1981.

Acts of the Commonwealth Parliaments

In the Commonwealth Parliament 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 Australian Constitution. In all 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 enacted in the name of the Governor of the State, with the advice and consent of the Parliament in the case of South Australia, and of the Legislative Council and House of Assembly in the case of Tasmania. Generally, assent to Bills passed by the Legislatures is given by the Governor-General or State Governor acting on behalf of, and in the name of, the Sovereign. In certain special cases Bills are reserved for the Royal Assent. The Parliaments of the States are empowered generally, subject to the Australian 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 Parliament, the latter law prevails and the former law is, to the extent of the inconsistency, invalid.

The enactment/history of Commonwealth Parliament legislation

The legislation passed by the Commonwealth Parliament between 1901 and 1973, and which was then still in operation, is published in a consolidated form entitled *Acts of the Parliament 1901–1973*. Since 1974, annual volumes of Acts have also been published. The consolidation contains a chronological table of Acts passed from 1901 to 1973, showing how they are affected by subsequent legislation or lapse of time, together with a table of legislation of the Commonwealth Parliament passed from 1901 to 1973 in relation to the several provisions of the Australian Constitution. Reference should be made to these for complete information.

The following figures indicate the variation over the years in the number of enactments of the Commonwealth Parliament since 1901 : 17 Acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939, 109 in 1952, 156 in 1965, 157 in 1968, 223 in 1973, 166 in 1974, 121 in 1975, 209 in 1976, 161 in 1977, 211 in 1978, 191 in 1979, 177 in 1980 and 182 in 1981.

CHAPTER 4

DEFENCE

This chapter outlines Australia's defence policy and its defence relationships with other countries; the higher defence organisation; the functions, organisation, manning and training of the three Services; the functions and activities of the Defence Science and Technology Organization; the Natural Disasters Organisation; and the functions of the Department of Defence Support.

Further information on current defence planning and activities is available in the Defence report and other publications of the Department of Defence, and in statements to the House of Representatives by the Minister for Defence.

Current defence policy

The primary aim of Australian defence policy is to ensure the security of Australia and its direct interests against military threat.

In pursuit of this goal, Australia's defence policy attaches high priority to developing and improving Australia's capacity to mount an independent national defence effort. This involves the development of the forces, infrastructure and support facilities to deter and if necessary respond effectively to acts of aggression. In particular, defence policy seeks to maintain and strengthen Australia's ability to deploy forces appropriate to cope with the lesser types of military contingencies which have the potential to arise with little or no warning and to establish the basis for expansion should the prospect of more substantial threat to Australia develop. This policy recognises that United States combat support may not be available in all circumstances of threat to Australia. However, the alliance with the United States under ANZUS gives substantial grounds for confidence that, in the event of a major threat to Australia, United States military support would be forthcoming.

The emphasis placed upon improving the operational self-reliance of the Defence Force has regard to our national interests and responsibilities and to the constraints imposed by resources on our ability to project power at distance. The security and stability of our immediate neighbourhood is of primary strategic importance to Australia and the continued development of an independent defence capability enhances our ability to contribute to the peaceful development of that region. Priority in defence activity is given accordingly to areas close to Australia and high value is placed on fostering the defence relationship with the countries of South-East Asia and the South-West Pacific.

While defence policy recognises the strategic importance of our immediate region, Australia is also conscious of its traditional association with the liberal democracies of the Western strategic community and the strong economic links which reinforce this association. The ANZUS alliance remains a central element of our defence policy and provides the framework within which Australia can support the United States in its efforts to deter global war.

Higher defence organisation

Legislation concerning the present organisation of the higher management of the Defence Force and the Department of Defence was passed by the Commonwealth Parliament in September 1975 and became effective on 9 February 1976. It specifically recognised that responsibility for the general control and administration of the Defence Force rests with the Minister for Defence.

Chief of Defence Force Staff: Under section 9 (2) of the *Defence Act* 1903 the Chief of Defence Force Staff is vested with the command of the Defence Force. The Chief of Defence Force Staff is the chief military adviser to the Minister and in addition the Chief of Defence Force Staff has, with the Secretary, the joint administration of the Defence Force as specified above.

Secretary, Department of Defence: The Secretary derives his normal administrative powers as a Permanent Head and Chief Officer from the Public Service Act, the Audit Act and Finance Regulations. In addition to these powers, section 9A of the *Defence Act* 1903 makes the Secretary and the Chief of the Defence Force Staff jointly responsible for the administration of the Defence Force (except for the matters falling within the command of the Defence Force or any other matter specified by the Minister). The Secretary is the principal civilian adviser to the Minister for Defence and is responsible to the Minister for advice on general policy and on the management and utilisation of defence resources.

Higher Defence Machinery

The *Council of Defence* considers and discusses matters referred to it by the Minister relating to the control and administration of the Defence Force and the respective Arms of the Defence Force. Council is chaired by the Minister for Defence and membership includes the Minister for Defence Support, the Secretary of the Department of Defence, the Chief of Defence Force Staff, the Secretary of the Department of Defence Support and the Chiefs of Staff.

An extensive committee system exists to prepare advice for the Minister on defence policy, and to identify the respective Armed Services' operational requirements to meet defence objectives. It is also designed to facilitate the sound management of resources and the development of general policy and to enable the interests of elements of the Defence organisation to be represented when decisions on resource allocation are taken. The committee system brings together the expertise of both military and civilian members in the internal policy formulating process and the proffering of advice to Government. The more important committees are described below:

The *Defence Committee*, chaired by the Secretary with the Chief of Defence Force Staff, the three Chiefs of Staff, and the Secretaries of the Departments of the Prime Minister and Cabinet, Treasury and Foreign Affairs as members. Representatives of other Government Departments and Agencies may be invited as members or consultants. The Committee advises the Minister on defence policy as a whole, the co-ordination of military, strategic, economic, financial and foreign affairs aspects of defence policy, and matters of policy or principle and important questions having a joint Service or inter-departmental aspect.

The *Chiefs of Staff Committee*, chaired by the Chief of Defence Force Staff, is responsible for providing the Minister with collective professional advice on military operations; military implications of defence policy; endorsement of military plans; and other related subjects.

The *Defence Force Development Committee*, chaired by the Secretary with the Chief of Defence Force Staff and the three Chiefs of Staff as members. It is concerned with advising the Minister on the formulation of the Five Year Defence Program, annual budget estimates, new major equipment acquisitions, and other matters relating to force structure and the management of resources.

Defence Review

On 30 April 1981 the Prime Minister announced in the House of Representatives a major review of the Defence organisation as part of the Review of Commonwealth Functions.

The Committee is chaired by Mr John Utz, Chairman and Chief Executive of Wormald International Ltd.

The terms of reference for the Review are:

- To review the organisation of the higher Defence machinery in the light of experience since the Defence re-organisation of 9 February 1976, with particular reference to;
- the suitability of the organisation to propose and implement policy for the achievement of governmental defence objectives, including development of:
  - capability for independent defence of our national security interests;
  - national defence preparedness;
  - defence co-operation with allies and regional friends;
  - increased self-reliance in the national infrastructure supporting Defence; and
  - the scope for further rationalisation and economy in managerial arrangements for defence-related activities of the Government now conducted outside the Defence organisation.
- the suitability of the organisation for a defence emergency or war;
- the distribution of responsibilities within the higher Defence machinery as laid down in Defence and other relevant statutes and in the Directives issued by the Minister for Defence;
- the organisation and functions of the senior Defence Committees.

An interim report on the issue of Departmental organisation was presented at the request of the Prime Minister in May 1982, and the recommendations were tabled in the Parliament on 7 May 1982.

The Review Committee concluded that there were disadvantages in the large structure of the Defence Department. It recommended the creation of a second Department in the Defence area—a Department of Defence Support.

The concept of a separate defence support organisation is not new. Such an arrangement operated when there was a Minister for Supply up to the time of the major defence re-organisation of 1973-76.

The Revised arrangements provided for the creation of a Department of Defence Support under a Minister for Defence Support, that Minister was also appointed as Minister Assisting the Minister for Defence. That Department has since been formed by the transfer of the following units from the Department of Defence:

- Aeronautical Research Laboratory
- Materials Research Laboratories
- Advanced Engineering Laboratory
- Electronics Research Laboratory
- Weapons Systems Research Laboratory
- RAN Research Laboratory
- Armed Forces Food Science Establishment
- Joint Tropical Trials and Research Establishment
- Materials Testing Laboratory
- Defence Support Centre, Woomera
- Administration Branch of the Defence Research Centre, Salisbury
- Industry Development Branch of the Defence Industry and Materiel Policy Division
- Guided Weapons and Electronics Support Facility, St Marys
- Dockyard Secretariat Branch
- HMA Naval Dockyard, Williamstown, Victoria
- HMA Naval Dockyard, Garden Island, New South Wales

together with the following elements from other Departments:

- Major Projects Branch of the Purchasing Division (excluding the ADP Purchasing Section) from the Department of Administrative Services
- Munitions Supply Division
- Aircraft Guided Weapons and Electronics Supply Division
- Management Division, together with the Government factories from the Department of Industry and Commerce.

The grouping of defence support activities under a separate Minister and Department should enable close co-operation with scientific and industrial organisations, who were involved with the Defence Department. At the same time, defence support effort could be integrated more closely with private sector industrial capacity and move towards increased self-reliance in industrial support. In the longer term this would also provide an expanded base for the overseas marketing of Australian-designed defence products.

EXPENDITURE OF DEFENCE FUNCTION

($'000)

	Actual expenditure					*Estimated expenditure*
Departmental category	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*	*1982-83*
Department of Defence—						
Capital Equipment	319,238	406,880	495,731	563,556	500,748	698,144
Capital Facilities	111,595	90,828	89,706	116,793	161,737	163,063
Defence Co-operation	26,952	24,600	30,045	37,914	39,676	42,963
Manpower	1,197,502	1,255,390	1,386,587	1,599,461	2,045,640	1,931,416
Other Running Costs	569,285	633,872	788,876	967,616	1,044,268	1,066,823
Total	*2,224,572*	*2,411,570*	*2,790,945*	*3,285,340*	*3,792,069*	*3,902,409*
Department of Defence Support—						
Capital Equipment	6,410	10,167	14,190	21,593	32,833	75,255
Capital Facilities	3,094	5,673	8,277	8,014	17,298	36,544
Manpower	9,641	9,484	7,845	10,846	13,123	168,264
Other Running Costs	67,956	71,277	81,850	91,350	112,061	148,648
Total	*87,101*	*96,601*	*112,162*	*131,803*	*175,315*	*428,711*
Other Departments—						
Capital Facilities	9,138	4,442	4,470	8,541	9,180	14,230
Manpower (including Renumeration Tribunal and Defence Force retirement and Death Benefits)	140,720	162,669	181,800	205,298	252,129	295,977
Other Running Costs	17,778	19,081	23,216	27,968	35,343	36,251
Total	*167,636*	*186,192*	*209,486*	*241,807*	*296,652*	*346,458*
Total expenditure on Defence function	**2,479,309**	**2,694,363**	**3,112,593**	**3,658,947**	**4,264,035**	**4,677,578**
Special provisions—						
Acquisition of Boeing 707 aircraft	..	10,201	3,395	196	289	100
Allowance for prospective wage and salary increases	..	..	..	..	..	110,000
Total Defence expenditure	**2,479,309**	**2,704,564**	**3,115,988**	**3,659,143**	**4,264,324**	**4,787,678**

Equipment for the defence force

An amount of $533.6 million (excluding Boeing 707 aircraft) was spent on equipment of a capital nature in 1981–82. An amount of $773.4 million is expected to be spent in 1982–83.

The significant new equipment items received by the Services in 1981–82 included three Fremantle Class patrol craft (HMAS *Townsville, Wollongong,* and *Launceston*), 75 eight tonne cargo trucks, 58 medium wheeled tractors, 24 fire fighting trucks, one well drilling rig, and some 1,700 Barra sonobuoys.

New major capital equipment decisions approved by the Government during 1981–82 include 75 McDonnell Douglas F/A-18 tactical fighter aircraft; 10 additional P-3C Orion long range maritime patrol aircraft; the establishment of production capability and the initial manufacture by Australian industry of the 105mm UK light gun; the Australian design, development and manufacture of a new turboprop basic training aircraft for the RAAF; a modernisation program for the RAN's three guided missile destroyers; and two Phalanx close-in weapon systems for the RAN.

On 25 February 1982 the former Minister for Defence announced the Government's decision to acquire the British aircraft carrier, HMS *Invincible*. However, following the Falkland Islands conflict, the British Government reviewed its overall defence priorities and decided not to sell the *Invincible*.

The Defence Department is re-examining the options available to meet the needs that earlier led the Government to decide to buy HMS *Invincible*. The options to be examined range from alternative ways of operating the necessary aircraft at sea, to a carrier capable of taking the F/A-18 aircraft. The re-examination will be completed towards the end of 1982.

Deliveries expected during 1982–83 include the third guided missile frigate (HMAS *Sydney*), four more Fremantle Class patrol craft (HMAS *Whyalla, Ipswich, Cessnock,* and *Bendigo*), four water fuel lighters, Matra R550 missiles, 235 eight tonne and 259 four tonne cargo trucks, 215 light field vehicles, 8 heavy cranes, 9 fire fighting trucks, 26 medium vibrating rollers, 46 compressors and 219 sustained fire machine guns. In addition, one River Class destroyer escort (HMAS *Stuart*) and one Oberon Class submarine (HMAS *Ovens*) will be received from modernisation.

Defence industry

Australian industry complements the Defence Force through provision of a wide range of goods and services including manufacture, repair and maintenance of defence equipment. As an essential element in a credible policy of self-reliance, defence industry policy seeks to establish, enhance or maintain industry capabilities that would maximise the potential for self-reliance, subject to the technological and resource constraints inherent in Australia's middle power status.

Industrial support for the Defence Force is fostered through operation of Government owned and operated establishments and private operators of Government facilities; provision of plant, equipment and technical assistance to private enterprises; preference for local production in Government purchases and provision of more general assistance to sectors of industry of major and direct strategic importance. Where equipment is purchased overseas, related or technologically equivalent work is sought in Australian industry up to 30 per cent of the value of the purchase as a contribution to self-reliance and to upgrade technological capabilities.

Of the $534 million spent on capital equipment in 1981-82, some $308 million was spent in Australia and $19.5 million of Australian Industry Participation (AIP) in Defence purchases was achieved.

Over recent years, local procurement has accounted for about 30 per cent of total expenditure on capital equipment. The 1981-82 increase (58 per cent) was caused by the unforeseen reduction in overseas capital expenditure resulting from the British Government's decision to retain HMS *Invincible*.

INDUSTRY RELATED DEFENCE EXPENDITURE IN AUSTRALIA

	1977-78		*1978-79*		*1979-80*		*1980-81*		*1981-82*	
	$m	*%*	*$m*	*%*	*$m*	*%*	*$m*	*%*	*$m*	*%*
Capital Equipment—										
Total	325.6		417.0		509.9		585.1		533.6	
Local	99.95	30.7	127.2	30.5	160.3	31.4	204.2	34.9	307.7	57.7
Replacement Equipment and Stores—										
Total	234.1		267.8		359.4		442.7		461.6	
Local	164.7	70.4	189.3	70.7	252.4	70.2	314.3	71.0	328.8	71.2
Equipment Repair and Overhaul—										
Total	74.1		87.5		108.2		134.9		159.9	
Local	72.2	97.5	80.0	91.4	98.6	91.1	126.3	93.6	146.3	91.5
Total Equipment Related Expenditure—										
Total	633.8		772.4		977.6		1,162.7		1,155.1	
Local	336.9	53.2	396.5	51.3	511.3	52.3	644.7	55.4	782.7	67.8

Supply support

The rising cost of supporting older equipment, an expanded capital equipment program and the higher level of sophistication of new equipments give rise to increased support requirements.

A number of new major capital equipments are obtained from overseas sources and Australia continues to pursue a policy of securing assurances of follow-on supply and support for these equipments. The United States is the major overseas source and the reciprocal logistic arrangements with that country are subject to ongoing development. Improved arrangements with other countries which are likely to be significant suppliers of defence equipment to Australia are also under development.

There is also, a continuing commitment to develop and sustain local industry capabilities of defence significance. The development of specialised capabilities in industry was fostered through expenditure of about $16 million in 1981-82. In December 1981 the Government entered into separate agreements with McDonnell Douglas and General Electric in relation to the new tactical fighter project under which assembly of the engines and final assembly and test of the F/A-18 Hornet will be undertaken in Australia. In addition many major parts of the aircraft and its systems will be manufactured in Australia and will introduce the new technologies needed to support the aircraft. The total value of contracts to be placed with Australian industry is estimated at $550 million.

With an increasingly large inventory, improved supply management systems are being developed with more extensive use of computers. Minicomputers for stock control and related functions are

already operating at selected establishments and are being progressively installed at other locations: data processing systems have been developed which will enable the supply catalogue to be maintained in a single supply data base for use by all Services.

Computer assistance is also employed in movement management systems to speed up these processes.

Capital facilities

During 1981–82 total expenditure on Capital Facilities was $188 million. Expenditure in 1982–83 is expected to increase to some $214 million.

Emphasis has continued on the development of facilities in the north of Australia. The new patrol boat base at Cairns was officially opened on 28 May 1982 and a patrol boat base at Darwin was officially opened in October 1982. A site has been reserved for possible patrol boat facilities at Finucane Island near Port Hedland, W.A. In support of the RAAF, works on an aircraft maintenance complex at RAAF base, Darwin, and improvements to the Learmonth, W.A. airfield's capacity for handling aircraft deployments are both expected to be completed by mid 1983. Design development for a new major airfield at Derby, W.A., has been continuing and construction is planned to begin by mid 1983.

Other operational bases where new major works are involved include: HMAS *Stirling*, Cockburn Sound, W.A.—where an armament depot was completed in 1981 and a fuel installation is expected to be completed later this year; Army bases at Townsville and Enoggera, Qld—where work is well advanced on stages of major development programs; RAAF base Amberley, Qld—where test facilities for the F-111 aircraft engines were completed early in 1982; RAAF base Edinburgh, S.A.—where work on a facility for maintaining aircraft avionics systems was completed late 1982; HMAS *Moreton*, on the Brisbane River—where wharves were acquired during the year to support the new heavy lift ship, HMAS *Tobruk* and other landing craft.

Major works on support facilities continued during the year with modernisation programmes at both Garden Island and Williamstown Naval Dockyards. At Cockatoo Island Dockyard, Sydney, construction of new cranes continued. Other support facilities which were substantially completed during the year include: Kingswood, N.S.W.—a maintenance and testing facility for missiles and torpedoes; Randwick, N.S.W.—stores administration buildings and other working facilities; RAAF Headquarters Glenbrook, N.S.W.—command and administrative facilities. During the year some 285 houses for Servicemen and their families were completed and it is expected to authorise construction or acquisition of 600 additional houses to reduce present shortfalls and replace some of the worst existing housing.

Major works at Defence Force educational and training institutions included: continuation of the development of the Australian Defence Force Academy in Canberra; the expected completion in early 1983 of facilities at Bonegilla, Vic., for the Army Apprentices' School and School of Military Survey; the completion during the year of additional living quarters at HMAS *Creswell*, Jervis Bay, A.C.T. and at HMAS *Nirimba*, Quakers Hill, N.S.W.; and the continuation of construction of additional living quarters, classrooms and administrative facilities at RAAF bases Wagga, N.S.W., and Laverton, Vic.

Defence manpower

Employment

The following table indicates the range of activities and occupations in which defence military and civilian manpower are involved.

FUNCTIONAL DISTRIBUTION OF DEFENCE MANPOWER AS AT 30 JUNE 1982

Function	*Service*	*Civilian*	*Total*
Operational Forces and Logistic Support	29,690	780	30,470
Specialist Support (e.g. communications, medical services)	4,900	4,065	8,965
Stores and Supply: Storage and Control	2,795	4,475	7,270
Dockyards, equipment production, repair and overhaul	3,060	1,195	4,255
Training	18,930	1,465	20,395
Support to Reserves and Cadets	1,275	100	1,375
Research and Development	300	255	555
Central Headquarters and Administration including overseas representation	4,060	3,195	7,255
Regional Commands and Administration	7,945	3,830	11,775
Defence Co-operation	230	—	230
Total	**73,185**	**19,360**	**92,545**

NOTES: Figures have been rounded.
Figures cannot be reconciled with those in previous Year Books owing to changes within classifications and transfer of civilian staff to the Department of Defence Support.
Civilian figures include only full-time operatives and exclude locally engaged civilians employed in support of Air Force deployment overseas, persons on extended leave, and part-time staff.

Permanent Defence Force

PERSONNEL STRENGTHS OF THE PERMANENT DEFENCE FORCE AS AT 30 JUNE

	Navy	*Army*	*Air Force*	*Total*
1978	16,298	31,883	21,689	69,870
1979	16,582	31,813	21,803	70,198
1980	16,961	32,321	22,249	71,531
1981	17,298	32,898	22,322	72,518
1982	17,598	32,876	22,711	73,185
1983 (approved targets)	17,146	32,850	22,477	72,473

COMPOSITION OF PERMANENT DEFENCE FORCE (*a*) AS AT 30 JUNE 1982

	Navy	*Army*	*Air Force*	*Total*
Male—				
Officers	2,076	4,159	3,411	9,646
Other Ranks	13,131	25,461	16,739	55,331
Cadets	377	470	437	1,284
Apprentices	687	908	480	2,075
Junior Recruits	172	—	—	172
Total	*16,443*	*30,998*	*21,067*	*68,508*
Females (*b*)—				
Officers	104	299	222	625
Other Ranks	1,013	1,558	1,394	3,965
Cadets	38	21	28	87
Total	*1,155*	*1,878*	*1,644*	*4,677*
Total Strength	**17,598**	**32,876**	**22,711**	**73,185**

(*a*) Includes Reserve personnel on full-time duty. (*b*) Excludes female personnel on maternity leave.

Reserve Forces

Reserves comprise trained and partly trained volunteers who are available to participate in the defence of Australia and its interests in times of war or defence emergency. Royal Australian Navy and Royal Australian Air Force Reserves can be used to supplement and increase the rate of effort of the Permanent Forces. The Army Reserve consists mainly of formed units and sub-units, which, with the Regular Army, provide the basis for expansion of the Army.

RESERVE COMPONENTS WITH TRAINING OBLIGATIONS (*a*) AS AT 30 JUNE

	Navy	*Army*	*Air Force*	*Total*
1978	917	23,164	490	24,571
1979	1,037	22,978	498	24,513
1980	1,039	23,986	502	25,527
1981	1,021	31,125	591	32,737
1982	1,094	31,706	873	33,673

(*a*) Strengths exclude those members who are serving full-time in the Permanent Defence Force but include members who have not fulfilled their minimum training obligations.

Defence co-operation

In support of Australia's defence and foreign policies the Government conducts Defence Co-operation Programs with South-East Asian and South Pacific countries. The programs are bilaterial, geared to the needs and priorities of co-operating countries, and emphasise the transfer of skills and technology. Activities include training in Australia, joint projects, loan of Australian personnel, and combined military exercises.

Training in Australia is an important activity. In 1981–82 over 1,360 overseas personnel were trained by the three Services or with civil organisations, which is an increase of over 18 per cent from the previous year. In accordance with the Government's decision to increase defence co-operation with neighbouring countries this figure is expected to expand steadily in future years. To assist in providing this increased level of training an initial program of upgrading selected training facilities and equipment in Australia was completed in 1982. This includes establishment of an English language training and cultural familiarisation centre (Defence Co-operation Language School) at RAAF Laverton which most overseas personnel attend prior to undertaking training at other Service establishments. The cost of establishing this centre was $1.97 million.

Co-operation with Papua New Guinea included the provision of Australian Loan Servicemen to PNG, combined exercises, training for PNG Servicemen in Australia, survey and engineering projects in PNG, and the provision of defence equipment. Expenditure in 1981–82 totalled $16.65 million.

In Indonesia major Defence Co-operation projects include maritime patrol assistance (including further maintenance assistance and an additional Attack Class patrol boat), survey and mapping of Irian Jaya, a survey feasibility study of the Islands of Sumatera, map production, Dockyard equipment for the Tanjung Uban Naval Base (Riau Islands), and test equipment for the Indonesian Defence Research Centre. Together with the provision of training and advisory assistance, total expenditure was $8.6 million in 1981–82.

Assistance to Malaysia in 1981–82 amounted to $4.0 million, mainly for training. Australian advisers in Malaysia provided assistance in the areas of ordnance, cataloguing, defence research and corps training.

Defence Co-operation with Singapore, composed of training and study visits in Australia and advisory assistance (mainly flying instruction) in Singapore, totalled $1.2 million in 1981–82. A similar figure was spent on the program with Thailand, also largely on training in Australia. Project assistance in Thailand included equipment and training at the Vehicle Rebuild Workshop, Military Technical Training School and Language Training School. Defence assistance to the Philippines in 1981–82 amounted to $1.9 million and included Australian advisory teams to assist in establishing a Nomad maintenance system and to support Australian DART target ranges, as well as training and study visits in Australia.

In 1981–82 expenditure on co-operation with South-West Pacific countries increased to $3 million. Activities in the South-West Pacific are not confined to those states with defence forces. They include technical advisers, survey and mapping, hydrography, channel clearance operations, training and equipment assistance. A new initiative in 1981–82 has been the development of a program of Army engineer assistance to South-West Pacific States to undertake civil engineering projects in remote areas.

Defence representatives overseas

Defence representatives are accredited to Britain, Burma, Canada, China, France, India, Indonesia, Iran, Japan, Republic of Korea, Malaysia, Nepal, New Zealand, Pakistan, Papua New Guinea, the Philippines, Singapore, Switzerland, Thailand and the United States of America.

Defence force activities overseas

The main areas where Australian Defence Force elements have been deployed during the year were Malaysia/Singapore, Papua New Guinea, the Middle East and the Indian Ocean. Units also visited the United Kingdom and Western Germany, Indonesia, the Philippines, Japan, the People's Republic of China, the United States, Canada, New Zealand and the South-West Pacific.

Australian Defence Force elements in the Malaysia/Singapore area include:

Navy—A Destroyer or Destroyer Escort is maintained in South-East Asian waters for much of the year. In addition other ships of the RAN visited the area on goodwill visits.

Army—An Australian infantry company is maintained at Butterworth on the basis of three month detachments from Australia, in a training role.

Air Force—Two squadrons of Mirage fighter aircraft are maintained at Butterworth with a detachment at Tengah in Singapore. Up to three P3 Orion maritime patrol aircraft are also maintained at Butterworth for surveillance duties.

The Defence Force continued to contribute to United Nations peacekeeping operations with Australian Army observers in Kashmir and the Middle East. In addition, since February 1982 Defence Force personnel have been deployed to Sinai for peacekeeping duties with the Multinational Force and Observers (MFO).

Five Australian Army instructors have been in Uganda since February 1982, as part of a Commonwealth Military Training Unit.

Since mid-January 1981 RAN ships have been deployed for patrol duties in the Indian Ocean and the Arabian Sea. These vessels have also paid goodwill visits to Indian Ocean littoral states.

Under the Defence Co-operation Program with neighbouring countries, elements of the Defence Force have conducted surveying and mapping operations in Indonesia, Papua New Guinea and Fiji, and have undertaken other tasks in the Solomon Islands, Tonga, Vanuatu and Kiribati.

THE DEFENCE FORCE

Royal Australian Navy

The RAN maintains and exercises a modern, well-equipped and highly-trained maritime force. The structure of this force is based primarily on the provision at sea of a balanced force group, consisting of surface warships, naval aviation and submarines.

Higher organisation

The Chief of Naval Staff has command of the RAN, subject to the overall command of the Defence Force by the Chief of Defence Force Staff. Principal staff officers to the Chief of Naval Staff are the Deputy Chief of the Naval Staff, the Chief of Naval Operational Requirements and Plans, the Chief of Naval Personnel, the Chief of Naval Technical Services, and the Chief of Naval Materiel. Other senior officers of the RAN include the Flag Officer Naval Support Command and the Flag Officer Commanding H.M. Australian Fleet.

Ships of the Royal Australian Navy

The Fleet, September 1982: *Melbourne*—aircraft carrier (decommissioned in June 1982 and is now in contingent reserve); *Supply*—oiler; *Stalwart*—Destroyer tender; *Tobruk*—amphibious heavy lift ship; *Adelaide, Canberra*—guided missile frigates; *Perth, Hobart, Brisbane*—guided missile destroyers; *Vampire*—destroyer; *Yarra, Parramatta, Swan, Torrens**—destroyer escorts; *Jervis Bay*—training ship; *Curlew, Snipe*—coastal minehunters; *Ibis*—coastal minesweeper; *Moresby, Flinders*—surveying ships; *Cook, Kimbla*—oceanographic research ships; *Otway, Onslow, Ovens, Otama, Oxley, Orion*—submarines; *Attack, Acute, Advance, Adroit, Ardent, Assail, Aware, Barbette, Bayonet, Bombard, Buccaneer, Fremantle, Launceston, Townsville, Warrnambool, Ipswich*—patrol boats; *Banks, Bass*—general purpose vessels; *Brunei, Labuan, Tarakan, Wewak, Betano, Balikpapan*—heavy landing craft. (**Stuart* and *Parramatta* decommissioned—undergoing modernization at Williamstown).

Fleet Air Arm

The aircraft carrier HMAS *Melbourne* was decommissioned in June 1982 and is now in contingent reserve. The Government announced in September 1980 that the *Melbourne* would be replaced by an aircraft carrier capable of operating helicopters and STOVL aircraft. The type of carrier and date of introduction into service is still under consideration. Four squadrons are based at the RAN Air Station, Nowra, New South Wales; HS 817 operates Sea King MK 50 helicopters in the anti-submarine role; HC 723 operates Iroquois UH 1B and Wessex 31B helicopters in utility tasks and search and rescue and also provides Bell 206 B/1 aircraft for the survey ship HMAS *Moresby*; VC 724 operates Skyhawk A4G and Macchi aircraft for fighter ground attack training and Fleet support activities including target towing; VC 851 operates Tracker S2E/G aircraft in anti-submarine and surveillance tasks and HS 748 aircraft in electronic warfare training. The RAN also operates Jindivik pilotless target aircraft. Helicopter capable ships in the RAN are the FFG's, *Stalwart, Tobruk* and *Moresby*.

Ship Construction and Repairs

There are two naval dockyards, one at Garden Island, Sydney and one at Williamstown, near Melbourne. A third yard at Cockatoo Island in Sydney harbour is operated by Vickers Cockatoo Dockyard Pty Ltd (VCD) under agreement with the Australian Government. This company carries out considerable naval refitting work, particularly of submarines. In August 1979 the company was awarded a contract to construct a new replenishment ship for the RAN the keel of which was laid in August 1980.

Other current construction projects include eleven patrol boats being built in Cairns, two guided missile frigates in the United States of America and modernisation of two destroyer escorts being undertaken by Williamstown Naval Dockyard (WND). A contract for the building of prototype MH Catamarans is expected to be placed shortly.

The significant new equipment received by the Navy in 1981–82 included:

HMAS *Townsville* from North Queensland Engineering Agents (NQEA);
HMAS *Wollongong* from NQEA;
HMAS *Launceston* from NQEA;
Deliveries expected in 1982–83 are:
HMAS *Sydney* in January 1983;
HMAS *Stuart* ex modernisation from Williamstown Naval Dockyard in March 1983;
HMAS *Whyalla* from NQEA in July 1982;
HMAS *Ipswich* from NQEA in November 1982;
HMAS *Cessnock* from NQEA in March 1983;
HMAS *Bendigo* from NQEA in May 1983;
Four Water Fuel Lighters from WND;
HMAS *Ovens* ex modernisation by VCD.

Evaluation is continuing on the selection of a replacement for HMAS *Melbourne* and the construction of two FFG type frigates in Australia.

Work will continue on the construction of HMAS *Darwin* (FFG04) in the USA, HMAS *Success* (AOR-01) at VCD, 6 Fremantle Class Patrol Boats at NQEA.

Training and Entry

RAN Staff College. The RAN Staff College located at HMAS *Penguin,* Balmoral, N.S.W., prepares RAN officers of Lieutenant Commander and Lieutenant rank for command and staff appointments. Two courses of 22 weeks duration are run annually, each course comprising 20 students, typically 15 Naval officers, 1 Army officer, 1 RAAF officer and 3 Public Service Board officers.

Officer Entry. The Royal Australian Naval College at Jervis Bay is the training centre for officers in the RAN. Applicants for permanent commissions (presently male only) must be under 20 years of age on 1 January of the year of entry and must matriculate to a university in an Australian capital city. Officer appointees specialise in Seamen, Engineering, Supply and Secretariat, or Instructor Branch. Appointees either complete a full-time degree course in Engineering Science, Surveying or Art at the University of New South Wales, or complete a Diploma of Applied Science at the Royal Australian Naval College. Applicants for degree studies must meet the entry requirements of the appropriate faculty of the University of New South Wales. Male and female applicants for short service commissions must be under 27 years of age on 1 January of the year of entry and have either matriculated to a degree course at an Australian university, College of Advanced Education, or Institute of Technical and Further Education, or achieve four passes at Year 12. Entry is also available to professionally qualified persons such as doctors, teachers, engineers and lawyers.

Sailor Entry. There are several entry schemes available, depending upon an individual's age, educational standard and interests. New entry training is carried out at the following establishments:

- HMAS *Nirimba* at Quaker's Hill, New South Wales, is the primary establishment for all RAN trade training which includes courses for apprentices aged between fifteen and eighteen, general entry personnel and direct entry tradesmen.
- HMAS *Leeuwin* at Fremantle, Western Australia, is the junior recruit training establishment for male entrants aged between fifteen-and-three-quarters and sixteen-and-a-half.
- HMAS *Cerberus* at Westernport, Victoria is the training establishment for general entry members aged between seventeen and twenty-six. Recruits receive twelve weeks initial basic training before progressing to branch training courses.

Advanced branch training is also undertaken at the various schools at HMAS *Penguin*, and HMAS *Watson* in Sydney, and the Naval Air Station at Nowra, New South Wales. A number of specialist courses are conducted in the United Kingdom and United States.

Australian Army

The Australian Army maintains a potential ability and readiness to conduct operations on land for the defence of Australia and, in co-operation with the other arms of the Australian Defence Force, shares a responsibility to deter aggression, to ensure the nation's security and to preserve its national interests.

Higher Organisation

Command of the Army is the responsibility of the Chief of the General Staff, subject to the overall command of the Defence Force by the Chief of Defence Force Staff. He has for his principal staff officers the Deputy Chief of the General Staff, the Chief of Operations, the Chief of Personnel, the Chief of Logistics, the Chief of Materiel and the Chief of the Army Reserve.

The Army is organised into three commands as follows:

- *Field Force Command* which commands all field force units of the Australian Army, both Regular and Army Reserve.
- *Logistic Command* which commands the principal logistic elements of the Army.
- *Training Command* which is responsible for all individual training and commands all Army training establishments and schools with the exception of the Royal Military College, Duntroon (which is under the command of the Chief of the General Staff).

Military Districts as listed below provide administrative support for the three commands, and, in certain cases act as intermediate headquarters for them:

- *1st Military District*—the State of Queensland.
- *2nd Military District*—the State of New South Wales, less those parts included in 3rd and 4th Military Districts.
- *3rd Military District*—the State of Victoria and part of southern New South Wales.
- *4th Military District*—the State of South Australia, plus a portion of south-western New South Wales.
- *5th Military District*—the State of Western Australia.
- *6th Military District*—the State of Tasmania.
- *7th Military District*—the Northern Territory.

The military district headquarters also handle those matters in which both Commonwealth and State Governments are involved.

Training

Australian Staff College. The Command and Staff College is located at Queenscliff, Victoria. The course is held annually and is of twelve months duration. The normal intake is eighty students, twenty of whom are from overseas countries. The course is designed to prepare selected majors for command and staff appointments in the rank of lieutenant colonel.

Royal Military College. The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory to provide trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations. The course is either four or five years of military and academic studies depending upon the academic course undertaken. On graduation, cadets are appointed lieutenant in the Australian Regular Army.

Officer Cadet School. The Officer Cadet School was established in 1951 at Portsea, Victoria, to increase the rate at which junior regimental officers could be produced for the Australian Army.

Civilians between eighteen-and-a-half and twenty-two-and-a-half years are eligible for entry. Serving soldiers are eligible for entry from eighteen-and-a-half up to twenty-seven years. Civilians accorded special entry status because of completed or part completed tertiary qualifications are eligible for entry between eighteen-and-a-half and twenty-five years. The course lasts for forty-four weeks and, on graduation, cadets are appointed second lieutenants in the Australian Regular Army.

Women's Royal Australian Army Corps School. The WRAAC School at Mosman, New South Wales, has two wings: one whose task is the training of officer cadets for the WRAAC; and one which is a basic training wing. The officer cadets are selected on the same criteria as entrants to the Officer Cadet School. The course is of forty weeks duration and, on graduation, cadets are appointed second lieutenants in the Women's Royal Australian Army Corps.

Land Warfare Centre. The Land Warfare Centre at Canungra provides training for personnel in tactics and administration and conducts sub-unit and individual training in battle skills.

Army Apprentices School. The Army Apprentices School was opened in 1948 at Balcombe, Victoria, to train youths as skilled tradesman for the Regular Army and to provide them with a background for an Army career. The course is open to youths between the ages of fifteen and seventeen-and-a-half and provides training in a number of highly skilled trades. With the move to Bonegilla in 1983, the Army Apprentices School will be open to male and female applicants.

Other Schools. Army schools have been established for the major arms and services to train officers and other ranks in the up-to-date techniques of their own arm or service, to qualify them for promotion and to produce trained instructors. Courses at Army schools are conducted for members of both the Regular Army and Army Reserve.

PLATE 29

A Leopard tank of the Royal Australian Armoured Corps. The Leopard is the Army's most potent fighting vehicle. Its 105 mm gun can engage an enemy tank at distances up to 2500 m and lesser targets up to 8000 m.

Royal Australian Air Force

The function of the Royal Australian Air Force is the conduct of operations in the air for the defence of Australia and Australian interests.

Higher Organisation

The Chief of the Air Staff (CAS) has command of the Royal Australian Air Force subject to the overall command of the Defence Force by the Chief of Defence Force Staff. The CAS is assisted in his decisions by an advisory committee which includes the Deputy Chief of the Air Staff, Chief of Air Force Personnel, Chief of Air Force Technical Services, Chief of Air Force Development, Chief of Air Force Materiel, Air Officers Commanding Operational and Support Commands, Director General Supply—Air Force, Assistant Secretary Resources Planning, and other senior officers or specialists as may be directed by the CAS. The Committee has no statutory authority nor executive function and the CAS is not obliged to accept its recommendations.

The Chief of Air Staff administers and controls RAAF units in Australia through the two commands. Operational Command is responsible to the CAS for the command of operational units and the conduct of their operations within Australia and overseas. Operational units based at Butterworth, Malaysia, contribute to the development of the Malaysian and Singapore defence capability and provide forces for the Integrated Air Defence System. Support Command is responsible to the CAS for training of personnel, and the supply and maintenance of Service equipment.

Structural Organisation

The RAAF has five operational elements, the units of which actively and directly participate in air operations. These elements are the strike/reconnaissance force, tactical fighter force, air transport force, tactical air support force and the maritime force. The strike/reconnaissance force provides a capability for offensive air operations against land and naval targets, and a long range reconnaissance capability. The tactical fighter force is responsible for air superiority, air defence and air interdiction operations, and also provides close air support to sea and land forces. The air transport force is used for routine strategic and domestic transport, and in addition has a tactical transport role. Tactical transport and close air support aircraft normally operate within a tactical air support force which is usually controlled by a joint (Air Force/Army) headquarters. Maritime forces are primarily employed in ocean surveillance, anti-submarine warfare and search and rescue. Major maritime operations are controlled by a joint (Air Force/Navy) headquarters.

The support component consists of those units and personnel which support units of the operational component. The elements are maintenance, supply, air training, ground training, administrative and the RAAF Reserve.

Aircraft

The RAAF's strike/reconnaissance force is equipped with F-111C and RF-111C aircraft. The air defence and ground attack squadrons are equipped with the Mirage 1110/D. Transport aircraft currently in use are Hercules C130H and C130E, Caribou, Mystere 20, HS-748, Boeing 707, and BAC-111. Three squadrons operate Iroquois and one operates the Chinook medium lift helicopters. Maritime squadrons operate Orion P-3B and P-3C aircraft. Aircraft used for aircrew initial training are the CT-4 Airtrainer, Macchi and HS-748T2.

Training

RAAF Academy. The RAAF Academy at Point Cook, Victoria is an affiliated college of the University of Melbourne. Cadets are selected principally for the General Duties Branch, and, after three years tertiary training, graduate with a Bachelor of Science degree. Graduates then complete a basic aircrew training course. Cadets selected for the Engineer Branch study the first year at the Academy and then attend the University of Sydney to graduate with a Bachelor of Aeronautical Engineering degree.

Engineer Cadet Squadron. The Engineer Cadet Scheme provides training for degree status in aeronautical, mechanical, electronic and communication engineering at the Royal Melbourne Institute of Technology. Electronic and communication engineering can also be taken at the Western Australian Institute of Technology.

Equipment Cadets. Cadets selected for Equipment Branch duties undertake a three year course at the Darling Downs Institute of Advanced Education in Queensland. They graduate with a Bachelor of Business degree.

Basic Aircrew Training. Flying training for RAAF pilots is conducted at Point Cook, Vic., and Pearce, WA, while RAAF navigators are trained at East Sale, Vic. Officer and military training forms part of the flying training course. Trainees receive their wings and are commissioned on graduation. The RAAF also provides pilot and observer training for the RAN and initial pilot training for the Army. Airmen, aircrew for employment as flight engineers, loadmasters and crewmen are trained in two phases: a basic aircrew course at Richmond, NSW, and flying training within the conversion training or operational squadrons.

Aircrew Operational Conversion. Conversion training to Mirage fighter aircraft and Orion Maritime aircraft is conducted by the respective conversion training squadrons. Conversions to other operational aircraft are conducted within the operational squadrons.

Officer Training. With the exception of those officers commissioned from the RAAF Academy, all officers entering directly (with or without tertiary qualifications), commissioned airmen and airwomen, engineering and equipment cadets and undergraduate students undergo the Officers' Initial Training Course at the Officers' Training School, Point Cook, Vic.

Staff College. The RAAF Staff College located at Fairbairn, ACT, provides two residential staff courses. The Basic Staff Course of six weeks duration provides Command and staff training to officers of the rank of Flight Lieutenant. The Advanced Staff College Course of forty-three weeks duration provides staff training and higher service education to selected officers normally of the rank of Squadron Leader. This course is designed to broaden the students' professional background and to prepare them for Command and staff appointments of greater responsibility. A one year correspondence course covering military studies, international affairs and management is a compulsory prerequisite for entry to the advanced course.

Ground Training. The major ground training schools are the School of Radio at Laverton, Victoria and the School of Technical Training at Wagga, New South Wales. Both schools provide trade and technologist apprentice and adult trade training for technical personnel. They also provide post graduate-type training and specialist familiarisation courses on aircraft and telecommunications systems. Non-technical courses conducted at Wagga include catering, clerical, supervision and management and instructional technique.

SERVICE ESTABLISHMENTS PROVIDING EDUCATIONAL COURSES OF SIX MONTHS DURATION OR LONGER, AUSTRALIA, 1979, 1980 AND 1981

	Students enrolled			*New entrants during year*			*Number completing course during year*		
Establishment	*1979*	*1980*	*1981*	*1979*	*1980*	*1981*	*1979*	*1980*	*1981*
Staff colleges—									
Joint Services Staff College	82	88	89	82	88	89	82	88	89
Australian Staff College	80	80	80	80	80	80	80	80	80
RAAF Staff College	48	41	40	48	41	40	47	41	40
RAN Staff College	34	36	40	34	36	40	34	35	40
Officer cadet training establishments—									
RANC	(*a*)537	567	486	332	314	235	217	245	197
RMC	439	456	453	135	139	149	77	71	72
RAAFA	130	127	136	46	33	47	25	26	32
Apprentice schools—									
Navy	677	904	880	184	252	761	167	527	560
Army	557	559	570	254	274	268	216	204	228
Air Force									
Wagga Wagga	338	335	300	161	173	179	(*b*)42	144	142
Laverton	86	109	71	50	50	51	(*b*)—	23	29
Other—									
RAN Junior Recruit Training School	360	256	460	360	256	320	344	220	300
RAAF School of Languages	34	45	41	34	45	41	34	35	29

(*a*) Now includes all RAN officer training. (*b*) Low numbers completing the course are due to extension of the course length by an average of three months. Apprentices graduated in 1980.

Defence Science and Technology Organisation

The Chief Defence Scientist heads the Defence Science and Technology Organisation (DSTO) which is engaged in research, analysis, development, trials and evaluation. It consists of a central office and ten establishments, a small number of people in overseas posts and some in joint activities with other nations. The DSTO contains about 4,400 staff (including some 1,000 professionals) who provide a degree of scientific expertise in most physical sciences and engineering fields of relevance to defence.

As part of major changes in the Department of Defence structure (Interim Defence Review Committee (Utz) Report) announced by the Prime Minister on 7 May 1982, the day-to-day responsibility for administration of nine DSTO establishments (i.e. all those except Central Studies Establishment) passed to the new Department of Defence Support.

The Minister for Defence retains central responsibility for defence science policy and co-ordinating defence expenditure. The Chief Defence Scientist, Professor P. T. Fink CBE FTS and his DSTO policy, advisory and military studies staff in Canberra remain in the Department of Defence.

The objective of DSTO is to ensure that Australia takes best advantage of modern technology in its Defence Force. The major activities are: scientific input to Defence policy formulation; solution of Defence Force problems particularly where high technology or special features of Australian physical or military environment are involved; modification and extension of life of military equipment; development of Australian equipment; evaluation of military equipment and procedures by trials, exercise analysis or operational research; support to defence industry; international co-operation in defence Research and Development.

The central office of DSTO in Canberra has 2 Divisions in the Department of Defence:

Programs and Administration Division controls the management and administration of the DSTO forward planning and advises on the optimum deployment of DSTO resources; co-ordinates co-operation with overseas governments and is responsible for information services as well as career planning and assessments. It also manages special joint undertakings with other countries.

The Projects and Analytical Studies Division provides management and advice on Major Projects and Co-ordinates relevant establishment activities; co-ordinates analytical studies throughout DSTO, fosters DSTO contacts with other national science and technology agencies and bodies, with professionals in industry and academic institutions and with the wider community.

DSTO Establishments

DSTO laboratories are located in eastern and southern Australia.

The DSTO establishments are:

Advanced Engineering Laboratory, Salisbury, S.A.
Armed Forces Food Sciences Establishment, Scottsdale, Tas.
Aeronautical Research Laboratories, Fisherman's Bend, Vic.
**Central Studies Establishment, Canberra, A.C.T.*
Electronics Research Laboratory, Salisbury, S.A.
Joint Tropical Trials Research Establishment, Innisfail, Qld.
Materials Research Laboratories, Maribyrnong, Vic.
Materials Testing Laboratory, Alexandria, N.S.W.
Royal Australian Navy Research Laboratory, Edgecliff, N.S.W.
Weapons Systems Research Laboratory, Salisbury, S.A.

* Still in the Department of Defence.

For further information *see* section on Department of Defence Support.

Implementation of DSTO Reviews

As a result of the DSTO Independent External Review and the Internal Review into Objectives and Procedures the following organisational changes occured in Feburary 1982:

- the central office division of Service Laboratories and Trials was abolished;
- the Royal Australian Navy Trials and Assessing Unit was transferred back to Navy;
- the Engineering Development Establishment transferred back to Army;
- responsibility for the Armed Forces Food Science Establishment, the Joint Tropical Trials Research Establishment, and the Materials Testing Laboratory passed to the head of the Materials Research Laboratories; and
- the Trials Resources Laboratory was absorbed into the Advanced Engineering Laboratory.

Natural Disasters Organisation

The Natural Disasters Organisation (NDO) was established in the Department of Defence in 1974, absorbing the functions of the former Directorate of Civil Defence; the latter had been in the Department of the Interior until moved to Defence in December 1972.

The organisation mitigates the effects of disasters at the request of State and Territory counter disaster organisations and in conjunction with the Defence Force, Commonwealth Government Departments and other Government and non-Government organisations; and supports the development of a core civil defence structure. The NDO and the State and Territory Emergency Service organisations constitute the core civil defence structure for Australia, but their main continuing activity in peace is related to mitigation of the effects of disasters. The States and Territories have complete responsibility for their own counter-disaster organisations.

At the national level NDO is required to develop and implement contingency plans involving Commonwealth resources to cope with requests by State/Territory counter-disaster authorities during disasters, and with civil defence needs. The headquarters of NDO in Canberra, through its National Emergency Operations Centre, provides a focal point for the co-ordination of national effort where appropriate. It is through this Centre that the physical resources available from the Commonwealth are co-ordinated when assistance or support is requested by State and Territory authorities.

The NDO administers a number of programs from Commonwealth funds for the support of the Emergency Service organisations, namely: the supply of emergency type equipment (radios, rescue vehicles, first aid kits, generators, flood rescue boats, etc.); reimbursement of salaries of State/Territory full-time organisers at regional level; provision of training films and handbooks, and subsidies on a limited dollar-for-dollar basis to provide accommodation for the State/Territory units at local government level.

Other programs which benefit all organisations with a counter-disaster involvement, and the community at large, are: training, principally at the Australian Counter Disaster College at Macedon, Victoria; emergency broadcasting facilities; a fall-out shelter survey service; and a public awareness program.

DEPARTMENT OF DEFENCE SUPPORT

The Department of Defence Support was formally established (by the Governor-General in Council) on 7 May 1982, and draws together elements previously located in the Departments of Administrative Services, Defence, and Industry and Commerce as recommended by the Interim Report of the Defence Review Committee (the Utz Committee).

This grouping of defence support activities under a separate Minister and Department enables close co-operation between scientific and industrial organisations involved in defence activities. At the same time it allows closer integration of private sector industrial capacity with the defence support effort leading to increased self-reliance in industrial support.

In responding to the manifold needs of Australian defence, the Department:

- undertakes the purchase of goods and services for defence purposes;
- undertakes and sponsors research and development relevant to defence needs, supporting both the Defence Force and the defence industry base in this regard;
- provides technical expertise and other forms of assistance to encourage defence industry initiatives and the acquisition of modern techniques and technologies;
- ensures that Australian industry participates in the procurement and support of defence equipment to the maximum practical extent;
- administers the Australian Offsets Program so as to stimulate technological advancement and broaden the capabilities of Australian industries of significance to this country's strategic and overall manufacturing needs;
- manages the Government's defence oriented facilities including munitions and aircraft factories, and dockyards; and
- consistent with the Government's defence and foreign affairs policies, markets defence and allied products and services to help maintain industrial capabilities of strategic significance.

All these activities are directed to the Department's singular goal—the provision of optimum support for the nation's defence effort in peace and war.

The Department employs some 19,000 employees under the Public Service Act, the Supply and Development Act and the Naval Defence Act. The employees include, in round numbers, 1,600 technical professionals, 4,800 tradesmen and 1,600 apprentices.

The intertim Utz Report saw the Committee system as a key means of integrating the Department with the Defence Organisation as a whole and recommended that the Minister and senior officers be members of, or invited to, a number of committees including:

- the Council of Defence;
- the Defence Committee;
- the Defence Force Development Committee;
- the Defence Force Structure Committee;
- the Consultative Group;
- the Defence Science and Technology Management Advisory Committee; and
- the Defence Science and Technology Committee.

The Minister and Secretary are members of the Council of Defence.

Membership of Departmental officers on a wide range of other committees is under review.

Budget allocations

Estimated total expenditure for the Department in the 1982–83 Budget was $429 million.

The Department is heavily committed to work associated with important defence projects ranging from the Basic Trainer Aircraft and the F/A-18 fighter programs to the Waler armoured vehicle, the Raven combat radio, the Discon telecommunications, the Barra anti-submarine and the follow-on destroyer projects.

Some of these projects already involve considerable work by Australian industry and contribute further to the nation's expanding technological capability.

On the Research and Development front the Department's scientists are applying state of the art technologies in such fields as weapons guidance systems and effective means of combating the threat of surface-to-surface and air-to-surface missiles.

DEPARTMENT OF DEFENCE SUPPORT: ELEMENTS OF EXPENDITURE, 1982–83
($'000)

Capital equipment	70,126
Defence facilities	35,243
Manpower	168,264
Other operating costs	155,363
Total expenditure	**428,996**

DEPARTMENT OF DEFENCE SUPPORT: EXPENDITURE ALLOCATIONS, 1982–83
($'000)

Government Munitions and Aircraft Factories	192,161
Naval Dockyards	82,003
Research Laboratories	128,569
Industry Development	5,396
Purchasing	5,238
Administration	15,629
Total	**428,996**

Some major programs for 1982–83, by functional areas, are:

Munitions

Nitroglycerine and propellant paste manufacturing plant at Mulwala Explosives Factory. Required for the manufacture of double-based propellant. Estimated expenditure $2 million.

Heavy shell forging plant at Ordnance Factory, Maribyrnong. Required for the forging of 155 mm shells. Estimated expenditure $2 million.

Modernisation of small arms ammunition production facilities at Ammunition Factory, Footscray. Estimated expenditure $3.4 million.

Occupational safety and health improvements at Munitions Filling Factory, St Marys. Estimated expenditure $1.5 million.

Aircraft, Guided Weapons and Electronics

Funding, marketing, plant re-arrangement and capital equipment and plant for the Basic Trainer project. Total cost of $2.9 million. Subcontract of design and manufacturing work will go to member organisations of the Australian Aircraft Consortium Pty Ltd and to the Department's Aeronautical Research Laboratories of Fishermen's Bend.

Provision has been made in the Budget estimates for development of a Box Launched Ikara at a cost of $853,000.

Construction of a structural bonding workshop, Government Aircraft Factories, at a total cost of $25.0 million. This workshop will provide a very significant update of airframe manufacture and modification and repair capability in the Australian industry. It will be very well equipped for fabricating airframe components in advanced carbon composite materials which are becoming more and more widely used in both military and civil aircraft production.

Approval has been given for capital expenditure (at Commonwealth cost) on buildings and works and machinery and plant required for the Australian industry program for the F/A-18 fighter. The works and machinery and plant items will be located at government and private factories.

This expenditure in the Australian aircraft industry will be principally in areas of high technology directly applicable to the role which the local industry will play in the new F/A-18 fighter.

Australia will undertake the final assembly of the aircraft and its engines and some airborne equipments. For the main part, this work will consist of assembling imported components. However, some major parts of the airframe, engine and equipments will be produced in Australia from raw materials. Such components will be produced in high volume for export to the United States under the Government's offsets policy.

Naval Dockyards

Modernisation of Garden Island Dockyard is continuing. An amount of $33 million has been committed for Stage 1 works.

A total of $88 million is to be committed for Stage 2 works which include the Woolloomooloo Fleet Base.

The principal activities of Garden Island continue to be the repair and refit of Naval ships and the manufacture and repair of naval stores.

At Cockatoo Island, leased and operated by Vickers Cockatoo Dockyard Pty Ltd, the RAN spent $29 million in 1982 on the modernisation and refit of the submarine HMAS *Ovens*, and is spending $32 million on HMAS *Orion*, due to be completed in August 1983. Construction of HMAS *Success* has been hampered by shortages of skilled labour and a delay in completion seems likely.

Principal activities at Williamstown Naval Dockyard are the continuing modernisation of HMAS *Stuart* and *Derwent* and the completion of four motor water/fuel lighters.

Research Laboratories

Provision has been made for the construction of a new physics laboratory at the Materials Research Laboratories at Maribyrnong at an estimated cost of $2.6 million. Work will begin soon after the necessary procedures through the Parliamentary Works Committee are completed.

Work will continue on the refurbishment and modification of the former Royal Edward Victualling Yard at Pyrmont, N.S.W., which will accommodate the Royal Australian Navy Research Laboratory currently located at Edgecliff.

New computing facilities will be installed in the Aeronautical Research Laboratories at Fishermens Bend, Victoria, and the Royal Australian Navy Research Laboratory, for an estimated total cost of $4.8 million.

Revenue

Estimated revenue for the Department in 1982–83 is $6.813 million comprising moneys payable to the Consolidated Revenue Fund in relation to Nomad aircraft sales, recovery of certain charges by the Research and Development Laboratories, repayment of working capital and moneys in excess of requirements at the Government Factories and other miscellaneous receipts.

Purchasing

Major contractual activities in 1982–83 are expected to include the construction of minehunter catamaran hulls, the defence integrated secure communications network, the Barra Project, additional helicopter requirements, a bridge simulator for the RAN and a flight simulator for the F/A–18.

Defence Purchasing

Under the Administrative Arrangements Order of 7 May 1982, the Minister for Defence Support became responsible for that part of defence purchasing which until then had been under the administrative control of the Minister for Administrative Services.

The Department of Defence Support is the Purchasing Authority (i.e. the Tendering Authority and Contract Authority) for all defence supplies of goods and services purchased in or from Australia from commercial suppliers above the prescribed public tender threshold (currently $10,000).

In the Department of Defence Support, defence purchasing is being handled in two ways:

- for major defence equipment procurements (usually those over $5 million, but also other requirements of smaller value but with great complexity or other special features) the tendering and contracting arrangements are done in Central Office; and
- for all other defence purchasing, the tendering and contracting is decentralised in the Department's regional offices in the capital cities.

Exceptions to the above are that the Department of Administrative Services will continue to handle defence requirements over the following range of supplies, for which it has a central purchasing role or expertise, for departments generally:

- ADP equipment including hardware, software and services (excepting for weapons and the like);

- furniture and fittings where the cost of single items or the overall cost of any discrete project exceeds the public tender threshold;
- cleaning; security and watchkeeping services; and
- common-use supplies on period contract (except where it is assessed that Defence/Defence Support requirements would account for 80 per cent or more of the supplies expected to be purchased under such contracts).

In respect of major contracts, contractual arrangements undertaken recently for the Department of Defence include:

- development and supply of three mine hunter weapons systems by Krupp Atlas Electronik of FRG ($13m);
- an acoustic sonobuoy for Project Barra (second production contract) to be supplied by Amalgamated Wireless Australia Ltd ($54m);
- production of sonar arrays by Honeywell Inc. U.S.A. ($U.S.11m);
- the production of instrumentation for sonar detecting devices for the Mulloka Sonar System by Electronics ($16m);
- the design and development of the Basic Training Aircraft by the Australian Aircraft Consortium Pty Ltd ($40m); and
- purchase from Lockheed Corporation of P3-C and trade-in of P3-B Orion aircraft ($275m).

The Department's purchasing function is heavily committed to work associated with other important Defence contracts such as:

- WALER, a project to replace the Army's current range of Light Armoured Fighting Vehicles;
- RAVEN, a project to provide the Army with a single channel radio system and associated ancillaries;
- DISCON, a project to provide a secure multipurpose communications network, between major Defence establishments throughout Australia; and
- Minehunter Catamarans, a project to design, develop and build minehunter and disposal systems for the RAN.

In addition to the above, the Department is engaged in contractual administration of many projects including construction of Patrol Boats and the Fleet Underway Replenishment ship for navy.

Defence Research and Development

The Department's defence research and development laboratories, form the second largest research and development organisation in Australia with some 1,000 professional scientists and a total staff of about 4,400. There are nine laboratories in five States.

The work of the research establishments is aimed at meeting the needs of Australian defence, present and future, and to help the defence force take best advantage of modern technology.

There is considerable interaction between the Research and Development (R & D) establishments and the defence force and defence industry, who are their principal customers. A large number of companies are associated with this R & D effort, some having facilities adjoining that of the Defence Research Centre Salisbury including several major aerospace companies.

Despite the laboratories strong alignment with defence, their unique skills and facilities are available for non defence tasks where priorities permit. Functions of the laboratories are briefly described below.

Materials Research Laboratories, Maribyrnong, Vic.—Provides research and development support to the defence force and defence industry in fields including materials, munitions, organic chemistry and high energy lasers.

Materials Testing Laboratory, Alexandria, N.S.W.—Responsible for chemical and metallurgical testing of materials for defence and defence related purposes.

Armed Forces Food Science Establishment, Scottsdale, Tas.—Determines energy and nutrient requirements of defence force personnel and translates these to ration packs and mess feeding.

Joint Tropical Trials and Research Establishment, Innisfail, Qld.—Studies behaviour and degradation of materials in hot/wet environments as well as effects of marine immersion.

Aeronautical Research Laboratories, Fishermens Bend, Vic.—Undertakes research and development in areas of significance to defence and on specific projects particularly in the field of aeronautics.

RAN Research Laboratory, Edgecliff, N.S.W.—Undertakes research, operational and other studies in this fields of underwater acoustics, oceanography, sonar and mining.

Advanced Engineering Laboratory.—Responsible for engineering feasibility studies, design, development, manufacture and trials of systems and equipment in mechanical electronics and communications engineering fields.

Electronics Research Laboratory.—Responsible for research and development in radio, electronics, radar, infrared applications, optics, electro-optics, electronic warfare, surveillance and navigation.

Weapons Systems Research Laboratory.—Responsible for research and development related to systems aspects of weapons, aeroballistics, underwater detection and rocket propulsion.

Defence Research Centre, Salisbury, S.A.—Comprises the Advanced Engineering, Electronics Research, and Weapons Systems Research Laboratories and provides for their administrative support. Provides general support services for the Defence Support Centre, Woomera.

Defence Support Centre, Woomera, S.A.—Provides an outdoor laboratory essential for weapon systems trials in support of research and development programs.

Production Facilities

The Department of Defence Support maintains and operates nine factories for the manufacture of munitions and other defence material, including military clothing, and two concerned with aircraft production. The munitions factories undertake work in the fields of light, heavy and chemical engineering.

As well as achieving progress in the development and production of munitions for Australia the factories have helped to broaden the country's industrial base. They develop and adopt new manufacturing technology and a diverse range of production equipment is used to develop new production processes and apply new techniques.

An extensive program of continued implementation of Computer Aided Design and Computer Aided Manufacturing (CAD/CAM) techniques within the factories has generated much interest in Australian industry.

Through the Department, the munitions factories have links with munitions manufacturers in the UK, Europe and North America. The Department also maintains contact with ASEAN countries on defence production matters and provides some training for their engineers. Functions of the facilities are briefly described below.

Small Arms Factory, Lithgow, N.S.W.—Manufactures small arms, weapons and kindred defence equipment.

Mulwala Explosives Factory, N.S.W.—Manufactures acids, nitro-cellulose and granular propellants.

Munitions Filling Factory, St Marys, N.S.W.—Assembles and fills artillery ammunition, bombs, depth charges, warheads, rockets, mines and pyrotechnic items.

Albion Explosives Factory, Vic.—Manufactures explosives and propellants, concentrates and mixes, nitric and sulphuric acids.

Australian Government Clothing Factory, Coburg, Vic.—Manufactures uniforms and other clothing for the defence services and other government departments.

Ordnance Factory, Bendigo, Vic.—Manufactures ordnance stores such as gun barrels, gun mountings, marine propulsion gearing, general gearing and general engineering items, and undertakes the modification and reconditioning of such stores.

Ammunition Factory, Footscray, Vic.—Manufactures small arms, medium calibre ammunition, cartridge cases, shell fuses, small munitions and undertakes fuse development.

Explosives Factory, Maribyrnong, Vic.—Produces rocket motors, gun propellants, explosive devices, special paint products and undertakes chemical process and design.

Ordnance Factory, Maribyrnong, Vic.—Manufactures ordnance, pressure vessels, generators, heavy forgings, fabrications and test equipment.

Government Aircraft Factories, Fishermens Bend and Avalon, Vic.—GAF is Australia's main designer and producer of manned and unmanned aircraft and guided weapons. GAF depends significantly on exports of military equipment of its own design and on work resulting from the Government Offsets policy. GAF is a major subcontractor to McDonnell Douglas and Northrop on the F/A-18 tactical fighter and is a consortium member for the Basic Trainer Project.

Aircraft Engineering Workshop, Pooraka, S.A.—Performs a broad range of short run work on aircraft spares and ground support equipment as well as commercial work.

Non-Government Operated Aerospace Facilities—Hawker de Havilland Australia Pty Ltd operates its Bankstown, N.S.W., facility on land owned by the Commonwealth. In 1981-82 the company benefited from Government expenditure of almost $5 million towards maintenance of its production

capability. Similarly, in 1981-82 the Government spent more than $4 million to support maintenance of production capability, and invested more than $1 million for machinery and plant at the Commonwealth Aircraft Corporation Ltd's facility at Fishermens Bend, Victoria.

Plant is also provided to the Aviation Division of Dunlop Olympic Ltd under and ongoing production agreement for the manufacture of defence components and spares and maintenance and overhaul of defence equipment.

Defence Dockyards

The Department of Defence Support manages the naval dockyards at Garden Island and Williamstown and is responsible for the Cockatoo Island Dockyard which is operated on behalf of the Commonwealth by Vickers Australia Pty Ltd.

These dockyards undertake:

- refitting;
- repair;
- modernisation; and
- construction of naval vessels.

Garden Island is principally concerned with refitting, repair and modification and is undergoing major modernisation to improve its ability in these areas and to create a fleetbase which is able to cope with the demands of modern naval vessels and systems.

In 1982 at Garden Island:

- HMAS *Curlew* and *Ibis* mine countermeasure ships, were refitting;
- HMAS *Kimbla*, oceanographic duties vessel, was refitting;
- HMAS *Jervis Bay*, training ship, was undergoing intermediate docking; and
- HMAS *Torrens*, destroyer escort, was on extended, intermediate docking.

Williamstown Dockyard, planned as the principal construction yard for destroyer size ships, is also being modernised with the view to the possible building there of FFG type vessels for the Royal Australian Navy.

At Williamstown in 1982:

- HMAS *Stuart* and *Derwent*, destroyer escorts, were on a modernisation program; and
- of four fuel/water lighters on order, two were undergoing trials and two were under construction.

All updates and modifications of submarines are carried out at Cockatoo Island and the new underway replenishment ship, HMAS *Success* is under construction there. In 1982 the submarines HMAS *Ovens* and *Orion* were refitting there.

CHAPTER 5

INTERNATIONAL RELATIONS

The basic principles underlying the shaping and conduct of Australia's foreign policy are that Australia is a significant middle-level power with democratic institutions; having strong affiliations with other Western countries but an emerging Asia-Pacific identity through its increasing involvement in the region.

Australia's prosperity is largely dependent on trade; it is geographically remote from its founding nation, principal migration source countries, major markets and its main allies; it is a relatively affluent and resource rich country in a populous, developing and rapidly changing region.

Initially, Britain and the Commonwealth countries were the central elements of Australia's foreign policy and activity. Later, partly as a consequence of the vital role played by the United States of America in the Pacific during the Second World War and subsequently, close relations were also developed with that country. These links, and links with Western Europe, remain important factors in Australian policy. Australia inherits its national traditions from Western European countries, conducts a major part of its trade with these countries and with Japan and the United States, and obtains technology and capital for its development from them.

Australia is located in a region which includes the politically, economically and strategically significant countries of North East and South East Asia and the many newly independent nations of the South Pacific. Awareness of the importance of these neighbouring states has led successive Australian Governments to seek to promote and maintain friendly and co-operative relations with them, not only to ensure the stability and security of the region, but also to develop mutually profitable trade, investment, exchange of technology, and co-operation in the development process. Australia gives special attention to its relations with China, Japan, ASEAN (the Association of South East Asian Nations) and its members, New Zealand, Papua New Guinea and the other South Pacific states.

Australia has also been concerned at the increasing instability in the world strategic environment, particularly in South West Asia, Indo-China, the Middle East and Africa. These will remain issues of central importance to the Government's foreign policy concerns and to the Western alliance of which Australia is an active member.

New international issues (economic, resources, human rights, refugees, etc.) and new concepts of national interest are emerging, together with an increasing recognition of the growing interdependence of the world community. This is reflected in economic issues becoming one of the priorities in Australia's foreign policy. Australia recognises the importance and growing complexity of economic issues, particularly the slow-down in world trade and economic development and the continuing energy crisis affecting both developed and developing countries. The growing interdependence of national economic and foreign policies and the increasing vulnerability of Australia's economy to international trade and other developments will remain at the heart of Australia's foreign policy concerns for some while to come. Australia's recognition of the serious implications that many of these issues have for the relationships between developed and developing countries was shown by the establishment early in 1978 of a Committee on Australia's Relations with the Third World. The Committee's Report was issued in September 1979. Australia places a high priority on its participation in the resolution of these global issues in the United Nations, the Commonwealth and other multilateral forums.

The United Nations

Successive Australian Governments have reaffirmed their support for the United Nations (UN), its Charter and the work being done in the various specialised agencies. Within the United Nations and other organisations, Australia seeks to work toward the solution of the pressing problems confronting humanity today.

Australia is involved in a wide range of United Nations matters and has served on many United Nations bodies. It was a member of the Security Council in 1973–74 and, in 1975, a long period of membership on the Trusteeship Council came to an end with the independence of Papua New Guinea. It is a member of the Special Committee on Decolonisation and the UN Committee for Namibia.

Australia is a member of the Economic and Social Council for 1980–82. Australia also supports the work of the specialised agencies and subsidiary bodies in such areas as development assistance, drug control and human rights. It is an active participant in the economic work of the United Nations

through such forums as the UN Conference on Trade and Development (UNCTAD) and has been re-elected to the UN Development Program (UNDP) Governing Council for three years from 1 January 1983. Australia is a member of the UN Commissions on Human Rights, Human Settlements, and Narcotic Drugs, and on the Executive Board of the UN Children's Fund and the Governing Council of the UN Environment Program (UNEP)—and has been elected to the Statistical Commission for a four-year term which began in 1981. Australia is a member of three of the UN Educational, Scientific and Cultural Organisation's Governing Councils and its prominent role in world refugee assistance is reflected in membership of the Executive Committee of the UN High Commissioner for Refugees.

Australia has been involved in almost all UN peacekeeping activities since these began. Australia has also contributed its assessed share of the costs of all UN operations and also makes voluntary contributions as well as providing men and equipment for peacekeeping forces.

Australia is also fully involved in the work of the UN on disarmament and outer space, and is a member of the main subsidiary bodies working in these areas.

Australia accepts the compulsory jurisdiction of the International Court of Justice and plays an active role in bodies concerned with the development of international law.

The Commonwealth

The Commonwealth is a distinctive and unique framework bringing together about a quarter of the world's population. Australia participates actively in the broad range of Commonwealth activities. It was host to the first regional Heads of Government meeting in Sydney in February 1978, and hosted the Commonwealth Heads of Government Meeting (CHOGM) in Melbourne in September-October 1981.

South East Asia

Australia shares with South East Asian countries a concern for peace and the economic and social development of the region. The Australian Government is in regular contact and consultation with South East Asian governments on a wide range of issues. Contacts with them have widened beyond the scope of official activity to include consultation between private sector organisations, co-operation in trade and resources, the export of Australian expertise and technology in joint enterprise arrangements, and direct Australian investment. Benefits from this growing economic relationship are mutual, and it is essential to Australia's economic and political future in its own region.

The range of personal contacts with the region continues to widen, as tourism develops, migration from Asia to Australia grows, student exchanges increase, and academic studies and press coverage of regional affairs expand.

Australia has particularly welcomed the progress made by ASEAN and its contribution to the promotion of regional co-operation. Australia has a significant interest in helping to ensure that ASEAN succeeds in generating economic growth and political stability and supports its wish to prevent domination of the region by any major power. Australia has entered a program of economic co-operation with ASEAN to which it has pledged a total of $56.7 million over the period 1974–75 to 1986–87, and for a number of years has played a major part in assistance with the Indo-Chinese refugee problem.

Asia

Australia believes that peace and prosperity in Asia depend largely on the ability of countries in the region to co-operate to secure these objectives and in ensuring that no major power, either inside or outside the region, is able to exert an undue influence in the area.

Australia's primary interest and concern in Asia has long been reflected in its active role in regional associations and organisations such as the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the Colombo Plan, the Asian Development Bank and in many other bodies, both private and government.

Japan is Australia's largest trading partner, with total trade now around $9,420 million a year and is a significant source of investment funds. Relations between the two countries in political, cultural, scientific, sporting and other areas are being actively fostered by both Governments with a view to improving mutual understanding and friendship.

Australia has developed a broad range of interests with China since the establishment of diplomatic relations in 1972. This has been facilitated through reciprocal visits by political leaders and the conclusion of several bilateral agreements. There is an increased level of co-operation and exchange of experts between the two countries, one element of which is an aid program which Australia has begun with China. The level of trade between Australia and China is important for both countries. China is a significant market for Australian wheat, sugar, wool and iron and steel products. Recent years have

also seen an increase in consultations between China and Australia on regional issues of mutual concern. Under the aid program Australia supports China's modernisation through the Technical Co-operation for Development Agreement which involves provision of relevant Australian expertise and advice on technical aspects of development projects. The Australia-China Council has played an important part in cultivating relations on a wide basis.

Australia's relations with the Republic of Korea are firmly established. In addition to the important economic partnership, both countries are promoting exchanges in other areas.

Australia is developing its relations with Laos and is providing a small program of development assistance. Australia maintains normal diplomatic relations with Vietnam but the bilateral relationship has been affected by Vietnam's military occupation of Kampuchea.

Australia recognises the strategic and political importance of the Indian sub-continent and has continued to strengthen friendly relations with the countries of that region. The Australian Prime Minister has visited India on three occasions in the past three years and the Indian Prime Minister, Mrs Gandhi, attended the 1981 Melbourne CHOGM. There have been regular exchanges of ministerial visits between Australia and the region. As part of the aid program with India, Australia is providing assistance, with an emphasis on livestock development.

South Pacific

Australia looks to consolidate and to expand its co-operative activities to promote the stability, welfare, harmony and economic development of the region. Australia has moved deliberately to develop and extend its bilateral relations with the Island countries and now has nine diplomatic missions in the area. Aid programs are substantial in size and varied in nature, covering all types of infrastructure and other development projects. The Australian Government has approved a new five-year forward indicative planning figure for the aid program to the region (excluding Papua New Guinea) to commence in 1983–84. A further $5.202 million for defence co-operation projects in the countries of the South West Pacific has been allocated for 1982–83.

As the largest of the South Pacific Island States, Papua New Guinea (PNG) has played, since independence, an influential and leading role in the region. Australia and PNG have a close and warm relationship which encompasses a broad range of Government and non-government activities. Australia's aid commitment to PNG is substantial and a second five-year aid agreement was announced in September 1980. Australia's budgetary aid will total $253 million for 1982–83 while the defence co-operation program will provide grant assistance of a further $17.54 million.

Australia was a foundation member of the South Pacific Commission, the South Pacific Forum and the South Pacific Bureau for Economic Co-operation and has become a party to the convention establishing the Forum Fisheries Agency. Australia takes part in these and the many regional meetings held in the Pacific to act on a broad range of issues of common interest. Besides contributions to ESCAP, SPEC and the SPC, financial support for other regional and international programs developed in the South Pacific is being increased significantly in 1982–83. Australia has also established a fund to promote the preservation and development of Pacific cultures. Australia and New Zealand have entered into a non-reciprocal preferential trade agreement in favour of South Pacific Forum States: the South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA).

Relations between Australia and New Zealand are particularly close. They are based on shared history, close economic ties, and common problems in dealing with the current international political and economic environment. The implementation in 1966 of the New Zealand-Australia Free Trade Agreement (NAFTA) established a special trading relationship between the two countries. Negotiations on a possible closer economic relationship have been taking place since 1980. The proposed new agreement to replace NAFTA would lead, on the basis of equality of opportunity, to the progressive elimination of remaining barriers to trans-Tasman trade such as tariffs and import restrictions, and to the removal of other trade-distorting factors such as export incentives.

The Australia New Zealand Foundation was founded following discussions between the Prime Minister of Australia, the Rt Hon. Malcolm Fraser, and the Deputy Prime Minister of New Zealand, the Hon. Brian Talboys, in March 1978. The aim of the Foundation is to help strengthen relations between Australia and New Zealand by encouraging the study and discussion of issues of interest to both countries and the promotion of increased cultural and other exchanges. The Foundation is government-funded but is administered by an independent Executive Board.

The Americas

Australia has a long-standing and close relationship with the United States which extends across the whole range of the national life of both countries. Government-to-Government relations are only one part of a larger and more extensive interaction between the two countries which derives from

common experiences, culture and language. In general, relations between the countries are warm and co-operative, with a high degree of official political consultation and a close personal relationship between the political leaders. The affinity between Australia and the United States is underpinned by substantial economic and commercial relations which, however, are not without their substantial difficulties from time to time. The United States is Australia's largest supplier of imported items and its second largest export market.

Canada is, to a greater degree than other nations, a country comparable with Australia in terms of institutions and traditions, geographical size, economic standing and international outlook. The genuine goodwill established between the two countries has allowed Canada and Australia to co-operate on the achievement of mutually desirable objectives, reflecting individual national interests and competition in certain commercial fields.

Developments in the Caribbean and the Latin American region are of increasing importance to Australia, and resident missions have been established in Jamaica, Mexico, Chile, Argentina, Brazil, Peru and, most recently, Venezuela. Australia has observer status at the annual General Assemblies of the Organisation of American States.

Europe

Australia attaches considerable importance to maintaining warm and friendly relations with the countries of Western Europe, with the European Community and its institutions, including the European Parliament.

Bilateral relations with individual Western European countries continue to be of considerable importance. These relations are promoted by the very close cultural and historical links we share with these countries and are reinforced by the presence in Australia of large numbers of people of recent European origin. Economic ties between Australia and the major Western European economies are likely to be significantly strengthened by a major increase in the export of Australian energy resources to Europe.

The European Community (EC) is Australia's second largest trading partner and a major source of investment funds and scientific and technological expertise. The 1979 agreement with the EC over the Multilateral Trade Negotiations (MTN) has gone only some way towards resolving trading difficulties. Australia remains committed to seeking the development of a closer and mutually advantageous relationship with the EC based on our wide range of common interests.

With the establishment in 1979 of the first directly elected European Parliament, it is evident that the Parliament will assume an increasingly important role in the Community. A delegation from the Parliament visited Australia early in 1981 during which the foundation for further mutually advantageous contact was established. The opening of an EC Commission Delegation in Australia in 1981 and the visit of the Commission President in 1982 were important developments.

Australia's relations with the Soviet Union have been circumscribed following that country's invasion of Afghanistan. The Government has denounced unequivocally the Soviet invasion as being totally without justification and as being in contempt of the Charter of the United Nations. Australia does not accept the Soviet view that what has occurred in Afghanistan can be divorced from the conduct of bilateral relations. To demonstrate its concern, the Government has taken a number of measures to curtail relations between Australia and the Soviet Union.

Australia has expanded its contacts with Eastern European countries since 1966, which saw the establishment of diplomatic missions in Poland and the German Democratic Republic (GDR). Eastern Europe is a sensitive area in world affairs and Australia has an interest in the maintenance of a balanced East/West relationship. Eastern Europe also has significant potential for Australian exports, particularly commodity exports, and our trade relations with the area have been expanding. Another aspect of our relations with Eastern Europe is the presence in Australia of large ethnic groups from countries of the region which have substantial links with their country of origin, notably in cultural matters.

The Middle East

Much value is placed on Australia's longstanding and close relations with the Arab nations and with Israel. Australia has an interest in the settlement of unresolved disputes in the region. Although Australia's ability to bring influence to bear towards a settlement of the Middle East dispute is limited, it has important interests in the region which cannot be overlooked. Australia supports the Camp David Accords and the peace treaty between Israel and Egypt, seeing them as a first step towards a just, lasting and comprehensive peace settlement. Australia's position on the Middle East dispute is that a comprehensive settlement should be based on United Nations Security Council Resolution 242

(which, inter alia, recognises the right of all states in the area to live in peace within secure and recognised boundaries and calls on Israel to withdraw from territories captured in 1967) and recognition of the legitimate rights of the Palestinians including their right to a homeland and the right to participate directly in decisions affecting their future. The terms of a settlement are a matter for negotiation among the parties directly concerned.

Africa

Australia wishes to broaden the range of its contacts with independent black African states and consolidate links with those with which it already enjoys friendly relations. It maintains formal diplomatic relations with South Africa without allowing this to derogate from its opposition to that country's policies of racial discrimination. Australia supports international action to bring Namibia to independence by a negotiated settlement. There has been a significant growth of aid to Africa in recent years. While aid is given to some 20 recipients in Africa, the greater proportion goes to the Commonwealth member states in East Africa.

Indian Ocean

Although recognising that the deterioration in the regional and international climate following the Soviet invasion of Afghanistan has ruled out any immediate prospects for the successful convening of a conference on the Indian Ocean as a zone of peace, Australia continues to play an active role in the UN Ad Hoc Committee considering this matter. In response to the changed strategic situation in the north-west Indian Ocean region, Australia has increased its naval and air deployments into the region on an independent national basis. It has also indicated a readiness to co-operate with the United States in assisting the latter's deployments into the region. In March 1981 Australia and the United States agreed on terms for staging unarmed B-52 aircraft through Darwin for the purposes of training and surveillance over the Indian Ocean.

ANZUS

Maintenance of the ANZUS alliance with the United States and New Zealand remains of major importance in Australian foreign policy. The alliance continues to play a valuable role in the promotion of stability and normal relations in the Asian and Pacific area.

Nuclear issues

Australia's nuclear policies are based on strong support of the Nuclear Non-Proliferation Treaty (NPT), which Australia ratified in 1973, and of the International Atomic Energy Agency (IAEA) whose responsibilities include the operation of the international safeguards regime. On 24 May 1977, the Prime Minister announced Australia's nuclear safeguards policy which prescribed the conditions and controls, including eligibility criteria, for countries wishing to import Australian uranium under new contracts. The conditions include an undertaking not to use Australian origin nuclear material for military or explosive purposes and to accept IAEA safeguards in order to verify that undertaking. The conditions are set out in binding bilateral nuclear safeguards agreements with customer countries. Nuclear safeguards agreements incorporating all the requirements of the Government's policy have been signed with Finland, the Philippines, the Republic of Korea, the United States, the United Kingdom, France, Sweden, Canada, EURATOM and Japan. The later agreements incorporate a settlement of the detailed conditions under which Australia exercises its prior consent rights over reprocessing, consistent with the policy statement by the Minister for Foreign Affairs on 27 November 1980.

Australia encourages universal adherence to the NPT and supports other measures to strengthen generally international arrangements to provide assurance against the further spread of nuclear weapons. These include participation in the activities of the IAEA to improve international safeguards and its discussions directed towards facilitating international nuclear co-operation under effective non-proliferation arrangements. Australia is a member of the Board of Governors of the IAEA and also a member of the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development.

Disarmament and arms control

For a number of years Australia has promoted nuclear arms control and disarmament objectives in the United Nations, and, since January 1979, as a member of the Committee on Disarmament in Geneva. Australia attaches particular priority to the earliest possible conclusion of a treaty banning all nuclear testing in all environments. Australia also has great interest in a number of non-nuclear disarmament questions. A promising start to serious consideration of a possible chemical weapons convention has been made in the Committee on Disarmament.

Australia has acceded to the following disarmament and arms control agreements: The Partial Test Ban Treaty, the Geneva Protocol (on Asphyxiating, Poisonous or Other Gases), the Outer Space Treaty, the Sea Bed Arms Control Treaty, the Nuclear Non-Proliferation Treaty, the Biological Weapons Convention, and the Environmental Modification Ban.

Economic relations

In recent years economic factors have assumed increasing importance in international relations. This is largely due to the growing economic interdependence between nations and the need for global co-operation to solve the problems facing domestic economies.

Australia's interest in international economic developments derives from the overall importance of trade to Australia and its historical reliance upon a substantial amount of capital inflow to offset balance of payments deficits on the current account.

The economic instability of the world economy in the 1970s and 1980s has led to the growth worldwide of protectionist pressures and moves towards seeking solutions to economic problems through bilateralism and the formation of trade blocs. The Australian Government has endeavoured to counter these harmful trends and to encourage global approach to economic recovery through its involvement in forums such as the General Agreement on Tariffs and Trade (GATT). GATT is the principle multilateral institution for negotiation of reductions in trade barriers in pursuit of the further liberalisation of world trade. In the context of the GATT Ministerial Meeting in November 1982, Australia has proposed a number of initiatives aimed at a standstill, followed by a progressive reduction, in all forms of protectionism and a strengthening of GATT's capacity to deal with outstanding trade disputes.

Australia also has a strong commitment to the freedom of international capital flows. As a net capital importer, it is of considerable importance to Australia that the international system be increasingly open and adaptable to facilitate the global exchange of goods, services, labour and capital. This is all the more so in view of the significant challenges imposed on the international monetary system by the dramatic changes in the world economy during the past decade.

Because of its particular characteristics and location, Australia is vitally dependent on its aviation, shipping and communications links with the rest of the world. Civil aviation has assumed particular prominence in Australia's foreign policy considerations in recent years, notably in its relations with developing countries in the region. These relations have been further developed by a series of new routes and services between Australia and points in South East Asia recently agreed upon by the Australian Government and the governments of the countries concerned. The maintenance of Australia's air links with Europe and the United States, furthermore, involves dealings not only with the countries to which Australia's international airline, Qantas, operates these services but also with the countries which Qantas overflies on these routes or where it enjoys stop-over rights.

A recent factor contributing to moves for changes in the world economy has been developing country demands for a New International Economic Order (NIEO) more geared to their needs and development aspirations. In 1980 and 1981 a major preoccupation of the UN General Assembly was the proposal to hold global negotiations on international economic development issues. Agreement is outstanding, however, on the agenda and procedures for the negotiations. Nonetheless, North/South issues were considered in 1981 at a series of important summit meetings. It was a major subject at the Commonwealth Heads of Government Meeting which Australia hosted in September-October 1981. Later in Cancun, Mexico, twenty-one heads of government met in October 1981 solely to consider North/South issues. Australia considers that it is in the interests of global security and stability and of the economic self-interest of all groups of states to achieve progress in the North/South dialogue and to address the economic development problems of developing states.

Australia also continues to attach great importance to its traditional relations with other developed countries, which continue to be Australia's principal trading partners. Membership of the OECD enables Australia to take part in consultations on a wide range of policy issues and on issues of international concern with countries experiencing similar social and economic circumstances. The Organisation's role in developing its members' policies on relations with developing countries, including the North/South dialogue, also makes it an important element in Australia's foreign policy.

Despite the importance of Australia's relations with its traditional trading partners, considerable concern has been expressed in recent years at the growing imbalance of trading opportunities which has unduly restricted the access of important Australian agricultural products to European Community markets. Australia has also been concerned about the effect of EC export subsidies on the returns from Australia's commodity exports to third world countries. Policies are being pursued to help resolve these problems.

North/South relations

Australia seeks to play a constructive role in the dialogue on international economic development issues between the developed ('the North') and developing countries ('the South'). Australia's approach to North/South issues is based on the belief that not only are there compelling humanitarian reasons for finding solutions to the many problems facing the world economy and the developing countries in particular, but also that the degree of interdependence in the world economy makes progress imperative for international stability and economic growth. Australia's approach is also influenced by the predominance of developing countries in the region and by the fact that Australia shares a number of economic interests with the developing countries e.g. it is a leading producer and exporter of a wide range of primary products and an importer of capital and technology.

Australia has taken a forward position on a number of North/South issues. It has encouraged changes to the international economic system sensitive to the views of developing countries, but which also would serve to promote orderly development, political stability and the full participation by all countries in an open international trade and payments system. Australia believes that the round of global negotiations on North/South issues which has been proposed in the UN General Assembly could make a positive contribution to those goals. As indicated above North/South issues were major items for dicussion at the Commonwealth Heads of Government Meeting, which Australia hosted in Melbourne in September-October 1981 and which gave birth to the Melbourne declaration and a communique which gave prominence to North/South matters.

Law of the Sea

Australia participated in all sessions of the Law of the Sea Conference, the largest and potentially the most important conference in the history of the United Nations, involving major strategic, economic, transport, scientific and environmental issues. A Convention was adopted on 30 April 1982 and opened for signature in December 1982. The text includes articles on the system of exploration and exploitation of the deep seabed beyond the limits of national jurisdiction; extension of the territorial sea to 12 nautical miles; establishment of coastal state sovereign rights in the living and non-living resources of an 'exclusive economic zone' of 200 nautical miles; recognition of coastal state sovereign rights over the exploration and exploitation of the natural resources of the continental shelf, defined in terms of the natural prolongation of the land-mass; protection and preservation of the marine environment; marine scientific research; and the settlement of disputes. Rights of freedom of navigation and passage through straits and archipelagos which are important to trading nations such as Australia are also recognized in the text. A preparatory commission to prepare for the establishment of the International Seabed Authority and its various organs will be convened when 50 States have signed or acceded to the Convention.

Antarctica

Australia has had a long association with Antarctica commencing with early expeditions and continuing with an active scientific program. Antarctica's importance to Australia derives from its geographical proximity, the history of Australian involvement there and Australian administration of the Australian Antarctic Territory. Australia maintains three permanent bases in the Territory at Casey, Davis and Mawson (as well as one on Macquarie Island).

As one of the twelve original signatories, Australia attaches particular significance to the 1959 Antarctic Treaty, which serves important Australian scientific, environmental and security interests. Australia hosted the first Antarctic Treaty Consultative Meeting in Canberra in 1961. Such meetings are held about every two years in one of the Consultative Party States, and in 1983 Australia will be host to the twelfth meeting.

In 1980, at a conference in Canberra, a Convention for the Conservation of Antarctic Marine Living Resources was concluded. The first meetings of the Commission and the Scientific Committee established by the Convention were held in Hobart in May-June 1982. The headquarters of the Commission began operating in Hobart in August. Australia will also participate in meetings, the first of which was held in Wellington, New Zealand, in June 1982, to negotiate a regime to regulate exploration for and exploitation of Antarctic minerals.

Treaties

The texts of bilateral and multilateral treaties to which Australia becomes a party are printed in the Australian Treaty Series when they enter into force. The most recent consolidation of the Australian Treaty List was published as Treaty Series 1971, No. 1. Australia's current position with regard to individual treaties may be ascertained by referring to the 1971 list in conjunction with Cumulative Supplement No. 3 (Treaty Series 1975, No. 1), annual volumes on treaty action in the Treaty Series, and

annual volumes on International Treaties and Conventions to which Australia has not yet become a party, in the series 'Select Documents on International Affairs'. These publications are available from Australian Government Publishing Service bookshops in State capital cities.

Cultural relations

The Department of Foreign Affairs administers a program of cultural exchanges with other countries in furtherance of the Government's foreign policy objectives. The program includes exchanges in the performing and visual arts, sport, film and literature as well as academic exchanges. The Department co-operates and consults with appropriate Australian organisations.

Australia has cultural agreements with France, Greece, India, Indonesia, Iran, Italy, Japan, Republic of Korea, Malaysia, the Philippines, Romania, Singapore, Thailand, Yugoslavia and China. (The activities under an agreement with the USSR have, however, been suspended since its invasion of Afghanistan.)

Australian Aid Program—1982–83

Australia's development assistance program is directed towards promoting the economic and social advancement of developing countries, particularly in Asia and the Pacific. It aims to meet the expressed needs of these countries and is directed towards key activities in their economies, such as rural development. All of Australia's aid is given on grant terms and a significant proportion is untied.

About 80 countries receive assistance, but Australia's efforts are aimed principally at assisting its nearest neighbours—Papua New Guinea (PNG), the South Pacific region and member countries of the Association of South-East Asian Nations (ASEAN).

In 1982–83, Australia expects to spend about $737 million on official development assistance, an increase of about $80 million or 12 per cent more than in 1981–82. Of this amount $554 million (75 per cent) will be provided as bilateral aid given directly to the governments of developing countries. The major elements of the bilateral program are budgetary support for PNG, project aid (equipment, goods and expertise), the education of Third World students and trainees, food aid and assistance through non-government organisations.

In addition, $173 million has been allocated to multilateral agencies. Support provided to these bodies has been increased by $35 million over 1981–82.

Papua New Guinea

About 36 per cent of Australia's bilateral aid goes to PNG because of a special relationship with the country based on long historical association.

This year Papua New Guinea will receive $264 million in assistance. The bulk of this amount ($253 million) will be in the form of an untied grant for budgetary support. This amount represents the second payment under a five-year aid agreement negotiated between the Australian and Papua New Guinea Governments in September 1980. As with the first five-year aid agreement which ended in 1980–81, the purpose of this long-term aid arrangement is to provide PNG with a practicable framework in which to plan its development.

In addition to the budget support grant, Australia meets the cost of termination payments and retirement benefits due to former employees and provides training for Papua New Guineans. Since 1981-82 this training has been incorporated into the PNG/Australia Technical Co-operation Program. This program also includes a jointly funded technical assistance program which will provide services and related equipment to increase the technical capacity and capability of Papua New Guinea.

Bilateral projects

Most of Australia's bilateral aid to countries other than PNG is for specific development activities undertaken by the developing countries. These range from large-scale regional development programs to simple facilities in villages. At 1 July 1982, Australia was involved in 348 projects in about 35 countries. The total value of its contribution is some $570 million. Generally, Australia meets the foreign exchange costs of a project, but it also pays, in an increasing number of cases, some of the local costs associated with projects.

South-East Asia receives the bulk of Australia's bilateral project aid. Many of the 82 projects in the region involve infrastructure development work, agricultural improvements through crop and livestock research as well as practical extension work. In recent years Australia has become increasingly involved in large-scale, integrated rural development programs intended to bring about the balanced growth of whole regions, particularly in Indonesia, the Philippines and Thailand.

The basis of our program to ASEAN is an open-ended commitment of $250 million. This commitment was first established in 1977 and has been periodically renewed. In addition, expenditure on research projects and other activities under the ASEAN-Australia Economic Co-operation Program will amount to $12 million in 1982–83.

Most of the ASEAN countries have now reached a stage of development where they are also looking to other forms of assistance to capitalise on their progress to date. As one response, Australia has introduced a scheme specifically for ASEAN known as the Development Import Finance Facility. The idea of the scheme is to reduce the cost to ASEAN governments of importing capital goods and services from Australia for development purposes. By offering a grant to support such transactions the Australian Government aims to enable recipient countries to purchase needed capital goods and services on better terms than are available under existing concessional finance. A separate allocation of $2.2 million has been set aside to provide grants in support of ASEANs' requirements for the import of developmental products and services on concessional terms.

Australia's current three-year commitment of $120 million to the South Pacific (over the period 1980–81 to 1982–83) will be replaced by a five-year indicative planning figure of $300 million commencing from 1983–84. Most of the expenditure associated with this commitment is in the form of bilateral project aid for Fiji, Tonga, Western Samoa, Solomon Islands, Vanuatu, Kiribati, Tuvalu, Cook Islands and Niue.

At 1 July 1982, Australia was undertaking 153 projects in the South Pacific. The large number of projects reflects the small-scale nature of island economies. These projects cover a wide range of activities and include assistance with transport, rural development, water and sewerage schemes, telecommunications and upgrading health facilities.

To keep pace with the changing requirements of the region, new forms of aid have been introduced over recent years, for example, one particular form of assistance which will be given increasing prominence in 1982–83 is the funding of joint ventures in the region. $1.75 million has been earmarked to provide grants for the purchase of island equity in joint ventures with Australian companies. The South Pacific countries should benefit from this through income and employment creation.

South Asian countries receive significant amounts of project aid mainly to help rural development. At 1 July 1982 Australia was involved in 39 aid projects in South Asia, many of which are assisting rural development.

While the Asian and Pacific regions have traditionally been major recipients of project assistance, the level of assistance to African countries and Indian Ocean States has increased in recent years for compelling humanitarian and political reasons. Africa contains two-thirds of the world's poorest nations, many of them classified as least-developed. Projects, food aid and emergency relief are the most important elements in Australia's aid program to Africa. Apart from normal project activities, the expanded program will include staffing assistance schemes, provision of development import grants and provision of assistance to regional programs being developed in southern Africa. These activities will be in addition to the commitment of $20 million to Zimbabwe (for expenditure by the end of 1984) which was announced in March 1981. The increase in assistance to this region is particularly appropriate at a time when the international community is focusing on the particular needs of the least developed countries which are predominantly African. In total some 27 projects worth $22 million were in existence at the beginning of 1981-82.

Training

During 1982–83 within a budget of $26 million, Australia will sponsor about 3,500 people to study in Australia and Third World countries. The training program is designed to assist people from Asia, Africa and the Pacific and Indian Ocean regions to develop the skills needed for social and economic development.

Australia's training program seeks to encourage recipient governments to relate their requests for training to their national development priorities. The aim is a matching of the Australian expertise with the requirements of recipient governments, whose role is to decide who should be nominated for scholarships and to indicate the level of training required and the field of study.

Within Australia the training includes individual training awards to regular Australian courses and special group courses known as Australian Development Assistance Courses, some of which are run in the International Training Institute in Sydney. Courses include studies in agriculture, health, engineering, education and management.

It is proposed to increase English language training both in Australia and in selected recipient countries. One benefit of this will be increased opportunities for academically promising candidates without good English. Further emphasis on training senior administrators in developing countries is also proposed.

Funding for the Australian Universities International Development Program (formerly the Australian Asian Universities Co-operation Scheme) will account for approximately $2.8 million. The primary focus of the program is on agriculture, food production and population studies. Assistance is given in teaching, research and a variety of short courses.

Food aid and food security

There is an increasing gap between food demand and supply in many developing countries. This has been aggravated by population pressure and the progressive destruction of agricultural land. Australia is responding to this problem in two ways: by addressing the short-term problem of food shortages with food aid; and by helping developing countries to supply more of their own food requirements in the long term.

In 1982–83, some $112 million will be utilised in providing food aid.

The Government is committed under the Food Aid Convention (FAC) to provide a minimum of 400,000 tonnes of foodgrain annually. While retaining a substantial bilateral food aid program, the Government announced last year that Australia would in future draw to a greater extent on the capacities and skills of the World Food Program (WFP) in distributing and monitoring the food aid program. In 1982–83, 30 per cent of the FAC commitment will be channelled through the WFP and by 1984–85 this will be increased to 50 per cent. It is expected that this will increase the effectiveness of the program because of the WFP's skill in using food aid in association with projects which develop rural infrastructure and stimulate agricultural production. In addition Australia will contribute $10 million to the WFP's cash and commodities program for projects utilising other foodstuffs.

Australian bilateral foodgrain is provided to food-deficit countries taking into account such factors as food consumption requirements, GNP per capita, calorie consumption, infant mortality rates and life expectancy levels, international reserves, import capacity, crop outlook and increasingly, emergency needs. With these factors taken into account, Australia has found that an increasing portion of the program is being provided to meet particularly severe food problems facing African countries.

There is a growing emphasis in the program on meeting emergency needs brought about by unfavourable climatic conditions, refugee flows and other factors. In addition to food supplied from the FAC commitment, Australia also meets these emergency needs from a special 50,000 tonne allocation to the International Emergency Food Reserve.

Apart from foodgrain, an allocation of $4.6 million will be set aside to provide non-grain foods such as high protein biscuits for use in feeding projects for vulnerable groups and for emergencies.

In 1982–83, funds available for use in other food security schemes will be increased to $4.5 million. Australia attaches importance to measures intended to improve food production, marketing and distribution. A significant portion of this amount will be used to support food security programs developed by international bodies such as the Food and Agriculture Organisation.

A further major initiative in the food security sector has been the establishment in 1982 of the Australian Centre for International Agricultural Research (ACIAR).

Australian Centre for International Agricultural Research (ACIAR). The establishment of ACIAR was announced in 1981 and in 1982 the Centre will enter into its first contracts with Australian agricultural institutions to undertake research work into agricultural problems facing developing countries. A trust fund for ACIAR has been established with the Government agreeing to an initial three-year commitment of $25 million. In 1982–83 $3.8 million was allocated to the Centre.

Non-Government Organisations (NGOs)

The Australian Government gives financial assistance to a number of Australian Non-Government Organisations (NGOs) for their development assistance activities. Support for these organisations this year will amount to approximately $5.8 million.

The principal avenue of Government/NGO co-operation is a Project Subsidy Scheme under which eligible NGOs are assisted to undertake a variety of small scale projects at 'grass roots' level in developing countries. In 1982-83 some $4.7 million will be provided for this purpose. Within this amount funds will be set aside for use in South Pacific projects. In 1981 when the needs of disabled persons were being emphasised, projects of particular relevance to the disabled were also given prominence.

Some $1.1 million is also provided for schemes utilising the skills of Australian Volunteers. In addition to the long running Australian Volunteers Abroad scheme, a further scheme known as the Australian Executive Service Overseas Program was introduced in 1981. Volunteers who may be either active or retired business executives will be placed with business and community organisations in developing countries for periods of up to six months. The Confederation of Australian Industry is managing the scheme during the trial period.

A number of international NGOs will also be supported again in 1982-83 such as the International Committee of the Red Cross. In total, support for these activities will amount to approximately $1.1 million. Funding was also provided to a new NGO—the Australian Disaster Response Organisation (AODRO) which was formed to develop an Australian response, including the provision of qualified volunteers to assist in disasters occurring in developing countries.

Multilateral aid

Australia contributes to several international organisations and financial institutions concerned with aid to developing countries. They include the World Bank Group, Asian Development Bank, United Nations Development Program and other UN agencies, International Fund for Agricultural Development, Commonwealth Fund for Technical Co-operation, Economic and Social Commission for Asia and the Pacific (ESCAP), South Pacific Bureau for Economic Co-operation (SPEC), South Pacific Commission (SPC) and various international science, technology and research centres.

Support for these bodies provides Australia with an opportunity to participate in major development projects which are beyond the resources of individual donors.

Contributions in 1982-83 to international financial institutions are estimated at $68 million. Included in this amount is $43.1 million which will be provided to the International Development Association, the soft-lending affiliate of the World Bank, which directs its work towards assisting the poorest countries. Other major contributions in 1982-83 involve expenditure of some $7.7 million to the Asian Development Fund, $12.6 million for the International Bank for Reconstruction and Development and $1.9 million for the International Finance Corporation.

Payments to UN, regional and international agencies in 1982-83 are estimated at $106 million (including $38 million to the WFP). In 1982-83, there is provision for significant increases in our pledges to the major UN bodies active in development. This reflects the Government's appreciation of the special role which these bodies can play in providing international assistance. The five major bodies which will receive additional assistance are the UN Development Program, UN Children's Fund, the UN High Commissioner for Refugees, the UN Fund for Population Activities and the UN Relief and Works Agency. In total, these five bodies will receive over $29 million in 1982-83.

With regard to Commonwealth-related concerns, a $4.5 million contribution to the Commonwealth Fund for Technical Co-operation is provided for to meet priority technical assistance needs of developing Commonwealth countries. Over $6 million is included this year to meet Commonwealth commitments.

Continued support of over $10 million is to be given to regional organisations such as ESCAP, SPEC and SPC. In 1982-83 support will be increased for other regional and international programs developed in the South Pacific. Regional co-operative efforts in the transportation sector will receive particular priority. In total $6.9 million has been allocated for South Pacific regional activities. One new program will involve Australian participation in a geoscientific research program in the region. This seabed research program will be jointly undertaken by New Zealand, the United States and Australia.

In 1982-83 $6.2 million will be provided for the international science, technology and research programs including support of a number of international agricultural research institutions within the Consultative Group on International Agricultural Research (CGIAR). A further $1.2 million has been allocated for institutional and program support and fellowship grants to training institutes and research centres such as the Asian and Pacific Development Centre.

Refugees and relief

It appears that massive refugee flows have become a long-term part of international affairs. The 10 million men, women and children who live as refugees and displaced persons throughout the world are the victims of political tension or instability, social upheaval and related economic hardships and continuing infringements of human rights. The refugee problem is an international question of grave humanitarian and political discussions which has become a major foreign policy concern.

Refugee issues will continue to be a significant element in Australian foreign policy considerations and important in our relations with countries affected by refugee movements. Australia is well-known for its long-standing practice of responding with compassion to refugee problems around the globe. This is shown both in resettlement and assistance for refugees and through timely and generous contributions to NGOs active in refugee relief. Since 1978, Australia has provided some $114 million in humanitarian assistance to refugees and displaced persons. In 1982-83 approximately $18.2 million will be available (in addition to food aid) to provide for emergency relief. Australia is currently the fourth largest contributor to the budget of the United Nations High Commissioner for Refugees (UNHCR).

Consular

The Department of Foreign Affairs is responsible to the Minister for the protection of Australian citizens and their interests overseas. Consular services to the Australian public are available from Australian diplomatic and consular posts throughout the world.

As at 30 November 1982, Australia maintained the following diplomatic and consular missions overseas. Full details of these missions are available from the Department of Foreign Affairs, Canberra, A.C.T. 2600.

NOTE. In certain cases the Head of Mission accredited to one country is also accredited to another country. Where this is the case the name of the country in which the Head of Mission is located is shown in brackets. Except where indicated the missions are located in capital cities.

Australian missions overseas

Embassies

Afghanistan (in Pakistan); Algeria; Argentina; Austria; Bahrain; Belgium; Bolivia (in Chile); Brazil; Bulgaria (in Yugoslavia); Burma; Chile; China; Colombia (in Venezuela); Costa Rica (in Mexico); Czechoslovakia (in Poland); Denmark; Ecuador (in Venezuela); Egypt; Ethiopia (in Kenya); Finland (in Sweden); France; Gabon (in Nigeria); German Democratic Republic; Germany, Federal Republic of; Greece; Guatemala (in Mexico); Hungary (in Austria); Indonesia; Iran; Iraq; Ireland; Israel; Italy; Ivory Coast (in Ghana); Japan; Jordan; Korea, Republic of; Kuwait; Laos; Lebanon; Libya; Luxembourg (in Belgium); Madagascar (in Tanzania); Maldives, Republic of (in Sri Lanka); Mexico; Mongolia (in U.S.S.R.); Morocco (in France); Nepal (in India); Netherlands; Norway (in Sweden); Oman (in Jeddah); Pakistan; Panama (in Mexico); Paraguay (in Argentina); Peru; Philippines; Poland; Portugal; Qatar (in Saudi Arabia); Romania (in Yugoslavia); Saudi Arabia; Senegal (in Ghana); South Africa; Spain; Sudan (in Egypt); Sweden; Switzerland; Syria; Thailand; Tunisia (in Algeria); Turkey; Union of Soviet Socialist Republics; United States of America; Venezuela; Vietnam, Socialist Republic of; Yugoslavia.

High Commissions

Bahamas (in Jamaica); Bangladesh; Barbados (in Jamaica); Botswana (in Zimbabwe); Britain; Canada; Cyprus; Fiji; Ghana; Grenada (in Jamaica); Guyana (in Jamaica); India; Jamaica; Kenya; Kiribati; Lesotho (in South Africa); Malaysia; Malta; Mauritius (in Tanzania); Nauru; New Zealand; Nigeria; Papua New Guinea; Seychelles (in Kenya); Singapore; Solomon Islands; Sri Lanka; Swaziland (in South Africa); Tanzania; Tonga; Trinidad and Tobago (in Jamaica); Tuvalu (in Fiji); Uganda (in Kenya); Vanuatu; Western Samoa; Zambia; Zimbabwe.

Commissions

Hong Kong.

Other

Mission to—European Communities (Brussels); United Nations (New York); United Nations (Geneva); United Nations Educational, Scientific and Cultural Organisation (Paris); Organisation for Economic Co-operation and Development (Paris); United Nations Industrial Development Organisation (Vienna); Australian Delegation to Multilateral Trade Negotiations (Geneva).

Consulate-General in—New York, Chicago, San Francisco, Los Angeles, Houston and Honolulu; Osaka; Auckland; Milan; Toronto and Vancouver; Rio de Janeiro; Bombay; Bahrain; and Abu Dhabi.

Consulate in—Edinburgh and Manchester; Geneva; Noumea; Bali and Capetown.

Specialist officers of the Department of Trade and Resources (formerly the Department of Overseas Trade), other Australian Government Departments and the Defence Services stationed abroad are attached to Australian diplomatic or consular missions. Senior attached officers are in some cases accredited to the missions with diplomatic or consular ranks approved by the Minister for Foreign Affairs.

Passports

The Department of Foreign Affairs is responsible for Australian passport matters. Australian passports are normally valid for five years. Proof of citizenship must be produced. It is the responsibility of the passport holder to obtain any necessary visas. More than one million Australians travel abroad each year. The Department issued 531,000 new passports in 1981.

CHAPTER 6

DEMOGRAPHY

This chapter deals with the size, growth, geographic location and characteristics of the population and with components of population change, namely births, deaths, marriages, divorces and migration.

The sources of the statistics in this chapter are population censuses, population surveys, State and Territorial registers of births, deaths and marriages, records of courts dealing with divorce, and other administrative records such as passenger cards required from international travellers and records of family allowance transfers.

With the proclamation of the *Constitution Alteration (Aboriginals) Act* 1967 on 10 August 1967, the provision in Section 127 of the Constitution requiring the exclusion of Aboriginals in reckoning the numbers of the people of the Commonwealth or of a State or other part of the Commonwealth was repealed. Accordingly, population and vital statistics for all dates subsequent to 10 August 1967 no longer exclude full-blood Aboriginals. Also, estimates for periods back to 30 June 1961 have been revised to include Aboriginals.

The references at the end of this chapter list publications of the Central Office of the Australian Bureau of Statistics dealing specifically with the topics of this chapter.

THE POPULATION

The population census

Basic enumerations of the population have been made since the early days of settlement in Australia. The early enumerations were known as 'musters'. A census conducted in New South Wales in 1828 became the first in a series of regular censuses in that colony. Periodic censuses were taken in the other Australian colonies. The first simultaneous censuses of all the Australian colonies was taken in 1881. The first national census was taken in 1911. It was followed by others in 1921, 1933, 1947, 1954, 1961 and at five yearly intervals thereafter. A special article on early censuses appears in Year Book No. 15 of 1922. A special article outlining the history, purposes, legal basis, organisation and publication of results of population censuses appears in Year Book No. 53 of 1967, pages 164–70, but note that the reference in that Year Book to the exclusion of Aboriginals from the census count has not applied since the repeal of the relevant provision of Section 127 of the Constitution (see above).

Every census from 1881 has inquired into age, sex, marital status, birthplace, nationality or citizenship, and occupation. A wide variety of other topics has been included from time to time.

The most recent census in Australia was conducted on 30 June 1981. Counts of persons and dwellings are available for every collection district and for other larger areas, as well as statistics on characteristics of persons and dwellings as collected in the census. Census statistics will continue to be released in publications, on microfiche and on magnetic tape until 1985. A list of 1981 Census publications is contained in *Census 81—Data Release Plans* (2142.0).

The 1981 Census contained fewer questions than the 1976 Census. However, in addition to basic demographic topics mentioned above, questions were asked on such topics as previous residence, birth place of parents, English language proficiency, Aboriginality, religious affiliation, school attendance, educational qualifications, income, employment, mode of travel to work and certain characteristics of dwellings.

As for previous censuses, foreign diplomatic personnel and their families were out of the scope of the census, as were all persons residing in diplomatic residences on census night.

Despite elaborate arrangements aimed at obtaining complete coverage, it is not possible to ensure that a census schedule is returned for every individual. Some error inevitably remains for various reasons (e.g. inadvertent omission of very young children, missed dwellings or occupied dwellings mistakenly taken as unoccupied). Since 1966, sample surveys have been taken soon after each census to discover the approximate extent of underenumeration and the effects on the census results of misstatement or nonreply to specific questions. Underenumeration of the population of Australia at the 1981 Census is estimated to have been 1.9 per cent. Estimated underenumeration of State and Territory populations ranged from 0.8 per cent in Tasmania to 5.0 per cent in the Northern Territory. Underenumeration varies from location to location and for populations of different ages and other characteristics. These and similar problems are common to all population censuses.

Population estimates

Population estimates by sex and State are calculated on a quarterly basis by updating estimates at census dates for subsequent births and deaths and for overseas and interstate migration. Age estimates as at 30 June each year are published by sex for each State and Territory. Small area population estimates down to the local government area level are also made annually.

The method of determining the base population at a census date has recently been changed in that estimates now reflect the usual residence of the population rather than the actual location in which people were counted at the census. At the Australia level this means that overseas visitors counted in the census are subtracted, the remaining population is adjusted for census underenumeration and an estimate of Australian residents temporarily overseas on census night is added. For the States this process involves an additional step which returns those people not at home on census night to their place of usual residence.

This change-over has enabled population estimates after the 1981 Census date to be compiled wholly according to place of usual residence, since components of population increase were already available on a usual residence basis. Estimated resident populations for the 1971 and 1976 Census dates have also been calculated and intercensal estimates have been revised accordingly.

As a result of the above adjustments, estimated resident populations at census dates differ from actual census counts. The figures for estimated resident populations (with actual location census counts shown in brackets) are: 13,067,300 (12,755,600) in 1971; 14,033,100 (13,548,500) in 1976; and 14,926,800, preliminary (14,576,300) in 1981.

Size and growth of Australia's population

When Europeans first settled in Australia, the Aboriginal population is believed to have been at least 300,000. The Aboriginal population suffered a drastic decline in numbers over the next 145 years so that by 1933 it is estimated to have totalled about 67,000. In 1981, however, nearly 160,000 Aboriginals were counted in the census.

The population of Australia reached 1 million in 1858, 5 million in 1918, 10 million in 1959 and 15 million towards the end of 1981.

From 1861 natural increase has been the major element in population growth, and immigration the most variable. In the years 1861 to 1890, total growth on average exceeded 3 per cent a year and natural increase 2 per cent. The rate of natural increase declined during the last decade of the nineteenth century and the first decade of the twentieth century, and this, together with a near cessation of immigration during that period, reduced the rate of growth from 3.70 per cent in 1861–70 to 1.63 per cent in 1901–10.

The 1914–18 War was the dominating influence in the decade 1911–1920: during the war and immediate post-war years the birth rate rose and immigration was resumed. In the economic depression of the 1930s, however, natural increase fell to very low levels and immigration ceased; indeed, in some years, overseas departures exceeded arrivals.

With the outbreak of the 1939–45 War, Australia entered a new phase. The immediate effect of the war was to increase the number of marriages and births. The increasing births more than offset the rise in deaths due to war casualties and higher civilian death rates. Migration in these years was negligible.

The period 1947 to 1961 was marked by 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.

Between 1961 and 1970, net migration continued at about the same level as in the previous decade, but there were declines in the crude birth rate and the rate of natural increase. The years from 1971 till 1980 were characterised by a reduced rate of natural increase due to a decline in the birth rate. In 1981, however, the crude birth rate rose for the first time since 1971 to 15.8 per 1,000 mean population (15.3 in 1980). Net migration gain, moderate for most of the seventies, increased sharply during 1979, 1980 and 1981, following changes in migration intake targets and Australia's acceptance of a large number of Indo-Chinese refugees as settlers.

The rate of population growth in 1981 was 1.67 per cent, the highest since 1971 (1.93 per cent). The population estimates in the following table relate to the end of December. Estimates for the end of June are given in other tables in this Chapter.

POPULATION AND COMPONENTS OF GROWTH

Period	Population at end of period ('000) (a)	Average annual rate of growth (b) (per cent) Natural increase	Net migration (c)	Total
1851-1860	1,145.6			
1861-1870	1,647.8	2.47	1.23	3.70
1871-1880	2,231.5	2.07	1.01	3.08
1881-1890	3,151.4	2.05	1.46	3.51
1891-1900	3,765.3	1.73	0.07	1.80
1901-1910	4,425.1	1.53	0.10	1.63
1911-1920	5,411.3	1.60	0.43	2.03
1921-1930	6,500.8	1.32	0.53	1.85
1931-1940	7,077.6	0.79	0.05	0.85
1941-1950	8,307.5	1.13	0.47	1.61
1951-1955	9,311.8	1.38	0.95	2.31
1956-1960	10,391.9	1.40	0.83	2.22
1961-1965	11,505.4	1.27	0.74	1.98
1966-1970	12,663.5	1.11	0.91	1.94
1971-1975	(d) 13,968.9	1.07	0.49	1.56
1976-1980p	(d) 14,806.3	0.81	0.45	1.17
1974	(d) 13,832.0	0.95	0.64	1.60
1975	(d) 13,968.9	0.90	0.10	0.99
1976p	(d) 14,109.9	0.82	0.24	1.01
1977p	(d) 14,280.8	0.83	0.48	1.21
1978p	(d) 14,429.4	0.81	0.33	1.04
1979p	(d) 14,599.9	0.81	0.48	1.18
1980p	(d) 14,806.3	0.80	0.71	1.41
1981p	(d) 15,053.5	0.86	0.86	1.67

(a) Excludes full-blood Aboriginals prior to 1961. (b) The average annual rates of population growth for periods greater than one year are calculated on the compound interest principle. The rates refer to the population at the beginning of the period. Discrepancies between the sum of the rate of growth due to natural increase and net migration and the rate of total growth are due to intercensal adjustments. (c) Prior to 30 June 1933, net migration includes discrepancies disclosed by the various censuses, which were corrected by adjusting recorded overseas departures. From 30 June 1933 to 30 June 1971, net migration represents the excess of all arrivals over all departures. From 30 June 1971, net migration is defined as the excess of overseas arrivals over overseas departures classified as permanent and long-term. From 30 June 1976, net migration consists of net permanent and long-term movement and an adjustment for the net effect of changes in travel intentions which affect the categorization of movements. (d) Estimated resident population. Estimated resident populations for 1976 onwards are preliminary and subject to revision when final 1981 Census results become available. The estimated resident population at 31 December 1970 used to compute rates of growth for the period 1971-1975 was 12,929,600.

Projections of the population

Projections of Australia's population have been made by the ABS using the component method in which a base population is brought forward year by year by applying assumptions about future levels of fertility, mortality and the characteristics of overseas migration.

The 1982 projections presented in the following table give a possible 2021 population in the range 22.1 million to 26.0 million persons.

Assumptions used in 1982 projection series—

Base population: The four series are based on the estimated resident population of Australia at 30 June 1981.

Series A: *Fertility*—Total fertility rates for Australia are assumed to initally recover to a level of 2,010, and then decline to 1,900 in 1987, remaining constant thereafter. This 1987 level is about 10 per cent below replacement level.

Mortality—The 1971-80 average annual rates of decline in the age-specific death rates are assumed to continue until 1986. From 1987 to 2021 the age-specific death rates are projected to converge linearly to 2021 rates obtained by applying 1961-80 rates of decline for the period 1982-2021.

Migration—Net overseas migration to Australia is set at 75,000 persons per year.

Series B: *Fertility*—Total fertility rates for Australia are assumed to recover from 1,936 births per thousand females in 1981 to long-term replacement level of 2,110 by 1987, remaining constant thereafter.

Mortality—as in Series A.

Migration—as in Series A.

Series C: *Fertility*—as in Series A.
Mortality—as in Series A.
Migration—Net overseas migration to Australia is set at 125,000 persons per year.
Series D: *Fertility*—as in Series B.
Mortality—as in Series A.
Migration—as in Series C.

The effect of the alternative fertility assumptions on projected populations can be seen in the table below by comparing Series A with Series B or by comparing Series C with Series D. Similarly comparisons between Series A and Series C or between Series B and Series D will bring out the differences due to the alternative migration assumptions.

POPULATION: ACTUAL AND PROJECTED
('000)

			Projected population			
			1982 Projections			
At 30 June (a)	*Actual population*	*At 30 June*	*Series A*	*Series B*	*Series C*	*Series D*
1947	7,579.4	1982	15,128.0	15,129.0	15,179.5	15,179.6
1954	8,986.5	1983	15,335.9	15,336.6	15,438.0	15,438.7
1961	10,508.2	1984	15,550.0	15,552.5	15,704.6	15,707.1
1966	11,550.5	1985	15,766.7	15,776.5	15,974.9	15,984.8
1971	13,067.3	1986	15,981.1	16,006.9	16,243.8	16,270.1
1974	13,722.6					
1975	13,893.0	1991	17,008.6	17,169.0	17,555.8	17,721.3
1976	14,033.1	1996	17,994.2	18,297.8	18,843.9	19,160.0
1977p	14,191.8	2001	18,916.7	19,365.4	20,084.1	20,555.1
1978p	14,358.2	2006	19,760.2	20,359.6	21,261.4	21,895.5
1979p	14,513.8	2011	20,557.1	21,332.9	22,408.5	23,235.0
1980p	14,692.2	2016	21,328.7	22,331.9	23,544.7	24,619.5
1981p	14,926.8	2021	22,062.1	23,337.1	24,653.4	26,026.1

(*a*) Prior to 1971 population figures are census counts. For 1971 and subsequent years figures shown are estimated resident populations.

Without further immigration, Series A (and C) projections yield a population of 17.2 million by the year 2001 and of 18.1 million by the year 2021; Series B (and D) projections, without immigration, give populations of 17.6 million for 2001 and 19.3 million for 2021.

For all four series, the annual rate of growth would monotonically decrease as a consequence of the increasing crude death rate, the falling crude birth rate and the decreasing rate of net immigration. The median age would continuously increase as a result of the population becoming older. This ageing of the population is also reflected in an increase in the crude death rate whilst age-specific mortality rates are projected to decrease.

PROJECTED ANNUAL RATES OF GROWTH AND MEDIAN AGES (*a*) AUSTRALIA 1981 TO 2021

	Year ending 30 June	*Series A*	*Series B*	*Series C*	*Series D*
Birth rate (per cent)	1981p	1.57	1.57	1.57	1.57
	1986	1.60	1.70	1.60	1.70
	1991	1.52	1.67	1.53	1.69
	1996	1.46	1.59	1.47	1.61
	2001	1.38	1.50	1.39	1.52
	2006	1.31	1.43	1.33	1.45
	2011	1.29	1.43	1.31	1.45
	2016	1.27	1.44	1.30	1.47
	2021	1.25	1.43	1.28	1.45
Death rate (per cent)	1981p	0.74	0.74	0.74	0.74
	1986	0.72	0.72	0.71	0.71
	1991	0.76	0.76	0.75	0.74
	1996	0.80	0.79	0.78	0.77
	2001	0.83	0.81	0.80	0.79
	2006	0.86	0.83	0.82	0.80
	2011	0.83	0.85	0.85	0.82
	2016	0.91	0.87	0.87	0.83
	2021	0.94	0.90	0.90	0.85
Net immigration (per cent)	1981p	0.87	0.87	0.87	0.87
	1986	0.47	0.47	0.78	0.77
	1991	0.44	0.44	0.72	0.71
	1996	0.42	0.41	0.67	0.66
	2001	0.40	0.39	0.63	0.61
	2006	0.38	0.37	0.59	0.57
	2011	0.37	0.35	0.56	0.54
	2016	0.35	0.34	0.53	0.51
	2021	0.34	0.32	0.51	0.48
Total rate of growth (per cent)	1981p	1.60	1.60	1.60	1.60
	1986	1.36	1.45	1.67	1.77
	1991	1.20	1.35	1.50	1.65
	1996	1.08	1.22	1.36	1.50
	2001	0.95	1.08	1.22	1.34
	2006	0.83	0.96	1.10	1.22
	2011	0.77	0.92	1.03	1.17
	2016	0.72	0.91	0.96	1.14
	2021	0.65	0.86	0.89	1.08
Median age (years)	1981p	29.61	29.61	29.61	29.61
	1986	30.86	30.81	30.71	30.66
	1991	32.18	31.88	31.91	31.63
	1996	32.59	32.99	33.15	32.64
	2001	33.61	33.88	34.20	33.44
	2006	35.84	34.89	35.30	34.35
	2011	37.01	35.67	36.31	34.99
	2016	37.68	35.87	36.87	35.18
	2021	38.24	36.17	37.44	35.52

(*a*) The median age indicates the age at which one half of the population is younger and the other half older.

Location of the population

For historical, climatic and economic reasons the population of Australia is concentrated in capital cities and other major cities, mainly on the south and east coasts of the continent. In June 1981, 69.66 per cent of the population lived in the national capital, the six State capital cities and four other major cities of 100,000 or more persons (metropolitan statistical divisions and statistical districts). Of these, only Canberra is located inland. The percentage of the population living in rural areas declined over the years as the major cities and towns attracted most of the population growth; there were periods when the rural population actually declined in numbers. This trend, however, slowed considerably after 1971 and between 1976 and 1981 it actually reversed, so that a higher percentage of the population was counted in rural areas at the 1981 Census (14.2 per cent) than at the 1976 Census (13.9 per

cent). In 1981, New South Wales was the State with the highest per cent of the estimated resident population living in the capital city or towns of over 100,000 (75.5 per cent), followed by Victoria (74.6 per cent), South Australia (72.2 per cent), Western Australia (70.7 per cent), Queensland (52.4 per cent) and Tasmania (40.0 per cent).

ESTIMATED RESIDENT POPULATION IN STATE CAPITAL CITIES AND OTHER MAJOR CITIES(a)
('000)

	30 June 1976	*30 June 1981p*
Sydney	3,143.8	3,280.9
Melbourne	2,723.7	2,803.6
Brisbane	1,000.9	1,086.5
Adelaide	924.1	952.7
Perth	840.2	918.0
Newcastle	380.0	402.3
Canberra (*b*)	226.5	246.1
Wollongong	222.3	231.0
Hobart	164.3	170.9
Gold Coast (*c*)	110.9	164.1
Geelong	138.3	142.1
Total	**9,875.0**	**10,398.2**
Percentage of total population	**70.37**	**69.66**

(*a*) Capital city statistical divisions and statistical districts of 100,000 persons or more in 1976. (*b*) Includes Queanbeyan. (*c*) Includes Tweed Heads.

While there has been population growth in all States during this time, there has, between 30 June 1971 and 30 June 1981, been substantially higher than average growth in the States of Queensland (26.7 per cent), Western Australia (23.3 per cent), and the two Territories—the Northern Territory (43.3 per cent) and the Australian Capital Territory (50.3 per cent).

POPULATION OF STATES AND TERRITORIES(*a*)
('000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.(b)*	*Aust.*
5 April 1891	1,127.1	1,140.1	393.7	315.5	49.8	146.7	4.9	..	3,177.8
31 March 1901	1,354.8	1,201.1	498.1	358.3	184.1	172.5	4.8	..	3,773.8
3 April 1911	1,646.7	1,315.6	605.8	408.6	282.1	191.2	3.3	1.7	4,455.0
4 April 1921	2,100.4	1,531.3	756.0	495.2	332.7	213.8	3.9	2.6	5,435.7
30 June 1933	2,600.8	1,820.3	947.5	580.9	438.9	227.6	4.9	8.9	6,629.8
30 June 1947	2,984.8	2,054.7	1,106.4	646.1	502.5	257.1	10.9	16.9	7,579.4
30 June 1954	3,423.5	2,452.3	1,318.3	797.1	639.8	308.8	16.5	30.3	8,986.5
30 June 1961	3,918.5	2,930.4	1,527.5	971.5	746.8	350.3	44.5	58.8	10,548.3
30 June 1966	4,237.9	3,220.2	1,674.3	1,095.0	848.1	371.4	56.5	96.0	11,599.5
30 June—									
1971	4,725.5	3,601.4	1,851.5	1,200.1	1,053.8	398.1	85.7	151.2	13,067.3
1972	4,795.1	3,661.3	1,898.5	1,214.6	1,082.0	400.3	92.1	159.8	13,303.7
1973	4,841.9	3,707.7	1,952.0	1,228.5	1,101.0	403.1	97.1	173.3	13,504.5
1974	4,894.1	3,755.7	2,008.3	1,241.5	1,127.6	406.2	102.9	186.2	13,722.6
1975	4,932.0	3,787.4	2,051.4	1,265.3	1,154.9	410.1	(*c*)92.9	199.0	13,893.0
1976	4,959.6	3,810.4	2,092.4	1,274.1	1,178.3	412.3	98.2	207.7	14,033.1
1977*p*	5,003.2	3,837.5	2,132.4	1,286.6	1,204.8	413.9	102.2	211.1	14,191.8
1978*p*	5,049.8	3,863.7	2,177.5	1,297.8	1,230.9	416.4	107.0	215.2	14,358.2
1979*p*	5,103.3	3,883.2	2,223.2	1,301.8	1,254.1	418.7	111.4	218.2	14,513.8
1980*p*	5,165.2	3,909.8	2,275.4	1,308.7	1,273.5	423.5	115.2	220.8	14,692.2
1981*p*	5,237.1	3,948.6	2,345.3	1,319.3	1,299.1	427.3	122.8	227.3	14,926.8
Percentage of total population in 1981*p*	**35.09**	**26.45**	**15.71**	**8.84**	**8.70**	**2.86**	**0.82**	**1.52**	**100.00**

(*a*) Figures before 1961 exclude Aboriginals, later figures do not. The estimates from June 1971 for each State and Territory are estimated resident populations. Intercensal estimates incorporate adjustments to make each intercensal total increase agree with the difference between the estimated resident populations at two consecutive census points. (*b*) Part of New South Wales before 1911. (*c*) Decrease due to the effect of cyclone 'Tracy' on the Darwin population.

Age distribution of the population

The age distribution of the population is shown in Plate 30, page 125, in the form of an age-sex pyramid. The low birth rates of the depression years of the 1930s, the prolonged "baby boom" from the end of World War II to the early 1960s and the declining birth rate of the 1970s are reflected in the profile.

ESTIMATED RESIDENT POPULATION BY AGE: 30 JUNE 1981p
('000)

Age group (years)	*Males*	*Females*	*Persons*
0–4	583.6	554.9	1,138.5
5–9	650.0	620.9	1,270.9
10–14	672.8	643.8	1,316.6
15–19	661.2	637.3	1,298.5
20–24	660.3	643.0	1,303.4
25–29	623.4	608.3	1,231.7
30–34	620.0	605.4	1,225.4
35–39	503.6	486.0	989.6
40–44	427.5	406.8	834.3
45–49	377.3	357.5	734.8
50–54	394.1	379.2	773.2
55–59	369.8	370.9	740.6
60–64	292.6	321.4	613.9
65–69	250.4	285.4	535.8
70+	363.1	556.4	919.5
All ages	**7,449.6**	**7,477.2**	**14,926.8**

The median age of the population has been increasing since the early 1970s. It stood at 29.6 years on 30 June 1981.

MEDIAN AGE OF THE POPULATION *(a)*, SELECTED YEARS 1901-81

	1901	*1921*	*1933*	*1947*	*1961*	*1971*	*1981p*
Median age (years)	22.5	25.8	27.7	30.7	29.4	27.5	29.6

(*a*) The median age indicates the age at which one half of the population is younger and the other half older. Based on estimated resident populations from 1971 onwards, prior to 1971 on census counts.

The age distribution of the population has changed gradually in the past decade or so. The proportion of the population aged 65 years and over has increased, due in part to a declining number of births, but also to improvements in life expectancy resulting from a falling death rate.

Substantial levels of immigration have had the effect of reducing the proportion of the population in elderly groups to levels below what it would otherwise have been.

Australia's age profile, with a median age of approximately 30 years, is comparatively younger than that of much of Europe, the original source of most of Australia's population. This is because of a higher rate of natural increase and the effect of immigration to Australia.

The labour force age group

The proportion of the population in the labour force age group (usually defined as the population aged 15-64) increased between 1971 and 1981 from 63.0 to 65.3 per cent of the population. The increase was particularly large in the 15-44 age group.

PERCENTAGE DISTRIBUTION OF THE POPULATION(*a*) BY AGE GROUP: SELECTED YEARS 1947–81

	30 June						
Age group	*1947*	*1954*	*1961*	*1966*	*1971*	*1976*	*1981p*
				('000)			
0–14 years	25.1	28.5	30.2	29.4	28.7	27.0	25.0
15–44 years	45.2	43.1	41.4	42.2	43.0	44.1	46.1
45–64 years	21.1	20.0	19.9	19.9	20.0	20.0	19.2
Total 15–64 years	*66.3*	*63.2*	*61.3*	*62.1*	*63.0*	*64.1*	*65.3*
65 years and over	8.0	8.3	8.5	8.5	8.3	8.9	9.7

(*a*) Prior to 1971, percentages shown are based on census counts; from 1971 they are based on estimated resident populations at census dates.

The aged population

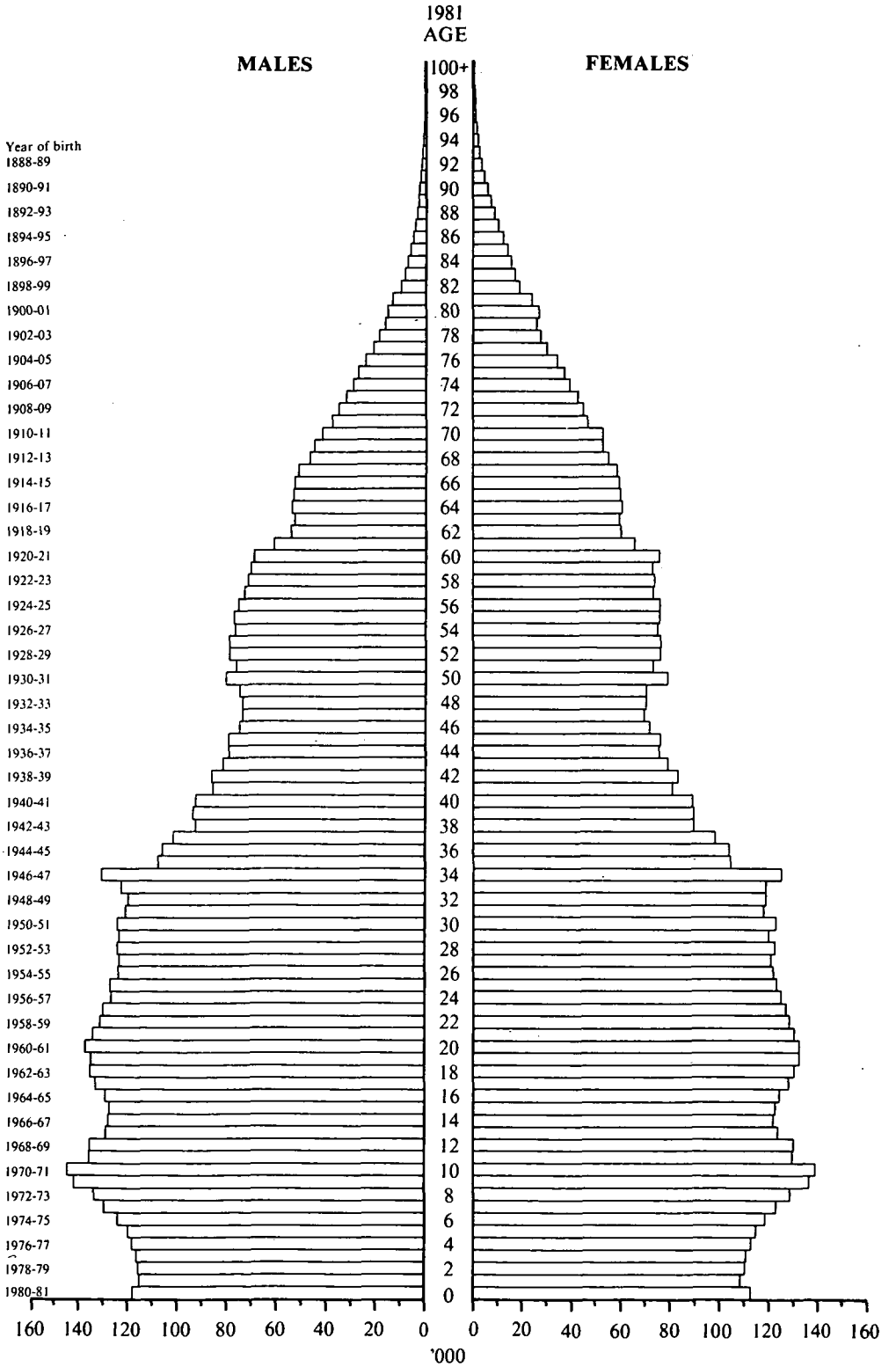
The proportion of total population aged 65 years and above was 9.75 per cent in 1981, an increase from 8.34 per cent in 1971 and 8.93 per cent in 1976.

The proportion of females in this group is high; 57.85 per cent of the total in 1981. The female proportion increases with age due to higher male mortality at every age.

ESTIMATED RESIDENT POPULATION IN AGE GROUPS: 1971 TO 1981

	Number ('000)				*Per cent*			
30 June	*Under 15*	*15–44*	*45–64*	*65 and over*	*Under 15*	*15–44*	*45–64*	*65 and over*
				MALES				
1971	1,918.6	2,887.4	1,302.6	459.4	29.2	44.0	19.8	7.0
1976	1,940.6	3,158.2	1,407.8	525.5	27.6	44.9	20.0	7.5
1978*p*	1,915.6	3,288.5	1,418.6	557.5	26.7	45.8	19.8	7.8
1979*p*	1,902.7	3,352.6	1,420.3	576.3	26.2	46.2	19.6	7.9
1980*p*	1,898.8	3,417.7	1,423.5	595.5	25.9	46.6	19.4	8.1
1981*p*	1,906.4	3,496.1	1,433.7	613.5	25.6	46.9	19.2	8.2
				FEMALES				
1971	1,828.7	2,734.2	1,305.5	631.0	28.1	42.1	20.1	9.7
1976	1,846.5	3,027.2	1,400.0	727.4	26.4	43.2	20.0	10.4
1978*p*	1,828.6	3,168.8	1,411.3	769.4	25.5	44.1	19.7	10.7
1979*p*	1,817.3	3,237.9	1,413.3	793.5	25.0	44.6	19.5	10.9
1980*p*	1,813.0	3,307.7	1,418.2	817.7	24.6	45.0	19.3	11.1
1981*p*	1,819.7	3,386.8	1,428.9	841.8	24.3	45.3	19.1	11.3
				PERSONS				
1971	3,747.3	5,621.6	2,608.1	1,090.4	28.7	43.0	20.0	8.3
1976	3,787.1	6,185.4	2,807.8	1,252.8	27.0	44.1	20.0	8.9
1978*p*	3,744.2	6,457.3	2,829.9	1,326.8	26.1	45.0	19.7	9.2
1979*p*	3,720.0	6,590.5	2,833.6	1,369.8	25.6	45.4	19.5	9.4
1980*p*	3,711.8	6,725.5	2,841.7	1,413.2	25.3	45.8	19.3	9.6
1981*p*	3,726.1	6,882.9	2,862.6	1,455.2	25.0	46.1	19.2	9.7

AGE PYRAMID OF THE ESTIMATED RESIDENT POPULATION, 1981 (PRELIMINARY)



POPULATION OF AUSTRALIA: AGE LAST BIRTHDAY, BY SEX, 30 JUNE 1981

PLATE 30

Marital status

The numbers of men and women aged 15 and over are nearly equal, but there are more single men than single women and there are more widows than widowers. The first phenomenon is attributable to women generally marrying about 2 years younger than men, and the second to their greater longevity. In 1981, 30.9 per cent of the male population aged 15 and over was single, 60.9 per cent married (excluding 2.4 per cent married but recorded as permanently separated), 2.5 per cent widowed and 3.3 per cent divorced. For females the figures were 22.9 per cent single, 59.3 per cent married (excluding 2.7 per cent married but permanently separated), 11.1 per cent widowed and 4.1 per cent divorced.

MARITAL STATUS OF THE POPULATION 1954 TO 1981

(Per cent distribution)

Census	*Never married*		*Married*	*Married but permanently separated*	*Widowed*	*Divorced*	*Total*
	Under 15	*15 and over*					
			MALES				
1954	28.9	21.2	45.4	1.3	2.5	0.7	100.0
1961	30.6	20.7	44.5	1.3	2.2	0.7	100.0
1966	29.9	21.4	44.5	1.3	2.1	0.7	100.0
1971	29.3	20.7	45.6	1.3	2.0	1.0	100.0
1976	28.0	21.0	46.1	1.6	1.9	1.4	100.0
1981	25.8	22.9	45.2	1.8	1.9	2.4	100.0
			FEMALES				
1954	28.3	15.4	46.1	1.5	7.9	0.8	100.0
1961	29.8	14.8	45.1	1.5	7.9	0.8	100.0
1966	28.9	15.7	44.9	1.5	8.1	0.9	100.0
1971	28.2	14.9	46.1	1.5	8.2	1.1	100.0
1976	26.6	15.6	45.9	2.0	8.1	1.8	100.0
1981	24.4	17.3	44.8	2.1	8.4	3.1	100.0

Masculinity

The masculinity of the population is expressed as the number of males per 100 females. This ratio is influenced by the age structure: masculinity at birth is about 105.5, but higher male mortality gradually erodes the difference so that the numbers of males and females would tend to be about the same soon after age 50 in the absence of migration, and the masculinity ratio progressively declines thereafter. The overall masculinity of the population has been declining to such an extent that it fell below 100 in 1979, the first time since World War 1. In 1981 it was 99.63.

MASCULINITY IN EACH AGE GROUP (males per hundred females)(*a*)

30 June	*Age in years*				
	0–14	*15–44*	*45–64*	*65 and over*	*Total*
1971	104.92	105.60	99.78	72.80	101.06
1976	105.09	104.33	100.56	72.24	100.44
1978p	104.75	103.78	100.51	72.46	100.03
1979p	104.70	103.54	100.49	72.63	99.86
1980p	104.73	103.32	100.37	72.82	99.71
1981p	104.76	103.23	100.34	72.87	99.63

(*a*) Based on estimated resident populations.

Ethnic composition

The composition of the population has been changing gradually in post-war decades due to changes in both the numbers and the origins of immigrant flows.

In 1981, persons born outside Australia made up 22 per cent of the population, a slight increase on earlier censuses. This represents a substantially higher proportion than that recorded at the 1947 Census (following the end of World War II) when the proportion was 10 per cent.

PERSONS BY BIRTHPLACE 30 JUNE 1981(*a*)

	Males	*Females*	*Persons*
Australia	5,615,436	5,778,425	11,393,861
UK and Eire	575,375	557,226	1,132,601
New Zealand	89,782	86,931	176,713
Germany (b)	55,126	55,632	110,758
Greece	75,215	71,410	146,625
Italy	149,684	126,199	275,883
Lebanon	26,622	23,001	49,623
Malta	30,628	26,373	57,001
Netherlands	51,863	44,181	96,044
Poland	33,031	26,410	59,441
Yugoslavia	81,527	67,808	149,335
Other Europe	111,208	93,822	205,030
Other Asia	162,146	159,819	321,965
America	48,974	47,273	96,247
Africa	45,609	44,628	90,237
Other Oceania	17,621	18,511	36,132
At sea and not stated	97,229	81,605	178,834
Total	**7,267,076**	**7,309,254**	**14,576,330**

(*a*) Based on census counts, actual location, not adjusted for underenumeration.
(*b*) Includes German Federal Republic and German Democratic Republic.

AUSTRALIAN AND OVERSEAS BORN PERSONS
(Per cent)

Census (a)	*Australian born*	*Overseas born*		*Total*
		U.K. and Eire	*Other*	
1954	85.7	7.4	6.9	**100.0**
1961	83.1	7.2	9.7	**100.0**
1966	81.6	7.9	10.6	**100.0**
1971	79.8	8.5	11.7	**100.0**
1976	79.9	8.2	11.8	**100.0**
1981	78.2	7.8	14.1	**100.0**

(*a*) Based on census counts, actual location, not adjusted for underenumeration.

The Aboriginal population

A brief account was given of the Australian Aboriginal population, its origin and its numbers as estimated from time to time in Year Book No. 17, pages 951–61. A special article by A. R. Radcliffe Brown dealing with the estimated number and distribution of the Aboriginal population at the date of the first settlement of European people on the continent appeared in Year Book No. 23, pages 687–96. For a more recent comprehensive analysis, see "The Aboriginal Population of Australia" by L. R. Smith, ANU Press, Canberra 1980.

The task of collecting data on the Aboriginal population is difficult, raising problems of coverage, definition and reporting. For this reason, statistics, even of the total Aboriginal population, should be treated with caution. This applies particularly to comparison of the changes in numbers from one census to another which can be affected by social attitudes and by changes made in the nature of the question in an attempt to improve coverage and reporting. Analysis of 1976 Census results indicated that some overstatement of the number of Aboriginals and Torres Strait Islanders occurred in the 1976 Census. These issues are discussed in more detail in *Census 81—Aboriginals and Torres Strait Islanders* (2153.0)

COUNTS OF ABORIGINALS AND TORRES STRAIT ISLANDERS (TSI) 30 JUNE 1971, 1976, 1981

	1971(a) number			1976(b) number			1981(c) number		
State	*Aboriginal*	*TSI*	*Total*	*Aboriginal*	*TSI*	*Total*	*Aboriginal*	*TSI*	*Total*
New South Wales	23,101	772	23,873	37,688	2,763	40,451	33,414	1,953	35,367
Victoria	5,656	715	6,371	12,415	2,345	14,760	5,283	774	6,057
Queensland	24,414	7,508	31,922	31,948	9,396	41,344	33,966	10,732	44,698
South Australia	7,140	159	7,299	9,940	774	10,714	9,476	349	9,825
Western Australia	21,903	278	22,181	25,565	560	26,125	30,749	602	31,351
Tasmania	575	96	671	2,522	421	2,943	2,334	354	2,688
Northern Territory	23,253	128	23,381	23,535	215	23,750	28,680	408	29,088
Australian Capital Territory	248	7	255	769	59	828	763	60	823
Australia	**106,290**	**9,663**	**115,953**	**144,382**	**16,533**	**160,915**	**144,665**	**15,232**	**159,897**

(a) 1971 figures include a pro-rating of non-response. (b) Any discrepancies between totals and sums of components are due to sampling error. (c) Changed editing procedures adopted for 1981 Census results; *see* (2153.0) for details.

Internal migration

The five-yearly censuses and annual internal migration surveys (conducted in conjunction with the labour-force survey) are the principal sources of internal migration data. Estimates of interstate migration are also made from address changes notified to the Department of Social Security. For reasons of timing, methodology, coverage (the surveys for example exclude children under 15) and other constraints, these three data series are not comparable.

Internal migration surveys

Internal migration surveys have been conducted at approximately annual intervals since 1970. The most recent was for the twelve months ended 31 May 1981. In these surveys, the place of usual residence of respondents is compared with that twelve months ago. If they differ, the respondent is classified as a mover. Estimates are made of the numbers and characteristics of movers and non-movers. Movers are further classified by place of origin and place of destination. (Because the estimates are based on information from occupants of a small sample of dwellings, the imprecision due to sampling variability should be kept in mind. Standard errors of estimates are published in the detailed bulletins providing the survey results.)

Recent internal migration surveys show that about 16 per cent of all persons aged 15 and over change their residence within a twelve-month period. Of those who change their residence, about 50 per cent remain within the same capital city and together with another 40 per cent, within the same State or Territory; slightly over 10 per cent are interstate movements.

While the pattern of migration has varied over the years, the age and sex composition of those who changed residence has been rather consistent: the masculinity ratio remains around 50 to 51 per cent and movers show a concentration in the ages 20 to 34 (57 per cent of all movers in the twelve-month period ended 31 May 1981).

INTERNAL MIGRATION(*a*)

(Persons aged 15 years and over)

	Year ended— 30 September 1978	*30 June 1979*	*30 June 1980*	*31 May 1981*
		('000)		
Changed usual residence—				
Intrastate—				
Within State capital cities (*b*)	827.4	854.4	885.4	924.6
To and from State capital cities (*b*)	158.1	168.0	177.7	170.0
Within Territories and rest of States	505.2	451.5	508.4	520.0
Total, intrastate	1,490.6	1,473.9	1,571.5	1,614.6
Interstate	193.5	179.2	185.6	193.8
Total	1,684.1	1,653.1	1,757.0	1,808.5
Did not change usual residence	8,522.1	8,672.5	8,783.6	8,931.0
Total	10,206.2	10,325.6	10,540.6	10,739.5
		Movers per thousand of population		
Mobility rate	*165*	*160*	*167*	*168*

(*a*) Non-institutionalised civilians aged 15 years and over at the time of the survey who were resident in Australia at the beginning and end of the survey year. (*b*) State capital cities exclude Canberra and Darwin.

Interstate migration

The most reliable data on internal and interstate migration are provided by the five-yearly censuses. The 1971 Census was the first census which set out to measure internal migration by asking respondents where they usually lived and where they had lived five years before. An analysis of the data is given in the Census Monograph *Internal Migration in Australia*. In the 1976 and 1981 Censuses, respondents were asked where they had lived one year, as well as five years, before. A summary of the 1976 results is given in Year Book No. 65.

The 1981 Census results show that interstate migration has continued to increase compared with results from the 1971 and 1976 Censuses. At the 1981 Census, 651,200 persons reported a change of State or Territory of usual residence between 1976 and 1981. This represents 5.2 per cent of all persons who actually reported their State or Territory of usual residence for both census dates. (The figure for the 1971–76 period was 569,500, representing 5.0 per cent.) The census figures are understated in the sense that:

(i) a person who moved out of and back into a State during the five year, or the one year period is not counted as a mover; and

(ii) persons who failed to answer either or both questions and those who were missed from the census altogether were excluded.

The net effect of interstate migration on the State populations is less than gross flows indicate because arrivals in a State are offset to a greater or lesser extent by departures.

The following tables indicate the origin and destination of the 1976–81 and 1980–81 interstate movers identified by the 1981 Census. Queensland was the major destination State, followed by New South Wales, Victoria and Western Australia. The major State of origin was New South Wales, followed by Victoria, Queensland and South Australia. Queensland made by far the largest population gain from interstate migration, 83,600 persons aged 5 years and over, in the five years to June 1981 and 35,100 in the year ending 30 June 1981. The only other State to make any significant gain was Western Australia with 10,600 in the five years to June 1981 and 2,100 in the year ending 30 June 1981.

The major changes in relation to the 1971–76 period were the substantial increase in net gain by Queensland, and the reduced gain by the Australian Capital Territory. Both South Australia and Victoria recorded increased net losses in 1976–81 as compared to the 1971–76 period. New South Wales reduced its net loss from interstate migration from 74,000 in the 1971–76 period to 24,500 in the 1976–81 period; however New South Wales recorded a net loss of 15,000 in the year to June 1981.

STATE OR TERRITORY OF USUAL RESIDENCE AT JUNE 1976 AND 1981 BY ORIGIN AND DESTINATION OF PERSONS WHO MOVED INTERSTATE BETWEEN 1976 AND 1981(*a*)

Persons aged 5 years and over in 1981 ('000)

	State or Territory of residence in 1981								
State or Territory of residence in 1976	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Total*
New South Wales	—	44.3	80.2	15.3	17.1	4.9	5.1	22.1	189.0
Victoria	55.4	—	56.1	16.1	17.9	7.4	4.5	7.2	164.7
Queensland	47.4	20.0	—	5.9	8.7	2.7	5.7	4.5	94.9
South Australia	16.8	17.5	12.5	—	8.9	2.1	6.5	2.4	66.7
Western Australia	13.8	12.2	9.9	6.4	—	2.1	3.5	1.8	49.6
Tasmania	5.6	7.4	6.0	2.0	2.5	—	0.7	0.7	24.8
Northern Territory	4.2	3.0	6.8	4.3	3.1	0.4	—	0.8	22.6
Australian Capital Territory	21.3	5.0	6.9	2.0	2.0	0.7	1.0	—	38.9
Total	**164.5**	**109.3**	**178.4**	**51.9**	**60.2**	**20.3**	**27.1**	**39.5**	**651.2**
Net gain 1976–81	−24.5	−55.4	83.6	−14.8	10.6	−4.5	4.5	0.6	—

STATE OR TERRITORY OF USUAL RESIDENCE AT JUNE 1980 AND 1981 BY ORIGIN AND DESTINATION OF PERSONS WHO MOVED INTERSTATE BETWEEN 1980 AND 1981(a)

Persons aged 1 year and over in 1981 ('000)

State or Territory of residence in 1980	*State or Territory of residence in 1981*								
	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Total*
New South Wales	—	18.8	38.2	6.0	7.1	2.1	2.3	8.4	83.0
Victoria	21.8	—	21.1	5.8	6.4	2.8	1.9	2.6	62.5
Queensland	20.6	9.9	—	2.7	3.6	1.3	2.5	1.7	42.3
South Australia	6.5	6.9	5.0	—	3.1	0.8	2.8	0.8	25.9
Western Australia	6.1	5.0	4.2	2.8	—	0.9	1.8	0.7	21.4
Tasmania	2.1	2.8	2.5	0.7	0.9	—	0.3	0.3	9.6
Northern Territory	2.2	1.6	3.4	2.2	1.7	0.2	—	0.4	11.7
Australian Capital Territory	8.7	2.1	2.9	0.7	0.8	0.3	0.4	—	15.8
Total	**68.0**	**47.1**	**77.3**	**20.8**	**23.6**	**8.5**	**12.0**	**14.8**	**272.1**
Net gain 1980-81	−15.0	−15.4	35.1	−5.1	2.1	−1.0	0.3	−1.0	—

(a) The figures are based on the number of persons who, in the 1981 Census, provided a State or Territory of usual residence for 1976 and 1981, or respectively 1980 and 1981, and whose State or Territory of residence differed at the two dates.

VITAL STATISTICS

Registration of vital events, i.e. births, deaths and marriages, has been compulsory throughout Australia since 1856. The total number of these occurrences is available for each year since the 1860s and more detailed information since the 1910s. The number of divorces has been published since 1891, but other details have been published on a consistent basis only since the 1950s.

Crude rates are the number of vital events per thousand of the mean population of a particular year. *Natural increase* is the excess of births over deaths. In 1981, births numbered 235,842, deaths 109,003 and the natural increase was 126,839. The rate of natural increase for 1981 was 8.50 per thousand of the mean resident population made up of crude birth rate 15.80 and crude death rate 7.30. This was the first time since 1971 that an increase in the crude birth rate occurred.

BIRTHS, DEATHS AND NATURAL INCREASE

Period	*Number*			*Crude rates per 1,000 of mean population(a)*		
	Births	*Deaths*	*Natural increase*	*Births*	*Deaths*	*Natural increase*
Annual averages—						
1961-65	232,952	95,465	137,487	21.34	8.75	12.60
1966-70	240,325	107,263	133,062	19.95	8.90	11.05
1971-75	253,438	111,217	142,221	18.81	8.24	10.57
1976-80	225,388	109,028	116,360	15.70	7.60	8.10
Annual totals—						
1976	227,810	112,662	115,148	16.23	8.03	8.20
1977	226,291	108,790	117,501	15.94	7.66	8.28
1978	224,181	108,425	115,756	15.61	7.55	8.06
1979	223,129	106,568	116,561	15.37	7.34	8.03
1980	225,527	108,695	116,832	15.35	7.40	7.95
1981	235,842	109,003	126,839	15.80	7.30	8.50

(a) Rates for 1976 onwards are preliminary and subject to revision when mean resident populations based on final 1981 Census data have been calculated.

There were 113,905 marriages registered in 1981, a crude rate of 7.6. Divorces numbered 41,412 bringing the crude divorce rate to 2.8, which was a reduction from a peak of 4.5 in 1976.

MARRIAGE AND DIVORCE

Period	Number		Crude rates per 1,000 of mean population(a)	
	Marriages	Divorces(b)	Marriage	Divorce
Annual averages—				
1961-65	83,250	7,568	7.6	0.7
1966-70	106,188	10,681	8.8	0.9
1971-75	111,803	17,348	8.4	1.3
1976-80	106,297	45,220	7.4	3.2
Annual totals—				
1976	109,973	63,230	7.8	4.5
1977	104,918	45,150	7.4	3.2
1978	102,958	40,608	7.2	2.8
1979	104,396	37,854	7.2	2.6
1980	109,240	39,258	7.4	2.7
1981	113,905	41,412	7.6	2.8

(a) Rates shown in this table for the years 1971 to 1981 have been re-calculated using estimated resident population introduced after the 1981 Census. (b) Figures for 1979 and earlier years have been revised to exclude nullities and show dissolutions only.

Births and fertility

Special interest attaches to fertility as an element of population change. Fertility has had considerable impact on the population structure. In 1971, there was a record 276,362 births registered but the number of births declined progressively in each year until 1980, when a slight reversal of the trend occurred. This continued in 1981 when 235,842 births were registered, representing a 4.6 per cent increase from 1980.

Live births

Extensive statistics of live births are available since the 1910s. These include information about sex of children, the incidence of multiple births, marital status of the parents, the number of previous issue to the mother's existing marriage, the duration of marriage, the age of parents and their country of birth.

With rare exceptions, statistics indicate an excess of male over female births. In 1981, there were 121,170 male births and 114,672 female births, a masculinity ratio of 105.67.

The proportion of children born to parents not married to each other at the time of birth has been increasing. In 1951-55, 3.97 per cent of births were ex-nuptial. In 1981, there were 31,200 ex-nuptial births, 13.23 per cent of the total.

LIVE BIRTHS: SEX AND NUPTIALITY

Period	Live births				Ex-nuptial live births			
	Males	Females	Persons	Masculinity	Persons	Masculinity	Percentage of total	Per 1,000 of mean population(a)
Annual averages—								
1961-65	119,777	113,175	232,952	105.83	13,798	106.88	5.92	1.26
1966-70	123,326	116,999	240,325	105.41	18,937	105.11	7.88	1.57
1971-75	130,047	123,389	253,436	105.39	24,516	106.71	9.69	1.88
1976-80	115,783	109,605	225,388	105.64	25,062	106.34	11.12	1.74
Annual totals—								
1976	116,838	110,972	227,810	105.29	23,064	108.20	10.12	1.64
1977	116,551	109,740	226,291	106.21	23,314	106.03	10.30	1.64
1978	114,964	109,217	224,181	105.26	24,744	106.73	11.04	1.72
1979	114,613	108,516	223,129	105.62	26,110	103.94	11.70	1.80
1980	115,948	109,579	225,527	105.81	28,076	106.78	12.45	1.91
1981	121,170	114,672	235,842	105.67	31,200	107.49	13.23	2.09

(a) Rates shown in this table for the years 1971 to 1981 have been re-calculated using estimated resident population introduced after the 1981 Census.

About 1 per cent of confinements result in twin births and about one in 10,000 in triplets. Quadruplets occur about once in 250,000 confinements. The likelihood of multiple confinement is about 0.9 per cent for the first nuptial confinement, rising to about 1 per cent at the second confinement and to as much as 1.5 per cent at the fourth and subsequent confinements. The incidence of multiple births also rises with age of mother.

Since the 1950s, there has been a decline in the proportion, and since 1971 in the number, of women having three or more children to their marriage. During the 1950s and early 1960s the median age of mother at first nuptial birth declined, but in recent years it has risen. In 1981, median age at first birth was 25.26 years.

NUPTIAL CONFINEMENTS: BIRTH ORDER

Period	Birth order 1	2	3	4	5	6	7 and over	Total nuptial (a)	Ex-nuptial	Confinements
					NUMBER OF CONFINEMENTS					
Annual averages—										
1961-65 . . .	69,281	57,971	40,818	23,612	12,125	6,160	6,862	216,829	13,655	230,483
1966-70 . . .	80,999	62,930	37,446	18,899	8,961	4,489	5,213	218,937	18,707	237,644
1971-75 . . .	88,120	74,641	36,914	15,216	6,006	2,805	2,959	226,674	24,299	250,973
1976-80 . . .	77,877	69,291	34,288	11,119	3,332	1,278	1,173	198,373	24,851	223,224
Annual totals—										
1976	78,086	73,338	33,505	11,130	3,584	1,497	1,534	202,692	22,873	225,565
1977	78,588	70,859	34,596	11,032	3,438	1,349	1,263	201,135	23,134	224,269
1978	76,999	68,759	34,783	11,248	3,307	1,224	1,134	197,461	24,538	221,999
1979	77,032	67,250	34,387	11,100	3,124	1,140	1,050	195,084	25,884	220,968
1980	78,680	66,247	34,167	11,084	3,207	1,179	884	195,492	27,826	223,318
1981	82,476	67,627	35,445	11,750	3,282	1,113	886	202,579	30,956	233,535
					MEDIAN AGE OF MOTHER					
Annual averages—										
1961-65 . . .	23.12	25.72	28.35	30.64	32.51	33.88	35.02	26.54	22.54	26.38
1966-70 . . .	23.14	25.63	28.21	30.54	32.53	34.06	35.42	25.92	21.37	25.67
1971-75 . . .	23.60	25.96	28.21	30.55	32.53	34.09	36.84	25.87	21.12	25.58
1976-80 . . .	24.79	26.60	28.77	30.59	32.47	34.23	37.29	26.64	21.63	26.27
Annual totals—										
1976	24.23	26.22	28.45	30.40	32.38	34.30	37.32	26.22	21.60	25.91
1977	24.59	26.39	28.64	30.53	32.41	34.54	37.08	26.46	21.51	26.13
1978	24.85	26.56	28.75	30.48	32.46	33.98	37.99	26.65	21.55	26.28
1979	25.07	26.82	28.89	30.66	32.44	34.23	36.83	26.86	21.62	26.46
1980	25.20	27.02	29.11	30.88	32.68	34.12	37.23	27.00	21.89	26.56
1981	25.26	27.20	29.22	30.89	32.63	34.38	36.88	27.11	22.07	26.66

(a) Includes those for whom birth order was not stated.

Fertility

The general fertility rate, which is the number of births to women of any age per thousand females aged 15–44, is the simplest measure of fertility. The rates have been calculated for the three years' births around each census from 1881 and provide a consistent series for nuptial and ex-nuptial fertility as well as for total fertility.

The rates show a substantial decline in fertility over the total period with a low point in 1932–34 and a minor recovery, peaking in 1960–62. The 1975–77 general rate of 78 births per thousand females aged 15–44 was only 46 per cent of the rate in 1880–82. The decline has been greater among married women, the rate for 1975–77 of 107 per thousand being only 33 per cent of the 1880–82 rate. Ex-nuptial fertility in 1975–77 was 23 per thousand, 64 per cent above 1880–82.

FERTILITY RATES: AUSTRALIA

Period	Births per 1,000 women aged 15–44 years	Nuptial births per 1,000 married women aged 15–44 years	Ex-nuptial births per 1,000 single, widowed or divorced women aged 15–44 years	Index numbers (base year 1880–82=100) Births per 1,000 women aged 15–44 years	Nuptial births per 1,000 married women aged 15–44 years	Ex-nuptial births per 1,000 single, widowed or divorced women
1880–82	170	321	14	100	100	100
1890–92	159	332	16	94	103	114
1900–02	117	235	13	69	73	93
1910–12	117	236	13	69	74	93
1920–22	107	197	11	63	61	79
1932–34	71	131	7	42	41	50
1946–48	104	160	11	61	50	79
1953–55	109	149	14	64	46	100
1960–62	112	154	18	66	48	129
1965–67	95	132	21	56	41	150
1970–72	100	134	29	59	42	207
1975–77	78	107	23	46	33	164

Age specific birth rates provide a measure of changing patterns of fertility within the fertile ages. The sum of these rates *is the total fertility rate.* The total fertility rate represents the number of children a woman would bear in her lifetime if she experienced the rates of the year shown.

Age specific birth rates rose for every age group from 15 to 44 years in 1981, the fir: . such general increase to occur since a sharp reduction in birth rates commenced in 1972.

The birth rate for the most fertile age group of mothers (25-29) rose from 140.9 per 1,000 population in 1980 to 145.1 in 1981. The birth rate in this group has been as high as 200 per thousand in the late 1950's and early 1960's.

Birth rates for mothers in the 15-19 and 20-24 year old age groups rose marginally for the first time since 1971.

The birth rate for mothers in the 30-34 year old age groups rose for the third successive year to 77.5 (the low point for this age group was reached in 1976 at 72.5 per 1,000).

The general increases in age-specific birth rates resulted in an increase of 2.2 per cent in the total fertility rate (i.e. the sum of the age-specific rates) to 1,936 per 1,000 females in 1981.

AGE-SPECIFIC BIRTH RATES(*a*)

Period	Age group (years) 15–19	20–24	25–29	30–34	35–39	40–44	45–49	Total fertility (*b*)
1956–60	44.20	216.42	211.47	126.06	63.91	18.96	1.45	3.412
1961–65	46.50	203.95	207.15	122.38	59.18	17.54	1.19	3.289
1966–70	49.39	172.59	187.64	103.03	46.84	12.89	1.00	2.866
1971–75*r*	47.98	154.02	166.90	85.04	33.68	8.50	0.58	2.484
1976–80*r*	30.69	116.37	143.81	73.80	23.73	4.80	0.31	1.968
1976*r*	35.19	128.23	146.14	72.54	24.07	5.52	0.41	2.061
1977*r*	32.15	121.97	145.68	74.10	23.86	5.03	0.30	2.015
1978*r*	29.96	115.69	143.89	73.38	23.49	4.50	0.25	1.956
1979*r*	28.52	109.07	142.41	73.89	23.60	4.57	0.33	1.912
1980*r*	27.63	106.90	140.92	75.10	23.63	4.36	0.28	1.894
1981	28.10	107.27	145.05	77.54	24.41	4.45	0.27	1.936

(*a*) Number of births per 1,000 women in each age group. Excludes particulars of full-blood Aboriginals before 1966. Rates from 1971 have been revised using estimated resident population introduced after the 1981 Census. (*b*) The sum of the age specific rates multiplied by 5 and divided by 1,000. This is the number of children a woman would bear in her lifetime if she experienced the rates of the year shown.

The gross reproduction rate is derived from total fertility and the ratio of female to total births. It indicates the number of female children who would be born on average to women supposing the rates from which it was calculated were to apply throughout the reproductive period. It is an indication of the extent to which the population is reproducing itself except that it does not allow for females who fail to survive to the end of the childbearing period. *The net reproduction rate* allows for such mortality. It is obtained by multiplying the age-specific rates by the survivor proportions in the corresponding age group of the stationary or life table population. Mortality in childhood and young adulthood is now so low that there is little difference between current gross and net reproduction rates.

GROSS AND NET REPRODUCTION RATES

Period	*Gross reproduction rate*	*Net reproduction rate*	*Life tables used*
1961	1.728	1.672	1960–62
1966	1.400	1.357	1965–67
1971	1.403	1.362	1971
1978	0.953	0.933	1978
1979	0.930	0.911	1979
1980	0.920	0.902	1980
1981	0.941	0.924	1981

Mortality

The number of deaths per year is in excess of 100,000. The increase from previous decades arises from the overall growth of the population, and from the advanced age of an increasing proportion of the population. The crude death rate, which fell from over 12 per 1,000 at the beginning of the century to 7.3 per 1,000 in 1981, can be expected to rise slowly as a result of further ageing of the population, unless there is a more than off-setting drop in age specific death rates.

General mortality

Between 1953–55 and 1960–62 mortality declined in every age-group. Between 1960–62 and 1970–72 there were further declines in most age groups, particularly infant mortality. However, increases in mortality were recorded for males aged 15–24 years. Since 1970–72, there have been further decreases in mortality at most ages.

Mortality is greater for males than for females at every age. It is relatively high in the first year of life (11.2 per 1,000 males and 8.7 per 1,000 females in 1981), very low in childhood and young adulthood, and then rises in middle and old age.

AGE-SPECIFIC DEATH RATES(*a*)

Age group (years)	*1953–55 (b)*	*1960–62 (b)*	*1965–67 (b)*	*1970–72 (b)*	*1975–77 (b)*	*1979*	*1980*	*1981*
				MALES				
Under 1 (*c*)	25.18	22.36	20.85	18.85	15.27	12.57	11.93	11.17
1–4 . . .	1.69	1.15	1.08	0.98	0.78	0.64	0.66	0.61
5–9 . . .	0.67	0.52	0.45	0.45	0.37	0.30	0.32	0.34
10–14 . . .	0.63	0.48	0.46	0.41	0.39	0.35	0.34	0.29
15–19 . . .	1.51	1.23	1.33	1.51	1.49	1.31	1.29	1.24
20–24 . . .	1.82	1.62	1.67	1.76	1.72	1.70	1.60	1.53
25–29 . . .	1.68	1.49	1.48	1.34	1.28	1.40	1.36	1.33
30–34 . . .	1.79	1.69	1.64	1.48	1.40	1.31	1.23	1.23
35–39 . . .	2.40	2.26	2.45	2.24	1.98	1.75	1.72	1.66
40–44 . . .	3.64	3.67	3.82	3.42	3.27	2.76	2.77	2.61
45–49 . . .	6.01	5.96	6.14	5.96	5.62	4.99	4.92	4.55
50–54 . . .	10.44	10.01	10.45	9.85	9.12	8.31	8.30	7.93
55–59 . . .	17.03	16.57	16.96	16.52	14.66	13.27	12.96	12.95
60–64 . . .	26.58	26.44	27.59	26.54	23.55	21.09	20.89	19.78
65–69 . . .	41.28	41.68	43.66	41.29	36.93	33.75	33.51	32.28
70–74 . . .	64.53	63.04	66.84	63.60	57.88	52.55	52.14	51.96
75–79 . . .	98.77	94.43	99.77	99.97	87.14	79.96	81.99	79.80
80–84 . . .	145.88	141.83	146.95	145.48	133.86	120.94	122.58	120.22
85 and over	248.14	243.69	241.98	235.41	218.48	204.86	202.32	206.80
				FEMALES				
Under 1 (*c*)	19.88	17.57	16.35	14.37	11.85	10.07	9.44	8.66
1–4 . . .	1.35	1.08	1.14	0.77	0.58	0.54	0.48	0.47
5–9 . . .	0.50	0.38	0.34	0.32	0.26	0.24	0.23	0.18
10–14 . . .	0.37	0.29	0.27	0.26	0.23	0.17	0.22	0.20
15–19 . . .	0.58	0.50	0.54	0.59	0.52	0.47	0.44	0.45
20–24 . . .	0.67	0.60	0.63	0.57	0.51	0.57	0.54	0.47
25–29 . . .	0.83	0.71	0.72	0.64	0.52	0.53	0.44	0.51
30–34 . . .	1.11	0.95	0.98	0.89	0.75	0.64	0.66	0.57
35–39 . . .	1.74	1.47	1.54	1.41	1.20	0.96	0.92	0.87
40–44 . . .	2.55	2.26	2.31	2.19	1.96	1.61	1.59	1.43
45–49 . . .	4.19	3.65	3.86	3.56	3.11	2.69	2.54	2.66
50–54 . . .	6.43	5.55	5.87	5.46	4.84	4.22	4.09	3.78
55–59 . . .	9.25	8.14	8.67	8.35	7.33	6.45	6.35	6.16
60–64 . . .	14.75	13.31	13.56	12.69	11.43	10.31	9.77	9.71
65–69 . . .	23.89	21.99	21.94	20.69	18.11	16.07	15.86	15.72
70–74 . . .	40.93	37.14	37.47	35.44	29.86	26.46	26.30	25.54
75–79 . . .	69.72	63.18	62.37	61.35	51.22	45.12	45.58	44.27
80–84 . . .	117.36	105.10	107.93	102.28	88.33	80.35	79.78	75.89
85 and over	213.69	210.20	197.73	191.86	173.74	163.66	163.68	160.91

(*a*) Number of deaths per 1,000 of population of the same age group and sex. The populations used in the calculation of these rates are based on census counts at 30 June 1954, 1961, and 1966. Rates from 1971 have been revised using estimated resident population introduced after the 1981 Census. (*b*) *Average annual rate per 1,000 of population, based on deaths in the three year period, i.e. census year and the years preceding and following it.* (*c*) Infant deaths per 1,000 live births.

AGE AT DEATH, 1981

Age at death (years)	Number			Per cent		
	Males	Females	Persons	Males	Females	Persons
Under 1	1,354	993	2,347	2.23	2.06	2.15
1-4	283	210	493	0.47	0.43	0.45
5-9	222	114	336	0.37	0.24	0.31
10-14	194	127	321	0.32	0.26	0.29
15-19	822	284	1,106	1.35	0.59	1.01
20-24	1,008	305	1,313	1.66	0.63	1.20
25-29	827	310	1,137	1.36	0.64	1.04
30-34	764	343	1,107	1.26	0.71	1.02
35-39	834	422	1,256	1.37	0.87	1.15
40-44	1,117	580	1,697	1.84	1.20	1.56
45-49	1,715	950	2,665	2.83	1.97	2.44
50-54	3,124	1,432	4,556	5.15	2.96	4.18
55-59	4,789	2,286	7,075	7.89	4.73	6.49
60-64	5,786	3,121	8,907	9.53	6.46	8.17
65-69	8,081	4,487	12,568	13.31	9.29	11.53
70-74	9,144	5,752	14,896	15.07	11.91	13.67
75-79	8,514	6,835	15,349	14.03	14.15	14.08
80-84	6,305	7,754	14,059	10.39	16.05	12.90
85-89	3,686	6,857	10,543	6.07	14.19	9.67
90-94	1,686	3,804	5,490	2.78	7.87	5.05
95-99	371	1,165	1,536	0.61	2.41	1.41
100 and over	40	169	209	0.07	0.35	0.19
Not stated	30	7	37	0.05	0.01	0.03
Total	**60,696**	**48,307**	**109,003**	**100.00**	**100.00**	**100.00**

Life expectancy

The life table is a life history of a hypothetical group, or cohort, of people, as it is diminished gradually by deaths. They form the basis for the *stationary population* which is the population that would result from a constant number of births each year which had been subject at each age to the life table mortality rates.

Since 1921, official life tables have been calculated from the separate male and female populations as enumerated at the census, and the deaths of the three years around the census. Earlier life tables were compiled for decennial periods 1881-90, 1891-1900 and 1901-10. Life tables have also been prepared in recent years using annual age estimates and the deaths of a particular year.

A key value in life tables is the expectation of life remaining at each age. Expectation of life, particularly at birth, improved at every age in the first half of this century. Between 1953-55 and 1970-72 there was little change in expectation of life. However, since 1970-72 there have been significant improvements, particularly in expectation of life at birth which has increased between 1970-72 and 1981 from 68.1 years to 71.4 for males and from 74.8 years to 78.4 for females.

COMPLETE EXPECTATION OF LIFE AT SELECTED AGES

	Expectation of life (a) at									
	Birth		*1 year of age*		*20 years of age*		*40 years of age*		*60 years of age*	
Period	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*
1901-11 (*b*)(*c*)	55.2	58.8	60.0	62.9	44.7	47.5	28.6	31.5	14.4	16.2
1920-22 (*b*)(*c*)	59.2	63.3	62.7	66.0	47.0	50.0	30.1	33.1	15.1	17.2
1932-34 (*b*)(*c*)	63.5	67.1	65.5	68.7	48.8	51.7	31.1	34.0	15.6	17.7
1946-48 (*b*)(*c*)	66.1	70.6	67.3	71.5	49.6	53.5	31.2	34.9	15.4	18.1
1953-55 (*b*)(*c*)	67.1	72.8	67.9	73.5	50.1	55.1	31.7	36.0	15.5	18.8
1960-62 (*b*)(*c*)	67.9	74.2	68.5	74.5	50.4	56.2	31.8	37.0	15.6	19.5
1965-67 (*c*)	67.6	74.2	68.1	74.4	50.0	56.0	31.4	36.9	15.3	19.5
1970-72 (*c*)	68.1	74.8	68.5	74.9	50.4	56.5	31.8	37.3	15.5	19.9
1975-77 (*c*)	69.6	76.6	69.6	76.5	51.5	58.0	32.8	38.7	16.4	21.0
1978 (*d*)r	70.3	77.3	70.3	77.2	52.1	58.6	33.5	39.3	16.8	21.5
1979(*d*)r	70.9	77.9	70.8	77.7	52.5	59.1	33.8	39.8	17.1	21.9
1980(*d*)	71.0	78.1	70.9	77.8	52.6	59.3	33.9	39.9	17.1	21.9
1981(*d*)	71.4	78.4	71.2	78.1	52.9	59.5	34.1	40.1	17.3	22.1

(*a*) The average number of additional years a person of the given age and sex might expect to live if the age-specific death rates of the given period continued throughout his/her lifetime. (*b*) Excludes particulars of full-blood Aboriginals prior to 1967. (*c*) Based on Official Life Tables calculated by the Australian Government Actuary. (*d*) Based on annual life tables calculated by the Australian Statistician. These tables are based on preliminary estimated resident population.

Marriages

Marriages in Australia are solemnised under Federal legislation, namely the *Marriage Act* 1961 as amended. The original Act, which superseded State Acts, came into part operation on 6 May 1961. The first regulations and major provisions under the Act commenced on 1 September 1963.

Under the Act, marriages may be celebrated by Ministers of Religion registered as Authorised Celebrants, Registrars or other persons whose function is the registration of marriages, and other authorised civil and religious celebrants.

One month's written notice of intended marriage must be given to the Celebrant, though this may be shortened in special circumstances. Celebrants issue marriage certificates to the parties and transmit copies of the certificates to Registrars in the States or Territories in which the marriages took place.

The marriageable age under the Act is 18 for males and 16 for females. After inquiry, a Judge or Magistrate may authorise, in exceptional and unusual circumstances, the marriage of a person below marriageable age, but not below 16 for males and 14 for females.

Minors require, generally speaking, parental consent. A prescribed authority, usually a Registrar, may dispense with consent where such consent can be presumed and it would be unreasonable to require it. If parental consent is refused unreasonably, a Magistrate may give consent in lieu of the parent or guardian. Such a Magistrate's decision is subject to appeal. The age of majority was reduced in 1973 from 21 to 18. Because the marriageable age for males is also 18, the only persons of marriageable age requiring parental consent are now females between the ages of 16 and 18.

The Act makes provision, on a uniform basis, in respect of prohibited relations, other grounds for void marriages, legitimation, marriages overseas, and pre-marital education.

In 1981, 76.8 per cent of grooms and 77.5 per cent of brides were marrying for the first time; approximately 2.8 per cent were widowers and 3.3 per cent widows; and 20.4 per cent of grooms and 19.2 per cent of brides had been divorced. The proportion of marriages involving divorced persons increased sharply in 1976 and slightly thereafter. This is associated with the larger numbers of divorces granted since the introduction of the *Family Law Act* 1975.

Median age at first marriage declined during the 1950s and 1960s but has risen slightly in recent years. In 1981 it was 24.4 years for males and 22.1 for females. In 1981, 3.2 per cent of grooms and 16.5 per cent of brides married under the age of 20.

MARITAL STATUS AT MARRIAGE

Period	Grooms				Brides			
	Bachelors	*Widowers*	*Divorced*	*Total bride-grooms*	*Spinsters*	*Widows*	*Divorced*	*Total brides*
				NUMBER				
Annual averages—								
1961–65	75,384	3,063	4,803	83,250	74,962	3,218	5,070	83,250
1966–70	96,438	3,320	6,430	106,188	96,341	3,568	6,279	106,188
1971–75	99,203	3,473	9,126	111,802	99,287	3,810	8,705	111,802
1976–80	82,344	3,394	20,559	106,297	82,987	4,022	19,288	106,297
Annual totals—								
1976	86,792	3,777	19,404	109,973	87,434	4,378	18,161	109,973
1977	81,172	3,385	20,361	104,918	81,694	3,999	19,225	104,918
1978	79,581	3,279	20,098	102,958	80,142	3,818	18,998	102,958
1979	80,226	3,266	20,904	104,396	80,893	3,996	19,507	104,396
1980	83,950	3,264	22,026	109,240	84,770	3,920	20,550	109,240
1981	87,460	3,152	23,293	113,905	88,308	3,727	21,870	113,905
				MEDIAN AGES				
Annual averages—								
1961–65	24.16	56.60	40.41	24.69	21.32	49.25	36.63	21.67
1966–70	23.54	56.69	39.75	23.94	21.19	50.05	36.08	21.50
1971–75	23.33	57.78	37.25	23.86	20.99	51.13	33.04	21.43
1976–80	23.93	58.42	36.07	25.35	21.55	51.64	32.52	22.67
Annual totals—								
1976	23.62	57.86	36.56	24.89	21.23	51.19	32.58	22.24
1977	23.76	58.43	35.92	25.17	21.35	50.88	32.24	22.48
1978	23.94	58.54	35.95	25.41	21.55	51.81	32.37	22.71
1979	24.10	58.65	36.07	25.60	21.72	52.30	32.63	22.89
1980	24.22	58.63	35.83	25.66	21.91	52.04	32.80	23.03
1981	24.42	59.13	36.00	25.86	22.08	52.11	32.88	23.29

AGE AT MARRIAGE

Period	Age: Under 20	20–24	25–29	30–34	35–39	40–44	45–49	50 and over	Total
GROOM									
Annual averages—									
1961–65	5,278	38,845	20,344	7,495	3,799	2,154	1,498	3,837	83,250
1966–70	7,917	55,824	23,398	7,008	3,544	2,473	1,763	4,258	106,185
1971–75	8,427	59,058	24,374	7,408	3,425	2,376	1,970	4,765	111,802
1976–80	4,830	45,796	26,139	11,245	5,500	3,512	2,822	6,452	106,297
Annual totals—									
1976	6,302	49,614	25,659	9,776	5,198	3,450	3,057	6,917	109,973
1977	5,242	46,059	24,908	10,750	5,216	3,399	2,915	6,429	104,918
1978	4,592	44,011	25,337	11,229	5,451	3,447	2,691	6,200	102,958
1979	4,069	43,778	26,537	11,687	5,706	3,576	2,710	6,333	104,396
1980	3,943	45,519	28,256	12,785	5,928	3,690	2,737	6,382	109,240
1981	3,619	46,114	30,522	13,674	6,800	3,958	2,686	6,532	113,905
BRIDE									
Annual averages—									
1961–65	23,454	39,370	8,760	3,553	2,416	1,715	1,367	2,616	83,250
1966–70	30,475	53,356	10,334	3,521	2,143	1,764	1,545	3,047	106,185
1971–75	34,319	51,846	12,363	4,280	2,279	1,733	1,621	3,362	111,802
1976–80	23,006	45,938	16,560	7,700	4,092	2,669	2,124	4,208	106,297
Annual totals—									
1976	28,063	45,891	15,755	6,866	3,892	2,641	2,356	4,509	109,973
1977	24,827	44,208	15,692	7,360	3,945	2,519	2,229	4,138	104,918
1978	22,290	44,094	16,114	7,810	4,026	2,525	2,121	3,978	102,958
1979	20,382	46,029	16,974	7,873	4,225	2,803	1,950	4,160	104,396
1980	19,466	49,467	18,267	8,591	4,370	2,858	1,965	4,256	109,240
1981	18,769	51,769	20,039	9,354	4,871	3,053	1,992	4,058	113,905

Marriage rates of the marriageable population provide a measure of changing marriage patterns. Marriage rates have been calculated for the three years around the census per thousand single, widowed and divorced males, females and persons.

The rates for 1975–77 were 64.86 for males, 61.92 for females, and 63.36 for persons.

The proportion of all marriages celebrated by civil officers rose to 37.6 per cent of all marriages registered in 1981. This proportion has more than doubled since 1973.

MARRIAGE RATES OF MARRIAGEABLE POPULATION

Censal period	Per thousand single, widowed and divorced, aged 15 and over: Males rate	Females rate	Persons rate	Per thousand persons: Rate	Index
1880–82	39.38	63.56	48.63	7.62	100
1890–92	36.50	35.50	44.04	7.28	96
1900–02	37.32	48.39	42.14	7.27	95
1910–12	45.80	55.33	50.12	8.74	115
1920–22	54.00	58.08	55.97	8.75	115
1932–34	41.70	44.13	42.88	7.12	93
1946–48	71.89	70.60	71.24	10.15	133
1953–55	64.20	66.46	65.32	7.92	104
1960–62	61.50	63.07	62.27	7.34	96
1965–67	68.06	68.04	68.05	8.32	109
1970–72	70.34	67.11	68.69	9.09	119
1975–77	64.86	61.92	63.36	7.84	103

Divorce

The *Matrimonial Causes Act* 1959-66 provided for dissolution of marriage on one or more of 14 grounds. It also provided for nullity of marriage and for judicial separation. This Act, which came into operation in 1961, replaced separate State and Territory legislation. The *Family Law Act* 1975, which came into operation on 5 January 1976, provides for a single ground for divorce—irretrievable breakdown of marriage—and for nullity of marriage on the ground that the marriage is void.

Statistics prior to 1976 in the following tables relate to divorces granted under the Matrimonial Causes Act or under previous State or Territory legislation. Statistics for 1976 differentiate between divorces granted under Matrimonial Causes and Family Law legislation. Although Family Law legislation provides for petitions filed before 1976 to be heard under the superseded Matrimonial Causes legislation, statistics of divorces granted after 1976 make no such differentiation.

When comparing the number and rate of decrees granted from year to year it should be borne in mind that the availability of judges to hear petitions lodged can affect the number of decrees granted. A rise in one year may be due wholly or in part to the clearing of a backlog of cases from an earlier year. In addition, changes to legislature, rules or practices may also affect the number of divorce applications.

Following a sharp rise in the number of divorces in 1976, the first year of Family Law legislation, the number dropped by 29 per cent to 45,150 in 1977. However, this number was still 86 per cent higher than the number granted in 1975 under Matrimonial Causes legislation. The total number for 1980 was 39,258 and for 1981, 41,412.

DIVORCES(*a*)

Period	*Petitions filed*	*Petitions granted*
Annual averages—		
1961-65r	9,955	7,568
1966-70r	13,089	10,681
1971-75r	22,704	17,348
1976-80r	45,312	45,220
Annual totals—		
1976r	66,092	63,230
Matrimonial Causes	–	15,720
Family Law	66,092	47,510
1977r	41,628	45,150
1978r	40,918	40,608
1979r	37,393	37,854
1980	40,531	39,258
1981	41,652	41,412

(*a*) Dissolutions of marriage. Numbers from 1961 have been revised to exclude nullities.

NUMBER OF DIVORCES, 1969 TO 1981

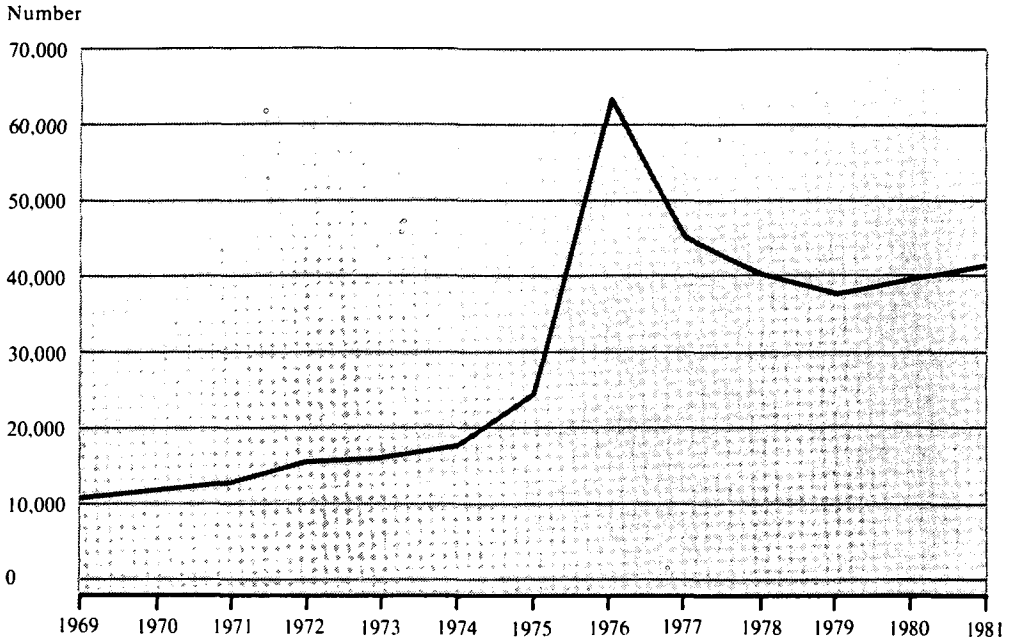


PLATE 31

Duration of marriage, age at marriage and age at divorce

The median duration of marriages dissolved in 1981 was 10.2 years. Of the 41,412 marriages which were dissolved, 49.3 per cent had lasted less than ten years, 31.5 per cent between ten and twenty years and 19.2 per cent twenty years or more.

DIVORCE, YEARS MARRIED

	Years married							
Period	*0–4*	*5–9*	*10–14*	*15–19*	*20–24*	*25 and over*	*Total*	*Median duration of marriage*
Annual averages—								
1961-65	501	1,999	1,747	1,329	926	1,040	7,542	13.6
1966-70	903	2,937	2,146	1,685	1,429	1,581	10,681	13.4
1971-75	1,693	5,478	3,432	2,398	1,930	2,417	17,349	11.9
1976-80	8,234	13,112	8,359	5,556	4,265	5,694	45,220	10.6
Annual totals—								
1976	9,791	19,108	11,421	7,917	6,200	8,793	63,230	11.0
1977	7,802	12,960	8,383	5,630	4,374	6,001	45,150	10.9
1978	7,839	11,599	7,504	4,941	3,755	4,970	40,608	10.5
1979	7,621	10,754	6,929	4,646	3,502	4,402	37,854	10.3
1980	8,115	11,138	7,558	4,644	3,496	4,306	39,258	10.2
1981	8,606	11,800	8,118	4,941	3,550	4,397	41,412	10.2

In 1981, the median age at marriage of divorcing husbands was 23.5 years and of wives 20.9 years. Of husbands, 10.3 per cent had been aged under 20 at marriage and 53.4 per cent aged 20–24; of wives 37.3 per cent had been aged under age 20 and 43.5 per cent between 20–24.

DIVORCE, MEDIAN AGE AT MARRIAGE

Period	Median age at marriage of— Husband	Wife
Annual averages—		
1966–70	24.2	21.7
1971–75	23.5	20.9
1976–80	23.4	20.8
Annual		
1976	23.4	21.0
1977	23.3	20.7
1978	23.3	20.8
1979	23.4	20.8
1980	23.4	20.9
1981	23.5	20.9

At time of divorce, the median age of husbands was 35.5 years and of wives 32.8 years. A total of 25.6 per cent of husbands and 37.7 per cent of wives were aged under 30 years when the marriage was dissolved.

Children of the marriage

For the years in which the Matrimonial Causes Act was in force, children of the marriage were defined as living children under the age of 21 at the time of the petition. Under previous legislation there were differences between States. The Family Law Act defines them as children of the marriage if they were under the age of 18 at the time of application. In 1981, of the dissolutions granted under the Family Law Act, no children were involved in 38.9 per cent of the dissolutions, while 21.5 per cent of the dissolutions involved 1 child, 25.6 per cent 2 children, and 13.9 per cent 3 or more children.

DISSOLUTION OF MARRIAGE, NUMBER OF CHILDREN

Period	Number of children of the marriage 0	1	2	3	4	5 and over	Total dissolutions	Total children	Average number of children
Annual averages—									
1961–65	2,834	1,950	1,611	753	279	143	7,568	9,347	1.2
1966–70	3,628	2,656	2,428	1,212	497	261	10,681	14,588	1.4
1971–75	5,628	4,062	4,200	2,147	874	438	17,349	24,840	1.4
1976–80	17,013	10,186	10,970	4,746	1,633	671	45,220	55,218	1.2
Annual totals—									
1976	23,606	14,751	14,422	6,761	2,542	1,148	63,230	73,645	1.2
1977	16,381	10,473	11,005	4,857	1,679	755	45,150	57,878	1.3
1978	14,965	9,127	10,047	4,336	1,530	603	40,608	51,599	1.3
1979	14,641	8,167	9,488	3,876	1,243	439	37,854	46,130	1.2
1980	15,471	8,412	9,890	3,900	1,173	412	39,258	46,836	1.2
1981	16,127	8,898	10,621	4,141	1,231	394	41,412	49,616	1.2

INTERNATIONAL MOVEMENTS

Statistics of overseas arrivals and departures are compiled from incoming and outgoing passenger cards which are collected from all travellers under the *Migration Act* 1958. Earlier statistics were obtained from passenger lists required under various Acts.

Since 1924, overseas travellers have been classified into two principal categories which distinguish movements for short terms from movements for longer periods (including permanent movements). Revised questions for travellers were introduced in 1958 and again in 1974. The 1958 revision enabled the separation, after 1959, of permanent from other long-term movements and also the identification of former settlers departing permanently. The 1974 revisions improved the classification without change of principle. The categories of overseas movement are:

Permanent—consists of persons arriving with the stated intention of settling permanently in Australia (settlers), and Australian residents (including former settlers) departing with the stated intention of residing permanently abroad. Before 1974, former settlers were not so classified unless they had spent at least 12 months in Australia.

Long-term—consists of overseas visitors arriving and Australian residents departing with the stated intention of staying in Australia or abroad respectively for 12 months or more; and visitors departing and residents returning who have stayed in Australia or abroad respectively for 12 months or more. Until 1974, Australian residents returning were classified as long-term only if their time spent abroad included a period of 12 months in any one country. Their classification is now governed solely by their total absence from Australia.

Short-term—consists of overseas visitors arriving and Australian residents departing whose intended or actual period of stay in Australia or abroad respectively is less than twelve months.

The classification of overseas movements is based on statements made by the traveller on arrival in or departure from Australia. The statistics represent the travellers' intentions at the time of arrival or departure; travellers may subsequently change their intentions, and this must be borne in mind in interpreting the statistics.

An upsurge of international tourism, particularly by Australian residents, occurred in the 1970s. The volume of sea travel has changed little over the period (the figures exclude pleasure cruises in the south west Pacific beginning and ending in Australia), so that in 1981 less than one per cent of arrivals and departures had travelled by ship. Net gain, i.e. the excess of total arrivals over total departures, until recently provided a satisfactory measure of the population gain from international migration. In recent years, however, distortions arising from seasonality of short-term arrivals and departures have become very large. For the purpose of estimating the population of Australia and the States and Territories, therefore, the migration component of population growth has been measured since 1 July 1971 by reference to permanent and long-term movements only.

OVERSEAS ARRIVALS AND DEPARTURES: AUSTRALIA 1961–1980

ARRIVALS

	Permanent and long-term movement				*Short-term movement(a)*				
	Permanent	*Long-term*				*Overseas visitors arriving*			
Period	*Settlers arriving*	*Australian residents returning*	*Overseas visitors arriving*	*Total permanent and long-term arrivals*	*Australian residents returning*	*In transit*	*Other*	*Total*	*Total arrivals*
Annual averages—									
1961–65 . . .	115,198	22,258	14,770	152,226	117,041	28,685	102,776	131,461	400,727
1966–70 . . .	160,813	36,148	24,481	221,442	259,700	41,476	255,800	297,275	778,417
1971–75 . . .	109,687	57,751	26,254	193,692	631,446	74,356	401,569	475,925	1,301,063
1976–80 . . .	73,823	59,143	28,730	161,695	1,062,105	62,521	622,208	684,729	1,908,530
Annual totals—									
1976	58,317	59,875	23,312	141,504	968,265	66,462	465,406	531,868	1,641,636
1977	75,640	57,700	27,472	160,813	973,677	53,032	510,249	563,281	1,697,771
1978	68,419	57,938	28,389	154,745	1,029,482	57,501	573,093	630,594	1,814,822
1979	72,236	61,441	33,450	167,127	1,144,334	68,339	725,006	793,345	2,104,807
1980	94,502	58,760	31,025	184,288	1,194,768	67,270	837,288	904,558	2,283,613
1981	118,735	59,402	34,552	212,689	1,181,387	62,772	873,955	936,727	2,330,803

OVERSEAS ARRIVALS AND DEPARTURES: AUSTRALIA 1961-1980—*continued*

DEPARTURES

	Permanent and long-term movement						*Short-term movement(a)*		
	Permanent			*Long-term*					
Period	*Former settlers departing*	*Other residents departing*	*Total permanent departures*	*Australian residents departing*	*Overseas visitors departing*	*Total permanent and long-term departures*	*Australian residents departing*	*Overseas visitors departing*	*Total departures*
Annual averages -									
1961-65 . . .	9,698	6,798	16,496	37,905	12,719	67,120	118,624	135,006	320,749
1966-70 . . .	23,191	8,752	31,942	56,219	14,349	102,511	258,824	308,321	669,656
1971-75 . . .	26,622	12,032	38,654	66,430	22,984	128,067	647,608	479,015	1,254,690
1976-80 . . .	13,827	9,917	23,744	59,223	19,837	102,803	1,077,331	655,413	1,835,548
Annual totals—									
1976	16,815	9,918	26,733	68,526	20,631	115,890	973,799	512,468	1,602,156
1977	14,171	8,591	22,762	64,091	19,182	106,035	971,253	540,943	1,618,230
1978	14,027	10,933	24,960	58,519	19,643	103,122	1,062,234	597,123	1,762,480
1979	12,670	10,750	23,420	54,266	20,422	98,107	1,175,768	752,440	2,026,317
1980	11,450	9,393	20,843	50,713	19,306	90,862	1,203,603	874,090	2,168,555
1981	11,280	8,576	19,856	46,738	19,018	85,612	1,217,299	900,376	2,203,287

(*a*) Statistics of short-term movement since 1974 have been derived from a stratified sample of travellers and are subject to sampling error.

The total number of overseas arrivals and departures (excluding passengers on cruises which commence and complete their journeys in an Australian port) for the year 1981 was 4,534,100, 2 per cent more than for 1980. Growth in both arrivals and departures was particularly significant in the March quarter with almost half the total growth.

New South Wales, with 56.4 per cent of clearances, remained the principal State of arrival and departure in 1981.

Short-term movements accounted for approximately 94 per cent of total movements in both 1980 and 1981.

Changes in the pattern and volume of short-term movements is shown in Chapter 26, under the heading 'Tourism'.

Migration to Australia

Migration to Australia is regulated by the *Migration Act* 1958 which came into force on 1 June 1959. Any person entering Australia after the commencement of the Act without having been granted an entry permit or who is not within an exempted class is a prohibited immigrant. Exempted persons include diplomatic and consular representatives of other countries, and seamen and air crew who enter with leave in Australian ports.

Immigration has contributed substantially to Australia's post war population growth. In the post-war years, some 3.7 million migrants have arrived, of which it is estimated that more than 80 per cent settled.

Settler arrivals in 1981 totalled 118,735, an increase of 25.6 per cent over the total for the previous year.

European born settlers continued to be the major source, contributing 50 per cent of the overall settler intake. This was primarily due to the large contribution from the U.K. and Ireland (32 per cent of the total). The number of Asian born settlers was 31,501 which constituted 26.5 per cent of settler arrivals. More than half of these were included in the refugee program. New Zealand born settlers again constituted the second largest group, after the U.K. and Ireland, with 15,328 settlers, 13 per cent of the total.

Although the actual number of assisted arrivals increased by 3,634 to 29,958, the percentage of total settlers fell from 28 per cent in the previous year to 25 per cent in 1981. From May 1981 the grant of assisted passage was restricted to refugees.

SETTLERS ARRIVING BY COUNTRY OF LAST RESIDENCE

	Number		*Per cent*	
	1971	*1981*	*1971*	*1981*
South Africa	1,996	3,411	1.3	2.9
Other Africa	3,815	1,726	2.5	1.5
Total Africa	*5,811*	*5,137*	*3.7*	*4.3*
Canada	2,998	1,406	1.9	1.2
U.S.A.	7,050	2,314	4.5	1.9
Other America	5,123	1,311	3.3	1.1
Total America	*15,171*	*5,031*	*9.8*	*4.2*
Bangladesh, India, Pakistan and Sri Lanka	3,968	1,201	2.6	1.0
Indonesia	113	2,524	0.1	2.1
Lebanon	3,856	763	2.5	0.6
Malaysia and Singapore	2,048	9,730	1.3	8.2
Philippines	429	3,330	0.3	2.8
Thailand	128	4,710	0.1	4.0
Turkey	3,192	969	2.1	0.8
Other Asia	4,578	5,557	2.9	4.7
Total Asia	*18,312*	*28,784*	*11.8*	*24.2*
U.K. and Ireland	59,276	37,476	38.1	31.6
Austria	6,901	3,234	4.4	2.7
Germany	3,951	2,970	2.5	2.5
Greece	8,632	1,769	5.6	1.5
Italy	6,334	2,511	4.1	2.1
Yugoslavia	11,223	1,861	7.2	1.6
Other Europe	13,751	10,160	8.8	8.6
Total Europe	*110,068*	*59,981*	*70.8*	*50.5*
New Zealand	5,117	17,884	3.3	15.1
Other Oceania	1,046	1,898	0.7	1.6
Total Oceania	*6,163*	*19,787*	*4.0*	*16.7*
Not Stated	..	*15*	..	..
Total	**155,525**	**118,735**	**100.0**	**100.0**

Each year Australia loses a proportion of its previous migrant intakes. Additionally, partly as a result of the high international mobility of professional and skilled workers, substantial numbers of Australians take up job opportunities overseas.

Eligibility for entry for settlement is restricted to certain family members and fiancees and fiances of Australian residents, to others who possess skills, qualifications, personal or other qualities which represent an economic, social or cultural gain to Australia, and to certain refugees.

SETTLER ARRIVALS

Period	*Assisted*	*Unassisted*	*Total*
Annual averages—			
1966–70	107,496	53,317	160,813
1971–75	58,176	51,511	109,687
1976–80	19,662	54,162	73,824
Annual totals—			
1976	15,840	42,481	58,321
1977	17,532	58,108	75,640
1978	19,549	48,870	68,419
1979	19,063	53,173	72,236
1980	26,324	68,178	94,502
1981	29,958	88,777	118,735

SETTLER ARRIVALS BY AGE

	Age in years						
Period	*0–4*	*5–14*	*15–24*	*25–44*	*45–64*	*65 and over*	*All ages*
			MALES				
Annual averages—							
1966–70	10,542	15,434	21,184	32,272	5,809	1,243	86,484
1971–75	7,411	10,009	12,878	20,326	3,921	1,247	55,792
1976–80	4,942	7,154	7,707	12,669	2,971	1,385	36,828
Annual totals—							
1976	3,996	5,543	5,339	9,556	2,105	1,183	27,722
1977	5,205	7,221	8,009	12,410	3,461	1,344	37,650
1978	4,577	6,768	7,463	11,351	2,897	1,378	34,434
1979	4,986	6,837	7,598	12,205	2,873	1,339	35,838
1980	5,947	9,403	10,126	17,822	3,517	1,680	48,495
1981	7,554	12,064	13,102	23,155	4,204	1,787	61,866
			FEMALES				
Annual averages—							
1966–70	9,909	14,435	17,751	24,132	6,240	1,861	74,328
1971–75	6,952	9,301	13,685	17,445	4,787	1,725	53,895
1976–80	4,639	6,392	8,105	12,168	3,885	1,808	36,996
Annual totals—							
1976	4,100	5,314	6,537	9,830	3,280	1,538	30,599
1977	4,821	6,597	8,070	12,104	4,595	1,803	37,990
1978	4,062	5,651	7,578	11,202	3,738	1,754	33,985
1979	4,621	6,062	8,438	11,874	3,607	1,796	36,398
1980	5,591	8,334	9,904	15,828	4,204	2,147	46,008
1981	7,073	10,616	11,654	20,843	4,536	2,147	56,869
			PERSONS				
Annual averages—							
1966–70	20,451	29,869	38,935	56,405	12,049	3,104	160,813
1971–75	14,363	19,311	26,563	37,771	8,708	2,972	109,687
1976–80	9,581	13,546	15,812	24,837	6,855	3,192	73,824
Annual totals—							
1976	8,096	10,857	11,876	19,386	5,385	2,721	58,321
1977	10,026	13,818	16,075	24,518	8,056	3,147	75,640
1978	8,639	12,419	15,041	22,553	6,635	3,132	68,419
1979	9,607	12,899	16,036	24,079	6,480	3,135	72,236
1980	11,538	17,737	20,030	33,650	7,721	3,827	94,502
1981	14,627	22,680	24,756	43,998	8,740	3,934	118,735

SETTLER ARRIVALS BY MARITAL STATUS

Period	Never married: Under 15 years	Never married: 15 years and over	Married	Widowed and divorced	Total
MALES					
Annual averages—					
1966–70	25,976	25,742	33,668	1,098	86,484
1971–75	17,420	14,750	22,595	1,027	55,792
1976–80	12,095	9,052	14,769	912	36,827
Annual totals—					
1976	9,541	6,710	10,888	581	27,720
1977	12,426	9,631	14,826	767	37,650
1978	11,345	8,451	13,808	830	34,434
1979	11,817	8,453	14,562	1,006	35,838
1980	15,344	12,015	19,762	1,374	48,495
1981	19,601	15,155	25,641	1,469	61,866
FEMALES					
Annual averages—					
1966–70	24,344	12,530	34,125	3,330	74,328
1971–75	16,246	9,752	25,055	2,842	53,895
1976–80	11,005	6,435	17,043	2,513	36,996
Annual totals—					
1976	9,361	5,473	13,886	1,877	30,597
1977	11,378	6,319	17,874	2,419	37,990
1978	9,700	5,955	15,950	2,380	33,985
1979	10,672	6,609	16,518	2,599	36,398
1980	13,914	7,818	20,987	3,289	46,008
1981	17,627	9,250	26,771	3,221	56,869
PERSONS					
Annual averages—					
1966–70	50,320	38,272	67,793	4,427	160,813
1971–75	33,666	24,502	47,651	3,869	109,687
1976–80	23,100	15,487	31,813	3,424	73,824
Annual totals—					
1976	18,902	12,182	24,779	2,458	58,321
1977	23,804	15,950	32,700	3,186	75,640
1978	21,045	14,406	29,758	3,210	68,419
1979	22,489	15,062	31,080	3,605	72,236
1980	29,258	19,833	40,748	4,663	94,502
1981	37,228	24,405	52,412	4,690	118,735

Refugees

Australia accepted 21,972 people under refugee and special humanitarian programs in 1981. This compared with an intake of 21,692 in 1980.

Since 1945, Australia has accepted more than 400,000 refugees or displaced persons, including 170,000 from Europe who were displaced by the Second World War and its aftermath.

Australia presently accepts refugees from about 40 countries. The largest single element in Australia's current refugee intake is the Indo-Chinese program. In 1981, 14,667 Indo-Chinese refugees were resettled in Australia.

Australia is one of 90 countries which have become party to an international convention and protocol on the status of refugees and, in so doing, have taken on certain international legal obligations to assist refugees. It is also a member of the Executive Committee of the United Nations High Commission for Refugees (UNHCR). Australia's response to refugee situations is two-fold. Through aid programs directed principally through UNHCR refugees are offered protection and assistance in countries of first asylum. Those refugees for whom other durable solutions are not feasible are offered resettlement (in Australia) when the group has cultural or historical ties with Australia, or in response to a regional problem.

REFUGEE ARRIVALS

Period	*Assisted*	*Other*	*Total*
Annual average—			
1961-65	1,799	n.a.	n.a.
1966-70	7,446	n.a.	n.a.
1971-75	2,773	7,776	10,549
1976-80	9,274	3,284	12,558
Annual totals—			
1976	865	3,231	4,096
1977	2,202	7,272	9,474
1978	8,790	1,682	10,472
1979	14,639	2,418	17,057
1980	19,875	1,817	21,692
1981	19,055	2,917	21,972

Citizenship

The grant of citizenship is controlled by the *Australian Citizenship Act* 1948. Citizenship may be acquired by birth in Australia, by birth abroad to an Australian parent, or by grant of citizenship to persons resident in Australia under conditions prescribed in the Act.

All persons are now eligible for the grant of Australian citizenship provided that they have resided in Australia for at least three years, are of good character, have an adequate knowledge of English and of the responsibilities and privileges of citizenship, and intend to reside permanently in Australia.

PERSONS GRANTED AUSTRALIAN CITIZENSHIP

Period	*Number*
Annual averages—	
1961-65	43,823
1966-70	40,934
1971-75	61,182
1976-80	75,138
Annual totals—	
1976	118,189
1977	70,706
1978	65,094
1979	53,555
1980	68,145
1981	56,459

Sources

Comprehensive statistics on aspects of demography are in the following publications of the Australian Bureau of Statistics:

1976 Census publications including: *Population of States and Territories Adjusted for Under-Enumeration as Shown by Post-Enumeration Survey* (2212.0); *Summary of Population and Dwelling Characteristics: States, Territories and Australia* (2409.0 to 2417.0); *Characteristics of the Population and Dwellings: States, Territories and Australia* (2418.0 to 2426.0); *Characteristics of the Population and Dwellings in Local Government Areas* (2427.0 to 2434.0).

Australian Life Tables (3305.0).

Australian Mortality—A Study By Causes of Death—Occasional Paper (1980/1).

Birth Expectations of Married Women (3215.0).

Births, Australia (3301.0).

Deaths, Australia (3302.0).

Australian Demographic Statistics Quarterly (3101.0).

Divorces, Australia (3307.0).

Estimated Age Distribution of the Population: States and Territories of Australia (3201.0).

Fertility of Australian Marriages (R Series, Demog 2)

Internal Migration (3408.0).

Internal Migration in Australia, D. T. Rowland, Census Monograph, Australian Bureau of Statistics and the Department of Demography, Australian National University, 1979 (3409.0).

Marriages, Australia (3306.0).

Overseas Arrivals and Departures, Australia (3401.0, 3402.0, 3404.0).

Perinatal Deaths, Australia (3304.0).

Projections of the Population of Australia (3204.0).

Projections of the Population of the States and Territories of Australia (3214.0).

CHAPTER 7

PRICES

RETAIL PRICES AND PRICE INDEXES

Retail prices of food and groceries and average rentals of houses have been collected by the Australian Statistician for the years extending back to 1901 and, in some cases, by the Statisticians of various States for earlier years.

Retail prices of a more extensive range of commodities (including clothing) and certain services in common demand have been ascertained at frequent and regular intervals since 1923. (Comparable information was ascertained for the month of November in each year from 1914 to 1922.) The range of items for which retail prices data is obtained was considerably expanded in 1948 and in later years. Average retail prices of certain food and grocery items in the relevant periods were published in the annual *Labour Report* (now discontinued). Descriptions of these earlier indexes were last published in *Labour Report No. 58, 1973.*

The current retail price index, the Consumer Price Index (CPI), was published for the first time in August 1960 and was compiled retrospectively to the September quarter 1948. A description of the Consumer Price Index is given below. For a more complete description of the CPI, readers are referred to a booklet entitled *A Guide to the Consumer Price Index* (6440.0), which is available from the Australian Bureau of Statistics (ABS) on request.

The Consumer Price Index

Introduction

The CPI measures quarterly changes in the price of a 'basket' of goods and services which account for a high proportion of expenditures by metropolitan wage and salary earner households. This 'basket' covers a wide range of goods and services, arranged in the following eight groups: food; clothing; housing; household equipment and operation; transportation; tobacco and alcohol; health and personal care; and recreation and education. Each group is in turn divided into sub-groups.

As from June quarter 1982 the geographic coverage of the CPI has been expanded to include a full CPI for Darwin.

Index numbers at the *group* and *All Groups* levels are published for each State capital city, Canberra, Darwin, and for the weighted average of eight capital cities. Index numbers for *All Groups* are also published for the weighted average of six State capital cities. *Subgroup index numbers* are published for the weighted average of eight capital cities.

Index population

Because the spending patterns of various groups in the population differ somewhat, the pattern of one large group, fairly homogeneous in its spending habits, is chosen for the purpose of calculating the CPI. The CPI population group is, in concept, *metropolitan employee households.* For this purpose *employee households* are defined as those households which obtain the major part of their household income from wages and salaries; and *metropolitan* means the eight capital cities.

Weighting pattern

There are 105 expenditure classes (i.e. groupings of like items) within the current CPI and each expenditure class has its own weight, or measure of relative importance. In calculating the index, price changes for the various expenditure classes are combined using these weights.

Changes in the weighting pattern have been made at approximately five-yearly intervals to take account of changes in household spending patterns. The CPI, in fact, comprises ten series of price indexes which have been linked to form a continuous series. The tenth series (i.e. the current series) was introduced as from the March quarter 1982, with a weighting pattern based on estimated household expenditure in 1979–80 and on a reference base 1980–81 =100.0. Details of the weighting pattern are published in the booklet *A Guide to the Consumer Price Index.*

The CPI 'basket' of goods and services covers items which are considered representative of metropolitan household spending habits and whose prices can be associated with an identifiable and specific quantity of a commodity or service. For instance, price changes for a given quantity and quality of bread or refrigerators can be measured and included in the CPI. Income taxes and personal savings, on the other hand, do not form part of the CPI because they cannot be clearly associated with the purchase of a specific quantity of a good or service.

Price collection

Since the CPI is designed to measure the impact of changing prices on metropolitan wage and salary earner households, price movements are monitored in the kinds of retail outlets or other establishments where such households would normally purchase goods and services. This involves collecting prices from many sources including supermarkets, department stores, footwear stores, restaurants, garages, dental surgeries and hairdressers. Items such as bus, rail and air fares, electricity and gas charges, telephone charges and local authority rates are collected from the appropriate authorities. Information on rents is obtained from property management companies and government housing authorities. In total, around 85,000 separate price quotations are collected each quarter.

Prices of the goods and services included in the CPI are generally collected quarterly. However, some important items are priced monthly or more frequently (e.g. bread, fresh meat and fish, fresh fruit and vegetables, petrol, alcohol and tobacco) and a small number annually (e.g. seasonal clothing, local government rates and charges).

The bulk of items for which prices are collected quarterly are priced at the middle of the mid-month of the quarter (i.e. in August, November, February and May), but, to facilitate a more even spread of the field collection workload, some goods and services are priced in the first and third months of each quarter. Items priced in the third month are generally those subject to price changes at discrete points of time (e.g. electricity and postal charges, milk); in these cases information is obtained of any changes in price during the quarter so that a weighted average price for the whole quarter can be calculated.

The prices used in the CPI are those that any member of the public would have to pay on the pricing day to purchase the specified good or service. Any sales or excise taxes which the consumer must pay when purchasing specific items are included in the CPI price. Sale prices, discount prices and 'specials' are reflected in the CPI so long as the items concerned are of normal quality (i.e. not damaged or shop soiled) and are offered for sale in reasonable quantities. To ensure that the price movements reflect the experience of the bulk of the metropolitan population, the brands and the varieties of the items which are priced are generally those which sell in greatest volume.

Changes in quality

The CPI aims to measure the price change of a constant basket of goods and services over time. For this reason, efforts are made to ensure that identical or equivalent items are priced in successive time periods. This involves evaluating changes in the quality of goods and services included in the index, and removing the effects of such changes so that the index reflects only the price change.

Periodic revision of the CPI

The CPI is periodically revised in order to ensure it continues to reflect current conditions. CPI revisions have usually been carried out at approximately five-yearly intervals, the most recent having been completed in June 1982. Following each revision the new list of items and weights (i.e. the new CPI basket) is linked to the previous series to form one continuous series. The process of linking ensures that the continuous series reflects only price variations and not differences in costs of the old and new baskets.

Earlier CPI series

The index has been compiled for each quarter from the September quarter 1948. The above description of the CPI refers to the tenth series which was introduced as from the March quarter 1982. A description of earlier CPI series is contained in the *Labour Report No. 58, 1973,* and in previous issues of the Year Book.

CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS

(*Base of each index: Year* 1980–81 = 100.0) (*a*)

Period	*Weighted average of six State capital cities*	*Sydney*	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Canberra*	*Darwin*	*Weighted average of eight capital cities*
Year—										
1976–77	70.1	69.6	70.1	70.5	70.5	70.2	70.2	69.8	..	..
1977–78	76.7	75.8	77.0	77.1	77.5	77.8	77.1	76.1	..	..
1978–79	83.0	82.4	83.1	83.4	83.2	84.1	83.1	82.3	..	..
1979–80	91.4	91.1	91.4	91.5	91.6	91.9	91.6	91.1	..	..
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	110.4	110.2	110.4	110.7	110.5	111.2	110.0	110.7	111.1	110.4
Quarter—										
1980–81—										
March	101.1	101.3	101.0	100.9	101.2	100.8	101.0	100.9	101.0	101.1
June	103.4	103.3	103.3	103.6	103.7	103.0	103.2	103.6	102.9	103.4
1981–82—										
September	105.5	105.1	105.5	106.0	105.8	106.5	105.7	105.7	105.0	105.5
December	109.9	109.4	110.1	110.1	110.0	111.2	109.7	110.0	111.3	109.9
March	111.8	111.5	111.6	112.5	111.7	112.4	111.3	111.8	113.0	111.8
June	114.5	114.6	114.3	114.1	114.4	114.6	113.4	115.2	115.0	114.5

(*a*) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

CONSUMER PRICE INDEX: GROUP INDEXES WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES

(*Base of each index: Year* 1980–81 = 100.0 unless otherwise noted)

Period	*Food*	*Clothing*	*Housing*	*Household equipment and operation*	*Transportation*	*Tobacco and alcohol*	*Health and personal care*	*Recreation and education(a)*	*All groups*
Year—									
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	..	100.0
1981–82	108.6	107.1	111.1	110.6	110.3	109.2	124.2	..	110.4
Quarter—									
1980–81—									
March	101.3	100.3	101.0	101.5	101.2	100.9	100.8	..	101.1
June	102.8	103.3	103.8	103.1	105.2	102.5	101.8	..	103.4
1981–82—									
September	106.4	104.1	106.4	105.5	105.3	105.7	102.9	..	105.5
December	108.1	106.9	109.7	109.2	110.0	107.6	128.2	..	109.9
March	109.1	107.4	112.2	112.0	111.3	110.4	131.2	100.0	111.8
June	110.7	110.0	115.9	115.6	114.7	112.9	134.5	101.2	114.5

(*a*) New grouping, base March quarter 1982 = 100.0. Group index not compiled for quarters prior to the base period.

CONSUMER PRICE INDEX: GROUP INDEXES SIX STATE CAPITAL CITIES, CANBERRA AND DARWIN

(*Base of each index: Year* 1980–81 = 100.0) (*a*)

Year	*Sydney*	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Canberra*	*Darwin*
				FOOD				
1976–77	63.8	64.6	63.7	65.6	64.8	64.4	64.4	..
1977–78	70.1	71.8	70.3	73.1	74.4	71.6	70.9	..
1978–79	78.9	79.9	77.6	80.6	82.1	80.3	79.7	..
1979–80	90.6	90.6	89.8	90.9	91.7	91.6	90.8	..
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	107.9	108.6	109.2	108.8	110.2	108.7	107.7	110.3
				CLOTHING				
1976–77	73.5	73.6	74.2	72.9	73.1	72.7	74.4	..
1977–78	81.3	81.6	82.0	80.5	81.2	80.4	81.3	..
1978–79	87.2	87.6	87.8	87.0	87.0	86.7	87.3	..
1979–80	93.2	93.4	93.8	93.1	92.9	93.1	93.1	..
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	106.8	106.9	108.2	107.5	107.2	106.4	107.5	108.7
				HOUSING				
1976–77	69.0	76.2	72.7	75.6	77.2	77.7	79.2	..
1977–78	75.3	82.6	80.4	81.9	85.1	83.9	85.0	..
1978–79	81.7	86.7	85.8	86.0	89.2	88.2	88.4	..
1979–80	89.7	91.6	91.6	92.1	92.5	93.2	92.8	..
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	111.1	111.2	113.0	110.1	109.1	107.4	112.4	111.7
				HOUSEHOLD EQUIPMENT AND OPERATION				
1976–77	74.6	70.7	73.5	71.6	70.7	70.5	69.6	..
1977–78	80.1	76.8	79.4	78.0	77.4	77.6	75.4	..
1978–79	84.3	82.1	85.0	82.7	83.0	82.4	80.8	..
1979–80	90.4	89.7	90.5	90.4	89.4	89.9	89.2	..
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	110.7	110.9	110.2	110.9	109.5	110.0	109.4	110.3
				TRANSPORTATION				
1976–77	69.0	67.4	70.0	68.6	67.1	68.6	66.9	..
1977–78	74.0	73.6	74.5	74.8	73.1	75.1	73.0	..
1978–79	81.3	79.9	81.9	82.0	81.1	79.8	79.2	..
1979–80	91.5	91.0	91.9	91.9	90.6	90.6	90.7	..
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	110.3	108.6	112.2	111.2	111.9	112.8	112.4	108.4
				TOBACCO AND ALCOHOL				
1976–77	71.0	71.9	71.1	74.1	71.3	71.5	71.0	..
1977–78	73.6	75.8	74.4	77.2	74.9	74.8	74.8	..
1978–79	84.8	87.1	88.8	87.4	87.3	86.4	85.2	..
1979–80	92.4	94.7	94.1	93.6	94.4	93.0	93.0	..
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	109.9	108.3	109.5	108.5	109.1	109.1	108.6	110.4
				HEALTH AND PERSONAL CARE				
1976–77	70.7	73.9	79.6	73.0	77.3	71.0	69.2	..
1977–78	84.4	89.3	95.0	86.7	91.7	85.8	83.4	..
1978–79	82.0	85.3	84.8	80.3	84.5	82.9	81.8	..
1979–80	90.7	90.8	89.8	90.4	96.7	90.8	90.2	..
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	121.8	128.7	114.1	121.7	130.9	120.5	124.3	136.4

CONSUMER PRICE INDEX: GROUP INDEXES
SIX STATE CAPITAL CITIES, CANBERRA AND DARWIN—*continued*

(*Base of each index: Year* 1980–81 = 100.0) (*a*)

Year	*Sydney*	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Canberra*	*Darwin*
				RECREATION AND EDUCATION(*b*)				
1976–77	..	..	..	..	..	..	..	
1977–78	..	..	..	..	..	..	..	
1978–79	..	..	..	..	..	..		
1979–80	..	..	..	..	..	..	..	
1980–81	..	..	..	..	..	..	..	
1981–82	..	..	..	..	..	..	..	

(*a*) The index numbers are designed to measure movements in retail prices of specified groups of items for each city individually. They measure variations from time to time and not differences in price levels between cities. (*b*) The new Recreation and Education group is not compiled for periods prior to March quarter 1982.

Previous retail price indexes

Five series of retail price indexes were compiled by the ABS at various times prior to the introduction of the Consumer Price Index in 1960. These indexes are described in Year Book No. 61.

An index of retail price movements from 1901 onwards has been derived by linking together the following indexes: from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946–47, the 'C' Series Retail Price Index; from 1946–47 to 1948–49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent; and from 1948–49 onwards, the Consumer Price Index. The continuous series derived in this way is shown in the table below. As the indexes differ greatly in scope, the resulting series is only a broad indication of long-term trends in retail prices.

RETAIL PRICE INDEX NUMBERS: SIX STATE CAPITAL CITIES
COMBINED, 1901 TO 1981

(*Base: Year* 1911 = 100)

Year	*Index number*	*Year*	*Index number*	*Year*	*Index number*
1901	88	1928	167	1955	394
1902	93	1929	171	1956	419
1903	91	1930	162	1957	429
1904	86	1931	145	1958	435
1905	90	1932	138	1959	443
1906	90	1933	133	1960	459
1907	90	1934	136	1961	471
1908	95	1935	138	1962	469
1909	95	1936	141	1963	472
1910	97	1937	145	1964	483
1911	**100**	1938	149	1965	502
1912	110	1939	153	1966	517
1913	110	1940	159	1967	534
1914(*a*)	114	1941	167	1968	548
1915(*a*)	130	1942	181	1969	564
1916(*a*)	132	1943	188	1970	586
1917(*a*)	141	1944	187	1971	621
1918(*a*)	150	1945	187	1972	658
1919(*a*)	170	1946	190	1973	720
1920(*a*)	193	1947	198	1974	829
1921(*a*)	168	1948	218	1975	954
1922(*a*)	162	1949	240	1976	1,083
1923	166	1950	262	1977	1,216
1924	164	1951	313	1978	1,313
1925	165	1952	367	1979	1,432
1926	168	1953	383	1980	1,578
1927	166	1954	386	1981	1,731

(*a*) November

INDEX NUMBERS OF CONSUMER (RETAIL) PRICES IN VARIOUS COUNTRIES ALL GROUP INDEXES(*a*)

(Source: *Monthly Bulletin of Statistics* of the Statistical Office of the United Nations)
(*Base of each index: Year* 1970 = 100)

Period	*Australia* (*b*)	*Canada*	*Federal Republic of Germany*	*Indonesia (Djakarta)* (*c*)	*Japan*	*New Zealand*	*United Kingdom*	*United States of America*
1976	185	153	140	292	188	190	215	147
1977	208	165	146	324	204	218	249	156
1978	224	180	150	351	211	244	270	168
1979	244	197	156	132	219	277	306	187
1980	269	217	164	156	237	325	361	212
1981	295	244	174	175	248	375	404	234
Quarter—								
1980—								
Sept	272	220	165	160	239	331	368	215
Dec	278	226	167	166	242	343	375	221
1981—								
March	284	233	170	171	244	353	384	226
June	291	240	173	174	248	367	402	231
Sept	297	248	175	177	249	382	409	238
Dec	309	254	177	179	252	396	419	241

(*a*) The items priced and the levels at which they are priced in these indexes vary widely according to the intended purposes of the indexes of the various countries. The index numbers show fluctuations in prices in each country and do not measure relative price levels between countries. (*b*) Consumer Price Index converted to base: 1970 = 100. (*c*) From March 1979—revised figures, base April 1977–March 1978 = 100.

Wholesale price indexes

Introduction

The ABS compiles a range of Wholesale Price Indexes relating to materials used and articles produced by defined sectors of the Australian economy. Each index is calculated using fixed weights. In compiling the indexes, prices are collected from representative suppliers, manufacturers or exporters of the goods included in the indexes. Prices are generally collected as at the mid-point of each month except in the case of the *Price Index of Materials Used in Manufacturing Industry* and *Export Price Index*, for which average monthly prices are mainly used.

All indexes are compiled and published monthly. Published index numbers for financial years are simple averages of the relevant monthly index numbers. Annual index numbers for most of the indexes are shown below. Monthly index numbers, together with more detailed information concerning methods used in compiling these indexes, are shown in the monthly bulletins published for each index. Information on the weighting patterns for each index is available from the ABS on request.

Price index of materials used in house building

This index measures changes in prices of selected materials used in the construction of houses. Its composition reflects the usage of materials in houses which were selected as representative for the purpose. Weights are based on the year 1968–69. The reference base of the index is the year 1966–67 = 100.0. Further information concerning the method of compiling the index, as well as more detailed index numbers, is shown in the publications *Price Index of Materials Used in House Building* (6408.0), *Labour Report* No. 58, 1973 and Year Book No. 60.

PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING
GROUP INDEX NUMBERS—WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES

(*Base of each index: Year* 1966–67 = 100.0)

	Concrete mix, cement and sand	*Cement products*	*Clay bricks, tiles, etc.*	*Timber, board and joinery*	*Steel products*	*Other metal products*
Value Weight	*5.73%*	*8.10%*	*12.85%*	*36.16%*	*5.86%*	*7.20%*
1976–77	217.8	258.9	227.8	254.1	263.2	207.9
1977–78	239.0	284.6	245.8	275.0	287.7	220.1
1978–79	255.5	303.8	262.2	290.8	307.6	239.7
1979–80	292.8	336.3	294.8	331.5	341.0	281.7
1980–81	334.1	383.1	334.9	377.8	389.4	314.7
1981–82	373.8	438.5	375.9	406.8	435.0	343.1

	Plumbing fixtures, etc.	*Electrical installation materials*	*Installed appliances*	*Plaster and plaster products*	*Miscellaneous materials*	*All groups*
Value weight	*3.74%*	*1.63%*	*5.13%*	*5.64%*	*7.96%*	*100.00%*
1976–77	224.3	201.8	181.9	178.8	210.7	232.9
1977–78	239.1	215.5	193.3	191.8	230.4	252.0
1978–79	244.1	240.0	202.9	204.3	248.2	268.1
1979–80	278.1	282.1	217.6	222.8	278.2	302.9
1980–81	319.3	316.0	240.6	244.6	319.6	344.0
1981–82	351.5	345.9	263.9	271.1	348.7	377.9

PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING
ALL GROUPS INDEX NUMBERS—SIX STATE CAPITAL CITIES

(*Base of each index: Year* 1966–67 = 100.0)

	State capital cities(a)						*Weighted average of six State capital cities*
	Sydney	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	
1976–77	234.5	223.6	243.5	250.7	229.8	235.1	232.9
1977–78	254.0	238.6	265.1	270.7	253.4	256.7	252.0
1978–79	272.7	251.4	281.3	292.1	268.2	273.6	268.1
1979–80	309.5	283.4	315.0	338.5	299.4	304.2	302.9
1980–81	347.6	324.7	363.7	386.1	337.6	338.2	344.0
1981–82	378.5	355.1	407.2	427.2	373.2	371.7	377.9

(*a*) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

Price index of materials used in building other than house building

The *Price Index of Materials Used in Building Other than House Building* (6407.0), on a reference base 1966–67 = 100.0, was discontinued in January 1981. Monthly index numbers on a 1966–67 = 100.0 reference base are available for the period 1966–67 to 1979–80. A description of the discontinued index is shown in previous year books and in the monthly publications issued up to and including January 1981.

The revised price index of materials used in building other than house building

The revised Price Index of Materials Used in Building Other than House Building was introduced in February 1981 on reference base 1979–80 = 100.0.

This index measures changes in prices of selected materials used in the construction of buildings other than houses. Its composition reflects the usage of materials in the construction of buildings (other than houses) commenced in the three years ending June 1977.

Further information concerning the method of compiling the index can be obtained from the February 1981 issue of the publication *Price Index of Materials Used in Building Other than House Building—Six State Capital Cities* (6407.0). The tables below show annual index numbers for ASIC groups and 'All groups' for the weighted average of six State capital cities. In addition 'All groups' index numbers for each State capital city are shown. Index numbers for selected materials and special combinations of materials and monthly index numbers are shown in each issue of the monthly price index publication *Price Index of Materials Used in Building Other than House Building—Six State Capital Cities* (6407.0).

PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING GROUP INDEX NUMBERS BASED ON AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION (ASIC) WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES

(*Base of each index: Year* 1979-80=100.0)

	Selected ASIC Groups					
	Wood and wood products	*Clay products and refractories*	*Cement and concrete products*	*Basic iron and steel*	*Structural metal products*	*Sheet metal products*
Value weight	*(253) 7.97%*	*(286) 4.16%*	*(287) 15.41%*	*(294) 4.69%*	*(314) 29.24%*	*(315) 3.68%*
1979-80	100.0	100.0	100.0	100.0	100.0	100.0
1980-81	114.3	114.3	113.0	113.2	113.9	114.5
1981-82	126.5	126.8	125.2	126.6	126.5	130.3

	Selected ASIC Groups				
	Other fabricated metal products	*Appliances and electrical equipment*	*Industrial machinery and equipment*	*Other*	*All groups*
Value weight	*(316) 2.77%*	*(335) 9.70%*	*(336) 8.79%*	*13.58%*	*100.00%*
1979-80	100.0	100.0	100.0	100.0	100.0
1980-81	112.9	109.8	111.2	112.6	112.9
1981-82	126.2	122.2	124.2	123.6	125.4

PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING ALL GROUPS INDEX NUMBERS—SIX STATE CAPITAL CITIES

(*Base of each index: Year* 1979-80=100.0)

	State capital cities(a)						*Weighted average of six State capital cities*
	Sydney	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	
1976-77(*b*)	75.5	76.6	77.0	74.5	76.0	77.8	76.0
1977-78(*b*)	81.8	83.0	83.2	80.9	83.4	84.1	82.4
1978-79(*b*)	88.3	88.5	88.9	87.3	89.4	89.6	88.5
1979-80	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1980-81	113.1	112.7	113.2	113.8	112.2	111.6	112.9
1981-82	126.6	123.6	126.3	127.4	123.8	122.9	125.4

(*a*) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.
(*b*) The index series for 1976-77 to 1978-79 are based on the series previously published on a reference base 1966-67=100.0. They have been converted to the reference base 1979-80=100.0 by linking the old and new series in the year 1979-80.

Price index of materials used in manufacturing industry

This index measures changes in prices of materials (including fuels) used by establishments classified to the Manufacturing Division of the Australian Standard Industrial Classification (ASIC), as described in the ABS publication *Australian Standard Industrial Classification (Preliminary Edition)* 1969 (1201.0). The index is on a *net basis*, i.e. it relates in concept only to those materials which are used by establishments within the Manufacturing Division in Australia and which have been produced by establishments outside that Division. Materials purchased by establishments classified to the Australian Manufacturing Division from other establishments in that Division are outside the scope of the index.

The reference base of the index is the year 1968–69 = 100.0. The weighting base of the index corresponds to the year 1971–72. The items included in the index were allocated weights in accordance with estimated manufacturing usage in 1971–72 valued at relevant prices applying in the reference base year 1968–69. The selected items are combined for publication purposes into broad groups using two different classifications:

(i) Australian Standard Industrial Classification (ASIC), and
(ii) Standard International Trade Classification (SITC (R)).

Further information concerning the method of compiling the index, as well as more detailed index numbers, is shown in the publications *Price Index of Materials Used in Manufacturing Industry, Australia* (6411.0) and Year Book No. 61.

PRICE INDEX OF MATERIALS USED IN MANUFACTURING INDUSTRY: GROUP INDEX NUMBERS BASED ON AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION

(*Base of each index: Year* 1968–69 = 100.0)

	Imported materials				*Home produced materials*					
	Agri-culture	*Mining*	*Manu-facturing*	*Total imported materials*	*Agri-culture*	*Forestry and fishing*	*Mining*	*Elec-tricity*	*Total home produced materials*	*All groups*
Value weight	*1.92%*	*4.17%*	*21.07%*	*27.16%*	*47.04%*	*1.12%*	*18.92%*	*5.76%*	*72.84%*	*100.00%*
1976-77	258.6	479.5	182.1	233.2	152.5	245.2	189.2	148.8	163.2	182.2
1977-78	303.4	515.3	201.6	257.0	162.4	273.5	211.4	160.9	176.7	198.5
1978-79	285.3	542.6	222.1	275.7	228.8	263.5	281.8	173.8	238.7	248.8
1979-80	329.2	911.8	261.8	366.4	280.3	300.3	403.5	186.7	305.2	321.8
1980-81	293.6	1,146.3	278.7	413.0	295.9	344.4	454.1	210.2	330.9	353.2
1981-82	264.5	1 247.8	290.6	435.7	282.1	363.0	471.3	253.3	330.2	358.9

PRICE INDEX OF MATERIALS USED IN MANUFACTURING INDUSTRY: GROUP INDEX NUMBERS BASED ON STANDARD INTERNATIONAL TRADE CLASSIFICATION (REVISED)

(*Base of each index: Year* 1968–69 = 100.0)

	Manufactured materials (imported)			*Other materials (imported and home produced)*			
	Chemicals	*Metal manu-factures, components for transport equipment and machinery*	*Other manufactured materials*	*Food, live animals and tobacco*	*Crude materials (excl. fuels)*	*Electricity, gas and fuels*	*All groups*
Value weight	*6.67%*	*5.21%*	*5.76%*	*45.87%*	*20.66%*	*15.83%*	*100.00%*
1976-77	160.3	211.6	164.5	154.9	191.7	254.8	182.2
1977-78	170.7	246.6	185.1	166.6	199.2	291.0	198.5
1978-79	180.9	271.6	201.3	232.5	227.4	362.4	248.8
1979-80	225.1	294.2	230.3	285.1	288.8	554.6	321.8
1980-81	244.7	310.3	242.9	299.5	286.9	695.5	353.2
1981-82	252.8	320.7	257.3	284.1	280.7	771.8	358.9

Price indexes of articles produced by manufacturing industry

These indexes measure changes in the prices of articles produced by establishments classified to the Manufacturing Division of the Australian Standard Industrial Classification (ASIC). The indexes are on a *net basis*, i.e. they relate in concept only to those articles which are produced in defined sectors of Australian manufacturing industry for sale or transfer to other sectors or for export or for use as capital equipment. Articles which are sold or transferred to other establishments within the sector for further processing (as materials, components, fuels, etc.) are excluded.

The following sector price indexes are published:

(i) a net index for the Manufacturing Division of ASIC (known as the *All Manufacturing Industry Index*), and

(ii) net indexes for the twelve sub-divisions within the Manufacturing Division.

The reference base of the index is the year 1968–69=100.0. The weighting base of the index corresponds to the year 1971–72. The items included in these indexes were allocated weights in accordance with estimated *net* sector production in the year 1971–72, valued at the relevant prices applying in the reference base year 1968–69.

The selected items are combined for publication purposes using the structure of the Australian Standard Industrial Classification.

Further information concerning the method of compiling the index and monthly index numbers for sub-divisions and special groupings are shown in the publication *Price Indexes of Articles Produced by Manufacturing Industry, Australia* (6412.0). Further information about the indexes is also shown in Year Book No. 62.

PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRY (*a*)
(*Base of each index: Year* 1968–69=100.0)

		Net subdivision indexes (*c*)					
Year	*All Manufacturing Industry Index* (*b*)	*Food, beverages and tobacco* (*21–22*)	*Textiles* (*23*)	*Clothing and footwear* (*24*)	*Wood, wood products and furniture* (*25*)	*Paper, paper products and printing* (*26*)	*Chemical, petroleum and coal products* (*27*)
1976–77	196.9	180.0	178.6	208.1	246.8	212.8	182.4
1977–78	213.8	195.6	193.3	225.2	264.0	231.7	200.7
1978–79	237.4	226.4	205.1	238.4	280.4	245.0	233.1
1979–80	274.9	266.5	228.8	255.3	315.5	269.6	307.4
1980–81	305.2	290.9	252.7	276.5	357.3	304.2	366.9
1981–82	329.0	301.9	270.6	298.1	388.4	346.0	401.1

Year	*Glass, clay and other non-metallic mineral products* (*28*)	*Basic metal products* (*29*)	*Fabricated metal products* (*31*)	*Transport equipment* (*32*)	*Other industrial machinery and equipment and household appliances* (*33*)	*Miscellaneous manufacturing products* (*34*)
1976–77	202.5	200.6	244.9	195.0	199.4	176.0
1977–78	219.8	214.0	268.7	211.6	215.3	192.4
1978–79	236.8	237.2	287.7	230.2	232.2	209.8
1979–80	265.2	282.7	323.9	252.2	261.3	252.5
1980–81	300.2	297.8	371.6	275.7	289.7	273.9
1981–82	337.5	315.3	414.2	303.2	320.7	289.5

(*a*) For a full description of Division of Manufacturing and the subdivisions within Manufacturing Division, *see Australian Standard Industrial Classification* (ASIC), *Preliminary Edition*, 1969. (*b*) This index is on a net division basis and relates in concept only to articles which are produced in the Manufacturing Division of ASIC for sale or transfer outside the Division. (*c*) These indexes are on a 'net subdivision' basis; the index for each subdivision relates in concept to articles which are produced in that subdivision for sale or transfer outside the subdivision.

EXPORT PRICE INDEXES

An annual index of export prices has been published by the bureau since its inception. Brief descriptions of indexes covering the period between 1901 and 1979 are shown in Year Book No. 55, pages 256–7 and Year Book No. 58, pages 240–2.

Export price index

The revised Export Price Index was introduced in July 1979. It relates to *all exports of merchandise* from Australia and includes re-exports of merchandise (that is, goods which are imported into Australia and exported at a later date without physical transformation). The index numbers for each month relate to prices of those exports of merchandise that are physically shipped from Australia during that month.

The reference base of the index is the year 1974–75 = 100. The commodities directly represented in the index were selected on the basis of their export values in the years 1974–75, 1975–76 and 1976–77. They were allocated weights in accordance with the average value of exports for each commodity over the period 1974–75 to 1976–77. The 1975–76 and 1976–77 export values for each commodity were revalued at 1974–75 prices before averaging.

The selected commodities are combined for publication purposes into broad index groups using two different classifications:

(i) Australian Export Commodity Classification, 1978–79 (AECC), (1203.0);

(ii) Australian Standard Industrial Classification, 1978 (ASIC), (1201.0).

Further information concerning the method of compiling the index can be obtained from the July 1979 issue of the publication *Export Price Index* (6405.0) and Year Book No. 64. More detailed index numbers are shown in the monthly publication *Export Price Index, Australia* (6405.0).

EXPORT PRICE INDEX:
INDEX NUMBERS BASED ON AUSTRALIAN EXPORT COMMODITY CLASSIFICATION (AECC)
(*Base of each index: Year* 1974–75=100)

		AECC Sections				
Year	*All groups*	*Food and live animals (0)*	*Crude materials inedible (except fuels) (2)*	*Mineral fuels and lubricants (3)*	*Animal and vegetable oils and fats (4)*	*Chemicals and other manufactured exports (5, 6, 7 and 8)*
1976–77 . .	122	98	141	156	117	118
1977–78 . .	128	100	149	167	136	125
1978–79 . .	144	119	162	170	157	146
1979–80 . .	174	145	191	198	169	188
1980–81 . .	185	162	202	217	145	181
1981–82 . .	187	147	219	247	139	178

EXPORT PRICE INDEX:
INDEX NUMBERS BASED ON AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION (ASIC)
(*Base of each index: Year* 1974–75=100)

	ASIC Divisions		
Year	*Agriculture, forestry, fishing and hunting (A)*	*Mining (B)*	*Manufacturing (C)*
1976–77	106	148	119
1977–78	105	159	127
1978–79	114	163	150
1979–80	137	180	190
1980–81	150	191	199
1981–82	153	221	191

Previous wholesale price indexes

The *Melbourne Wholesale Price Index*, first compiled in 1912, was discontinued in 1961. The *Wholesale Price (Basic Materials and Foodstuffs) Index*, which replaced the Melbourne Wholesale Price Index from 1936-37, was discontinued in 1970. Further information concerning these indexes is shown in Year Book No. 61.

References

For further information on the subjects dealt with in the foregoing pages, *see* the following ABS publications: *Monthly Summary of Statistics, Australia* (1304.0); *Digest of Current Economic Statistics, Australia* (1305.0); *Consumer Price Index* (6401.0); *Consumer Price Index, Monthly Food Group Index, Six State Capital Cities and Canberra* (6402.0); *Average Retail Prices of Selected Items, Six State Capital Cities and Canberra* (6403.0); *Consumer Price Index, Monthly Food Group Index, Darwin* (6413.0); *Price Index of Materials Used in Building Other Than House Building, Six State Capital Cities* (6407.0); *Price Index of Materials Used in House Building, Six State Capital Cities* (6408.0); *Price Index of Materials Used in Manufacturing Industry, Australia* (6411.0); *Price Indexes of Articles Produced by Manufacturing Industry, Australia* (6412.0); *Price Indexes of Metallic Materials, Australia* (6410.0); *Export Price Index, Australia* (6405.0).

PETROLEUM PRODUCTS PRICING AUTHORITY

General

The Petroleum Products Pricing Authority which was established on 26 June 1981 pursuant to the *Petroleum Products Pricing Act* 1981, took over from the Prices Justification Tribunal the responsibility for price surveillance of the petroleum products industry. The functions of the Authority are to conduct inquiries in relation to prices for the supply of petroleum products or related services within Australia, and to report to the Minister for Administrative Services the results of every such inquiry.

Organisation

The Authority is constituted by a full-time Commissioner and is staffed by persons appointed or employed under the *Public Service Act* 1922.

Legislative Provisions

Inquiries conducted by the Authority at the request of the Minister or with his approval may be either:

(a) A prices justification inquiry, that is to say an inquiry as to whether the price or prices at which a company or companies supply or supplies, or propose or proposes to supply, petroleum products or services of a particular description is or are justified, or

(b) an inquiry not being a prices justification inquiry into such specified matter or matters relating to the prices at which petroleum products or services are supplied.

The Authority's enabling legislation also provides for the following:

(i) In conducting a prices justification inquiry and making its reports on such an inquiry, the Authority shall have due regard to the need for the company or companies concerned to achieve a level of profitability that is sufficient to enable the company or companies to mantain an adequate level of investment and employment.

(ii) Section 19 of the Act states that declared companies are guilty of an offence in raising prices of petroleum products or services without prior notice to the Authority and the occurrence of certain specified events. These events include the expiration of the prescribed period or the serving of a notice by the Authority on a company stating that the Authority does not intend holding an inquiry as to whether the proposed price is justified. A declared company means a company declared by the Minister by notice published in the Commonwealth of Australia Gazette.

(iii) With certain exceptions, the prescribed period is the period of 21 days commencing on the day the Authority receives the notice under Section 19. In the case where, following receipt of a notice, a public inquiry is held, the prescribed period commences on the day the Authority receives the notice and ends on the earlier of the day the Authority's report on the proposed price is received by the company or fourteen days after the expiration of the 3 months period commencing on the date that the Authority served notice on the company that the public inquiry was to be held. Provision exists for the extension of prescribed periods in certain circumstances.

(iv) The Authority on the application by companies is empowered to grant interim price increases to apply during the course of the Authority's consideration of proposed or existing prices.

(v) Before commencing to hold an inquiry reasonable notice will be given in the Commonwealth of Australia Gazette and in newspapers specifying the matter that is the subject of the inquiry and the time and place at which the inquiry is to be commenced.

(vi) Any person or body of persons may apply to the Authority to be made a party to an inquiry. If the application is granted such a party is entitled to give evidence or call witnesses to give evidence and to make submissions to the Authority.

(vii) Subject to the Act and to any direction given to the Authority by the Minister, the procedures to be followed at an inquiry are at the discretion of the Commissioner. The Authority is not bound by the rules of evidence.

(viii) Confidential submissions and evidence may be taken in private if the Authority considers that it is desirable to do so.

(ix) The Commissioner or an associate Commissioner (for a particular inquiry) has the power to obtain information.

(x) The Authority shall, as soon as practicable after 30 June, prepare and furnish to the Minister a report with respect to the operations of the Authority during the year ended on that date.

HOUSEHOLD EXPENDITURE SURVEYS

During the financial years 1974–75 and 1975–76, the ABS conducted two surveys in order to obtain information about the expenditure patterns of private households. The 1974–75 survey was confined to a sample of households in the six State capital cities and Canberra (collection in Darwin being suspended in December 1974 due to cyclone Tracy), while the coverage of the 1975–76 survey was extended to include other urban and rural regions. Apart from limited attempts in 1910–11 and 1913 to assess the spending patterns of Australian households, these surveys were the first official collections of household expenditure statistics conducted in this country.

Surveys of household expenditure and related topics have formed an integral part of the statistical programmes of a number of other countries for many years. Perhaps the most important reason for the collection of data relating to expenditure at the household level is to provide information for use in improving the representativeness of the items and the weighting pattern used to compile the Consumer Price Index (*see* page 151). Household expenditure statistics also provide a rich source of data needed for a wide range of policy and research purposes. These include the planning of welfare services; assessing the need for, and effect of, programmes in fields such as housing, education and health; assessing the impact of taxation and government benefits; and improving estimates of private final consumption expenditure in the National Accounts.

Details about the 1974–75 and 1975–76 surveys are contained in Year Book No. 63, pages 119–123.

A further household expenditure survey will be conducted during the calendar year 1984.

CHAPTER 8

MANPOWER

The principal subjects covered in this chapter are the labour force and unemployment, wage rates, earnings, hours of work, industrial disputes, labour organisations and Commonwealth Government employment and training programs. Further detail on these subjects is contained in *Labour Statistics, Australia* (6101.0) and in other publications which are referred to in the various sections of this chapter.

THE LABOUR FORCE

This section contains a number of series relating to the labour force and its components. The labour force comprises two categories of persons: those who are employed and those who are unemployed. In the first category are included employers, self-employed persons, wage and salary earners, and unpaid family helpers. Comprehensive details for each State and Territory and for Australia as a whole in respect of persons in the labour force, classified according to industry, occupation, status of worker (i.e. whether employers, self-employed persons, wage and salary earners or unpaid family helpers) and personal characteristics such as age, sex, marital status and birthplace, are obtained only at a general census of population.

In addition to the population censuses, estimates of the labour force are obtained through the population survey, which is conducted monthly by means of personal interviews at a sample of households throughout Australia (*see* below). The survey provides particulars of the demographic and labour force characteristics of the population.

The population census

Statistics on the labour force from the Census of Population and Housing, conducted on 30 June 1981, are available on microfiche. Additional tables will be contained in the publications *Summary Characteristics of Persons and Dwellings* (2435.0–2443.0) and *Cross-classified Characteristics of Persons and Dwellings* (2444.0–2452.0). All tables are listed in the *Catalogue of 1981 Census Tables* (2139.0).

The population survey

The population survey is the general title given to the household sample survey which since February 1978 has been conducted monthly in all States and Territories. Although emphasis in the survey is placed on the regular collection of data on demographic and labour force characteristics of the population, supplementary and special surveys of particular aspects of the labour force or of other subjects are carried out from time to time. Statistics from supplementary surveys are released in publications which are available on request.

The survey is based on a multi-stage area sample of private dwellings (about 30,000 houses, flats, etc.) and non-private dwellings (hotels, motels, etc.), and covers about two-thirds of one per cent of the population of Australia. The information is obtained from the occupants of selected dwellings by carefully chosen and specially trained interviewers, the interviews generally being conducted during the two weeks beginning on the Monday between the 6th and 12th of each month. The information obtained relates to the week before the interview (i.e. the survey week).

The labour force survey

A description of the labour force survey and a selection of principal statistics obtained from it are given in this section. The first Australia-wide labour force survey was carried out in February 1964 and surveys were conducted quarterly until February 1978. Estimates are published in the monthly publications, *The Labour Force, Australia (Preliminary)* (6202.0), *The Labour Force, Australia* (6203.0), and *Unemployment, Australia (Preliminary Estimates)* (6201.0). Comprehensive statistics are published in annual publications entitled *The Labour Force, Australia* (6204.0), *Labour Statistics, Australia* (6101.0) and in *Unemployment, Underemployment and Related Statistics,*

Australia, February 1978 to February 1980 (6236.0). However, because of recent revisions to survey estimates, figures in monthly publications prior to February 1978 and in annual publications to 1977 are not directly comparable with current estimates shown in the following tables.

Scope and definitions

The labour force survey includes all persons aged 15 and over except members of the permanent defence forces; certain diplomatic personnel of overseas governments, customarily excluded from census and estimated populations; overseas visitors holidaying in Australia; and members of non-Australian defence forces (and their dependants) stationed in Australia.

The labour force category to which a person is assigned depends on his actual activity (i.e. whether working, looking for work, etc.) during the survey week. This is determined from answers given to a set of questions designed for this purpose. For further information see *Information Paper: Questionnaires used in the Labour Force Survey* (6232.0). The following definitions relate only to those persons within the scope of the survey.

Employed persons comprise all those aged 15 and over who, during the survey week:

(a) worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (including employees, employers and self-employed persons); or

(b) worked for 15 hours or more without pay in a family business or on a farm (i.e. unpaid family helpers); or

(c) were employees who had a job but were not at work and were: on paid leave; on leave without pay for less than four weeks up to the end of the survey week; stood down without pay because of bad weather or plant breakdown at their place of employment for less than four weeks up to the end of the survey week; on strike or locked out; on workers' compensation and expected to be returning to their job; or receiving wages or salary while undertaking full-time study; or

(d) were employers or self-employed persons who had a job, business or farm, but were not at work.

Unemployed persons are those aged 15 and over who were not employed during the survey week, and

(a) had actively looked for full-time or part-time work at any time in the four weeks up to the end of the survey week and:

  (i) were available for work in the survey week, or would have been available except for temporary illness (i.e. lasting for less than four weeks to the end of the survey week); or

  (ii) were waiting to start a new job within four weeks from the end of the survey week and would have started in the survey week if the job had been available then; or

(b) were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant breakdown.

The *labour force* comprises all persons who, during the survey week, were employed or unemployed, as defined above.

These definitions conform closely to the international standard definitions specified by the International Labour Organisation (ILO).

Population benchmarks

The population survey estimates are calculated in such a way as to conform to the independently estimated distribution of the population aged 15 and over by age and sex. These independent estimates (benchmarks) are necessarily derived from incomplete information about population changes (deaths, internal and overseas migration) and can differ from estimates of the population subsequently published by the ABS. For estimates of the population and other demographic statistics reference should be made to *Australian Demographic Statistics Quarterly* (3101.0).

Survey estimates are not revised for the usually small amendments of population benchmarks arising from new data on deaths and overseas and internal migration. Revisions are made, however, after each census and when population estimation bases are reviewed. Survey estimates back to August 1966 have been recalculated to conform to revised population estimates. The estimates take account of results of the 1966, 1971 and 1976 Population Censuses, including estimates of under-enumeration, and incorporate a revised method of measuring overseas migration gain (i.e. by excluding movements of less than one year's duration). For information concerning these population estimates for the period June 1971 to June 1977 see *Population and Vital Statistics, Australia, June Quarter 1977* (3212.0). Survey estimates based on population estimates derived from the 1981 population census will become available in mid-1983.

Comparison with population census

The results of the 1976 Population Census show that labour force figures derived from the census differ from estimates derived from the population surveys of May and August 1976.

The labour force definition used in the population census is similar to that used in the survey. However, evidence from census post-enumeration surveys indicates that the personal interview approach, as used in the population survey, tends to identify a larger number of persons as being in the labour force than does the filling in of the questions on the census schedule by the householder. In addition, the post-enumeration survey following the 1976 Population Census showed an under-enumeration of the population of 2.71 per cent. It has not been possible to adjust the published census labour force figures for any under-enumeration.

Reliability of the estimates

Since the estimates in the following tables are based on information obtained from the occupants of a sample of dwellings, the estimates and the movements derived from them are subject to sampling variability; that is, they may differ from the figures that would have been produced if all dwellings had been included in the surveys. One measure of the likely difference is given by the *standard error*, which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings was included. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included, and about nineteen chances in twenty that the difference will be less than two standard errors.

Space does not allow for the separate indication of the standard errors of all estimates in this section. A table of standard errors which is intended to be of general application is therefore given below.

An example of the use of the table is as follows: if the estimate for Australia obtained from the sample is 100,000, the standard error is 3,900; there are then about two chances in three that the true figure is within the range 96,100 to 103,900 and about nineteen chances in twenty that this figure is between 92,200 and 107,800.

STANDARD ERRORS OF ESTIMATES FOR AUSTRALIA

Size of estimate	*Number*	*Per cent of estimate*	*Size of estimate*	*Number*	*Per cent of estimate*
4,500	970	21.6	200,000	5,100	2.6
5,000	1,000	20.0	300,000	6,000	2.0
10,000	1,400	14.0	500,000	7,200	1.4
20,000	2,000	10.0	1,000,000	9,100	0.9
50,000	2,900	5.8	2,000,000	11,000	0.6
100,000	3,900	3.9	5,000,000	15,000	0.3

The standard errors of estimates relating to agricultural employment are generally somewhat higher than the standard errors of other estimates of the same magnitude. Estimates for females also tend to have higher standard errors than estimates of equivalent size for males in similar categories.

The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the numerator and the size of the denominator. However, the per cent standard error of the estimated percentage will generally be lower than the per cent standard error of the estimate of the numerator. The per cent standard errors of the numerators can be obtained from the table above.

As the standard errors in the table above show, the smaller the estimate the higher is the relative standard error. Very small estimates are thus subject to such high standard errors (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In the following tables, estimates less than 4,500 have not been included. Although figures for these small components can in some cases be derived by subtraction, they should not be regarded as reliable.

The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by interviewers and respondents. Inaccuracies of this kind are referred to as the *non-sampling error*, and they may occur in any enumeration, whether it be a full count or only a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers and efficient operating procedures.

LABOUR FORCE STATUS OF THE CIVILIAN POPULATION AGED 15 AND OVER.(a)

May—	Employed	Unemployed: Looking for full-time work	Unemployed: Looking for part-time work	Unemployed: Total	Labour force	Not in labour force	Civilian population aged 15 and over	Unemployment rate(b)	Participation rate(c)
				—'000—				—per cent—	
MALES									
1977 . .	3,891.5	163.0	21.7	184.7	4,076.2	985.8	5,062.0	4.5	80.5
1978 . .	3,863.5	194.8	14.4	209.1	4,072.6	1,087.2	5,159.8	5.1	78.9
1979 . .	3,908.3	197.7	13.0	210.6	4,118.9	1,132.4	5,251.3	5.1	78.4
1980 . .	3,981.2	201.0	18.9	219.9	4,201.1	1,140.6	5,341.6	5.2	78.6
1981 . .	4,064.2	175.5	17.3	192.9	4,257.1	1,190.7	5,447.8	4.5	78.1
1982 . .	4,066.9	219.8	20.0	239.8	4,306.8	1,256.7	5,563.4	5.6	77.4
MARRIED FEMALES									
1977 . .	1,382.0	42.7	31.9	74.6	1,456.6	1,950.4	3,407.0	5.1	42.8
1978 . .	1,356.5	49.8	34.1	83.9	1,440.4	1,958.7	3,399.1	5.8	42.4
1979 . .	1,356.3	40.0	32.2	72.2	1,428.5	2,035.9	3,464.4	5.1	41.2
1980 . .	1,394.7	39.5	34.1	73.6	1,468.2	1,992.9	3,461.1	5.0	42.4
1981 . .	1,423.3	44.0	34.5	78.4	1,501.7	2,030.2	3,531.9	5.2	42.5
1982 . .	1,432.1	47.3	36.6	83.9	1,515.9	2,055.2	3,571.2	5.5	42.4
ALL FEMALES									
1977 . .	2,132.7	112.8	56.3	169.1	2,301.8	2,878.4	5,180.2	7.3	44.4
1978 . .	2,135.3	136.8	49.3	186.2	2,321.4	2,964.5	5,285.9	8.0	43.9
1979 . .	2,135.0	137.5	48.5	186.0	2,321.0	3,061.3	5,382.3	8.0	43.1
1980 . .	2,256.6	141.6	52.1	193.7	2,450.3	3,027.2	5,477.5	7.9	44.7
1981 . .	2,313.0	132.1	50.5	182.6	2,495.6	3,089.8	5,585.4	7.3	44.7
1982 . .	2,337.9	152.8	57.2	210.0	2,547.9	3,152.0	5,699.9	8.2	44.7
PERSONS									
1977 . .	6,024.2	275.8	78.0	353.8	6,378.0	3,864.2	10,242.2	5.5	62.3
1978 . .	5,998.7	331.6	63.7	395.3	6,394.0	4,051.7	10,445.7	6.2	61.2
1979 . .	6,043.3	335.1	61.4	396.6	6,439.9	4,193.6	10,633.5	6.2	60.6
1980 . .	6,237.8	342.6	71.0	413.6	6,651.4	4,167.7	10.819.1	6.2	61.5
1981 . .	6,377.2	307.7	67.8	375.5	6,752.7	4,280.5	11,033.2	5.6	61.2
1982 . .	6,404.8	372.6	77.3	449.9	6,854.7	4,408.7	11,263.3	6.6	60.9

(a) For definitions and scope of estimates *see* page 166. (b) The number of unemployed expressed as a percentage of the labour force (i.e. employed and unemployed) in the same group. (c) The labour force expressed as a percentage of the civilian population aged 15 and over in the same group.

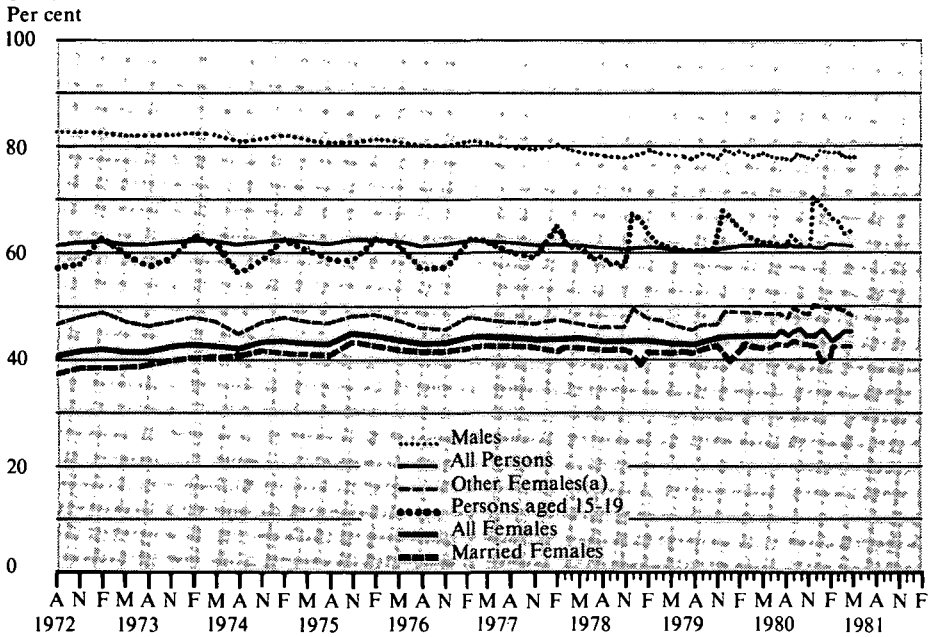
CIVILIAN LABOUR FORCE, BY BIRTHPLACE AND PERIOD OF ARRIVAL IN AUSTRALIA, MAY 1982

	Employed		Unemployed				
	Full-time	Total	Looking for full-time work	Total	Labour force	Unemployment rate(a)	Participation rate(b)
	—'000—					—per cent—	
MALES							
Born in Australia	2,765.6	2,944.9	150.5	164.3	3,109.2	5.3	78.2
Born outside Australia	1,070.9	1,122.0	69.3	75.5	1,197.5	6.3	78.9
Arrived before 1966	535.2	558.0	20.5	21.4	579.4	3.7	73.1
1966–1970	222.5	234.1	18.8	21.0	255.1	8.2	86.9
1971–1975	148.3	155.9	10.6	11.5	167.4	6.9	87.2
1976–1980	114.7	120.5	9.4	10.2	130.6	7.8	85.4
Jan. 1981 to May 1982	50.3	53.6	10.1	11.4	65.0	17.5	75.9
MARRIED FEMALES							
Born in Australia	523.2	999.5	24.9	50.0	1,049.5	4.8	41.2
Born outside Australia	281.0	432.6	22.4	33.9	466.4	7.3	46.1
Arrived before 1966	119.6	201.6	5.3	10.8	212.4	5.1	39.9
1966–1970	66.2	97.9	*	6.8	104.7	6.5	56.8
1971–1975	46.9	68.6	*	*	73.0	*	51.4
1976–1980	38.3	49.2	*	5.6	54.8	10.2	51.5
Jan. 1981 to May 1982	10.0	15.3	5.3	6.2	21.5	28.9	45.9
ALL FEMALES							
Born in Australia	1,115.1	1,746.1	106.4	146.9	1,893.0	7.8	45.2
Born outside Australia	405.2	591.7	46.4	63.2	654.9	9.6	46.1
Arrived before 1966	157.4	250.2	11.6	18.8	269.0	7.0	37.5
1966–1970	99.7	141.1	11.7	16.4	157.5	10.4	57.4
1971–1975	68.5	97.5	6.2	8.2	105.7	7.8	54.3
1976–1980	61.7	78.2	7.6	9.1	87.3	10.5	54.1
Jan. 1981 to May 1982	18.0	24.7	9.4	10.7	35.4	30.3	49.1
PERSONS							
Born in Australia	3,880.6	4,691.1	256.8	311.2	5,002.2	6.2	61.2
Born outside Australia	1,476.2	1,713.7	115.8	138.7	1,852.4	7.5	63.1
Italy	137.0	157.2	6.3	7.2	164.4	4.4	61.0
Greece	85.6	97.8	8.1	9.1	106.9	8.5	67.8
Yugoslavia	95.5	104.7	10.3	11.5	116.2	9.9	67.1
U.K. and Ireland	535.7	630.5	37.0	45.6	676.1	6.7	60.8
New Zealand	83.2	101.3	7.4	9.1	110.4	8.3	74.1
Other	539.1	622.2	46.8	56.2	678.4	8.3	63.0
Arrived before 1966	692.6	808.2	32.1	40.2	848.4	4.7	56.2
1966–1970	322.2	375.2	30.4	37.4	412.6	9.1	72.6
1971–1975	216.8	253.4	16.7	19.7	273.1	7.2	70.6
1976–1980	176.4	198.7	17.0	19.3	218.0	8.9	69.3
Jan. 1981 to May 1982	68.2	78.3	19.6	22.1	100.4	22.0	63.7

(a) The number of unemployed expressed as a percentage of the labour force (i.e. employed and unemployed) in the same group. (b) The labour force expressed as a percentage of the civilian population aged 15 and over in the same group. Excludes persons in institutions.
* Less than 4,500 or based on a figure less than 4,500. *See* page 167.

LABOUR FORCE PARTICIPATION RATES

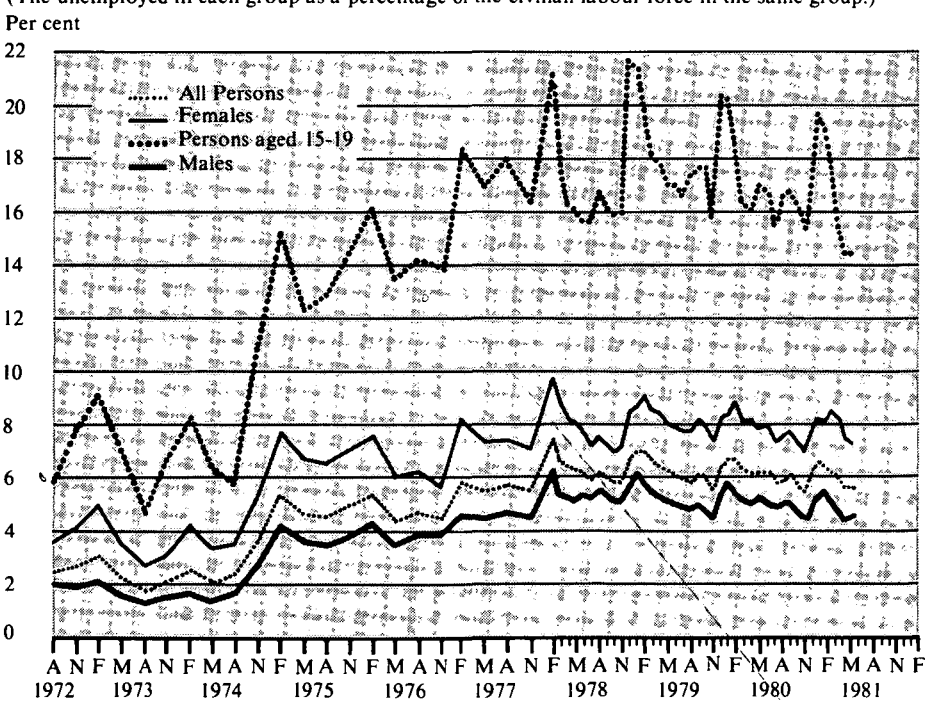
(The labour force in each group as a percentage of the civilian population aged 15 years and over in the same group.)



(a) Never married, widowed and divorced.

UNEMPLOYMENT RATES

(The unemployed in each group as a percentage of the civilian labour force in the same group.)



PLATES 32 and 33

CIVILIAN LABOUR FORCE, BY AGE, MAY 1982

Age group	Number ('000)				Participation rate (a) (per cent)			
	Males	Married females	All females	Persons	Males	Married females	All females	Persons
15–19	424.2	11.9	372.4	796.5	65.6	40.8	60.2	63.0
20–24	592.0	162.7	457.5	1,049.5	90.2	56.5	71.3	80.9
25–34	1,145.9	471.7	643.3	1,789.2	95.7	48.2	53.4	74.5
35–44	932.3	467.3	552.0	1,484.4	94.8	57.8	58.8	77.2
45–54	707.5	295.9	365.1	1,072.6	90.7	47.7	49.2	70.5
55–59	304.5	75.0	102.7	407.2	81.1	26.2	27.6	54.5
60–64	144.1	21.6	33.6	177.7	47.3	9.6	10.3	28.2
65 and over	56.3	9.6	21.3	77.6	9.1	2.9	2.5	5.3
Total	**4,306.8**	**1,515.9**	**2,547.9**	**6,854.7**	**77.4**	**42.4**	**44.7**	**60.9**

(a) The labour force expressed as a percentage of the civilian population aged 15 and over in the same group.

EMPLOYED PERSONS BY INDUSTRY AND AVERAGE WEEKLY HOURS WORKED, MAY 1982

Industry	Number ('000)			Average weekly hours worked (a)		
	Males	Females	Persons	Males	Females	Persons
Agriculture and services to agriculture	286.4	90.8	377.2	49.9	29.1	44.9
Forestry and logging, fishing and hunting	29.6	*	32.7	38.7	*	37.3
Mining	87.9	8.2	96.1	38.4	33.9	38.0
Manufacturing	932.7	312.2	1,244.9	38.0	33.2	36.8
Food, beverages and tobacco	133.2	49.8	182.9	37.3	31.8	35.8
Metal products	197.0	26.2	223.2	38.1	34.1	37.6
Other manufacturing	602.5	236.2	838.8	38.2	33.5	36.8
Electricity, gas and water	114.1	10.8	124.9	35.7	30.8	35.2
Construction	423.4	46.5	469.8	38.8	19.0	36.8
Wholesale and retail trade	724.1	547.1	1,271.1	40.7	28.9	35.6
Transport and storage	310.5	56.2	366.6	39.2	29.2	37.7
Communication	106.7	34.7	141.4	32.6	29.8	31.9
Finance, property and business services	312.8	260.5	573.2	38.8	30.0	34.8
Public administration and defence	196.6	89.9	286.5	34.9	30.5	33.5
Community services	371.5	648.9	1,020.5	36.3	27.8	30.9
Recreation, personal and other services	170.8	229.0	399.8	39.2	26.5	31.9
Total	**4,066.9**	**2,337.9**	**6,404.8**	**39.1**	**29.0**	**35.4**

(a) Figures relate to hours worked, not hours paid for. The figures may be affected by public holidays, leave, absenteeism, absence from work due to sickness, injury, accident, industrial disputes, plant breakdown, etc. * Less than 4,500 or based on a figure less than 4,500. *See* page 167.

EMPLOYED PERSONS BY OCCUPATION, MAY 1982 ('000)

Occupation	Males	Married females	All females	Persons
Professional, technical, and related workers	522.9	246.1	426.1	949.0
Administrative, executive and managerial	351.2	39.7	57.5	408.7
Clerical	333.3	438.2	781.9	1,115.2
Sales	265.6	175.8	310.2	575.8
Farmers, fishermen, timber-getters, etc.	364.4	76.5	90.7	455.1
Transport and communication	300.2	32.4	49.3	349.5
Tradesmen, production-process workers and labourers, n.e.c.; and miners, quarrymen, etc.	1,710.5	171.7	241.1	1,951.6
Service, sport and recreation	218.9	251.7	381.1	600.0
Total	**4,066.9**	**1,432.1**	**2,337.9**	**6,404.8**

PART-TIME WORKERS: WHETHER PREFERRED TO WORK MORE HOURS AND WHETHER LOOKING FOR FULL-TIME WORK, BY AGE, MAY 1982
('000)

	Age group						
	15–19	*20–24*	*25–34*	*35–44*	*45–54*	*55 and over*	*Total*
MALES							
Total	**65.1**	**31.6**	**40.6**	**24.9**	**20.2**	**48.0**	**230.4**
Preferred not to work more hours	50.7	19.1	26.5	18.3	13.3	45.3	173.3
Preferred to work more hours	14.4	12.5	14.1	6.6	6.8	*	57.1
Had actively looked for full-time work (*a*)	6.2	6.1	6.8	—4.6—		*	24.0
MARRIED FEMALES							
Total	*	**32.0**	**191.3**	**221.2**	**132.4**	**48.8**	**627.8**
Preferred not to work more hours	*	28.3	171.1	199.4	122.2	46.2	568.8
Preferred to work more hours	*	*	20.2	21.7	10.1	*	59.0
Had actively looked for full-time work (*a*)	*	—5.8—		4.8	*	*	12.7
ALL FEMALES							
Total	**88.8**	**67.8**	**210.8**	**235.2**	**147.0**	**68.1**	**817.5**
Preferred not to work more hours	63.6	52.6	185.5	210.6	133.0	64.0	709.2
Preferred to work more hours	25.2	15.2	25.3	24.6	14.1	*	108.4
Had actively looked for full-time work (*a*)	10.7	7.6	6.6	5.6	*	*	33.0
PERSONS							
Total	**153.9**	**99.4**	**251.4**	**260.1**	**167.2**	**116.1**	**1,048.0**
Preferred not to work more hours	114.3	71.7	212.0	228.9	146.3	109.3	882.5
Preferred to work more hours	39.6	27.7	39.4	31.2	20.9	6.7	165.5
Had actively looked for full-time work (*a*)	16.9	13.7	13.4	7.4	5.1	*	57.1

(*a*) In the four weeks up to the end of the survey week. * Less than 4,500. *See* page 167.

EMPLOYED PERSONS, BY HOURS WORKED (*a*), MAY 1982
('000)

	Males	*Married females*	*Other females (b)*	*All females*	*Persons*
Weekly hours worked (*a*)—					
0(*c*)	253.8	116.6	58.9	175.5	429.3
1–15	129.6	282.0	108.7	390.7	520.3
16–29	217.5	278.1	82.9	361.0	578.5
30–34	352.3	137.1	84.7	221.8	574.0
35–39	558.8	196.4	186.0	382.4	941.2
40	1,189.2	266.2	266.3	532.5	1,721.7
41–44	243.6	38.5	48.0	86.4	330.0
45–48	350.2	37.9	34.4	72.3	422.5
49 and over	772.0	79.3	36.0	115.3	887.3
Total	**4,066.9**	**1,432.1**	**905.8**	**2,337.9**	**6,404.8**

(*a*) The figures relate to hours worked, not hours paid for. (*b*) Never married, widowed or divorced. (*c*) Persons who had a job from which they were absent for the whole of the survey week.

UNEMPLOYED PERSONS, BY INDUSTRY AND OCCUPATION OF LAST FULL-TIME JOB, MAY 1982

Industry division or sub-division(a)	*Total ('000)*	*Unemployment rate(b) (per cent)*	*Occupation group*	*Total ('000)*	*Unemployment rate(b) (per cent)*
Had worked full-time for two weeks or more in the last two years	276.4	4.1	Had worked full-time for two weeks or more in the last two years	276.4	4.1
Agriculture and services to agriculture	15.3	3.9	Professional, technical, etc.	17.7	1.8
Manufacturing	66.6	5.1	Administrative, executive and managerial	6.5	1.6
Food, beverages and tobacco	15.5	7.8	Clerical	38.3	3.3
Metal products	12.6	5.3	Sales	31.2	5.1
Other manufacturing	38.5	4.4	Farmers, fishermen, timber-getters, etc.	20.5	4.3
Construction	29.9	6.0	Miners, quarrymen, etc.	*	*
Wholesale trade	15.5	3.8	Transport and communication	11.5	3.2
Retail trade	46.9	5.0	Tradesmen, production-process workers and labourers, n.e.c.	112.1	5.5
Transport and storage	9.9	2.6	Service, sport and recreation	36.5	5.7
Finance, property and business services	14.9	2.5			
Community services	27.5	2.6			
Recreation, personal and other services	31.2	7.2			
Other industries	18.6	2.7			
Stood down(c)	10.1	..			
Other(d)	163.4	..			
Total	**449.9**	**6.6**			

(a) Classified according to the Australian Standard Industrial Classification, 1978. (b) The number of unemployed expressed as a percentage of the labour force (i.e. employed and unemployed) in the same group. (c) Persons who were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant breakdown. (d) Had never worked for two weeks or more in a full-time job, or had not done so in the last two years. Industry and occupation were not obtained for these persons. * Less than 4,500 or based on a figure less than 4,500. *See* page 167.

UNEMPLOYED PERSONS, BY AGE AND WHETHER LOOKING FOR FULL-TIME OR PART-TIME WORK, MAY 1982

	Number unemployed ('000)				*Unemployment rate (a) (per cent)*			
	Males	*Married females*	*All females*	*Persons*	*Males*	*Married females*	*All females*	*Persons*
LOOKING FOR FULL-TIME WORK								
Total	**219.8**	**47.3**	**152.8**	**372.6**	**5.4**	**5.6**	**9.1**	**6.5**
15-19	54.0	*	58.2	112.1	15.6	*	21.5	18.2
Attending school	*	*	*	6.1	n.a.	n.a.	n.a.	n.a.
20-24	55.0	9.2	38.1	93.2	9.9	7.2	9.9	9.9
25 and over	110.8	36.3	56.5	167.3	3.5	5.1	5.5	4.0
LOOKING FOR PART-TIME WORK								
Total	**20.0**	**36.6**	**57.2**	**77.3**	**8.0**	**5.5**	**6.5**	**6.9**
15-19	12.1	*	13.3	25.4	15.6	*	13.0	14.1
Attending school	8.7	*	7.5	16.2	18.5	*	13.9	16.1
20-24	*	*	5.9	8.7	*	*	8.0	8.0
25 and over	5.2	32.1	38.1	43.3	3.7	5.1	5.4	5.2
TOTAL								
Total	**239.8**	**83.9**	**210.0**	**449.9**	**5.6**	**5.5**	**8.2**	**6.6**
15-19	66.1	*	71.4	137.5	15.6	*	19.2	17.3
Attending school	12.1	*	10.2	22.3	22.9	*	17.8	20.3
20-24	57.8	12.7	44.0	101.8	9.8	7.8	9.6	9.7
25 and over	116.0	68.4	94.6	210.6	3.5	5.1	5.5	4.2

(a) See footnote (b) to table above.

UNEMPLOYED PERSONS, BY DURATION OF UNEMPLOYMENT (*a*), BY AGE, ETC., MAY 1982

Duration of unemployment (*weeks*)	Age (group) 15–19	20–24	25–34	35–54	Total (*b*)	Married	Not married (*c*)	Looking for— Full-time work	Looking for— Part-time work
MALES									
—'000—									
Under 2	6.5	*	5.3	*	19.9	6.9	13.0	15.4	4.5
2 and under 4	5.7	6.9	5.6	5.5	24.4	8.1	16.3	21.5	5.4
4 and under 8	11.6	9.2	6.0	5.6	34.5	11.4	23.1	32.0	
8 and under 13	8.4	8.0	4.6	5.7	27.2	9.2	18.0	24.7	5.6
13 and under 26	19.5	11.0	9.6	9.6	52.2	14.9	37.3	49.1	
26 and under 39	5.1	6.3	4.8	5.9	21.1	8.0	13.0	20.1	4.6
39 and under 52	*	5.6	5.5	*	7.0	*	*	6.5	
52 and under 65	*				15.6	5.0	10.6	14.5	
65 and over	5.3	6.9	8.2	11.7	38.1	18.1	20.0	36.2	
Total	*66.1*	*57.8*	*49.7*	*51.3*	*239.8*	*84.9*	*155.0*	*219.8*	*20.0*
—weeks—									
Average (mean) duration	21.4	30.5	37.3	44.2	35.1	41.8	31.5	35.7	28.8
Median duration	13.5	14.1	17.5	20.0	16.5	19.0	15.5	17.3	8.3
FEMALES									
—'000—									
Under 2	4.8	6.6	5.9	5.1	18.7	11.1	7.6	9.1	9.6
2 and under 4	8.0		6.2	4.6	23.0	12.2	10.8	13.0	10.0
4 and under 8	10.2	8.1	7.1	8.4	34.1	15.0	19.2	24.4	9.8
8 and under 13	8.6	4.9	6.3	5.4	25.4	10.7	14.7	19.1	6.3
13 and under 26	18.8	10.9	8.5	7.8	46.0	13.7	32.3	37.6	8.4
26 and under 39	8.4	4.6	5.4	6.6	22.8	8.6	14.2	16.7	6.1
39 and under 52	*	*	*		5.7	*	*	5.0	7.1
52 and under 65	*	*	*		9.5	4.5	5.0	7.0	
65 and over	8.4	4.9	4.6	6.0	24.9	6.6	18.3	20.9	
Total	*71.4*	*44.0*	*47.2*	*43.8*	*210.0*	*83.9*	*126.2*	*152.8*	*57.2*
—weeks—									
Average (mean) duration	26.7	30.6	23.0	30.8	28.3	22.6	32.0	31.3	20.2
Median duration	15.8	15.9	11.5	11.6	14.1	9.7	17.4	16.7	7.7
PERSONS									
—'000—									
Under 2	11.4	6.3	11.2	8.9	38.6	18.0	20.6	24.5	14.1
2 and under 4	13.7	11.1	11.8	10.1	47.3	20.3	27.0	34.5	12.9
4 and under 8	21.8	17.3	13.1	13.9	68.6	26.4	42.2	56.4	12.2
8 and under 13	17.0	12.9	10.9	11.1	52.6	19.9	32.8	43.8	8.9
13 and under 26	38.3	21.9	18.1	17.3	98.2	28.6	69.6	86.7	11.4
26 and under 39	13.4	10.8	10.3	7.9	43.9	16.6	27.2	36.8	7.1
39 and under 52	*	*	*	*	12.6	4.8	7.8	11.5	4.7
52 and under 65	5.3	5.5	6.2	6.1	25.0	9.4	15.6	21.5	
65 and over	13.7	11.8	12.9	17.7	63.0	24.7	38.3	57.0	6.0
Total	**137.5**	**101.8**	**96.9**	**95.2**	**449.9**	**168.7**	**281.2**	**372.6**	**77.3**
—weeks—									
Average (mean) duration	24.2	30.5	30.3	38.0	31.9	32.3	31.7	33.9	22.5
Median duration	14.7	15.0	14.0	15.7	15.4	13.0	16.4	17.1	7.8

(*a*) Period from the time the person began looking for work, or was laid off, to the end of the survey week. Periods of unemployment are recorded in complete weeks and this results in a slight understatement of duration. (*b*) Includes persons aged 55 and over, details for whom are not shown separately. (*c*) Never married, widowed and divorced. * Less than 4,500. *See* page 167.

Government employees

Government employees comprise not only administrative employees but also all other employees of government bodies (Commonwealth, State, local and semi-government) on services such as railways, road transport, banks, postal and telecommunications, air transport, education (including universities, colleges of advanced education, etc.), radio, television, police, public works, factories, marketing authorities, public hospitals (other than those run by charitable or religious organisations) and departmental hospitals and institutions.

GOVERNMENT EMPLOYEES (*a*): JUNE 1982

(Excluding defence forces and employees in agriculture and services to agriculture)
('000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Commonwealth									
Males	86.0	67.9	31.5	29.1	16.2	7.1	2.7	34.3	274.7
Females	40.6	28.7	14.7	8.2	7.6	2.4	1.3	23.9	127.4
Persons	126.6	96.5	46.2	37.3	23.8	9.5	3.9	58.2	402.1
State									
Males	193.8	154.6	99.2	52.5	61.9	20.4	..	..	582.3
Females	145.8	114.6	58.2	46.4	45.6	16.4	..	..	426.9
Persons	339.6	269.1	157.4	98.9	107.4	36.8	..	..	1,009.3
Northern Territory									
Males	..	..	..	..	..	..	7.6	..	7.6
Females	..	..	..	..	..	..	6.6	..	6.6
Persons	..	..	..	..	..	..	14.2	..	14.2
Local									
Males	48.7	20.8	19.3	5.4	7.3	2.5	0.4	..	104.5
Females	8.9	12.9	2.9	1.6	1.9	0.5	0.1	..	28.9
Persons	57.6	33.7	22.2	7.0	9.2	3.1	0.5	..	133.4
Total									
Males	**328.5**	**243.2**	**150.0**	**86.9**	**85.3**	**30.1**	**10.6**	**34.3**	**969.0**
Females	**195.3**	**156.2**	**75.8**	**56.2**	**55.1**	**19.3**	**8.0**	**23.9**	**589.9**
Persons	**523.9**	**399.4**	**225.8**	**143.2**	**140.5**	**49.3**	**18.6**	**58.2**	**1,558.9**

(*a*) Includes semi-government bodies.

Employees of Private Business

Publication of statistics of employees of private businesses estimated from a sample survey of 20,000 business units is expected to commence in respect of the September Quarter 1983.

JOB VACANCIES

Sample surveys of job vacancies were conducted by the ABS in March each year (by mail) from 1974 to 1978 and quarterly (by telephone) from May 1977 to May 1978. The annual and quarterly surveys were suspended in March and May 1978 respectively as part of the measures necessary to bring the activities of the ABS within the resources available to it at that time. The quarterly survey was re-introduced in May 1979.

A summary of the results of these surveys is shown in the table below. Results of the resumed quarterly surveys are not directly comparable with those of surveys conducted up to May 1978, because of a change of the treatment of vacancies in the government sector. More detailed results and explanatory notes are published in *Job Vacancies, Australia* (6231.0).

	Number of vacancies ('000)					
	Private sector	*Government sector*	*Manufacturing (b)*	*Other industries (c)*	*Total*	*Job vacancy rate (a) (per cent)*
1981—						
February	21.2	12.3	10.4	23.1	33.5	0.8
May	20.0	13.6	10.0	25.7	35.7	0.8
August	20.8	14.0	9.7	25.0	34.7	0.8
November	23.1	13.6	9.8	26.9	36.7	0.9
1982—						
February	20.6	13.1	9.3	24.4	33.7	0.8
May	13.4	11.9	4.9	20.4	25.3	0.6
August	11.0	10.5	3.7	17.8	21.5	0.5
Standard error of estimates and of quarterly movements	1.5	0.6	0.7	2.0	2.1	0.05

(*a*) The job vacancy rate is calculated by expressing the number of job vacancies as a percentage of employees plus vacancies. (*b*) Australian Standard Industrial Classification (ASIC) Division C. (c) ASIC Divisions A to L *excluding* Division C (Manufacturing), Subdivisions 01 and 02 (agriculture, etc.), 94 (private households employing staff) and defence forces.

MINIMUM WAGE RATES AND EMPLOYMENT CONDITIONS

Industrial Conciliation and Arbitration

General

Legal minimum rates of pay for some 90 per cent of Australian wage and salary earners are prescribed in awards and determinations of Federal and State industrial tribunals or in collective agreements registered with them.

The main tribunals operative at the end of September 1982 were as follows.

- Federal: Australian Conciliation and Arbitration Commission, Public Service Arbitrator, Flight Crew Officers' Industrial Tribunal.
- Joint Federal and New South Wales: Coal Industry Tribunal.
- New South Wales: Industrial Commission of New South Wales, Public Service Board of New South Wales.
- Victoria: Industrial Relations Commission, Public Service Board, Teachers Tribunal, Police Service Board.
- Queensland: Industrial Conciliation and Arbitration Commission of Queensland.
- South Australia: Industrial Commission, Conciliation Committees, Public Service Arbitrator, Teachers Salaries Board.
- Western Australia: Western Australian Industrial Commission, Western Australian Coal Industry Tribunal, Public Service Arbitrator, Railway Classification Board, Government School Teachers Tribunal.
- Tasmania: Industrial Boards, Public Service Board, Public Service Arbitrator.

Federal Tribunals

The Australian Conciliation and Arbitration Commission has jurisdiction in respect of the prevention and settlement of industrial disputes extending beyond the limits of any one State. The Commission consists of a President, Deputy Presidents and Commissioners. The work of the Commission is normally done by individual members; however, certain matters such as standard hours, national wage cases, the minimum wage for adults, equal pay principles, annual leave and long service leave with pay

must be determined by a Full Bench of the Commission consisting of at least three members, of whom not less than two are Presidential members. A Full Bench of the Commission also deals with appeals and references from single members of the Commission and from the Public Service Arbitrator. Where a State law or an award, etc. of a State Tribunal is inconsistent with a Federal award, etc., the latter prevails to the extent of the inconsistency.

Conditions of employment of Federal government employees are regulated by statutory provisions and by determinations of the Australian Public Service Arbitrator. Appeals and references may be made to the Australian Conciliation and Arbitration Commission.

The Flight Crew Officers' Industrial Tribunal is empowered to prevent and settle industrial disputes involving pilots, navigators and flight engineers of aircraft.

The Coal Industry Tribunal was established under the authority of Federal and New South Wales legislation, and is empowered to determine interstate and New South Wales disputes in the coal mining industry.

State Tribunals

State tribunals have jurisdiction over industrial disputes confined within their own State boundaries. For details of the composition and operation of the State tribunals listed above, reference should be made to the various State Year Books.

Determination of rates of pay

The awards, etc. of the various Federal and State tribunals prescribe minimum rates of pay, standard hours of work and other conditions of employment for particular occupations. Most awards also prescribe a minimum wage for adults, i.e., the minimum amount which must be paid to an adult employee, regardless of occupation, for working the standard weekly hours of work. The concept of equal pay for the sexes is applicable in most Federal and State awards. In recent years the wage fixing principles of the Australian Conciliation and Arbitration Commission have generally been followed by State tribunals.

In April 1975 the Commission introduced a set of wage determination principles which provided for quarterly (later half-yearly) adjustments to award wages in line with movements in the previous quarter's (half-year's) consumer price index, unless the Commission was persuaded not to grant such an increase. Other principles were designed to limit wage movements outside of indexation.

The main aims of this system were to contribute to a moderation in inflation and to reduce the degree of industrial disputation over wages matters.

In all there were eighteen national wage cases over the 1975-81 period, with full indexation being awarded on six occasions. In June 1979 the Commission said that it had come to the brink of abandoning the *indexation system* and again in April 1981 it expressed misgivings and re-fashioned some of the principles. However, on 31 July 1981, the Commission abandoned wage indexation saying in its reasons for decision: 'The events since April have shown clearly that the commitment of the participants to the system is not strong enough to sustain the requirements for its continued operation. The immediate manifestation of this is the high level of industrial action in various industries . . . (which) resulted in substantial increases being agreed without regard to the test of negligible wage cost . . .'

Since then claims have been dealt with on a case-by-case basis. For details of increases in Federal and State awards, etc., and for rates of minimum wage for adult males and adult females, *see Award Rates of Pay Indexes* (6312.0).

For details of wage determination in earlier periods see previous issues of the Year Book, the Labour Report (last issue 1973) and the 1975-81 issues of Labour Statistics (6101.0).

Rates of wage

This section contains indexes (with base: year 1954 = 100.0) of minimum weekly and hourly rates of wage for adult males and adult females for Australia and each State.

Because the indexes are designed to measure movements in prescribed minimum rates of 'wages' as distinct from 'salaries', those awards, etc. which relate solely or mainly to salary earners are excluded.

Further particulars of wage rates and index numbers will be found in publications *Minimum Wage Rates*, March 1939 to June 1965 (6313.0), *Wage Rates Indexes*, June 1965 to June 1968 (6314.0) and *Wage Rates Indexes*, June 1968 to June 1972 (6314.0). Figures to August 1982 were published in the monthly publications *Wage Rates, Australia* (6312.0) and *Wage Rates Indexes, Australia* (*Preliminary*) (6311.0) and may have included revisions of figures shown in the following tables.

Weighted average minimum weekly wage rates for adult males and adult females covered by Federal awards, etc. and those covered by State awards, etc. (as defined below) are shown separately in the following table. For the purposes of the index, Federal awards, etc. include awards of or collective agreements registered with the Australian Conciliation and Arbitration Commission, and determinations of the Australian Public Service Arbitrator. State awards, etc. include awards or determinations of or collective agreements registered with State industrial tribunals, together with certain unregistered collective agreements when these are dominant in the particular industries to which they refer.

Late in 1982, new indexes were released, based on a more up-to-date weighting pattern and including both wage and salary earners. Details are published monthly in *Award Rates of Pay Indexes* (6312.0)

WEEKLY WAGE RATES: ALL GROUPS(*a*)

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(*b*) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

	Rates of wage ($)			*Index Nos. (Base 1954 = 100.0)*
End of December—	*Federal awards, etc.*	*State awards, etc.*	*All awards, etc.*	*All awards, etc.*
	ADULT MALES			
1976	135.50	134.45	135.02	478.1
1977	148.87	148.67	148.78	526.8
1978	162.09	159.59	160.96	569.9
1979	170.75	166.46	168.81	597.7
1980	188.43	185.48	187.10	662.5
1981p	220.67	209.73	215.72	763.8
	ADULT FEMALES			
1976	119.14	131.49	125.75	631.7
1977	131.94	144.84	138.85	697.4
1978	141.57	155.27	148.90	748.0
1979	147.02	160.75	154.37	775.4
1980	165.51	181.51	174.07	874.4
1981p	191.40	204.09	198.19	995.5

(*a*) Excludes rural industry. (*b*) As prescribed in awards, determinations and collective agreements.

The following table shows for Australia the weighted average minimum weekly rates of wage and index numbers in each industry group and for all groups (excluding rural industry) at the dates specified.

WEEKLY WAGE RATES: ADULT MALES, INDUSTRIES

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(*a*) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry	*End of December—* 1976	1977	1978	1979	1980	1981*p*
	RATES OF WAGE(b) ($)					
Mining and quarrying(*c*)	159.74	176.24	189.46	201.87	222.41	258.56
Manufacturing—						
Engineering, metals, vehicles, etc.	126.83	140.00	153.62	163.36	179.10	210.96
Textiles, clothing and footwear	124.27	137.09	147.24	152.03	173.07	199.46
Food, drink and tobacco	132.39	145.89	157.21	163.81	182.32	208.92
Sawmilling, furniture, etc.	128.15	141.49	151.27	156.33	177.67	199.15
Paper, printing, etc.	136.74	150.26	161.24	169.42	187.36	208.63
Other manufacturing	129.92	143.36	154.74	161.94	180.86	203.91
All manufacturing	*128.64*	*141.93*	*154.11*	*162.12*	*179.80*	*207.46*
Building and construction	146.11	160.38	174.22	181.80	201.23	233.52
Railway services	124.40	138.31	148.38	155.99	170.67	204.50
Road and air transport	133.29	146.68	159.32	168.28	185.01	214.14
Shipping and stevedoring(*d*)	164.17	179.58	192.54	200.96	222.65	242.40
Communication	160.85	175.98	186.95	198.35	216.00	251.22
Wholesale and retail trade	134.99	148.84	160.81	166.84	186.60	212.13
Public authority n.e.i. and community and business services	138.34	151.95	162.54	168.88	187.90	216.16
Amusement, hotels, personal service, etc.	124.98	137.89	148.20	153.29	173.62	196.73
All industries(*e*)	**135.02**	**148.78**	**160.96**	**168.81**	**187.10**	**215.72**

INDEX NUMBERS

(*Base: Weighted Average Minimum Weekly Wage Rate for Australia, Year* 1954=100.0)

Mining and quarrying(*c*)	565.6	624.0	670.8	714.8	787.5	915.5
Manufacturing—						
Engineering, metals, vehicles, etc.	449.1	495.7	543.9	578.4	634.2	747.0
Textiles, clothing and footwear	440.0	485.4	521.4	538.3	612.8	706.2
Food, drink and tobacco	468.4	516.6	556.7	580.0	645.6	739.8
Sawmilling, furniture, etc.	453.8	501.0	535.6	553.6	629.1	705.1
Paper, printing, etc.	484.2	532.1	570.9	599.9	663.4	738.7
Other manufacturing	460.0	507.6	547.9	573.4	640.4	722.0
All manufacturing	*455.5*	*502.6*	*545.7*	*574.0*	*636.6*	*734.6*
Building and construction	517.4	567.9	616.9	643.7	712.5	826.9
Railway services	440.5	489.7	525.4	552.3	604.3	724.1
Road and air transport	471.9	519.4	564.1	595.9	655.1	758.2
Shipping and stevedoring(*d*)	581.3	635.9	681.7	711.6	788.4	858.3
Communication	569.6	623.1	662.0	702.3	764.8	889.5
Wholesale and retail trade	478.0	527.0	569.4	590.8	660.7	751.1
Public authority n.e.i. and community and business services	489.8	538.0	575.5	598.0	665.3	765.4
Amusement, hotels, personal service, etc.	442.5	488.3	524.8	542.8	614.8	696.6
All industries(*e*)	**478.1**	**526.8**	**569.9**	**597.7**	**662.5**	**763.8**

(*a*) As prescribed in awards, determinations and collective agreements. (*b*) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (*c*) For mining, rates of wage used are those prescribed for the principal mining centres and include lead bonuses, etc. (*d*) Includes rates of wage (and value of keep) for occupations in the coastal shipping service, other than masters, officers and engineers. (*e*) Excludes rural industry.

The following table shows for Australia weighted average minimum weekly rates of wage and index numbers in each of the industry groups in which the number of females employed is important, and the weighted average for all groups combined, at the dates specified.

WEEKLY WAGE RATES: ADULT FEMALES, INDUSTRIES

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(*a*) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

	End of December—					
Industry	*1976*	*1977*	*1978*	*1979*	*1980*	*1981p*
	RATES OF WAGE(b) ($)					
Manufacturing—						
Engineering, metals, vehicles, etc.	123.32	136.19	147.95	156.19	173.61	203.50
Textiles, clothing and footwear	118.55	131.07	140.18	144.66	165.04	190.17
Food, drink and tobacco	124.30	137.30	147.64	153.42	173.08	193.72
Other manufacturing	123.32	136.20	146.07	151.46	170.94	190.21
All manufacturing	*121.19*	*133.91*	*143.82*	*149.35*	*168.91*	*193.04*
Transport and communication	129.26	142.31	150.58	156.33	171.46	200.14
Wholesale and retail trade	133.28	147.14	157.81	162.79	184.52	206.80
Public authority n.e.i. and community and business services	131.49	144.77	155.33	162.22	179.58	207.63
Amusement, hotels, personal service, etc.	120.36	133.09	142.76	147.68	167.70	190.04
All industries(*c*)	**125.75**	**138.85**	**148.90**	**154.37**	**174.07**	**198.19**
	INDEX NUMBERS (*Base: Weighted Average Minimum Weekly Wage Rate for Australia, Year* 1954=100.0)					
Manufacturing—						
Engineering, metals, vehicles, etc.	619.5	683.9	743.2	784.6	872.1	1,022.2
Textiles, clothing and footwear	595.5	658.4	704.1	726.7	829.0	955.3
Food, drink and tobacco	624.4	689.7	741.6	770.6	869.4	973.1
Other manufacturing	619.4	684.2	733.7	760.8	858.7	955.5
All manufacturing	*608.7*	*672.6*	*722.4*	*750.2*	*848.4*	*969.7*
Transport and communication	649.3	714.9	756.4	785.3	861.2	1,005.3
Wholesale and retail trade	669.5	739.2	792.7	817.7	926.8	1,038.8
Public authority n.e.i. and community and business services	660.5	726.7	780.3	814.8	902.1	1,043.0
Amusement, hotels, personal service, etc.	604.6	668.5	717.1	741.8	842.4	954.6
All industries(*c*)	**631.7**	**697.4**	**748.0**	**775.4**	**874.4**	**995.5**

(*a*) As prescribed in awards, determinations and collective agreements. (*b*) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (*c*) Excludes rural industry; mining and quarrying; and building and construction.

The average rates of wage in the preceding tables are based on the minimum rates prescribed for selected occupations in awards, etc. for a full week's work, excluding overtime. However, the number of hours constituting a full week's work differs in some instances between the various occupations in each State, and between the same occupations in the several States. For some purposes a better comparison may be obtained by reducing the results in the preceding paragraphs to a common basis, namely the rate of wage per hour. The particulars of weighted average minimum hourly rates of wage for adult males given in the following tables relate to all industries except the rural industry and shipping and stevedoring; for adult females the rates exclude rural industry, mining and quarrying, and building and construction.

HOURLY WAGE RATES: ALL GROUPS(*a*)

WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES

	Adult males		*Adult females*	
End of December—	*Rates of wage (cents)(b)*	*Index numbers(c)*	*Rates of wage (cents)(b)*	*Index numbers(c)*
1976	336.97	476.3	316.99	631.8
1977	371.64	525.3	350.00	697.6
1978	402.20	568.5	375.35	748.2
1979	421.99	596.5	389.14	775.6
1980	467.74	661.1	438.80	874.6
1981p	540.45	763.9	499.59	995.8

(*a*) *See* text above. (*b*) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (*c*) Base: weighted average minimum hourly wage rate, Australia, 1954=100.0.

Standard hours of work

In the fixation of weekly wage rates, most industrial tribunals prescribe the number of hours constituting a full week's work (excluding overtime) for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages shown below. The main features of the reduction of hours to forty-four, and later to forty, per week were summarised in previous issues of the Year Book. Since January 1948, practically all employees in Australia have had a standard working week of forty hours or less. However, the number of hours constituting a full week's work (excluding overtime) differs between occupations and/or States. The weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and collective agreements for a full working week in respect of adult male workers in all industry groups except rural industry and shipping and stevedoring, at 30 June 1982, were: New South Wales, 39.17; Victoria, 39.30; Queensland, 39.62; South Australia, 39.31; Western Australia, 39.26; Tasmania, 39.52; Australia, 39.29. Corresponding figures for adult female workers at 30 June 1982, were: New South Wales, 39.35; Victoria, 39.67; Queensland, 39.66; South Australia, 39.59; Western Australia, 39.73; Tasmania, 39.60; Australia, 39.53.

Working hours arrangements

During the period February to May 1981 a special survey based on a sample of private and non-private dwellings was conducted throughout Australia in order to obtain information about the different types of working patterns of employed persons, such as evening and night work, shift work and weekend work. Results of this survey were published in *Working Hours Arrangements, Australia, February to May 1981* (6338.0) A similar survey, of evening and night work and work patterns of employees, was conducted in November 1976. Results of this survey were published in *Evening and Night Work, November, 1976* (6329.0) and *Work Patterns of Employees, November 1976 (6328.0).*

Alternative working arrangements

During the period March to May 1982 a special survey based on a sample of private and non-private dwellings was conducted throughout Australia in order to obtain further information about working arrangements, such as the the incidence of permanent part-time work and the demand for reduced working hours and "tapered" and early retirement. Results were published in *Alternative Working Arrangements, Australia, Preliminary, March to May 1982 (6340.0).*

Working conditions and employment benefits

During the period February to May 1979 a special survey based on a sample of private and non-private dwellings was conducted throughout Australia in order to obtain information about selected aspects of working conditions and a range of benefits provided by employers to employees. Results of these surveys were published in *Employment Benefits, Australia, February to May 1979* (6334.0) and *Working Conditions, Australia, February to May 1979* (6335.0).

Annual leave and long service leave

The majority of employees in Australia at present receive four weeks paid annual leave.

Four weeks annual leave was granted to State government employees in New South Wales in 1964, in South Australia in 1971 and in Tasmania in October 1972. Australian Government employees received the entitlement in 1973, as did State Government employees in Victoria, Queensland and Western Australia. (Northern Territory Government employees are entitled to four weeks annual leave.)

In December 1973, Queensland day workers employed under State awards were granted four weeks paid annual leave. Subsequently, workers covered by State awards in other States were granted similar benefits.

In May 1974, the Australian Conciliation and Arbitration Commission granted four weeks paid annual leave to persons employed under the Metal Industry Award, to accrue from 1 January 1974. As a result, this benefit was extended to other Federal awards. In addition to the leave entitlement, workers also received a leave bonus which varies in amount (but a 17½ per cent addition to leave pay is a frequent provision in awards).

Paid long service leave, i.e. leave granted to workers who remain with the one employer or in the same industry over an extended period of time, has been included in the provisions of Federal and State industrial legislation and industrial awards. Most employees in Australia are now entitled to at least thirteen weeks paid long service leave after fifteen years continuous employment with the one employer. For employees in certain industries and for some employees of the Australian and State Governments, long service leave entitlements are more generous. In all cases the transfer of ownership of a business does not constitute a break in continuity of service with the same employer.

In May 1979, a survey based on the monthly population survey (*see* the section *The Population Survey* earlier in this chapter) was conducted throughout Australia in order to obtain information about the incidence and extent of annual and long-service leave-taking within Australia. Results of this survey were published in *Annual and Long-service Leave, May 1979* (6317.0).

SURVEYS OF EARNINGS AND HOURS

Average weekly earnings

Estimates of average weekly earnings derived from particulars of employment and wages and salaries recorded on payroll tax returns, from other direct collections and from estimates of the unrecorded balance are no longer compiled by the ABS. Details regarding the change from payroll tax data to direct collection are contained in *Information Paper, Review of ABS Employment* (6239.0)

In September 1981 a new quarterly survey of employers based on the ABS Central Integrated Register was introduced to obtain employment and earnings information to produce the new average weekly earnings series.

One of the primary aims of the new series is to measure the trend of average weekly earnings. Accordingly, the data collected relates to those elements of earnings which as a general rule, are received by employees regularly. For the December quarter of each year more detailed dissections of earnings and additional information on hours paid for are collected and this will replace the annual October survey of earnings and hours. For further details, see pages 188-189.

A summary of the main differences in concepts, methods and scope of the old and new earnings series is published in *Information Paper, Average Weekly Earnings—New series to replace former Payroll Tax Based Series* (6336.0). Results of the new survey are published in *Average Weekly Earnings, Australia* (6302.0).

Scope and definitions

All wage and salary earners who received pay in respect of the reference period are represented in the survey, except: (i) members of the Australian permanent defence forces; (ii) employees of establishments primarily engaged in agriculture; (iii) employees in private households employing staff; (iv) employees on workers' compensation; (v) employees based outside Australia; (vi) employees paid soley from commission without a retainer; (vii) self employed persons such as working proprietors of unicorporated businesses; (viii) subcontractors; (ix) owner/drivers.

Reference period refers to the last pay-period ending on or before a specified date near the middle of the quarter. If the operations of the establishment(s) covered by the return were seriously curtailed by an industrial dispute, breakdown; fire, etc., during the reference period, particulars for the previous normal pay-period were obtained.

Employees comprise male and female wage and salary earners who received pay for the reference period.

Full-time employees are those who work the agreed or award hours for a full-time employee in their occupation and who received pay for any part of the reference period; if agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 30 hours or more a week.

Full-time employees temporarily on short-time, or who began or ceased work during the reference period, are included. Some employees, who were paid for a weekly attendance of less than 30 hours (e.g. aircrews, teachers, university lecturers), are classified as full-time if they worked the normal scheduled hours for a full-time week.

Adults are employees 21 years of age or over and those employees who are under 21 years of age but are paid at the full adult rate for their occupation.

Weekly total earnings refers to earnings of employees in the reference period, before taxation and any other deductions, e.g. superannuation, board and lodging, have been made. Earnings comprise overtime earnings, ordinary time earnings, shift allowances, penalty rates, commission and similar payments, and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the reference period. Retrospective pay or pay in advance, annual leave loadings and other bonuses not related to the reference period are excluded.

Weekly ordinary time earnings refers to that part of *weekly total earnings* attributable to award, standard or agreed hours of work. Included in relation to these hours are shift allowances, penalty rates, commissions, bonuses and incentive payments, and one week's proportion of payments for annual and other leave taken during the specified pay-period.

Survey design

A sample of employers listed on the ABS central register of businesses was selected to ensure adequate State and industry representation. Industry was determined at the establishment level and all establishments of an enterprise within a State classified to a common industry were treated as a single composite unit. These industry units were then formed into categories or 'strata' according to their employment as recorded on the ABS register of economic units, and a random sample was then selected within each category. Some 3,600 employers are included in the sample.

Comparability of results

The new series differs in several important ways from the payroll tax based series which it replaces. In particular, data on male and female, ordinary and overtime earnings are obtained directly from a sample survey of employers drawn from an ABS register of economic units which is more complete than the coverage provided by employers subject to payroll tax.

Because of the differences in coverage, concepts and methods between the old and new series it is difficult to make direct comparisons for users who wish to obtain movements in earnings for a period which takes in both the old and the new series, a table has been included in recent issues of *Average Weekly Earnings, Australia* (6302.0) which shows quarter to quarter movements in the old and new series, linked to a common index base.

AVERAGE WEEKLY EARNINGS OF EMPLOYEES, AUSTRALIA

		MALES			*FEMALES*			*PERSONS*		
		Full-time adults		*All males*	*Full-time adults*		*All females*	*Full-time adults*		*All employees*
Quarter	*Survey reference date*	*Weekly ordinary time earnings*	*Weekly total earnings*	*Weekly total earnings*	*Weekly ordinary time earnings*	*Weekly total earnings*	*Weekly total earnings*	*Weekly ordinary time earnings*	*Weekly total earnings*	*Weekly total earnings*
					—dollars—					
1981—										
September	14 August	287.20	311.20	286.60	234.80	240.90	194.70	271.40	289.90	252.20
December	23 October	300.00	327.50	299.40	243.40	250.30	197.30	283.20	304.40	260.80
1982—										
March	19 February	314.10	341.30	316.00	250.50	257.70	207.10	294.30	315.70	274.60
June	21 May	324.40	352.10	326.00	261.50	268.20	215.50	305.10	326.30	283.90
September p	20 August	339.50	363.40	335.00	270.80	276.30	223.70	317.70	335.70	291.70

Earnings and hours of employees (distribution and composition), May 1981

Results of the May 1981 survey contained in the tables below relate to the pay-period which included 11 May 1981. Similar surveys have been conducted in May each year from 1974 to 1981. The results of these surveys are published in *Earnings and Hours of Employees, Distribution and Composition, Australia* (6306.0) and in earlier issues of the Year Book.

Scope of survey

All wage and salary earners were represented in the survey except (i) members of the permanent defence forces, (ii) employees in agriculture, (iii) employees in private households employing staff, (iv) waterside workers employed on a casual basis, (v) employees on worker's compensation and (vi) persons employed by private employers (other than hospitals) not subject to payroll tax. At the time of sample selection, payroll tax was payable by employers paying in wages and salaries more than $150,000 a year in Queensland and the Northern Territory, more than $96,600 a year in Victoria, more than $72,000 a year in New South Wales, South Australia, Western Australia and the Australian Capital Territory, and more than $60,000 a year in Tasmania. In general, Australian Government bodies, religious and benevolent institutions, public hospitals and other similar organisations were specifically exempted under the Australian and State Payroll Tax Acts.

Coverage

The survey covered stratified random samples of government departments and authorities, non-government hospitals not subject to payroll tax and other private employers subject to payroll tax.

Survey design

The majority of employers selected were requested to supply relevant details, on separate questionnaires, for only a sample of their employees. Individual employees were randomly selected by the employers in accordance with instructions supplied by the ABS. Employers with fewer than 10 employees were required to complete a questionnaire for every employee.

Definitions

Employees comprise male and female wage and salary earners within the survey scope who received pay for the specified pay-period.

Full-time employees are employees who received pay for the specified pay-period and whose standard (or rostered) weekly hours of work for that pay-period were at least 30 hours. Included are full-time employees who began or ceased work during the pay-period and full-time employees on paid annual leave, paid sick leave and paid holidays. Some employees (e.g. aircrews, teachers, university lecturers), although paid for a weekly attendance of less than 30 hours, were classified as full-time.

Non-managerial employees were defined to include minor supervisory employees, leading hands, clerical and office staff as well as ordinary wages employees. They exclude *managerial, executive, professional and higher supervisory staff* generally defined as those employees who (i) were ineligible to receive payment for overtime, or (ii) although subject to payment for overtime, were in charge of a significant number of employees in a separate establishment (or establishments). The basis of allocation of employees to these two categories may have varied between individual private employers and between employers in the private and government sectors, with consequent effects on survey results. For some occupations in government employment, such as school teachers and doctors, there is no general payment for overtime. In these cases, managerial, etc. staff were determined according to the degree of supervision exercised or in relation to the pay structure of associated administrative employees.

Weekly hours paid for refers to the hours for which payment was made. It comprises *ordinary time hours* defined below and *overtime hours*, which are those in excess of ordinary time hours. Weekly hours paid for were not reported for managerial, executive, professional and higher supervisory staff.

Ordinary time hours refers to award, standard or agreed hours of work. It includes stand-by or reporting time which are part of standard hours, and that part of paid annual leave, paid sick leave and long-service leave taken during the specified pay-period.

Weekly earnings refers to gross earnings before taxation and other deductions have been made. It includes *overtime earnings*, which refers to payment for overtime hours as defined above, and *ordinary time earnings*, as defined below. It includes one week's proportion of payments made other than on a weekly basis, e.g. salary paid fortnightly or monthly and paid annual or other leave taken during the specified pay-period. Pay in advance, retrospective pay and annual or periodical bonuses, etc. are excluded.

Ordinary time earnings refers to that part of weekly earnings which is attributable to ordinary time hours, as defined above. It comprises award or agreed base rates of pay for ordinary time hours paid for, including all allowances (other than overtime) specified in the award, etc.; payment by measured result, i.e. payment by piecework, task bonus, commission, etc.; and other earnings, i.e. attendance and good timekeeping bonuses, profit-sharing and any other forms of over-award, etc. pay.

Median earnings is the amount which divides the distribution into two equal groups, one having earnings above the median and the other having earnings below it. Medians were calculated from grouped data, linear interpolation being used within the class interval in which the median fell.

Mean (or average) earnings is the amount obtained by dividing the total earnings of a group (e.g. full-time employees) by the number of employees in that group.

Reliability of the estimates

Since the estimates from this survey are based on a sample they may differ from the figures that would have been produced if the information had been obtained for all employees. One measure of the likely difference is given by the *standard error.*

The figures in Table A below provide an indication of the magnitude of the standard error of estimates of numbers of persons (distribution of weekly earnings) shown in the table on page 186. An example of the use of Table A is as follows: if the estimate for Australia obtained from the sample is 30,000, the standard error is 1,800 (6 per cent), i.e. there are about two chances in three that the true figure is within the range 28,200 to 31,800 and about nineteen chances in twenty that this figure is between 26,400 and 33,600.

Table B indicates the relative standard errors of average weekly earnings for full-time non-managerial employees. An example of the use of this table is as follows: the table on the composition of average weekly earnings indicates that average overtime earnings of full-time male non-managerial employees aged 21 years and over (Australia) were $29.00. Table B below shows the approximate standard error for this estimate to be 1.4 per cent (i.e. about 40 cents). There are about two chances in three that the true figure is within the range $28.60 to $29.40, and about nineteen chances in twenty that the true figure is between $28.20 and $29.80.

The percentage standard errors in Table B relate only to estimates for Australia. Estimates for the States and Territories have higher standard errors, those for New South Wales and Victoria being about twice, and those for the other States and Territories about 3 to 5 times, as great as those for Australia.

The smaller the estimate the higher is the relative standard error. Estimates with a standard error greater than 15 per cent have not been published, except those relating to overtime earnings and hours; for these categories all estimates with a standard error less than 20 per cent have been published. Estimates with standard errors 20 per cent but not greater than 30 per cent have also been published if the standard errors are not greater than $1.00 or 0.5 hours respectively.

Relative standard errors for average weekly *hours paid for* are generally much lower than for the corresponding relative standard errors for average weekly *earnings* shown in Table B.

Relative standard errors for mean and median weekly earnings of 'all employees' are less than 1.5 per cent.

Note. Estimates of average weekly earnings shown in the tables are rounded to the nearest 10 cents, and those of average weekly hours paid for are rounded to the first decimal place. Any discrepancies between sums of components and totals in tables are due to rounding.

TABLE A. APPROXIMATE STANDARD ERRORS OF ESTIMATES OF NUMBERS OF PERSONS

	Size of estimate (persons)						
Standard error	*5,000*	*10,000*	*20,000*	*30,000*	*40,000*	*60,000*	*100,000*
Number	650	900	1,400	1,800	2,000	2,400	4,000
Per cent	13	9	7	6	5	4	4

TABLE B. APPROXIMATE RELATIVE STANDARD ERRORS OF AVERAGE WEEKLY EARNINGS, FULL-TIME NON-MANAGERIAL EMPLOYEES, AUSTRALIA, MAY 1981
(Per cent)

	Aged 21 years and over				*Aged under 21 years*	
	Males		*Females*		*Males*	*Females*
Industry	*Overtime*	*Total*	*Overtime*	*Total*	*Total*	*Total*
Manufacturing	2.0	0.4	5.1	0.7	1.4	2.0
Non-manufacturing	1.8	0.3	5.8	0.5	1.2	0.8
Total all industries	**1.4**	**0.3**	**4.1**	**0.5**	**0.9**	**0.7**

FULL-TIME NON-MANAGERIAL EMPLOYEES: COMPOSITION OF AVERAGE WEEKLY EARNINGS, AUSTRALIA, MAY 1981

	Aged 21 years and over					*Aged under 21 years*		
		Ordinary time						
Industry	*Overtime*	*Award etc. pay*	*Payment by measured result*	*Other pay*	*Total*	*Overtime*	*Ordinary time*	*Total*
				MALES				
Manufacturing	35.50	225.60	9.30	14.40	284.70	14.70	155.90	170.50
Non-manufacturing	26.00	265.30	6.00	6.10	303.30	9.60	161.80	171.30
Total all industries	**29.00**	**252.70**	**7.10**	**8.70**	**297.50**	**11.40**	**159.60**	**171.00**
				FEMALES				
Manufacturing	9.60	188.50	7.90	7.90	213.90	4.90	144.80	149.70
Non-manufacturing	4.80	237.20	0.60	3.10	245.70	2.80	151.90	154.80
Total all industries	**5.90**	**225.80**	**2.30**	**4.20**	**238.30**	**3.10**	**150.90**	**154.00**

FULL-TIME NON-MANAGERIAL EMPLOYEES: AVERAGE WEEKLY HOURS PAID FOR, AUSTRALIA, MAY 1981

	Aged 21 years and over						*Aged under 21 years*	
	Males			*Females*			*Males*	*Females*
Industry	*Overtime*	*Ordinary time*	*Total*	*Overtime*	*Ordinary time*	*Total*	*Total*	*Total*
Manufacturing	3.6	38.9	42.5	1.2	38.5	39.7	40.8	39.5
Non-manufacturing	2.4	38.5	40.8	0.5	37.5	38.0	40.1	38.8
Total of industries	**2.8**	**38.6**	**41.3**	**0.7**	**37.7**	**38.4**	**40.4**	**38.9**

ALL EMPLOYEES: WEEKLY EARNINGS, STATES, MAY 1981

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australia(a)*
MALES							
			—per cent of employees—				
Weekly earnings ($)—							
Under 60	1.7	1.8	3.1	2.8	2.3	6.6	1.9
60 and under 80	0.8	0.8			2.0		0.8
80 „ „ 100	1.3	1.2	1.9	2.7			1.3
100 „ „ 120	1.8	1.3	1.7		3.1		1.6
120 „ „ 140	1.9	1.8	1.8	1.9		7.4	1.8
140 „ „ 160	1.9	1.7	2.1	1.7	4.3		1.8
160 „ „ 180	2.5	2.2	2.4	3.1			2.5
180 „ „ 200	4.7	5.0	6.4	6.9	6.2	5.3	5.3
200 „ „ 220	7.8	8.4	9.7	11.3	8.0	9.3	8.5
220 „ „ 240	8.9	8.7	9.3	11.9	9.2	10.4	9.2
240 „ „ 260	9.3	9.1	9.6	10.8	8.5	9.1	9.3
260 „ „ 280	8.2	8.3	7.9	8.1	8.0	9.9	8.2
280 „ „ 300	7.2	8.1	7.5	7.1	6.4	7.3	7.4
300 „ „ 320	6.3	6.3	6.2	6.2	6.3	6.4	6.3
320 „ „ 340	5.0	6.2	5.4	5.5	6.1	15.3	5.6
340 „ „ 360	4.6	5.8	4.0	3.6	5.0		4.8
360 „ „ 380	4.4	4.3	3.2	3.0	4.2		4.0
380 „ „ 400	3.8	3.7	3.3	2.0	3.2		3.5
400 „ „ 450	6.7	6.3	5.1	4.8	6.1	7.8	6.2
450 „ „ 500	4.2	3.4	3.4	2.8	4.2		3.8
500 and over	6.8	5.5	5.9	3.5	7.0	5.2	6.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
			—number ('000)—				
Total employees	969.4	749.4	369.7	242.3	240.0	79.5	2,712.8
			—dollars—				
Median earnings	277.70	279.10	264.90	254.00	275.80	264.00	274.00
Mean earnings	300.10	295.20	285.30	272.90	297.60	281.00	294.60
FEMALES							
			—per cent of employees—				
Weekly earnings ($)—							
Under 40	3.4	3.3	5.9	5.0	6.1	9.8	4.1
40 and under 60	2.1	2.8	3.1	6.1	3.2		2.7
60 „ „ 80	2.2	2.9	2.6		3.4	9.7	2.7
80 „ „ 100	4.0	3.8	5.3	3.9	5.4		4.2
100 „ „ 120	4.6	4.6	5.1	6.1	5.0	11.7	4.8
120 „ „ 140	5.4	5.1	6.3	5.9	6.3		5.6
140 „ „ 160	5.5	5.3	6.0	6.5	5.6	12.1	5.5
160 „ „ 180	8.2	9.8	8.2	10.1	8.1		8.7
180 „ „ 200	11.4	10.2	10.7	11.6	12.8	11.5	11.1
200 „ „ 220	13.8	12.0	12.7	14.2	12.1	10.5	13.0
220 „ „ 240	10.2	11.9	9.0	9.5	8.0	15.5	10.4
240 „ „ 260	7.5	7.4	7.2	5.1	6.2		7.1
260 „ „ 280	5.6	5.6	4.9	6.1	7.1	15.5	5.2
280 „ „ 300	4.1	4.3	4.1				3.9
300 „ „ 320	2.9	3.2	5.0	5.7	5.6		2.9
320 „ „ 340	2.7	2.5					2.8
340 „ „ 360	2.3	2.0	3.7	4.0	5.1	*	1.9
360 and over	3.9	3.2					3.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
			—number ('000)—				
Total employees	570.2	433.8	172.3	133.1	125.2	40.5	1,517.8
			—dollars—				
Median earnings	204.50	203.50	193.70	190.80	190.80	191.60	201.10
Mean earnings	204.30	201.00	187.70	188.40	188.30	185.40	199.10

(*a*) Includes the Northern Territory and the Australian Capital Territory.

Earnings and hours of employees, October 1981

Results of this survey, were obtained from the Quarterly Survey of Earnings for the December quarter 1981, which included additional questions relating to hours, junior employees and non-managerial employees. The results, some of which are shown below are similar to, but not comparable with previous surveys of earnings and hours. Detailed results and explanatory notes are published in *Earnings and Hours of Employees, Australia, October 1981* (6304.0). Further information about the Quarterly Survey of Earnings is shown in the section on averge weekly earnings on pages 182-183. Definitions for additional items obtained from the December quarter survey are shown below.

Juniors are all other employees under 21 years of age.

Non-managerial employees include minor supervisory employees, leading hands, clerical and office staff as well as ordinary wages employees. They exclude *managerial, executive, professional and higher supervisory staff*, generally defined as those employees who (a) are ineligible to receive payment for overtime or (b) although subject to payment for overtime, are in charge of a significant number of employees in a separate establishment(s).

Weekly overtime earnings refers to that part of *weekly total earnings* for hours paid for in excess of award standard or agreed hours of work.

Weekly hours paid for refers to the hours for which payment was made. It comprises overtime hours and ordinary time hours. For employees paid other than weekly, hours were converted to a weekly basis. For employees who began or ceased work, or were absent without pay for any reason during the specified pay-period, only the hours actually paid for were included. Where agreed hours of work were less than award hours, hours were based on agreed hours. Hours of work were not reported for managerial, etc. staff.

Overtime hours refers to hours in excess of award, standard or agreed hours of work.

Ordinary time hours refers to award, standard or agreed hours of work. It includes stand-by or reporting time which are part of standard hours of work, and that part of paid annual leave, paid sick leave and long service leave taken during the specified pay-period.

Reliability of the estimates

Since the estimates from the survey are based on information which, was obtained from samples of employers, they may differ from the figures that would have been produced if the information had been obtained from all employers. One measure of the likely difference is given by the *standard error* (for definition *see* page 185).

Relative standard errors for the published estimates of average weekly ordinary time earnings and average weekly total earnings are generally less than 3 per cent. Relative standard errors for the figures of average weekly overtime earnings and hours are generally less than 10 per cent.

FULL-TIME NON-MANAGERIAL EMPLOYEES: AVERAGE WEEKLY EARNINGS AND HOURS, INDUSTRY, AUSTRALIA, OCTOBER 1981

	Manufacturing									
					Metal products, machinery and equipment					
	Food, beverages and tobacco	*Textiles, clothing and footwear*	*Paper, printing, etc.*	*Chemical, petroleum and coal products*	*Basic metal products*	*Fabricated metal products; other machinery, etc.*	*Transport equipment*	*Total*	*Other*	*Total manufacturing*
AVERAGE WEEKLY EARNINGS ($)										
Adult males	312.80	250.40	331.00	313.70	348.60	308.00	280.60	309.80	272.30	304.70
Junior males	174.50	126.80	147.10	150.40	185.50	138.00	130.20	144.50	130.00	143.90
Adult females	239.40	205.10	229.90	241.60	242.00	215.20	232.40	221.20	216.10	222.60
Junior females	160.70	121.90	148.10	124.10	172.50	147.50	165.70	153.90	140.00	143.50
AVERAGE WEEKLY HOURS PAID FOR										
Adult males	42.7	42.6	41.1	39.5	43.7	44.1	40.9	43.2	43.0	42.7
Junior males	40.4	40.5	39.0	35.6	39.9	37.3	35.6	37.3	39.4	38.3
Adult females	39.6	42.4	39.9	39.9	40.1	39.7	40.2	39.8	40.1	40.4
Junior females	39.4	36.8	39.2	40.0	39.0	38.0	39.4	38.3	39.2	38.6
AVERAGE HOURLY EARNINGS ($)										
Adult males	7.30	5.90	8.10	7.90	8.00	7.00	6.90	7.20	6.40	7.10
Junior males	4.30	3.10	3.80	4.20	4.70	3.70	3.70	3.90	3.30	3.80
Adult females	6.10	4.80	5.80	6.10	6.00	5.40	5.80	5.60	5.40	5.50
Junior females	4.10	3.30	3.80	3.20	4.40	3.90	4.20	4.00	3.60	3.70

	Non-manufacturing										
	Mining	*Electricity, gas and water*	*Construction*	*Wholesale trade*	*Retail trade*	*Transport and storage; communication*	*Finance, business services*	*Public administration, etc.*	*Other*	*Total non-manufacturing*	*Total all industries*
AVERAGE WEEKLY EARNINGS ($)											
Adult males	467.90	332.50	316.30	285.50	249.20	333.30	291.50	312.30	277.10	314.80	311.40
Junior males	231.50	176.30	171.20	139.00	137.80	169.00	160.70	165.50	148.40	155.00	151.40
Adult females	296.40	256.50	221.20	232.80	211.30	277.60	245.30	268.50	210.70	252.60	246.40
Junior females	226.60	171.30	153.50	142.80	129.90	169.70	151.60	165.50	135.20	147.60	147.20
AVERAGE WEEKLY HOURS PAID FOR											
Adult males	43.2	39.1	41.4	41.4	41.7	39.6	39.5	38.1	40.1	40.0	40.9
Junior males	39.3	38.2	39.7	39.8	40.8	38.2	39.4	36.6	41.0	39.7	39.2
Adult females	37.8	36.6	37.8	40.1	40.6	38.6	38.4	36.7	39.2	37.9	38.4
Junior females	38.9	36.8	37.1	39.3	39.8	38.1	38.2	36.6	40.0	38.5	38.5
AVERAGE HOURLY EARNINGS ($)											
Adult males	10.80	8.50	7.70	6.90	6.00	8.40	7.40	8.20	6.90	7.90	7.60
Junior males	5.90	4.60	4.30	3.50	3.40	4.40	4.10	4.50	3.60	3.90	3.90
Adult females	7.90	7.00	5.90	5.80	5.20	7.20	6.40	7.30	5.40	6.70	6.40
Junior females	5.80	4.70	4.10	3.60	3.30	4.50	4.00	4.50	3.40	3.80	3.80

Overtime

From July 1979 to June 1981 the ABS conducted a monthly sample survey of employers, by telephone, to obtain information about overtime hours worked by employees. In this two year period the survey did not show sufficient month-to-month variation to warrant the continuation of the survey as a monthly collection therefore, the survey, since August 1981, has been conducted quarterly, in August, November, February and May of each year. The survey is generally conducted in respect of the last pay period ending on or before the third Friday of each survey month.

A summary of the results of the surveys to August 1982 is shown in the tables below. More detailed information and explanatory notes are published in *Overtime, Australia* (6330.0).

	Average weekly overtime hours								
Month	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
PER EMPLOYEE IN THE SURVEY									
1981—									
August	1.63	1.39	1.60	1.04	1.48	1.02	1.99	0.80	1.46
November	1.64	1.59	1.65	1.10	1.90	1.19	1.85	0.81	1.57
1982—									
February	1.61	1.46	1.51	1.15	1.58	1.17	1.55	0.62	1.48
May	1.51	1.44	1.59	1.05	1.73	1.04	1.87	0.76	1.45
August	1.32	1.18	1.38	1.05	1.51	0.82	1.60	0.67	1.26
Standard error of August 1982 estimates	0.07	0.07	0.12	0.06	0.11	0.08	0.16	0.04	0.04
PER EMPLOYEE WORKING OVERTIME									
1981—									
August	6.89	6.97	7.01	5.64	7.91	6.45	8.77	6.91	6.91
November	6.96	7.40	7.11	6.07	8.50	6.96	8.09	6.96	7.18
1982—									
February	7.16	7.23	6.66	5.85	7.39	6.74	7.05	5.90	6.99
May	7.21	7.22	6.80	6.37	7.70	7.03	7.59	6.77	7.13
August	6.55	6.75	6.16	6.05	7.68	6.02	6.91	6.43	6.60
Standard error of August 1982 estimates	0.14	0.18	0.27	0.16	0.24	0.29	0.31	0.22	0.08
PROPORTION OF EMPLOYEES IN THE SURVEY WORKING OVERTIME (per cent)									
1981—									
August	23.66	19.91	22.81	18.45	18.74	15.80	22.66	11.52	21.14
November	23.57	21.42	23.17	18.20	22.35	17.04	22.83	11.67	21.92
1982—									
February	22.43	20.25	22.66	19.59	21.42	17.30	21.99	10.49	21.14
May	20.98	19.92	23.43	16.47	22.44	14.77	24.63	11.16	20.39
August	20.15	17.48	22.42	17.28	19.69	13.65	23.18	10.35	19.09
Standard error of August 1982 estimates	0.87	0.77	1.05	0.84	1.01	0.77	1.75	0.81	0.53

Weekly earnings of employees (distribution) August 1981

In August 1981 a survey based on the population survey (*see* the section *The Population Survey* earlier in this chapter) was conducted throughout Australia in order to obtain information about weekly earnings of all persons aged 15 years and over who were employed as wage or salary earners in their main job.

Some results on weekly earnings of wage and salary earners are presented below. Additional details are published in *Weekly Earnings of Employees (Distribution), Australia, August 1981* (6310.0).

In many cases the answer to the question on earnings was based on the knowledge of one person, generally the housewife. Some understatement in the estimates may be expected because of imperfect recall of minor or irregular sources of earnings.

Definitions

Weekly earnings refers to gross weekly wages and salaries from all jobs (i.e. before taxation and other deductions have been made). For persons paid other than weekly, earnings were converted to a weekly equivalent.

Median weekly earnings is the amount which divides the distribution of individuals into two equal groups, one having earnings above the median and the other having earnings below it. Medians were calculated from grouped data with linear interpolation being used within the class interval in which the median fell.

Mean weekly earnings is the amount obtained by dividing the total earnings of a group by the number of units in that group.

Full-time workers are those who usually work 35 hours a week or more and others who, although usually part-time workers, worked 35 hours or more during the survey week.

Part-time workers are those who usually work less than 35 hours a week and who did so during the survey week. When recording hours of work, fractions of an hour were disregarded.

Reliability of estimates

Since the estimates from this survey are based on information obtained from the occupants of a sample of dwellings, they may differ from the figures that would have been produced if the information had been obtained from occupants of all dwellings. One measure of the likely difference is given by the *standard error*.

The following estimates have not been shown as they are subject to sampling variability too high (more than approximately 20 per cent) for most practical uses; less than 4,500 for Australia, New South Wales and Victoria; less than 3,500 for Queensland; less than 2,500 for South Australia and Western Australia; less than 1,500 for Tasmania; and less than 2,000 for the Northern Territory and the Australian Capital Territory.

Means and medians are also subject to sampling variability. Standard errors vary according to the size and distribution of the population for which the mean and median have been obtained. Standard errors of means and medians in the tables below could generally be expected to be below 6 per cent. For populations of 100,000, the standard errors of the means and median would both be about 2 per cent.

FULL-TIME EMPLOYEES: WEEKLY EARNINGS IN ALL JOBS AND AGE, AUSTRALIA, AUGUST 1981

	Age group (years)								
	15–19	*20–24*	*25–34*	*35–44*	*45–54*	*55–59*	*60 and over*	*Total 20 and over*	*Total*
MALES									
Weekly earnings ($)—				—'000—					
Under 110	73.2	10.4	11.0	9.9	7.5			43.0	116.1
110 and under 120	26.1	*	6.5	5.9	*	7.1	6.6	11.6	37.7
120 „ „ 130	26.5	6.6						20.3	46.8
130 „ „ 140	23.1	7.5	5.2	6.3	5.2			19.8	42.9
140 „ „ 150	20.9	7.0	8.4					24.7	45.6
150 „ „ 160	18.0	15.8	12.0	6.9	6.4	9.8	7.0	44.8	62.7
160 „ „ 170	16.8	15.8	10.2	7.9	8.8			47.6	64.4
170 „ „ 180	11.6	19.0	16.5	10.2	10.7			64.8	76.4
180 „ „ 190	12.1	23.4	20.5	12.8	12.3	6.0	5.0	80.1	92.2
190 „ „ 200	10.4	27.4	30.0	17.2	18.8	8.7	5.9	108.1	118.5
200 „ „ 210	13.0	47.5	48.8	40.3	37.8	18.5	10.5	203.3	216.3
210 „ „ 220	6.3	32.8	42.4	24.5	28.1	12.2	8.1	148.1	154.3
220 „ „ 230	5.1	33.8	45.7	32.2	28.2	13.5	7.5	160.9	166.0
230 „ „ 240	4.8	25.6	42.0	26.8	28.2	12.6	5.8	140.9	143.2
240 „ „ 250		23.1	43.5	32.8	29.0	11.1	7.1	146.7	149.1
250 „ „ 260	4.7	24.6	56.6	37.1	30.5	13.8	7.4	170.0	172.8
260 „ „ 280		29.8	73.5	42.2	34.9	15.1	8.5	204.1	205.9
280 „ „ 300	4.8	26.9	68.1	45.3	36.2	11.4	5.5	193.4	195.1
300 „ „ 320		20.4	73.3	48.7	33.3	12.6	5.0	193.4	194.8
320 „ „ 340		14.8	48.2	33.2	23.0	9.6	*	133.0	134.2
340 „ „ 360		9.7	41.2	33.7	20.0	9.0	4.7	118.3	118.8
360 „ „ 380	*	6.2	29.8	27.8	17.4	6.2	5.5	90.4	91.1
380 „ „ 400	*	5.6	28.3	27.5	13.7	5.6		83.1	83.4
400 „ „ 450	*	5.2	46.1	46.9	28.0	6.9	4.7	136.2	136.7
450 „ „ 500	*	5.0	22.0	32.7	19.2	7.3		87.9	89.1
500 „ „ 550	*	*	17.8	22.2	14.0	4.7	*	61.6	61.6
550 and over	*	6.5	34.9	39.1	30.7	15.2	6.2	132.6	133.6
Total	**281.1**	**456.1**	**882.8**	**670.2**	**526.2**	**217.0**	**116.2**	**2,868.5**	**3,149.6**
				—dollars—					
Median earnings	136	223	271	290	264	257	242	260	252
Mean earnings	149	239	293	314	298	295	270	289	277
Standard error of mean	1.80	2.30	2.00	2.50	2.70	4.10	5.10	1.10	1.00
FEMALES									
Weekly earnings ($)—				—'000—					
Under 110	53.7	5.6	6.9	6.0	4.9			25.8	79.5
110 and under 120	19.8	*	5.7	5.3	*	7.6	5.0	9.0	28.9
120 „ „ 130	28.2	5.4						14.6	42.9
130 „ „ 140	19.6	9.5	11.3	6.4	4.8			18.7	38.3
140 „ „ 150	20.9	8.7						24.7	45.6
150 „ „ 160	17.2	18.5	10.5	9.6	5.7			45.9	63.1
160 „ „ 170	12.0	15.0	11.1	10.8	7.2			46.7	58.7
170 „ „ 180	8.5	23.4	15.4	16.4	10.2	6.1		70.2	78.6
180 „ „ 190	6.5	24.4	13.3	13.8	12.2			67.2	73.7
190 „ „ 200	*	30.4	16.2	13.8	12.3	8.6	5.7	78.6	82.6
200 „ „ 210	5.5	38.4	28.1	21.1	16.6			109.7	115.2
210 „ „ 220	5.4	27.2	26.1	15.3	10.3	9.7		84.6	87.6
220 „ „ 230		20.7	19.8	10.6	10.7			68.5	71.0
230 „ „ 240	7.2	18.2	17.4	10.5	7.2	5.0	5.1	56.9	57.9
240 „ „ 250		12.6	15.8	12.6	12.7			56.7	57.9
250 „ „ 260		14.3	22.1	9.7	6.4	7.6		54.8	55.9
260 „ „ 280		15.6	26.9	13.2	7.0			66.6	67.4
280 „ „ 300		13.1	21.1	10.5	5.2			53.3	54.0
300 and over		19.5	68.4	42.6	23.9	6.3		162.5	164.9
Total	**208.4**	**323.4**	**335.9**	**228.2**	**160.8**	**50.9**	**15.9**	**1,115.0**	**1,323.4**
				—dollars—					
Median earnings	131	205	232	217	213	218	210	215	206
Mean earnings	140	213	247	240	231	231	216	232	218
Standard error of mean	2.00	2.40	2.70	3.20	3.70	6.60	11.00	1.40	1.20

* Subject to sampling variability too high for most practical uses.

INCOME DISTRIBUTION SURVEYS

A survey of annual income in respect of 1978-79 was conducted throughout Australia in the period September to December 1979 in order to obtain information about income of individuals, unemployed persons, income units and families. Some results of this survey were published in the 1981 and 1982 issues of the Year Book. Additional details are published in *Income Distribution, Australia, 1978-79: Unemployed Persons* (6521.0); *Individuals* (6502.0); *Income Units* (6523.0) and *Supplementary Tables* (6504.0), the last of which contains tables for individuals, income units and families.

Similar surveys were conducted in November 1969 and November 1974 in respect of 1968-69 and 1973-74. Results were published in *Income Distribution, 1968-69, Consolidated* and *Revised Edition* (6505.0); *Income Distribution, 1973-74 Part 1* (6502.0) individuals, *Part 2* (6503.0) families and *Part 3* (6504.0) individuals, families and income units.

Questions were asked in respect of each person aged 15 years or over, except those attending school full-time, on the amount of income received in 1978–79 from each of the following sources: wages or salary; own business, profession, farm, etc. (net income); share in a partnership (net income); government social security and welfare cash benefits; superannuation; interest, dividends, rent, etc.; other sources.

Although some respondents referred to personal records, in many cases answers were based on memory. Some understatement in the estimates may be expected because of imperfect recall, particularly of minor or irregular sources of income, or because of misunderstanding of the questions.

Definitions

Total income is the sum of income received from each of the sources listed above.

Median income is the amount which divides the distribution into two equal groups, one having incomes above the median and the other having incomes below it. Medians were calculated from grouped data with linear interpolation being used within the class interval in which the median fell.

Mean income is the amount obtained by dividing the total income of a group by the number in that group.

A *family* consists of two or more persons living in the same household, the head of the family and spouse (if any) and any person(s) related to them either by blood, marriage (including de facto relationships) or adoption.

Married couple income units consist of a husband, wife and dependent children (if any), as defined.

One parent income units consist of a parent and at least one dependent child; they cannot include a married couple.

One person income units consist of persons not included in units defined in the above paragraphs. Non-dependent children living with their parents are classed as one person income units.

Dependent children are all unmarried persons living with their parent(s) and either under 15 years of age, or full-time students aged 15-20 years whose earned income in 1978-79 was less than $1,600.

Reliability of the estimates

Since the estimates are based on information from occupants of a sample of dwellings, they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the *standard error* (for definition *see* page 185). All estimates in the tables below have standard errors of less than 20 per cent. An estimate of 100,000 persons or income units would have a standard error of approximately 5.5 per cent. Standard errors of the medians and means are less than 1 per cent.

ALL INCOME RECIPIENTS: TOTAL INCOME AND PRINCIPAL SOURCE OF INCOME, AUSTRALIA, 1978–79

	Wages or salary	*Own business, farm, profession, etc.*	*Share in partnership*	*Government social security and welfare cash benefits*	*Interest, dividends, rent, etc.*	*Superannuation*	*Other*	*Total*
				MALES				
				—'000—				
Total income($)—								
1 and under 3,000	149.1	11.2	19.7	445.7	32.0			665.9
3,000 „ „ 3,500	36.0	6.6	12.1	107.7				168.3
3,500 „ „ 4,000	44.8	*	18.6	50.5	11.0	7.6	13.6	124.0
4,000 „ „ 4,500	46.8	6.6	16.9	32.3				108.4
4,500 „ „ 5,000	40.0	*	14.2	26.7				92.8
5,000 „ „ 6,000	107.1	19.8	38.0	37.5				225.7
6,000 „ „ 7,000	117.6	17.9	34.5	10.0	18.6	23.5	9.3	192.6
7,000 „ „ 8,000	172.3	20.2	32.7	7.3				247.9
8,000 „ „ 9,000	248.4	20.8	31.8	*				319.4
9,000 „ „ 10,000	301.9	11.4	22.7	*	14.1	22.2		344.2
10,000 „ „ 11,000	328.6	29.0	26.8	*				397.3
11,000 „ „ 12,000	274.9	14.6	14.6	*				310.3
12,000 „ „ 13,000	281.3	16.1	18.3	*				320.6
13,000 „ „ 14,000	214.8	9.6	12.9	*				241.6
14,000 „ „ 15,000	183.5	8.9	8.1	*				205.2
15,000 „ „ 16,000	140.5	12.6	16.1	*			7.2	170.5
16,000 „ „ 18,000	213.4	12.3	118.0	*				248.0
18,000 „ „ 20,000	124.7	7.8	6.8	*	14.0	11.9		141.2
20,000 „ „ 25,000	131.5	12.3	17.7	*				164.8
25,000 „ „ 30,000	36.8	6.1	*	*				49.4
30,000 „ „ 40,000	23.5	9.7	6.9	*				42.7
40,000 and over	9.5	13.2	6.6	*				29.9
Total	**3,227.0**	**277.0**	**399.2**	**722.8**	**89.6**	**65.2**	**30.1**	**4,810.9**
				—dollars—				
Median income	11,070	10,350	8,370	2,780	5,170	8,270	5,290	9,740
Mean income	11,570	13,580	10,560	3,040	6,910	9,310	6,270	10,170

ALL INCOME RECIPIENTS: TOTAL INCOME AND PRINCIPAL SOURCE OF INCOME, AUSTRALIA, 1978–79—*continued*

	Wages or salary	*Own business, farm, profession, etc.*	*Share in partnership*	*Government social security and welfare cash benefits*	*Interest, dividends, rent, etc.*	*Superannuation*	*Other*	*Total*
				FEMALES				
				—'000—				
Total income($)—								
1 and under 2,000	195.5	6.4	10.9	982.9	173.3	*	17.7	1,381.1
2,000 „ „ 2,500	67.2	6.8	7.4	226.2	12.6			320.6
2,500 „ „ 3,000	80.3		9.0	385.5	10.7			491.4
3,000 „ „ 3,500	76.9	6.9	18.6	216.9	11.3			329.6
3,500 „ „ 4,000	68.4		11.6	91.0	6.6			183.1
4,000 „ „ 4,500	87.3	10.6	19.1	56.3	9.9	13.0	12.3	180.1
4,500 „ „ 5,000	79.2		15.3	37.7	7.7			144.7
5,000 „ „ 6,000	152.8		33.9	40.7	12.9			252.5
6,000 „ „ 7,000	176.0	8.2	27.3	20.1	10.1			245.5
7,000 „ „ 8,000	183.4		27.4					234.2
8,000 „ „ 9,000	219.3	6.6	23.8	7.5	21.3			262.6
9,000 „ „ 10,000	185.9		16.3					209.2
10,000 „ „ 11,000	133.7	9.2	19.5	*	10.5	10.1	7.6	163.0
11,000 „ „ 12,000	86.2		11.8	*				104.7
12,000 „ „ 13,000	56.2		13.2	*				74.1
13,000 „ „ 14,000	39.4		6.9	*				49.3
14,000 „ „ 15,000	28.8		8.8	*				40.2
15,000 „ „ 16,000	21.3		6.8	*				33.0
16,000 „ „ 18,000	20.7	8.2	9.7	*	9.1			34.4
18,000 „ „ 20,000	10.5		*	*				16.6
20,000 and over	10.4		12.2	*				29.9
Total	**1,979.4**	**62.9**	**313.2**	**2,066.4**	**296.1**	**24.0**	**37.6**	**4,779.6**
				—dollars—				
Median income	7,030	6,150	7,130	2,100	1,190	6,600	3,210	3,300
Mean income	7,050	8,170	8,640	1,980	3,210	6,880	4,830	4,720

ALL INCOME UNITS: TOTAL INCOME, TYPE OF INCOME UNIT AND NUMBER OF DEPENDENT CHILDREN, AUSTRALIA, 1978–79

	Married couple income units						*One parent income units*				
	With dependent children										
	No dependent children	*One dependent child*	*Two dependent children*	*Three or more dependent children*	*Total with dependent children*	*Total married couple income units*	*One dependent child*	*Two or more dependent children*	*Total*	*One person income units*	*All income units*
	— '000 —										
Total income ($)—											
Nil	6.2	*	*	*	*	6.2	*	*	*	34.7	41.6
1 and under 2,000	8.7	*	8.4	6.0	19.5	28.2	*	*	9.2	161.4	198.8
2,000 „ „ 3,000	22.9				*	27.4	6.9	*	9.4	520.8	557.7
3,000 „ „ 4,000	17.7	14.8	10.8	7.2	10.3	28.0	26.1	8.6	34.7	402.2	464.8
4,000 „ „ 5,000	159.2				17.9	177.1	14.8	30.5	45.4	195.7	418.2
5,000 „ „ 6,000	113.5	16.7	12.3	6.5	35.5	149.0	6.4	23.4	29.8	178.2	357.0
6,000 „ „ 7,000	78.5	15.4	11.4	11.9	38.6	117.1	*	9.3	14.5	169.3	300.9
7,000 „ „ 8,000	47.8	16.1	17.7	16.1	49.9	97.7	6.4	7.3	10.7	176.5	284.8
8,000 „ „ 9,000	59.3	24.2	29.9	18.6	72.7	132.0	7.3		10.4	200.1	342.5
9,000 „ „ 10,000	63.3	24.7	28.2	18.0	70.9	134.3	6.5	6.3	10.4	167.6	312.3
10,000 „ „ 11,000	71.5	40.9	49.1	25.9	115.8	187.4	7.7		10.1	151.4	348.8
11,000 „ „ 12,000	57.8	33.1	47.9	32.9	113.9	171.7				101.8	278.0
12,000 „ „ 13,000	61.9	39.3	52.3	35.9	127.5	189.4	7.7	*	13.0	82.3	276.7
13,000 „ „ 14,000	51.0	33.2	53.6	29.6	116.5	167.5				57.9	228.9
14,000 „ „ 15,000	52.6	35.2	36.4	31.2	102.8	155.5				44.3	203.4
15,000 „ „ 16,000	57.5	38.4	50.6	38.0	127.0	184.5				37.1	225.2
							6.1	7.9	14.0		
16,000 „ „ 18,000	114.1	52.2	88.0	56.8	197.1	311.2				39.2	352.8
18,000 „ „ 20,000	110.8	47.2	65.8	49.5	162.5	273.3				18.9	296.5
20,000 „ „ 25,000	180.9	77.3	115.2	74.5	267.0	447.9				19.4	470.3
25,000 „ „ 30,000	82.3	27.3	36.4	30.3	94.0	176.4					182.2
30,000 „ „ 40,000	38.9	21.9	27.5	25.7	75.1	114.0	*	*	6.3	14.9	121.1
40,000 and over	23.2	10.3	14.9	9.6	34.8	58.0					63.4
Total	**1,479.9**	**573.1**	**756.5**	**524.3**	**1,853.9**	**3,333.8**	**109.4**	**109.3**	**218.7**	**2,773.5**	**6,325.9**
	— dollars —										
Median total income	12,540	14,660	15,400	15,590	15,240	14,350	5,350	5,330	5,330	5,400	9,610
Mean total income	14,150	15,940	16,760	17,010	16,580	15,500	7,270	7,370	7,320	6,590	11,310

* Subject to sampling variability too high for most practical uses.

ALL FAMILIES AND NON-FAMILY MEMBERS: FAMILY INCOME AND FAMILY SIZE AUSTRALIA, 1978–79

	Non-family members(a)	*Number in family* 2	3	4	5	6 and over	*All families*	*Total non-family members and families*
				—'000 families—				
Total family income ($)—								
Under 2,000	86.4	15.7	6.8	7.2	*		37.7	124.2
2,000 and under 4,000	484.9	65.6	10.0	6.2	7.5	10.7	85.8	570.7
4,000 „ „ 5,000	75.6	150.1	29.5	8.5			193.5	269.1
5,000 „ „ 6,000	70.3	121.9	26.5	16.4	7.1		174.4	244.7
6,000 „ „ 7,000	65.8	85.8	21.0	14.4	8.8		134.2	200.0
7,000 „ „ 8,000	74.1	48.4	23.2	17.6	6.7	8.3	104.3	178.4
8,000 „ „ 9,000	95.7	60.6	30.7	29.8	8.9	8.6	138.7	234.4
9,000 „ „ 10,000	77.8	54.0	30.9	30.7	12.2	7.8	135.6	213.4
10,000 „ „ 11,000	85.8	63.4	39.1	48.5	21.0	7.2	179.2	264.9
11,000 „ „ 12,000	66.9	54.7	33.8	44.6	22.8	12.0	167.8	234.7
12,000 „ „ 13,000	48.6	53.8	42.2	56.4	24.2	10.6	187.2	235.8
13,000 „ „ 14,000	35.2	46.8	36.5	54.2	19.3	11.9	168.6	203.7
14,000 „ „ 15,000	32.1	48.8	35.8	43.6	25.1	11.6	164.9	197.0
15,000 „ „ 16,000	25.9	48.0	41.3	50.2	27.0	14.2	180.7	206.5
16,000 „ „ 18,000	28.0	94.7	58.8	90.9	50.1	19.8	314.4	342.4
18,000 „ „ 20,000	12.1	95.0	59.7	75.2	41.3	21.3	292.5	304.7
20,000 „ „ 25,000	13.9	157.2	103.3	149.6	73.9	37.1	521.0	534.9
25,000 „ „ 30,000		74.6	51.3	64.0	45.0	24.7	259.6	263.6
30,000 „ „ 35,000		21.1	28.5	44.4	34.3	12.5	140.9	143.9
35,000 „ „ 40,000		12.3	13.8	18.2	9.0	12.4	65.5	66.4
40,000 „ „ 50,000	11.0	9.0	6.3	13.0	9.9	11.5	49.6	50.5
50,000 and over		6.1	9.7	11.7	8.7	*	41.1	43.3
Total	**1,390.2**	**1,387.4**	**738.5**	**895.3**	**468.6**	**247.2**	**3,736.9**	**5,127.2**
				—dollars—				
Median family income	5,680	11,430	15,080	16,420	17,510	18,070	14,980	12,120
Mean family income	7,070	13,280	16,650	18,270	19,730	20,510	16,430	13,890

(a) Comprises persons who were not married and had no dependent children and who either lived alone or with other persons with whom they are not related.

INDUSTRIAL DISPUTES

The tables in this section refer to disputes involving stoppages of work of ten man-days or more: statistics of persons affected at establishments other than those at which the stoppages occurred are *not* included.

The statistics are compiled according to the Australian Standard Industrial Classification (ASIC), described in the ABS publication *Australian Standard Industrial Classification*, 1978, Vol. 1 (1201.0). Prior to 1980 the statistics were compiled using the Preliminary Edition, 1969.

Detailed information, including explanatory notes, definitions, etc. on industrial disputes involving stoppages of work, is given in the annual publication *Labour Statistics, Australia* (6101.0). A table showing statistics of industrial disputes for each year from 1913 is contained in the Appendix to *Labour Report* No. 58, 1973. Current statistics are published in the monthly publication *Industrial Disputes, Australia* (6321.0). Quarterly and annual figures are published in *Industrial Disputes, Australia* (6322.0).

The annual figures contained in tables on this page and pages 199, 200 and 202 relate to disputes *in progress* in the year, whilst figures in tables on page 201 relate only to disputes which *ended* in the reference year.

INDUSTRIAL DISPUTES: INDUSTRIES, 1976 TO 1981

	Mining		*Manufacturing*			*Transport and storage; Communication*			
Year	*Coal*	*Other*	*Metal products, machinery and equipment*	*Other*	*Construction*	*Stevedoring services*	*Other*	*Other industries (a)*	*All industries*
				NUMBER OF DISPUTES					
1976(*b*)	172	203	510	341	302	139	179	209	2,055
1977	247	194	501	361	258	85	203	241	2,090
1978	287	238	584	355	178	161	192	282	2,277
1979	256	221	598	266	136	94	176	295	2,042
1980	260	353	709	240	186	116	204	361	2,429
1981	354	332	950	285	247	94	269	384	2,915
				WORKERS INVOLVED (DIRECTLY AND INDIRECTLY) ('000)					
1976(*b*)	65.7	73.4	484.4	426.2	264.8	35.4	294.7	545.5	2,189.9
1977(*c*)	48.2	31.4	111.3	101.9	51.5	19.2	105.1	127.6	596.2
1978	52.3	45.3	465.3	163.9	57.1	65.2	100.0	126.3	1,075.6
1979	107.9	58.2	395.6	276.3	134.4	48.4	201.6	639.1	1,862.9
1980	79.7	49.6	322.1	153.0	60.0	35.5	100.8	372.1	1,172.8
1981	98.8	60.0	322.4	207.6	136.2	30.9	130.9	265.0	1,251.8
				WORKING DAYS LOST ('000)					
1976(*b*)	159.1	215.0	775.0	856.5	535.8	37.1	388.0	832.6	3,799.2
1977(*c*)	102.8	170.9	204.4	455.7	215.2	39.9	172.6	293.3	1,654.8
1978	142.3	125.1	732.1	490.2	134.1	122.9	166.9	217.2	2,130.8
1979	232.6	283.6	929.7	749.0	359.7	114.3	435.8	859.7	3,964.4
1980	710.7	197.7	615.9	728.4	217.9	73.4	142.5	633.7	3,320.2
1981	318.3	307.4	1,221.5	654.1	441.9	59.3	406.2	783.3	4,192.2
				ESTIMATED LOSS IN WAGES ($'000)					
1976(*b*)	6,165	7,780	22,235	23,866	18,659	1,003	11,573	23,271	114,552
1977(*c*)	4,591	7,300	6,906	14,714	8,218	1,307	6,386	10,252	59,674
1978	7,228	5,513	24,988	17,396	5,345	4,331	5,806	7,796	78,404
1979	10,370	12,634	32,860	26,993	13,700	4,266	15,791	32,000	148,614
1980	39,270	10,287	25,804	31,087	10,898	2,970	5,883	25,823	152,022
1981	21,321	19,366	60,576	34,658	25,312	3,188	19,044	38,315	221,779

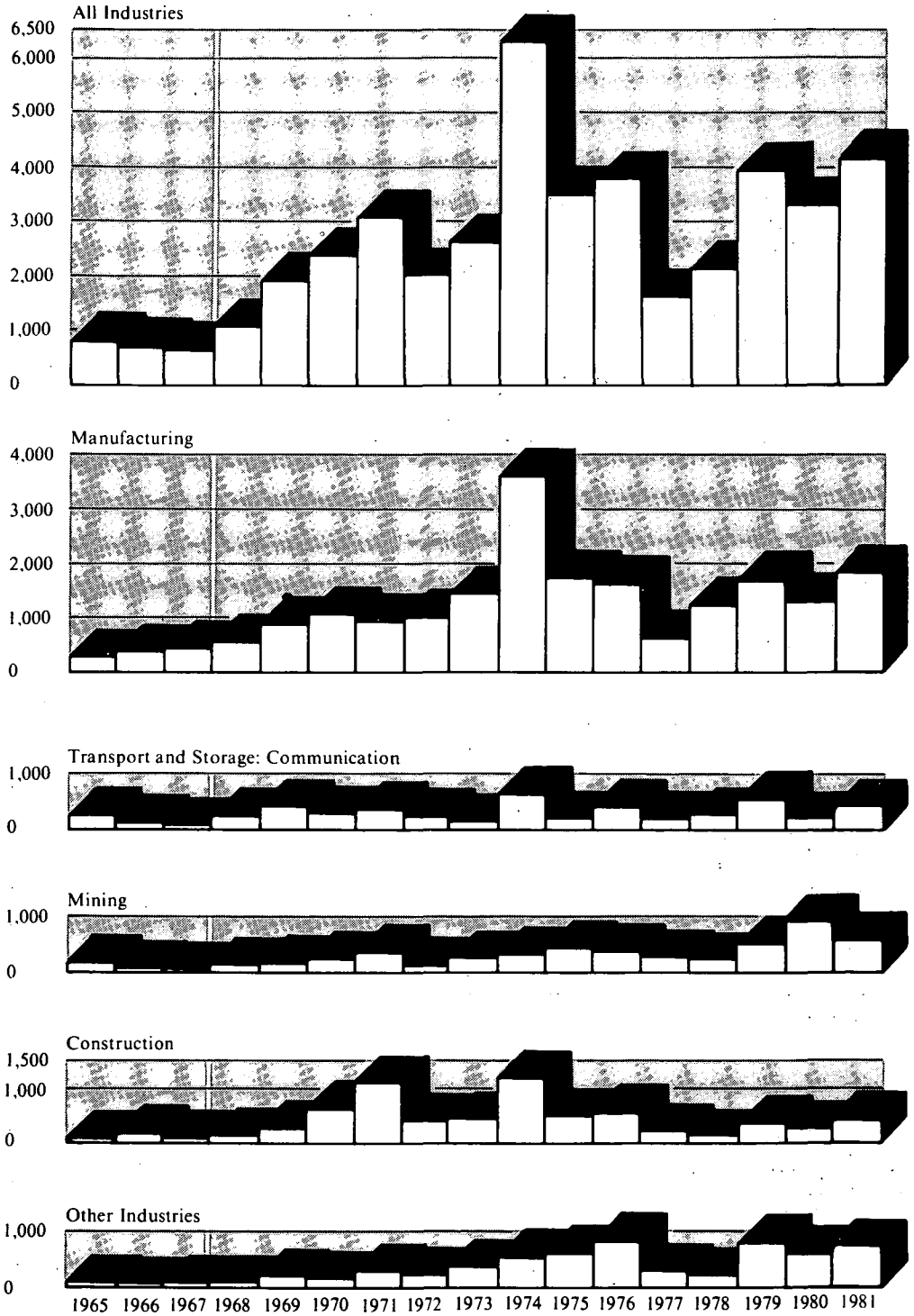
(*a*) ASIC divisions A, D, F, I to L. (*b*) Includes Medibank stoppages in June and July which involved an estimated 1,570,000 workers and resulted in a loss of 2,060,000 working days and $59,060,000 in wages. (*c*) Excludes an estimated 150,000 Victorian workers stood down as a result of the electricity supply dispute in October in that State (but at establishments other than those at which the stoppage occurred). These workers lost an estimated 2.1 million working days.

INDUSTRIAL DISPUTES: WORKING DAYS LOST, INDUSTRIES ('000)

ASIC division	*ASIC industry*	*1979*	*1980*	*1981*
A	Agriculture, forestry, fishing and hunting	54.5	4.5	21.0
B	Mining	516.2	908.5	625.8
	Coal mining	232.6	710.7	318.3
	Other mining	283.6	197.7	307.4
C	Manufacturing	1,678.7	1,344.3	1,875.7
	Food, beverages and tobacco	379.8	494.9	198.5
	Textiles; clothing and footwear	70.7	11.4	67.9
	Textiles	23.5	3.7	15.6
	Clothing and footwear	47.3	7.7	52.4
	Wood, wood products and furniture	45.7	6.3	14.5
	Paper and paper products, printing and publishing	90.7	109.9	240.1
	Chemical, petroleum and coal products	85.6	58.9	40.0
	Metal products, machinery and equipment	929.7	615.9	1,221.5
	Basic metal products	208.2	156.4	273.5
	Fabricated metal products	171.1	74.8	138.3
	Transport equipment	272.9	264.4	523.6
	Other machinery and equipment	277.6	120.3	286.1
	Other manufacturing	76.4	47.1	93.1
	Non-metallic mineral products	33.6	18.3	53.2
	Miscellaneous manufacturing	42.8	28.8	39.9
D	Electricity, gas and water	99.7	98.6	105.9
	Electricity and gas	77.7	58.8	83.4
	Water, sewerage and drainage	21.9	39.8	22.4
E	Construction	359.7	217.9	441.9
F	Wholesale and retail trade	207.2	184.5	158.2
	Wholesale trade	85.5	106.1	93.6
	Retail trade	121.7	78.4	64.6
G,H	Transport and storage; communication	550.1	215.9	465.5
	Railway transport; Air transport	223.5	103.3	109.6
	Railway transport	146.2	84.5	38.1
	Air transport	77.3	18.9	71.5
	Water transport	123.3	85.1	90.9
	Stevedoring services	114.3	73.4	59.3
	Water transport (except stevedoring services)	9.0	11.7	31.6
	Road transport; other transport and storage; communication	203.3	27.5	264.9
	Road transport	105.3	20.3	152.9
	Other transport and storage; communication	98.0	3.4	112.1
I	Finance, insurance, real estate and business services	70.6	12.1	13.1
J,K	Public administration and defence; community services	328.7	236.0	383.2
	Health	65.9	9.6	32.7
	Education, libraries, museums and art galleries	154.7	81.4	183.0
	Other	108.1	144.9	167.5
L	Entertainment, recreation, restaurants, hotels and personal services	99.1	98.0	102.0
	Total	**3,964.4**	**3320.2**	**4,192.2**

INDUSTRIAL DISPUTES: AUSTRALIA

Working Days Lost—Industries



Note: A break exists in the series between 1967 and 1968 due to the adoption of the Australian Standard Industrial Classification (ASIC).

PLATE 34

The following table shows, for the years 1979 to 1981, working days lost in industrial disputes which ended in those years, classified according to duration, causes and methods of settlement. Causes (i.e. the direct causes of stoppages of work) are grouped as follows:

Wages—claims involving general principles relating to wages, including combined claims relating to wages, hours or conditions of work. *Hours of work*—claims involving general principles relating to hours of work. *Leave, pensions, compensation provisions, etc.*—claims involving general principles relating to these provisions. *Managerial policy*—disputes concerning managerial policy of employers including computation of wages, hours, leave, etc. in individual cases; docking pay, etc.; dismissals, etc.; principles of promotion, etc.; employment of particular persons and personal disagreements; production limitations, etc. *Physical working conditions*—disputes concerning physical working conditions including safety issues; protective clothing and equipment, etc.; amenities; shortage of, or condition of, equipment or material; new production methods, etc.; arduous physical tasks, etc. *Trade unionism*—disputes concerning employment of non-unionists; inter-union and intra-union disputes; sympathy stoppages; recognition of union activities, etc. *Other*—disputes concerning protests directed against persons or situations other than those dealing with employer-employee relationship; non-award public holidays; accidents and funerals; no reason given for stoppage; etc.

INDUSTRIAL DISPUTES: DURATION, CAUSES AND METHODS OF SETTLEMENT, WORKING DAYS LOST, 1979 TO 1981(*a*)

('000)

	1979	*1980*	*1981*
DURATION			
Up to 1 day	1,096.8	228.6	293.0
Over 1 to 2 days	275.7	713.7	295.9
Over 2 to 3 days	188.7	204.4	530.8
Over 3 to less than 5 days	1,002.4	242.1	674.7
5 to less than 10 days	495.6	407.7	1,131.5
10 to less than 20 days	554.9	447.6	926.3
20 to less than 40 days	247.8	500.2	438.5
40 days and over	52.3	318.0	136.7
Total	**3,887.1**	**3,062.4**	**4,427.4**
CAUSES(*b*)			
Wages	2,041.8	1,101.8	2,066.9
Hours of work	114.7	230.6	1,099.1
Leave, pensions, compensation provisions, etc.	16.9	463.0	278.3
Managerial policy	502.3	701.8	687.8
Physical working conditions	151.7	167.1	176.5
Trade unionism	98.0	103.4	87.4
Other	961.8	294.6	31.3
Total	**3,887.1**	**3,062.4**	**4,427.4**
METHODS OF SETTLEMENT(*c*)			
Negotiation	643.8	788.6	701.5
Mediation	28.0	25.0	9.5
State legislation—			
Under State conciliation, etc., legislation	179.2	255.5	323.8
Intervention, etc. of State Government officials	0.6	-	2.4
Federal and joint Federal State legislation (*d*)	277.2	140.4	1,343.7
Filling the places of workers on strike or locked out	-	-	0.9
Closing down the establishment permanently	0.5	8.3	9.8
Resumption without negotiation	2,757.4	244.1	2,003.2
Other methods	0.5	-	32.7
Total	**3,887.1**	**3,062.4**	**4,427.4**

(*a*) Refers to disputes which ended in the year. *See* page 198. (*b*) For nature of classification, *see* text above. (*c*) Method directly responsible for ending the stoppage of work. (*d*) Includes Industrial Tribunals under (i) Conciliation and Arbitration Act, (ii) Coal Industry Acts, (iii) Stevedoring Act, (iv) Other Acts, and intervention, etc. of Federal government officials.

The following table shows the number of working days lost per 1,000 employees in the years 1976 to 1981. For classification of causes *see* grouping on page 201. The figures to 1979 are based on estimates of employees as published in *Civilian Employees, Australia* (6213.0). As this series was suspended from April 1980, estimates from 1980 have been calculated by using estimates of employees from the labour force survey. For purposes of comparison, figures for 1979 have been shown on both bases.

INDUSTRIAL DISPUTES: WORKING DAYS LOST PER 1,000 EMPLOYEES

	1976	*1977*	*1978*	*1979*	*1979(a)*	*1980(a)*	*1981(a)*
All causes	773	336	434	787	788	650	800
All causes excluding those not involving employer/employee relationship	344	323	387	594	594	592	794

(*a*) Based on estimates from the labour force survey.

INDUSTRIAL ACCIDENTS

Statistics of industrial accidents and diseases and workers' compensation are currently available only on a State basis and are included in the various State Year Books and publications. Some work to develop a collection including national totals and estimates on a uniform basis throughout the States began in 1978 and is continuing. Work is proceeding with respect to improving coverage, especially under jurisdictions other than the principal Workers' Compensation Act in each State.

LABOUR ORGANISATIONS

Labour organisations in Australia

Trade unions

For the purpose of these statistics a *trade union* is defined as an organisation, consisting predominantly of employees, whose principal activities include the negotiation of rates of pay and conditions of employment for its members. Returns showing membership by States and Territories at 31 December each year are obtained for all trade unions and employee organisations. Results of this collection are published in the annual bulletin *Trade Union Statistics, Australia* (6323.0). The following table shows the position at the end of each of the years 1976 to 1981. Some of the figures shown have been revised; for a more detailed explanation of the revisions, see *Trade Union Statistics, Australia, December 1981* (6323.0).

TRADE UNIONS: NUMBER, MEMBERSHIP AND PROPORTION OF TOTAL EMPLOYEES

End of December—	*Number of separate unions(a)*	*Number of members ('000)*		*Proportion of total employees (per cent)*
		Males	*Females*	
1976	322	1,956.8	843.3	55
1977	324	1,940.6	857.4	55
1978	330	1,969.2	861.5	56
1979	328	1,971.4	902.2	56
1979	328	1,971.4	902.2	56 (*b*)
1980	325	2,009.5	946.3	56 (*b*)
1981	324	2,029.4	964.7	56 (*b*)

(*a*) Without inter-State duplication. (*b*) Based on estimates from the labour force survey, *see* below.

In the table above the approximate percentages of wage and salary earners in employment who were members of trade unions are shown. The estimates of employees have been derived by adding figures for employees in agriculture and in private households employing staff to the estimates of employees in all other industries as at the end of each year. Estimates of the proportion of total employees for 1976 to 1979 are based on estimates of employees as published in *Civilian Employees, Australia* (6213.0). As this series was suspended as from April 1980 the proportions of total employees shown from December 1980 have been calculated by using estimates of employees from the labour force survey. For purposes of comparison figures for December 1979 have been shown on both bases. The percentages shown should be regarded as giving only a broad indication of the extent of union membership among wage and salary earners because they are based on estimates of *employed* wage and salary earners which are subject to revision and because the degree of unemployment of reported union members will affect the percentages for a particular year and comparison over time.

TRADE UNIONS: CLASSIFICATION ACCORDING TO NUMBER OF MEMBERS, 1981

Number of members	Separate unions		Members	
	Number	Proportion of total (per cent)	Number ('000)	Proportion of total (per cent)
Under 100	36	11.1	1.7	0.1
100 and under 250	46	14.2	7.3	0.2
250 „ „ 500	26	8.0	9.8	0.3
500 „ „ 1,000	48	14.8	33.4	1.1
1,000 „ „ 2,000	45	13.9	64.3	2.1
2,000 „ „ 5,000	38	11.7	129.0	4.3
5,000 „ „ 10,000	22	6.8	156.1	5.2
10,000 „ „ 20,000	20	6.2	287.4	9.6
20,000 „ „ 30,000	12	3.7	280.2	9.4
30,000 „ „ 40,000	9	2.8	316.5	10.6
40,000 „ „ 50,000	7	2.2	329.2	11.0
50,000 „ „ 80,000	8	2.5	531.6	17.8
80,000 and over	7	2.2	847.4	28.3
Total	**324**	**100.0**	**2,994.1**	**100.0**

In November 1976 a survey based on the population survey (for details *see* the section *The Population Survey* earlier in this chapter) was conducted throughout Australia in order to obtain information about the industry and occupation, and some demographic characteristics, of wage and salary earners who were members of trade unions. Results of the survey are published in *Trade Union Members, November 1976* (6325.0).

Employer and employee organisations registered under Industrial Arbitration Acts, etc.

The Federal *Conciliation and Arbitration Act* 1904 and a number of State industrial arbitration Acts provide for the registration of employer and employee organisations as outlined below. In general, registration is necessary before an organisation may appear before the relevant industrial arbitration tribunal.

In Victoria and Tasmania, where wages and conditions of work in the State sphere are determined by Wages Boards and Industrial Boards respectively, there is no provision in industrial arbitration legislation for registration of trade unions or employer organisations.

Federal. At the end of 1981 the number of employers' organisations registered under the provisions of the *Conciliation and Arbitration Act* 1904 was 82. The number of unions registered at the end of 1981 was 151, with membership of approximately 2.44 million, representing 82 per cent of the total membership of all trade unions in Australia. Lists of organisations of employees and employers registered under this Act are published periodically by the Office of the Industrial Registrar (Australian Conciliation and Arbitration Commission). (Branches of employer organisations and unions may also register under various State Acts, as outlined below.)

New South Wales. At 30 June 1981 there were 112 employee unions and 299 employer unions registered under provisions of the *Industrial Arbitration Act* 1940, and 131 employee unions, 11 employer unions, and 8 other unions registered under the *Trade Union Act* 1881. (Unions may register under either or both Acts.) Lists of unions registered under these Acts are included in the *New South Wales Industrial Gazette.* (*See* Vol. 226 for details at 30 June 1981.)

Queensland. At 31 December 1981 there were 74 employee unions registered under the *Industrial Conciliation and Arbitration Act* 1961–1980 with a reported membership of 374,013. At the same date, 39 employer unions with a reported membership of 36,854 employers were registered. Lists of registered employee and employer unions are published in the annual report of the President of the Industrial Court.

South Australia. At the end of December 1981 there were 10 employer associations and 73 employee associations registered under the provisions of the *Industrial Conciliation and Arbitration Act* 1972 as amended. Membership of these employee associations totalled approximately 200,300.

Western Australia. At 30 June 1982 there were 69 unions of workers, with an aggregate membership of 171,912, registered under the provisions of the *Industrial Arbitration Act,* 1979–1981. At the same date there were 14 registered unions of employers with a reported aggregate membership of 2,142 employers. Lists of registered unions of workers and of employers, together with membership figures, are published in the *Annual Report of the Chief Industrial Commissioner of the Western Australian Industrial Commission.*

Central Labour Organisations

At the end of September 1982 there remained in Australia two main central labour organisations: the *Australian Council of Trade Unions* (ACTU), which came into being in 1927 and at the end of September 1982 had affiliated with it 156 trade unions with a combined membership of approximately 2.35 million; and the *Council of Professional Associations* which was formed in 1956 and as at September 1982 had 8 organisations affiliated with it with an aggregate membership of approximately 22,000.

International Labour Organisation

The International Labour Organisation (ILO) was established on 11 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. With certain amendments this constitution remains the charter of ILO to this day, bringing governments, employers and trade unions together to discuss international labour and social problems. A new definition of the aims and purposes of the ILO known as the Declaration of Philadelphia, which was added to the constitution at the 1944 Session of the International Labour Conference, asserted the responsibility of ILO in combating poverty and insecurity. In 1946 the Organisation became the first of the specialised agencies of the United Nations. Under the terms of agreement, the United Nations recognises the ILO as a specialised agency having responsibility in the field defined by its constitution, which embraces labour conditions, industrial relations, employment organisation, social security and other aspects of social policy.

The ILO operates through a tripartite structure which enables governments, employers and workers to participate directly in its activities. The Organisation consists of the International Labour Conference, which is responsible for the formulation of international labour standards, and is composed of four representatives (2 government, one employers' and one workers') from each of the 150 Member States; the Governing Body, which decides numerous matters relating to the overall direction of the ILO and which consists of the representatives of 28 governments, 14 employers' and 14 workers' representatives; and the International Labour Office, which collects and distributes information on all subjects relating to the international adjustment of conditions of work and provides the secretariat. Particulars of the proceedings of International Labour Conferences up to the 58th Session and details of ILO conventions ratified by Australia are given in *Labour Report* No. 58, 1973, pages 255–9.

ILO publications on labour statistics include *International Recommendations on Labour Statistics, An Integrated System of Wages Statistics*, the quarterly *Bulletin of Labour Statistics* and the *Year Book of Labour Statistics*.

One of the functions of the ILO is to sponsor the International Conferences of Labour Statisticians at which the ABS is usually represented. Since 1923, the ILO has conducted 13 International Conferences of Labour Statisticians, the latest being held in Geneva in October 1982. These conferences are responsible for recommending and reviewing standards which the ABS adopts wherever practicable.

EMPLOYMENT AND TRAINING PROGRAMS

The Commonwealth Government has a range of programs designed to promote work experience and training. The principal aims of these programs are to maintain an adequate supply of trained persons to meet the needs of industry and to assist disadvantaged groups in the labour market. The main Commonwealth programs are described below.

Trade Training

Commonwealth Rebate for Apprentice Full-time Training (CRAFT)

This program compensates employers for the cost of releasing apprentices to attend off-the-job-training courses, including basic trade courses provided by technical education institutions. From 1 January 1983 it pays tax exempt rebates of between $21.00 and $41.00 per day, depending upon the trade and level of training.

Special apprentice training

Four types of support are available for certain categories of apprentices. Under the *Group One Year Scheme* assistance is provided to enable apprentices indentured to private employees to undertake their first year of training in Government establishments.

The *Special Assistance Program* makes provision for a subsidy to employers to employ apprentices who have been retrenched by their former employer. Assistance provided under the *Group Apprenticeship Support Program* enables small employers who would normally be unable to employ apprentices to establish joint projects to train apprentices. The *Special Trade Training Program* has been developed to provide special assistance for the training of adult apprentices in skills which are in short supply.

Skills Training

Skills in demand

This program promotes the training of persons in particular skills which are in demand by industry. It offers a range of assistance including the costs of establishing and running training courses and providing allowances for unemployed trainees. The development and management of this training is on a joint industry and government basis.

General training assistance

Under General Training Assistance subsidies can be provided to employers who employ and train an unemployed person if they are unable to obtain a suitably trained applicant. The weekly rates for on-the-job training are $50.80 per week for juniors and $69.30 per week for adults. A training allowance equal to the rate of unemployment benefit plus an allowance of $37.00 per week ($15.30 for persons aged under 18) can be provided to eligible unemployed persons who undertake formal study in an occupation which is in demand.

Industry training services

In addition to specific schemes directed at the training of individuals, the Government also provides aid to assist industry to develop and improve its own training programs.

Youth training

A *School to Work Transition Allowance*, equal to the level of unemployment benefit plus $6.00 per week, is available to eligible unemployed young persons to enable them to attend full-time transition courses conducted by Technical and Further Education (TAFE) Colleges. For further details refer to Education chapter on page 271). A *Pre-Apprenticeship Allowance* of $20.00 per week is available to persons who do not meet the eligibility criteria for the transition allowance while they are attending Government funded pre-apprenticeship training at TAFE institutions.

Special Youth Employment Training Program (SYETP)

A major disadvantage faced by young people in competing in the labour market is a lack of appropriate work skills and previous work experience. Often a lack of the personal qualities or formal qualifications required by employers add to their difficulties.

To offset these disadvantages, wage subsidies may be provided to employers. To qualify for the subsidy employers must be prepared to make available work experience and on-the-job training in full-time jobs for 17 or 34 weeks.

Two levels of subsidy are available:

Standard SYETP where $75.00 per week is provided for up to 17 weeks for young people aged between 15 and 24 years who are registered as unemployed with the Commonwealth Employment Service (CES) and have been so registered and away from full-time education for at least four of the last twelve months; and

Extended SYETP where a subsidy at $100.00 per week is provided for up to 17 weeks, then $75.00 per week for a further 17 weeks for young people aged between 18 to 24 years who are registered as unemployed with the CES and have been so registered and away from full-time education for at least eight of the last twelve months.

Special training

Some groups in the community, because of background and circumstances beyond their control, face additional disadvantages in gaining and maintaining employment. In recognition of these disadvantages special programs, allowances and subsidies are available.

Two such groups are Aboriginals and the disabled. Assistance provided includes the provision of *public sector training* positions, *training allowances* and *employer subsidies*. Special training projects for Aboriginals and work preparation courses for disabled persons are also supported.

Employment services

A number of programs are funded to support the Government's manpower and training policies and to offset the effects of certain inefficiencies in the labour market.

The two main types of program are mobility assistance programs and information programs. Mobility assistance includes *Relocation Assistance Scheme* (RAS) which assists the relocation of unemployed people or people who have received notification of impending redundancy and who are unable to obtain within a reasonable time continuing employment in the area in which they live, and the *Fares Assistance Scheme* (FAS) which assists unemployed people to attend job interviews with prospective employers.

The information programs include the provision of *Occupation Information* and a *National Promotional Campaign* to ensure a widespread knowledge of the assistance provided under the Government's programs.

Youth affairs

A number of programs other than manpower and training programs are maintained to assist youth.

Community-based youth programs

Community-based youth programs encourage the community to support unemployed youth; these include:

The *Community Youth Support Scheme (CYSS)*. The objective of CYSS is to encourage communities to assist local unemployed young people to develop their capacity for obtaining and retaining employment, and also to become more self-reliant during periods of unemployment.

The *Volunteer Youth Program* which provides grants to community organisations for the purpose of facilitating the placement of unemployed young people in voluntary community service activities with the aim of developing and enhancing their work-related skills.

The *Community Youth Special Projects Program* which assists community organisations to develop individual projects aimed at offering the young unemployed full-time structured training and employment-related activities.

There are also a number of other related youth schemes which make grants to Youth Organisations and Youth Exchanges and Youth Studies.

Trade Union Training Authority

The Trade Union Training Authority (TUTA) was established in 1975 for the provision, co-ordination, promotion and evaluation of trade union training in Australia. Training programs are conducted at TUTA's centres in each capital city, in country locations throughout Australia and at the TUTA's national residential college at Albury/Wodonga, the Clyde Cameron College.

EXPENDITURE: MANPOWER AND TRAINING PROGRAMS, AUSTRALIA, 1980-81 to 1982-83

Type of program	*1980–81*	*1981–82*	*1982–83(a)*
		$'000	
Trade Training			
CRAFT	64,451	78,749	84,000
Special Apprentice Training	3,600	3,360	5,000
Skills Training			
Skills in demand and general training allowances	11,941	11,762	15,600
Industry training services	3,000	4,500	5,400
Youth Training			
School to work transition allowance	4,703	8,423	11,000
Pre-apprenticeship allowance	1,587	1,146	1,200
Work experience (SYETP)	41,255	53,702	73,800
Special Training			
Training for Aboriginals	13,928	19,044	21,670
Training for the disabled	2,719	6,471	7,300
Employment Services			
Relocation assistance scheme	1,265	1,599	2,000
Fares assistance scheme	303	264	350
Occupational information	1,620	1,211	1,300
Former Regular Servicemen's vocational training scheme (Terminated)	287	196	150
National promotional campaign	840	124	1,000
Employment strategies	428	290	400
Youth Affairs Assistance			
Community-based youth scheme	14,163	14,937	18,520
Other youth assistance	591	660	960
Total Manpower and Training Programs	*166,681*	*206,438*	*249,650*
Trade Union Training Authority	3,369	4,046	5,059
Total all programs	**170,050**	**210,484**	**254,709**

(a) Estimated.

NUMBER OF NEW APPROVALS: MANPOWER AND TRAINING PROGRAMS, AUSTRALIA, 1980–81 to 1982–83

Type of program	*1980–81*	*1981–82*	*1982–83(a)*
Trade Training			
CRAFT	92,000	99,000	111,000
Special Apprentice Training	2,395	3,040	3,800
Skills Training			
General Training			
Formal	1,801	1,086	1,200
On-the-job	15,724	8,235	8,250
Skills in demand	390	1,213	2,500
Youth Training			
School to work	8,330	11,456	13,600
Pre-apprenticeship	1,778	1,596	1,500
Work experience (SYETP)			
Standard	51,273	37,525	55,000
Extended	6,494	10,582	15,000
Government	3,622	3,589	4,200
Special Training			
Training for Aboriginals	4,900	4,628	4,760
Training for the disabled	2,125	3,776	4,050
Employment Services			
Relocation Assistance Scheme	1,527	1,513	1,875
Total all programs	**192,359**	**187,239**	**226,735**

CHAPTER 9

SOCIAL SECURITY AND WELFARE

The Commonwealth Government, the State Governments and voluntary welfare organisations all provide social welfare services. This chapter concentrates on the benefits and services provided by the Commonwealth Government, principally those of the Departments of Social Security and Veterans' Affairs but mention is also made of the services provided by the Departments of Aboriginal Affairs and Immigration and Ethnic Affairs.

Details of services administered by the Commonwealth Department of Health are given in Chapter 10, Health. Details of pension and superannuation schemes for government and semi-government employees, mine workers, parliamentarians and employees of private business are included in Chapter 21, Private Finance.

Commonwealth Government expenditure on social security services

This section deals with various government payments for the relief of the aged, indigent, infirm, widowed, orphaned and unemployed; assistance to families; etc. For summary statements of cash payments to persons made by public authorities under various functional heads, *see Commonwealth Government Finance, Australia* (5502.0) and other annual publications listed at the end of this chapter.

Under the provisions of section 51 of the Constitution, the Commonwealth Government is empowered to legislate on:

'(xxiii) Invalid and old age pensions:

(xxiiiA) The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances;'.

On 1 July 1947, with the passage of the *Social Services Consolidation Act* 1947, all Acts providing social service benefits were amalgamated. The Act is at present styled the *Social Services Act* 1947.

The social security benefits provided by the Commonwealth Government under the *Social Services Act* 1947, and the date on which each came into operation, are shown on page 421 of Year Book No. 61. In addition, a supporting parent's benefit, replacing the supporting mother's benefit, was introduced in November 1977.

AUTHORITIES OF THE COMMONWEALTH GOVERNMENT, SOCIAL SECURITY AND WELFARE CASH BENEFITS TO PERSONS

($'000)

	1979–80	*1980–81*	*1981–82*
Assistance to aged persons—			
Aged pensions	3,508,755	3,935,796	4,506,946
Delivered meals	1,608	2,275	2,583
Personal care	14,468	19,645	21,692
Telephone concessions	16,515	17,635	21,527
Total	*3,541,346*	*3,975,351*	*4,552,748*
Assistance to incapacitated and handicapped persons—			
Invalid pensions	796,367	880,795	977,125
Sheltered employment allowances	22,778	27,527	33,967
Handicapped children's benefits	19,142	19,060	22,300
Rehabilitation services	20,145	23,313	26 792
Total	*858,432*	*950,695*	*1,060,184*
Assistance to unemployed and sick persons—			
Unemployment benefits	925,195	995,748	1,224,343
Sickness benefits	126,631	174,477	225,053
Special benefits	52,932	69,988	74,107
Other	220	303	264
Total	*1,104,978*	*1,240,516*	*1,523,767*

AUTHORITIES OF THE COMMONWEALTH GOVERNMENT, SOCIAL SECURITY AND WELFARE CASH BENEFITS TO PERSONS—continued

($'000)

	1979–80	*1980–81*	*1981–82*
Assistance to ex-servicemen(*a*)—			
Disability and dependants pensions and allowances	956,993	1,182,453	1,317,946
Other benefits	2,597	3,642	4,203
Total	*959,590*	*1,186,095*	*1,322,149*
Assistance to widows and single parents—			
Widows' pensions	561,393	641,792	717,386
Supporting parents' benefits	259,596	412,399	605,864
Total	*820,989*	*1,054,191*	*1,323,250*
Assistance to families and children—			
Family allowances	1,012,733	950,413	1,041,761
Orphans' pensions	2,052	2,125	2,872
Total	*1,014,783(b)*	*952,538*	*1,044,633*
Other social security and welfare programs—			
Funeral benefits	1,451	1,509	1,448
Telephone rental concessions n.e.c.	2,884	3,339	4,151
Compassionate allowances	83	7	7
Assistance to homeless persons	1,072	1,760	1,991
Other	1,461	1,500	2,300
Total	*6,951*	*8,115*	*9,897*
Total social security and welfare	**8,307,069**	**9,367,501**	**10,836,628**

(*a*) For details *see* section on Veterans' Affairs in this Chapter. (*b*) In 1979-80 the Commonwealth received $2,000 in maternity allowance repayments.

Age and invalid pensions and associated payments

Age pensions are payable to men and women who have reached the ages of 65 and 60 respectively. They are subject to certain residence qualifications and an income test unless the person is permanently blind or has reached the age of 70. For persons over 70 years of age, increases above the base rate are subject to an income test. These payments are subject to tax.

To be residentially qualified for age pension a person must generally be living in Australia on the date of application for the pension and have lived in Australia for ten years continuously at some time.

Invalid pensions are payable to persons sixteen years of age and over who are permanently incapacitated for work to the extent of at least 85 per cent, or permanently blind. Invalid pension is paid subject to an income test. However, if the pension is paid due to blindness, payment for the pensioner and one dependant child or student child (16-24 years of age) is free of the income test.

There is no residence qualification for invalid pension if the incapacity or permanent blindness occurred within Australia (including an external Territory other than Norfolk Island) or during temporary absence from Australia. As a result, some people not residentially qualified for age pension but who have reached age pension age receive an invalid pension.

A wife's pension is payable to the wife of a pensioner not entitled, in her own right, to an age, invalid or repatriation service pension. There is no residence qualification, but an income test applies. A wife's pension is taxable only if her husband has reached the age of 65.

Rates of pension. The maximum standard rate was increased to $74.15 a week from May 1982. This is payable to a single, widowed or divorced pensioner, or a married pensioner whose spouse is not receiving a pension or a tuberculosis allowance. The standard rate may also be paid to each of a married pensioner couple who are living apart for an indefinite period due to illness or infirmity of either or both. The maximum rate for married pensioner couple (known as the married rate) was increased to $123.60 a week from May 1982 ($61.80 a week each). For a married person whose spouse receives a tuberculosis allowance or a service pension, the maximum rate is also $61.80 a week.

For qualified persons over the age of 70, the base standard rate is $51.45 a week and the base married rate is $85.80 a week. Subject to an income test, these persons can qualify for further amounts not exceeding the rates applicable to those under 70 years of age.

Additional pension for each dependent child under 16 years is payable, subject to the income test, at the rate of up to $10.00 a week. Widowed or other unmarried age or invalid pensioners with a dependent child may receive a guardian's allowance of up to $6 a week, or up to $8 a week if the child is under 6 years of age or is an invalid child requiring full-time care. A guardian's allowance is also subject

to the income test. Eligibility for the additional pension for children is extended to include a child over sixteen and under the age of 25 years provided he is wholly or substantially dependent on the pensioner and is receiving full-time education at a school, college or university. Supplementary assistance of up to $8 a week (standard rate pensioners) and $4 a week (married rate pensioners) subject to a special income test, is available to pensioners if they pay rent or pay for board and lodging or for lodging.

On the death of one member of a married pensioner couple, the surviving pensioner spouse becomes entitled to receive, for up to six fortnightly instalments, the equivalent of the two pensions that would have been paid if the spouse had not died. For the purpose of this provision the term 'pensioner' includes a person in receipt of age, invalid, wife's or repatriation service pension, or a sheltered employment allowance.

A table showing the maximum rates of pension operating since 1 July 1909 at dates prior to 14 October 1965 is included on page 608 of Year Book No. 51. Details of the respective rates and allowances payable in recent years are shown in the Annual Reports of the Department of Social Security.

The income test is the same for age and invalid pension purposes. As already noted, it does not apply to the permanently blind or, in the case of age pensions, to people who have reached 70 years of age unless they wish to claim payment above the base rate. In other cases, the income test operates to reduce pension payable if a claimant's *income as assessed*—in effect, the claimant's annual income—exceeds prescribed limits.

The effect of the income test is to preclude from entitlement to any pension a person with no dependants subject to the income test and whose income exceeds $168.30 a week. The corresponding figure for a married couple without children is $140.85 a week (each partner).

The maximum rate of supplementary assistance payable to single pensioners or to pensioner couples was increased by $3 a week to $8 a week in February 1982.

The eligibility conditions were also changed from that date so that 50 cents of supplementary assistance is paid for each $1 of rent in excess of $10 a week, subject to a maximum payment of $8 and whereas previously the maximum weekly payment had been reduced for single pensioners by assessable income over $1 a week, and for married pensioners by half of assessable income over $2 a week, the maximum rate payable is now reduced by 50 cents for each $1 of all assessable income. Pensioners who are tenants of public housing authorities are no longer eligible for supplementary assistance. These conditions also apply to payments of supplementary allowance to long-term sickness beneficiaries which fell due after January 1982.

Certain types of income are exempted. The main exemptions are: gifts or allowances from children, parents, brothers, or sisters; benefits from friendly societies; family allowances; Commonwealth Government health benefits and amounts received from registered hospital or medical benefit organisations. The amount of a pensioner's income included in income as assessed may also be reduced by up to $6 per week for each dependent child under sixteen years or full-time dependent student in the pensioner's care.

For the purposes of the income test, the income as assessed of a married person is normally taken to be half of the combined income as assessed of the married couple. Exceptions may be made where the spouses are legally separated or where other special circumstances exist.

AGE PENSIONERS: 30 JUNE

Age	*1980*	*1981*	*1982*
		-'000-	
60–64 years	156.2	157.6	156.9
65–69 years	345.7	343.1	335.0
70–74 years	349.4	358.4	367.5
75 years and over	470.7	488.3	507.7
Total	**1,321.9**	**1,347.4**	**1,367.0**
Percent of aged population(*a*) %	76.8	75.8	n.y.a.
Number admitted during year(*b*)	96,488	93,801	77,765
Total payments during year(*c*) $'000	3,508,755	3,935,796	4,506,946

INVALID PENSIONERS: 30 JUNE

Age	*1980*	*1981*	*1982*
		-'000-	
16–19 years	7.9	7.6	7.1
20–39 years	48.1	48.1	48.0
40–59 years	124.7	119.9	116.0
60–64 years	43.8	42.1	41.3
65 years and over	4.8	4.3	4.2
Total	**229.2**	**222.0**	**216.6**
Number admitted during year	40,356	25,458	25,055
Total payments during year(*c*) $'000	796,367	880,795	977,125

(*a*) Per cent of persons of pensionable age (males aged 65 years and over and females aged 60 years and over). (*b*) Excludes transfers from wives pensions. (*c*) Includes allowances, supplementary assistance and wives pensions where applicable.

Sheltered employment allowance and associated payments

Sheltered employment allowance is payable to disabled people who are employed in sheltered workshops and are otherwise qualified to receive an invalid pension or would become so qualified if they ceased to be provided with sheltered employment. The allowance is subject to the same income test as applies to invalid pension and is paid at the same rate. It is payable in the form of a supplement to the sheltered employee's wages. The allowance is not taxable unless the sheltered employee has reached age pension age.

A sheltered employee is entitled to the same additional payments as an invalid pensioner except that no supplementary assistance is payable. Instead, all people in receipt of sheltered employment allowance receive an incentive allowance of $8 a week. There is no income test on the allowance, but a person precluded by his or her income from receiving sheltered employment allowance is not entitled to incentive allowance.

All sheltered workshops are required to pay sheltered employment allowances on behalf of the Department of Social Security. At 30 June 1982, 161 workshops were paying the allowance to 8,618 disabled employees. Expenditure during the year 1981–82 was $33,967,000.

Widows' pensions and associated payments

There are three categories of widow pensioners:

Class 'A'. A widow who has the custody, care and control of one or more qualifying children under the age of sixteen years or dependent full time student aged 16–24;

Class 'B'. A widow who, because she has no qualifying children or students in her custody, care and control, is not eligible for a Class 'A' widow's pension but is either at least 50 years of age or, after having reached the age of 45, has ceased to receive a Class 'A' pension by reason of ceasing to have the custody, care and control of a qualifying child or student; and

Class 'C'. A widow not eligible for Class 'A' or Class 'B' widow's pension, who is under 50 years of age and is in necessitous circumstances following her husband's death. In normal circumstances, the Class 'C' pension is not payable after 26 weeks have elapsed from the death of the husband, but if the widow is pregnant the period is extended until the child's birth, whereupon the widow may then become eligible for a Class 'A' widow's pension.

For classes 'A' and 'B', the term 'widow' includes: a wife who has been deserted by her husband for a period of at least six months; a divorcee; a woman whose husband has been in prison for at least six months and a woman who, although not legally married to him, lived with a man on a *bona fide* domestic basis and was wholly or mainly maintained by him for at least three years immediately preceding the man's death.

A residence qualification applies unless the claimant and her husband were residing permanently in Australia, or an external territory other than Norfolk Island, when she became a widow.

A widow's pension is not payable to a woman receiving an age or invalid pension, a supporting parent's benefit, an unemployment, sickness or special benefit, a sheltered employment allowance, or a war widow's pension.

Current rates of pension. With effect from May 1982, the maximum rate of pension for all classes of widow is $74.15 a week plus, in the case of widows with children, a mother's allowance of $6 a week or $8 a week where at least one child is under 6 or is an invalid requiring full-time care, plus $10 a week for each dependent child who is under 16 years or is a dependent full-time student. Supplementary assistance of up to $8 a week is also available to widows who pay rent, or for board and lodgings or for lodgings, and who are wholly or substantially dependent on their pension. The amount of this assistance cannot exceed the amount of rent paid.

Income test. Widows' pensions are subject to an income test and are taxable. Class 'A' and Class 'B' widows' pensions are subject to the same income test as applies to age and invalid pensions. A test of hardship applies in the case of Class 'C' widows' pensions.

In September 1980, the Commonwealth Government accepted responsibility for women supporting children alone. The previous arrangement under the States Grants (Deserted Wives) Act was cancelled at that time. Since then, deserted wives with children can be paid supporting parents benefits for the first six months of their desertion; deserted wives without children can be assisted by unemployment benefit or special benefit. A woman qualified for Class 'A' or Class 'B' widow's pension may transfer to widow's pension after being deserted for six months.

CLASS A AND B WIDOW PENSIONERS, BY AGE: 30 JUNE 1982

Category	*Under 20*	*20–29*	*30–39*	*40–49*	*50–59*	*60 and over*	*Total*	*Per cent*
				-'000-				
Class 'A'	0.1	13.6	36.6	24.0	10.4	0.2	84.8	51.7
Class 'B'	–	–	–	3.2	57.8	18.2	79.2	48.3
Total Class 'A' and 'B'	**0.1**	**13.6**	**36.6**	**27.2**	**68.1**	**18.4**	**164.0**	**100.0**
				-per cent-				
	0.1	8.3	22.3	16.6	41.6	11.2	100.0	..

At 30 June 1982, 85,153 widow pensioners were receiving additional pension.

WIDOWS' PENSIONS

Year	*Pensions current at end of year*				*Average weekly pension at end of year (a)*	*Amount paid in pensions during year (a) (b)*
	Class 'A'	*Class 'B'*	*Class 'C'*	*All classes*		
					$	$'000
1976–77	76,059	63,329	97	139,485	55.71	370,201
1977–78	82,392	67,461	103	149,956	59.90	439,497
1978–79	88,683	71,941	123	160,747	61.53	499,349
1979–80	91,142	74,922	118	166,182	69.17	561,393
1980–81	87,837	77,700	124	165,661	77.52	641,792
1981–82	84,800	79,158	133	164,091	84.70	717,386

(*a*) Includes supplementary assistance and allowances. (*b*) Includes payments to benevolent homes for maintenance of pensioners.

Supporting parent's benefit

Supporting parent's benefit was introduced in November 1977 to extend to supporting fathers the same benefit as had previously been available to supporting mothers through supporting mother's benefit. From September 1980, payment to supporting parents was made from the pension payday following date of lodgement of the claim. The benefit is for any lone mother who is supporting a child, and who is either not entitled to, or does not wish to claim widows pension, and to lone fathers who are supporting a child, parents who are the deserted or deserting partner of a de facto relationship, de facto spouses of prisoners or separated spouses. There is a residence qualification if the claimant was not living in Australia at the time of becoming a supporting parent. To be eligible for the benefit a person must be supporting a qualifying child under the age of sixteen years, or an older, dependent, full-time student. The rate of supporting parent's benefit, including guardian's allowance and payments for children, is the same as for the Class 'A' widow's pension. It is also subject to the same income test as the Class 'A' widow's pension and is taxable.

SUPPORTING PARENTS BY AGE AND TYPE: 30 JUNE 1982

Type of beneficiary	*Under 20*	*20–29*	*30–39*	*40–49*	*50 and over*	*Total*	*Per cent*
				—'000—			
Unmarried mother	7.2	24.4	5.6	1.0	0.3	38.6	31.2
Separated wife	1.4	27.2	26.1	8.2	1.3	64.2	51.8
Defacto wife	1.2	8.4	3.9	1.3	0.4	15.2	12.3
Father	—	0.9	2.5	1.7	0.8	5.9	4.8
Total	**9.7**	**60.9**	**38.2**	**12.2**	**2.9**	**123.9**	**100.0**
				—per cent—			
	7.8	49.1	30.8	9.9	2.3	100.0	..

At 30 June 1982, 123,942 supporting parents were receiving additional benefit.

SUPPORTING PARENT'S BENEFIT

		1979–80	*1980–81*	*1981–82*
Number admitted during year		28,581	71,280	71,009
Beneficiaries current at end of year—				
Females		66,604	101,583	118,019
Males		3,821	5,048	5,923
Total		*70,425*	*106,631*	*123,942*
Average weekly benefit at end of year (*a*)	$	78.97	91.04	99.58
Amount paid in benefits during year (*a*)	$'000	259,596	412,399	605,864

(*a*) Includes supplementary assistance and allowances.

Fringe benefits

The Commonwealth Government makes available to pensioners and recipients of supporting parent's benefits several 'fringe benefits'. In most cases these are subject to a special income test requiring that the person's income, apart from pension or benefit, be less than $40 a week in the case of a single person, or $68 a week combined in the case of a pensioner couple. These benefits include:

- free medical treatment if the doctor bulk bills (otherwise 85 per cent of the Schedule fee is refunded up to a maximum of $5 for each service).
- a comprehensive range of pharmaceuticals free of charge;
- a one-third reduction in telephone rental (subject to the income of co-residents);
- reduced fares for Commonwealth Government railway and shipping services;
- certain postal concessions;
- a 10 per cent discount on book purchases from Australian Government Publishing Service Bookshops;
- free hearing aids; and
- free optometrical consultations.

State Governments, local government authorities and private organisations also provide certain fringe benefits. The most valuable of these are reductions in local government rates and in public transport charges.

There were 1,589,886 pensioners with PHB (Pensioner Health Benefits) cards entitling them to Commonwealth pensioner fringe benefits at 30 June 1982. The number of dependent children of these pensioners was 406,000. The number of sickness beneficiaries eligible for fringe benefits at 30 June 1982 was estimated to be 52,400.

Funeral benefits

A funeral benefit of up to $20 is payable to any person liable for the funeral costs of an age or invalid pensioner. A higher benefit of up to $40 is payable to an age, invalid, wife, widow pensioner or supporting parent beneficiary liable for the funeral cost of a spouse, a child or another such pensioner. For those benefits 'pensioner' means a person who satisfies, or has satisfied, the pensioner fringe benefits income test.

FUNERAL BENEFITS GRANTED

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
$20 grants in respect of—						
Age or invalid pensioners	25,436	23,905	22,168	21,645	21,247	21,276
Others	13	20	23	62	28	35
Total	*25,449*	*23,925*	*22,191*	*21,707*	*21,275*	*21,311*
$40 grants in respect of—						
Age or invalid pensioners	24,720	24,590	24,022	24,230	23,608	24,880
Others	1,447	1,294	944	894	685	386
Total	*26,167*	*25,884*	*24,966*	*25,124*	*24,293*	*25,266*
Total grants	**51,616**	**49,809**	**47,157**	**46,831**	**45,568**	**46,577**

Total cost of funeral benefits granted during 1981–82 was $1,448,000.

Unemployment and sickness benefits and associated payments

Unemployment and sickness benefits are paid to men over sixteen and under sixty-five years of age, and to women over sixteen and under sixty years of age, who are unemployed or temporarily incapacitated for work. They must have been living in Australia during the preceding twelve months or be likely to remain permanently in Australia. Both benefits are subject to an income test. A person cannot receive both benefits simultaneously, nor can a person receive either benefit at the same time as an invalid, widow's, repatriation service pension or supporting parent's benefit.

For unemployment benefit purposes, a person must establish that he is unemployed, that his unemployment is not due to industrial action by himself or by members of a union of which he is a member, that he is capable and willing to undertake suitable work, and that he has taken reasonable steps to obtain such work. Registration for employment with the Commonwealth Employment Service is necessary. For sickness benefit purposes, a person must establish that he is temporarily incapacitated for work because of sickness or accident and that he has thereby suffered a loss of salary, wages or other income.

Rates of Benefit. The maximum weekly rates of unemployment and sickness benefit payable at June 1982 are as follows:

	Maximum Weekly Rate	
	Unemployment benefit	*Sickness benefit*
	$	$
Married person (including additional benefit for spouse)	123.60	123.60
Single person aged 18 or more with dependants	74.15	74.15
Single person aged 18 or more, no dependants	58.10	74.15
Single person under 18 years	36.00	36.00

These amounts are increased by $10.00 for each child under sixteen years in the beneficiary's custody, care and control, or for any full-time student wholly or substantially dependent on the beneficiary.

After the benefit has been paid for six consecutive weeks a sickness beneficiary who is paying rent or is paying for lodging or board and lodging may be entitled to a supplementary allowance of up to $8 a week. The amount of any such allowance cannot exceed the amount of rent paid.

The weekly rate of benefit is withdrawn on a 50 per cent basis for private income within the ranges $3 to $40 a week for single persons aged 16 and 17 with a parent in Australia, and $6 to $50 a week in all other cases. Benefits are withdrawn on a dollar for dollar basis for all private income in excess of these upper limits. The income of the spouse is also taken into account unless the claimant and his spouse are permanently separated. For sickness benefit purposes the income from an approved friendly society or other similar approved body in respect of the incapacity for which sickness benefit is payable is disregarded. 'Income' does not include family allowance or other payments for children, Commonwealth health benefits and payments from registered health benefit organisations, or an amount paid in reimbursement of medical, dental or similar expenses.

The amount of compensation, damages or similar payment, or war pension, if paid in respect of the same incapacity as that for which sickness benefit is claimed, is deducted from the sickness benefit if it is paid in respect of the same period. If it is not paid in respect of the same incapacity, compensation in respect of the same period is regarded as income and war pension is ignored.

Special benefit

A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not receiving an age, invalid or widow's pension, a supporting parent's benefit, a service pension or a tuberculosis allowance and who, because of age, physical or mental disability or domestic circumstances, or any other reason, is unable to earn a sufficient livelihood for himself and his dependants. Recipients of special benefits include, among others, unmarried women for a period before and after the birth of a child, persons caring for invalid parents or sick relatives/children, and persons ineligible for a pension because of lack of residence qualifications.

Special benefits are also paid to immigrants who are in Commonwealth Government centres or hostels awaiting their first placement in employment in Australia. During this time they receive a short instruction in English and in Australian conditions to facilitate their assimilation into the community and employment.

The benefit is designed to meet cases of special need and may also be paid as income support over a period if no other social security benefits is payable.

The rate paid may not exceed the rate of unemployment or sickness benefit which could be paid if the claimant were qualified to receive it.

UNEMPLOYMENT, SICKNESS, AND SPECIAL BENEFITS

	Number admitted to benefit during year			*Average number of persons on benefit at end of each week*			*Amount paid in benefits*		
Year	*Unemployment*	*Sickness*	*Special (a)*	*Unemployment*	*Sickness*	*Special (a)*	*Unemployment*	*Sickness*	*Special (a)*
							($'000)	($'000)	($'000)
1976–77	803,461	148,508	40,299	216,856	32,385	8,039	618,074	105,408	21,657
1977–78	879,637	145,910	42,706	265,828	34,724	9,795	794,144	117,929	29,743
1978–79	810,500(*b*)	133,000(*b*)	48,700	306,200(*b*)	33,400(*b*)	12,000	910,012	113,263	36,491
1979–80	792,300(*b*)	142,100(*b*)	66,850	306,300(*b*)	36,100(*b*)	15,850	925,195	126,631	49,273
1980–81	782,500(*b*)	140,900(*b*)	83,630(*b*)	310,000(*b*)	44,500(*b*)	20,400(*b*)	995,748	174,477	69,998
1981–82	833 600	154 600(*b*)	69 700	332 000	48 600(*b*)	18 100	1 224 343	225 053	74 107

(*a*) Excludes special benefits to migrants in accommodation centres. (*b*) Estimated.

Family allowances

A family allowance is paid to a person caring for children under sixteen years or full-time students aged 16–24 years who are wholly or substantially dependent on that person. Family allowance is not paid for students receiving Tertiary Education Assistance or other related Commonwealth education allowances. Payment is usually made to the mother. Approved charitable, religious or government institutions are paid family allowances for children in their care.

Twelve months residence in Australia is required if the claimant and the child were not born here, but this requirement is waived if the Department of Social Security is satisfied that they are likely to remain in Australia permanently. Under certain conditions, family allowance may be paid to Australians who are temporarily absent overseas.

Rates of allowance. The monthly rates are $15.20 for the first or only child; $21.70 for the second; $39.00 for the third; $39.00 for the fourth; and $45.55 for each subsequent child. The rate payable for each child or student in an approved institution is $39.00 a month.

Some details of family allowance payments are shown in the following table.

FAMILY ALLOWANCES: 1981–82

Number of children and students in family	*Number of families*								
	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Total(a)*
1	258,445	190,950	113,591	67,574	64,939	21,547	6,914	11,672	735,632
2	287,659	226,739	129,377	77,019	78,583	24,456	7,331	16,078	847,242
3	130,516	105,792	63,209	30,435	35,497	11,332	3,783	7,626	388,190
4	37,861	31,083	20,148	7,268	9,700	3,245	1,473	2,169	112,947
5	8,454	7,004	5,120	1,382	1,965	729	548	430	25,632
6	2,512	1,964	1,575	360	569	173	211	111	7,475
7	731	594	528	123	159	54	71	27	2,287
8	236	199	191	32	51	13	27	16	765
9	81	75	54	11	27	4	8	8	268
10 or more	36	31	29	7	11	3	5	1	123
Total	**726,531**	**564,431**	**333,822**	**184,211**	**191,501**	**61,556**	**20,371**	**38,138**	**2,120,561**
No. of children in approved institutions	2,238	2,411	2,244	458	1,592	123	43	20	9,129
Amount paid during year ($'000)	374,985	282,959	162,704	96,856	93,881	30,320	(*b*)	(*b*)	1,041,761

(*a*) Includes family allowances paid to Australians temporarily abroad. (*b*) Expenditure for N.T. and A.C.T. included in expenditure for S.A. and N.S.W. respectively.

Double orphan's pension

This pension is payable to the guardian of a child whose parents or adoptive parents are both dead, or one of whom is dead and the other missing. It is also payable in cases where one parent is dead and the other is a long-term inmate of a prison or mental hospital. In the case of a refugee child, since November 1981 the pension has generally been payable if the parents are outside Australia, or if their whereabouts is not known. Payment is made for orphans who are under sixteen years or who are full-time students under twenty-five. There is no income test. The pension is payable at the rate of $55.70 a month for each eligible child. A double orphan's pension is not payable if the child attracts a war orphan's pension under the Repatriation Act. The number of double orphan's pensions at 30 June 1982 was 5,166. The expenditure on these pensions during the year 1981–82 was $2,872,000.

Handicapped child's allowance

Parents or guardians of a child under sixteen years or a dependent full-time student who is severely handicapped mentally and/or physically, is living in the family home, and needs constant care and attention, are entitled to a handicapped child's allowance of $73 a month. The allowance is not subject to an income test, but a residence qualification similar to that for family allowance applies. The allowance is also available to persons on low income who are caring for a substantially handicapped child and are suffering severe financial hardship as a result of expenditure associated with the child's disability. The number of handicapped child's allowances being paid at 30 June 1982 was 27,045. The total amount paid through these allowances during the year 1981–82 was $22,300,000.

Portability of social service payment

Age, invalid and widows' pensions and supporting parent's benefits continue in force for recipients who have left Australia unless they left before 8 May 1973 or their pension or benefit is subject to the provisions of either of the reciprocal agreements with New Zealand or the United Kingdom. In certain cases of hardship, the pension or benefit may continue for people who left before 8 May 1973. The number of Australian pensions being paid overseas under the general portability provisions at 30 June 1982, was 17,642.

Reciprocal social services agreements with other countries

New Zealand. An agreement between the Governments of Australia and New Zealand for reciprocity in social services came into operation on 3 September 1943 and was amended from 1 July 1949. The reciprocal arrangements cover age and invalid pensions, widow's pensions, family allowance and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence. Residence in one country may be treated as residence in the other country in relation to entitlement to benefits in which a residential qualification applies. Persons from one country taking up a 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 residents 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. There is a limit of thirteen weeks on payment of New Zealand benefits in Australia.

United Kingdom. Under a reciprocal agreement on social services between the United Kingdom and Australia, residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies. Australians going to the United Kingdom for permanent residence are treated in the United Kingdom as if they have been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits. There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

Commonwealth Rehabilitation Service (CRS)

The Commonwealth Rehabilitation Service assists people with a long-term disability who are within the broad working age group. It aims to help disabled people to reach their maximum physical, mental, social and vocational usefulness and to assist them to live as independently as possible. Towards this aim, it provides co-ordinated programs of treatment and training to meet the special needs of each disabled person. Responsibility for the delivery of these services rests with the residential and day-attendance rehabilitation centres, work adjustment centres, work preparation centres, and regional rehabilitation units.

Rehabilitation may also be made available to people aged 14 or 15 years who, without treatment or training, would be likely to qualify for invalid pension at age sixteen.

For those eligible, payment of pension or benefit continues during treatment. When vocational training begins, pension or benefit is suspended and replaced by training allowance. This allowance is determined by the Director-General, Department of Social Security, having regard to the adult male average award wage. Living-away-from-home allowance is paid where necessary. Fares and living expenses (including those of an attendant where required) in connection with treatment, training or attendance for an interview or for medical examination may also be paid. Necessary aids, appliances and modifications may be provided free of charge to a person receiving treatment and training or who needs them to assist him to engage in a suitable vocation after the discontinuance of his treatment and training or who needs them otherwise to assist in his rehabilitation.

Treatment, training and assessment programs are undertaken at rehabilitation centres where occupational therapists, vocational counsellor, qualified tradesmen and teachers determine the skills which make best use of ability and which are best adapted to the person's needs. In addition to the services provided at each centre, technical schools, business colleges, universities, training on-the-job in commerce or industry and correspondence courses are all used for training purposes. In 1981–82 a total of 5,912 disabled persons were accepted for rehabilitation.

Other services of the Department of Social Security

The Department of Social Security provides a professional social work service and Ethnic and Aboriginal Liaison Office Schemes. It administers grants to major national welfare organisations such as: Australian Council of Social Service, Australian Council on the Ageing, Australian Council for Rehabilitation of Disabled, Australian Early Childhood Association and to non-government welfare agencies providing emergency relief or in financial difficulties.

To assist in its role of advising the government on welfare policy, the Department of Social Security initiates, develops and evaluates experimental projects in social welfare and undertakes research studies.

The Department supports the work of the Social Welfare Research Centre at the University of New South Wales and provides a grant to the Social Welfare Research Unit of the Australian Council of Trade Unions (ACTU).

Commonwealth Government assistance through welfare organisations

Accommodation for aged and disabled people

The *Aged or Disabled Persons Homes Act* 1954 is designed to encourage the provision of homes in which aged persons may reside in conditions approaching normal domestic life.

To be eligible for assistance under the Act an organisation must be:

(i) carried on otherwise than for the purposes of profit or gain to the individual members; and

(ii) a religious organisation, an organisation of which the principal objects or purposes are charitable or benevolent, an organisation of former members of the defence forces established in every State or a State branch of such an organisation, an organisation approved by the Governor-General for the purposes of the Act, or a local governing body.

An organisation conducted or controlled by, or by persons appointed by, the Commonwealth or any State Government is not eligible for assistance under the Act.

The Director-General of the Department of Social Security or his delegate may make a grant of money to an organisation as assistance towards meeting the cost of the construction or purchase of a home, including land, to be used permanently for the accommodation of aged persons. The grant is made on a basis of $2 for each $1 raised by the organisation but is limited to $12,100 for a single unit of accommodation and $14,035 for a double unit plus up to $1,920 per unit for land. Money which the organisation received from a governmental body other than a local governing body does not attract subsidy.

Before a grant is made the Director-General must be satisfied that the sum of the money expended and the money at present available for expenditure by the organisation 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.

The following table gives information regarding grants approved for each of the past six years. The amounts granted in each year include new grants approved in that year together with adjustments made during the year in respect of grants originally approved in earlier years.

AGED OR DISABLED PERSONS HOMES ACT: GRANTS AND AMOUNTS APPROVED AND BEDS PROVIDED

		1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Grants approved	No.	71	126	74	108	161	119
Amount approved	$'000	21,381	23,719	20,357	20,127	39,154	28,715
Beds provided—							
Self-contained	No.	233	505	376	294	396	324
Hostel	,,	769	428	310	456	990	691
Nursing	,,	1,015	1,225	884	1,083	1,676	1,031
Total	,,	**2,017**	**2,158**	**1,570**	**1,833**	**3,062**	**2,046**

Since the commencement of the Act in December 1954, 3,830 grants amounting to $388,784,825 have been approved, and accommodation has been provided for 69,438 aged and disabled persons.

The Aged or Disabled Persons Homes Act also provides a *personal care subsidy* of $20 a week paid to eligible organisations for persons of eighty years of age or over and other persons requiring and receiving approved personal care while living in hostel-type accommodation provided by organisations eligible under the Aged or Disabled Persons Homes Act. Approximately sixty per cent of hostel residents qualify for payment of the subsidy. The following table gives details of the premises approved, payments made and number of residents aged eighty years or over residing in the approved premises.

AGED OR DISABLED PERSONS HOMES ACT: PERSONAL CARE SUBSIDIES, 30 JUNE 1982

		N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Approved premises	No.	235	209	129	100	77	22	2	6	780
Residents qualifying	No.	6,064	5,170	3,834	3,030	2,347	569	34	110	21,698
Subsidies paid, 1981–82	$'000	6,046	5,976	3,839	3,094	2,512	608	57	108	22,241

Handicapped people

The *Handicapped Persons Assistance Act* 1974–76 replaced both the *Sheltered Employment (Assistance) Act* 1967 and the *Handicapped Children (Assistance) Act* 1970. Under this legislation, eligible organisations may apply for subsidies towards the cost of providing capital projects, maintenance and equipment. Grants are also available in respect of rental and certain salary payments.

Grants on purchases of buildings, equipment etc. take the form of a $4 subsidy for each $1 raised by an eligible organisation from non-government sources. Rent is subsidised at a rate equal to 80 per cent of the approved rental paid subject to certain conditions. Salary costs may be subsidised to an amount equal to 100 per cent of salary paid to staff employed in new ventures, but this is reduced to 50 per cent after the premises have been providing the service for 2 years or more.

As well as assisting organisations with establishment and running costs, the legislation also provides financial encouragement to sheltered workshop administrations to provide the type of training for the handicapped which will prepare them, where possible, for open employment. A *training fee* of $500 is paid to organisations providing approved sheltered employment for each handicapped employee who, having received at least 6 months training in the workshop, graduates to open employment and remains there for at least 12 months.

Introduction of the Handicapped Persons Assistance Act in December 1974 also saw the legal transfer of the administration of Handicapped Children's Benefit from the Commonwealth Department of Health to the Department of Social Security. Where an organisation provides approved residential accommodation for mentally or physically handicapped children under 16 years, it becomes entitled to receive a Commonwealth benefit of $5 per day in respect of each resident child.

HANDICAPPED PERSONS ASSISTANCE ACT

	1979–80	*1980–81 (e)*	*1981–82 (e)*
Approved premises(*a*)	1,061	1,107	1,073
Total expenditure during year (*b*)—		-$'000-	
New South Wales (*c*)	14,093	17,325	20,510
Victoria	8,699	11,834	14,152
Queensland	4,646	7,550	8,907
South Australia (*d*)	6,467	8,553	10,033
Western Australia	3,899	5,680	6,564
Tasmania	1,512	1,957	1,500
Total	**39,317**	**52,899**	**61,666**

(*a*) Total approved sheltered workshops, activity therapy centres, training centres and residentials as at 30 June. (*b*) Includes capital and recurrent expenditure. (*c*) Includes Australian Capital Territory. (*d*) Includes Northern Territory. (*e*) Includes Handicapped Childrens Benefit.

HANDICAPPED CHILDREN'S BENEFIT

	1979–80	*1980–81*	*1981–82*
Approved handicapped persons homes(*a*)	115	129	144
Handicapped children accommodated(*a*)	1,625	1,416	1,399
Days of benefit paid during year	332,706	350,197	362,522
Total amount paid during year $000	1,667	1,762	1,813

(*a*) As at 30 June.

Homeless people

The Homeless Persons Assistance Act was introduced in December 1974 to help non-profit organisations and local governing bodies which provide accommodation, food and social welfare services for homeless men and women.

The Act enables grants to be made to eligible organisations to meet the cost of purchasing, constructing, altering or renting buildings to be used as homeless persons' assistance centres, as well as to meet the cost of purchasing furniture, furnishings and equipment for such centres. Grants also meet half the salary of a social welfare worker employed at a centre. The amount of grants made for these purposes during 1981–82 was $5,485,547.

A subsidy is also available to help meet the cost of providing food and accommodation for homeless persons at an approved centre, or of meals provided at such centres for non-resident homeless persons. The rate of the food and accommodation subsidy has been prescribed at $1.20 per day and the rate of meals subsidy as 40 cents per meal. During 1981–82 the amount of this subsidy totalled $1,990,512.

The *Delivered Meals Subsidy Act* 1970 helps organisations to establish, maintain, expand and improve 'meals on wheels' services. The subsidy is at the rate of 45 cents for every meal provided on approved vitamin C supplement and 40 cents for each other meal provided by approved organisations. At 30 June 1982, 738 organisations had received a total subsidy of $22,891,855 under the Act. During 1981–82 the amount of this subsidy totalled $4,252,788. Organisations eligible for grants under the Act are the same as those specified under the Aged or Disabled Persons Homes Act.

Children's Services

The Children's Services Program is administered by the Office of Child Care, within the Department of Social Security. It provides grants to State, and local governments and community organisations for a flexible network of services for children and their families mainly concentrating on day care and pre-school centres. The general principle guiding approval of grants is one of directing assistance on a needs basis.

Other services funded under the program include support services for families and adolescents, special services for migrants, Aborigines and disabled children and research, evaluation and information projects.

Two components of the Program which are administered jointly with State Governments have been identified as the Family Support Services and the Youth Services Schemes. While these are identified separately as schemes, they are an integral part of the Children's Services Program.

EXPENDITURE ON CHILDREN'S SERVICES PROGRAM
($'000)

Year	*Pre-school*	*Other Child care*	*Total*
1976-77	49,018	18,068	67,086
1977-78	45,994	25,203	71,197
1978-79	32,750	31,086	63,836
1979-80	33,090	36,136	69,226
1980-81	31,183	42,851	74,034
1981-82	33,005	47,355	80,360

Social Security Appeals Tribunals

The Social Security Appeals System provides for persons who are aggrieved by decisions of the Department of Social Security to have a right of appeal to a Social Security Appeals Tribunal. The Tribunals operate in each State and in the Australian Capital Territory and the Northern Territory.

Before any appeal is initiated, when a client of the Department of Social Security is informed of an adverse decision he is also informed that, if he is dissatisfied, he may contact a Review Officer in the Department personally or by telephone, who will be pleased to discuss the case and, if necessary, will review the decision without delay. If the client remains dissatisfied, the Review Officer will explain the Appeals System and, if required, assist the client to lodge an appeal with a Tribunal.

Each Tribunal consists of a full-time member seconded from, but independent of, the Department and two part-time members—one a lawyer and one experienced in the welfare field and for appeals involving medical criteria—a legally qualified medical practitioner. A Tribunal considers the substantial merits of each case without regard to legal forms and technicalities and seeks to ensure that justice is done between the appellant and the Department.

The Tribunals have no power to change decisions but may make recommendations to the Director-General of Social Services that a departmental decision should be changed. The final decision lies with the Director-General who may, but need not, accept the recommendation of a Tribunal.

Jurisdiction is vested in the Administrative Appeals Tribunal and provides for clients of the Department of Social Security to have a further right of appeal to the Administrative Appeals Tribunal where the client is dissatisfied with the outcome of the departmental consideration of a Social Security Appeals Tribunal recommendation (whether or not that recommendation was favourable to the client), or where the Director-General has, at the request of a client who has not appealed to an SSAT, certified in writing that the case involves an important principle of general application under the Social Services Act.

World Assembly on Ageing

The United Nations resolved that a World Assembly on Ageing be held in Vienna in the latter half of 1982. The purpose of the Assembly was to launch an international action program aimed at guaranteeing social and economic security for older persons.

The Department of Social Security had major responsibility for organising Australia's participation. Three reports were prepared for the World Assembly:

- Aging in Australia: A National Report
- Australia's Aged Population, 1982 (A.B.S. Cat. No. 4109.0)
- Older People at Home: Summary of Work in Progress of the joint survey by the Australian Council on the Ageing and the Australian Department of Social Security.

Social Welfare Policy Secretariat

The Social Welfare Policy Secretariat is responsible for the provision of advice on, and the integrated development of plans, policies and programs in the broad field of health and welfare. It is responsible also for ensuring the co-ordinated development and review of health and welfare policies and for ensuring that appropriate research activities are directed to these ends.

In developing its policy proposals the Secretariat consults with relevant Commonwealth Departments. Whenever appropriate the views of interested organisations and individuals are also sought.

The Secretariat commenced operation in March 1978. As a consequence of the new administrative arrangements announced by the Prime Minister on 2 November 1980, the Head of the Secretariat now reports to the Minister for Social Security.

National Working Party on Welfare Statistics (WELSTAT)

All State and Territory welfare departments, the Australian Bureau of Statistics and the Commonwealth Department of Social Security are co-operating in the WELSTAT project which is developing standardised national social welfare statistics and, more generally, assessing the adequacy of social welfare statistics in Australia. National standards have been developed in a number of areas relating to Child Welfare. In particular, Statistics have been published on *'Persons under Guardianship and Children in Substitute Care'*, (4405.0) and *'Adoptions'*, (4406.0). Standards have also been developed for *'Persons in Juvenile Corrective Institutions and Children in Prison'*; Statistics in this area are published by the Australian Institute of Criminology.

Standards are being developed for collections on *Emergency and Supplementary Assistance* and *Child Maltreatment*. Work has also commenced in the Australian Bureau of Statistics, under the auspices of WELSTAT, on the development of an Australian Standard Welfare Activities Classification (ASWAC).

State and local government

State Governments are the main providers of direct personal welfare services. Welfare services provided through State departments can be broadly summarised as follows:

- emergency relief and supplementary assistance to people in need;
- preventative, remedial and rehabilitative services for children, young people and families;
- child protection services;
- community and residential care services for dependent and delinquent young people;
- services related to the adoption and foster care of children;
- services related to the development and regulation of early childhood services;
- domiciliary care for the aged.

State departments also provide consultative, developmental and advisory services in the field of community welfare, including funding of some non-government services. State authorities share with the Commonwealth, responsibility for service provision to the young, families, the aged and special groups such as Aboriginals and migrants.

Services provided by local government authorities vary between and within states. Generally local governments either provide, subsidise or coordinate service provision for children and for the aged. Services most commonly undertaken by local government include the establishment of infant welfare centres, the provision and maintenance of parks, kindergartens, day nurseries, home help, and emergency services including meals delivered to the aged.

The States also provide services such as domestic assistance for aged persons in their homes in cooperation with the Commonwealth.

Under the States Grants (Home Care) Act 1969 the Commonwealth Government will share with a participating State on a $1 for $1 basis the cost of the provision of approved home care services wholly or mainly for aged persons in their homes.

The Commonwealth Government will also share on a $2 for $1 basis with participating States up to a maximum of two-thirds of the capital cost for the establishment, extension and equipping of approved senior cititzens' centres as well as meeting on a $1 for $1 basis with the States the cost of the salary of a welfare officer employed in conjunction with a senior citizens' centre. All States participate in this scheme.

PAYMENTS TO STATES FOR HOME CARE SENIOR CITIZENS CENTRES AND WELFARE OFFICERS

State	*Home Care Services*	*Senior Citizens Centres*	*Welfare Officers*	*Total*
New South Wales	4,321,005	1,378,917	448,487	6,148,409
Victoria	4,098,033	696,312	677,012	5,471,357
Queensland	1,498,106	763,106	68,975	2,330,187
South Australia	1,156,702	509,248	87,712	1,753,662
Western Australia	897,776	442,553	117,151	1,457,480
Tasmania	701,378	209,863	–	911,241
Total	**12,673,000**	**3,999,999**	**1,399,337**	**18,072,336**

Voluntary Agencies

A wide range of social welfare services are provided within the Australian community by voluntary agencies. These include:

- personal counselling for families and individuals;
- emergency relief;
- home care and visitation services;
- family support services;
- child and family day care;
- sheltered employment for the handicapped;
- crisis accommodation for youth, families, women and single men;
- accommodation and support services for the aged and handicapped.

While many services delivered by voluntary agencies are subsidised or supported by government funding, other activities rely on more direct forms of community financial support such as donations and public appeals. Voluntary agencies employ substantial numbers of professional welfare workers but also rely heavily on the contributions of volunteers.

The range and scope of voluntary welfare activity has increased greatly in recent years. Self-help organisations which provide personal support to people suffering particular social or physical disabilities are becoming more prevalent as are agencies which direct assistance to particular target groups such as Aboriginals and ethnic communities.

Aboriginals

A referendum in May 1967 lead to the repeal of section 127 of the Constitution which provided that, in reckoning the numbers for census purposes, Aboriginals should not be counted, and to the deletion of the words 'other than the Aboriginal race in any State' from section 51 (xxvi) which relates to the power of the Commonwealth Parliament to make laws in respect to people of any race. The Constitutional amendment, in effect, gave the Commonwealth Government shared power with the State Governments in relation to Aboriginals. The Commonwealth Government's aim is to help Aboriginals become self-managing and self-sufficient while, at the same time, preserving and developing their own distinctive culture. The Commonwealth Department of Aboriginal Affairs which is responsible for policy, planning and co-ordination in respect of Aboriginal affairs at the national level has regional offices in all States and the Northern Territory.

The National Aboriginal Consultative Committee (NACC) established in 1973, was replaced in 1977 by the National Aboriginal Conference (NAC), whose 36 members are elected by Aboriginals throughout Australia for three-year terms.

Its role is to provide a forum in which Aboriginal views can be expressed at State and national level and, in particular, to express Aboriginal views on the long term goals and objectives which the Government should pursue, the programs it should adopt in Aboriginal affairs, and on the need for new programs in Aboriginal affairs.

From 1 July 1981, the NAC Executive assumed the advisory functions and powers of the former Council for Aboriginal Development.

The Aboriginal Development Commission (ADC), an all-Aboriginal Commission, was established in 1980 by the Commonwealth Government as an independent body. The ADC assists Aboriginal and Torres Strait Islander groups, communities and individuals to acquire land for a variety of purposes, engage in business enterprises, obtain finance for housing and other personal needs, and to receive training where necessary.

Migrants

Rising intake

The number of migrants who have come to Australia since the end of the Second World War is approaching the 4 million mark. These migrants have contributed significantly to Australia's population which has more than doubled, from 7.4 million at the end of 1945 to 15.1 million at the end of 1981. At the time of the 1981 Census, almost 22 per cent of Australia's population was overseas born. Post-war immigration peaked in 1970 with 185,300 settler arrivals, declined thereafter to a low of 54,100 in 1975, but has steadily increased again, to 94,500 in 1980 and 118,700 in 1981.

A projection (Series A) of Australia's population around the end of the century (June 2001) is for 18.9 million. This projection allows for a net overseas migration gain of 75,000 a year and is some 1.7 million more than it would be without further migration gain.

Accommodation of migrants

Migrants must be assured of accommodation on arrival, unless they have sufficient funds to be independent. For those migrants nominated by relatives or friends, this initial accommodation has usually been in private homes. Assisted migrants and refugees nominated by the Commonwealth Government are provided with transitory accommodation in migrant centres operated by Commonwealth Accommodation and Catering Services Ltd, a non-profit-making Government-sponsored company. These centres provide a range of services to help migrants to settle in Australia, including child minding centres, English language classes, youth recreation activities, welfare officers and assistance in obtaining permanent accommodation.

The total capacity of the centres is about 9,600. Additionally 396 two and three bedroom self-contained flats can accommodate migrants nominated by the Commonwealth Government.

British assisted migrants nominated by State Governments are, in most cases, provided with initial accommodation in reception centres operated by the State authorities.

Ethnic affairs—Services for migrants and refugees

The Department of Immigration and Ethnic Affairs provides services to facilitate the successful settlement and welfare of migrants and refugees.These services are currently being modified and extended in accordance with recommendations made during an evaluation of post-arrival programs and services undertaken early in 1982 by the Australian Institute of Multicultural Affairs (the AIMA report).

In addition, the Department is responsible, through its Ethnic Affairs Division, for advancing policies designed to secure the successful settlement and integration of migrants into Australian society. These policies include fostering the preservation and sharing of the cultural heritage of migrant communities, and maintenance of harmonious inter-group relations in Australia's multicultural society. The Department provides advice to a number of other departments whose responsibilities are particularly important within this context.

The Department is a source of information and advice to Ethnic Liaison Officers in each Commonwealth Government department and authority who have responsibility for ensuring that Commonwealth Government policies, programs and services are responsive to the needs of migrants.

The Department has carriage of the Commonwealth's interests covering the ethnic press. Major activities recently have included ethnic press research and a review with the Department of Administrative Services of policy on Commonwealth advertising in the ethnic press. The new policy is intended to ensure that the ethnic press is an integral part of the advertising programs of all Commonwealth Departments.

Departmental social workers and welfare officers provide information and advice, and, in more complex cases, professional counselling for migrants in their own language. They operate from the Regional Offices of the Department in the State capital cities with some outposted to migrant centres (hostels), voluntary welfare organisations and other centres in areas of high migrant density. They are also involved in community development work and provide consultancy services to other agencies assisting migrant settlement.

Departmental activities are complemented by those of social workers and welfare officers employed by voluntary agencies funded by Commonwealth grants administered by the Settlement Branch. In many respects these voluntary agencies are best placed to assist migrants.

Australian Institute of Multicultural Affairs (AIMA) report further endorsed the emphasis on the Government's provision of Grant-in-Aid to voluntary agencies to assist them to extend or develop welfare services for migrants. Approximately sixty additional grants will be provided as a result, making a total of 181 by 1984–85.

The Department provides a free translation and interpreting service for migrants during the settlement period and offers a translation service to Commonwealth departments and other bodies for a fee. At the present time translation units are operating in Canberra, Sydney and Melbourne.

In 1973 a Telephone Interpreter Service (TIS) was introduced to help overcome communication problems by providing over the telephone, in a wide range of languages, a general interpreting, information and referral service for migrants and others having dealings with migrants. Where necessary and especially in emergency situations, arrangements may be made for the personal attendance of an interpreter. TIS currently operates in Canberra, all State capitals, Darwin and in a number of major provincial centres of migrant population. During the year ended 30 June 1982, a total of 232,357 calls was received by TIS. The aggregate number of calls received since the inception of the Service in 1973 is 1,165,776.

Cost-sharing agreements have been concluded with the Governments of New South Wales, Victoria, South Australia and Queensland for the establishment or extension of State operated interpreting and translation services.

A National Accreditation Authority for Translators and Interpreters (NAATI) was established by the Commonwealth Government in 1977 to develop standards of competence for translators and interpreters in Australia and to test and accredit at those standards. State/Territory Panels for Translators and Interpreters have been established in all States and Territories to administer tests to those seeking accreditation.

The AIMA report recommended further strengthening of the Initial Settlement Programme, which is designed to provide to migrants and refugees on arrival, English instruction and orientation courses and activities on various aspects of life in Australia. The courses, which are offered both in Migrant centres (hostels) and in the community, cover such matters as employment, housing, education, health and welfare services.

Twenty-three migrant resource centres, (24 including the Departmentally-run proto-type), have been established in areas of high migrant density. These resource centres provide support for all agencies (both government and voluntary) which assist migrants, and also provide a focus for community participation and development of local resources to meet migrant needs.

The settlement of refugees particularly from Indo-China has become an important element in the Commonwealth Government's overall migrant settlement program. Most of these refugees are acommodated intitially at Commonwealth Government migrant centres where they are able to participate in an initial settlement program designed to facilitate their settlement in the community. In addition, under the Community Refugees Settlement Scheme, numbers of refugees are moved directly from the refugee camps overseas into the Australian community where they are in the care of families, groups and organisations which have undertaken to provide a range of support and assistance.

The Adult Migrant Education Program (AMEP) provides a wide range of language learning opportunities, as well as offering information about Australia, its services and institutions. The Department is responsible for the funding and co-ordination of the program at the national level, while service delivery is provided in the main by Adult Migrant Education Services in each State and Territory.

In 1981–82 expenditure on the Adult Migrant Education Program was $32,242,000. New enrolments in the Program nationally totalled just over 100,000 persons including 17,600 in courses for new arrivals.

In August 1982, following the AIMA Evaluation of Post Arrival Programs and Services, the Government announced plans to further upgrade the Program through increased course places for new arrivals, the provision of advanced English courses in TAFE institutions and a number of other measures intended to improve administrative and educational effectiveness.

Refugees and those migrants who have been admitted to Australia under the Labour Demand category with skills in shortage or minor shortage are eligible for migrant centre accommodation. These centres provide a range of services to help migrants to settle in Australia, including child minding centres, English language classes, youth recreation activities, welfare officers and assistance in obtaining permanent accommodation. The total effective capacity of the centres is about 10,000. Additionally 378 two and three bedroom self-contained flats can accommodate migrants nominated by the Commonwealth Government.

The status of 'Australian citizen" was created under the *Nationality and Citizenship Act* 1948 which came into force on 26 January 1949. The relevant Act is now the *Australian Citizenship Act* 1948 and under its provisions all new settlers regardless of origin, are required to satisfy uniform requirements for the grant of citizenship. A major review of the Act which included public consultations in every State and Territory, has recently been completed. Amendments are expected to be introduced into Federal Parliament during 1982–83. In the financial year 1981–82, 78,178 applications for Australian citizenship were received compared with 69,907 in 1980–81 and 63,158 in 1979–80. Some 1.5 million new settlers have been granted Australian citizenship since 1945.

Further information is contained in the *Department of Immigration and Ethnic Affairs Annual Review, Review '82.*

VETERANS' AFFAIRS

The Repatriation Commission, established under the *Repatriation Act* 1920, consists of three full-time members. It is responsible for the administration of the Repatriation Act and associated legislation, all matters of policy, and the general administration and overall supervision of the provision of benefits under the legislation. The Chairman of the Commission is also the Secretary of the Department of Veterans' Affairs (formerly the Department of Repatriation), which provides the administrative machinery through which the Commission operates. The central office is in Canberra and there is a branch office, under the control of a Deputy Commissioner, in each State.

The principal functions of the Department are: the payment of disability and dependants' pensions (previously called war pensions) and service pensions and allowances to eligible veterans and their dependants; the provision of medical treatment for veterans for injuries and illnesses accepted as service-related; the provision of medical treatment in certain circumstances for veterans who are suffering from injuries and illnesses whether service-related or not; the provision of medical treatment for war/defence widows and certain dependants of deceased veterans; and provision of a wide range of other benefits for eligible persons. Since 5 October 1976, the *Defence Service Homes Act* 1918 has been administered by the Defence Service Homes Corporation (DSHC) (previously the Australian Housing Corporation) within the departmental framework. At the same time, the Department was given responsibility for the Office of Australian War Graves.

Repatriation benefits are provided in respect of service not only in the 1914–18 and 1939–45 Wars but also in the South African War 1899–1902, in the Korea and Malaya operations, in prescribed areas with the British Commonwealth Far East Strategic Reserve (F.E.S.R.) and the Special Overseas Forces and, in certain circumstances, in the Regular Defence Forces.

For information on war service land settlement *see* Year Book No. 61 (Chapter 13, Agricultural Industries) and for statistics relating to defence service homes *see* Chapter 19, Housing and Construction, of this Year Book.

For detailed information about repatriation pensions, allowances, benefits and services, reference should be made to the annual reports of the Repatriation Commission.

VETERANS' AFFAIRS (excl. DSHC): TOTAL EXPENDITURE(*a*)

($'000)

Class	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Pensions, allowances and other benefits	662,876	799,264	860,229	966,072	1,193,181	1,329,871
Medical treatment	223,058	251,589	268,539	310,327	357,219	426,360
Administration	39,556	41,999	44,441	49,539	54,971	68,541
Works, rent and maintenance	14,020	17,477	21,301	27,881	24,587	22,136
Total expenditure	**939,510**	**1,110,329**	**1,194,511**	**1,353,819**	**1,629,958**	**1,846,908**

(*a*) Includes expenditure by Departments other than Veterans' Affairs as follows: 1976–77, $13,710,296; 1977–78, $15,718,166; 1978–79, $18,819,531; 1979–80, $25,072,835; 1980–81, $21,270,359; 1981–82, $18,260,360.

Disability pensions

The first provision for the payment of disability pensions to veterans and pensions to their dependants was made by the Commonwealth Parliament in the *War Pensions Act* 1914. This Act was repealed in 1920 by the *Australian Soldiers' Repatriation Act* 1920 (amended from 31 December 1950 to the Repatriation Act). Amendments to the Act in 1943 considerably widened the eligibility provisions, to the benefit mainly of members of the Citizen Military Forces who had not served outside Australia during the 1939–45 War.

Main pension rates vary twice each year; current rates are available from Department of Veterans' Affairs Branch Offices.

Summary of disability pensions

The following table provides a summary of disability pensions according to the veteran's war/area of service. Statistics relating to miscellaneous disability pensions are included collectively in each table, with further details being provided later in this section.

DISABILITY AND DEPENDANTS' PENSIONS: 1981–82

		1914–18 War	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscel-laneous*	*Total*
Pensions in force at 30 June 1982 (*b*)	No.	31,094	343,356	9,507	21,333	7,393	447	413,130
Annual pension liability at 30 June 1982	$'000	76,593	437,786	7,307	7,221	2,677	786	532,370
Amount paid in pensions during the year 1981–82	$'000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	510,675
New claims granted	"	57	4,179	279	1,103	1,687	20	7,325
Restorations	"	7	876	92	120	84	1	1,180
Pensions cancelled (gross)	"	40	5,450	532	562	315	9	6,908
Deaths of pensioners	"	3,257	8,227	89	35	25	15	11,648

(*a*) Includes Interim Forces. (*b*) Includes 4,285 student children over 16 years of age.

Classes of disability pensions

The following tables provide an analysis of the number of pensions in force, veteran's class of pension, new claims and deaths for 1981–82.

DISABILITY PENSIONS IN FORCE: 30 JUNE 1982

Class	*1914–18 War*	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscel-laneous*	*Total (b)*
Veterans	5,069	151,542	3,957	6,855	2,962	161	170,546
Wives and wives (widows)	12,186	143,730	3,226	5,227	1,879	169	166,417
Children (*b*)	10	10,853	1,907	8,834	2,408	6	24,018
War widows	13,536	34,392	281	165	92	107	48,573
Children of deceased veterans	1	16	2	1	4	1	25
Orphans	2	451	57	161	47	2	720
Other dependants	290	2,372	77	90	1	1	2,831
Total	**31,094**	**343,356**	**9,507**	**21,333**	**7,393**	**447**	**413,130**

(*a*) Includes Interim Forces. (*b*) Includes 4,285 student children over 16 years of age.

DISABILITY PENSIONS FOR INCAPACITATED VETERANS IN FORCE: BY CLASS OF PENSION 30 JUNE 1982

Class	*1914–18 War*	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscellaneous*	*Total*
Special Rate (T & P I) or equivalent	1,257	13,026	195	86	27	22	14,613
Intermediate Rate	49	1,918	32	15	2	1	2,017
General Rate—from 10 per cent to 100 per cent assessed disability	3,763	136,598	3,730	6,754	2,933	138	153,916
Total	**5,069**	**151,542**	**3,957**	**6,855**	**2,962**	**161**	**170,546**

(*a*) Includes Interim Forces

DISABILITY PENSIONS: NEW CLAIMS GRANTED, 1981–82

Class	*1914–18 War*	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscellaneous*	*Total*
Veterans	20	1,540	100	252	664	6	2,582
Wives and widows of veterans	30	2,260	103	282	410	4	3,089
Children	2	353	74	566	612	10	1,617
Other dependants	5	26	2	3	1	–	37
Total	**57**	**4,179**	**279**	**1,103**	**1,687**	**20**	**7,325**

(*a*) Includes Interim Forces.

DISABILITY PENSIONS: DEATHS 1981–82

Class	*1914–18 War*	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscellaneous*	*Total*
Veterans	984	5,245	60	21	18	8	6,336
Wives and widows of veterans	2,238	2,777	23	11	6	7	5,062
Children	3	8	1	3	1	–	16
Other dependants	32	197	5	–	–	–	234
Total	**3,257**	**8,227**	**89**	**35**	**25**	**15**	**11,648**

(*a*) Includes Interim Forces.

Number of disability pensions and expenditure, States and Australia

The following table shows the number of pensions in force and expenditure to 30 June 1982, according to place of payment.

DISABILITY PENSIONS: NUMBER OF PENSIONS AND ANNUAL EXPENDITURE

	Number of disability pensions in force at 30 June 1982(a)				
Place of payment	*Incapacitated veterans*	*Dependants of incapacitated veterans*	*Dependants of deceased veterans*	*Total*	*Annual expenditure (b) ($'000)*
New South Wales(*c*)	61,839	66,732	19,370	147,941	195,613
Victoria	41,005	46,904	13,948	101,857	125,846
Queensland	29,703	33,833	7,716	71,252	85,019
South Australia(*d*)	15,832	17,888	4,419	38,139	41,879
Western Australia	14,279	16,560	3,857	34,696	35,597
Tasmania	7,111	7,942	1,826	16,879	22,966
Overseas	777	1,111	478	2,366	3,755
Total	**170,546**	**190,970**	**51,614**	**413,130**	**510,675**

(*a*) Includes Interim Forces. (*b*) Includes domestic allowance payable to widows. (*c*) Includes Australian Capital Territory. (*d*) Includes Northern Territory.

Summary of disability pensions, 1976–77 to 1981–82

The following table shows the number of pensions granted, pensions in force and the expenditure for disability pensions in each of the years ended 30 June 1977 to 1982.

DISABILITY PENSIONS

Year	Pensions granted	Deaths	Number of disability pensions in force at 30 June(a): Incapacitated veterans	Dependants of incapacitated veterans	Dependants of deceased veterans	Total	Annual expenditure (b) $'000
1976–77	9,856	11,637	193,123	237,237	54,804	485,164	371,459
1977–78	8,039	11,390	187,427	220,968	54,291	462,686	419,033
1978–79	7,257	11,500	182,988	212,177	53,136	448,301	415,329
1979–80	6,141	11,151	178,471	204,265	52,031	434,767	432,001
1980–81	6,732	11,680	174,278	197,603	51,453	423,334	496,310
1981–82	7,325	11,648	170,546	190,970	51,614	413,130	510,675

(a) Includes Interim Forces 1939–45 War. (b) Includes domestic allowance payable to widows.

Miscellaneous disability pensions

The Commission is also responsible for the payment of pensions and allowances to beneficiaries under the *Seamen's War Pensions and Allowances Act* 1940, the *Papua New Guinea (Members of the Forces Benefits) Act* 1957 and Cabinet decisions granting eligibility to persons who were attached to the armed forces during war-time.

The following table shows the number and class of pensions and the annual liability at 30 June 1982.

MISCELLANEOUS DISABILITY AND DEPENDANTS' PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY, 30 JUNE 1982

Class	Number of pensions in force at 30 June 1982: Veterans(a)	Dependants of incapacitated veterans	Dependants of deceased veterans	Total	Annual liability (b) $'000
Act of grace	91	98	36	225	346
Seamen's war pension	68	77	39	184	265
New Guinea civilians	2	-	36	38	167
Total	**161**	**175**	**111**	**447**	**778**

(a) 'Veterans', in this context, are persons in respect of whose war-time experience a pension is paid. (b) Includes domestic allowances payable to widows.

Service pensions

The *Repatriation Act* 1920 provides for a service pension to be paid (subject to an income test unless the person is blind) to the following persons:

- male veterans who served in a theatre of war (or in a designated *Operational* or *Special Overseas Service* area) and have attained the age of sixty years or are permanently unemployable;
- female veterans who served in a theatre of war, or served abroad or embarked for service abroad and have attained the age of fifty-five years, or are permanently unemployable;
- veterans of the South African War 1899–1902 who were members of a naval or military force or contingent raised in Australia for active service in that war;
- veterans of other British Commonwealth Forces who served outside the country of enlistment or within that country if a campaign medal has been awarded in respect of such service. Ten years residence in Australia is a necessary qualification;
- veterans who served in formally raised allied forces in conflicts in which Australia participated, who served in a theatre of war and at no time served in enemy forces. Ten years residence in Australia is also necessary.

British Commonwealth and Allied mariners who served in a theatre-of-war in the 1939–45 war and who satisfied the ten year residency requirement will be eligible as from 3 February 1983.

If otherwise eligible, persons aged 70 years or over receive the service pension free of the income test at the rate of $51.45 per week if single or $42.90 per week each if married. Higher rates of pension may be payable subject to the income test.

A veteran in receipt of a service pension is entitled, subject to an income test, to free medical benefits for disabilities not service-related. These benefits include general practitioner service, specialist service where necessary, full pharmaceutical benefits, surgical aids and appliances (including spectacles), dental treatment, and treatment in Repatriation General Hospitals.

Main pension rates vary twice each year; current rates are available from the Department of Veterans' Affairs' Branch Offices.

The following table provides a summary of Service Pensions according to the veteran's war/area of service.

SERVICE PENSIONS 1981–82

		1914–18 War	*1939–45 War*	*Korea-Malaya operations*	*Special Overseas Service*	*British Commonwealth*	*Allied Forces*	*Miscellaneous*	*Total*
New claims granted	No.	122	35,121	451	131	5,605	1,030	342	42,766
Restorations	"	8	127	1	—	21	—	—	157
Cancellations (gross)	"	206	5,274	75	22	482	64	2	6,125
Deaths	"	1,509	6,981	44	10	301	42	7	8,894
Pensions in force at 30 June 1982	"	10,255	262,357	1,685	332	21,610	3,101	562	299,902
Annual liability at 30 June 1982	$'000	29,779	793,645	5,012	951	64,708	9,393	1,601	905,089
Amount paid in pensions during 1981–82	$'000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	807,537

Class of service pensions

The following tables give an analysis of the total number of pensions in force, new claims granted and deaths for 1981–82.

SERVICE PENSIONS: NUMBER IN FORCE, 30 JUNE 1982

Class	*1914–18 War*	*1939–45 War*	*Korea-Malaya operations*	*Special Overseas Service*	*British Commonwealth*	*Allied Forces*	*Miscellaneous*	*Total*
Veterans—								
old age	6,719	124,368	428	31	11,283	1,623	292	144,744
permanently unemployable	850	29,392	614	161	1,117	118	37	32,289
Tuberculosis(*a*)	17	989	14	1	9	–	1	1,031
Total	*7,586*	*154,749*	*1,056*	*193*	*12,409*	*1,741*	*330*	*178,064*
Wives and widows	2,669	107,608	629	139	9,201	1,360	232	121,838
Total	**10,255**	**262,357**	**1,685**	**332**	**21,610**	**3,101**	**562**	**299,902**

(*a*) Eligibility on these grounds ceased on 2 November 1978.

SERVICE PENSIONS: NEW CLAIMS GRANTED 1981–82

Class	*1914-18 War*	*1939-45 War*	*Korea-Malaya operations*	*Special Overseas Service*	*British Commonwealth*	*Allied Forces*	*Miscellaneous*	*Total*
Veterans	51	19,412	239	74	3,106	568	199	23,649
Wives and widows	71	15,709	176	57	2,499	462	143	19,117
Total	**122**	**35,121**	**415**	**131**	**5,605**	**1,030**	**342**	**42,766**

SERVICE PENSIONS: DEATHS 1981-82

Class	1914-18 War	1939-45 War	Korea-Malaya operations	Special Overseas Service	British Common-wealth	Allied Forces	Miscell-aneous	Total
Veterans	1,345	5,887	39	10	235	32	7	7,555
Wives and widows	164	1,094	5	-	66	10	-	1,339
Total	**1,509**	**6,981**	**44**	**10**	**301**	**42**	**7**	**8,894**

Number of Service Pensions and Expenditure, States and Total

The following table shows the number of pensions in force and expenditure to 30 June 1982 according to place of payment.

SERVICE PENSIONS: NUMBER IN FORCE AT 30 JUNE 1982 AND ANNUAL EXPENDITURE 1981-82

State	Pensions in Force: Veterans	Wives and widows	Total	Annual expenditure ($'000)
New South Wales(*a*)	58,901	40,149	99,050	270,080
Victoria	43,784	29,875	73,659	195,250
Queensland	33,268	23,235	56,503	153,963
South Australia(*b*)	18,773	13,012	31,785	84,957
Western Australia	15,704	10,417	26,121	69,549
Tasmania	7,206	4,887	12,093	32,529
Overseas	428	263	691	1,209
Total	**178,064**	**121,838**	**299,902**	**807,537**

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

The following table provides a summary of Service Pensions.

SERVICE PENSIONS

	Pensions granted	Deaths	Pensions in Force: Veterans	Depend-ants	Total	Annual expenditure ($'000)
1976-77	32,404	6,875	105,685	58,030	163,715	283,280
1977-78	37,491	7,092	118,955	69,562	188,517	372,100
1978-79	36,607	7,827	131,792	80,630	212,422	436,196
1979-80	40,735	7,952	146,370	93,594	239,964	525,178
1980-81	46,189	8,966	163,237	108,841	272,078	686,487
1981-82	42,766	8,894	178,064	121,838	299,902	807,537

Medical treatment for veterans and dependants of veterans

Medical treatment is provided for all disabilities which have been accepted as service-related, and for pulmonary tuberculosis and cancer not related to service. In addition, and subject to certain conditions, treatment is provided for most non-service-related disabilities for: incapacitated veterans receiving disability pensions at or above the maximum (100 per cent) General Rate; 1939-45 War veterans receiving both service pension at any rate and disability pension at the 50 per cent rate or higher; veterans or nurses who served in the 1914-18 War; veterans of the Boer War; ex-prisoners-of-war; war widows and certain other dependants of deceased male veterans whose deaths have been accepted as service-related, and of deceased Special Rate pensioners; and certain service pensioners.

Treatment is provided at six Repatriation general hospitals (one in each State) and three auxiliary hospitals and an ANZAC hostel in Victoria. The total number of available beds for patients in wards or parts of wards open for use in all these institutions at 30 June 1982 was 2,593 and expenditure during 1981-82 amounted to $173,773,722. In addition, expenditure of $252,585,801 was incurred during 1981-82 on medical services outside these institutions.

Community patients

Where spare bed capacity exists in the Repatriation hospitals, patients may be admitted from the general community to a level not exceeding 20 per cent of the total occupied beds of the hospital over a period of time.

Repatriation hospitals and institutions

Details of full-time staff in Repatriation general hospitals and other Repatriation institutions are given in the following table.

REPATRIATION HOSPITALS AND INSTITUTIONS: FULL-TIME OPERATIVE STAFF 30 JUNE 1982

Type of institution	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*A.C.T.*	*N.T.*	*Aust.*
General hospitals	2,369	1,402	1,065	705	805	211	–	–	6,557
Other in-patient institutions	238	133	78	–	–	–	–	–	449
Limb and appliance centres	68	76	26	21	16	11	1	2	221
Total	**2,675**	**1,611**	**1,169**	**726**	**821**	**222**	**1**	**2**	**7,227**

The following table gives details of in-patients treated at Repatriation general hospitals and other Repatriation institutions in each State. The figures shown refer to treatment episodes, e.g. a person who is admitted to hospital twice during a year is counted twice.

REPATRIATION GENERAL HOSPITALS AND INSTITUTIONS: IN-PATIENTS TREATED, 1981–82

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust.*
REPATRIATION GENERAL HOSPITALS							
In-patients at beginning of year	703	404	367	227	317	70	2,088
Admissions and re-admissions during year	19,099	14,279	10,495	7,220	8,101	2,012	61,206
Total in-patients treated	*19,802*	*14,683*	*10,862*	*7,447*	*8,418*	*2,082*	*63,294*
Discharges	18,397	13,691	10,084	6,957	7,865	1,911	58,905
Deaths	757	616	409	241	284	87	2,394
In-patients at end of year	648	376	369	249	269	84	1,995
Average daily beds occupied	586	387	345	224	254	71	1,867
REPATRIATION AUXILIARY HOSPITALS							
In-patients at beginning of year	185	108	55	—	—	—	348
Admissions and re-admissions during year	1,704	747	578	—	—	—	3,029
Total in-patients treated	*1,889*	*855*	*633*	—	—	—	*3,377*
Discharges	1,663	666	503	—	—	—	2,832
Deaths	94	83	67	—	—	—	244
In-patients at end of year	132	106	63	—	—	—	301
Average daily beds occupied	156	104	60	—	—	—	319

In addition to the repatriation institutions, eligible patients are treated in other country and metropolitan hospitals and nursing homes at departmental expense. During 1981–82, 40,317 Repatriation in-patients were accommodated and treated in country and metropolitan hospitals and 6,767 in nursing homes.

Repatriation psychiatric patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department of Veterans' Affairs in separate wings of psychiatric hospitals administered by the State authorities. Excluding 37 on trial leave, there were 477 repatriation patients in these hospitals at 30 June 1982.

Out-patient treatment is provided throughout Australia at repatriation hospitals and clinics and through the Repatriation Local Medical Officer Scheme. During 1981–82, 702,532 out-patients were treated at Repatriation institutions, and local medical officers consultations totalled 2,913,683. The number of Repatriation local medical officers in Australia at 30 June 1982 was 10,403.

Artificial limb and appliance services

A wide range of artificial limbs and other surgical aids is supplied by the artificial limb and appliance centre in each State capital and Darwin. In addition, the Department maintains the Central Development Unit located in Melbourne, and engages in research and development in the prosthetic and orthotic field.

Since 1973, artificial limbs have been provided free of charge to all members of the community who need them (except where patients are eligible for compensation), either through the Department's artificial limb and appliance centres or on order through commercial limb-makers. The number of limbs supplied through the Department has increased significantly as the community has taken advantage of the free-limbs scheme.

Details of production at all centres during 1981–82 are as follows: arms, 253; legs, 2,756; surgical and adapted footwear, 6,242; other surgical appliances, 1,032; and repairs, 27,062. In addition the Department purchased from commercial manufacturers 1,877 legs, 145 arms and 3,789 limb repairs.

General Repatriation benefits and miscellaneous

Other activities of Department of Veterans' Affairs

In addition to the payment of pensions and the provision of medical treatment, the Department also provides various benefits and allowances designed to meet the needs of special classes of veterans and their dependants. These include the Soldiers' Children Education Scheme.

In addition, gift cars and an annual allowance for their upkeep are provided for veterans who, as a result of service, have suffered the amputation of both legs above the knees or amputation of one leg above the knee plus any two other amputations (above the ankle or at or above the wrist) or complete paraplegia resulting in the total loss of the use of both legs. A grant of up to $500 may be made towards the funeral expenses of eligible veterans and certain of their dependants. As from 13 November 1980, Temporary Incapacity Allowance may be paid to a veteran whose stay in hospital together with post-hospital convalescence or other treatment on a full-time basis exceeds 28 days. Payment of up to $10 may be made to provide such necessities as meals, sleeping accommodation, etc., for veterans in need of immediate relief. Also, certain concessions in telephone rental charges are provided for some classes of veterans and their dependants, including blinded veterans, war and defence widows and certain service and Special Rate disability pensioners. Veterans who have been blinded as a result of service may be issued with talking book machines. The Australian Red Cross Society supplies 'book' records or cassettes for these machines free of charge, thus enabling the blind to enjoy a wide range of literature.

Expenditure in 1981–82 on general Repatriation benefits for all wars was $11,659,000 comprising Soldiers' Children Education Scheme, $2,263,000; recreation transport allowance, $1,078,000; and other benefits, $8,318,000.

As at 30 June 1982, trust and other funds administered by the Department of Veterans' Affairs held $26,763,000 in securities (face value) and $5,297,000 in cash, a total of $32,060,000.

Reciprocal arrangements with the United Kingdom, New Zealand and other countries provide for the payment of pensions, etc., to eligible Australian veterans living overseas and to eligible veterans from overseas who are living in Australia.

Soldiers' Children Education Scheme

The Soldiers' Children Education Scheme was established in 1921 and operates with the assistance of the honorary Education Boards in each State. These Boards consist of representatives of government and non-government education authorities and of ex-service and other organisations which have a general interest in the welfare of the children of veterans. The objects of the Scheme are to assist and encourage eligible children in acquiring a standard of education compatible with their aptitude and ability, and to prepare them to enter an agricultural, commercial, professional, or industrial calling of their own choice. Eligible children are children of veterans whose deaths have been accepted as service-related; or of veterans who died from causes not service-related but who were receiving at the date of death a disability pension at a Special Rate for blindness, total and permanent incapacity, or amputation of two or more limbs; or of veterans who, as a result of service, are blinded totally and permanently incapacitated. From the commencement of primary education until the child reaches twelve years of age, school requisites and fares are provided. From the commencement of secondary education or from the age of twelve years, whichever is earlier, an education allowance is payable while the child is undertaking primary or secondary education. Assistance beyond secondary education is provided where an approved beneficiary continues with a course of specialised education or training necessary for a career. At this stage of training, in addition to the education allowance, fees are paid and text books, essential equipment and other minor benefits are provided.

All education allowances are subject to an income test, i.e. the amount of education allowance payable depends on the amount of income a child receives over the allowed limit. Weekly rates of allowances vary from time to time; current rates are available from the Department of Veterans' Affairs' Branch Offices.

The following tables show the costs of education under the scheme for the year ended 30 June 1982, and the number of children in receipt of benefit at 30 June 1982.

SOLDIERS' CHILDREN EDUCATION SCHEME: EXPENDITURE, 1981–82

($'000)

	N.S.W.(a)	*Vic.*	*Qld*	*S.A.(b)*	*W.A.*	*Tas.*	*Aust.*
Cost of education of beneficiaries—							
Under 12 years of age	2.7	0.8	5.0	2.3	0.7	0.8	12.3
12 years of age and over	893	583	365	182	130	90	2,243
Total expenditure	**895.7**	**583.8**	**370.0**	**184.3**	**130.7**	**90.8**	**(c)2,255.3**

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Excludes overseas expenditure of $8,000.

SOLDIERS' CHILDREN EDUCATION SCHEME: NUMBER RECEIVING BENEFITS AT 30 JUNE 1982

Type of training	*N.S.W.(a)*	*Vic.*	*Qld*	*S.A.(b)*	*W.A.*	*Tas.*	*Over-seas*	*Total*
At school—								
Primary (c)	124	70	122	44	31	27	n.a.	418
Secondary	399	190	213	97	53	62	8	1,022
Total at school	*523*	*260*	*335*	*141*	*84*	*89*	*8*	*1,440*
Tertiary/professional	244	140	76	51	39	23	2	575
Technical	–	42	6	–	–	4	–	52
Industrial	59	9	3	16	5	14	1	107
Grand total	**826**	**451**	**420**	**208**	**128**	**130**	**11**	**2,174**

(a) Includes A.C.T. (b) Includes N.T. (c) Not in receipt of an education allowance.

Re-establishment benefits for former regular servicemen

Subject to prescribed conditions, vocational training and business loans are provided for former regular servicemen with a view to ensuring that they are not at a disadvantage when they return to civil life. Loans from $5,000 (business and professional) and $10,000 (agricultural) may be granted to veterans in these categories who satisfy prescribed requirements in respect of suitability of their proposed business propositions and adequacy of security. Agricultural loans are administered by the Department of Primary Industry. Vocational training is provided for by the Department of Employment and Industrial Relations.

Survey of Ex-service personnel, widows and children

In November 1971, a survey based on the quarterly population survey (*see* Chapter 8, Manpower) was conducted at the request of the then Department of Repatriation and the Services Canteen Trust Fund. Details of the survey were published in Year Book No. 59, page 112 and in the publication *Ex-service Personnel, Widows and Children (November 1971)* (4403.0). A similar survey was conducted in October 1979, and included questions relevant to the Defence Service Homes function. Results were published in April 1980.

The Services Canteens Trust Fund

The Services Canteens Trust Fund was established under the *Services Trust Funds Act* 1947. Its funds are derived from the assets and profits of wartime services canteens, mess and regimental funds of disbanded units, and several other sources.

The total amount transferred to the Fund to 31 December 1981 was $11,086,682. The Act prescribed that of this, $5 million and such further amounts as the trustees of the Fund might from time to time decide should be devoted to the provision of education facilities for the children of eligible veterans, and that the balance of the Fund should be used to provide relief for veterans and their dependants in necessitous circumstances.

The Fund is administered by seven honorary trustees appointed by the Governor-General. The trustees have power to determine the persons or groups of persons to benefit from the Fund and the extent of the benefits to be granted within the provisions of the Act, and to appoint regional committees to assist with the administration. Members of regional committees are all persons who served in the 1939–45 War or are widows of men who served during the war. The trustees and members of regional committees serve in an honorary capacity.

Assistance from the Fund

Persons eligible for assistance from the Fund are those who, between 3 September 1939 and 30 June 1947, served in the Australian Naval, Military or Air Forces, including members of the canteens staff of any ship of the Royal Australian Navy, persons duly accredited to any part of the Defence Forces who served in an official capacity on full-time paid duty, and their dependants.

The trustees have introduced various schemes for providing financial assistance to needy eligible veterans and their dependants. The total cash assistance granted to individuals under all schemes from the inception of the Fund to 31 December 1981 was $16,710,083 ($433,181 during 1981) distributed as follows:

- welfare relief, $5,696,989 ($246,039 during 1981)
- children's education, $10,622,840 ($134,280 during 1981)
- other schemes, $390,254 ($2,682 during 1981)

For detailed information on the operation of the Fund, reference should be made to the annual reports of the Services Canteens Trust Fund.

Further information—ABS publications

Further information on subjects dealt with in this chapter is included in the annual *Australian National Accounts, National Income and Expenditure* (5204.0); *Commonwealth Government Finance* (5502.0); *State and Local Government Finance, Australia* (5504.0); and *Social Indicators, Australia* (4101.0). Current and summarised information on Commonwealth Government social services is contained in the *Monthly Summary of Statistics, Australia* (1304.0).

CHAPTER 10

HEALTH

This chapter is concerned with activities of the Commonwealth relating to health including quarantine, national health benefits programs and health insurance; grants for health purposes; activities of national health services organisations, Commonwealth Government health advisory organisations and organisations associated with public health such as the Royal Flying Doctor Service and the National Heart Foundation of Australia. Also included are statistics of personal health benefit payments, notifiable diseases, health related surveys, causes of death, perinatal deaths and cremations.

Further information about the administration of public health services is contained in the annual reports of the Director-General of Health; the annual reports of the State health authorities; and in the Year Books and annual publications published by the Australian Bureau of Statistics.

NATIONAL HEALTH SERVICES

Prior to an amendment to the Constitution in 1946, the only health function of the Commonwealth Department of Health was in relation to quarantine. Consequent upon this amendment, the Commonwealth Government was given powers to make laws about pharmaceutical, hospital and sickness benefits and medical and dental services. The Commonwealth Government also has used its powers under *Section* 96 of the Constitution to make grants to the States for health purposes. In addition, the Commonwealth Government gives financial assistance to certain organisations concerned with public health matters. A number of Commonwealth Government health organisations have been established; detailed information on the functions and operations of these organisations is given in this and previous Year Books and in the annual reports of the Commonwealth Director-General of Health.

Quarantine

The *Quarantine Act* 1908 is administered by the Commonwealth Department of Health and provides for the taking of measures to prevent the introduction or spread of diseases affecting humans, animals and plants.

Human quarantine

The masters of all ships and aircraft arriving in Australia from overseas are required to notify medical officers acting on behalf of the Commonwealth Department of Health of all cases of illness on board their vessel at the time of arrival. Passengers or crew members who are believed to be suffering from a quarantine illness may be examined by Quarantine Medical Officers located at all ports of entry.

The main concern of examining officers is the detection of quarantine diseases including cholera, yellow fever, plague, typhus fever and viral haemorrhagic fevers. These diseases are not endemic to Australia and it is of great importance to prevent their entry. Sufferers or suspected sufferers may be isolated to prevent the possible spread of the disease.

A valid International Certificate of Vaccination is required of travellers to Australia over one year of age who have been in *yellow fever* endemic zones within the past 6 days.

All passengers, whether they arrive by sea or air, are required to give their intended place of residence in Australia so that they may be traced if a case of disease occurs among the passengers on the ship or aircraft by which they travelled to Australia.

Isolation. Under the Quarantine Act, airline and shipping operators are responsible for the expenses of isolation of all travellers who disembark from their aircraft or ship and who fail to meet Australia's vaccination requirements.

Animal quarantine

The objectives of animal quarantine being developed within the Department in consultation with Australia's agricultural and livestock groups, seek to combine the need to provide improved genetic material for Australia's livestock industries, with the maximum practical protection against the entry of exotic livestock diseases.

Importation of animals is restricted to certain species from designated overseas countries whose diseases status and pre-entry quarantine facilities meet Australia's stringent requirement. With few exceptions all imported animals are required to serve a period in quarantine on arrival.

Animal quarantine stations are located at most capital cities. A high security animal quarantine station on the Cocos (Keeling) Islands provides the means whereby the safe importation of a wide range of animals is possible.

Measures to prevent the entry of exotic diseases are also applied through the recently enhanced Northern Surveillance program and the rigorous screening of applications to import biological materials and animal products.

Plant quarantine

Arising from both its dependence upon exotic plant species for agriculture, horticulture and forestry and its island continental isolation, Australia is free of numerous plant pests and diseases that occur elsewhere in the world. Since 1 July 1909, the importation into Australia of plant materials has been subject to an increasingly stringent quarantine: some materials are admitted only under certain conditions while others are prohibited altogether. The quarantines are designed to exclude from the country unwanted pests and plant diseases. It is not possible to predict how a new plant pest or disease will perform when introduced to a new environment free of its natural enemies. Hence the general objective is to keep any pest or disease out of the country which could cause serious economic losses to Australia's agriculture, horticulture or forests.

For further details *see* Year Book No. 61, page 449.

The Australian Health Scheme

Under the Federal/State system of Government in Australia, State Governments are responsible for the provision of hospital and health services within their own borders. The Commonwealth Government is responsible for national health matters such as quarantine, and as well, maintains specific assistance programs relating to pharmaceutical benefits, medical benefits, nursing home benefits and health insurance. In general the Commonwealth Government's role in the Australian health scheme is to provide Australian residents with protection against medical, hospital, nursing home and home care costs.

The Commonwealth Government provides finance in respect of health care through Commonwealth medical benefits, its contribution to the Reinsurance trust fund, the payment of Commonwealth nursing home benefits, and the funding of deficit financed nursing homes. The Commonwealth also provides a *Domiciliary Nursing Care Benefit* and daily bed subsidies towards the cost of accommodation in private hospitals.

Health insurance coverage is available from registered medical benefits organisations and registered hospital benefits organisations. These are private non-profit organisations. Some commercial organisations also offer types of health insurance.

The various sectors of the health scheme are authorised by, and administered under, the following Commonwealth legislation:

Health Insurance Act;
National Health Act;
Nursing Homes Assistance Act; and
States (Tax Sharing and Health Grants) Act.

In all States and the Northern Territory, except South Australia and Tasmania, the hospital cost sharing agreements have been terminated. The Commonwealth, under new arrangements now provides funds to these States and the Northern Territory in the form of untied identifiable general purpose grants within tax sharing arrangements, in lieu of the previous specific funding for public hospitals, the Community Health Program and the School Dental Scheme.

South Australia and Tasmania also receive an identifiable general purpose health grant for services previously funded under the *Community Health Program* and the *School Dental Scheme*. For hospitals in these two States, the cost sharing arrangements continue with the Commonwealth meeting 50 per cent of the agreed net operating costs of recognised public hospitals.

Health Program Grants

Health program grants, authorised under the Health Insurance Act, are payable to eligible organisations to meet the cost, or such proportion of the cost as the Minister may determine, of approved health services provided by medical practitioners employed on a salaried or sessional basis. Eligible organisations are required to impose charges, where appropriate, for services involving privately insured

patients. Generally, the grant covers the cost of medical services provided to patients in respect of whom a doctor in private practice would bulk-bill, i.e. Pensioner Health Benefits cardholders and their dependants, and eligible people in special need.

Community Health Program—National Projects

Under the Community Health Program National Projects arrangements, the Commonwealth provides 100 per cent funding to organisations in respect of specific activity which has been approved for the purpose of the Program.

The largest of these projects is the Family Medicine Program (FMP) of the Royal Australian College of General Practitioners, which provides vocational training for young doctors who intend to enter general practice. The trainees receive their training through attachments to participating private general practitioner practices and by attendance at educational events organised by the FMP.

The other national projects are either national co-ordinating secretariats of voluntary non-profit organisations operating in more than one State or specific health-related projects which have national application.

Program of Aids for Disabled People

The principal aim of the Program of Aids for Disabled People (PADP) arrangements is to enable people with disabilities of a permanent or indefinite duration to live more independently in a domestic situation, with a consequent reduction in demand for more costly institutional care. Under the program certain aids to daily living including wheelchairs, surgical shoes, braces, splints, calipers, surgical wigs, aids for incontinence, walking aids, personal aids (eating and cooking utensils, toilet articles) and basic home modifications (ramps, rails, grips, doorwidenings, etc.) may be provided to eligible people. PADP is operated through health services networks administered by the State and Territory health authorities.

Commonwealth Medical Benefits

The Health Insurance Act provides for a Medical Benefits Schedule which lists medical services and the Schedule (standard) fee applicable in each State in respect of each medical service. The Schedule covers all services rendered by legally qualified medical practitioners, certain prescribed medical services rendered by approved dentists in the operating theatres of approved hospitals, and optometrical consultations by participating optometrists. Schedule fees are set and updated by an independent fees tribunal which is appointed by the Government. The fees so determined are those to apply for medical benefits purposes only. Medical services in Australia are generally delivered by either private medical practitioners on a fee-for-service basis, or medical practitioners employed in hospitals.

All persons who are insured for at least basic cover with a registered medical benefits organisation are entitled to Commonwealth medical benefits at a rate of 30 per cent of the Schedule fee for each medical service. Patients also have to pay any amount charged in excess of the Schedule fee.

These Commonwealth medical benefits are paid through medical benefits organisations which are registered under the National Health Act and act as agents for the Commonwealth in this regard. Benefits may be claimed either before the doctor has been paid, in which case the benefits are used to help pay the doctor's account, or alternatively the benefits may be claimed after the doctor's account has been settled.

Special arrangements apply in respect of pensioners with pensioner health benefit entitlement and people who satisfy certain criteria as people in special need. People in special need, as defined, comprise migrants during their first six months in Australia, unemployment and special beneficiaries, and people on low incomes. Pensioners who qualify, are eligible for Commonwealth medical benefits equal to 85 per cent of the Schedule fee for each medical service, or the Schedule fee less $5 whichever is the greater amount. The maximum personal contribution by an eligible pensioner would be $5 where the Schedule fee is charged. Doctors may bulk bill the Department of Health direct for these benefits. Alternatively, the pensioners may pay the doctors' accounts and then claim the benefits from the medical benefits organisations with which they have registered.

For people who satisfy the criteria as being in special need Commonwealth medical benefits equal to 85 per cent of the Schedule fee for each medical service or the Schedule fee less $5, whichever is the greater amount are payable. Doctors who bulk bill the Commonwealth in respect of services to people in special need must accept the Commonwealth benefit of 85 per cent in full settlement of the account. If doctors do not bulk bill, these patients may be required to make a personal contribution to the doctor's charges after claiming the appropriate Commonwealth medical benefit from a medical benefits organisation. Where the Schedule fee is charged the maximum contribution by a person in special need would be $5 under these circumstances i.e. when not bulk billed.

Medical Insurance Benefits

All registered medical benefits organisations are required to operate a basic medical benefits table and may, in addition, operate other tables of benefits.

The basic medical benefits table must, together with the Commonwealth benefit, cover either 85 per cent of the Schedule fee for each medical service or the Schedule fee less $10, whichever is the greater amount, where the Schedule fee is charged. The organisations may not refuse to accept members to the basic table on the grounds of state of health, nor may they refuse to pay basic table benefits on the basis of pre-existing illness and chronic illness, or limit benefits to a maximum number of services.

Registered organisations can impose a two months waiting period from the date a new member joins a basic benefits table until fund benefits are payable. The Commonwealth benefit component (30 per cent) of basic medical benefits is, however, payable immediately.

The organisations may also operate other tables of benefits with the proviso that at least the basic level of benefits are paid and that total medical benefits do not exceed the Schedule fee or the amount charged by the doctor, which ever is the lesser amount. These tables may also provide benefits for a wide range of paramedical services and aids, dental services, etc.

Hospital Costs

The Commonwealth Government requires that accommodation in public hospitals with treatment by hospital doctors be available without charge to eligible pensioners and persons in special need. Subject to decisions by State Governments on extending access to free hospital treatment, all other patients must meet any charges raised either through health insurance or from their own resources. The process of determining the actual level of hospital charges and their application is the responsibility of the State health authorities.

The Commonwealth Government provides a private hospital bed day subsidy of $28 for each day's hospitalisation of a patient for predetermined (prescribed) surgical procedures in private hospitals. For patients not receiving prescribed surgical procedures, a Commonwealth bed day subsidy of $16 for each day's hospitalisation is provided. These subsidies are claimed by the private hospital on the patient's behalf and are subsequently deducted from the patient's account.

Hospital Insurance Benefits

Hospital fees in recognised public hospitals are determined by the State Governments. The Commonwealth declares standard fees for benefit purposes. Private hospitals charge varying fees and there is no Government fee control over the private hospital sector.

All registered hospital benefits organisations are required to operate a basic hospital benefits table and may, in addition, operate other tables of benefits.

The basic table currently provides the following benefits:

(a) hospital fund benefit equal to the standard fee for shared-ward accommodation in a recognised hospital. This benefit may also be utilised to partly cover the fee for a private room in a recognised hospital or for accommodation in a private hospital;
(b) benefits to cover fees raised for 'professional services' rendered to private patients in recognised hospitals by doctors employed by the hospitals. This situation arises where a private patient chooses to be treated by doctors engaged by the hospital rather than by a private doctor;
(c) outpatient benefits in respect of outpatient services provided in those States where recognised hospitals charge for these services; and
(d) long stay nursing home type patients accommodated in hospitals.

As in the medical basic table, the organisations may not refuse to accept members to the basic hospital table on the grounds of state of health. Although the organisations may not refuse fund benefits at the basic level because of pre-existing illness, chronic illness etc., they do receive financial assistance from the Government to maintain benefit payments to persons who require extensive hospitalisation. This assistance is provided under the *Hospital Benefits Reinsurance Trust Fund,* which will be referred to later.

In addition to the basic hospital benefits table, the hospital benefits organisation may also operate other tables of benefits with the proviso that the total benefits will not exceed the amount of the charge. Most organisations operate a supplementary table which, when combined with the basic table provides cover equal to the charge for a private room in a recognised hospital. Benefits under these tables may, in combination with the basic benefit table also be used to at least partly cover the net cost of accommodation in a private hospital. Some organisations also have additional tables of benefits to cover higher private hospital charges and to cover some paramedical services and aids.

Insurance Contribution Rates

Private medical and hospital insurance coverage is voluntary. It is Government policy that the contribution rates for medical benefits tables and hospital benefits tables are to be based on the community rating principle, i.e. all contributors to a table pay the same contribution regardless of such factors as age, sex, state of health, etc. The only permitted exception to this rule is that persons without dependants need only pay half the normal rate of contribution.

Contributions to basic hospital and/or basic medical insurance are eligible for a taxation rebate at the rate of 30.67 per cent for the 1982-83 income year and 30 per cent in subsequent years.

Hospital Benefits Reinsurance Trust Fund

Hospital benefits organisations are permitted to transfer to their reinsurance accounts benefits at the basic table rate for those contributors who spend more than thirty-five days in hospital in any one year.

The Commonwealth Government contributes $100 million per year to the Reinsurance Trust Fund and the remaining benefits liability is shared equitably between the hospital benefits organisations according to claims experience and total membership of the basic table.

The reinsurance arrangements ensure that the financial liability for long-term hospital patients (i.e. the aged and chronically ill) is shared by the Government and all hospital benefits organisations in an equitable manner.

Long-term (Nursing Home Type) Patients

In general long-term patients accommodated in hospitals who no longer require hospital treatment are reclassified as nursing home type patients and are required to contribute towards their care and accommodation in the same way as patients in nursing homes. A 'nursing home type patient' is an inpatient whose hospitalisation exceeds 60 days, unless a certificate has been issued by a medical practitioner to certify that a patient is in need of acute care. The arrangements operate in all hospitals except New South Wales and Northern Territory public hospitals.

Government Nursing Home Benefits

There are two forms of Commonwealth benefit payable in respect of patients accommodated in premises approved as nursing homes under the National Health Act. These benefits are as follows:

(a) *Basic Nursing Home Benefit.* The Commonwealth pays basic nursing home benefits in respect of all qualified nursing home patients other than those who are eligible to receive benefits from some other source such as workers' compensation or third party insurance. Basic benefit levels are reviewed and adjusted annually to a level whereby the fees charged in respect of 70 per cent of beds in non-Government nursing homes, approved under the National Health Act, (i.e. participating nursing homes) are covered by a combination of the prescribed minimum patient contribution (explained below) plus the Commonwealth basic nursing home benefit. As the general level of fees in these nursing homes varies between States, the amount of basic benefit payable also varies between States under the above formula. As at 5 November 1981, the maximum amount of basic nursing home benefit payable per day in each State and Territory was: New South Wales and Australian Capital Territory $23.00; Victoria $31.65; Queensland $20.40; South Australia and Northern Territory $27.60; Western Australia $18.55; and Tasmania $20.65; and

(b) *Commonwealth Extensive Care Benefit.* The Commonwealth extensive care benefit is payable at the rate of $6 a day, in addition to the Commonwealth basic benefit, in respect of patients who need and receive 'extensive care' as defined in the National Health Act. Application must be made for payment of the extensive care benefit. As in the case of the Commonwealth basic benefit, the extensive care benefit is payable in respect only of qualified patients who are not entitled to receive such benefits from workers' compensation or third party insurance.

Minimum Patient Contribution

Generally speaking, all participating nursing home patients are required to make a minimum contribution towards the cost of their accommodation in the nursing home. Patients are required to make this contribution towards the cost of their accommodation and care in recognition of those costs which would otherwise be incurred outside the nursing home; the nursing home is usually a long-term residence for most patients and the patient contribution is related to the pension which is paid to assist towards the cost of living.

The minimum patient contribution equals 87.5 per cent of the sum of the standard pension plus supplementary assistance and at 6 May 1982 was $10.25 a day.

Where the fees charged by a participating nursing home are in excess of the combined total of nursing home benefits plus the minimum patient contribution, the difference must be met by the patients. Conversely, where the nursing home fee is less than this combined total, the basic benefit is reduced by that amount.

Fees charged to patients in Government nursing homes are determined by State Governments. Patients in these homes also attract basic and extensive care benefits from the Commonwealth Government.

Deficit Financing Arrangements

As an alternative to the provision of patient benefits under the National Health Act (as outlined above), the *Nursing Homes Assistance Act,* 1974 provides for direct funding of nursing homes conducted by local government and charitable and benevolent organisations.

Under the deficit financing arrangements the Commonwealth meets the approved operating deficits and the cost of approved asset replacements of nursing homes. Financial assistance is provided by way of monthly advances based on a budget approved by the Department. An annual settlement is effected when audited financial statements are forwarded to the Department.

Nursing homes wishing to participate in the deficit financing arrangements must enter into a formal agreement with the Government for that purpose. Patients in deficit financed nursing homes are required to pay a prescribed fee equivalent to the minimum statutory patient contribution. Higher fees are prescribed for patients entitled to damages or compensation.

Domiciliary Nursing Care Benefit

The Commonwealth Government provides a benefit to assist people who choose to care, in their own homes, for chronically ill or infirm relatives who would require admission to a nursing home if this care in their own home was not available. Patients who qualify for this benefit are, typically, those people who are incapable of caring for themselves and of being left unsupervised for any significant period.

This benefit, the domiciliary nursing care benefit, is payable at the rate of $42 per fortnight. The basic criteria for the payment of the benefit are that the patient must be aged 16 years or over and be in need of continuing nursing care and receiving regular visits by a registered nurse.

Australian Residents Overseas

Generally speaking, Australian residents who are temporarily absent from Australia overseas, are eligible to receive Commonwealth medical benefits provided they are either insured with a registered medical benefits organisation or an eligible pensioner. Commonwealth medical benefits payable in respect of medical treatment overseas are based on the Schedule fees for equivalent services in New South Wales. All other persons—uninsured and people in special need—must meet costs for medical treatment overseas from their own resources.

The Commonwealth does not provide any assistance in respect of hospital accommodation overseas for Australian residents.

Visitors to Australia

Visitors to Australia, along with all Australian residents who do not qualify for special Government assistance, are responsible for the full cost of their medical and hospital treatment.

Visitors to Australia can insure themselves with travel agents, commercial insurers or registered health insurance organisations prior to arrival or on arrival in Australia. There is normally a two month waiting period before benefits become payable by the registered health insurance organisation although Commonwealth medical benefits are immediately available.

Commonwealth Authorities Expenditure

Pharmaceutical benefits

A person receiving treatment from a medical practitioner or a participating dental practitioner registered in Australia is eligible for benefits on a wide range of drugs and medicines when they are supplied by an approved pharmacist upon presentation of a prescription or by an approved private hospital when that person is receiving treatment at the hospital. Special arrangements exist to cover the supply of pharmaceutical benefits in situations where the normal conditions of supply do not apply, e.g. in remote areas.

A three-tier system of patient contribution for each supply of a pharmaceutical benefit was introduced on 1 January 1983. Under these arrangements:

- pensioners with Pensioner Health Benefit cards and sickness beneficiaries with Health Benefits cards, and the dependants of both groups, receive pharmaceutical benefit items free of charge;
- persons in special need who hold Health Care cards, together with Social Security and Veterans' Affairs pensioners who are not eligible for a Pensioner Health Benefits or Health Benefits card, and dependants of these groups, are required to pay a patient contribution of $2 per benefit item;
- other members of the general public pay a patient contribution of $4 per benefit item.

Under the Pharmaceutical Benefit Scheme the total cost, including patient contributions, for prescription drugs was $428.9 million in 1980-81 and $526.0 million in 1981-82. These figures do not include benefits supplied by certain hospitals and miscellaneous services or retrospective adjustments of chemists' remunerations.

Summary of personal benefit payments

For an analysis by purpose and economic type of expenditure by all Commonwealth Government authorities *see* Chapter 22, Public Finance.

Most Commonwealth Government health benefits are financed through the National Welfare Fund and the Health Insurance Commission. The following table shows personal benefit payments by Commonwealth Authorities for 1980–81.

COMMONWEALTH AUTHORITIES: PERSONAL BENEFIT PAYMENTS—HEALTH 1980–81

($'000)

	N.S.W. (a)	*Vic.*	*Qld*	*S.A. (a)*	*W.A.*	*Tas.*	*N.T. (a)*	*A.C.T. (a)*	*Total*
Hospital and clinical services—									
Hospital benefits reinsurance	31,233	47,326	15,968	17,711	677	871	–	1,383	115,169
Private hospital daily bed payments	20,411	19,727	13,803	8,698	5,438	1,894	632	904	71,508
Hospital benefits, n.e.c.	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	1
Nursing home benefits	135,411	90,840	53,655	42,772	36,418	13,389	1,690	5,996	380,171
Tuberculosis campaign allowances	319	623	215	44	54	15	37	10	1,318
Rehabilitation of ex-servicemen	250	175	69	21	65	26	–	35	641
Total	*187,624*	*158,691*	*83,710*	*69,246*	*42,652*	*16,195*	*2,359*	*8,329*	*568,808*
Other health services—									
Medical benefits	299,915	165,694	89,471	55,535	46,540	13,427	3,269	9,056	682,907
Isolated patients travel and accommodation assistance	1,113	410	1,733	295	594	156	534	–	4,837
Pharmaceutical benefits for pensioners	80,647	44,561	30,312	15,952	13,346	5,083	131	1,011	191,044
Pharmaceutical benefits, n.e.c.	46,484	30,914	17,600	9,292	8,792	2,951	344	1,794	118,171
Domiciliary care	5,850	4,259	3,200	1,438	1,501	1,238	–	–	17,485
Total	*434,009*	*245,838*	*142,316*	*82,512*	*70,773*	*22,855*	*4,278*	*11,861*	*1,014,442*
Total health	**621,633**	**404,529**	**226,026**	**151,758**	**113,425**	**39,050**	**6,637**	**20,190**	**1,583,250**

(*a*) State totals for New South Wales and South Australia also include most of the unallocatable expenditure on personal benefit payments to residents in the Australian Capital Territory and the Northern Territory respectively. (*b*) A State and Territory dissection of the total for *Hospital benefits, n.e.c.* is not available.

Tuberculosis

An arrangement between the Commonwealth and the States under which the Commonwealth reimbursed the States for all approved capital expenditure on tuberculosis and for net maintenance expenditure to the extent that it exceeded that for 1947–48 was discontinued from 31 December 1976. The National Tuberculosis Advisory Council, however, has been retained to keep abreast of advances and to advise the Minister for Health and, through him, the State Ministers for Health on the best means of prevention, diagnosis and control of tuberculosis. There are eleven members of the Council, the chairman being the Director-General of the Commonwealth Department of Health.

To reduce the spread of infection the Commonwealth Government pays allowances to persons suffering from infectious tuberculosis so that they may give up work and undergo treatment. Commonwealth Government Expenditure on Tuberculosis Allowances over the last three years has been $1,207,200 in 1979–1980, $1,317,000 in 1980–81 and $1,103,200 in 1981–82.

Immunisation campaigns

Continuing immunisation programs against poliomyelitis, measles, rubella, diphtheria, tetanus, and whooping cough are maintained in all States and Territories. Mumps immunisation programs commenced late in 1982.

Mass campaigns for rubella immunisation are routinely undertaken only on girls aged between 10 and 14 years. Rubella immunisation is also available when appropriate to females during their reproductive years. Whooping cough immunisation is currently given only to infants less than 1 year of age.

National health services organisations

The *Commonwealth Department of Health Pathology Laboratory Service* provides clinical diagnostic and investigational facilities at laboratories situated in Albury, Bendigo, Cairns, Hobart, Kalgoorlie, Launceston, Lismore, Port Pirie, Rockhampton, Tamworth, Toowoomba and Townsville. Their primary role is to assist medical practitioners in the diagnosis of illness and disease and to provide facilities for investigations into public health and aspects of preventive medicine. During 1981-82, these laboratories carried out approximately 5.6 million pathology tests and investigations in respect of 0.7 million patient requests. On 1 July 1982 the laboratory at Kalgoorlie was transferred to the control of the Western Australian State Government.

The Commonwealth Serum Laboratories Commission (CSL) produces pharmaceutical products for human and veterinary use and is one of Australia's foremost scientific institutes. The Commission's main function is to produce and sell prescribed pharmaceutical products used for therapeutic purposes and to ensure the supply of essential pharmaceutical products in accordance with national health needs. The Commission's functions also include research and development relating to many kinds of human and veterinary diseases covering the fields of bacteriology, biochemistry, immunology and virology. The Commission's laboratories and central administration are located at Parkville, Victoria, with storage and distribution facilities in all States.

For over sixty years, CSL has been Australia's chief supplier of biological medicines, insulins, vaccines, penicillin, human blood fractions, Bacillus Calmette-Guerin (BCG) and an increasing range of veterinary biological products needed by Australia's sheep, cattle, pig and poultry industries. The role of CSL has expanded as a result of amendments to the CSL Act from 1 July 1980 that allow CSL to produce, buy, import, supply, sell or export prescribed pharmaceutical products (either of a biological or non-biological nature).

The Commission employs more than 1,000 people, including medical officers, veterinarians, bacteriologists, biochemists, physicists, engineers, accountants, laboratory assistants, skilled tradesmen and experienced marketing staff to promote the sale of its products.

The *Australian Radiation Laboratory* is concerned with:

(a) The formulation of policy, development of codes of practice, national surveillance and provision of scientific services relating to the public and occupational health implications of ionising and non-ionising radiation; and

(b) The maintenance of national radiation measurement standards and quality evaluation and assurance of radioactive materials used for medicine diagnosis and treatment.

The *National Acoustic Laboratories* undertake scientific investigations into hearing and problems associated with noise as it affects individuals, and advise Commonwealth Government Departments and instrumentalities on hearing conservation and the reduction of noise. A free audiological service is provided for pensioners with medical benefit entitlements and their dependants, persons under 21, war widows, Social Security rehabilitees and Veterans' Affairs patients. During 1981-82 the number of appointments provided was 148,595 and the number of hearing aids fitted was 46,832.

The *Ultrasonic Institute* conducts research and provides advisory services on the use of ultrasonic radiation in the diagnosis and treatment of disease. The Institute is recognised as a world leader in its field.

Commonwealth Government health advisory organisations

The *National Health and Medical Research Council* advises the Commonwealth Government and State Governments on matters of public health legislation and administration, on matters concerning the health of the public and on medical research. It also advises the Commonwealth Government and State Governments on the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition. The Council advises the Commonwealth Minister for Health on the application of funds from the Medical Research Endowment Fund which provides assistance to Commonwealth Government Departments, State Departments, Universities, Institutions and persons

for the purposes of medical research and for the training of persons in medical research. The Commonwealth Government makes annual appropriations to the fund. The allocation for 1982–83 is $30.0 million. The secretariat for the Council and its Committees is provided by the Commonwealth Department of Health and is located in Canberra.

The *Commonwealth Institute of Health* is located in the University of Sydney and provides teaching, research and consultation in all fields relating to health and its maintenance and promotion including resources devoted to the study of health problems of work, the tropics and developing nations. The Institute's academic functions are under the direction of the University, whilst its various training, research and consultative roles are maintained by the Commonwealth Department of Health which funds the Institute's activities.

The Institute has an important role as a resource and data collection centre for the nation and it is endeavouring to promote health and a better understanding of health care and its delivery throughout Australia and neighbouring countries.

The Institute offers undergraduate and postgraduate training in a wide range of Public Health specialities, the largest programme being the Master of Public Health.

Costs for the Institute paid by the Commonwealth Government during 1981–82 were $2,869,765 for administration and $49,485 for plant and equipment.

The *Institute of Child Health* which was associated with the Commonwealth Institute of Health located at the University of Sydney and with the Royal Alexandra Hospital for Children at Camperdown closed on 31 December 1981. Its activities included research into medical and social problems of childhood, undergraduate and postgraduate teaching at the University of Sydney, collaboration with other national and international organisations concerned with child health and disease, and the training of United Nations Colombo Plan Fellows. Costs of the Institute paid by the Commonwealth Government during 1981–82 were $361,972 for administration and $3,301 for plant and equipment.

The *National Biological Standards Laboratory*, including the *Australian Dental Standards Laboratory*, is responsible for the development of standards for therapeutic goods and for testing such products for compliance with standards to ensure that they are safe, pure, potent and efficacious. Other responsibilities, including the inspection of manufacturing premises, the evaluation of new and modified products and the investigation of complaints, make it the linchpin of a uniform national system of control over therapeutic goods.

The British Pharmacopoeia, the British Pharmaceutical Codex and the British Veterinary Codex are specified as primary standards. In addition, the Minister has powers to make orders setting standards for specific types of goods and general classes of goods which are imported, or the subject of interstate trade, or supplied to the Commonwealth Government. Standards developed by the National Biological Standards Laboratory are submitted to a statutory committee, the Therapeutic Goods Standards Committee, which advises the Minister on their suitability.

The Laboratory, jointly with State officials and the pharmaceutical industry, prepares and revises an Australian Code of Good Manufacturing Practice which is the criterion employed by inspectors for the licensing of pharmaceutical manufacturers.

The Laboratory has sections which deal with viral products, bacterial products, pharmaceutical products, antibiotics and pharmacology, testing dental products and some medical devices.

The *Australian Drug Evaluation Committee* makes medical and scientific evaluations both of such goods for therapeutic use as the Minister for Health refers to it for evaluation and of other goods for therapeutic use which, in the opinion of the Committee, should be so evaluated, and advises the Minister for Health as it considers necessary relating to the importation into and the distribution within Australia of goods for therapeutic use that have been the subject of evaluation by the Committee. It has the powers to co-opt and seek advice from specialist medical colleges and associations and from the medical and allied professions, drug manufacturers and other sources. During 1981–82 sixty-four applications for approval to market new drugs and twenty-five applications to extend the indications or amend dosage regimes for currently marketed drugs were considered by the Committee. Sixty-seven applications were approved, twenty-one rejected and one deferred pending production of further information on safety and efficacy. Under the Committee's control are the Australian Registry of Adverse Reactions to Drugs, which provides an early warning system based on reports of reactions to drugs forwarded voluntarily by medical practitioners, pharmacists, hospitals, etc; the Adverse Drug Reaction Advisory Committee, which gives initial consideration to the adverse drug reaction reports received by the Registry and arranges feedback to the medical profession; the Vaccines Sub-Committee; the Endocrinology Sub-Committee; the Congenital Abnormalities Sub-Committee; the Parenteral Nutrition Sub-Committee; the Anti-Cancer Drugs Sub-Committee; the Radiopharmaceuticals Sub-Committee; and the National Drug Information Advisory Sub-Committee, formed to oversight administrative aspects of the technical input to the National Drug Information Service.

The *Therapeutic Goods Advisory Committee* considers, and advises the Minister for Health on, any matters relating to standards applicable to goods for therapeutic use and the administration of the Therapeutic Goods Act. The *Therapeutic Goods Standards Committee*, under the same Act, advises the Minister for Health on standards applicable to goods for therapeutic use and requirements relating to the labelling and packaging of any such goods.

The *National Therapeutic Goods Committee* comprises Federal and State representatives. Its function is to make recommendations to the Commonwealth and State Governments on action necessary to bring about co-ordination of legislation and administrative controls on therapeutic goods. Sub-committees have been formed to consider specific matters, notably advertising, establishment of a National Product Register, a Code of Good Manufacturing Practice, and standards for disinfectants.

The *Standing Committee of the Health Ministers' Conference* was established by the 1980 Australian Health Ministers' Conference to carry out any tasks or directions referred to it by the Conference. The Committee's membership consists of representatives from the Commonwealth Departments of Health and Veterans' Affairs, each State health authority, the Northern Territory Department of Health and the Capital Territory Health Commission.

Other Commonwealth Government subsidies and grants to States

Home nursing subsidy scheme

The *Home Nursing Subsidy Scheme* provides for an annual Commonwealth subsidy to approved home nursing services. Organisations eligible for the subsidy are those which are non-profit making, employ registered nurses, and receive assistance from a State Government or from local government bodies. During 1981–82 subsidies totalling $16.5m were paid to 191 organisations providing home nursing services in the States. Home nursing services in the Northern Territory were provided by the Commonwealth Department of Health until 1 January 1979, when responsibility was transferred to the Northern Territory Government. In the Australian Capital Territory, these services have been provided by the Capital Territory Health Commission.

Paramedical services

The *States Grants (Paramedical Services) Act* 1969 provides for the Commonwealth Government to share on $1 for $1 basis with participating States the cost of approved paramedical services such as chiropody, occupational therapy, physiotherapy and speech therapy provided wholly or mainly for aged persons in their homes. Matching grant payments during 1981–82 amounted to $1,182,291.

Commonwealth Government grants to organisations associated with public health

In addition to providing the services already mentioned in this Chapter, the Commonwealth Government gives financial assistance to certain organisations concerned with public health. Examples of organisations included in this category are given in the following text.

The *Royal Flying Doctor Service* is a non-profit organisation providing medical services in remote areas of Australia. It is distinct from, but co-ordinates with, the Aerial Medical Service which, while formerly operated by the Commonwealth Department of Health, has been operated by the Northern Territory Government since 1 January 1979. The Royal Flying Doctor Service is financed mostly from donations and government contributions. For the year ended 30 June 1982 the Commonwealth Government paid grants totalling $3,536,866 towards operational costs and matching assistance of $632,250 towards an approved program of capital expenditure. The Service made flights during 1981–82 totalling 5.6 million kilometres and transported 8,357 patients. In the same period medical staff conducted a total of 86,041 consultations and dental treatment was given to 4,321 patients.

The *Red Cross Blood Transfusion Service* is conducted by the Australian Red Cross Society throughout Australia. The operating costs of the Service in the States are met by the State Governments paying 60 per cent, the Society 5 per cent of net operating costs or 10 per cent of donations, whichever is the lesser, and the Commonwealth Government meeting the balance. In the Northern Territory the Society contributes to operating costs as it does in the States, and the Commonwealth met the balance prior to 1 January 1979. After this date the Northern Territory is in the same position as the States. Approved capital expenditure by the Service in the States is shared on a $1 per $1 basis with the States and the Northern Territory Government. Commonwealth Government expenditure for each State and the Northern Territory during 1981–82 was $8,906,802, made up as follows: New South Wales, $2,597,579; Victoria, $2,958,481; Queensland, $1,182,384; South Australia, $948,577; Western Australia, $949,590; Tasmania, $168,791; and Northern Territory, $101,400.

The *National Heart Foundation of Australia* is a voluntary organisation, supported almost entirely by public donations, established with the objective of reducing the toll of heart disease in Australia. It approaches this objective by programs sponsoring research in cardiovascular disease, community and professional education directed to prevention, treatment and rehabilitation of heart disease and community service programs including rehabilitation of heart patients, risk assessment clinics and surveys and documentation of various aspects of heart disease and treatment of heart disease in Australia. The Foundation's income in 1981 was $5,071,000 of which $4,190,000 was from public donations and bequests. Federal, State and Semi-Government authorities made grants of $132,314 for specific projects conducted by the Foundation. Since the inception of the Foundation research has been a major function and a total of $14,285,000 has been expended in grants to university departments, hospitals and research institutes and for fellowships tenable in Australia and overseas. It is notable however that with increasing opportunities for prevention and control of heart disease, the Foundation's education and community service activities are increasing significantly. In 1981 the expenditure on research was $1,482,000 while expenditure on education and community service was $959,000.

The *World Health Organization* (WHO) is a specialised agency of the United Nations having as the objective the attainment by all peoples of the highest level of health. Australia is assigned to the Western Pacific Region, the headquarters of which is at Manila and is represented annually at both the World Health Assembly in Geneva and the Regional Committee Meeting in Manila. Australia's contribution to WHO for 1981–82 was $3,465,825.

The *International Agency for Research on Cancer* (IARC) was established in 1965 within the framework of the World Health Organization. The headquarters of the Agency are located in Lyon, France. The objectives and functions of the Agency are to provide for planning, promoting and developing research in all phases of the causation, treatment and prevention of cancer. Australia's contribution to the IARC for 1981–82 was $473,755.

The *Isolated Patients Travel and Accommodation Assistance Scheme* commenced on 1 October 1978. The purpose of the Scheme is to financially assist patients living in isolated areas with costs incurred where they need to travel in excess of 200 kilometres to obtain specialist medical treatment from the nearest suitable medical specialist or consultant physician. The scheme has now been extended to include referral for specialist oral surgery as well as special provisions for isolated cleft lip and/or cleft palate patients. For the 12 months up to 30 June 1982, 51,809 patients had been approved for benefit under the Scheme with a cost to the Commonwealth of $6,298,027.

Public health legislation and administration

For a comprehensive account of the administration of health services in each State, the Northern Territory and the Australian Capital Territory, *see* the annual reports of the respective health departments and health commissions. For details of legislation and administrative changes in previous years *see* earlier issues of the Year Book.

Supervision and care of infant life

Because the health of mothers and infants depends largely on pre-natal care as well as after-care, government, local government and private organisations provide instruction and treatment for mothers before and after confinement. The health and well-being of mother and child are looked after by infant welfare centres, baby clinics, créches, etc.

In all States, Acts have been passed with the object of supervising the conditions of infant life and reducing the rate of mortality. Stringent conditions regulate the adopting, nursing and maintaining of children placed in foster-homes by private persons.

HOSPITALS AND NOTIFIABLE DISEASES

Repatriation hospitals

A full range of services for the medical care and treatment of eligible veterans and certain dependants is available from the Department of Veterans' Affairs hospital system. Patients from the general community may also receive treatment at Repatriation hospitals provided bed capacity is available above the needs of the entitled veteran and the hospital facilities are appropriate to the treatment required.

In-patient treatment is provided at the six acute-care Repatriation General Hospitals (one in each State) and three auxiliary hospitals. In-patient treatment may also be provided in non-departmental public and private hospitals at the Department's expense in certain circumstances.

Mental patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department in mental hospitals administered by the State authorities.

Details of patients, staff and expenditure on Repatriation institutions and other medical services are given in Chapter 9, Social Security and Welfare.

Hansenide hospitals

The two isolation hospitals in Australia for the care and treatment of persons suffering from Hansen's Disease (leprosy) are at Little Bay in New South Wales and Derby in Western Australia. In North Queensland, a leprosy annexe is attached to the Palm Island Hospital near Ingham and in the Northern Territory leprosy sufferers are treated and cared for at the East Arm Hospital in Darwin. Treatment is also provided at a number of other hospitals in Australia which do not have facilities set aside specifically for leprosy patients.

In Australia, new cases of leprosy notified to the Commonwealth Department of Health numbered 59 in 1979, 35 in 1980 and 38 in 1981.

Mental health institutions

The presentation of meaningful statistics of mental health services has become increasingly difficult because of changes in recent years in the institutions and services for the care of mental patients. The emphasis has shifted from institutions for care of patients certified insane to a range of mental health services provided for in-patients and out-patients at psychiatric hospitals, admission and reception centres, day hospitals, out-patient clinics, training centres, homes for the mentally retarded and geriatric patients, psychiatric units in general hospitals, and the like. Numbers of institutions, beds available, staff and patients treated at locations catering only for the mentally ill in 1973–74 were published in Year Book No. 61, page 465. More recent figures indicate that fewer patients were treated as in-patients in nearly every State, but this should not be considered as an indication of improved mental health; it is rather a more advanced method of treatment, allowing patients greater contact with the outside world.

Hospital morbidity statistics

A major factor in the cost of health care in Australia is hospital treatment of patients. Attempts to measure the number of in-patients treated and bed-days involved for each disease or injury have been going on for some years, but as coverage is incomplete it is not possible to present national statistics. Figures for New South Wales, Queensland, South Australia, Western Australia and Tasmania, however, have been published in the ABS publications *Hospital and Nursing Home Inpatients* (4306.1), *Patients Treated in Hospitals* (4303.3), *Hospital Morbidity* (4302.4), *Hospital In-patient Statistics* (4301.5) and *Hospital Morbidity* (4301.6) respectively.

An examination of the New South Wales figures for 1980, which include psychiatric hospitals, indicates that the largest numbers of patients were treated for conditions of pregnancy, childbirth and the puerperium (10.6 per cent), genito-urinary diseases (9.7 per cent) and injury (9.7 per cent) but, in terms of hospital bed-days, the greatest occupancy rate was caused by mental disorders (27.0 per cent) followed by diseases of the circulatory system (15.0 per cent) and injury (6.9 per cent). Of the principal operations performed the largest number was for female genital organ surgery (13.1 per cent) followed by digestive system surgery (9.9 per cent) and obstetric surgery (9.1 per cent).

Notifiable diseases

Although State and Territory health authorities are responsible for the prevention and control of infectious diseases within their areas of jurisdiction, certain powers and responsibility may be delegated to local authorities within each State. These usually involve such activities as personal health services, environmental sanitation and local communicable disease control.

The Commonwealth Department of Health receives notification figures from the States and Territories on a monthly basis which are published in *Communicable Diseases Intelligence*. The national totals for the year are published in the annual report of the Director-General of Health.

The following table shows, by State and Territory, the number of cases notified in 1981 for those diseases which are notifiable in all States and Territories. The table does not include diseases which are

notifiable only in certain States or Territories. Factors such as the following affect both the completeness of the figures and the comparability from State to State and from year to year: availability of medical and diagnostic services; varying degrees of attention to notification of diseases; and enforcement and follow up of notifications by health authorities.

NOTIFIABLE DISEASES(*a*), NUMBER OF CASES NOTIFIED 1981

Disease	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Arbovirus infection	1	3	10	2	1	—	—	—	17
Brucellosis	17	3	4	11	—	1	—	—	36
Cholera	2	—	—	—	—	—	—	—	2
Diphtheria	—	2	1	—	—	—	15	—	18
Gonorrhoea	3,841	2,243	1,353	976	1,458	172	967	187	11,197
Hepatitis A (infectious)	594	356	149	107	66	40	115	26	1,453
Hepatitis B (serum)	175	150	51	84	17	—	18	5	500
Hydatid disease	15	—	—	3	—	4	—	2	24
Leprosy	—	5	6	2	8	—	17	—	38
Leptospirosis	5	64	4	11	11	—	—	—	95
Malaria	70	73	172	38	30	2	9	14	408
Ornithosis	—	5	—	8	—	—	—	—	13
Salmonella infections	357	374	269	745	167	32	302	23	2,269
Syphilis	1,339	171	470	122	230	—	575	9	2,916
Tetanus	—	5	2	5	—	—	—	—	12
Tuberculosis (all forms)	499	407	215	110	160	—	39	30	1,460
Typhoid fever	17	6	2	1	—	—	—	—	26

(*a*) There were no cases of anthrax, plague, poliomyelitis, smallpox, yellow fever or any form of typhus.

Health-related surveys conducted by the ABS

Australian Health Survey

A survey was conducted by ABS during the period July 1977–June 1978 to obtain information on the health of Australians and the use of and need for various health services and facilities. Topics covered by the survey included recent and chronic illness, accidents, use of medicines, and use of doctors, dentists, and other health workers and facilities, as well as a range of personal characteristics. The items are described more fully in *Australian Health Survey Information Paper* (4340.0). Summary results of the survey have been published in *Australian Health Survey 1977–1978* (4311.0); detailed results are published in a series of publications (4313.0 to 4322.0) dealing with the special topics of the survey. The survey is explained in detail in *Outline of Concepts, Methodology and Procedures Used* (4323.0).

Health Insurance Survey

In March 1982 the ABS conducted a survey throughout Australia to obtain information about levels of health insurance cover in the Australian community. The survey obtained, in respect of contributor units, details of the hospital and medical insurance arrangements they had at the time of the survey. The survey found that as at March 1982, 65.8 per cent of all possible contributor units had some type of private health insurance. A further 17.7 per cent were identified as being covered by special Commonwealth health benefits, leaving 16.5 per cent of all possible contributor units without health insurance nor identified access to special Commonwealth health benefits.

Compared with an estimate of 56.2 per cent obtained in a similar survey in March 1981, the above estimate represents a net increase of 9.6 percentage points in the previous twelve months in the proportion of possible contributor units with some type of health insurance cover. An estimated 1,953,000 persons were without health insurance nor identified access to special Commonwealth health benefits.

Results of the survey showing such details as type and level of health insurance cover; income and composition of contributor unit; age of head of contributor unit; special Commonwealth health benefits, and an outline of the medical and hospital benefits schemes 1 November 1978 to 30 June 1982 are published in *Health Insurance Survey, Australia, March 1982* (4335.0).

Hearing Survey

In September 1978 the ABS conducted a survey to obtain information about hearing problems for persons aged 15 years or more. Details included the cause and extent of their problem, whether a hearing aid was used, and if not, the reason for not using an aid. It also contained data on whether persons have had their hearing tested in the last 5 years.

Results of the survey have been published in the publication *Hearing and the Use of Hearing Aids (Persons aged 15 years or more) September 1978* (4336.0).

A similar survey was conducted for persons aged 2 to 14 years but contained data only on cause of hearing problem and whether persons have had their hearing tested in the last 5 years. Results of this survey are contained in the publication *Sight, Hearing and Dental Health (Persons aged 2 to 14 years) February–May 1979* (4337.0).

Sight Survey

During February to May 1979 the ABS conducted a survey to obtain information on sight problems and the use of glasses/contact lenses for the Australian population aged 2 years or more. Details included type of sight problems, reason glasses/contact lenses are worn, how often they are worn and whether persons have had their sight tested in the last 5 years.

Results of the survey for persons aged 2 to 14 years have been published in the publication *Sight, Hearing and Dental Health (persons aged 2 to 14 years) February–May 1979* (4337.0). For persons aged 15 years or more the relevant publication is *Sight Problems and the Use of Glasses/Contact Lenses (persons aged 15 years or more) February–May 1979* (4338.0).

Dental Survey

During February to May 1979 the ABS conducted a survey to obtain information on the dental health of the Australian population aged 2 years or more. Information collected included time since last visit to a dentist; number of visits in the last 12 months, treatment received at last visit and usual number of check-ups per year. Data were also collected for persons aged 15 years or more as to whether false teeth were worn.

Results of the survey for persons aged 2 to 14 years have been published in the publication *Sight, Hearing and Dental Health (persons aged 2 to 14 years) February–May 1979* (4337.0). For persons aged 15 years or more the relevant publication is *Dental Health (persons aged 15 years or more) February–May 1979* (4339.0).

Survey of Handicapped Persons

During February to May 1981 a survey was conducted throughout Australia to obtain information about the nature and extent of various disabilities and handicaps in the Australian community.

The survey examined the needs of and the kinds of problems experienced by persons with different types of handicaps. The areas examined in respect of handicapped persons included causes, disabling conditions, services, aids, accommodation, employment, education, income, transport, recreation and institutionalised care.

The sample for the survey consisted of two distinct parts. In the first part, a sample of 33,000 households was selected from all households in Australia and in the second part, a sample of 5,300 patients or residents was selected from 723 randomly selected health establishments throughout Australia.

For the purposes of the survey, a disabled person was defined as a person who had one or more of a set of selected disabilities or impairments (e.g. loss of sight, loss of hearing, slowness at learning or understanding, incomplete use of arms and fingers, restriction in physical activities). These had to have lasted or be likely to last for 6 months or more.

A handicapped person was defined as a disabled person who was further identified as being limited to some degree in his/her ability to perform certain activities or tasks in relation to one or more of the following five areas: self care, mobility, communication, schooling, employment. Since the measurement of handicap could not be readily applied to children under 5 years of age, all disabled persons in this age group were regarded as being handicapped.

The main features of the survey results are:

- 1,264,600 Australians or 8.6 per cent of the population are handicapped. A further 4.6 per cent of the population are disabled but suffer no subsequent handicap.
- Of the 1,264,600 handicapped persons, 295,800 were mildly handicapped, 253,700 were moderately handicapped and 513,900 were severely handicapped. (Severity of handicap was not determined for 201,200 persons with only a schooling or employment limitation, or aged less than 5 years).
- Of those who are handicapped, 111,000 are residents of health establishments and 1,153,600 are resident in households.
- The handicaps of persons in health establishments tended to be more severe than those of persons in households. For example, over 90 per cent of handicapped persons in health establishments were severely handicapped compared with 36 per cent of handicapped persons in households.
- As age increases the likelihood of being handicapped also generally increases. For example, in the age range 15 to 24 years, there were 66,200 handicapped persons (2.6% of persons aged 15 to 24) whilst in the age range 65 to 74 years there were over 220,000 (24.1% of persons aged 65 to 74).

DEATHS

Causes of Death and Perinatal Deaths

Causes of death in Australia are currently classified according to the Ninth Revision of the International Classification of Diseases (ICD) produced by the World Health Organization (WHO). For the years 1968 to 1978, causes of death were classified according to the Eighth Revision of the ICD. A summary of age-specific death rates for major cause groups in this period was published in *Causes of Death: Age-specific Death Rates, Australia, 1968 to 1978* (3308.0). Detailed statistics are published in the publication *Causes of Death, Australia* (3303.0), and only broad groupings of causes of death are shown in the table below. The statistics in the table relate to 1981 and represent the number of deaths registered that year rather than the number of deaths which actually occurred in 1981.

The major causes of death in the community in 1981 were ischaemic heart disease (accounting for 28.8 per cent), malignant neoplasms (cancers) (21.8 per cent), cerebrovascular disease (strokes) (12.6 per cent) and external causes of injury or poisoning (7.2 per cent). Infectious diseases have caused few deaths in Australia in recent years, largely as a result of quarantine activities, immunisation campaigns and similar measures. In 1981, only 0.5 per cent of all deaths were due to such diseases.

The relative importance of groups of causes of death varies with age. Heart disease, cancer and strokes are predominant in middle and old age. Accidents, particularly those involving motor vehicles, are the primary cause of death in childhood and early adulthood. The majority of infant deaths (65 per cent in 1981) occur within 28 days after birth. Nearly all of these neonatal deaths are due to congenital anomalies, birth injury or other conditions present from birth.

CAUSES OF DEATH IN EACH AGE GROUP, AUSTRALIA, 1981

	Age group (years)									
Causes of death	*Under one*	*1–14*	*15–24*	*25–34*	*35–44*	*45–54*	*55–64*	*65–74*	*75 and over*	*Total (a)*
	NUMBER OF DEATHS									
Malignant neoplasms	17	181	147	335	830	2,361	5,221	7,459	7,256	23,812
Ischaemic heart disease	–	1	6	66	433	1,909	5,203	9,663	14,143	31,433
Cerebrovascular disease	2	13	16	58	144	461	1,221	2,973	8,816	13,706
Other diseases of the circulatory system	13	31	57	96	143	409	1,009	2,065	7,079	10,906
Congenital anomalies	694	97	31	22	13	12	36	25	7	937
Certain conditions originating in the perinatal period	953	3	–	–	–	–	–	–	–	956
Bronchitis, emphysema and asthma	1	20	37	36	40	117	331	633	907	2,123
Other diseases of the respiratory system	53	46	28	43	46	192	614	1,350	2,840	5,212
Motor vehicle accidents	18	267	1,240	571	325	273	260	209	209	3,373
Other accidents	29	246	261	301	226	239	219	272	700	2,493
Suicides and self-inflicted injuries	–	5	294	342	295	275	224	156	80	1,672
All other causes(*b*)	567	240	302	374	458	973	1,644	2,659	5,149	12,380
All causes	**2,347**	**1,150**	**2,419**	**2,244**	**2,953**	**7,221**	**15,982**	**27,464**	**47,186**	**109,003**
	RATE(*c*)									
Malignant neoplasms	7	5	6	14	46	157	385	796	1,400	160
Ischaemic heart disease	–	–	–	3	24	127	384	1,031	2,729	211
Cerebrovascular disease	1	–	1	2	8	31	90	317	1,701	92
Other diseases of the circulatory system	6	1	2	4	8	27	74	220	1,366	73
Congenital anomalies	294	3	1	1	1	1	3	3	1	6
Certain conditions originating in the perinatal period	404	–	–	–	–	–	–	–	–	6
Bronchitis, emphysema and asthma	–	1	1	1	2	8	24	68	175	14
Other diseases of the respiratory system	22	1	1	2	3	13	45	144	548	35
Motor vehicle accidents	8	8	48	23	18	18	19	22	40	23
Other accidents	12	7	10	12	12	16	16	29	135	17
Suicides and self-inflicted injuries	–	–	11	14	16	18	17	17	15	11
All other causes	240	7	12	15	25	65	121	284	994	83
All causes	**995**	**33**	**93**	**91**	**162**	**479**	**1,180**	**2,931**	**9,106**	**730**

CAUSES OF DEATH IN EACH AGE GROUP, AUSTRALIA, 1981—*continued*

Causes of death	Age group (years) Under one	1–14	15–24	25–34	35–44	45–54	55–64	65–74	75 and over	Total (a)
	PERCENTAGE(*d*)									
Malignant neoplasms	0.7	15.7	6.1	14.9	28.1	32.7	32.7	27.2	15.4	21.8
Ischaemic heart disease	–	0.1	0.2	2.9	14.7	26.4	32.6	35.2	30.0	28.8
Cerebrovascular disease	0.1	1.1	0.7	2.6	4.9	6.4	7.6	10.8	18.7	12.6
Other diseases of the circulatory system	0.6	2.7	2.4	4.3	4.8	5.7	6.3	7.5	15.0	10.0
Congenital anomalies	29.6	8.4	1.3	1.0	0.4	0.2	0.2	0.1	–	0.9
Certain conditions originating in the perinatal period	40.6	0.3	–	–	–	–	–	–	–	0.9
Bronchitis, emphysema and asthma	–	1.7	1.5	1.6	1.4	1.6	2.1	2.3	1.9	1.9
Other diseases of the respiratory system	2.3	4.0	1.2	1.9	1.6	2.7	3.8	4.9	6.0	4.8
Motor vehicle accidents	0.8	23.2	51.3	25.4	11.0	3.8	1.6	0.8	0.4	3.1
Other accidents	1.2	21.4	10.8	13.4	7.7	3.3	1.4	1.0	1.5	2.3
Suicides and self-inflicted injuries	–	0.4	12.2	15.2	10.0	3.8	1.4	0.6	0.2	1.5
All other causes	24.2	21.0	12.5	16.7	15.5	13.5	10.3	9.7	10.9	11.4
All causes	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(*a*) *Total* includes 37 deaths where age is not known. (*b*) Includes 349 deaths from external causes and 545 deaths from infectious diseases. (*c*) Rates are per 100,000 of population at risk, except for children under one year of age which are per 100,000 live births registered. (*d*) Percentage of all deaths within each age group.

Perinatal deaths

Since deaths within the first four weeks of life (neonatal deaths) are mainly due to conditions originating before or during birth, and the same conditions can cause fetal death (stillbirth), special tabulations are prepared combining the two. These are termed 'perinatal deaths'. The statistical definition of perinatal deaths in Australia was amended in 1979 from that previously used, in accordance with a recommendation of the Ninth Revision Conference (1975) of the World Health Organization "that national perinatal statistics should include all fetuses and infants delivered weighing at least 500 grams (or, when birthweight is unavailable, the corresponding gestational age (22 weeks) or body length (25 cm crown-heel)), whether alive or dead". The following table incorporates a further recommendation of the Conference in that it shows for 1981 the number of fetal, neonatal and total perinatal deaths in Australia classified by both the main condition in the fetus/infant and the main condition in the mother.

The perinatal death rate for Australia continues to decline. In 1981 the rate (on the new definition) was 13.25 per 1,000 total births whereas, on the same definition, it was 14.14 in 1980 and 18.65 in 1976.

Of the conditions in the child, the two main groups responsible for perinatal deaths were *Hypoxia, birth asphyxia and other respiratory conditions* (37.9 per cent of the total) and *Congenital anomalies* (24.0 per cent). Thirty-eight per cent of all perinatal deaths did not mention any condition in the mother as contributing to the death. Of those deaths where maternal conditions were reported, 47 per cent were reported as being due to *Complications of placenta, cord and membranes.*

PERINATAL DEATHS BY CAUSE, AUSTRALIA, 1981

Cause of death	Number of deaths			Rate		
	Fetal	Neonatal	Perinatal	Fetal(a)	Neonatal (b)	Perinatal (a)
Conditions in fetus/infant—						
Slow fetal growth, fetal malnutrition and immaturity	147	173	320	0.62	0.73	1.35
Birth trauma	5	36	41	0.02	0.15	0.17
Hypoxia, birth asphyxia and other respiratory conditions	764	429	1,193	3.22	1.82	5.02
Fetal and neonatal haemorrhage	31	99	130	0.13	0.42	0.55
Haemolytic disease of fetus and newborn	21	6	27	0.09	0.03	0.11
Other conditions originating in the perinatal period	510	102	612	2.15	0.43	2.58
Congenital anomalies	224	532	756	0.94	2.26	3.18
Infectious and parasitic diseases	—	2	2	—	0.01	0.01
All other causes	4	61	65	0.02	0.26	0.27
Conditions in mother—						
Maternal conditions which may be unrelated to present pregnancy	212	88	300	0.89	0.37	1.26
Maternal complications of pregnancy	210	455	665	0.88	1.93	2.80
Complications of placenta, cord and membranes	745	173	918	3.14	0.73	3.87
Other complications of labour and delivery	30	32	62	0.13	0.14	0.26
No maternal condition reported	509	692	1,201	2.14	2.94	5.06
All causes—1981	**1,706**	**1,440**	**3,146**	**7.18**	**6.11**	**13.25**
1980	1,708	1,503	3,211	7.52	6.67	14.14
1979	1,757	1,605	3,362	7.82	7.20	14.96
1978	1,904	1,737	3,641	8.43	7.75	16.11
1977	1,896	1,869	3,765	8.31	8.26	16.51
1976	2,121	2,165	4,286	9.23	9.51	18.65

(*a*) Per 1,000 births registered (live births and stillbirths) weighing 500 grams or more at birth. (*b*) Per 1,000 live births registered weighing 500 grams or more at birth.

Note: The statistics for the years 1976 to 1978 in this table are also based on the revised definition.

Cremations

The first crematorium in Australia was opened in South Australia in 1903. At 31 December 1981 there were thirty-eight crematoria in Australia, situated as follows: New South Wales, 17; Victoria, 4; Queensland, 9; South Australia, 2; Western Australia, 3; Tasmania, 2; Australian Capital Territory, 1. There is no crematorium in the Northern Territory. The number of cremations carried out in 1979 was 49,568 (46.5 per cent of all deaths); in 1980 it was 50,629 (46.6 per cent of all deaths) and in 1981 the number was 51,673 (47.4 per cent of all deaths).

CHAPTER 11

LAW AND ORDER

THE LAW IN AUSTRALIA

Nature and composition of law

The laws of a country represent the common body of rules, whether proceeding from legislation, executive action, court judgments or custom, that a state or community recognises as binding on its citizens or members, and which are enforceable by judicial means. In Australia, the law consists basically of:

- Acts passed by the Federal Parliament acting within the scope of its powers under the Australian Constitution, together with regulations, rules and orders made under such Acts;
- Acts and Ordinances passed in respect of the Australian Capital Territory and the Northern Territory of Australia, together with regulations, rules and orders made under such Acts and Ordinances;
- Acts passed by State Parliaments and the legislature of the Northern Territory, together with regulations, rules and orders made under such Acts;
- so much of the common or statute law of England that applies to Australia and remains unrepealed; and
- the common law, consisting of judicial decisions.

These various laws relate to a number of subject-matters, including constitutional law, criminal law, civil law, family law and industrial law.

Federal and State responsibilities

The Commonwealth of Australia is empowered to make laws in relation to certain matters specified in the Australian Constitution, e.g. in relation to trade and commerce, taxation, defence and external affairs. In relation to some of these matters, the powers of the Commonwealth are concurrent with that of the Australian States and Territories in that they may be exercised by either the Commonwealth, the States or the Territories. In other areas the Commonwealth's power is absolute and in all areas of Commonwealth jurisdiction Commonwealth laws are binding on the Australian States and Territories.

The Australian States and Territories have independent jurisdiction in all matters not otherwise specifically invested in the Commonwealth of Australia and it is the common law and statute laws of the States and Territories that primarily govern the day-to-day lives of most Australians. With certain exceptions, such as traffic laws, State and Territorial law applies normally only to persons who are residents of the State or Territory concerned and to things located or events occurring within such State or Territory.

The common law is uniform throughout Australia although statute law often varies between the States and Territories. However, some of the problems arising from these differences have become recognised over recent years and attempts are now being made towards the enactment of uniform laws in areas of State and Territory jurisdiction wherever possible.

Administration of the law

Administration of the law in Australia is undertaken by the responsible governments concerned, principally through Federal, State and Territorial police and judiciaries, and State and Territorial corrective or penal services. There is no independent Federal corrective service, and the relevant State or Territorial agencies provide corrective services for Federal offenders.

The various law enforcement agencies involved in the administration of law operate in such a way that the activities of one agency may affect the activities of another, e.g. a criminal offence reported to the police may lead to the arrest, charge and court appearance of the offender, and subsequent provision of corrective (e.g. imprisonment, probation) or welfare services. The agencies involved, and the relationship between them, may vary according to the laws, agencies and types of matters or offenders involved.

Reform of the law

Reform of the law is undertaken principally through State and Commonwealth Parliaments and Attorneys-General acting on recommendations provided by State and the Australian Law Reform Commissions, and by State Supreme and Federal Courts.

Law Reform Commissions have been established as statutory authorities in all States (except South Australia) to undertake review of State laws, and report findings and recommendations for reform of those laws, to State Parliaments and Attorneys-General. (In South Australia, a Law Reform Committee was established by proclamation to perform similar functions in that State.) In addition, in Victoria there is a Chief Justice's Law Reform Committee and a Victorian Legal and Constitutional Committee established under the *Parliamentary Committees (Joint Investigatory Committees) Act 1982*. These agencies have functions to recommend reform of the law. Acceptance of recommendations depends upon governmental and parliamentary reaction to the proposals.

The Australian Law Reform Commission

The Australian Law Reform Commission (ALRC), which commenced operations in 1975 under the *Law Reform Commission Act 1973*, was established to report on the review, simplification and modernisation of those laws concerning matters consigned by the Australian Constitution to the jurisdiction of the Commonwealth Parliament, and to consider proposals for the uniformity of laws of the States and Territories. The Commission is required to make reports to the Attorney-General arising out of such review or consideration, and to make such recommendations as it thinks fit.

The ALRC has assumed the functions formerly undertaken by the A.C.T. Law Reform Commission, and has the responsibility for review of Territorial law operating in both the Australian Capital Territory and Northern Territory.

In undertaking its functions, the Commission follows the normal procedure of law commissions where possible. Upon receipt of a reference, the Commission advertises and calls for public submissions in relation to the reference, and prepares a working paper examining the issues for distribution among groups thought to have a special interest in the subject matter. Public sittings are conducted, and in the light of submissions received, a final report containing draft legislation is prepared for submission to the Attorney-General. The Commission, which consisted of four full-time, and seven part-time members at 30 June 1982, makes extensive use of honorary consultants.

To 30 June 1982, the Commission has completed reports on the following references: complaints against police and criminal investigation; alcohol, drugs and driving; consumers in debt; defamation; sentencing of federal offenders; human tissue transplants; lands acquisition and compensation; insurance intermediaries; and child welfare. Legislation following the recommendations contained in these reports have been enacted in some cases. In other cases, the proposals made by the Commission are under consideration by Parliament or the appropriate Commonwealth Department. Current references include privacy, debt recovery laws, access to court (standing to sue and class actions), Aboriginal customary laws and evidence. Other references are expected shortly.

COURTS: STRUCTURE AND FUNCTIONS

Federal Courts

The judicial power of the Commonwealth of Australia is vested in the High Court of Australia, in the Federal courts created by the Federal Parliament and in the State courts invested by Parliament with Federal jurisdiction. The nature and extent of the judicial power of the Commonwealth is prescribed by Chapter III of the Australian Constitution. For details of Commonwealth of Australia Constitution Act *see* Chapter I, pages

High Court of Australia

The High Court of Australia consists of a Chief Justice and six other Justices. The *High Court of Australia Act* 1979, which came into operation on 21 April 1980, provides for such matters as the constitution and seat of the Court, its administration and Registry. The new High Court building in Canberra was opened by Her Majesty the Queen on 26 May 1980 and the first sitting of the High Court in its new building was held on 3 June 1980. The seat of the High Court was finally established in the Australian Capital Territory on 1 September 1980 and sittings of the High Court are now held at Canberra and at other places as required.

The Australian Constitution itself confers original jurisdiction on the High Court in all matters:

(i) arising under any treaty;

(ii) affecting consuls or other representatives of other countries;
(iii) in which the Commonwealth of Australia, 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 resident of another State; and
(v) in which a writ of mandamus or prohibition, or an injunction, is sought against an officer of the Commonwealth of Australia.

In relation to each of these matters the High Court's jurisdiction is exclusive to the jurisdiction of Australian State courts.

The Federal Parliament may, under the constitution, confer certain additional original jurisdiction on the High Court. The High Court has been conferred with original jurisdiction in all matters arising under the constitution or involving its interpretation and in trials of indictable offences against the law of the Commonwealth. Since the Federal Court of Australia commenced to exercise Federal jurisdiction on 1 February 1977, the only other statutory original jurisdiction which is still conferred on the High Court is its jurisdiction as a Court of Disputed Returns for the Federal Parliament.

The High Court's exclusive jurisdiction no longer includes matters involving the limits *inter se* of the constitutional powers of the Commonwealth of Australia and those of the Australian States. However, a cause or part of a cause arising under the Constitution or involving its interpretation that is pending in a Federal court or in a court of a State or Territory may be removed into the High Court.

Under the Australian Constitution the High Court has 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 of:

(i) any Justice or Justices exercising the original jurisdiction of the High Court;
(ii) any other Federal court or court exercising Federal jurisdiction; and
(iii) the Supreme Court of any State or any other State court from which appeal lay to the Privy Council at the establishment of the Commonwealth.

Appeals against High Court decisions

Leave to appeal to the Judicial Committee of the Privy Council from a decision of the High Court can now only be sought in cases involving the limits *inter se* of the constitutional powers of the Commonwealth of Australia and those of the Australian States if the High Court certifies that the question is one that ought to be determined by the Privy Council. No such certificate has in fact been granted by the High Court since 1913.

Federal Court of Australia

The Federal Court of Australia was created by the *Federal Court of Australia Act* 1976 and commenced to exercise jurisdiction on 1 February 1977.

The Act provides that the Court has such original jurisdiction as is invested in it by laws made by the Federal Parliament including jurisdiction formerly exercised by the Federal Court of Bankruptcy and the Australian Industrial Court, matters under the *Administrative Decisions (Judicial Review) Act* 1977 in relation to administrative action taken under Commonwealth legislation and certain matters under the *Trade Practices Act* 1974.

The Federal Court has appellate jurisdiction with respect to judgments of the Court constituted by a single judge; judgments of the Supreme Courts of the Australian Territories; and certain judgments of State Supreme Courts exercising Federal jurisdiction (for example, under the *Income Tax Assessment Act* 1936 and the *Patents Act* 1952).

For the purposes of its organisation and business, the Federal Court consists of two Divisions: an Industrial Division and a General Division. Matters arising under the *Conciliation and Arbitration Act* 1904 and under the *Stevedoring Industry Act* 1956 are dealt with in the Industrial Division and all other matters are dealt with in the General Division of the Court. The Federal Court sits as required in each State, the Australian Capital Territory and the Northern Territory of Australia.

Family Court of Australia

The *Family Law Act* 1975, which came into operation on 5 January 1976, introduced a new law dealing with the dissolution and nullity of marriage, custody and welfare of the children, maintenance and the settlement of property between the parties to a marriage.

The law is administered by the Family Court of Australia, which was created by the Act, and by certain other courts in the Australian States and Territories. Except in Western Australia, courts of summary jurisdiction in the States and Territories have jurisdiction in all matrimonial causes, except proceedings for principal relief, subject to the agreement of the parties in defended custody proceedings and property proceedings regarding property worth more than a certain sum. A State Family Court has been established in Western Australia to administer family law in that State.

In dealing with proceedings under the Act, the Family Court is required to have regard to the following principles:

- the need to preserve and protect the institution of marriage as the union of a man and a woman to the exclusion of all others voluntarily entered into for life;
- the need to give the widest possible protection and assistance to the family as the natural and fundamental group unit of society, particularly while it is responsible for the care and education of dependent children;
- the need to protect the rights of children and to promote their welfare; and
- the means available for assisting parties to a marriage to consider reconciliation or the improvement of their relationship to each other and to the children of the marriage.

The same principles apply to all courts exercising jurisdiction under the *Family Law Act* 1975. Proceedings under the Act in the Family Court are heard in private and no publicity about any proceedings under the Act is permitted, unless otherwise directed by the Court. The publication of law court lists and law reports, or other publications of a technical character directed to the legal or medical profession, is exempted from this prohibition.

The Family Court has the important task of protecting and promoting the welfare and rights of children in proceedings regarding their guardianship or custody. The paramount consideration guiding the Court in all such proceedings is the welfare for the children. Further, a divorce decree will not become effective unless the Court is satisfied that proper arrangements have been made by parties for the welfare of their children.

A feature of the Act is that, in the absence of any court order, both the parties to a marriage have joint custody of a child of the marriage as a matter of law. However, one parent can ask the Court for sole custody of a child. In disputes over custody, the child may be separately represented. The wishes of children over 14 in such disputes must be taken into account unless there are special circumstances.

The right to maintenance under the Act is based on the needs of the party seeking it and the ability of the other party to pay. There are specific matters for the Court to consider when it is dealing with maintenance applications. These include:

- the age and state of health of the parties;
- the income, property and financial resources of each of the parties and their financial obligations;
- whether either party is entitled to a pension or superannuation;
- the length of the marriage and what is an appropriate standard of living for each party;
- whether persons seeking maintenance have to care for children;
- the extent to which the marriage has affected the earning capacity of the applicant; and
- the possibility of the applicant taking on a training course or further educational course to improve his or her employment prospects.

Both parties are liable to maintain their children according to their respective means and the Court is guided by similar considerations in deciding what order to make.

The Court has power to settle disputes about the family assets, including the power to order a transfer of legal interests in property. When dealing with these disputes, the Court considers the interest each of the parties has in the property and the contribution made during the marriage. The Act directs the Court to look at the financial contribution made by the parties and at the contribution made by either party in the capacity of homemaker or parent.

Under the Act, great emphasis is placed on the counselling services available through the family courts to persons involved in proceedings and to any persons who have encountered marriage problems. It is not necessary to start proceedings to make use of these services. The Act also provides that there is only one ground for divorce—that of irretrievable breakdown of a marriage. Irretrievable breakdown of a marriage is established under the law if the husband and wife have separated and have lived apart from each other for 12 months and there is no reasonable likelihood of reconciliation. The main change made to the previous law by the provisions of the Act is that fault is no longer taken into account as a ground for divorce.

Applications can be made to the Family Court of Australia for custody and maintenance even if a divorce is not sought. Persons may also seek the Court's assistance for counselling with regard to their marital problems whether or not they are contemplating proceedings for divorce or other relief.

The Judges of the Family Court are appointed because of their suitability to deal with matters of family law by reason of their training, experience and personality. The Judges do not wear wigs and gowns, and the staff attached to the Court include trained counsellors.

Specific provision is made in the Act for legal assistance to be given by the Australian Legal Aid Office to persons who are assessed to be unable to afford legal representation.

The Family Court has had pamphlets printed to explain the operation of the Act. These pamphlets are both in English and various European languages.

State and Territory Courts

Australian State and Territory courts have original jurisdiction in all matters brought under State or Territory statute laws, and in matters arising under Federal laws, where such matters have not been specifically reserved to courts of Federal jurisdiction. Most criminal matters, whether arising under Federal, State or Territory law, are dealt with by State and Territory courts.

Each State and Territory court system is organised and operates independently. However, within each system, which comprises both courts of general jurisdiction and specialist courts and tribunals, the courts are organised hierarchically according to the nature of the matters with which they may deal.

Courts of General Jurisdiction

These courts are empowered to adjudicate on civil and criminal matters, or civil or criminal matters, or criminal matters which embrace the laws of contract and tort (compensating for civil wrongs). Criminal matters are those involving an alleged breach of the statute, code or common law that may render a person liable to prosecution, usually at the instigation of the Crown, and which make persons liable to punishment if proof of such allegation is established according to law.

The various levels of State and Territory courts of general jurisdiction are outlined below.

Courts of Summary Jurisdiction

Magistrate's Court or Courts of Petty Sessions. These courts have jurisdiction over matters involving summary or less serious indictable offences and civil matters in some Australian States and Territories, and are generally presided over by a stipendiary magistrate or, in some circumstances, a justice or justices of the peace.

Preliminary hearing of matters involving more serious indictable offences (i.e. those offences triable before a judge and jury) are also undertaken by these courts. If the court determines that a prima facie case exists against the accused, the matter is committed to a higher court for trial. In certain circumstances, persons convicted of an offence in a Magistrate's Court may be committed to a higher court for sentence.

Local Courts. These courts, which operate in South Australia and Western Australia only, have jurisdiction over civil matters involving claims of limited value. In other Australian States and the Territories, local court functions are performed by Magistrates or County or District Courts (see below).

Children's Courts. These courts have jurisdiction over matters involving summary or less serious indictable offences, committed by, or against, children or young persons under a certain age (the age limit for hearing in a Children's Court varies between States). The jurisdiction of Children's Courts also includes matters involving neglected, uncontrollable or truant children.

Children's Panels have been established in South Australia and Western Australia to deal with children who are alleged to have committed less serious offences, which may otherwise be dealt with by Children's Courts.

Higher Courts

County or District Courts. These courts have jurisdiction in matters involving more serious indictable offences, and, in some Australian States, civil matters involving a claim in excess of the limit allowable for lower court hearing. When hearing criminal cases, the courts comprise a judge and jury, but usually comprise a judge only for hearings of civil matters.

No County or District Courts exist in Tasmania, the Australian Capital Territory or the Northern Territory of Australia.

State and Territory Supreme Courts. These courts are the superior courts of record in, and for, each Australian State or Territory. Their jurisdiction is unlimited in relation to both civil and criminal matters (except where a particular matter falls within reserved Federal jurisdiction) and they perform a variety of other judicial functions (e.g. in relation to equity, probate, administrative law, etc.). Supreme Courts are constituted in the same way as County or District Courts.

Appeals

County and District Courts and State and Territory Supreme Courts have jurisdiction to hear appeals against the decisions of lower courts and some specialist tribunals.

The procedures concerning the right of appeal are laid down by statute in each State and Territory, and appeals may be lodged against matters such as the correctness of the verdict or the severity of the sentence imposed. However, appeals against Supreme Court decisions are heard in most States by a Full Bench of the Supreme Court which usually comprises three judges of the Supreme Court. Appeals from Supreme Court decisions may be taken to the Federal Court of Australia or the High Court of Australia or the Privy Council depending on the nature of the matter involved.

Special Courts and Tribunals

Each Australian State and Territory administers particular areas of the law through specialist courts or tribunals, such as Small Claims Courts, Licensing Courts, etc. These courts or tribunals deal primarily with civil matters or matters of an administrative nature.

Courts of Marine Inquiry

Matters which come within the jurisdiction of Courts of Marine Inquiry are contained in the *Navigation Act 1912*. The principal areas of jurisdiction are to make inquiries into casualties affecting ships, or entailing loss of life on or from ships and to charges of incompetency or misconduct.

When the Department of Transport and Construction is advised of an incident which may warrant the convening of a Court of Marine Inquiry, the Minister will appoint an officer to conduct a Preliminary Investigation. The officer will conduct interviews with the parties involved and based on the results of these interviews advise the Minister as to whether or not the circumstances warrant a request by the Minister for a Court of Marine Inquiry to be convened. The Governor-General by proclamation establishes the Court of Marine Inquiry. Findings of the Court are forwarded to the Minister, as well as any observations the Court thinks fit to make.

Statistics

Information relating to the operation of courts in particular Australian States may be obtained from the respective State Year Books.

Administrative Review

Administrative Appeals Tribunal

The Administrative Appeals Tribunal was established by the *Administrative Appeals Tribunal Act* 1975 and came into operation on 1 July 1976. It is an independent tribunal whose function is to review decisions made by Commonwealth Ministers, authorities and officials under certain laws of the Commonwealth. The Tribunal is able to substitute its own decision in those areas in which it has jurisdiction. The Tribunal has jurisdiction under a total of 119 enactments including decisions under the *Social Services Act* 1947, *Compensation (Commonwealth Government Employees) Act* 1971, *Migration Act* 1958, *Customs Act* 1901, *Export Market Development Act* 1974, the Air Navigation Regulations and the *Freedom of Information Act* 1982. Further additions to the Tribunal's jurisdiction are made from time to time.

The Principal Registry is in Canberra and there are Tribunal Registries in each capital city.

The Administrative Review Council was also established by the *Administrative Appeals Tribunal Act* 1975. The principal functions of the Administrative Review Council are to make recommmendations to the Attorney-General on rights of review of administrative decisions and on the procedures of administrative tribunals.

Administrative Decisions (Judicial Review) Act 1977

The *Administrative Decisions (Judicial Review) Act* 1977, which came into operation on 1 October 1980, provides for judicial review in the Federal Court of Australia of administrative action taken under Commonwealth legislation. The Court is empowered where an order of review is sought by an aggrieved person to review the lawfulness of a decision, conduct leading up to the making of a decision or circumstances where there has been failure to make a decision. The grounds on which review may be sought and the powers of the Court are set out in the Act. In many cases, a person who is entitled to seek judicial review in respect of an administrative decision may seek a statement of reasons for the decision from the decision-maker.

Commonwealth Ombudsman

The Office of the Commonwealth Ombudsman was established by the *Ombudsman Act* 1976 and commenced operation in June 1977. In April 1981 the *Complaints (Australian Federal Police) Act* 1981 gave the Ombudsman additional responsibilities in relation to the investigation of complaints against the Australian Federal Police. The Ombudsman is empowered to investigate complaints about the administrative actions of Commonwealth departments and prescribed authorities, and complaints about the conduct of members of the Australian Federal Police, and about its practices and procedures. Where the Ombudsman is of the opinion, after an investigation is completed, that remedial action is required, he reports to the body concerned and may include in his report any recommendations he thinks fit to make. If the organisation fails to comply with a recommendation contained in a report by the Commonwealth Ombudsman, he may report to the Prime Minister and to the Parliament. The Commonwealth Ombudsman is represented in each capital city of the States and the Northern Territory.

Each of the Australian States and the Northern Territory has an Ombudsman with the responsibility of investigating complaints about State Government departments and authorities and local government bodies.

The Human Rights Commission

The Human Rights Commission was set up by the Commonwealth Government in December 1981 to *promote* and *protect* human rights in Australia. The human rights with which it is concerned are those set out in five United Nations instruments:

- The International Covenant on Civil and Political Rights;
- The Declaration of the Rights of the Child;
- The Declaration on the Rights of Mentally Retarded Persons;
- The Declaration on the Rights of Disabled Persons; and
- The International Convention on the Elimination of All Forms of Racial Discrimination.

The Commission works under two Acts—the *Human Rights Commission Act* 1981 and the *Racial Discrimination Act* 1975.

Under the Human Rights Commission Act the functions of the Commission are fourfold:

(i) to review legislation for its consistency with human rights;
(ii) to inquire into and, where practicable, effect a settlement of issues, including complaints, that have come to its notice;
(iii) to promote understanding, acceptance and public discussion of human rights; and
(iv) to undertake and co-ordinate research and educational programs affecting human rights.

Where the Commission considers a change in Commonwealth law or practice is required, it is to report this to the Attorney-General, and its reports must be made public by tabling in the Parliament.

Under the Racial Discrimination Act, the Commission is charged with functions in relation to racial discrimination similar to those numbered (ii) to (iv) above in relation to human rights generally. Investigation and resolution of complaints made under the Racial Discrimination Act carried out by the Commissioner for Community Relations on behalf of the Commission.

The Racial Discrimination Act applies regardless of whether the discrimination falls within Commonwealth, State or Northern Territory jurisdiction. The human rights function is related to Commonwealth laws and practices under those laws, although the Human Rights Commission Act provides for co-operation with State agencies in the promotion of human rights.

Freedom of Information Act 1982

The *Freedom of Information Act* 1982 which came into operation on 1 December 1982 has two objectives:

- to make available to the public information about the rules, practices and operations of Commonwealth Government departments and authorities; and
- to create a general right of access to documents in the possession of Ministers and agencies.

In order to achieve these objectives the Act defines the rights of members of the public to obtain access to documents, and sets out a range of obligations and restrictions on departments and the public for exercising these rights.

The right of access does not extend to all documents. Exempt are:

- certain documents to which the *Archives Act* 1982 applies;
- documents affecting national security, defence, international relations and relations with States;
- Cabinet and Executive Council documents;
- internal working documents (subject to certain limitations on what may be exempt);
- documents affecting enforcement of the law and protection of public safety;
- other documents exempt by reason of secrecy provisions of other enactments, financial or property interests of the Commonwealth, personal privacy, legal professional privilege etc.;
- documents made available for purchase or open access upon payment of a fee; and
- documents created before 1 December 1982.

However, there are two exemptions to this last restriction on access:

- a person has a right of access to documents created before 1 December 1982, necessary to the understanding of a document already legally in that person's possession; and
- individuals have the right of access to documents which predate the commencement of the Act by up to five years, providing that the documents relate to the individual.

The public is not required to provide reasons for requesting access to documents. However, all requests under the Act should be in writing and provide such information concerning the document as

is reasonably necessary to enable a responsible officer to identify the document. Where a person wishes to make a request or has made a request that does not comply with the provisions of the Act relating to requests for access it is the duty of the agency to take reasonable steps to assist the person to make the request in a manner that complies with the Act.

Provisions exist whereby a person may apply to have an amendment made to information relating to that person's own personal affairs.

Royal Commissions—Commonwealth

Australian Governments have from time to time established Royal Commissions to inquire into, and report on, matters of public concern.

A Royal Commission is established by the Governor-General, on the advice of the Government, issuing a commission to a person or persons to inquire into and report on specified matters. At the end of its inquiry, a Royal Commission presents its report to the Governor-General for consideration by the Government.

The power to issue Letters Patent to inquire is a prerogative of the Crown. The *Royal Commissions Act* 1902 confers powers on a Royal Commission to compel the attendance of persons, the giving of evidence, and the production of papers. It also creates a number of offences (e.g. failure to attend a Royal Commission when summoned, or to produce papers) and gives some protection to Commissioners and witnesses against legal liability. The constitutional foundation of the Royal Commissions Act is section 51 (xxxix) of the Constitution, which provides that the Commonwealth Parliament may make laws with respect to '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'.

LETTERS PATENT ISSUED FROM 30.6.77 TO 30.6.82

Name of Royal Commission	*Commissioner(s)*	*Date of issue of Letters Patent*
Australian Royal Commission of Inquiry into Drugs	The Hon. Mr Justice E. S. Williams	13 October 1977
Royal Commission of Inquiry into Electoral Redistribution of Queensland 1977	The Hon. Mr Justice D. G. P. McGregor	24 April 1978
Commission of Inquiry into the Efficiency and Administration of Hospitals	Mr J. H. Jamison, O.B.E.	29 August 1979
Commission of Inquiry into the Viability of the Christmas Island Phosphate Industry	Mr W. W. Sweetland	20 December 1979
Royal Commission on the Activities of the Federated Ship Painters and Dockers Union	Mr Frank Costigan, Q.C.	10 September 1980
Royal Commission of Inquiry into Drug Trafficking	The Hon. Mr Justice D. G. Stewart	25 June 1981
Inquiry into the Activities of the Australian Building Construction Employees' and Builders' Labourers' Federation	Mr J. S. Winneke, Q.C.	20 August 1981
Royal Commission into Australian Meat Industry	The Hon. Mr Justice A. E. Woodward	12 September 1981

FINAL ROYAL COMMISSION REPORTS PRESENTED FROM 30.6.77 TO 30.6.82

Name of Royal Commission	*Date of presentation*	*Tabled in the Parliament*
Royal Commission into Human Relationships	November 1977	28 February 1978
Royal Commission of Inquiry into Electoral Redistribution of Queensland in 1977	August 1978	15 August 1978
Australian Royal Commission of Inquiry into Drugs	January 1980	18 March 1980
Commission of Inquiry into the Efficiency and Administration of Hospitals	December 1980	25 February 1981
Commission of Inquiry into the Viability of the Christmas Island Phosphate Industry	February 1980	20 February 1980
Royal Commission into the Activities of the Australian Building Construction Employees' and Builders' Labourers' Federation	May 1982	20 October 1982

LEGAL AID

The purpose of providing legal aid is to ensure that no person involved in a legal dispute or action should be without legal assistance by reason of not being able to pay for it, and is based on the notion of justice and equity before the law.

Legal aid in Australia is delivered through a variety of schemes operated at Federal, State and local levels. The principal schemes are those of the Australian Legal Aid Office, the legal aid commissions (which operate in five States and the Australian Capital Territory) and the Aboriginal legal services. In addition there are numerous community based legal aid agencies and certain law society schemes.

Historically, legal aid schemes in Australia were initiated by State governments with Public Solicitor or Public Defender schemes in Queensland, Victoria and New South Wales. The Law Society in South Australia began a legal assistance scheme in 1933, and law society schemes followed in other States. In 1973 the Australian Legal Aid Office was established to provide legal assistance in the Federal area.

It is now the policy of the Commonwealth Government that legal aid other than that given by Aboriginal legal services and voluntary and community agencies be provided in each State and Territory through a single independent statutory commission, established by State or Territory legislation. Under this policy, legal aid is provided by both salaried and private lawyers and funded by the Commonwealth in Federal matters. The States continue to fund legal assistance provided in relation to State matters. Pursuant to agreements entered into between the Commonwealth and the States, independent statutory commissions providing legal advice and assistance in both Commonwealth and State matters have been established in Queensland, South Australia, Victoria, Western Australia and the Australian Capital Territory. A statutory commission has also been established in New South Wales, but its functions do not extend to Commonwealth matters. Legal aid commissions have not yet been established in Tasmania and the Northern Territory, and in these places, as well as New South Wales, the Australian Legal Aid Office continues to provide legal advice and assistance in Commonwealth matters.

Aboriginal legal services operate in all States and Territories and are funded by the Department of Aboriginal Affairs. Community law centres which also operate in most States are funded by Commonwealth, State and in some instances local government.

The Commonwealth Attorney-General administers a growing area of legal assistance in special federal areas outside the scheme of independent statutory commissions. This assistance is provided under various Commonwealth Acts, (such as the *Conciliation and Arbitration Act* 1904, *Administrative Appeals Tribunal Act* 1975 and the *Trade Practices Act* 1974) and administrative schemes (e.g. aid for Public Interest and Test Cases and for cases involving the recovery of children removed overseas).

The Commonwealth Legal Aid Council, established pursuant to the *Commonwealth Legal Aid Act* 1977 has the broad function of advising the Commonwealth Attorney-General on matters relating to the provision of Legal Aid in Australia. The Council Secretariat is located in the Australian Legal Aid Office Division of the Commonwealth Attorney-General's Department.

Selected details of the income and expenditure of major Australian Legal Aid schemes during 1981-82, and further information on the operation of these schemes are available from Annual Reports of the Commonwealth Legal Aid Council and the Commonwealth Attorney-General's Department or by writing to the Secretary, Commonwealth Legal Aid Council, Attorney-General's Department, Parkes, A.C.T. 2600.

THE POLICE

The primary duties of the police are the prevention and detection of crime, the protection of life and property, and the enforcement of law to maintain peace and good order. In addition, they may perform a variety of other duties in the service of the State, including the regulation of street traffic, acting as clerks of petty sessions, crown land bailiffs, foresters, mining wardens and inspectors under the Fisheries and various other Acts. With the exception of the Australian Federal Police, police forces in Australia are under the control of the State and Northern Territory Governments, but their members perform certain functions for the Commonwealth Government, such as aliens registration officers, and in conjunction with the Australian Federal Police and other Commonwealth officers, they police various Commonwealth Acts and Regulations.

Australian Federal Police

The Australian Federal Police (AFP) was formed in October 1979. It performs normal police duties in the Australian Capital Territory, and is the principal agency for the enforcement of Federal laws, and the protection of Commonwealth Government property, and property and interests at buildings and establishments under Commonwealth Government control, and co-ordinate some of the work of other investigation and law enforcement agencies in Australia.

The AFP operates the Australian Police College at Manly, N.S.W., to provide training for officers of various police forces and other agencies in Australia and New Zealand. The force has its head office in Canberra, and district offices in each State capital.

The active strengths and ranks of non-civilian police personnel in police forces in Australia, are shown in the following table.

POLICE FORCES

Year/Rank	*AFP*	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*
At 30 June—								
1979	(*a*)2,481	9,063	7,463	4,132	3,621	2,558	1,132	539
1980	2,614	9,400	7,603	4,387	3,423	2,643	1,041	534
1981—								
Executive officers	32	69	72	28	71	40	10	16
Inspectors	109	240	312	106	35	70	51	20
Sergeants	492	2,344	1,875	1,101	476	622	155	122
Constables including Trainees/ cadets/probationary constables	2,022	6,815	5,937	3,197	2,638	1,924	813	385
Total	**2,655**	**9,468**	**8,196**	(*b*)**4,554**	**3,220**	**2,656**	**1,029**	**543**

(*a*) From October 1979 the Commonwealth Police and the A.C.T. Police combined to form the Australia Federal Police. At 30 June 1979 there were 581 A.C.T. and 1,900 Commonwealth Police. (*b*) Includes 122 Technical and scientific officers not included in ranks.

CRIME STATISTICS

Selected Offences

Since 1964, the ABS has published a series of 'Selected Offences reported or becoming known to Police'. This series is provided by police, and is based as far as possible on definitions and procedural arrangements agreed to by police authorities for all States and Territories. Explanatory notes relating to the statistics are contained in Year Book, No. 61, p. 475-7.

The following graph shows the number of offences reported or becoming known to police, including the Australian Federal Police, in Australia in each of the seven major categories included in the series.

SELECTED OFFENCES REPORTED OR BECOMING KNOWN TO POLICE, AUSTRALIA, 1971-72 TO 1980-81

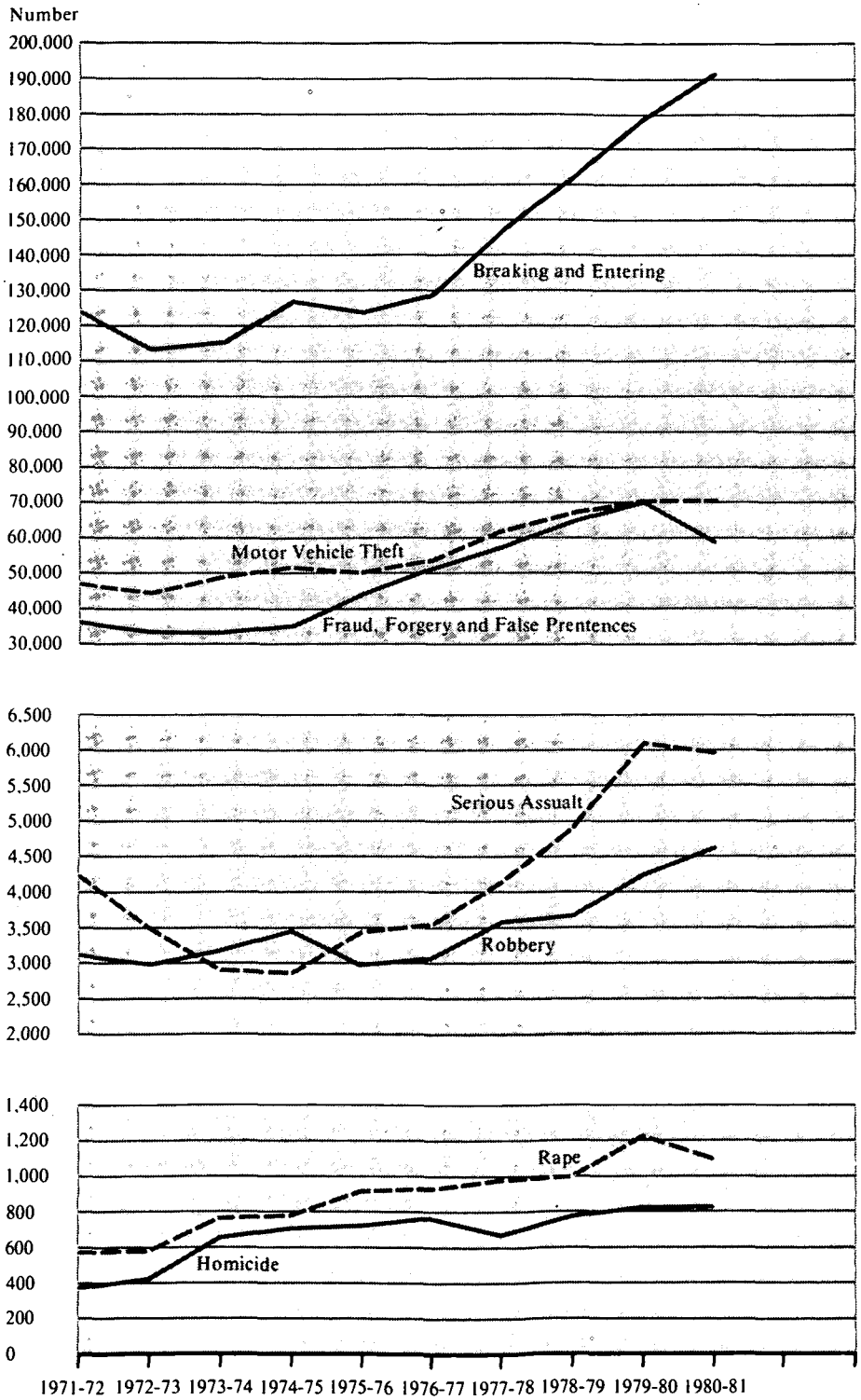


PLATE 35

Drug Offences

Australia is a signatory to the Single Convention of Narcotic Drugs which has as its main aim the limitation of narcotic drugs to legitimate medical and research purposes.

As its name implies, the Single Convention of Narcotic Drugs covers only the so-called narcotic drugs including cannabis and its derivatives. In recognition that there are other drugs of dependence, the member nations met during 1970 and 1971 and drew up a further Convention to impose controls on psycotropic substances such as hallucinogens, amphetamines, other central nervous system stimulants, barbiturates, tranquillisers and certain other sedatives.

For details of legislative provisions *see* Year Book No. 63, page 218.

Law enforcement in respect of drugs in Australia is handled mainly by the following bodies:

- State and Territory police forces who police State and Territory laws and Commonwealth laws in conjuction with Commonwealth authorities.
- The Australian Federal Police who police Commonwealth laws.
- The Bureau of Customs in the Department of Business and Consumer Affairs which has responsibility for the enforcement of laws controlling importing and exporting of drugs.

The National Standing Control Committee on Drugs of Dependence was established in 1969 by the Commonwealth Government to co-ordinate the activities of the various Commonwealth, State and Territories' bodies participating in the administration of drug laws and control. The role of the Committee is to consider further steps that can be taken by the national and State Governments together to combat all aspects of drug abuse in Australia, including addiction, trafficking, treatment and education.

The Australian Federal Police serve as the national agency for the systematic collection, collation, evaluation and dissemination of information concerning the illicit drug traffic in Australia. The following extracts are from the detailed statistics published by them in the annual report *Drug Abuse in Australia (A Statistical Survey).*

DRUG AND DRUG-RELATED OFFENCES: NUMBER OF CHARGES(a) INVOLVING SPECIFIC DRUG TYPES: AUSTRALIA 1979 TO 1981

Year	*Possess*	*Import*	*Use/ administer*	*Traffic*	*Steal*	*False pretences*	*Forged scripts*	*Other*	*Total*
Narcotics—									
1979	1,068	73	1,009	414	137	73	379	367	3,520
1980	877	36	783	352	85	114	136	228	2,611
1981	1,186	103	1,003	565	148	287	103	350	3,745
Cannabis—									
1979	10,688	102	3,472	862	23	2	—	2,352	17,501
1980	12,269	95	4,027	1,266	37	—	—	2,584	20,278
1981	15,776	123	5,065	1,623	17	2	—	3,980	26,506
Amphetamines—									
1979	94	1	57	12	12	20	37	12	245
1980	85	—	49	25	—	22	14	6	201
1981	298	2	208	90	—	6	3	17	624
Barbiturates hypnotics—									
1979	359	—	263	53	45	32	104	51	907
1980	224	—	197	59	11	30	65	44	630
1981	143	—	77	26	20	12	37	21	342
Tranquilisers—									
1979	79	—	40	29	34	12	36	18	248
1980	64	1	66	30	11	19	12	17	220
1981	102	—	73	19	20	7	24	18	263
Hallucinogens—									
1979	186	—	40	33	—	—	1	18	278
1980	183	3	32	58	—	—	2	12	290
1981	171	3	39	38	1	1	—	10	263
Other—									
1979	46	—	12	48	30	8	14	14	172
1980	50	—	23	51	24	74	41	22	285
1981	89	1	24	31	16	12	14	17	204
Total—									
1979	**12,520**	**176**	**4,893**	**1,451**	**281**	**147**	**571**	**2,832**	**22,871**
1980	**13,752**	**135**	**5,177**	**1,841**	**168**	**259**	**270**	**2,913**	**24,515**
1981	**17,765**	**232**	**6,489**	**2,392**	**228**	**327**	**181**	**4,333**	**31,947**

(a) Charges arising from offences involving a number of different drug types have been counted under each drug type involved.

AGE DISTRIBUTION OF PERSONS CHARGED (a) WITH DRUG AND/OR DRUG RELATED OFFENCES: AUSTRALIA 1979 to 1981

Year	*16 years and under*	*17*	*18–25*	*26–30*	*31–49*	*50 years and over*	*Total*
1979	311	534	7,743	1,783	825	37	11,233
1980	338	558	7,939	1,909	923	49	11,716
1981	520	778	10,052	2,636	1,333	49	15,368

(a) Persons counted only once, regardless of the number of occasions on which charged during the year.

CORRECTIONAL TREATMENT OF OFFENDERS

The term 'corrections' (and its derivatives) as used here refers to the treatment of offenders within the justice system.

While there is a variety in the types of correctional activities employed in each State and Territory, such activities can be broadly categorised into three groups:

- non-continuing forms of treatment, where, if the offender meets the requirements set by court, then correctional agencies would not normally become actively involved. Examples of these forms of treatment are fines, bonds, recognisances without supervision.
- continuing forms of treatment, where the offender is subject to some form of control by a correctional agency, usually for a specified period. This control may take form of—
  - (i) full time custody, as in the case of persons detained in prisons, or other institutions, or
  - (ii) non-custodial treatment involving conditions to be observed by the offender, e.g. probation and parole. In recent years there has been a trend towards the greater use by courts of non-custodial treatment of offenders. This has seen the development of a range of programs such as periodic/weekend detention, attendance centre programs, and community service, under which the offender is at liberty in the community, but is required to report for weekend detention, training, counselling, or to perform unpaid work in the community.

Separate provisions exist in each State and Territory for the treatment of juvenile offenders, and courts and correctional agencies have a wide choice in the types of correctional treatments available to them. Both custodial and non-custodial correctional activities are employed, but greater flexibility allows treatment to be more closely aligned to individual requirements.

Each State and the Northern Territory operates its own prisons and other correctional services. Convicted adult prisoners from the A.C.T. serve their sentences in N.S.W. prisons, but local provision is made for the short-term custody of remand prisoners, and for probation and parole services. The Federal Government does not operate any prisons or other correctional services, and Federal offenders (i.e. persons convicted of offences under Federal laws) fall within the jurisdiction of State agencies for correctional purposes.

Information relating to correctional services in each State is available from the annual reports of the respective authorities and certain data are also published monthly by the Australian Institute of Criminology on adults and juveniles in detention, and adult probationers and parolees.

CRIMINOLOGICAL RESEARCH

The Australian Institute of Criminology

The Australian Institute of Criminology, which is located in Canberra (telephone (062) 82 2111), was established as a statutory authority under the *Criminology Research Act* 1971. The Institute is administered by a Director and a Board of Management comprising three members appointed by the Federal Attorney-General, and three members representing the States, who are appointed by the Criminology Research Council.

Among the functions of the Institute as defined in the Criminology Research Act are:

- to conduct criminological research (i.e. research in connection with the causes, prevention and correction of criminal behaviour and related matters), and communicate the results of such research to the Commonwealth and States;
- to advise on the needs for, and programs of, criminological research, and give advice and assistance in relation to any research funded through the Criminology Research Council;
- to conduct seminars and courses of training and instruction for persons engaged in criminological research or work related to the prevention or correction of criminal behaviour;
- to provide advice in relation to the compilation of statistics in relation to crime; and
- publish material resulting from, or relating to its activities.

Since its inception the Institute has undertaken directly, or through the Criminology Research Council actively assisted and advised on, an extensive range of criminological research projects, and has conducted, or been represented at, numerous national and international conferences dealing with crime related matters. In addition, the Institute maintains a comprehensive library of criminological material which is available to researchers and criminal justice practitioners.

Major publications of the Institute during 1981–82 included *Crime Trends in Twentieth-Century Australia* by Satyanshu K. Mukherjee, *Source Book of Australian Criminal & Social Statistics 1900–1980* by Satyanshu K. Mukherjee, Evelyn N. Jacobsen and John R. Walker, and *Just Deserts for the Mad* by Ivan Potas.

Each year the Institute conducts from 15 to 20 national seminars. Topics covered by seminars during 1981–82 included: victimology; the role of forensic psychologists; the police and private security; and mentally ill offenders.

The Criminology Research Council

The Criminology Research Council, comprised of representatives from the Commonwealth and each State, is an independent body corporate also established under the *Criminology Research Act* 1971. The Council is responsible for the control and administration of the Criminology Research Fund, which is funded fifty percent by the Federal Government, and fifty percent by State Governments on a pro-rata population basis. Subject to the Council's assessment of a project, persons seeking to conduct criminological or related research may be provided with a grant from the Fund.

Since its establishment the Council has provided grants for over 90 separate research projects covering nearly all aspects of crime and criminal justice in Australia. Council-funded research is generally located in specific regions and may involve primary data gathering. By contrast, the research undertaken by the Institute itself is generally national and comparative in nature and makes use of existing data sources.

BANKRUPTCY AND COPYRIGHT

Bankruptcy

For a description of the provisions of the *Bankruptcy Act* 1966, *see* Year Book No. 55, pages 586–7. The Act was amended in 1970 to remove any obstacle the Act might present to the operation of compositions or schemes of arrangements entered into under State or Territory legislation providing assistance to farmers in respect of their debts. Details for each Australian State have been published in the Annual Report by the Minister for Consumer and Business Affairs on the operation of the Act.

Copyright

Copyright is regulated by the Commonwealth *Copyright Act* 1968 which came into force on 1 May 1969. The Act does not contain any provisions requiring or enabling the completion of formalities (such as publication, registration or the payment of fees) in order to obtain copyright protection in Australia. Protection is granted automatically from the moment of making a work or other subject matter.

The Act has been amended from time to time. The *Copyright Amendment Act* 1980, in particular, contains substantial changes in a number of areas including fair dealings, copying by libraries and archives, and copying for educational purposes and for handicapped readers.

Copyright is administered by the Attorney-General's Department.

SELECT BIBLIOGRAPHY

For further reading on the topics outlined above it is suggested that readers consult the following references.

Australian Constitutional Law

The Australian Constitution Annotated, Attorney-General's Department, Australian Government Publishing Service, Canberra, 1980

Howard, Prof. Colin, *Australia's Constitution*, Penguin, Melbourne, 1978

Lane, Prof. P. H., *An Introduction to Australian Constitutional Law*, The Law Book Company Limited, Sydney, 1967

Lane, Prof. P. H., *An Introduction to the Australian Constitution*, 2nd ed., The Law Book Company Limited, Sydney, 1977

Sawer, Prof. Geoffrey, *The Australian Constitution*, Australian Government Publishing Service, Canberra, 1975

Federal Parliament

An Introduction to the Australian Federal Parliament, Angus and Robertson, Sydney, 1956

Crisp, Prof. L. F., *Australian National Government*, 4th ed., Longman Cheshire Pty Ltd, Melbourne, 1976

Odger, J. R. *Australian Senate Practice*, 5th ed., Australian Government Publishing Service, Canberra, 1976

Pettifer, J. A. (ed.), *House of Representatives Practice*, Australian Government Publishing Service, Canberra, 1981

Law and the Australian Legal System

Baalman, John, *Outline of Law in Australia* (4th ed. by Geoffrey A. Flick), The Law Book Company Limited, Sydney, 1979

Bates, Nicholas, *Introduction to Legal Studies*, 3rd ed., Butterworths, Melbourne, 1980.

Gifford, D. J. and Kenneth H. Gifford, *Our Legal System*, The Law Book Company Limited, Sydney, 1981.

Marsh, S. B., I. P. Predl and P. A. Ward, *Outlines of Law—Australian Edition*, McGraw-Hill Book Company, Sydney, 1972

Ross, Stan and Mark Weinburg (eds), *Law for the People: A Citizen's Guide to the Law in Australia and New Zealand*, Penguin Books, Melbourne, 1976

Sawer, Prof. Geoffrey, *The Australian and the Law*, Penguin Books, Melbourne, 1976

Twyford, John, *The Layman and the Law in Australia*, 2nd ed., Doubleday, Sydney, 1980

CHAPTER 12

EDUCATION

State and Commonwealth Government responsibilities in education

The governments of the six Australian States and the Northern Territory have the major responsibility for education, including the administration and substantial funding of primary, secondary and technical and further education. The Commonwealth Government is directly responsible for education services in the Australian Capital Territory, administered through an education authority, and for services to Norfolk Island, Christmas Island and the Cocos (Keeling) Islands. The Commonwealth Government provides supplementary finance to the States and is responsible for the total funding of universities and colleges of advanced education. The role of the Commonwealth Government extends beyond its funding capacity: it is involved in initiating and co-ordinating policy and in maintaining a national perspective.

The State Governments administer their own systems of primary, secondary and technical and further education through government departments responsible to State Ministers. In three States, a single Education Department is responsible for these three levels of education. In New South Wales and South Australia, there is a separate department responsible for technical and further education. In Victoria, the Education Department's former responsibility for technical and further education has passed to a Post Secondary Technical and Further Education Board. Furthermore, in New South Wales the Education Commission advises the Minister on primary, secondary and further education.

Detailed information on the education systems of the States may be found in the respective State year books. Chapter 27 of this Year Book provides details of the situation in the Territories.

General characteristics of schools

Compulsory education

School attendance is compulsory throughout Australia between the ages of 6 and 15 years (16 years in Tasmania). Each State or Territory has its own specific requirements. However, many Australian children commence their education earlier than is required. Many children attend pre-schools for a year before entering school (usually in sessions of 2-3 hours for 2-5 days per week). The majority commence primary school at about 5 years of age, except in Western Australia, where they start at 6 years. Primary schooling begins with a preparatory or kindergarten year, followed by 12 grades to complete a full secondary course of study. The final two years of schooling fall outside the compulsory stage of education, but at least half the students in Year 10 remain for a further year's study and over a third complete Year 12.

Non-Government Schools

All children between the prescribed ages must attend either a government school or some other recognised educational institution. While the majority of Australian children attend government schools, about one in four attend non-government schools at some stage of their school life. In the last few years enrolments in the non-government sector have increased to 680,000 in 1981 i.e. about 23 per cent of all school enrolments. Non-government schools operate under conditions determined by government authorities, usually registration boards, in each State and Territory. These conditions require that minimum education standards are met and that the schools have satisfactory premises. The majority of non-government schools are Catholic and there is a Catholic Education Commission in each State and at the national level. Most other non-government schools are under the auspices of, or run by, other religious denominations. The capacity of the Commonwealth Government to assist with the cost of educating children in denominational schools throughout Australia was upheld by the High Court in 1981.

Funding of schools

Primary and secondary education is free in government schools in all States and Territories. Fees for the hire of textbooks and other school equipment, however, may be charged, particularly in secondary schools. State Governments provide the bulk of funds for government schools out of general revenue and make per capita grants to non-government schools. About one-sixth of the total funding of

schools is now provided directly by the Commonwealth through the Commonwealth Schools Commission, which, in consultation with the States, advises the Commonwealth Government on the resource needs of both government and non-government schools. For further details, *see* Expenditure on education, page 267.

School organisation and operation

Primary schooling provides a general elementary program lasting for 7 or 8 years, until Years 6 or 7. Students enter secondary schools at Year 7 in some State systems and at Year 8 in others. Secondary education is generally comprehensive and co-educational. Most students attend schools reasonably near to their homes. Usually primary and secondary schools are separate institutions, but in some country areas there are area or central schools which provide both forms of schooling. Non-government schools follow a similar pattern, but a significant though declining proportion are single-sex institutions. In Tasmania and the Australian Capital Territory, attendance for the final two years of government schooling is at separate secondary colleges.

Generally, schools in Australia have a considerable degree of autonomy. Most State Departments have established regional administrations which are responsible for matters such as planning school buildings and deploying staff while a central curriculum unit provides general guidelines on course planning. In general, individual schools determine teaching and learning approaches within the guidelines and offer options within resources available and the attitudes and interests of students. Some systems encourage school-based curriculum development and, in the case of the Australian Capital Territory, school-based assessment in place of external examinations. While schools usually have a parents' association, there has been encouragement of greater community participation in general decision-making at school level in some systems through parent representation on school councils and boards.

Specialist services and programs provided in schools include educational or vocational counselling by a permanent or visiting teacher, English as a Second Language programs by specialist teachers (especially in schools with significant numbers of children from non-English speaking backgrounds), special programs designed to assist Aboriginal schoolchildren (including the widespread use of Aboriginal teacher aides and bilingual education programs in communities where the children's first language is an Aboriginal language), a variety of programs for gifted and talented children and remedial assistance for children with learning difficulties.

Pre-school education

All States and Territories except one have a policy of making pre-school education universal for children at about four years of age (in Western Australia, at 5 years). Participation rates for this age group are currently estimated to range between 40 per cent in one State and 80 per cent or more in the remaining five States and Territories. In some States, pre-schools are mainly government-run, in others many are operated by private or voluntary organisations. Attendance fees are generally not charged at government-run pre-schools, but parents contribute in other ways, such as by assisting pre-school teachers at some sessions and contributing towards the purchase of play materials and other educational equipment. Pre-school teachers generally favour the traditional free play program with emphasis on children's social and emotional development through creative activities.

Primary and secondary education

A generalised description of the basic subjects and teaching methods at each level follows.

Primary schools

In the lower primary years the main emphasis is on the development of basic language and literacy skills, simple arithmetic, moral and social education, health training and some creative activities.

In the upper primary years there is development of the skills learned in the earlier years. English, mathematics, social studies, science, music, art and craft, physical education and health are studied. There are also optional subjects such as religious instruction and, in some schools, foreign and community languages and instrumental music.

Students in Australian primary schools usually have only one class teacher for all subjects, and are promoted each year on the basis of completing the previous year, rather than on achievement. However, in schools where open plan learning styles have been adopted, the method of team teaching (more than one teacher to a class) and multi-age grouping of students is often practised.

Secondary schools

In some systems the first one or two years of secondary school consist of a general program which is followed by all students, although there may be some electives. In later years a basic core of subjects is retained with students being able to select additional optional subjects. In other systems students select options from the beginning of secondary school.

The core subjects in all systems are English, mathematics, science and, usually, a humanities or social science subject. Optional subjects may include for example, a foreign language, a further humanities or social science subject, commerce, art, crafts, music, home economics, a manual arts subject, agriculture, physical education or health education. Some schools offer optional courses in subjects such as consumer education, conversational foreign languages, shorthand, typewriting, road safety, drama and leisure-time activities.

In senior secondary years a wider range of options is available in the larger schools and there is an increasing trend towards encouraging individual schools to develop courses suited to the needs and interests of their students, subject to accreditation and moderation procedures.

Victoria is the only State which retains a system of secondary technical education. These schools offer a wide range of elective technical subjects. In the Northern Territory three Aboriginal residential colleges assist Aboriginals to participate in secondary education.

Students in Australian secondary schools generally have different teachers for each separate subject area, though, like primary schools, variations may occur where open planned or more flexible methods have been adopted. Promotion is, again, generally chronological, but students may be grouped according to ability after an initial period in unstreamed classes.

Examinations and assessment at each level are carried out by individual schools except in Year 12 in the systems which have retained external examinations at Year 12 level. Students attaining the minimum school leaving age may leave school and seek employment, or enrol in a vocationally oriented course in a technical and further education (TAFE) institution or a private business college. For many TAFE courses, completion of Year 10 of secondary school is a minimum entry requirement. For those continuing to the end of secondary school (Year 12), opportunities for further study are available in TAFE institutions, universities, colleges of advanced education and other post-school institutions. The latter include non-government teachers colleges and a few single purpose institutions such as the Australian Film and Television School, the Australian Maritime College and the National Institute of Dramatic Art.

Students' eligibility for entry to universities and colleges of advanced education is assessed during, or at the end of, the final two years of secondary schooling. In Victoria the standard basis for admission to higher education is public examination results. Four other States and the Northern Territory use different combinations of school assessment and public examinations. In Queensland and the Australian Capital Territory eligibility to enter higher education is determined from moderated and standardised school assessments. Several education systems are currently reviewing their senior secondary school assessment procedures.

Other schooling arrangements

Children may be exempted from the requirement of compulsory attendance if they live too far from a school or suffer a physical disability. These children usually receive correspondence tuition. Special schools are available in larger centres for socially, physically and mentally handicapped children in cases where they are not catered for in special or regular classes in ordinary schools.

In addition to correspondence tuition there are other provisions for children in isolated areas. Schools of the Air operate in New South Wales, South Australia, Queensland, Western Australia and the Northern Territory. Schooling for the children of Aboriginal groups in remote areas of the Northern Territory is conducted by Aboriginal teaching assistants supported by visiting teachers from established schools. Increasing numbers of Aboriginals are now being trained as fully qualified teachers. Special education is provided by State Governments, although in all States and particularly in New South Wales, Queensland and Victoria, parents have formed voluntary organisations to establish additional schools catering for their children's special needs. The Commonwealth Government, through the Commonwealth Schools Commission, provides funds to State authorities to assist in the upgrading of special education facilities.

Boarding facilities are available at some non-government schools mainly in the larger towns and cities. Some government schools, in particular those catering for special groups such as Aboriginals, have residential-hostels close by.

Post-secondary education

Technical and further education (TAFE)

The major part of technical and further education in Australia is provided in government administered institutions variously known as colleges, schools, or centres of technical and further education. There is also some TAFE provision in some colleges of advanced education, agricultural colleges and adult education authorities. These institutions are spread widely throughout Australia in both metropolitan and country areas. They vary greatly in size and in the scope of their educational provisions, though the largest tend to be located in metropolitan regions. TAFE institutions operate from early February to mid-December, in either three terms or two semesters depending on the institution.

Each of the States provides the bulk of the finance for its own institutions. The Commonwealth Government provides supplementary funds to the States on the basis of recommendations from the Commonwealth Tertiary Education Commission.

Government TAFE institutions offer an extremely wide range of vocational and non-vocational courses. Courses may be designed to supplement previous training, or to provide specialised instruction in particular aspects of job skills, pre-vocational training prior to employment, preparatory or bridging instruction to permit entry to a chosen vocational course and adult education for personal interest, leisure or general enrichment purposes. Courses may be classified into the following six streams: professional, para-professional, trades, other skilled, preparatory and adult or further education. Courses in the first two streams lead to the award of a diploma or associate diploma, in the third and fourth streams to a certificate, while the less formal shorter courses in the fifth and sixth streams do not lead to any qualification. The majority of TAFE courses are part-time, concurrent with employment, but there is also provision for full-time and external study.

There are additionally some non-government bodies which offer technical and further education of a non-apprenticeship nature. Business colleges offer courses in secretarial studies, while agencies such as the Workers Educational Association and a range of voluntary groups help meet adult education needs in the community.

Colleges of advanced education

Colleges of advanced education normally operate over three terms or two semesters, beginning in early to late February and running to mid-December. Students commencing courses will have completed a full secondary education, or will have demonstrated that they have a high probability of successfully completing a course. There are quotas on new enrolments at many of the larger colleges with students able to enrol on a full-time or part-time basis and there are usually provisions for mature-age entry.

The principal purpose of the colleges is to provide tertiary education oriented towards practical training and industrial and social needs. The colleges aim to equip students so that immediately after graduation they may play an effective role in commerce, industry, the public service and the arts. The colleges emphasise undergraduate teaching more than research, although some colleges also offer post-graduate level courses, either at the diploma or masters level. Most colleges have a commitment to part-time study, and many offer 'sandwich' courses, which provide a period of full-time study with associated periods of full-time employment. Some colleges also offer external courses.

Some colleges may be large, diversified or multi-vocational institutions, while others are small single purpose institutions. The Commonwealth Government has decided to consolidate into larger units 30 of the smaller colleges for which teacher education is the main activity, by their incorporation into multi-purpose or multi-campus colleges with a single governing body, or by integration with neighbouring universities. When the consolidation has been completed the number of colleges will be reduced from 68 in 1981 to about 40, depending on the form of the amalgamations.

The duration of a basic undergraduate course in a college of advanced education is two to three full-time years, at the conclusion of which an Associate Diploma, a Diploma or a Bachelor Degree is awarded. A great variety of courses is offered by colleges of advanced education, embracing such areas as applied science, teacher education, liberal arts, business and secretarial studies and para-medical studies.

Although teaching in colleges of advanced education is more vocationally-oriented and less theoretical or academic than in universities, the system of tuition is similar. Lectures, tutorials and seminars are organised by the institution in the subjects offered. Normally, assessment of a student's progress is made by examination and/or completion of prescribed coursework.

Halls of residence are provided at some colleges of advanced education, principally those located in country areas. These can accommodate some, but not usually all, students enrolled at those institutions.

Universities

The university year in Australia normally runs from late February or early March to mid-December over three terms or two semesters depending on the institution. Normally students commencing courses will have completed a full secondary education, though most universities have some provisions for admitting other persons who can demonstrate that they have a high probability of successfully completing a course. There are quotas on new enrolments in most faculties in Australian universities. Although there are usually provisions for mature-age entry, the majority of students proceed straight from school.

There are nineteen universities in Australia, most of which are located in the capital cities. Universities are autonomous institutions established under Acts of the appropriate parliament and financed mainly by the Commonwealth Government. The basic undergraduate course in most disciplines is three or four full-time years in duration, at the conclusion of which a bachelor degree is awarded. A further one to two years of full-time study is required for a masters degree, and three to five years for a doctoral degree. Universities also offer post-graduate diploma courses in some disciplines. All universities offer full-time and part-time courses, and some offer external studies. In 1981, sixty per cent of students were enrolled in full-time study. As well as providing undergraduate courses, Australian universities are centres of post-graduate study and research. In 1982 it was announced that 10 Commonwealth Special Research Centres in 7 universities are to receive additional Commonwealth funding as highly promising research centres of excellence. Some universities have institutes or units involved exclusively in research and/or post-graduate teaching. In 1981, 13 per cent of university students were proceeding to higher degrees.

Courses at Australian universities are normally organised in faculties or schools, and students generally elect to study in a number of subject areas, or departments, within a faculty or school. Universities will generally offer some, but not all, of the following courses of study: agriculture, architecture, arts, dentistry, economics, education, engineering, law, medicine, music, science, and veterinary science.

The system of tuition in universities is normally by means of lectures, tutorials, seminars and supervised practical work. Normally, assessment of a student's progress is made by examination and/or completion of prescribed coursework. Theses are required for many post-graduate degrees.

Most universities have halls of residence on the campus which accommodate some, but not all, of the students currently enrolled. Student organisations on campus provide a wide range of sporting and social facilities for students.

Teacher education

The majority of teachers are educated in colleges of advanced education, but a substantial number of secondary teachers and a few primary teachers receive their pre-service education in a university. A few non-government teachers colleges, mostly operated by religious denominations, educate some of the teachers for non-government schools. The majority of pre-school and primary trainee-teachers undertake courses of three years' duration before commencing teaching. Most secondary trainee-teachers undertake a four year course.

The normal entry requirement for teacher education is determined by the matriculation requirements of individual universities and colleges of advanced education.

The content of pre-service teacher education is determined by individual universities and colleges of advanced education. Options are available to students but, generally, the three year course for a pre-school or primary trainee-teacher includes history and principles of education, general and special methods of teaching, early childhood development and general educational psychology, as well as the subjects they will be teaching. Practice teaching is required and may occupy a considerable part of the teacher education program.

Secondary trainee-teachers are generally expected to specialise in two or three subjects. These may be studied as part of an education degree in either a university or a college of advanced education, or as part of another degree to be followed by a post-graduate diploma in education.

In-service training opportunities are available within all education systems. There are two general types: study leave or assistance to enable teachers to upgrade their formal qualifications, or less formal workshops, seminars or conferences. In each State many of these 'less formal' activities are co-ordinated by a joint committee of representatives of teachers and of government and non-government schools. Also with the assistance of funds from the State Government and the Commonwealth Schools Commission, teachers directly organise many of their own in-service education activities through a number of teacher centres and education centres in each State.

In its guidelines to the Commonwealth Tertiary Education Commission, the Commonwealth Government directed attention to the balance between the supply of and demand for teachers and to

the implications of the required reduction in intakes to pre-service teacher education to avoid oversupply. Intake numbers for primary pre-service teacher courses have declined by 29 per cent from 1978 to 1982 and for secondary courses are expected to decline by 30 per cent from 1978 to 1984. However, after 1982 they are projected to increase moderately in primary courses. Reduced teacher education enrolments have led to the need for consolidation of smaller colleges of advanced education.

Migrant education

English as a second language

Acceptance by both Commonwealth and State Governments of the concept of Australia as a multicultural society has led to the expansion of the *English as a Second Language Program*, formerly the *Migrant Education Program*, which is aimed specifically at improving the English language competence of children from non-English speaking backgrounds, many of whom are Australian born. The Commonwealth Schools Commission makes funding provision for extra English language assistance across the whole curriculum in regular classes as well as for withdrawal arrangements (special classes) where necessary and for the adoption of school programs and operations to reflect the multicultural experience of migrant children. Other developments in the States and Territories continue initiatives that have been undertaken in recent years, such as the availability of community languages in schools, the employment of bilingual teachers and teacher aides and the establishment of additional Intensive Language Centres for newly arrived migrants and refugees.

Multicultural education

The Commonwealth Schools Commission has also established a complementary program in Multicultural Education, the purpose of which is to promote in all students an appreciation of the multicultural nature of Australian society through such projects as teaching community languages, intercultural studies and other activities aimed at encouraging respect for different cultural backgrounds. Two recent and significant developments are the Commonwealth Government's support for "ethnic schools" which run classes to teach particular languages and cultures, and its provision for new courses in community languages at universities and colleges of advanced education in the 1982–84 triennium.

Adult migrant education

The *Adult Migrant Education Program* is a national program, funded and co-ordinated by the Commonwealth Department of Immigration and Ethnic Affairs. It aims to help adult migrants and refugees from non-English speaking backgrounds learn English and obtain essential information about Australia and Australian society.

Co-ordinated settlement programs give new immigrants orientation on housing, education, employment and welfare, together with formal English instruction. The program is conducted in a variety of ways including full and part-time classes and special arrangements such as English classes at the work place, the Home Tutor Scheme and English by radio and television. Enrolments in the program have increased in recent years.

For the most part the courses are conducted by State Governments through their Adult Migrant Education Services or Branches. A number of tertiary institutions and some community organisations also participate in the program through courses funded by the Commonwealth. These courses are available at a number of locations including migrant education centres leased by the Commonwealth in each mainland capital city, education centres in migrant hostels and other community and education facilities in suburban and some country areas.

Financial assistance

Primary and secondary education is free in government schools in all States and Territories although nominal fees may be charged for the hire of textbooks and other school equipment. Most State Governments provide financial assistance to parents for educational expenses such as these as well as for transport to and from school, and various forms of scholarship, bursary, boarding and clothing allowances. Many of these forms of assistance are specifically intended to assist low income families.

Post-secondary education (in institutions of technical and further education, colleges of advanced education and universities) has been free since the beginning of 1974.

At the national level, the Commonwealth Government, through its Department of Education, provides a number of schemes of assistance for Australian students to facilitate access to education, particularly at the upper secondary and post-secondary level. A brief description of these schemes was given in the 1980 Year Book and are listed later in this chapter, in the statistical table dealing with Student Assistance Schemes.

In addition, the States offer various schemes of assistance at the primary and secondary level; some are paid directly to the schools, others to the student or the student's parents. Many of these awards are intended to offset the cost of books, to enable students to attend special schools, or to assist students in remote areas who need to live away from home or to travel long distances to attend school.

Some universities have a small number of scholarships or other forms of assistance to enable students to undertake tertiary study. Some of these awards are at the post-graduate level, and some are for study overseas. Some non-government schools also offer scholarships and bursaries to assist students.

Administrative structure of education at the national level

As mentioned at the beginning of this chapter, the Commonwealth Government has direct responsibility for education only in the Australian Capital Territory and the external Territories, the Northern Territory Government having assumed responsibility for education in the Territory from 1 July 1979. (*See* relevant State Year Books for a description of State administrative structures.) The Commonwealth Government, however, has special responsibilities for the Aboriginal people and for migrants, as well as the power to provide assistance for students. Moreover, the Commonwealth Government is responsible for international relations in education. Accordingly, the Commonwealth Department of Education's activities include the administration of schemes of student assistance, international education, some aspects of migrant education, language teaching and Aboriginal Education. The Department also liaises with the media and community groups, and produces a range of publications relating to education in Australia, e.g. *Directory of Higher Education Courses, Education News* and *Hemisphere*, a bi-monthly Asian-Australian magazine.

The Department provides a secretariat for the Organisation for Economic Co-operation and Development (OECD) Advisory Committee on Education and co-ordinates Australia's involvement in the OECD education research activities under the Centre for Educational Research and Innovation (CERI). As well, the Department provides a secretariat for the Australian National Commission for the United Nations Educational, Scientific and Cultural Organisation (UNESCO) which has a specialist Education Committee.

The Australian Constitution empowers the Commonwealth Government to make grants to the States and to place conditions upon such grants. This power has been used to provide financial assistance to the States specifically for educational purposes. There are two national education commissions which advise the Commonwealth Government on the needs of educational institutions throughout Australia for the purposes of financial assistance: the Commonwealth Schools Commission, which was established in 1973; and the Commonwealth Tertiary Education Commission, which was established in 1977 to replace three former commissions—the Universities Commission, the Commission on Advanced Education and the Technical and Further Education Commission. The Commonwealth Tertiary Education Commission comprises a Commission which is concerned with co-ordination and intersectoral matters, and three Councils on universities, advanced education and technical and further education.

Generally, the Commissions are required to consult with State authorities (and, in the case of the Commonwealth Schools Commission, with the authorities conducting non-government schools) and such other persons, bodies and authorities as they think necessary before making recommendations to the Commonwealth Government on the amount of financial assistance required, both in general and for specific purposes, to meet the needs of each sector.

The all-Aboriginal *National Aboriginal Education Committee* advises the Commonwealth Department of Education and other government departments and bodies on the educational needs of Aboriginals from pre-school to tertiary level. The NAEC's consultative process has been developed to a stage whereby the views of Aboriginal people regarding their needs in education can be clearly expressed at both State and national levels.

The needs for financial assistance for pre-school and child care facilities are considered at the national level by the Office of Child Care within the Commonwealth Department of Social Security.

Commonwealth Government education authorities also function as co-ordinating agencies for joint activity by the States and Territories in a number of fields.

- The *Australian Council on Awards in Advanced Education* seeks, in consultation with State co-ordinating bodies, to establish consistency in awards in advanced education by establishing, maintaining and publishing a register of such awards.

A number of other bodies at the national level have an important co-ordinating, planning or funding role.

- The *Australian Education Council,* comprising the Commonwealth and State Ministers for Education, normally meets three times in each two years as a consultative body to consider matters of mutual interest, such as the material and personnel needs of schools and co-operation in educational developments generally. It is assisted by a Standing Committee consisting of senior officials including the Directors-General of Education in each State and the Secretary of the Commonwealth Department of Education.
- The *Conference of the Directors-General of Education* normally meets twice each year. Matters discussed and decisions reached at the Conference have a direct influence in each State and Territory on such matters as pre-service and in-service education of teachers, school staffing, curricula, special education, building programs, administrative procedures and the extent of uniformity and diversity between education systems. Under the auspices of the Directors-General Conference, regular meetings of senior specialist personnel are held.
- The *Australian Council for Educational Research* (ACER) is an independent national research organisation. The Council is funded by annual grants from each of the State Governments and the Commonwealth Government, as well as from its own activities. The Council is involved in its own and contract research in co-operation with education systems and plays a central role in the development, production and distribution of tests and other measuring instruments, and on research into teaching and learning, and into the broad foundations of education. The ACER acts as the Australian national centre for the program of international surveys of student achievement conducted by the International Association for Evaluation of Education Achievement (IEA).

There are also a number of non-government organisations which have a co-ordinating role in education at the national level. These include the *National Catholic Education Commission,* the *National Council for Independent Schools,* the *Australian Vice-Chancellors' Committee,* the *Australian Conference of Principals of Colleges of Advanced Education,* the *Conference of Directors of TAFE* and the *Australian High School Principals' Association.* Teachers at various levels have national organisations, as do some community and parental groups. The Australian Union of Students is a national organisation for tertiary students. (For further details *see* the *Australian Education Directory,* published by the Commonwealth Department of Education).

Major current issues in education

Some of the major initiatives taken in education at the national level are discussed below. (*See* relevant State Year Books for a description of State issues.)

The transition from secondary education to employment

On 22 November 1979, the Commonwealth Ministers for Education and for Employment and Youth Affairs announced that the Commonwealth would provide additional grants to the States to a total of $150 million over five years for a special Transition from School to Work Program. The Commonwealth allocation was $27.4 million in 1981 and $30 million in 1982. These funds are providing for the development of programs, in both government and non-government schools and in TAFE colleges, for the extension and diversification of education and training. The primary concern of this Transition Program is to provide appropriate education and training courses for those young people who leave school each year with poor employment prospects and to provide for those people still in school who are at risk of facing similar difficulties.

Projects supported under the program have included expansion of TAFE programs such as pre-apprenticeship, pre-vocational and pre-employment courses, and EPUY programs, development of alternative courses in schools for potential early school leavers, development of link courses, improved services and techniques for identifying potential early school leavers, expansion of school counsellor, vocational education and guidance services, and teacher development programs and community education projects.

Schemes introduced to assist young Australians seeking employment

The *Education Program for Unemployed Youth* (EPUY), was introduced in July 1977, to provide financial assistance to State and Territorial education authorities to develop and conduct courses for young people for whom low or inadequate levels of educational achievement form a primary barrier to their obtaining stable employment. Courses are designed to provide instruction in literacy and numeracy, to promote self confidence and to give students some basic vocational skills and a knowledge of job seeking techniques. Courses are from six to twenty weeks duration.

Persons less than 25 years of age are eligible provided that they have been registered for employment or can show other evidence of having been unemployed for not less than four of the previous twelve months, and have been away from full-time education for the same length of time and are currently registered for employment. An amount of $2.0 million was made available for expenditure on the program in 1977–78, $3.2 million in 1978–79, $3.7 million in 1979–80 and $3.8 million in 1980–81. The administration of the EPUY and Transition from School to Work Program was combined in 1982 when $4.6 million was provided specifically for EPUY.

Other schemes, administered by the Department of Employment and Youth Affairs, which may assist young people in the transition from school to work are the *National Employment and Training Scheme* (NEAT), the *Special Youth Employment Training Program* (SYETP), the *Commonwealth Rebate for Apprentice Full-Time Training* (CRAFT), the *Relocation Assistance Scheme* (RAS) and the *Community Youth Support Scheme* (CYSS).

The Inquiry into Management Education

This Inquiry was established in April 1980 under the Chairmanship of Mr J. T. Ralph, Deputy Managing Director, CRA Ltd. Under its terms of reference, the Committee was directed to investigate the availability and effectiveness of courses for middle and top management, the manner of financing management education and the special needs of small business. The Commission reported in May 1982 and public comment was sought and taken into consideration by the Commonwealth Government which, in September, announced its support for two major recommendations: to establish a second national graduate school at the University of Melbourne and to assist with the cost of establishment of an Australian Foundation of Management Development. Other decisions relating to business management programs and the needs of small business, and the desirability of rationalising programs of management education have also been announced.

Australian Studies in Student Performance (ASSP)

The Australian Studies in Student Performance project was commissioned by the Australian Education Council as part of a response to general community concern about education standards in Australia. In all Australian States, samples of children aged 10 and 14 years were tested in writing, reading and numeration.

The survey was conducted in October 1980 by the Australian Council for Educational Research, and the report entitled, *Performance in Literacy and Numeracy 1980*, is available at Australian Government Publishing Service bookshops. An evaluation of the survey (its administration and influence) was conducted by Prof. Power of Flinders University. In February 1982 the AEC decided that the testing program should continue.

Potential of Communications Satellites for Education

The Australian Education Council agreed in October 1981 to set up an advisory committee to recommend a three year program of trials in the educational use of communications technology, in particular telecommunications relating to the use of the domestic communications satellite system being developed for Australia. Subject to the agreement of the various governments to participate in the program, the advisory committee will include researchers and representatives from all States participating in the trials program, higher education institutions, and the technical and further education sector. Management and evaluation of the project will be co-ordinated by the Commonwealth Department of Education, and is estimated to cost $100,000. The cost of the trials is estimated at $420,000. These costs will be shared by the Commonwealth and the participating States.

Educational training in the Defence Force

Information on educational training in the Defence Force is contained in Chapter 4 Defence, pages 62-6 inclusive.

EDUCATION STATISTICS

For the most recent statistics available on subjects dealt with in this chapter reference should be made to the series of mimeographed publications on social statistics issued by the Australian Bureau of Statistics. These publications comprise *Schools, Australia* (4202.0), *Colleges of Advanced Education, Australia* (4206.0) and *University Statistics, Australia* (4208.0). Financial aspects are dealt with in the annual publications *Commonwealth Government Finance, Australia* (5502.0), *State and Local Government Finance, Australia* (5504.0) and *Expenditure on Education, Australia* (5510.0). The annual reports of the respective State education departments provide detailed statistical and other information about particular States. The Commonwealth Department of Education issues publications on aspects of primary, secondary and tertiary and other post-secondary education.

NUMBER OF EDUCATIONAL INSTITUTIONS, 1981

	Schools					
	Government	*Roman Catholic*	*Other non-government(a)*	*Total*	*Universities*	*Colleges of advanced education*
New South Wales	2,236	609	195	3,040	6	23
Victoria	2,149	488	144	2,781	4	22
Queensland	1,268	281	68	1,617	3	10
South Australia	638	103	60	801	2	6
Western Australia	695	143	63	901	2	5
Tasmania	261	37	24	322	1	1
Northern Territory	130	10	3	143	—	—
Australian Capital Territory	95	26	7	128	1	1
Australia—1981	**7,472**	**1,697**	**564**	**9,733**	**19**	**68**
1980	7,444	1,706	529	9,679	19	68
1979	7,393	1,694	506	9,593	19	71

(*a*) Of the 564 other non-government schools in 1981, 97 or about 17 per cent were Anglican.

NUMBER OF STUDENTS ENROLLED AT EDUCATIONAL INSTITUTIONS, 1981

	Schools					
	Government	*Roman Catholic*	*Other non-government(a)*	*Total*	*Universities*	*Colleges of advanced education*
New South Wales	790,393	195,773	42,080	1,028,246	63,532	39,907
Victoria	595,042	164,046	57,565	816,653	44,219	56,566
Queensland	360,424	80,699	19,804	460,927	22,392	23,418
South Australia	213,033	29,078	14,234	256,345	12,811	17,558
Western Australia	207,126	36,255	12,252	255,633	12,620	20,237
Tasmania	70,932	10,353	4,564	85,849	5,082	2,082
Northern Territory	23,271	3,720	495	27,486	—	—
Australian Capital Territory	39,182	14,405	2,673	56,260	5,955	5,299
Australia—1981	**2,299,403**	**534,329**	**153,667**	**2,987,399**	**166,611**	**165,067**
1980	2,318,077	522,215	144,270	2,984,562	163,156	159,466
1979	2,336,718	512,345	137,868	2,986,931	160,810	155,667

(*a*) Of the 153,667 students at other non-government schools in 1981, 58,025 or about 38 per cent were attending Anglican schools.

NOTE: For details of technical and further education institutions and associated enrolments, *see* pages 12/252–12/255.

Schools

Statistics of government and non-government schools, teachers and students in 1981 and earlier years are shown in the following tables. Statistics for the number of schools and students in each State are included in the two preceding tables. The number of schools and teachers refer to the position at dates which vary from State to State and in some instances from year to year. Institutions providing only pre-school education, senior technical and agricultural colleges, evening schools, continuation classes, and institutions such as business colleges and coaching establishments are not included in these statistics. Student statistics in the tables which follow refer to the number of students enrolled at the schools included in the August schools census. For more detailed statistical information, *see* the annual publication *Schools, Australia* (4202.0).

NUMBERS OF TEACHERS(*a*), BY CATEGORY OF SCHOOL, STATES AND TERRITORIES, 1981

		Non-government schools		
	Government schools	*Roman Catholic*	*Other*	*All schools*
New South Wales	45,248	9,735	2,928	57,911
Victoria	40,462	8,358	4,053	52,873
Queensland	19,719	3,774	1,178	24,671
South Australia	14,472	1,554	973	16,999
Western Australia	11,691	1,834	885	14,410
Tasmania	4,947	525	328	5,800
Northern Territory	1,486	190	32	1,708
Australian Capital Territory	2,500	705	173	3,378
Australia—1981	**140,525**	**26,675**	**10,550**	**177,750**
1980	141,206	25,481	9,933	176,620
1979	141,210	24,492	9,495	175,196

(*a*) Full-time teachers plus full-time equivalent units of part-time teaching, rounded to whole numbers. Excluded are teachers-in-training, teachers on leave without pay, and other teachers engaged wholly in advisory, administrative or other non-teaching duties.

PERCENTAGE CHANGES BETWEEN 1979 AND 1981—NUMBERS OF SCHOOLS, TEACHERS AND STUDENTS

	Schools	*Teachers*	*Students*
Government	+1.1	—0.5	—1.6
Roman Catholic	+0.2	+8.9	+4.3
Other Non-government	+11.5(—2.0)(*a*)	+11.1(+7.7)(*a*)	+11.5(+7.5)(*a*)
Total	**+1.5**	**+1.4**	**0.0**

(*a*) Figures for Anglican schools are shown in brackets.

Between 1979 and 1981 the total number of teachers increased by 1.4 per cent, with the increase being particularly pronounced for non-government schools. In the same period, the number of non-government schools (other than Roman Catholic and Anglican) increased by 14.7 per cent. However, the overall increase in the total number of schools was only about 1.5 per cent. In government schools student enrolments decreased by 1.6 per cent, whereas they increased in non-government schools by 5.8 per cent. The increase of enrolments in Roman Catholic and other non-government schools offset the decrease of enrolments in government schools, so that there was affectively no increase in overall enrolments.

PERCENTAGE CHANGES BETWEEN 1979 AND 1981—ENROLMENTS BY AGE CATEGORY

	Government		*Non-government*		
Age last birthday (years)	*Males*	*Females*	*Males*	*Females*	*All students*
Under 6 to 9	-4.3	-4.4	+4.6	+3.1	-2.7
10 to 14	+3.7	+4.1	+10.5	+10.1	+5.3
15 and over	-9.6	-7.4	-0.5	+0.3	-6.3
All ages	**-1.8**	**-1.4**	**+6.1**	**+5.5**	**0.0**

Between 1979 and 1981 enrolments in non-government schools increased across all age categories, particularly 10 to 14 year olds, for both sexes except for a slight decrease in males 15 years and over. Conversely, enrolments in government schools decreased across all age categories for both sexes except for 10 to 14 year old males and females. For these groups enrolments increased slightly.

The tables below present detailed information on student enrolments for 1981 showing breakdowns by school type, sex and State.

GOVERNMENT AND NON-GOVERNMENT SCHOOLS: STUDENTS, BY AGE AND SEX, AUSTRALIA, 1981
(August school census)

	Government schools			*Non-government schools*			*All schools*		
Age last birthday (years)	*Males*	*Females*	*Persons*	*Males*	*Females*	*Persons*	*Males*	*Females*	*Persons*
Under 6	80,420	77,163	157,583	21,691	21,628	43,319	102,111	98,791	200,902
6	98,821	92,998	191,819	25,258	24,719	49,977	124,079	117,717	241,796
7	102,708	96,737	199,445	26,215	25,464	51,679	128,923	122,201	251,124
8	107,310	101,505	208,815	26,653	26,537	53,190	133,963	128,042	262,005
9	113,175	107,403	220,578	28,428	28,241	56,669	141,603	135,644	277,247
10	114,225	108,893	223,118	29,508	29,305	58,813	143,733	138,198	281,931
11	106,476	100,858	207,334	29,351	28,346	57,697	135,827	129,204	265,031
12	101,302	94,831	196,133	31,900	32,415	64,315	133,202	127,246	260,448
13	96,700	90,535	187,235	31,264	31,658	62,922	127,964	122,193	250,157
14	95,448	88,927	184,375	30,044	30,581	60,625	125,492	119,508	245,000
15	81,239	76,716	157,955	27,559	28,279	55,838	108,798	104,995	213,793
16	50,330	50,263	100,593	20,434	21,546	41,980	70,764	71,809	142,573
17	24,052	26,375	50,427	13,364	13,420	26,784	37,416	39,795	77,211
18	5,324	4,712	10,036	2,075	1,550	3,625	7,399	6,262	13,661
19 and over	1,898	2,059	3,957	273	290	563	2,171	2,349	4,520
All Ages—1981	**1,179,428**	**1,119,975**	**2,299,403**	**344,017**	**343,979**	**687,996**	**1,523,445**	**1,463,954**	**2,987,399**
1980	1,189,633	1,128,444	2,318,077	332,930	333,555	666,485	1,522,563	1,461,999	2,984,562
1979	1,201,127	1,135,591	2,336,718	324,223	325,990	650,213	1,525,350	1,461,581	2,986,931

SCHOOLS: STUDENTS, BY AGE, 1981
(August school census)

Age last birthday (years)	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Under 6	81,640	56,858	22,222	19,087	10,597	4,102	2,202	4,194	200,902
6	83,688	62,774	39,435	20,042	21,799	7,037	2,485	4,536	241,796
7	87,255	65,787	41,056	20,194	22,171	7,243	2,643	4,775	251,124
8	90,378	68,173	43,020	21,896	23,249	7,611	2,882	4,796	262,005
9	95,721	72,358	45,220	22,975	25,035	8,028	2,768	5,142	277,247
10	95,745	74,663	45,569	23,844	25,864	8,310	2,853	5,083	281,931
11	87,757	71,235	43,510	23,004	24,276	7,953	2,583	4,713	265,031
12	85,834	71,257	41,658	22,833	24,037	8,155	2,356	4,318	260,448
13	82,343	68,060	40,773	22,257	22,771	7,628	2,101	4,224	250,157
14	82,102	66,679	39,484	21,465	22,059	7,321	1,904	3,986	245,000
15	74,186	60,055	30,070	19,652	17,778	6,752	1,446	3,854	213,793
16	45,475	47,445	18,740	13,212	10,700	3,102	822	3,077	142,573
17	29,265	25,044	8,579	4,878	4,817	1,771	334	2,523	77,211
18	6,105	4,222	1,002	708	388	380	64	792	13,661
19 and over	752	2 043	589	298	92	456	43	247	4,520
All Ages—1981	**1,028,246**	**816,653**	**460,927**	**256,345**	**255,633**	**85,849**	**27,486**	**56,260**	**2,987,399**
1980	1,029,688	822,272	450,575	259,798	253,229	86,952	26,414	55,634	2,984,562
1979	1,032,702	825,560	444,045	264,497	252,610	87,447	25,156	54,914	2,986,931

Technical and further education

The major part of technical and further education (TAFE) in Australia is provided in a network of government-administered institutions variously known as colleges, schools or centres of technical and further education. In addition, TAFE vocational courses are conducted by certain colleges of advanced education and by agricultural colleges in New South Wales and Victoria, and a large number of bodies, both statutory and voluntary, participate in the provision of adult education programs. The following statistics relate to technical and further education activities of the major government departments/divisions of TAFE, agricultural authorities and advanced education authorities; they do not include activities of bodies such as the Board of Adult Education in New South Wales, the Council of Adult Education in Victoria and the Australian Capital Territory evening colleges. For further information on the organisation of TAFE and associated statistical details, *see* the report, *Tertiary Education Commission—Recommendations For 1981* (July 1980), the Commonwealth Tertiary Education Commission's Report for 1979-81 Triennium, Volume 1 (February 1978), Volume 2 (August 1978) and Volume 3 (August 1979), the *First Report of the Technical and Further Education Commission*, (July 1976) and previous reports of the Australian Committee on Technical and Further Education.

TECHNICAL AND FURTHER EDUCATION: INSTITUTIONS BY TYPE OF INSTITUTION, 1980

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
Type of institution—									
Major TAFE Authorities—									
Major institutions(*a*)	84	32	28	34	27	7	2	5	219
Annexes(*b*) . . .	197	13	4	556	—	—	6	—	776
Other institutions(*c*) .	—	133	—	—	86	4	5	1	229
Annexes(*b*) . . .	—	6	—	—	—	—	—	—	6
Agricultural authorities colleges	2	6	—	—	—	—	—	—	8
Colleges of advanced education(*d*) . . .	1	1	4	1	3	—	—	—	10
Total(*e*) 1980 .	**284**	**191**	**36**	**591**	**116**	**11**	**13**	**6**	**1,248**
1979 .	274	217	37	594	120	9	12	9	1,272
1978 .	227	221	36	526	122	10	8	9	1,159

(*a*) Institutions whose major function is TAFE and which has a full-time principal officer. (*b*) Subsidiaries of parent institutions. (*c*) All TAFE institutions other than major institutions. (*d*) Colleges offering TAFE activities. (*e*) Includes parent institutions and subsidiaries (annexes) of parent institutions.

TECHNICAL AND FURTHER EDUCATION: ENROLMENTS (*a*) BY TYPE OF ENROLMENT AND STREAM OF STUDY, 1980

Type of enrolment/ stream		*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
					FULL-TIME ENROLMENTS(*b*)					
Professional		22	167	50	—	22	6	45	—	312
Para-professional		12,619	4,269	642	728	3,600	531	109	243	22,741
Trades		3,554	1,105	1,644	116	496	97	33	16	7,061
Other skilled		7,631	943	3,625	81	41	644	159	423	13,547
Preparatory		3,390	7,674	300	1,193	804	326	18	253	13,958
Adult education		—	—	—	—	—	—	—	—	—
Total	*1980*	*27,216*	*14,158*	*6,261*	*2,118*	*4,963*	*1,604*	*364*	*935*	*57,619*
	1979	22,128	13,616	4,817	1,561	4,552	1,464	246	870	49,254
					PART-TIME ENROLMENTS(*b*)					
Professional		1,109	134	169	156	103	32	12	12	1,727
Para-professional		49,825	21,797	6,733	26,385	32,116	2,936	642	3,307	143,741
Trades		53,297	45,146	15,156	8,622	16,145	5,286	912	2,197	146,761
Other skilled		93,349	34,787	10,422	27,188	9,277	4,614	2,379	6,452	188,468
Preparatory		22,363	36,586	6,342	23,764	5,428	1,452	1,840	2,627	100,402
Adult education		23,306	57,859	55,624	52,053	63,607	18,270	6,278	2,457	279,454
Total	*1980*	*243,249*	*196,309*	*94,446*	*138,168*	*126,676*	*32,590*	*12,063*	*17,052*	*860,553*
	1979	234,892	173,871	77,697	133,417	124,928	31,873	10,126	15,669	802,473
					EXTERNAL ENROLMENTS					
Professional		512	—	—	183	—	—	—	—	695
Para-professional		5,762	4,945	3,094	3,523	10,770	661	38	—	28,793
Trades		1,273	232	831	322	3,103	—	—	—	5,761
Other skilled		6,727	1,665	2,194	1,175	2,311	—	5	—	14,077
Preparatory		4,430	1,725	2,399	2,621	2,082	519	—	—	13,776
Adult education		1,286	12	99	217	374	—	—	—	1,988
Total	*1980*	*19,990*	*8,579*	*8,617*	*8,041*	*18,640*	*1,180*	*43*	—	*65,090*
	1979	17,997	7,913	9,274	7,832	15,292	1,531	177	—	60,016
					TOTAL ENROLMENTS					
Professional		1,643	301	219	339	125	38	57	12	2,734
Para-professional		68,206	31,011	10,469	30,636	46,486	4,128	789	3,550	195,275
Trades		58,124	46,483	17,631	9,060	19,744	5,383	945	2,213	159,583
Other skilled		107,707	37,395	16,241	28,444	11,629	5,258	2,543	6,875	216,092
Preparatory		30,183	45,985	9,041	27,578	8,314	2,297	1,858	2,880	128,136
Adult education		24,592	57,871	55,723	52,270	63,981	18,270	6,278	2,457	281,442
Total	**1980**	**290,455**	**219,046**	**109,324**	**148,327**	**150,279**	**35,374**	**12,470**	**17,987**	**983,262**
	1979	275,017	195,400	91,788	142,810	144,772	34,868	10,549	16,539	911,743

(*a*) Total enrolments registered during the year up to 31 October. These data refer to numbers of enrolments, not students. (*b*) An enrolment is full-time when annual class attendance amounts to 540 hours or more over the teaching year and part-time when less than 540 hours.

NOTE: Data have been revised to include enrolments at agricultural authorities colleges and colleges of advanced education offering TAFE activities.

TECHNICAL AND FURTHER EDUCATION: ENROLMENTS (*a*) BY TYPE OF ENROLMENT AND FIELD OF STUDY, 1980

Field of study	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
FULL-TIME ENROLMENTS(*b*)									
Applied science	563	851	86	2	374	15	24	66	1,981
Art and design	1,587	1,360	408	171	740	51	–	52	4,369
Building	1,429	737	1,460	51	319	100	67	23	4,186
Business studies	10,672	3,356	2,470	207	1,658	735	67	423	19,588
Engineering	5,697	2,928	109	324	596	137	54	59	9,904
Rural and horticultural	467	229	573	60	100	–	7	–	1,436
Music	–	41	31	19	22	–	–	–	113
Para-medical	249	7	–	11	48	–	–	–	315
Service industries	3,160	1,692	234	75	427	227	12	82	5,909
General studies	3,392	2,957	890	1,198	679	339	133	230	9,818
Total	*27,216*	*14,158*	*6,261*	*2,118*	*4,963*	*1,604*	*364*	*935*	*57,619*
PART-TIME ENROLMENTS(*b*)									
Applied science	2,334	2,124	1,076	756	2,213	678	244	297	9,722
Art and design	14,654	11,928	21,926	19,412	6,455	5,254	1,692	1,086	82,407
Building	17,140	22,777	8,172	10,259	5,500	3,320	756	882	68,806
Business studies	54,761	22,011	9,926	19,717	15,926	2,794	1,848	4,185	131,168
Engineering	59,020	45,529	20,244	19,143	17,461	5,401	1,386	2,997	171,181
Rural and horticultural	9,507	27,590	1,887	5,789	774	620	542	1,190	47,899
Music	53	1,720	1,173	3,197	228	881	1,146	432	8,830
Para-medical	2,188	723	612	375	218	125	98	30	4,369
Service industries	55,047	30,538	13,165	33,692	7,741	10,118	1,802	3,384	155,487
General studies	28,545	31,369	16,265	25,828	70,160	3,399	2,549	2,569	180,684
Total	*243,249*	*196,309*	*94,446*	*138,168*	*126,676*	*32,590*	*12,063*	*17,052*	*860,553*
EXTERNAL ENROLMENTS									
Applied science	52	195	16	–	922	–	–	–	1,185
Art and design	841	–	–	317	476	–	–	–	1,634
Building	547	443	559	177	721	–	–	–	2,447
Business studies	6,764	4,207	1,609	2,645	5,061	458	30	–	20,774
Engineering	3,390	1,082	2,205	561	4,699	–	–	–	11,937
Rural and horticultural	2,368	438	860	952	1,058	79	8	–	5,763
Music	–	–	–	17	–	–	–	–	17
Para-medical	314	–	234	34	171	66	–	–	819
Service industries	1,284	501	666	296	781	–	5	–	3,533
General studies	4,430	1,713	2,468	3,042	4,751	577	–	–	16,981
Total	*19,990*	*8,579*	*8,617*	*8,041*	*18,640*	*1,180*	*43*	–	*65,090*
TOTAL ENROLMENTS									
Applied science	2,949	3,170	1,178	758	3,509	693	268	363	12,888
Art and design	17,082	13,288	22,334	19,900	7,671	5,305	1,692	1,138	88,410
Building	19,116	23,957	10,191	10,487	6,540	3,420	823	905	75,439
Business studies	72,197	29,574	14,005	22,569	22,645	3,987	1,945	4,608	171,530
Engineering	68,107	49,539	22,558	20,028	22,756	5,538	1,440	3,056	193,022
Rural and horticultural	12,342	28,257	3,320	6,801	1,932	699	557	1,190	55,098
Music	53	1,761	1,204	3,233	250	881	1,146	432	8,960
Para-medical	2,751	730	846	420	437	191	98	30	5,503
Service industries	59,491	32,731	14,065	34,063	8,949	10,345	1,819	3,466	164,929
General studies	36,367	36,039	19,623	30,068	75,590	4,315	2,682	2,799	207,483
Total—1980	**290,455**	**219,046**	**109,324**	**148,327**	**150,279**	**35,374**	**12,470**	**17,987**	**983,262**
1979	275,017	195,400	91,788	142,810	144,772	34,868	10,549	16,539	911,743

(*a*) These data refer to numbers of enrolments, not students. (*b*) An enrolment is full-time when annual class attendance amounts to 540 hours or more over the teaching year and part-time when less than 540 hours.

NOTE: Data have been revised to include enrolments at agricultural authorities colleges and colleges of advanced education offering TAFE activities.

TECHNICAL AND FURTHER EDUCATION: TEACHING EFFORT (*a*) BY TYPE OF APPOINTMENT AND STREAM, 1980
('000 hours)

Stream	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
FULL-TIME STAFF(*b*)									
Professional	14.8	17.5	28.4	0.5	8.2	0.1	6.1	0.2	75.8
Para-professional	711.4	458.2	59.2	247.3	325.1	48.3	13.3	49.5	1,912.3
Trades	1,089.3	1,123.1	451.8	281.7	285.4	126.7	25.3	35.2	3,418.5
Other skilled	493.3	204.9	204.3	38.5	5.8	43.0	13.3	28.9	1,032.0
Preparatory	206.6	484.0	58.0	80.2	57.4	10.5	3.4	21.8	921.9
Adult education	28.9	77.3	15.5	15.4	18.9	1.0	2.1	7.4	166.5
Total	*2,544.3*	*2,365.0*	*817.2*	*663.6*	*700.8*	*229.6*	*63.5*	*143.0*	*7,527.0*
PART-TIME STAFF(*c*)									
Professional	7.0	1.7	5.0	0.7	2.8	1.1	–	0.1	18.4
Para-professional	441.1	100.5	61.3	60.7	130.8	43.5	3.3	28.4	869.6
Trades	333.0	42.3	23.3	9.2	59.4	34.5	3.2	11.5	516.4
Other skilled	385.8	52.4	62.8	32.7	11.2	16.8	5.8	20.7	588.2
Preparatory	165.5	180.7	45.7	104.1	32.1	15.8	8.4	38.4	590.7
Adult education	85.9	58.2	75.9	115.9	101.4	36.9	10.1	5.7	490.0
Total	*1,418.3*	*435.8*	*274.0*	*323.3*	*337.7*	*148.6*	*30.8*	*104.8*	*3,073.3*
ALL TEACHING STAFF									
Professional	21.8	19.2	33.4	1.2	11.0	1.2	6.1	0.3	94.2
Para-professional	1,152.5	558.7	120.5	308.0	455.9	91.8	16.6	77.9	2,781.9
Trades	1,422.3	1,165.4	475.1	290.9	344.8	161.2	28.7	46.7	3,935.1
Other skilled	879.1	257.3	267.1	71.2	17.0	59.8	19.1	49.6	1,620.2
Preparatory	372.1	664.7	103.7	184.3	89.5	26.3	11.6	60.2	1,512.4
Adult education	114.8	135.5	91.4	131.3	120.3	37.9	12.2	13.1	656.5
Total—1980	**3,962.6**	**2,800.8**	**1,091.2**	**986.9**	**1,038.5**	**378.2**	**94.3**	**247.8**	**10,600.3**
1979	3,621.7	2,613.4	938.8	1,096.1	1,025.1	343.1	87.5	223.0	9,948.7

(*a*) Hours of classroom duty performed by teachers during the teaching year (excluding all non-teaching staff). (*b*) All teaching staff employed full-time by the relevant authority or institution, including 'multi-sector' staff whose duties extend to teaching areas other than TAFE. (*c*) Includes hours worked on an overtime basis by full-time staff.

NOTE: Data have been revised to include staff at agricultural authorities colleges and colleges of advanced education offering TAFE activities.

Colleges of Advanced Education

The following statistics refer to operative institutions listed in the appropriate States Grants (Tertiary Education Assistance) Acts as colleges of advanced education, and the Canberra College of Advanced Education. These tables show details of students commencing advanced level courses, the number of students and teaching staff in 1981 and the number of students who completed advanced level courses in 1980. The reference date for these statistics is 30 April except for students who completed advanced level courses for whom the reference period is the twelve months ended 31 December. For more detailed statistics, *see* the annual publication *Colleges of Advanced Education, Australia* (4206.0).

COLLEGES OF ADVANCED EDUCATION: STUDENTS COMMENCING BY COURSE LEVEL AND FIELD OF STUDY, 1981(*a*)

Field of study	*Master degree*	*Graduate diploma*	*Bachelor degree*	*Diploma*	*Associate diploma*	*Total (b)*		
						Males	*Females*	*Persons*
Agriculture	—	127	204	84	587	703	299	1,002
Applied sciences	91	1,163	3,770	451	815	4,080	2,210	6,290
Art and design	—	656	1,962	993	657	1,700	2,568	4,268
Building, surveying and architecture	9	153	1,239	190	193	1,398	386	1,784
Commercial and business studies	170	2,837	9,209	441	1,607	9,857	4,407	14,264
Engineering and technology	24	341	3,211	78	948	4,453	149	4,602
Liberal studies	9	3,616	5,957	808	1,697	4,084	8,003	12,087
Music	—	162	398	99	107	330	436	766
Para-medical	44	444	1,842	1,329	513	1,066	3,106	4,172
Teacher education	21	2,609	5,496	9,128	63	5,986	11,331	17,317
Total—1981 (b)	**368**	**12,108**	**33,288**	**13,601**	**7,187**	**34,600**	**33,789**	**68,389**
1980	291	11,284	30,965	14,337	6,880	31,660	32,097	63,757
1979	271	10,526	29,356	16,312	5,971	30,686	31,750	62,436

(*a*) Excludes students commencing in second semester. (*b*) Components do not add to totals because totals include miscellaneous students who cannot be classified by course level.

COLLEGES OF ADVANCED EDUCATION: STUDENTS WHO COMPLETED COURSES BY FIELD OF STUDY AND COURSE LEVEL, 1980

Field of study	*Master degree*	*Graduate diploma*	*Bachelor degree*	*Diploma*	*Associate diploma*	*Total*		
						Males	*Females*	*Persons*
Agriculture	—	88	63	149	269	415	154	569
Applied sciences	20	430	1,425	261	218	1,466	888	2,354
Art and design	—	379	843	923	146	959	1,332	2,291
Building, surveying and architecture	—	72	451	122	71	600	116	716
Commercial and business studies	33	1,363	2,333	587	450	3,453	1,313	4,766
Engineering and technology	5	91	866	154	198	1,290	24	1,314
Liberal studies	—	1,472	1,854	544	567	1,559	2,878	4,437
Music	—	75	100	164	16	132	223	355
Para-medical	12	218	1,362	855	516	731	2,232	2,963
Teacher education	6	2,060	2,578	9,855	13	4,455	10,057	14,512
Total—1980	**76**	**6,248**	**11,875**	**13,614**	**2,464**	**15,060**	**19,217**	**34,277**
1979	76	6,155	10,521	15 124	2,037	14,811	19,102	33,913
1978	47	5,528	8,763	17,228	1,697	14,754	18,509	33,263

COLLEGES OF ADVANCED EDUCATION: STUDENTS BY TYPE OF ENROLMENT, COURSE LEVEL AND FIELD OF STUDY, 1981

Field of study	Master degree	Graduate diploma	Bachelor degree	Diploma	Associate diploma	Total Males	Total Females	Total Persons
FULL-TIME STUDENTS								
Agriculture	–	65	475	367	885	1,283	509	1,792
Applied sciences	82	299	5,968	763	571	4,467	3,216	7,683
Art and design	–	399	4,125	3,037	519	3,180	4,900	8,080
Building, surveying and architecture	3	28	1,782	71	137	1,512	509	2,021
Commercial and business studies	29	669	9,706	854	716	7,070	4,904	11,974
Engineering and technology	24	9	5,359	152	432	5,817	159	5,976
Liberal studies	12	930	7,312	1,615	1,307	3,968	7,208	11,176
Music	–	99	818	375	92	583	801	1,384
Para-medical	31	177	3,921	1,778	558	1,596	4,869	6,465
Teacher education	6	1,045	2,002	17,016	12	4,381	15,700	20,081
Total—1981 (a)	*187*	*3,720*	*41,468*	*26,028*	*5,229*	*33,879*	*42,806*	*76,685*
1980	216	3,924	38,569	30,537	4,973	34,382	43,837	78,219
1979	176	4,572	36,784	36,030	4,563	36,116	46,009	82,125
PART-TIME—INTERNAL STUDENTS								
Agriculture	–	17	31	15	64	114	13	127
Applied sciences	227	1,731	3,227	400	522	4,561	1,546	6,107
Art and design	–	539	678	338	794	956	1,393	2,349
Building, surveying and architecture	12	371	1,479	652	179	2,326	367	2,693
Commercial and business studies	375	3,115	13,852	691	1,693	15,669	4,057	19,726
Engineering and technology	94	590	2,875	153	971	4,601	82	4,683
Liberal studies	33	3,517	5,185	313	1,534	3,628	6,954	10,582
Music	–	153	239	28	81	150	351	501
Para-medical	95	513	1,425	616	277	900	2,026	2,926
Teacher education	63	2,047	6,206	5,215	47	5,476	8,102	13,578
Total—1981 (a)	*899*	*12,593*	*35,197*	*8,421*	*6,162*	*39,157*	*25,756*	*64,913*
1980	780	11,021	34,370	8,735	5,986	36,716	24,176	60,892
1979	655	8,954	30,868	10,575	5,316	34,656	21,712	56,368
EXTERNAL STUDENTS								
Agriculture	–	119	17	2	305	286	157	443
Applied sciences	38	57	1,006	23	558	1,190	492	1,682
Art and design	–	35	209	16	1	236	25	261
Building, surveying and architecture	2	40	23	31	197	276	17	293
Commercial and business studies	15	1,002	3,537	317	1,353	4,928	1,296	6,224
Engineering and technology	1	176	92	10	592	857	14	871
Liberal studies	–	1,535	2,241	187	476	1,413	3,026	4,439
Music	–	–	3	–	–	2	1	3
Para-medical	–	2	87	273	388	179	571	750
Teacher education	–	1,196	4,025	2,603	55	2,649	5,230	7,879
Total—1981 (a)	*56*	*4,162*	*11,240*	*3,462*	*3,925*	*12,403*	*11,066*	*23,469*
1980	48	3,457	9,525	3,889	3,436	10,603	9,752	20,355
1979	43	2,635	7,698	4,252	2,546	9,028	8,146	17,174
ALL STUDENTS								
Agriculture	–	201	523	384	1,254	1,683	679	2,362
Applied sciences	347	2,087	10,201	1,186	1,651	10,218	5,254	15,472
Art and design	–	973	5,012	3,391	1,314	4,372	6,318	10,690
Building, surveying and architecture	17	439	3,284	754	513	4,114	893	5,007
Commercial and business studies	419	4,786	27,095	1,862	3,762	27,667	10,257	37,924
Engineering and technology	119	775	8,326	315	1,995	11,275	255	11,530
Liberal studies	45	5,982	14,738	2,115	3,317	9,009	17,188	26,197
Music	–	252	1,060	403	173	735	1,153	1,888
Para-medical	126	692	5,433	2,667	1,223	2,675	7,466	10,141
Teacher education	69	4,288	12,233	24,834	114	12,506	29,032	41,538
Total—1981 (a)	**1,142**	**20,475**	**87,905**	**37,911**	**15,316**	**85,439**	**79,628**	**165,067**
1980	1,044	18,402	82,464	43,161	14,395	81,701	77,765	159,466
1979	874	16,161	75,350	50,857	12,425	79,800	75,867	155,667

(*a*) Components do not add to totals because totals include miscellaneous students who cannot be classified by course level.

PERCENTAGE CHANGES IN ENROLMENTS BETWEEN 1979 AND 1981

	Males	*Females*	*Persons*
Stage—			
Commencing course	+12.8	+6.4	+9.5
Completing course the previous year	+2.1	+3.8	+3.0
Status—			
Full-time	–6.2	–7.0	–6.6
Part-time—Internal	+13.0	+18.6	+15.2
External	+37.4	+35.8	+36.7
All students	**+7.1**	**+5.0**	**+6.0**

The percentage changes show that there has been a dramatic increase in the numbers of part-time internal and external students over the period 1979 to 1981, while the number of full-time students have declined.

Overall the number of students has increased by 6.0 per cent over this period despite the decline in the number of full-time students—especially noteworthy has been the growth in external students which, by 1981, comprised 14.2 per cent of total students, compared to 11 per cent in 1979. A substantial growth also occurred in commencing male student numbers which between 1979 and 1981 increased by 12.8 per cent, compared with an increase of 0.8 per cent between 1978 and 1980.

COLLEGES OF ADVANCED EDUCATION: TEACHING STAFF BY FIELD OF TEACHING STATES AND A.C.T., 1981

Teaching effort in approved courses of full-time and part-time staff, expressed in equivalent full-time units and rounded to whole numbers.

Field of teaching	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*A.C.T.*	*Australia*
				FULL-TIME STAFF				
Agriculture	65	-	32	33	18	-	-	148
Applied sciences	354	558	224	131	128	14	91	1,500
Art and design	232	348	47	98	20	6	-	750
Building, surveying and architecture	24	61	32	31	31	7	21	207
Commercial and business studies	240	441	166	51	118	17	47	1,079
Engineering and technology	63	338	117	81	66	8	-	672
Liberal studies	334	681	205	192	190	26	50	1,677
Music	98	43	17	-	9	4	-	169
Para-medical	79	176	41	84	110	-	-	490
Teacher education	589	508	273	253	241	42	46	1,953
Not classifiable	61	24	-	8	42	-	-	135
Total—1981	*2,138*	*3,178*	*1,154*	*960*	*973*	*123*	*255*	*8,781*
1980	2,124	3,229	1,209	977	940	196	252	8,927
1979	2,145	3,255	1,179	940	899	204	241	8,864
				PART-TIME STAFF				
Agriculture	2	-	-	2	-	-	-	3
Applied sciences	38	79	18	9	15	-	19	177
Art and design	53	75	9	9	3	1	-	150
Building, surveying and architecture	6	25	17	6	6	1	3	63
Commercial and business studies	29	54	41	15	17	1	11	169
Engineering and technology	21	23	23	4	12	-	-	83
Liberal studies	33	75	13	23	18	3	9	173
Music	43	17	16	-	-	1	-	78
Para-medical	18	34	9	40	18	-	-	119
Teacher education	27	47	22	26	16	2	9	149
Not classifiable	8	23	-	-	18	-	-	49
Total—1981	*278*	*451*	*167*	*133*	*124*	*9*	*52*	*1,213*
1980	296	417	170	138	186	16	90	1,312
1979	262	452	180	131	179	31	77	1,312
				ALL STAFF				
Agriculture	67	-	32	34	18	-	-	151
Applied sciences	392	636	242	139	143	14	110	1,677
Art and design	284	423	56	106	23	7	-	901
Building, surveying and architecture	30	86	48	37	37	8	24	270
Commercial and business studies	269	494	207	66	136	18	58	1,248
Engineering and technology	84	361	140	85	78	8	-	755
Liberal studies	367	756	218	215	207	29	59	1,850
Music	141	60	33	-	9	5	-	247
Para-medical	97	210	50	124	128	-	-	608
Teacher education	617	555	294	280	258	44	55	2,102
Not classifiable	69	47	-	8	60	-	-	184
Total—1981	**2,416**	**3,628**	**1,321**	**1,093**	**1,097**	**132**	**307**	**9,995**
1980	2,420	3,646	1,379	1,114	1,126	212	342	10,239
1979	2,407	3,707	1,358	1,072	1,078	235	318	10,175

The above tables indicate that total staff at colleges of advanced education decreased by about 1.8 per cent over the period 1979 to 1981 inclusive. Full-time staff decreased by only 0.9 per cent, while part-time staff decreased by 7.5 per cent after showing an increase of 14.6 per cent over the period 1978 to 1980 inclusive.

Nurse Education and Training

After consultations between Commonwealth and State Ministers for Education and Health, and consideration of responses from interested bodies, the Commonwealth Government completed its review of arrangements for nurse education and training, following the *Report of the Committee of Enquiry into Nurse Education and Training* and decided to support the qualitative improvement of nurse education and training through the upgrading and rationalisation of hospital-based nursing schools and the development of co-operative arrangements between hospital schools and tertiary institutions including the accreditation of the awards of hospital-based schools where appropriate.

Opportunities are available for nurses with appropriate qualifications and experience to undertake post-basic courses, including degree level courses, in colleges of advanced education.

Basic nursing education will continue to be provided by a variety of arrangements with most nurses and all nurses aides being trained in hospital-based schools of nursing.

Some nurses in training are undertaking pilot courses at colleges of advanced education. Evaluation of these courses at present levels of enrolment will continue.

Universities

The following university statistics provide details of the total number of students enrolled in university courses, the teaching staff engaged, and the number of students commencing and completing courses. The reference date for the statistics is 30 April except for students completing courses for whom the reference date is the year ended 30 June. For more detailed statistics, *see* the annual publication *University Statistics, Australia*, (4208.0).

UNIVERSITIES: STUDENTS COMMENCING, 1981

	Doctorate	*Master's degree*	*Bachelor degree*	*Non-degree*	*Total*		
					Males	*Females*	*Persons*
New South Wales	422	2,480	15,661	3,329	12,487	9,405	21,892
Victoria	279	1,363	11,279	2,147	7,921	7,147	15,068
Queensland	218	597	5,812	769	3,933	3,463	7,396
South Australia	57	264	3,056	729	2,339	1,767	4,106
Western Australia	98	338	3,707	710	2,555	2,298	4,853
Tasmania	40	220	1,508	591	1,215	1,144	2,359
Australian Capital Territory	141	131	1,525	319	1,197	919	2,116
Australia—1981	**1,255**	**5,393**	**42,548**	**8,594**	**31,647**	**26,143**	**57,790**
1980	1,049	4,534	42,779	8,174	31,208	25,328	56,536
1979	1,099	4,535	42,158	7,972	31,489	24,275	55,764

UNIVERSITIES: FULL-TIME AND PART-TIME STUDENTS BY SEX AND COURSE LEVEL, 1979 TO 1981

	Males			*Females*		
Course level	*1979*	*1980*	*1981*	*1979*	*1980*	*1981*
FULL-TIME STUDENTS						
Doctorate	2,729	2,775	2,850	857	932	986
Master's degree	2,235	2,307	2,397	1,045	1,120	1,191
Bachelor degree	52,849	52,245	51,885	35,704	36,210	37,257
Non-degree	1,769	1,596	1,594	1,892	1,808	1,764
Total	*59,582*	*58,923*	*58,726*	*39,498*	*40,070*	*41,198*
PART-TIME STUDENTS						
Doctorate	1,823	1,902	1,976	515	541	566
Master's degree	7,741	7,823	8,220	2,957	3,174	3,635
Bachelor degree	21,497	21,464	21,443	19,172	20,745	21,787
Non-degree	4,611	4,833	5,049	3,414	3,681	4,011
Total	*35,672*	*36,022*	*36,688*	*26,058*	*28,141*	*29,999*
ALL STUDENTS						
Doctorate	4,552	4,677	4,826	1,372	1,473	1,552
Master's degree	9,976	10,130	10,617	4,002	4,294	4,826
Bachelor degree	74,346	73,709	73,328	54,876	56,955	59,044
Non-degree	6,380	6,429	6,643	5,306	5,489	5,775
Total	**95,254**	**94,945**	**95,414**	**65,556**	**68,211**	**71,197**

UNIVERSITIES: STUDENTS BY TYPE OF ENROLMENT AND FIELD OF STUDY, 1981

Field of study	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Australia Males	Australia Females	Australia Persons
FULL-TIME STUDENTS										
Humanities	8,105	6,487	2,355	1,672	1,320	577	1,259	8,297	13,478	21,775
Fine arts	43	331	70	174	65	306	–	385	604	989
Social and behavioural sciences	1,793	1,678	678	634	794	61	93	2,010	3,721	5,731
Law	2,993	1,864	632	624	367	251	545	4,530	2,746	7,276
Education	1,587	1,047	379	241	442	595	3	1,480	2,814	4,294
Economics, commerce, government	4,701	3,494	1,135	765	908	272	504	8,104	3,675	11,779
Medicine	3,627	2,708	2,322	1,105	784	354	27	6,561	4,366	10,927
Dentistry	585	258	296	218	123	–	–	1,123	357	1,480
Natural sciences	5,667	6,469	2,412	1,990	1,633	541	880	12,607	6,985	19,592
Engineering, technology	4,824	2,099	1,052	622	634	168	5	8,844	560	9,404
Architecture, building	1,512	656	217	208	110	–	2	2,050	655	2,705
Agriculture, forestry	801	586	261	250	229	60	241	1,825	603	2,428
Veterinary science	399	264	423	–	259	–	–	792	553	1,345
Not stated	153	5	9	–	22	4	6	118	81	199
Total—1981	*36,790*	*27,946*	*12,241*	*8,503*	*7,690*	*3,189*	*3,565*	*58,726*	*41,198*	*99,924*
1980	37,085	27,815	12,012	8,451	7,691	2,344	3,595	58,923	40,070	98,993
1979	37,922	27,229	11,770	8,429	7,695	2,377	3,658	59,582	39,498	99,080
PART-TIME STUDENTS										
Humanities	8,220	5,477	4,612	1,295	1,577	482	1,272	8,354	14,581	22,935
Fine arts	31	100	31	50	56	137	–	169	236	405
Social and behavioural sciences	2,291	2,315	403	575	558	40	38	2,661	3,559	6,220
Law	1,215	969	473	138	37	68	203	2,142	961	3,103
Education	2,122	3,179	1,488	355	735	535	2	3,955	4,461	8,416
Economics, commerce, government	5,030	1,881	1,508	800	734	281	518	8,391	2,361	10,752
Medicine	292	261	131	233	69	4	–	597	393	990
Dentistry	69	30	19	39	12	–	–	147	22	169
Natural sciences	3,100	1,394	1,052	630	651	284	331	5,157	2,285	7,442
Engineering, technology	2,353	377	212	110	166	44	–	3,132	130	3,262
Architecture, building	753	177	79	23	14	–	–	846	200	1,046
Agriculture, forestry	196	75	100	58	58	13	21	428	93	521
Veterinary science	23	28	42	–	17	–	–	89	21	110
Not stated	1,047	10	1	2	246	5	5	620	696	1,316
Total—1981	*26,742*	*16,273*	*10,151*	*4,308*	*4,930*	*1,893*	*2,390*	*36,688*	*29,999*	*66,687*
1980	25,361	16,064	10,237	4,226	4,585	1,173	2,517	36,022	28,141	64,163
1979	23,926	15,736	9,951	4,411	4,305	1,058	2,343	35,672	26,058	61,730
TOTAL STUDENTS										
Humanities	16,325	11,964	6,967	2,967	2,897	1,059	2,531	16,651	28,059	44,710
Fine arts	74	431	101	224	121	443	–	554	840	1,394
Social and behavioural sciences	4,084	3,993	1,081	1,209	1,352	101	131	4,671	7,280	11,951
Law	4,208	2,833	1,105	762	404	319	748	6,672	3,707	10,379
Education	3,709	4,226	1,867	596	1,177	1,130	5	5,435	7,275	12,710
Economics, commerce, government	9,731	5,375	2,643	1,565	1,642	553	1,022	16,495	6,036	22,531
Medicine	3,919	2,969	2,453	1,338	853	358	27	7,158	4,759	11,917
Dentistry	654	288	315	257	135	–	–	1,270	379	1,649
Natural sciences	8,767	7,863	3,464	2,620	2,284	825	1,211	17,764	9,270	27,034
Engineering, technology	7,177	2,476	1,264	732	800	212	5	11,976	690	12,666
Architecture, building	2,265	833	296	231	124	–	2	2,896	855	3,751
Agriculture, forestry	997	661	361	308	287	73	262	2,253	696	2,949
Veterinary science	422	292	465	–	276	–	–	881	574	1,455
Not stated	1,200	15	10	2	268	9	11	738	777	1,515
Total—1981	**63,532**	**44,219**	**22,392**	**12,811**	**12,620**	**5,082**	**5,955**	**95,414**	**71,197**	**166,611**
1980	62,446	43,879	22,249	12,677	12,276	3,517	6,112	94,945	68,211	163,156
1979	61,848	42,965	21,721	12,840	12,000	3,435	6,001	95,254	65,556	160,810

UNIVERSITIES: TEACHING STAFF(*a*), BY FIELD OF TEACHING, 1981

Field of teaching	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*A.C.T.*	*Aust.*
FULL-TIME STAFF								
Humanities	718	479	238	159	121	44	138	1,896
Fine arts	52	74	31	35	9	37	3	239
Social and behavioural sciences	393	190	111	77	92	35	28	924
Law	138	148	38	31	14	13	34	415
Education	250	199	77	41	46	45	—	658
Economics, commerce, government	526	277	140	88	69	34	50	1,183
Medicine	317	258	251	129	83	47	15	1,100
Dentistry	42	25	37	19	13	—	—	136
Natural sciences	947	627	378	262	192	88	110	2,604
Engineering, technology	432	200	103	50	45	22	—	852
Architecture, building	116	39	31	15	7	—	—	209
Agriculture, forestry	85	55	22	38	22	9	19	249
Veterinary science	48	38	71	3	44	—	—	203
Other(*b*)	23	—	2	—	—	—	—	25
Total—1981	*4,086*	*2,608*	*1,528*	*945*	*755*	*373*	*396*	*10,692*
1980	4,120	2,626	1,525	960	783	301	407	10,722
1979	4,146	2,620	1,531	970	805	301	419	10,790
PART-TIME STAFF (full-time equivalent units) (c)								
Humanities	46	19	7	4	6	3	7	91
Fine arts	6	14	2	9	3	1	—	35
Social and behavioural sciences	42	25	15	5	9	1	1	98
Law	12	12	4	2	3	—	6	38
Education	40	23	2	2	5	3	—	74
Economics, commerce, government	37	23	6	5	5	1	2	80
Medicine	85	105	42	7	19	2	—	259
Dentistry	18	14	5	16	8	—	—	61
Natural sciences	129	111	29	48	30	2	13	362
Engineering and technology	40	20	5	7	5	1	—	78
Architecture, building	30	11	2	4	3	—	—	51
Agriculture, forestry	7	6	1	—	2	—	—	17
Veterinary science	3	2	2	—	1	—	—	8
Other(*b*)	11	2	4	—	—	—	—	17
Total—1981	*507*	*385*	*128*	*109*	*99*	*13*	*29*	*1,269*
1980	461	346	119	109	95	11	32	1,173
1979	469	340	123	106	93	14	30	1,175
ALL STAFF (full-time equivalent units) (*c*)								
Humanities	764	498	245	163	127	47	145	1,987
Fine arts	58	88	33	44	12	38	3	274
Social and behavioural sciences	435	215	126	82	101	36	29	1,022
Law	150	160	42	33	17	13	40	453
Education	290	222	79	43	51	48	—	732
Economics, commerce, government	563	300	146	93	74	35	52	1,263
Medicine	402	363	293	136	102	49	15	1,359
Dentistry	60	39	42	35	21	—	—	197
Natural sciences	1,076	738	407	310	222	90	123	2,966
Engineering and technology	472	220	108	57	50	23	—	930
Architecture, building	146	50	33	19	10	—	—	260
Agriculture, forestry	92	61	23	38	24	9	19	266
Veterinary science	51	40	73	3	45	—	—	211
Other(*b*)	34	2	6	—	—	—	—	42
Total—1981	**4,593**	**2,993**	**1,656**	**1,054**	**854**	**386**	**425**	**11,961**
1980	4,581	2,972	1,644	1,069	878	312	439	11,895
1979	4,615	2,960	1,654	1,076	897	315	448	11,965

(*a*) Excludes research only staff. (*b*) Includes staff teaching in the field of general studies and also a small number of staff unallocated to field of teaching. (*c*) The conversion of part-time staff to equivalent full-time units is made on the following basis: lecturer—250 hours per annum; and tutor/demonstrator—700 hours per annum.

The above tables indicate that total teaching staff at universities decreased slightly from 1979 to 1981. Full-time staff decreased over this period by 0.9 per cent while the number of part-time staff increased by 8.0 per cent.

UNIVERSITIES: STUDENTS COMPLETING DEGREE AND POST-GRADUATE DIPLOMA COURSES BY FIELD OF STUDY, YEAR ENDED 30 JUNE 1981

	Degrees				
Field of study	*Doctorate and Ph.D.*	*Master*	*Bachelor*	*Post graduate diploma*	*Total*
Humanities	119	356	7,547	25	8,047
Fine arts	5	21	140	11	177
Social and behavioural sciences	75	124	1,380	221	1,800
Law	7	72	1,580	84	1,743
Education	30	415	1,371	2,234	4,050
Economics, commerce, government	42	452	3,381	115	3,990
Medicine	101	41	1,864	81	2,087
Dentistry	6	28	286	4	324
Natural sciences	396	346	5,397	245	6,384
Engineering, technology	103	219	1,437	15	1,774
Architecture, building	10	73	414	20	517
Agriculture, forestry	37	77	429	29	572
Veterinary science	9	25	250	6	290
Not stated	—	7	6	24	37
Total—1981	**940**	**2,256**	**25,482**	**3,114**	**31,792**
1980	887	2,094	25,859	3,287	32,127
1979	927	2,144	26,155	3,565	32,791

STUDENT ASSISTANCE SCHEMES FUNDED BY THE DEPARTMENT OF EDUCATION

Scheme	*Number of students 1981*	*Expenditure ($'000) 1980–1981*
Postgraduate Awards(*a*)	1,867	8,712
Tertiary Education Assistance(*b*) (*c*)	91,096	163,444
Secondary Allowances(*b*)	25,751	12,718
Adult Secondary Education Assistance(*b*)	2,127	4,340
Aboriginal Secondary Grants(*b*)	18,718	17,425
Aboriginal Study Grants(*d*)	11,502	10,111
Aboriginal Study Grants—Overseas(*b*)	10	85
Assistance for Isolated Children(*b*)	19,213	14,487
Non-State Tertiary Institutions	n.a.	219
Total—1981	**170,284**	**231,541**
1980	150,604	215,257
1979	146,570	215,705

(*a*) For this scheme, the 'number of students' represents students receiving benefits at 30 June each year. (*b*) For this scheme the 'number of students' represents students receiving benefits at some time during the year. (*c*) Includes Commonwealth Teaching Service Scholarships, which are being phased out. (*d*) Preliminary—subject to revision.

Overseas students

Information on overseas students in Australia is given in Chapter 5, International Relations.

Expenditure on education

The aim of this section is to provide information on the extent and direction of both government and private expenditure on education in recent years. The figures have been compiled in accordance with national accounting concepts. For explanation of these concepts, reference should be made to *Australian National Accounts: Concepts, Sources and Methods* (5216.0), and also to *Commonwealth Government Finance, Australia* (5502.0), and *State and Local Government Finance, Australia* (5504.0), from which figures included in this section have also been taken.

The emphasis given in this section to the outlays of the public sector reflects in part the relative importance of that sector in the provision of education services, but it is also a reflection of the lack of detailed information relating to educational activities in the private sector. Information is given, however, to show the order of magnitude of private sector spending, and also to show aggregate supply of education services and facilities.

Total expenditure on education

Total expenditure on education can be measured by adding together the final expenditures of the public and private sectors.

The figure derived for total expenditure on education can be regarded as a measure of the aggregate supply of education services and facilities and can therefore be related to the supply of goods and services available from domestic production (i.e. gross domestic product). Final consumption expenditure and capital expenditure on education, by sector, can also be related to gross domestic product. These relationships are shown in the following table.

AUSTRALIA: EXPENDITURE ON EDUCATION

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
			— $m —			
Public sector—						
Final consumption expenditure	3,425	4,115	4,653	5,063	5,670	6,562
Expenditure on new fixed assets	695	641	717	731	659	648
Final expenditure(1)	*4,120*	*4,756*	*5,370*	*5,794*	*6,329*	*7,210*
Transfer payments and expenditure on existing fixed assets (net)	352	375	392	392	374	385
Outlay	*4,472*	*5,131*	*5,762*	*6,186*	*6,703*	*7,595*
Private sector—						
Final consumption expenditure	218	243	255	272	293	311
Expenditure on new fixed assets	87	68	89	110	101	137
Final expenditure(2)	*305*	*311*	*344*	*382*	*394*	*448*
Total expenditure on education (1) + (2)	**4,425**	**5,067**	**5,714**	**6,176**	**6,723**	**7,658**
Gross domestic product	**72,825**	**83,144**	**90,251**	**102,070**	**114,464**	**131,055**
			— per cent —			
Expenditure on education as percentage of gross domestic product—						
Final consumption expenditure—						
Public	4.7	4.9	5.2	5.0	5.0	5.0
Private	0.3	0.3	0.3	0.3	0.3	0.2
Expenditure on new fixed assets—						
Public	1.0	0.8	0.8	0.7	0.6	0.5
Private	0.1	0.1	0.1	0.1	0.1	0.1
Total expenditure	**6.1**	**6.1**	**6.3**	**6.1**	**5.9**	**5.9**

Private sector

Final expenditure on education by the private sector consists of private final consumption expenditure on education services, and expenditure on new fixed assets—mainly by private non-profit organisations and financed in part by grants from public authorities for private capital purposes. Private final consumption expenditure on education services is an estimate of fees paid by persons to government schools (mainly technical and agricultural colleges), fees and gifts to universities and school fees (other than boarding fees) paid to non-government schools, business colleges, etc. Expenditure on such items as school books, uniforms, etc., and expenditure by parents associations on school equipment is not included, being treated in the Australian National Accounts as private final consumption expenditure on other goods and services (such as clothing, books, household durables,

etc.). Private gross fixed capital expenditure in the field of education is estimated from statistics of the value of work done on new building and major additions to buildings of private educational institutions.

Public sector

The statistics presented here for the public sector relate to those outlays which have been identified as being primarily designed to serve the purposes of 'education', broadly as defined in the United Nations System of National Accounts. Included, therefore, are outlays on administration and regulation of school systems and institutions of higher learning and educational research; on provision, inspection and support of primary and secondary schools, colleges and universities, technical training institutions, schools for the handicapped, adult education facilities, pre-school centres, etc.; on scholarships, etc.; and on subsidiary services such as transportation of school children and fare concessions. Expenditure on school medical and dental services and provision of free milk for school-children are not included, as these are regarded as primarily serving the purpose of health.

The outlays of the public authorities engaged in providing education services or financing their provision by other bodies, public or private, have also been classified according to their economic type: final expenditure on goods and services (i.e. final consumption expenditure, and expenditure on new fixed assets); capital financing items (e.g. net expenditure on existing assets); transfers to the private sector (personal benefit payments, grants for private capital purposes) which become a source of finance for that sector's own final expenditures; and transfers between public authorities (Commonwealth Government grants to the States).

Detailed analyses have not been prepared of the accounts of all public authorities providing or financing education services, but methods of analysis have been adopted which reflect the net effect of the transactions of authorities not fully analysed (such as the State universities). Private non-profit organisations are covered by recording their final consumption expenditure as final expenditure by the public authorities and persons, i.e. the current grants to these organisations by public authorities are treated as public authorities' final expenditure and fees, donations, etc. paid to them by persons are included in private final consumption expenditure. Current outlay of non-profit organisations is therefore covered, being approximately equal to their income from grants and fees. For reasons of practicality, grants for capital purposes by public authorities to private non-profit organisations are treated as transfers, so that the capital expenditure of these organisations is wholly recorded in the private sector.

All public authorities

The outlay on education by all public authorities consists of the final expenditure on goods and services of the Commonwealth and State authorities and transfers by these authorities to the private sector. These figures are shown in the following table, and are related to the total outlay (on all functions) by all public authorities in order to give an indication of the share of government resources devoted to education.

Northern Territory government authorities

On 1 July 1978 the Northern Territory became self-governing with expenditure responsibilities and revenue powers broadly approximating those of a State. However, not all State type functions were fully transferred to the Northern Territory Government on that date. Responsibility for education services was transferred to the Northern Territory Government on 1 July 1979 and Northern Territory outlay is included with the statistics for State and local governments from 1979–80. For earlier years outlay on education in the Northern Territory is included in outlay of the Commonwealth Government.

ALL PUBLIC AUTHORITIES: OUTLAY ON EDUCATION

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
			–$ million–			
Commonwealth authorities—						
Final consumption expenditure	195.1	234.6	256.3	286.9	250.2	284.2
Personal benefit payments	162.5	194.0	212.6	224.9	225.2	244.3
Transfers overseas	–	–	–	–	–	0.2
Grants for private capital purposes	5.5	3.5	4.2	4.0	3.1	3.3
Expenditure on new fixed assets	73.4	62.2	54.2	50.8	33.2	31.6
Expenditure on existing fixed assets (net)	–0.3	–0.5	—	—	0.1	0.1
Grants to States—						
Current	1,133.8	1,390.8	1,517.8	1,592.3	1,771.2	2,046.8
Capital	319.2	327.8	343.1	363.7	325.1	321.2
Total Commonwealth	*1,889.2*	*2,212.3*	*2,388.3*	*2,522.7*	*2,608.1*	*2,931.7*
State authorities—						
Final consumption expenditure	3,222.8	3,872.0	4,388.4	4,766.8	5,409.2	6,265.7
Personal benefit payments	124.1	123.4	120.2	103.5	97.4	96.2
Grants for private capital purposes	33.0	25.4	32.2	40.4	30.1	29.2
Expenditure on new fixed assets	618.2	574.2	659.9	677.6	623.5	614.8
Expenditure on existing fixed assets (net)	26.9	29.0	21.3	17.8	17.2	10.6
Grants to local government authorities	8.5	13.3	10.8	10.1	10.7	11.8
Other(*a*)	–0.1	0.6	0.6	0.6	0.7	0.7
Total State	*4,033.4*	*4,638.0*	*5,233.4*	*5,616.8*	*6,188.8*	*7,029.0*
Less Grants from the Commonwealth Government for educational purposes	1,453.1	1,718.5	1,860.9	1,956.0	2,096.3	2,368.0
Outlay financed from States' own resources and from non-specific Commonwealth Government grants	2,580.3	2,919.5	3,372.5	3,660.8	4,092.5	4,661.0
Local authorities—						
Final consumption expenditure	7.4	8.5	8.5	9.5	10.3	11.7
Expenditure on new fixed assets	3.2	4.2	2.8	2.8	2.3	1.4
Expenditure on existing fixed assets (net)	—	—	0.8	0.5	0.4	0.5
Total local	*10.6*	*12.6*	*12.1*	*12.8*	*13.0*	*13.6*
Less Grants from State authorities for education purposes	8.5	13.3	10.8	10.1	10.7	11.8
Outlay financed from local authorities own resources	2.1	–0.7	1.4	2.7	2.4	1.8
Total outlay on education	**4,471.6**	**5,131.2**	**5,762.1**	**6,186.2**	**6,703.0**	**7,594.5**
Total outlay on all purposes	**27,602.6**	**31,788.6**	**35,810.2**	**38,847.2**	**43,214.9**	**49,848.2**
			–per cent–			
Outlay on education as percentage of total outlay	16.2	16.1	16.1	15.9	15.5	15.2

(*a*) Mainly subsidies for teacher housing.

Commonwealth authorities

Details of outlay on education by authorities of the Commonwealth Government are given in the following table.

COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION

	1978–79	*1979–80*	*1980–81*
		–$ million–	
General administration, regulation and research—			
Department of Education—			
Salaries, etc., n.e.c.	20.4	21.2	24.2
Administration expenses, n.e.c.	8.9	8.5	8.0
Tertiary Education Commission	1.9	2.2	2.7
Building and works, office equipment, etc.	0.1	0.1	0.2
Grants to the States—			
Research and development	0.8	0.9	1.0
Other	0.5	–1.0	–7.7
Total general administration, etc.	*32.6*	*31.9*	*28.4*
Transportation of students—			
School bus service—			
Australian Capital Territory	2.1	2.1	2.6
Northern Territory	1.3	—	—
Total transportation	*3.4*	*2.1*	*2.6*
Primary and secondary education—			
Schools Commission	3.4	3.4	3.6
Education services—			
Australian Capital Territory	66.3	66.8	76.2
Northern Territory	46.0	–	–
School broadcasts	2.0	2.3	2.0
Student assistance	9.9	10.5	12.7
Child migrant education program	0.7	0.7	4.5
Assistance to isolated children	13.1	12.2	14.5
Grants to non-government schools—			
Australian Capital Territory	12.9	14.4	17.2
Northern Territory	2.4	–	–
Grants to the States—			
Non-government schools—Recurrent grants	221.9	263.5	327.8
Non-government schools—Capital grants	38.4	29.8	34.7
Government schools—Recurrent grants	242.5	262.8	302.4
Government schools—Capital grants	140.5	115.1	103.8
Child migrant education(*a*)	1.9	2.7	0.1
Schools—joint programs	27.0	25.4	28.6
Grants to the Northern Territory—			
Recurrent grants	–	3.9	5.0
Capital grants	–	1.7	2.3
Other	0.6	2.5	11.9
Total primary and secondary	*829.5*	*817.7*	*947.3*
Vocational Training—			
Technical and Further Education in the A.C.T.	16.8	20.6	24.6
Darwin Community College	10.0	–	–
Student assistance	29.3	30.4	28.7
Grants to the States—TAFE—			
Apprentice training	–	–	–
Recurrent grants	51.7	62.8	84.2
Other Capital grants	65.0	78.8	97.1
Grants to the Northern Territory—			
Recurrent grants	–	3.7	4.0
Capital grants	–	2.5	2.3
Other	0.9	0.8	0.1
Total vocational training	*173.7*	*199.7*	*241.0*

For footnote *see* end of table.

COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION—*continued*

	1978–79	*1979–80*	*1980–81*
		-$ million-	
University education—			
Australian Universities Commission	0.2	–	–
Australian National University—			
Student assistance	2.4	2.5	2.3
Other	75.6	81.2	95.5
Student assistance—			
Undergraduate	74.4	74.8	68.4
Postgraduate	9.0	8.5	8.8
Grants to Australian National University residential colleges	0.1	0.1	0.1
School of Public Health and Tropical Medicine (Sydney University)	2.6	2.9	3.1
Grants to the States—Universities	645.7	704.9	774.2
Other	–	–	0.3
Total university	*810.1*	*875.0*	*952.6*
Other higher education—			
Canberra College of Advanced Education	15.2	17.3	18.9
Canberra School of Music	0.9	1.1	1.4
Australian Film and Television School	3.8	4.0	4.5
Student assistance	55.5	51.7	66.1
Commonwealth Teaching Service scholarships	0.9	0.6	0.3
Grants to the States	481.7	497.2	547.4
Grants to the Northern Territory	–	–	0.2
Other	4.2	11.3	11.3
Total other higher education	*562.2*	*583.2*	*650.1*
Other education programs—			
Aboriginal education—			
Study grants	5.2	7.4	10.2
Secondary grants	13.0	14.0	17.4
Grants to private non-profit organisations	6.0	3.9	4.4
Grants to the States	6.2	6.2	7.0
Other	18.1	0.2	0.3
Soldiers' children education scheme	2.9	2.6	2.4
Migrant education programs	18.8	23.5	29.0
Pre-school programs—			
Grants to States and local authorities	32.7	32.7	30.8
Grants to the Northern Territory	–	0.3	0.3
Other	3.0	3.2	3.4
Adult education programs	4.8	4.2	4.4
Other	0.3	0.3	0.1
Total other programs	*111.0*	*98.6*	*109.7*
Total outlay on education	**2,522.7**	**2,608.1**	**2,931.7**
of which—			
Current outlay	2,104.2	2,246.6	2,575.5
Capital outlay	418.5	361.5	356.2
Total outlay on all purposes	**30,196.8**	**33,200.9**	**37,779.3**
		-per cent-	
Outlay on education as a percentage of total outlay	8.4	7.9	7.8

(*a*) From January 1976 grants to the States for child migrant education under the Schools Commission program are included under various other grants to the States for schools.

As may be seen from the table, Commonwealth Government outlays are directed largely towards financing outlays on education by the States and the private sector. Direct expenditure by the Commonwealth Government relates mainly to the costs of administering its support programs and its own educational research activities, the provision of education services in the internal territories, expenditures of statutory bodies (i.e. the Australian National University, the Canberra College of Advanced Education, and the Australian Broadcasting Commission), expenditure on the education of Aboriginals by the Northern Territory administration, and the costs of the child migrant education program.

COMMONWEALTH AUTHORITIES: PERSONAL BENEFIT PAYMENTS FOR EDUCATION
($'000)

	1978–79	*1979–80*	*1980–81*
Primary and secondary education—			
Student assistance	9,582	10,494	12,718
Australian Capital Territory and Northern Territory scholarships and allowances	269	–	–
Assistance to isolated children	13,106	12,189	14,487
United world colleges scholarships	10	18	28
Total	*22,967*	*22,701*	*27,233*
Vocational training—			
Student assistance	29,258	30,445	29,011
University education—			
Australian National University scholarships	2,432	2,455	2,407
Student assistance—			
Post-graduate	8,962	8,483	8,712
Under-graduate	74,057	74,457	68,323
Australian Agricultural Council scholarships	17	–	–
Wool research studentships	240	291	–
Forestry scholarships	41	31	33
Other	82	42	41
Total	*85,831*	*85,759*	*79,516*
Other higher education—			
Student assistance	51,564	51,485	66,110
Commonwealth Teaching Service scholarships	939	550	281
Pre-school teaching scholarships	798	43	–
Non government institutions—fees	3,119	163	219
Other	21	18	23
Total	*56,441*	*52,259*	*66 633*
Other education programs—			
Aboriginal study grants	5,209	7,485	10,196
Aboriginal secondary grants	12,956	13,962	17,425
Soldiers' children education scheme	2,941	2,567	2,368
Adult secondary education assistance	4,735	4,140	4,340
Assistance to Vietnamese and Cambodian students	12	2	–
Migrant education services	4,578	5,912	7,726
Other	–	–	–
Total	*30,431*	*34,068*	*42,055*
Total education	**224,928**	**225,232**	**244,448**

Outlay on education in the Australian Capital Territory

As mentioned previously, the Commonwealth Government is responsible for the provision of education services in the Australian Capital Territory. Details of Commonwealth Government outlay on education in the Australian Capital Territory are given below; further information may be found in Chapter 27, The Territories of Australia.

COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION IN THE AUSTRALIAN CAPITAL TERRITORY(a)

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81(p)*
Current Outlay—						
Government schools and pre-schools(b)—						
Salaries and wages	36,851	43,462	50,636	53,951	58,776	68,103
Transportation of students	1,419	1,759	1,892	2,064	2,148	2,644
Contract school cleaning	2,321	2,779	2,759	2,921	2,956	3,243
Repairs and maintenance	869	794	726	1,541	2,191	1,837
Other	3,663	4,353	5,794	5,767	6,395	7,653
Non-government schools assistance—						
Per capita grants	4,362	6,032	7,119	8,596	10,381	13,166
Interest subsidy	634	801	1,218	1,113	1,034	924
Other grants and allowances	152	197	247	313	363	368
Technical and further education—						
Canberra School of Music	537	735	850	939	1,120	1,398
Canberra School of Art	364	493	704	798	990	1,365
Other TAFE Colleges	4,605	5,913	7,089	8,660	10,165	12,532
Canberra College of Advanced Education	9,575	12,083	12,466	14,327	16,046	17,383
Total	*65,352*	*79,402*	*91,500*	*100,990*	*112,565*	*130,616*
Less Fees	106	304	360	438	517	827
Total current outlay	*65,246*	*79,097*	*91,140*	*100,552*	*112,048*	*129,789*
Capital outlay—						
Government schools and colleges—						
By National Capital Development Commission—						
Primary and Pre-schools	6,537	6,717	1,937	2,784	2,216	1,766
Secondary schools	13,728	11,947	7,241	5,390	1,993	215
Technical Colleges	4,290	6,616	7,628	7,277	9,133	6,611
Other education buildings	3,533	1,090	3,320	2,266	4,647	3,703
By Department of Construction—						
Building and works	2	—	304	34	3	173
Furniture and fittings	1,071	582	622	832	573	1,431
Plant and equipment	1,589	1,835	1,095	1,153	931	1,281
Canberra College of Advanced Education	3,381	2,395	4,214	932	1,225	1,445
Non-government schools assistance—						
Approved capital programs(c)	3,691	2,781	3,332	2,872	2,658	2,774
Total capital outlay	*37,822*	*33,963*	*29,693*	*23,540*	*23,379*	*19,399*
Total outlay	**103,068**	**113,060**	**120,833**	**124,092**	**135,427**	**149,188**

(a) Excludes the Australian National University. Commonwealth Government payments to the University in 1980–81 amounted to $98,309,000 for current purposes and $200,000 for capital payments. (b) Includes pre-school running expenses in 1980–81 of $3,338,000. (c) Grants for private capital purposes.

State and local authorities

The following table shows the outlay on education by State and local authorities, financed from their own resources (including general purpose grants from the Commonwealth Government) and from Commonwealth Government grants for educational purposes.

STATE AND LOCAL AUTHORITIES: OUTLAY ON EDUCATION

($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Final consumption expenditure—						
New South Wales	1,101.3	1,302.4	1,464.2	1,603.0	1,826.3	2,134.0
Victoria	946.2	1,153.6	1,314.2	1,419.7	1,574.0	1,801.6
Queensland	433.3	520.4	593.2	634.6	707.1	831.9
South Australia	341.6	413.4	473.2	507.6	553.6	644.1
Western Australia	299.3	362.1	406.0	450.0	505.6	574.5
Tasmania	108.5	128.6	146.0	161.3	181.7	205.3
Northern Territory	—	—	—	—	71.3	85.9
Total	*3,230.2*	*3,880.5*	*4,396.8*	*4,776.3*	*5,419.5*	*6,277.4*
Expenditure on new fixed assets—						
New South Wales	229.0	173.7	219.8	231.4	212.3	220.4
Victoria	169.7	157.8	170.9	190.3	173.1	170.4
Queensland	74.1	99.9	102.2	95.7	92.9	87.0
South Australia	62.1	66.2	76.2	73.0	58.4	57.2
Western Australia	54.1	51.5	63.4	63.2	49.2	45.1
Tasmania	32.4	29.3	30.2	26.9	26.6	24.6
Northern Territory	—	—	—	—	13.4	11.5
Total	*621.3*	*578.4*	*662.7*	*680.5*	*625.8*	*616.2*
Expenditure on existing fixed assets (net)	26.9	29.0	22.1	18.2	17.7	11.1
Personal benefit payments	124.1	123.4	120.2	103.5	97.4	96.2
Grants for private capital purposes	33.0	25.4	32.2	40.4	30.1	29.2
Other(*a*)	−0.1	0.6	0.6	0.6	0.7	0.7
Total outlay on education	**4,035.5**	**4,637.4**	**5,234.8**	**5,619.5**	**6,191.2**	**7,030.8**
of which—						
New South Wales	1,392.4	1,541.4	1,754.0	1,906.0	2,112.4	2,424.3
Victoria	1,183.0	1,370.9	1,537.1	1,651.2	1,773.6	1,993.7
Queensland	533.3	648.9	725.1	761.0	827.3	947.0
South Australia	416.4	488.4	556.5	587.5	617.4	705.9
Western Australia	363.2	422.2	478.3	518.4	560.4	626.3
Tasmania	147.2	165.6	183.7	195.6	214.9	235.6
Northern Territory	—	—	—	—	85.1	98.0

(*a*) Mainly subsidies for teacher housing.

Specific purpose grants to the States for educational purposes

Financial assistance to the States specifically for education purposes constitutes the major item of outlay on education by the Commonwealth Government. The following table summarises the allocation of the various categories of grants to the States for recent years. Subsequent tables show the allocation of these specific purpose grants to individual States for the same period.

GRANTS TO STATES (*a*) FOR EDUCATIONAL PURPOSES

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
GRANTS FOR CURRENT PURPOSES						
Schools	331,884	421,758	455,622	491,395	555,261	663,585
Technical and further education	40,127	44,194	45,600	51,741	61,898	72,986
Colleges of Advanced Education	286,766	368,894	395,501	413,497	454,225	511,951
Universities	426,389	511,556	574,465	594,587	652,674	732,187
Aboriginal education	4,978	5,561	6,204	5,811	6,128	6,901
Child migrant education (*b*)	7,370	140	278	1,740	2,625	3,723
Pre-school education	35,232	37,643	39,362	32,750	33,090	31,183
Educational research	1,062	1,012	809	801	854	1,024
School-to-work transition activities	—	—	—	3,000	7,982	27,269
Total	*1,133,806*	*1,390,758*	*1,517,841*	*1,595,322*	*1,774,737*	*2,050,809*
GRANTS FOR CAPITAL PURPOSES						
Schools	143,631	147,766	183,457	178,956	146,592	141,123
Technical and further education	24,600	33,709	46,425	64,970	81,338	99,395
Colleges of Advanced Education	86,753	77,555	54,006	68,155	44,853	38,819
Universities	48,827	56,958	52,392	51,143	52,192	42,011
Aboriginal education	1,966	361	195	364	87	59
Child migrant education (*b*)	1,670	39	—	129	50	66
Pre-school education	11,797	11,375	6,632	—	—	—
Total	*319,246*	*327,763*	*343,107*	*363,717*	*325,112*	*321,473*
TOTAL GRANTS						
Schools	475,515	569,524	639,080	670,351	701,852	804,708
Technical and further education	64,727	77,903	92,025	116,711	143,236	172,380
Colleges of Advanced Education	373,519	446,449	449,507	481,653	499,078	550,770
Universities	475,216	568,514	626,858	645,730	704,866	774,198
Aboriginal education	6,944	5,922	6,399	6,175	6,215	6,960
Child migrant education (*b*)	9,040	179	278	1,869	2,674	3,789
Pre-school education	47,029	49,018	45,994	32,750	33,090	31,183
Educational research	1,062	1,012	809	801	854	1,024
School-to-work transition activities	—	—	—	3,000	7,982	27,269
Total	**1,453,052**	**1,718,521**	**1,860,950**	**1,959,040**	**2,099,848**	**2,372,282**

(*a*) Includes the Northern Territory from 1979-80. (*b*) Grants for child migrant education under the Schools Commission program, commencing January 1976, are included under 'schools'.

TOTAL GRANTS TO STATES FOR SCHOOLS

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Current grants—						
New South Wales	125,395	151,153	171,540	180,739	203,806	240,612
Victoria	100,354	134,939	138,250	152,062	169,614	202,048
Queensland	46,162	56,058	59,853	66,818	74,914	93,611
South Australia	27,452	35,038	38,566	39,746	44,714	53,289
Western Australia	23,194	33,521	35,293	38,741	44,019	51,656
Tasmania	9,327	11,049	12,120	13,290	14,617	17,565
Northern Territory	..	..	..	..	3,577	4,804
Total	*331,884*	*421,758*	*455,622*	*491,395*	*555,261*	*663,585*
Capital grants—						
New South Wales	45,886	48,683	57,952	58,954	46,266	45,663
Victoria	49,285	45,056	51,273	48,993	43,918	40,515
Queensland	22,363	28,090	34,263	29,475	24,609	21,015
South Australia	11,056	14,672	17,069	16,178	14,821	13,275
Western Australia	10,564	6,999	16,713	20,971	11,011	14,079
Tasmania	4,477	4,266	6,187	4,385	4,280	3,988
Northern Territory	..	..	..	..	1,686	2,589
Total	*143,631*	*147,766*	*183,457*	*178,956*	*146,591*	*141,123*
Total grants—						
New South Wales	171,281	199,836	229,492	239,693	250,072	286,275
Victoria	149,639	179,995	189,523	201,055	213,532	242,563
Queensland	68,525	84,148	94,116	96,293	99,523	114,626
South Australia	38,508	49,710	55,635	55,924	59,535	66,563
Western Australia	33,758	40,520	52,006	59,712	55,029	65,736
Tasmania	13,804	15,315	18,307	17,674	18,898	21,553
Northern Territory	..	..	..	..	5,263	7,393
Total	**475,515**	**569,524**	**639,080**	**670,351**	**701,852**	**804,708**

TOTAL GRANTS TO STATES FOR TECHNICAL AND FURTHER EDUCATION

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Current grants—						
New South Wales	17,652	16,714	19,184	21,061	23,546	26,214
Victoria	9,653	13,866	11,163	13,509	16,087	19,048
Queensland	4,643	4,537	4,885	5,222	6,932	7,965
South Australia	3,770	4,502	4,737	5,116	6,661	7,801
Western Australia	3,322	3,606	4,521	5,160	4,780	9,032
Tasmania	1,087	969	1,110	1,673	2,005	2,407
Northern Territory	..	..	..	..	1,887	518
Total	*40,127*	*44,194*	*45,600*	*51,741*	*61,898*	*72,986*
Capital grants—						
New South Wales	8,919	12,262	15,162	19,279	28,054	34,554
Victoria	7,376	9,333	12,728	19,592	15,467	27,634
Queensland	3,334	4,439	8,735	15,078	12,717	12,277
South Australia	1,208	2,320	4,837	6,901	8,697	8,718
Western Australia	2,876	3,690	2,993	3,726	10,481	9,148
Tasmania	887	1,665	1,970	394	3,400	4,772
Northern Territory	..	..	..	..	2,522	2,292
Total	*24,600*	*33,709*	*46,425*	*64,970*	*81,338*	*99,395*
Total grants—						
New South Wales	26,571	28,976	34,346	40,340	51,600	60,768
Victoria	17,029	23,199	23,891	33,101	31,554	46,682
Queensland	7,977	8,976	13,620	20,300	19,649	20,242
South Australia	4,978	6,822	9,574	12,017	15,358	16,519
Western Australia	6,198	7,296	7,514	8,886	15,262	18,180
Tasmania	1,974	2,634	3,080	2,067	5,405	7,179
Northern Territory	..	..	..	..	4,409	2,810
Total	**64,727**	**77,903**	**92,025**	**116,711**	**143,236**	**172,380**

TOTAL GRANTS TO STATES FOR COLLEGES OF ADVANCED EDUCATION AND TEACHERS COLLEGES

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Current grants—						
New South Wales	69,089	90,831	98,303	105,103	115,272	129,213
Victoria	111,307	135,960	141,522	146,456	159,680	179,566
Queensland	33,999	48,962	56,616	60,465	67,445	76,325
South Australia	28,838	38,221	41,724	42,477	46,612	52,182
Western Australia	36,522	46,242	48,080	49,560	53,290	60,064
Tasmania	7,011	8,678	9,256	9,436	10,068	11,249
Northern Territory	..	..	..	..	1,859	3,352
Total	*286,766*	*368,894*	*395,501*	*413,497*	*454,225*	*511,951*
Capital grants—						
New South Wales	23,716	27,200	11,886	20,070	12,087	9,390
Victoria	34,313	25,971	18,968	23,112	19,190	16,793
Queensland	9,181	14,630	7,899	10,712	5,056	5,674
South Australia	6,886	4,276	8,457	5,177	4,666	3,237
Western Australia	7,344	5,074	5,198	5,863	3,044	2,773
Tasmania	5,313	404	1,598	3,221	810	952
Northern Territory	..	..	..	..	—	—
Total	*86,753*	*77,555*	*54,006*	*68,155*	*44,853*	*38,819*
Total grants—						
New South Wales	92,805	118,031	110,189	125,174	127,359	138,603
Victoria	145,620	161,931	160,490	169,568	178,870	196,359
Queensland	43,180	63,592	64,515	71,177	72,501	81,999
South Australia	35,724	42,497	50,181	47,654	51,278	55,419
Western Australia	43,866	51,316	53,278	55,423	56,334	62,837
Tasmania	12,324	9,082	10,854	12,657	10,878	12,201
Northern Territory	..	..	..	..	1,859	3,352
Total	**373,519**	**446,449**	**449,507**	**481,653**	**499,078**	**550,770**

TOTAL GRANTS TO STATES FOR UNIVERSITIES

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Current grants—						
New South Wales	168,831	199,633	222,893	230,197	252,856	282,878
Victoria	110,717	134,763	152,808	158,860	173,556	194,070
Queensland	57,185	69,427	78,127	80,980	89,684	100,776
South Australia	43,107	51,000	56,872	57,917	63,161	70,280
Western Australia	32,891	40,795	46,532	48,318	53,190	59,443
Tasmania	13,658	15,938	17,234	18,315	20,227	24,740
Northern Territory	..	..	..	..	—	—
Total	*426,389*	*511,556*	*574,465*	*594,587*	*652,674*	*732,187*
Capital grants—						
New South Wales	21,754	17,553	17,909	21,840	25,353	18,634
Victoria	9,516	10,460	11,842	10,849	10,679	9,283
Queensland	6,453	11,638	7,335	6,042	8,755	6,253
South Australia	3,421	6,426	6,634	6,439	3,482	3,599
Western Australia	5,094	9,822	7,664	5,185	3,006	3,199
Tasmania	2,589	1,061	1,008	788	918	1,043
Northern Territory	..	..	..	..	—	—
Total	*48,827*	*56,958*	*52,392*	*51,143*	*52,192*	*42,011*
Total grants—						
New South Wales	190,585	217,186	240,802	252,037	278,209	301,512
Victoria	120,233	145,223	164,650	169,709	184,235	203,353
Queensland	63,638	81,065	85,462	87,022	98,438	107,029
South Australia	46,528	57,426	63,506	64,356	66,643	73,879
Western Australia	37,985	50,617	54,196	53,503	56,196	62,641
Tasmania	16,247	16,999	18,242	19,103	21,145	25,783
Northern Territory	..	..	..	..	—	—
Total	**475,216**	**568,514**	**626,858**	**645,730**	**704,866**	**774,198**

TOTAL GRANTS TO STATES FOR ABORIGINAL EDUCATION

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Current grants—						
New South Wales	904	931	1,013	690	756	1,022
Victoria	212	576	634	633	931	1,002
Queensland	866	836	858	904	724	801
South Australia	990	1,151	1,479	1,560	1,642	1,795
Western Australia	1,979	2,035	2,184	1,996	2,047	2,218
Tasmania	27	32	36	28	29	63
Northern Territory	–	–	–	–	–	–
Total	*4,978*	*5,561*	*6,204*	*5,811*	*6,128*	*6,901*
Capital grants—						
New South Wales	505	1	–	–	–	–
Victoria	87	–	–	–	–	–
Queensland	971	8	84	57	41	33
South Australia	377	233	50	149	23	5
Western Australia	25	119	61	159	23	21
Tasmania	1	–	–	–	–	–
Northern Territory	–	–	–	–	–	–
Total	*1,966*	*361*	*195*	*364*	*87*	*59*
Total grants—						
New South Wales	1,409	932	1,013	690	756	1,022
Victoria	299	576	634	633	931	1,002
Queensland	1,837	844	942	961	765	834
South Australia	1,367	1,384	1,529	1,709	1,665	1,800
Western Australia	2,004	2,154	2,245	2,155	2,070	2,239
Tasmania	28	32	36	28	29	63
Northern Territory	–	–	–	–	–	–
Total	**6,944**	**5,922**	**6,399**	**6,175**	**6,215**	**6,960**

GRANTS TO STATES FOR CHILD MIGRANT EDUCATION

(Excluding grants under the Schools Commission program, commencing January 1976)

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Current grants—						
New South Wales	2,720	67	165	727	1,008	1,181
Victoria	3,559	46	41	521	1,045	1,230
Queensland	195	2	15	172	262	508
South Australia	514	22	16	180	180	301
Western Australia	233	2	41	140	125	367
Tasmania	149	2	–	–	3	5
Northern Territory	–	–	–	–	2	131
Total	*7,370*	*140*	*278*	*1,740*	*2,625*	*3,723*
Capital grants—						
New South Wales	405	2	–	–	9	–
Victoria	943	5	–	88	22	33
Queensland	11	–	–	40	15	3
South Australia	275	31	–	–	–	20
Western Australia	—9	–	–	–	–	–
Tasmania	45	–	–	–	4	10
Northern Territory	–	–	–	–	–	–
Total	*1,670*	*39*	–	*129*	*50*	*66*
Total grants—						
New South Wales	3,125	69	165	727	1,017	1,181
Victoria	4,502	51	41	610	1,067	1,263
Queensland	206	2	15	212	277	511
South Australia	789	53	16	180	180	321
Western Australia	224	2	41	140	125	367
Tasmania	194	2	–	–	7	15
Northern Territory	–	–	–	–	2	131
Total	**9,040**	**179**	**278**	**1,868**	**2,674**	**3,789**

TOTAL GRANTS TO STATES FOR RECURRENT EXPENDITURE ON EDUCATIONAL RESEARCH

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Current grants—						
New South Wales	253	259	184	159	170	368
Victoria	431	314	240	302	318	315
Queensland	190	216	166	131	124	109
South Australia	116	139	135	124	107	113
Western Australia	59	70	75	74	111	99
Tasmania	14	14	9	11	11	19
Northern Territory	–	–	–	–	13	–
Total	**1,062**	**1,012**	**809**	**801**	**854**	**1,024**

TOTAL GRANTS TO STATES FOR PRE-SCHOOL EDUCATION

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Current grants—						
New South Wales	7,117	7,604	7,934	7,130	7,130	7,130
Victoria	10,922	11,668	12,244	9,015	9,015	7,108
Queensland	6,236	6,663	6,958	6,605	6,605	6,605
South Australia	4,651	4,969	5,194	3,730	3,730	3,730
Western Australia	4,580	4,894	5,110	4,860	4,860	4,860
Tasmania	1,726	1,845	1,922	1,410	1,410	1,410
Northern Territory	–	–	–	–	340	340
Total	*35,232*	*37,643*	*39,362*	*32,750*	*33,090*	*31,183*
Capital grants—						
New South Wales	3,165	6,592	3,053	–	–	–
Victoria	1,345	4,160	3,500	–	–	–
Queensland	2,584	314	–	–	–	–
South Australia	1,498	160	–	–	–	–
Western Australia	1,441	144	79	–	–	–
Tasmania	1,764	5	–	–	–	–
Northern Territory	–	–	–	–	–	–
Total	*11,797*	*11,375*	*6,632*	–	–	–
Total grants—						
New South Wales	10,282	14,196	10,987	7,130	7,130	7,130
Victoria	12,267	15,828	15,744	9,015	9,015	7,108
Queensland	8,820	6,977	6,958	6,605	6,605	6,605
South Australia	6,149	5,129	5,194	3,730	3,730	3,730
Western Australia	6,021	5,038	5,189	4,860	4,860	4,860
Tasmania	3,490	1,850	1,922	1,410	1,410	1,410
Northern Territory	–	–	–	–	340	·340
Total	**47,029**	**49,018**	**45,994**	**32,750**	**33,090**	**31,183**

TOTAL GRANTS TO STATES FOR SCHOOL-TO-WORK TRANSITION ACTIVITIES(*a*)

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
New South Wales	–	–	–	634	2,686	8,303
Victoria	–	–	–	679	1,292	6,249
Queensland	–	–	–	722	1,711	5,910
South Australia	–	–	–	670	1,119	3,307
Western Australia	–	–	–	76	587	1,944
Tasmania	–	–	–	219	519	1,295
Northern Territory	–	–	–	—	69	262
Total	**–**	**–**	**–**	**3,000**	**7,982**	**27,269**

(*a*) Includes grants for the Education Program for Unemployed Youth (EPUY).

CHAPTER 13

AGRICULTURAL INDUSTRIES

This chapter is divided into the following major parts:—Introduction; Sources of statistics and definitions of units; Structural statistics (provides data on the legal arrangements, size and industry class of the business organisations operating within the agricultural sector); Financial statistics (provides estimates of the financial performance of business organisations engaged in agricultural activities); Value of agricultural commodities produced and index of values at constant prices; Apparent consumption of foodstuffs and nutrients; Land tenure and land utilisation; Crop statistics; Livestock statistics; Livestock products; Agricultural improvements and employment.

Introduction

The development of Australian agricultural industries has been determined by interacting factors such as profitable markets, the opening up of new land (including the development of transport facilities) and technical and scientific achievements. Subsistence farming, recurring gluts, low prices and losses to farmers were gradually overcome by the development of an export trade. Profitable overseas markets for merino wool and wheat, and the introduction of storage and refrigerated shipping for the dairying and meat industry combined to make the agricultural sector Australia's main export earner. Until the late 1950's, agricultural products comprised more than 80 per cent of the value of Australia's exports. Since then, the proportion of Australia's exports coming from the agricultural sector has declined markedly.

However, this decline in importance has been due not to a decline in agricultural activity but rather to an increase in the quantity and values of the exports of the mining and manufacturing sectors. In fact, the agricultural sector experienced an increase in total output over that period. One interesting aspect of this increase in output is that it was accompanied by a large reduction in the size of the agricultural labour force, implying a large growth in productivity within the sector.

Sources of statistics and definitions of units

Agricultural Census

The major source of the statistics in this chapter is the Agricultural Census conducted at 31 March each year. This collects a wide range of information from agricultural establishments with agricultural activity covering the physical aspects of agriculture such as area and production of crops, fertilisers used, number of livestock disposed of, etc. In conjunction with the census, certain supplementary collections are conducted in some States where this has proved expedient, e.g. where the harvesting of certain crops has not been completed by 31 March (apples, potatoes, etc.), special returns covering the crops concerned are collected after the completion of the harvest.

In recent years, in order to minimise respondent burden and reduce processing costs, the ABS has been gradually excluding from the census those establishments which make only a small contribution to overall agricultural production. Since 1976-77, establishments with agricultural activity have been included in the Agricultural Census if the operating enterprise had, or was expected to have, an estimated value of agricultural operations of $1,500 or more. In 1981-82 this figures was raised to $2,500 in order to minimise the effects of inflation on the scope of the Agricultural Census.

While these changes have resulted in some changes in the counts of numbers of establishments appearing in publications, the effect on the statistics of production of major commodities is small. Statistics of minor commodities normally associated with small scale operations may be affected to a greater extent.

Details of the method used in the calculation of the estimated value of agricultural operations are contained in the publication *Agricultural Industries: Structure of Operating Units, Australia* (7102.0). Prior to 1975–76, all agricultural establishments with areas of one hectare or more were included. In addition, establishments of less than one hectare tended to be included where significant agricultural activity was undertaken, e.g. poultry farms, commercial market gardens and nurseries.

Integrated Agricultural Register

The Agricultural Census is one of the sources of information used to update the Integrated Agricultural Register (IAR). The IAR contains information about the area, type, legal status, level of activity and location of units engaged in agriculture, and is used for the despatch of most of the agricultural statistical collections. The IAR was originally compiled by adding data in a special census of economic units conducted in 1974 to existing data relating to physical characteristics of agricultural establishments. Details of the structure of economic units engaged in agriculture are compiled from the IAR. These economic units, in hierarchical order, are:

- *Enterprise* (the second level of economic unit). The enterprise is that unit comprising all operations in Australia of a single operating legal entity. (The term 'single legal entity' means a sole trader, partnership, company, trust, co-operative or estate in the private sector, or a department, local government authority or statutory authority in the government sector). For the agricultural sector, a 'multi-State enterprise' is an enterprise which belongs to an enterprise group which undertakes agricultural activities in more than one State.
- *Establishment* (the smallest economic unit). The establishment covers all operations carried out by one enterprise at a single physical location.

Agricultural Finance Survey (AFS)

The triennial AFS collects detailed financial statistics from a sample of agricultural enterprises. The main purpose of the survey is to produce estimates of the financial performance of the agricultural sector and its component industries.

Other Statistical Collections

The ABS conducts a number of other collections to obtain agricultural statistics. These include collections from wool brokers and dealers, livestock slaughterers and other organisations involved in the marketing and selling of agricultural commodities.

Structural statistics

The following tables provide information relating to the structure of operating units during 1980–81. Although the definitions of the operating units have been provided above, the following terminology is also used:

- *Industry.* As set out in the *Australian Standard Industrial Classification* (ASIC) (1201.0 and 1202.0). These publications provide details of the methodology used in determining the industry class of an economic unit.
- *Estimated Value of Agricultural Operations* (EVAO). This is determined by valuing the physical crop and livestock information collected in the Agricultural Census.

A further explanation of this terminology and more detailed statistics are given in the publication *Agricultural Industries: Structure of Operating Units, Australia* (7102.0).

NUMBER OF UNITS BY TYPE OF UNIT, 1980–81

Unit	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust.(a)*
Agricultural establishments . .	52,030	46,581	34,173	19,629	17,054	5,953	175,756
Agricultural enterprises . . .	50,133	45,060	32,677	19,113	15,767	5,685	169,158

(*a*) Includes enterprises in the Northern Territory, Australian Capital Territory and multi-State enterprises.

AGRICULTURAL ENTERPRISES, INDUSTRY AND ESTIMATED VALUE OF OPERATIONS: 1980–81

ASIC Code	Industry of enterprise	Estimated value of operations ($'000) 2–9	10–19	20–29	30–39	40–49	50–59	60–74	75–99	100–149	150–199	200+	Total
0124	Poultry for meat	42	64	97	73	71	64	59	44	41	24	64	643
0125	Poultry for eggs	91	78	63	47	45	42	62	119	137	116	292	1,092
0134	Grapes	1,047	948	1,009	675	341	215	153	113	70	18	20	4,609
0135	Plantation fruit	262	452	414	235	191	127	110	104	66	33	32	2,026
0136	Orchard and other fruit	1,549	998	812	621	540	404	449	506	517	200	293	6,889
0143	Potatoes	84	118	129	136	156	159	195	248	246	134	140	1,745
0144	Vegetables (except potatoes)	932	934	643	445	311	256	273	252	281	148	263	4,738
0181	Cereal grains (incl. oilseeds n.e.c.)	1,057	1,208	1,270	1,348	1,282	1,231	1,702	2,287	2,705	1,219	1,449	16,753
0182	Sheep-cereal grains	423	1,063	1,679	2,100	2,225	2,131	2,870	3,518	3,722	1,626	1,607	22,969
0183	Meat cattle-cereal grains	442	710	626	610	500	406	453	555	567	226	282	5,377
0184	Sheep-meat cattle	1,452	1,833	1,687	1,537	1,212	1,003	1,064	1,191	1,101	495	580	13,155
0185	Sheep	3,631	2,987	2,484	2,084	1,568	1,229	1,328	1,350	1,162	429	450	18,702
0186	Meat cattle	12,231	7,725	3,783	2,272	1,473	1,001	1,014	1,021	953	409	827	32,709
0187	Milk cattle	999	2,558	4,586	4,117	2,633	1,576	1,313	986	522	120	96	19,506
0188	Pigs	547	506	349	289	211	208	207	228	226	96	148	3,015
0191	Sugar cane	30	98	158	309	524	689	985	1,148	1,251	506	490	6,188
0192	Peanuts	6	30	40	48	60	36	46	54	34	14	15	383
0193	Tobacco	—	5	39	81	142	160	151	117	97	23	18	833
0194	Cotton	1	1	2	6	—	3	8	13	35	44	153	266
0195	Nurseries	363	251	124	169	97	92	130	83	108	53	139	1,609
0196	Agriculture n.e.c.	2,491	1,325	719	418	254	201	157	156	125	51	54	5,951
	Total (ASIC Code 01)	**27,680**	**23,892**	**20,713**	**17,620**	**13,836**	**11,233**	**12,729**	**14,093**	**13,966**	**5,984**	**7,412**	**169,158**

AGRICULTURAL ENTERPRISES, INDUSTRY, LEGAL STATUS AND ESTIMATED VALUE OF OPERATIONS: 1980–81

ASIC Code	Industry of Enterprise	Legal status: Sole operator	Family partnership	Other partnership	Private incorporated company	Public incorporated company	Other(a)	Total enterprises
0124	Poultry for meat	128	412	27	67	1	8	643
0125	Poultry for eggs	267	648	49	99	7	22	1,092
0134	Grapes	1,280	3,044	124	122	5	34	4,609
0135	Plantation fruit	683	1,231	55	37	2	18	2,026
0136	Orchard and other fruit	2,042	4,265	199	322	2	59	6,889
0143	Potatoes	471	1,132	45	79	—	18	1,745
0144	Vegetables (except potatoes)	1,430	3,015	100	154	2	37	4,738
0181	Cereal grains (incl. oilseeds n.e.c.)	3,904	11,131	516	796	20	386	16,753
0182	Sheep-cereal grains	4,319	16,394	684	1,078	16	478	22,969
0183	Meat cattle-cereal grains	1,426	3,336	183	324	5	103	5,377
0184	Sheep-meat cattle	3,912	7,373	682	819	21	348	13,155
0185	Sheep	5,978	10,501	746	976	13	488	18,702
0186	Meat cattle	13,173	15,822	1,178	1,692	50	794	32,709
0187	Milk cattle	5,203	13,073	397	490	8	335	19,506
0188	Pigs	836	1,948	92	107	4	28	3,015
0191	Sugar cane	1,315	4,460	129	166	4	114	6,188
0192	Peanuts	97	268	7	10	1	5	383
0193	Tobacco	165	601	35	17	—	15	833
0194	Cotton	34	151	22	48	—	11	266
0195	Nurseries	463	793	156	179	2	16	1,609
0196	Agriculture n.e.c.	2,653	2,677	263	290	5	63	5,951
	Total (ASIC Code 01)	**49,779**	**102,275**	**5,684**	**7,872**	**168**	**3,380**	**169,158**
	Estimated value of operations ($'000)—							
	2–9	13,151	12,433	838	698	18	542	27,680
	10–19	10,362	11,730	612	654	11	523	23,892
	20–29	7,318	11,978	518	500	12	387	20,713
	30–39	5,242	11,076	473	479	14	336	17,620
	40–49	3,555	9,117	407	450	9	298	13,836
	50–59	2,619	7,582	378	450	12	192	11,233
	60–74	2,408	9,025	448	588	8	252	12,729
	75–99	2,303	10,121	581	825	14	249	14,093
	100–149	1,656	10,231	615	1,157	23	284	13,966
	150–199	589	4,295	335	633	9	123	5,984
	200 and more	576	4,687	479	1,438	38	194	7,412
	Total all size groups	**49,779**	**102,275**	**5,684**	**7,872**	**168**	**3,380**	**169,158**

(a) Includes co-operative societies trusts and estates.

AGRICULTURAL ESTABLISHMENTS OPERATED BY AGRICULTURAL AND NON-AGRICULTURAL ENTERPRISES BY INDUSTRY OF ESTABLISHMENT: 1980–81

ASIC Code	*Industry of establishment*	*Operated by agricultural enterprises*	*Operated by non-agricultural enterprises*
0124	Poultry for meat	649	18
0125	Poultry for eggs	1,113	15
0134	Grapes	4,637	141
0135	Plantation fruit	2,038	25
0136	Orchard and other fruit	6,945	138
0143	Potatoes	1,757	22
0144	Vegetables (except potatoes)	4,785	53
0181	Cereal grains (incl. oilseeds n.e.c.)	17,065	213
0182	Sheep-cereal grains	23,356	180
0183	Meat cattle-cereal grains	5,450	82
0184	Sheep-meat cattle	13,295	262
0185	Sheep	19,107	307
0186	Meat cattle	33,880	1,320
0187	Milk cattle	19,689	147
0188	Pigs	3,064	77
0191	Sugar cane	6,295	39
0192	Peanuts	393	5
0193	Tobacco	837	1
0194	Cotton	267	3
0195	Nurseries	1,625	66
0196	Agriculture n.e.c.	6,146	249
	Total (ASIC Code 01)	**172,393**	**3,363**

AGRICULTURAL ESTABLISHMENTS OPERATED BY AGRICULTURAL AND NON-AGRICULTURAL ENTERPRISES BY INDUSTRY OF ENTERPRISE AND INDUSTRY OF ESTABLISHMENT: 1980–81

		Industry of establishment														
						Cereal grains-sheep-cattle and pigs (ASIC Code 018)										
ASIC Code	*Industry of enterprise* / *Description*	*Poultry (012)*	*Fruit (013)*	*Vegetables (014)*	*Total (012)-(014)*	*Cereal grains, (incl. oilseeds (0181)*	*Sheep, cereal grains (0182)*	*Meat cattle-cereal grains (0183)*	*Sheep-meat cattle (0184)*	*Sheep (0185)*	*Meat cattle (0186)*	*Milk cattle (0187)*	*Pigs (0188)*	*Total (018)*	*Other agriculture (019)*	*Total establishments (01)*
A	Agriculture, Forestry, Fishing and Hunting															
01	Agriculture															
012	Poultry	1,756	4	1	1,761	7	2	-	-	2	12	3	1	27	2	1,790
013	Fruit	1	3,550	5	13,556	4	4		-	4	31	3		46	10	13,612
014	Vegetables	1	5	6,512	6,518	3	1	1	3	3	22	4	2	39	10	6,567
	Total (ASIC Codes 012-014)	**1,758**	**13,559**	**6,518**	**21,835**	**14**	**7**	**1**	**3**	**9**	**65**	**10**	**3**	**112**	**22**	**21,969**
018	Cereal grains, sheep, cattle and pigs															
0181	Cereal grains (incl. oilseeds)	1	7		8	16,856	78	23	13	43	66	5	11	17,095	24	17,127
0182	Sheep-cereal grains		16	1	17	93	23,190	11	42	143	55	11	5	23,550	9	23,576
0183	Meat cattle-cereal grains		1	1	2	14	4	5,372	7	10	65	7	2	5,481	6	5,489
0184	Sheep-meat cattle		5	3	8	12	14	7	13,155	79	101	3	1	13,372	14	13,394
0185	Sheep		8	4	12	23	42	2	40	18,782	49	3	2	18,943	24	18,979
0186	Meat cattle	2	10	7	19	20	12	22	29	25	33,274	27	13	33,422	78	33,519
0187	Milk cattle		6	2	8	17	5	8	1	4	109	19,615	2	19,761	10	19,779
0188	Pigs		1		1	3	1	-	1	3	10	-	3,023	3,041	2	3,044
	Total (ASIC Code 018)	**3**	**54**	**18**	**75**	**17,038**	**23,346**	**5,445**	**13,288**	**19,089**	**33,729**	**19,671**	**3,059**	**134,665**	**167**	**134,907**
019	Other agriculture	1	7	6	14	13	3	4	4	9	86	8	2	129	15,374	15,517
	Total (ASIC Code 01)	**1,762**	**13,620**	**6,542**	**21,924**	**17,065**	**23,356**	**5,450**	**13,295**	**19,107**	**33,880**	**19,689**	**3,064**	**134,906**	**15,563**	**172,393**
02	Services to agriculture	1	4	3	8	9	12	3	15	32	34	11	3	119	11	138
03	Forestry and logging		2		2	2	-	-	7	9	36	3		57	3	62
04	Fishing and hunting		1		1		2	-	1	5	18			26	4	31
	Total (ASIC Division A)	**1,763**	**13,627**	**6,545**	**21,935**	**17,076**	**23,370**	**5,453**	**13,318**	**19,153**	**33,968**	**19,703**	**3,067**	**135,108**	**15,581**	**172,624**
B	Mining		3	1	4	2	1	2	2	2	13		1	23	2	29
C	Manufacturing	18	82	4	104	13	12	5	17	21	120	5	8	201	36	341
D	Electricity, Gas and Water					-	-	-	-		2			2	-	2
E	Construction		35	6	41	21	17	11	37	28	198	25	7	344	43	428
F	Wholesale and Retail Trade	10	101	31	142	98	72	37	94	109	380	50	42	882	139	1,163
G	Transport and Storage	1	24	18	43	24	25	7	23	39	133	19	7	277	22	342
H	Communication					-	2		1	1	1			5	-	5
I	Finance, Property and Business Services		23	6	29	24	14	9	19	28	150	11	2	257	41	327
J	Public Administration and Defence		3	1	4	4	3	-	2	3	6	5		23	2	29
K	Community Services	3	16	4	23	11	14	6	38	22	179	13	7	290	39	352
L	Recreation, Personal and Other Services		10	1	11	5	6	2	6	8	50	5		82	21	114
	Total all industries	**1,795**	**13,924**	**6,617**	**22,336**	**17,278**	**23,536**	**5,532**	**13,557**	**19,414**	**35,200**	**19,836**	**3,141**	**137,494**	**15,926**	**175,756**

Financial statistics

Estimates of selected financial aggregates of enterprises predominantly engaged in agricultural activity are shown in the following tables. The estimates have been derived from the triennial Agricultural Finance Survey. Up to 1977–78 the survey was conducted on an annual basis. The notation 'S.E.%' stands for 'standard error %' which is a measure of the sampling error resulting from the use of sampling techniques as opposed to the results which would have been obtained from a comparable complete collection. A more detailed explanation of standard errors and other terms used in the tables, as well as more detailed statistics, is given in the publication *Agricultural Industries, Financial Statistics, Australia, 1980–81* (7507.0).

ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF AGRICULTURAL ENTERPRISES, 1974–75 TO 1977–78 AND 1980–81

	1974–75		*1975–76*		*1976–77*		*1977–78*		*1980–81*	
	$m	*S.E. %*	*$m*	*S.E. %*	*$m*	*S.E. %*	*$m*	*S.E. %*	*$m*	*S.E. %*
Sales from crops	2,345.5	2	2,545.2	3	2,900.4	2	2,281.5	2	4,543.7	1
Sales from livestock	1,099.7	5	1,103.5	3	1,404.3	2	1,677.8		3,134.6	2
Sales from livestock products	1,382.7	2	1,461.4	3	1,632.4	2	1,682.0	1	2,422.2	2
Turnover	4,985.8	2	5,237.1	2	6,133.6	1	5,874.2	1	10,439.7	1
Purchases and selected expenses	2,278.1	2	2,514.4	3	2,690.4	1	2,838.7	1	5,283.5	1
Value added	2,897.3	3	2,783.1	5	3,310.0	1	2,869.9	1	5,034.9	2
Adjusted value added	2,576.0	4	2,449.1	2	2,924.6	2	2,472.6	2	4,471.7	2
Gross operating surplus	2,083.8	4	1,097.4	5	2,401.7	2	1,896.4	2	3,669.1	2
Cash operating surplus	1,658.7	3	1,594.1	3	2,291.8	2	1,801.6	2	3,419.1	2
Total net capital expenditure	620.0	4	801.7	4	820.9	3	772.7	3	1,301.3	3
Gross indebtedness	2,972.5	4	3,422.2	4	3,397.0	3	3,395.8	3	4,941.0	3

ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF AGRICULTURAL ENTERPRISES, 1980–81 ($ million)

	N.S.W	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust. (a)*
Sales from crops	1,048.8	737.5	1,413.4	559.3	710.6	49.1	4,543.7
Sales from livestock	989.2	658.2	617.7	278.1	372.1	97.3	3,134.6
Sales from livestock products	667.1	715.5	249.2	281.9	407.9	81.4	2,422.2
Turnover	2,798.3	2,166.2	2,383.7	1,143.5	1,536.9	238.2	10,439.7
Purchases and selected expenses	1,570.3	1,030.3	1,151.7	515.2	800.8	135.0	5,283.5
Value added	1,136.8	1,121.1	1,192.8	651.8	727.7	115.1	5,034.9
Adjusted value added	961.6	998.2	1,079.6	594.6	659.3	100.3	4,471.7
Gross operating surplus	750.7	852.0	869.7	508.7	569.7	71.3	3,669.1
Cash operating surplus	733.4	797.9	834.2	448.7	514.0	44.9	3,419.1
Total net capital expenditure	312.8	223.4	334.4	184.4	200.2	31.3	1,301.3
Gross indebtedness	1,320.7	870.3	1,030.7	571.0	870.6	171.3	4,941.0

(a) Included Northern Territory and Australian Capital Territory and estimates for multi-state enterprises.

ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF AGRICULTURAL ENTERPRISES, BY INDUSTRY, 1980–81
($ million)

	Poultry (0124–0125)	*Fruit (0134–0136)*	*Vegetables (0143–0144)*	*Cereal grains oilseeds (n.e.c.) (0181)*	*Sheep-cereal grains (0182)*	*Meat cattle-cereal grains (0183)*	*Sheep-meat cattle (0184)*
Sales from crops	6.3	508.0	357.4	1,083.5	1,133.5	173.5	37.6
Sales from livestock	67.0	9.1	26.2	173.5	442.1	156.8	580.1
Sales from livestock products	199.9	2.2	5.6	87.5	528.7	5.8	311.4
Turnover	290.6	549.7	399.1	1,372.7	2,151.7	349.1	964.5
Purchases and selected expenses	193.2	242.4	203.2	684.8	1,046.7	185.7	520.1
Value added	98.5	307.3	197.0	701.6	1,084.1	152.0	366.2
Adjusted value added	88.0	278.3	182.3	634.4	979.9	131.1	297.7
Gross operating surplus	60.6	187.7	135.3	575.3	885.3	110.8	191.3
Cash operating surplus	52.2	175.6	125.5	496.5	830.3	111.4	241.5
Total net capital expenditure	20.9	66.0	39.4	202.3	297.0	53.7	85.8
Gross indebtedness	81.8	198.5	103.2	801.0	1,018.5	163.4	483.6

	Sheep (0185)	*Meat cattle (0186)*	*Milk cattle (0187)*	*Pigs (0188)*	*Other agriculture (0191–0196)*	*All Industries (01)*
Sales from crops	82.5	38.2	32.3	10.0	1,080.9	4,543.7
Sales from livestock	351.5	906.8	195.9	187.3	38.3	3,134.6
Sales from livestock products	513.2	25.2	714.2	14.7	13.8	2,422.2
Turnover	970.9	1,013.2	965.1	217.4	1,195.8	10,439.7
Purchases and selected expenses	511.0	595.6	447.9	157.7	495.1	5,283.5
Value added	463.1	362.6	535.4	64.4	702.7	5,034.9
Adjusted value added	403.7	283.8	486.5	56.4	649.7	4,471.7
Gross operating surplus	320.4	188.2	432.7	39.3	542.1	3,669.1
Cash operating surplus	271.1	214.7	371.1	26.1	502.9	3,419.1
Total net capital expenditure	99.3	123.8	101.9	26.1	184.9	1,301.3
Gross indebtedness	514.0	525.2	550.0	105.2	396.4	4,941.0

Value of agricultural commodities produced and index of values at constant prices

Definitions

Gross value of commodities produced is the value placed on recorded production at the wholesale prices realised in the market place.

Marketing costs include freight, cost of containers, commission and other charges incurred in marketing.

Local value of commodities produced is the value placed on commodities at the place of production and is ascertained by deducting marketing costs from the gross value.

Index of values at constant prices is the index of the gross value of commodities produced at constant prices, i.e. it is a measure of change in value after the direct effects of price changes have been eliminated.

VALUES OF AGRICULTURAL COMMODITIES: 1980–81

	Gross value of agricultural commodities produced	*Marketing costs*	*Local value of commodities produced*	*Index of values at constant prices of agricultural commodities produced(a) (Base year: 1974–75 = 1000)*
	$m	$m	$m	
Crops	5,332.3	580.0	4,752.4	1072
Livestock slaughterings and other disposals	3,474.3	247.5	3,226.8	1138
Livestock products	2,803.8	186.8	2,617.1	884
Total agriculture	**11,610.5**	**1,014.2**	**10,596.3**	**1031**

(*a*) Weighted by average unit values of the 3 years ended 1975–76.

Publications

Two preliminary estimates of value of commodities produced are published: *Value of Agricultural Commodities Produced, Australia First Estimates* (7501.0) and *Value of Agricultural Commodities Produced, Australia Second Estimates* (7502.0). A final publication, *Value of Agricultural Commodities Produced, Australia* (7503.0), contains Indexes of Values at Constant Prices.

Index of Agricultural Commodities Produced

The index of values at constant prices of agricultural commodities produced and output is a measure of change in value after the direct effects of price changes have been eliminated.

The index is consistent in scope with those of previous years. The indexes are weighted by the average unit values for the three years ended 1975–76 with a reference base of 1974–75=1000.

For further details on how these and earlier series were calculated *see* Year Book No. 61, pages 1063–65 and *Value of Agricultural Commodities Produced, Australia* (7503.0).

GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED

($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82p*
Crops—						
Wheat for grain	1,052	935	2,296	2,478	1,684	2,480
Barley for grain	295	205	339	450.	381	493
Sugar cane cut for crushing	472	421	396	548	800	604
Fruit and nuts	290	324	388	407	460	463
Grapes	129	142	150	231	205	185
Vegetables	295	324	403	402	509	529
Pasture and grasses	147	118	161	177	240	285
Other crops	510	578	779	848	1,053	1,088
Total crops	*3,190*	*3,047*	*4,913*	*5,541*	*5,332*	*6,127*
Livestock slaughterings and other disposals(*a*)—						
Cattle and calves	1,011	1,177	2,155	2,386	2,056	1,860
Sheep and lambs	299	345	445	654	719	656
Pigs	197	213	254	311	338	392
Poultry	178	220	244	307	361	356
Total	*1,686*	*1,954*	*3,098*	*3,659*	*3,474*	*3,264*
Livestock products—						
Wool	1,173	1,206	1,374	1,651	1,670	1,754
Whole milk	521	553	628	676	885	1,011
Eggs	179	196	197	216	227	241
Honey and beeswax	9	15	15	21	17	18
Total	*1,881*	*1,970*	*2,214*	*2,564*	*(b)2,804*	*(b)3,028*
Total agriculture	**6,757**	**6,972**	**10,225**	**11,764**	**11,610**	**12,420**

(*a*) Includes adjustment for net exports of live animals. (*b*) Includes Australian Capital Territory milk and eggs which are not available for separate publication.

INDEX OF VALUES AT CONSTANT PRICES OF AGRICULTURAL COMMODITIES PRODUCED

(*Base year:* 1974–75 = 1000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Crops—						
Barley for grain	1264	1132	948	1593	1472	1066
Oats for grain	1305	1227	1133	2017	1614	1291
Wheat for grain	1060	1047	828	1610	1431	951
Other grain cereals	1185	1181	988	1461	1209	1492
Sugar cane(*a*)	1017	1165	1171	1013	1029	1155
Fruit and nuts	904	892	836	1001	988	1051
Grapes	987	1002	993	992	1201	1029
Vegetables	948	1051	1097	1188	1202	1215
All other crops(*b*)	869	874	911	1223	1183	1177
Total	*1046*	*1036*	*928*	*1372*	*1276*	*1072*
Livestock slaughterings and other disposals—						
Cattle and calves(*c*)	1192	1288	1415	1305	1011	947
Sheep and lambs	1083	1107	1116	1075	1294	1337
Pigs	993	1057	1137	1134	1254	1337
Poultry	1078	1152	1297	1431	1652	1599
Total(d)	*1134*	*1211*	*1312*	*1254*	*1162*	*1138*
Livestock products—						
Wool	951	886	853	887	889	883
Whole milk	965	925	893	926	909	890
Eggs	989	898	949	922	907	869
Total(e)	*959*	*897*	*873*	*901*	*898*	*884*
Agricultural commodities produced	**1039**	**1032**	**993**	**1210**	**1142**	**1031**

(*a*) Cut for crushing and planting. (*b*) Includes pastures and grasses; excludes crops for green feed or silage. (*c*) Includes dairy cattle slaughtered. (*d*) Component series based on carcass weight. (*e*) Includes honey and beeswax.

Apparent consumption of foodstuffs and nutrients

Estimates of consumption in Australia are compiled by deducting net exports from the sum of production and imports and allowing for recorded movement in stocks of the respective commodities. The term 'consumption' is used in a specialised sense, since the quantities actually measured are broadly the quantities available for consumption at a particular level of distribution, ie ex-market, ex-store or ex-factory depending on the method of marketing and/or processing. Because consumption of foodstuffs is measured, in general, at 'producer' level no allowance is made for wastage before they are consumed. The effect of ignoring wastage is ultimately to overstate consumption but it is believed that more efficient distribution and storage methods in recent years have cut down wastage. Furthermore, it is likely that many of the foodstuffs are being supplemented by householders self-supplies over and above the broad estimate already made.

The estimates of consumption per capita have been derived by dividing the total apparent consumption of each commodity or commodity group in a given year by the mean population of Australia in the same period.

More detailed information on the consumption of foodstuffs is contained in the publication *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0). For some commodities, more timely information is contained in the publication *Apparent Consumption of Selected Foodstuffs, Australia (Preliminary)* (4315.0).

APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS

(Kg—unless otherwise indicated)

Commodity	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Meat—					
Carcass meat—					
Beef and veal	*69.7*	*68.1*	*55.5*	*46.6*	*44.9*
Beef	64.2	62.4	52.0	44.1	42.6
Veal	5.6	5.7	3.5	2.5	2.3
Lamb	13.4	13.8	14.1	15.8	16.2
Mutton	4.7	3.7	4.6	5.1	4.0
Pigmeat	4.4	4.6	3.8	4.9	5.7
Total carcass meat	*92.3*	*90.1*	*77.9*	*72.4*	*70.8*
Offal and meat, n.e.i.	7.0	7.0	5.6	4.7	5.0
Canned meat (canned weight)	1.7	1.7	1.4	1.4	1.5
Bacon and ham (cured carcass weight)	5.6	6.1	6.5	6.3	6.8
Total meat (converted to carcass equivalent weight)	**108.8**	**107.6**	**94.2**	**87.2**	**86.8**
Poultry—					
Poultry (dressed weight)	15.8	16.9	18.9	20.3	20.1
Seafood—					
Fresh and frozen (edible weight)—					
Fish—					
Australian	1.4	1.7	1.6	1.5	1.7
Imported	1.6	1.7	1.5	1.9	2.1
Crustacea and molluscs	0.9	0.9	1.0	0.9	1.0
Seafood otherwise prepared (product weight)—					
Australian	0.5	0.5	0.6	0.5	0.5
Imported—					
Fish	2.0	1.9	1.6	1.9	1.8
Crustacea and molluscs	0.5	0.4	0.3	0.3	0.4
Total seafood	**7.0**	**7.0**	**6.7**	**7.0**	**7.4**
Milk and Milk Products—					
Market milk (fluid whole)(a) (litres)	101.4	101.1	101.4	102.3	102.8
Condensed, concentrated and evaporated milk—					
Full cream sweetened	0.8	0.8	0.7	0.7	0.9
Full cream unsweetened	2.6	2.3	2.5	2.2	2.4
Skim	1.6	1.6	1.6	1.4	1.0
Powdered milk—					
Full cream	1.6	1.4	0.9	1.0	1.2
Skim	2.0	3.0	3.2	3.7	3.6
Infants' and invalids' food	1.1	1.3	1.1	1.2	1.0
Cheese (natural equivalent weight)	5.1	6.3	6.3	6.8	6.7
Total (converted to milk solids, fat and non-fat)	**21.7**	**23.2**	**22.8**	**23.7**	**23.3**

APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS

(Kg—unless otherwise indicated)—*continued*

Commodity	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Fruit and Fruit Products—					
Fresh fruit (incl. fruit for fruit juice)—					
Citrus	32.8	35.7	35.7	40.5	41.7
Other	36.4	33.4	34.7	39.5	36.0
Jams, conserves, etc	2.0	1.8	2.3	1.6	1.5
Dried fruit	2.0	2.0	2.0	2.4	2.2
Processed fruit	10.3	10.7	10.6	12.1	12.7
Total (fresh fruit equivalent)	**91.6**	**89.8**	**93.6**	**106.7**	**103.8**
Vegetables—					
White potatoes	48.7	50.8	51.9	55.2	55.2
Other root and bulb vegetables	16.1	17.0	17.3	17.4	17.6
Tomatoes	13.7	13.2	13.8	14.6	15.6
Leafy and green vegetables	22.9	22.7	27.7	25.2	22.4
Other vegetables	16.5	17.8	19.7	17.7	17.6
Total (fresh equivalent weight)	**117.9**	**121.6**	**130.3**	**130.2**	**128.3**
Grain Products—					
Flour(b)	72.8	67.6	70.2	70.9	71.1
Breakfast foods—					
Oatmeal and rolled oats	0.6	0.6	0.9	0.3	0.7
Other (from grain)	7.3	7.4	7.5	7.0	7.0
Total breakfast foods	*7.9*	*8.0*	*8.4*	*7.3*	*7.1*
Table rice	2.4	2.5	2.5	2.6	2.9
Total grain products	**83.1**	**78.0**	**81.1**	**80.7**	**81.8**
Bread (900g loaves)	54.3	53.2	52.2	53.4	51.3
Eggs and Egg Products—					
Total (eggs in shell weight)	12.4	12.4	12.6	12.5	12.4
Equivalent number of eggs	219	219	221	220	220
Nuts (in shell)—					
Peanuts	1.5	3.4	2.2	1.4	2.3
Tree nuts	3.2	3.1	2.6	2.9	3.2
Oils and fats—					
Butter	5.8	5.1	4.5	4.6	4.3
Total margarine	*8.2*	*8.6*	*8.9*	*8.9*	*9.2*
Table margarine	4.7	5.7	5.9	6.5	6.8
Other margarine	3.5	2.9	2.9	2.5	2.5
Total (fat content)(c)	**21.9**	**21.7**	**21.4**	**21.5**	**21.6**
Sugar—					
As refined sugar	16.2	14.8	14.2	12.9	13.8
In manufactured foods	34.4	34.9	35.3	34.8	35.2
Total	*50.6*	*49.7*	*49.5*	*47.7*	*49.0*
Honey	0.6	1.0	0.8	0.9	0.6
Total(d)	**54.6**	**54.0**	**53.6**	**51.9**	**52.9**
Beverages—					
Tea	2.0	1.6	1.7	1.6	1.5
Coffee(*e*)	1.8	1.3	1.7	1.7	1.9
Aerated and carbonated waters (litres)	68.3	69.0	66.5	64.3	68.0
Beer (litres)	136.2	137.6	134.2	134.3	134.1
Wine (litres)	13.7	14.3	16.5	17.4	18.3
Spirits (litres alcohol)	1.3	1.3	1.1	1.0	1.1

(*a*) Prior to 1978–79 was known as Fluid Whole Milk. (*b*) Includes flour used for breadmaking. (*c*) Includes an estimate for vegetable oils and other fats. (*d*) Includes sugar content of syrups and glucose. (*e*) Coffee and coffee products in terms of roasted coffee.

Nutrients

The nutrients table has been compiled by the Nutrition Section and the Central Statistical Unit of the Commonwealth Department of Health and is based on the estimates of the quantity of foodstuffs available for per capita consumption.

For further information on the level of nutrient intake *see* the publication *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0).

ESTIMATED SUPPLY OF NUTRIENTS AVAILABLE FOR CONSUMPTION(*a*)
(Per capita per day)

Nutrient	*Unit*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Protein—						
Animal	g	69.9	71.7	66.9	65.8	65.0
Vegetable	g	32.7	32.3	32.8	32.6	33.3
Total	*g*	*102.6*	*104.0*	*99.7*	*98.4*	*98.3*
Fat (from all sources)	g	153.7	155.3	146.5	144.2	146.2
Carbohydrate	g	402.7	394.3	399.4	400.0	404.1
Calcium	mg	854.5	915.4	910.9	945.8	922.7
Iron	mg	16.1	16.0	15.4	14.9	15.0
Vitamin A activity	μg	1,698.7	1,706.3	1,604.3	1,513.9	1,566.6
Vitamin C (*b*)—						
Unadjusted	mg	97.6	102.5	106.7	109.8	109.8
Adjusted	mg	69.8	73.6	75.5	80.7	81.5
Thiamin (*b*)—						
Unadjusted	mg	1.7	1.8	1.8	1.8	1.8
Adjusted	mg	1.5	1.5	1.5	1.5	1.5
Riboflavin	mg	2.8	2.9	2.8	2.7	2.7
Niacin (*b*)—						
Unadjusted	mg	24.2	24.8	23.5	22.4	23.1
Adjusted	mg	40.6	41.4	39.5	38.1	38.8
Energy value	kJ	14,814	14,753	14,414	14,329	14,485

(*a*) Figures are based on conversion factors calculated from the revised and enlarged edition of S. Thomas and M. Corden *Metric Tables of Composition of Australian Food*, Canberra, 1977. (*b*) Data for vitamin C, Thiamin and Niacin show adjustments made for loss of nutrients in cooking and the extra niacin obtained from the metabolism of protein.

Land tenures

Descriptions of the land tenure systems of the States and the Territories, and conspectuses of land legislation in force were provided in Year Book No. 48 and previous issues (*see also* Year Book No. 50, page 85 and the List of Special Articles preceding the General Index in this Year Book).

Disposal of crown lands

For a description of the provisions that exist in all mainland States for the disposal of crown lands for public purposes, for unconditional purchase and occupation under lease or licence, *see* Year Book No. 61, page 742.

Closer settlement and war service settlement

Particulars of these are given in issues of the Year Book up to No. 22, and in Year Book Nos. 48, 55 and 61.

Alienation and occupation of crown lands

LAND TENURES,
(Thousand hectares)

		Private lands		*Crown lands*		
State or Territory	*Data: reference date*	*Alienated*	*In process of alienation*	*Leased or licensed*	*Other(a)*	*Total area*
New South Wales	30.6.81	28,618	1,362	42,947	7,216	80,143
Victoria	30.6.82	13,942	122	2,274	6,422	22,760
Queensland	31.12.81	13,265	20,658	125,462	13,315	172,700
South Australia	30.6.81	7,316	109	54,916	36,097	98,438
Western Australia	31.12.81	17,112	1,958	97,987	135,493	252,550
Tasmania	30.6.82	2,590	0.1	-4,235-		6,830
Northern Territory		n.y.a.	n.y.a.	n.y.a.	n.y.a.	134,620
Australian Capital Territory(*b*)	1.4.82	1	—	73	169	243
Australia		**n.y.a.**	**n.y.a.**	**n.y.a.**	**n.y.a.**	**768,284**

(*a*) Occupied by Crown; reserved; unoccupied; unreserved. (*b*) Includes Jervis Bay.

Land utilisation in Australia

The table on land tenures in Australia above, shows the proportions of Australia and of the States and Territories which are held under freehold tenure ('alienated or in process of alienation') or leasehold tenure ('leased or licensed'). The total area under tenure differs from the total area of agricultural establishments (shown below) by amounts which represent unused land or land held for non-agricultural purposes. In general, land in the more fertile regions tends to be mostly freehold, while the less productive land is held under Crown lease or licence.

AREA OF ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY

(Million hectares)

At 31 March	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust. (incl. A.C.T.)*
1977 . . .	66.0	14.5	155.0	63.1	115.2	2.3	75.4	491.5
1978 . . .	64.8	14.7	155.1	62.5	114.5	2.3	75.5	489.4
1979 . . .	65.1	14.4	156.3	62.7	116.2	2.2	76.2	493.2
1980 . . .	65.0	14.7	157.7	62.8	114.9	2.2	78.2	495.6
1981 . . .	65.2	14.7	157.5	62.4	115.8	2.2	77.6	495.4
1982p . . .	63.7	14.4	157.6	65.8	113.4	2.2	77.1	494.3

LAND UTILISATION: AUSTRALIA

(Million hectares)

	Area of			*Total*	
Year	*crops(a) (b)*	*sown pastures and grasses (b)*	*Balance (c)*	*Area of establishments*	*Percentage of Australian land area (768,284,000 hectares)*
1976-77	15.0	27.2	449.3	491.5	64.0
1977-78	16.8	26.6	446.0	489.4	63.7
1978-79	17.4	27.7	448.0	493.2	64.2
1979-80	18.0	27.1	450.6	495.6	64.5
1980-81	18.3	25.9	451.2	495.4	64.5
1981-82p	19.6	28.2	446.6	494.3	64.3

(*a*) Excludes pastures and grasses harvested for hay and seed which have been included in 'Area under sown pastures and grasses'.

(*b*) Prior to 1981-82 figures related to area 'used for' crop or pasture, i.e., an area used for more than one purpose during the year was counted only once. From 1981-82, an area double cropped or an area of pasture also planted to crop has been counted separately each time used.

(*c*) Used for grazing, lying idle, fallow, etc.

The total area of agricultural establishments in 1981-82 constituted 64.3 per cent of the Australian land area, the remainder being urban areas, State forests and mining leases, with an overwhelming proportion of unoccupied land (mainly desert). The balance data includes large areas of arid or rugged land held under grazing licences but not always used for grazing. Balance data also includes variable amounts of fallow land.

The crop area data represent up to 4.0 per cent of the area of agricultural establishments and emphasises the relative importance of the livestock industry in Australia—sheep in the warm, temperate, semi-arid lands and beef cattle in the tropics. The agricultural labour force (*see* page 373) is used on large areas of land with low carrying capacity.

Crops

For this section, statistics relating to crop areas and production have been obtained from the annual Agricultural Census. The census returns are collected in all States and the two Territories at 31 March each year and relate mainly to crops sown 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. Additional statistics relating to value of agricultural commodities produced, manufactured production and overseas trade are also included. Agricultural Census data published in this section refer to the 'agricultural' year ended 31 March, while other data refer to the year ended 30 June; but for most purposes there will be little error involved in considering 'agricultural year' data as applying to the financial year.

The following table shows the area of crops in each of the States and Territories of Australia since 1860–61.

AREA OF CROPS(*a*): 1860–61 TO 1981–82

('000 hectares)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1860–61 . . .	100	157	2	145	10	62	–	–	475
1870–71 . . .	156	280	21	325	22	64	–	–	868
1880–81 . . .	245	627	46	846	26	57	–	–	1,846
1890–91 . . .	345	822	91	847	28	64	–	–	2,197
1900–01 . . .	990	1,260	185	959	81	91	–	–	3,567
1910–11 . . .	1,370	1,599	270	1,112	346	116	–	–	4,813
1920–21 . . .	1,807	1,817	316	1,308	730	120	–	1	6,099
1930–31 . . .	2,756	2,718	463	2,196	1,939	108	1	2	10,184
1940–41 . . .	2,580	1,808	702	1,722	1,630	103	–	2	8,546
1949–50 . . .	2,295	1,881	832	1,518	1,780	114	–	4	8,424
1954–55 . . .	2,183	1,904	1,049	1,711	2,069	122	–	2	9,040
1959–60 . . .	2,888	1,949	1,184	1,780	2,628	130	1	3	10,564
1964–65 . . .	4,182	2,621	1,605	2,414	3,037	163	2	4	14,028
1966–67 . . .	5,027	2,738	1,863	2,626	3,568	180	2	4	16,007
1967–68 . . .	4,590	2,208	1,883	2,191	3,592	106	6	2	14,578
1968–69 . . .	5,509	2,529	2,071	2,596	3,839	110	6	3	16,665
1969–70 . . .	4,999	2,212	2,208	2,290	3,912	98	6	2	15,728
1970–71 . . .	3,967	1,732	1,791	1,998	3,826	80	2	1	13,397
1971–72 . . .	4,186	1,925	2,017	2,278	3,751	67	7	1	14,231
1972–73 . . .	4,329	1,943	1,963	2,122	3,814	80	12	1	14,265
1973–74 . . .	4,628	1,981	1,786	2,451	4,133	74	6	1	15,060
1974–75 . . .	4,089	1,772	1,898	2,257	3,754	67	7	1	13,845
1975–76 . . .	4,285	1,851	2,010	2,116	4,208	60	8	1	14,539
1976–77 . . .	4,520	1,943	2,026	2,036	4,417	65	2	1	15,010
1977–78 . . .	4,984	2,163	2,107	2,564	4,910	70	1	1	16,800
1978–79 . . .	5,020	2,209	2,307	2,827	4,993	80	2	1	17,438
1979–80 . . .	5,243	2,243	2,334	2,771	5,281	79	2	1	17,954
1980–81 . . .	5,208	2,180	2,481	2,772	5,547	84	1	1	18,273
1981–82p . .	5,721	2,166	2,751	2,881	5,955	91	2	1	19,567

(*a*) The classification of crops was revised in 1971–72 and adjustments made to statistics back to 1967–68. After 1966–67 lucerne for green feed, hay and seed, and pasture cut for hay and harvested for seed or green feed are excluded.

NOTE: From 1970–71 to 1980–81 figures related to area 'used for' crops, ie, an area used for more than one purpose during the year was counted only once. From 1981–82, an area double cropped has been counted separately each time used.

The wide range of climatic and soil conditions over the agricultural regions of Australia has resulted in a diversity of crops being grown throughout the country. Generally, cereal crops (excluding rice, maize and sorghum) are grown in all States over wide areas, while other crops are confined to specific locations in a few States. However, scanty or erratic rainfall, limited potential for irrigation and unsuitable soils or topography have restricted intensive agriculture. Despite this, agricultural production has increased over time to meet increased demands both in Australia and from overseas.

The following table provides an Australian summary of the area, production and gross value of the principal crops.

CROPS: AREA, PRODUCTION AND GROSS VALUE

	Area ('000 hectares)			*Production ('000 tonnes)*			*Gross value ($m)*		
Crop	*1979–80*	*1980–81*	*1981–82p*	*1979–80*	*1980–81*	*1981–82p*	*1979–80*	*1980–81*	*1981–82p*
Cereals for grain—									
Barley	2,482	2,451	2,677	3,703	2,682	3,511	450	381	493
Grain sorghum	519	658	651	922	1,204	n.y.a.	96	152	143
Maize	54	56	59	151	173	n.y.a.	20	26	25
Oats	1,123	1,093	1,387	1,411	1,128	1,619	99	139	161
Rice	116	104	116	613	728	783	94	138	92
Wheat	11,153	11,283	11,880	16,188	10,856	16,330	2,478	1,684	2,480
Legumes for grain	219	225	n.y.a.	217	237	n.y.a.	43	54	65
Crops for hay—									
Oats	197	220	275	635	613	890	30	41	n.y.a.
Wheat	51	79	80	138	169	203	6	14	n.y.a.
Crops for green feed, silage—									
Barley	62	76	61	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Forage sorghum	77	104	78						
Oats	655	684	624						
Wheat	45	73	35						
Sugar cane cut for crushing	267	288	316	21,151	23,976	25,054	548	800	604
Tobacco	8	7	6	15	15	n.y.a.	59	62	64
Cotton	75	78	90	244	259	n.y.a.	135	147	159
Peanuts	32	27	32	39	43	n.y.a.	22	37	44
Linseed	17	10	7	14	7	6	3	2	1
Rapeseed	42	24	16	41	17	14	9	4	4
Safflower	54	18	33	30	8	19	6	2	5
Sunflower	221	198	180	142	139	n.y.a.	36	34	30
Fruit (excl. grapes)	98	99	102	–	–	–	407	464	463
Orchard fruit	82	83	85	–	–	–	325	366	n.y.a.
Oranges	n.a.	n.a.	n.a.	392	424	n.y.a.	78	86	n.y.a.
Apples				299	307	n.y.a.	108	119	131
Pears				124	146	n.y.a.	37	41	40
Peaches				72	79	63	24	26	22
Bananas	8	8	9	125	124	125	46	60	57
Pineapples	7	7	6	123	123	123	20	20	20
Grapes	70	70	70	865	743	897	231	205	185
Vegetables	106	103	102	–	–	–	402	509	529
Potatoes	37	36	34	857	866	n.y.a.	127	170	180
Total, all crops (excluding pastures)	**17,954**	**18,273**	**19,567**	–	–	–	**5,364**	**5,092**	**5,842**

In the tables that follow, crop statistics are shown in these groupings: wheat, coarse grains, rice, oilseeds, sugar, vegetables, fruit, grapes and other crops such as tobacco, mushrooms and fodder crops.

Cereal grains

In Australia, cereals are conveniently divided into autumn-winter-spring growing ('winter' cereals) and spring-summer-autumn growing ('summer' cereals). Winter cereals such as wheat, oats, barley and rye are usually grown in rotation with some form of pasture such as grass, subterranean clover, medics or lucerne. In recent years, alternative winter crops such as rapeseed, field peas and lupins have been introduced into cereal rotation in areas where they had not previously been grown. Rice, maize, sorghum and the millets are summer cereals with the latter two being grown in association with winter cereals in some areas. In Northern Queensland and Western Australia there are two rice growing seasons—a dry season winter crop and a wet season summer crop.

Cereals for grain form a significant percentage of both the value of Australia's agricultural commodities and of the country's export earnings. The following table shows the significance of cereal grains in the last 6 years.

CEREAL GRAINS IN AUSTRALIA: A PERSPECTIVE

Year	Cereal grains(a) Gross value	Cereal grains(a) Export value f.o.b.	Total agriculture gross value	Total Australian exports—all produce value f.o.b.	Gross value of cereal grains as a percentage of gross value of agriculture	Export value of cereal grains as a percentage of total Australian exports
	$m	$m	$m	$m	per cent	per cent
1976–77	1,584.0	1,264.9	6,757	11,652	23.4	10.9
1977–78	1,354.8	1,261.9	6,972	12,270	19.4	10.3
1978–79	2,957.6	1,082.0	10,225	14,247	28.9	7.6
1979–80	3,245.4	2,764.7	11,764	18,870	27.6	14.7
1980–81	2,532.0	2,160.6	11,610	19,169	21.8	11.3
1981–82p	3,419.5	2,339.9	12,420	19,586	27.5	11.9

(a) Principally wheat, barley, oats, grain sorghum, rice and maize, with panicum/millet, canary seed and rye being minor cereals.

For more up-to-date and detailed information on cereals for grain *see* the following publications: *Agricultural Industries: Structure of Operating Units, Australia* (7102.0), *Agricultural Land Use and Selected Inputs, Australia* (7411.0), *Principal Agricultural Commodities, Australia (Preliminary)* (7111.0), *Selected Agricultural Commodities, Australia (Preliminary)* (7112.0), *Crops and Pastures, Australia* (7321.0), *Cereal Grains: Estimates of Intended Sowings, Australia* (7304.0), *Cereal Grains: Estimates of Area Sown, Australia (Preliminary)* (7305.0), *Value of Agricultural Commodities Produced: Australia, First Estimates* (7501.0), *Value of Agricultural Commodities Produced: Australia, Second Estimates* (7502.0), *Value of Agricultural Commodities Produced, Australia* (7503.0).

Wheat

Wheat is grown extensively in all States except Tasmania, and is the most important crop in Australia in terms of area, production and value of exports. Factors which have contributed to the development of the industry are the increasing demand for wheat on overseas markets, the availability of suitable cropping land and the organisation of overseas marketing and of research. As a large proportion of the wheat crop is exported, wheat marketing arrangements play an important role. The Australian Wheat Board was constituted in September 1939, under *National Security (Wheat Acquisition) Regulations*, to purchase, sell or dispose of wheat or wheat products and to manage or 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 major purpose in founding the Australian Wheat Board with responsibility for acquiring and marketing the Australian wheat crop was the protection of wheat farmers by lowering financial risks on each crop. The strength of the Australian Wheat Board is derived from its ability to act as the single Australian authority responsible for marketing of wheat abroad and to use that function as a basis for careful co-ordination of sales efforts and market development. The *Wheat Industry Stabilization Act* 1948 reconstituted the Australian Wheat Board to administer the first stabilisation plan, the concept of which was to provide growers with a 'guaranteed price' for a specific quantity of exported wheat. Since then there have been six Five Year Stabilisation Plans.

Wheat marketing and pricing arrangements: 1979–80 to 1983–84

On 29 November 1979 the *Wheat Marketing Act* 1979 received Royal Assent and new wheat marketing and pricing arrangements became operative for five seasons commencing from 1 October 1979. The basic elements of the new arrangements were negotiated between the Australian Wheatgrowers' Federation and Commonwealth and State Governments and necessitated the enactment of complementary Commonwealth and State legislation.

The current wheat marketing and pricing arrangements carry forward a number of features of the previous Stabilization Plan. In this respect the main features are: the Australian Wheat Board (AWB) is maintained as the sole statutory authority responsible for the marketing of wheat in Australia and of wheat and flour sold overseas; the constitution and general powers of the Wheat Board remain largely unchanged; the legislation applies to a seven-year period except for the pricing provisions which run for five years.

The following are important features introduced in the current plan.

Guaranteed Minimum Price. Shortly after delivery of wheat to the Australian Wheat Board or upon wheat coming under the Board's control, wheatgrowers receive a first payment by way of an advance payment calculated at the Guaranteed Minimum Price (GMP) increased or decreased for such allowances as wheat quality, varietal characteristics and storage, handling and transportation charges. The GMP is set at 95% of the average of the net pool returns for the previous two seasons and an estimate of the net pool return for the season in question and is guaranteed by the Commonwealth Government in the sense that any deficiency between the net pool return and the GMP would be met by the Government. This has not been necessary to date.

The GMP represents a substantial proportion of the growers' return from a pool, after deductions are made for the particular State's storage and handling charges, individual grower's rail freight and for contributions to research (Wheat Tax) and to the Wheat Finance Fund (Wheat Levy). Movements in the GMP from one season to the next are subject to a limit of 15 per cent up or down.

These arrangements provide the industry with support from the Government that is designed to help it overcome any short-run down-turn in producers' returns. At the same time the basis for determining the GMP ensures that the support will be inevitably modified with longer-run adjustments in market returns whether these adjustments be for a rising or a falling market. The GMP for 1981–82 is $141.55 per tonne for Australian Standard White (ASW) Wheat.

It is the intention that the GMP for each season be fixed before 1 December each year when the bulk of the harvest commences to be delivered. However the Act also provides for an interim payment to be made to growers who deliver wheat to the Board prior to the determination of the GMP for that season. An interim advance of $112.13 per tonne, less freight was made for the 1981–82 season.

Financial Arrangements. Traditionally the AWB has borrowed from the Rural Credits Department (RCD) of the Reserve Bank of Australia to obtain funds to make first advances to growers and to meet pool marketing expenses. Under the Reserve Bank Act RCD advances are for a maximum period of one year and the Board is required to repay these borrowings by 31 March in the year following the conclusion of the season.

With the introduction of GMP, it was necessary to develop commercial funding techniques to enable the Board to raise sufficient moneys from the Australian short term money market to pay growers upon delivery of their wheat. In the 1981–82 season, these borrowings amounted to $2,000 million. The Act provides that the Board may borrow to finance the first payment and pool expenses not only from the RCD but also, subject to the approval of the Minister for Primary Industry, from commercial sources.

Because the Government, for monetary policy reasons, has required the Board to borrow commercially in recent years instead of borrowing RCD moneys, the Act provides that the Government will meet any borrowing costs that are additional to those that would have been incurred had the borrowing been from the RCD. The Government's undertaking does not extend to borrowing costs incurred after 31 March following the close of the season to which the borrowings refer.

The Wheat Finance Fund established by the *Wheat Marketing Act* 1979 is a $100 million revolving fund of growers' monies. The $80 million previously held in the former Wheat Prices Stabilization Fund was transferred into the Finance Fund and is supplemented by the proceeds of a levy each season (presently $2.50 per tonne) of all wheat delivered to or sold by the Board. Any excess above $100 million in the Fund is returned to growers on a first-in-first-out basis. The Wheat Finance Fund provides a source of funds from which the Board is able to re-finance any outstanding debt to the Reserve Bank on a season's pool. Borrowings from the Fund if they were ever required, would be made at a rate of interest determined by the Minister from time to time.

Domestic Pricing. The arrangements for the pricing of wheat sold on the domestic market recognise the different segments of the market, namely, the use of wheat for milling into flour for human consumption and the use of wheat for stockfeed and for industrial purposes.

The 1981–82 season price for Australian Standard White wheat for human consumption sold domestically is $187.20 per tonne; Australian Standard White wheat f.o.r. ports basis. This amount includes a $3.19 per tonne component as the Tasmanian freight loading (see later). The price is determined according to a formula which takes account of movements in export prices and an index of prices paid by farmers while providing, over time, a margin above export prices. Movements in the formula price from year to year are subject to a limit of 20 per cent.

A loading is included in the price of wheat for human consumption and is paid into the Tasmanian Freight Fund, which is used exclusively to cover the cost of shipping wheat from the mainland to Tasmania each season. For 1981–82 the loading is $3.19 per tonne.

The domestic prices for industrial and stockfeed wheats are set periodically by the Board in the light of its commercial judgment and having regard to orderly marketing considerations. Under the provisions of the *Wheat Marketing Act* 1979 the Board has appointed two Consultative Groups representing grower and user interests. The function of the Groups is to provide relevant and up to date information and assessments to be taken into account by the Board, in determining prices for wheat sold for stockfeed and industrial purposes, having regard to the aims of balancing the commercial interests of producers and users and maintaining the orderly marketing of wheat produced and used for stockfeed and industrial purposes. The Groups do not recommend price levels. The information received by the Board from the Groups, its assessment of this information and its subsequent pricing decisions are reviewed by the Australian Agricultural Council.

Domestic Marketing Arrangements. The Australian Wheat Board exercises sole authority for the export marketing of wheat and flour and for the marketing of wheat domestically. The Board is authorised to issue permits to enable wheatgrowers to deliver their wheat, subject to certain conditions, other than to an authorised receiver of the Board. It is permitted to issue permits to growers:

(i) to sell seed wheat;
(ii) to sell inferior quality wheat including screenings unacceptable for receival by the Board;
(iii) to deliver wheat from a property on which it is grown to another farm under the same or joint ownership for use on the latter; or
(iv) to deliver wheat to a miller for gristing and return the produce of the gristing to the farm on which it was grown for use on that farm; or
(v) to sell wheat under authorized grower-to-buyer direct delivery transactions. Under these arrangements the Board is authorised to grant a permit for delivery by a grower direct to a buyer subject to conditions the Board determines as to price, freight allowance and the quality of the wheat. The proceeds of sale of the wheat involved are incorporated in the Board's pooling arrangements and the provisions for payments to growers apply as if the wheat had in fact been delivered to the Board's pool. However, provision is made for any quality differential agreed by the grower and buyer and for any cartage cost adjustment to be passed back to the buyer. Provision is also made for the Board to deduct from the payment to the grower a charge (covering capital, depreciation and costs of maintaining capital equipment) relating to costs associated with the bulk handling authority relevant to the particular grower. The specific charge is determined under State legislation.

Wheat which is retained by a grower on a farm on which it is grown for use on that farm does not come under the control of the Wheat Board.

Proposed Amendments to Legislation. The Government has decided to seek certain amendments to the existing wheat marketing legislation. These will require State complementary legislation. Proposals agreed include an expansion of the Board's powers to operate on futures markets, the accumulation of reserves by the Board for specific purposes, optional arrangements for the payment of the GMP, as well as machinery amendments designed to increase the efficiency and flexibility of the Australian Wheat Board.

IAC Reference. A reference on the wheat industry was sent to the Industries Assistance Commission in July 1982. The Commission has been asked to report by 30 September 1983 on whether assistance should be provided to the Wheat industry following the 1983–84 season and, if so, the nature and extent of such assistance. The Commission was requested to have particular regard to the marketing and pricing arrangements applying to the industry.

Wheat varieties and standards of wheat

The practice of breeding wheat suitable to local conditions has long been established in Australia. William Farrer (1845–1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have followed him have proved of immense benefit to the industry. Their efforts have resulted in the development of disease-resistant varieties, better average yields, and a greater uniformity of sample, with which have accrued certain marketing advantages as well as an improvement in the quality of wheat grown. A detailed table of wheat varieties sown appears in *Crops and Pastures, Australia* (7321.0) and, previously, in *Wheat, Australia* (7307.0). The continuation of wheat breeding activities has led to expansions in the areas sown to wheat as well as in yields per hectare, but it is difficult to distinguish progress due to improved wheat varieties from that due to crop/pasture rotations, increased mechanisation and superphosphate-improved pastures.

The quality of wheat (its flour yielding capacity, protein content, hardness and physical dough properties) is governed by a combination of the wheat variety and the climatic conditions under which it is grown. Since 1954, Australian wheat has been marketed under distinct classifications. This practice

of segregation has been widely employed to enhance the marketability of Australian wheat, and in recent years up to twenty-two separate grades have been made available for export. Within the Australian wheatbelt there exist wide ranges of soil fertility, rainfall, day length and ambient temperature, and, by developing varieties which complement the growing conditions, it has been possible to produce wheat with qualities suitable for virtually every commercial application. Particulars of Australian wheat standards may be found in *Crops and Pastures, Australia* (7321.0).

Central Grain Research Laboratory

In 1976, the Australian Wheat Board established this laboratory in Sydney as an addition to the facilities of the Bread Research Institute of Australia. The main functions of the laboratory are to test and report on the Australian crop, to analyse and compare competitor wheats from other countries and to develop research programs to aid the marketing of wheat.

WHEAT: AREA, PRODUCTION AND RECEIVALS

Season	*Area*		*Production*		*Australian Wheat Board receivals(a)*
	For grain	*All purposes*	*Grain*	*Gross value*	
	'000 ha	'000 ha	'000 tonnes	$m	'000 tonnes
1976-77	8,956	9,054	11,800	1,051.5	10,933
1977-78	9,955	10,078	9,370	934.9	8,540
1978-79	10,249	10,321	18,090	2,295.8	17,456
1979-80	11,153	11,249	16,188	2,478.0	15,327
1980-81	11,283	11,436	10,856	1,684.1	10,058
1981-82p	11,880	11,995	16,330	2,480.0	(b)15,542

(a) Australian Wheat Board receivals are for the season commencing 1 December; production data is for the year ending 31 March. (b) Receivals to 18 September 1982.

WHEAT FOR GRAIN: AREA AND PRODUCTION, BY STATE

Season	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australia*
			AREA ('000 hectares)				
1976-77	3,116	1,103	582	839	3,314	2	8,956
1977-78	3,377	1,270	607	1,090	3,609	1	9,955
1978-79	3,162	1,337	747	1,295	3,706	1	10,249
1979-80	3,415	1,457	733	1,424	4,121	2	11,153
1980-81	3,345	1,431	727	1,445	4,333	2	11,283
1981-82p	3,600	1,307	943	1,441	4,587	2	11,880
			PRODUCTION ('000 tonnes)				
1976-77	5,141	1,780	794	832	3,249	4	11,800
1977-78	3,846	1,497	569	511	2,945	2	9,370
1978-79	6,640	2,998	1,962	2,086	4,400	3	18,090
1979-80	6,000	3,250	846	2,349	3,739	4	16,188
1980-81	2,865	2,538	485	1,650	3,315	3	10,856
1981-82p	5,910	2,466	1,485	1,695	4,771	2	16,330

PRODUCTION AND DISPOSAL OF WHEAT FOR GRAIN

('000 tonnes)

Season	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Production	11,982	11,800	9,370	18,090	16,188	10,856
Less balance held on farms for—						
Seed usage	535	598	616	634	857	800
Feed and other uses	189	270	212			
Gross receivals	11,258	10,932	8,542	17,456	15,331	10,056
Opening stocks(*a*)	1,658	2,670	2,071	816	4,629	4,324
Total availability for sale	12,916	13,602	10,613	18,272	19,960	14,380
Export shipments—						
Wheat	7,962	9,502	7,918	11,526	13,049	9,451
Flour and wheat products(*a*)	271	261	180	167	147	163
Domestic sales—						
Flour(*a*)	1,304	1,261	1,259	1,298	1,315	1,339
Stockfeed	620	380	438	621	1,068	1,179
Breakfast feeds etc. (*a*)	68	55	43	41	45	49
Total disposal	10,225	11,459	9,838	13,653	15,624	12,181
Availability (—) Disposals	2,691	2,143	775	4,619	4,336	2,199
Closing stocks(*a*)	2,670	2,071	816	4,629	4,324	2,174
Apparent wastage	21	72	-41	-10	12	25

(*a*) Wheat and flour in terms of wheat.

NOTE: The Australian Wheat Board is the source of receivals, export shipments, domestic sales data, and opening and closing stocks; the ABS records other data.

Wheat pools

Details of wheat receivals by State of origin for the several Pools together with Pool payments and times of payment will be found in the latest issue of *Crops and Pastures, Australia* (7321.0).

International Wheat Agreement

A number of Agreements have operated since 1949 to provide a valuable framework for continuing international consultation and co-operation on world wheat matters, including the regular monitoring of the world wheat situation. The 1971 International Wheat Agreement (the first expiring on 30 June 1974) has been extended six times by protocol, the most recent extension expiring on 30 June 1983. It comprises two separate legal instruments, the Wheat Trade Convention and the Food Aid Convention, linked by a common preamble. Negotiations towards a new Agreement were held in January 1978 and January–February 1979 under the auspices of the U.N. Conference on Trade and Development (UNCTAD). No consensus was reached on an Agreement with economic provisions designed to bring about a measure of price stability by the accumulation and release of internationally co-ordinated nationally-held reserve stocks. The 1979 conference was adjourned indefinitely. Subsequently, in 1980 and 1981, the International Wheat Council considered other possible bases for an Agreement with its attention focussing on a more flexible approach to stockholding with reserve stock action being taken on the basis of a consensus within the Council rather than applying automatically at a particular time as a result of price movements; this was known as the 'alternative approach'. With the strong opposition of the U.S. Administration to the international co-ordination of the stockholding of wheat, the 'alternative approach' proved to be not negotiable. However, the Council agreed, in December 1981, on immediate steps to strengthen the operation of the existing Agreement. The Council also decided that it was imperative to continue the search for an agreed basis for a new Agreement, keeping in view the paramount objectives of market stability and food security. In the meantime, it seems very likely the current Agreement will be further extended beyond 1983.

Details of the earlier International Wheat Agreements are published in previous editions of the Year Book, in the latest issue of *Crops and Pastures, Australia* (7321.0) and in previous issues of *Wheat, Australia* (7307.0).

WHEAT EXPORTS: A COMPARISON WITH OTHER EXPORT COMMODITIES(*a*)

Year	*Wheat for grain: Exports*		*Total Australian exports—all produce: Value f.o.b.*	*Export value of wheat for grain as a percentage of total Australian exports*
	Quantity	*Value f.o.b.*		
	'000 tonnes	$m	$m	per cent
1976–77	7,945	863.5	11,652	7.4
1977–78	10,949	1,011.1	12,270	8.2
1978–79	6,824	794.2	14,247	5.6
1979–80	14,876	2,176.8	18,870	11.5
1980–81	10,552	1,729.4	19,169	9.0
1981–82p	10,912	1,720.0	19,586	8.8

(*a*) These statistics exclude re-exports.

EXPORTS OF WHEAT AND FLOUR

Country of consignment	*Quantity ('000 tonnes)*			*Value f.o.b. ($m)*		
	1979–80	*1980–81*	*1981–82p*	*1979–80*	*1980–81*	*1981–82p*
WHEAT						
Bangladesh	449.8	132.7	124.2	67.9	22.5	19.2
China—excl. Taiwan Province	3,572.0	1,421.3	1,383.5	452.9	236.5	215.7
Egypt, Arab Republic of	1,683.3	1,788.7	1,552.7	251.1	285.0	243.3
India	—	—	782.9	—	—	123.2
Indonesia	659.6	494.7	480.3	98.2	76.5	75.5
Iran	753.5	666.1	544.3	120.0	108.9	83.8
Iraq	1,200.8	134.8	750.5	179.3	20.9	119.8
Japan	984.8	780.9	995.1	147.0	125.7	156.4
Kuwait	147.1	653.1	228.6	21.9	102.7	33.9
Malaysia	365.8	292.5	294.2	53.6	46.4	44.4
Saudi Arabia	168.1	166.9	122.2	31.1	28.6	21.5
Singapore	350.7	174.9	50.7	45.4	26.5	7.6
Sri Lanka	63.0	170.8	129.8	8.0	28.0	20.8
U.S.S.R.	2,653.2	2,479.9	2,408.0	432.0	421.7	386.0
Yemen Arab Republic	330.3	257.1	332.0	52.5	42.7	51.2
Other countries	1,494.4	937.6	733.5	215.9	156.8	117.7
Total	**14,876.4**	**10,552.0**	**10,912.5**	**2,176.8**	**1,729.4**	**1,720.0**
FLOUR(*a*)						
Mauritius	12.5	16.3	21.0	2.9	3.9	5.9
New Caledonia	4.4	7.4	8.1	1.0	1.8	1.9
Papua New Guinea	17.3	12.9	0.5	4.3	3.5	0.1
Polynesia (FR)	2.0	2.7	3.2	0.5	0.7	0.7
Samoa (Western)	3.6	4.3	4.9	0.8	1.0	1.1
Solomon Islands	3.1	3.4	2.9	0.7	0.9	0.7
Sudan	—	14.6	—	—	4.1	—
Tonga	3.5	3.6	4.8	0.8	0.9	1.1
Other countries	9.9	24.2	15.6	2.3	6.6	4.2
Total	**56.3**	**89.4**	**61.0**	**13.3**	**23.4**	**15.7**

(*a*) Plain, white and self-raising flour, sharps and wheatmeal for baking.

WORLD WHEAT: AREA AND PRODUCTION

Source: International Wheat Council, *Review of the World Wheat Situation, 1980–81*

	Area (million hectares)			*Production (million tonnes)*		
	1979–80	1980–81	1981–82p	1979–80	1980–81	1981–82p
Europe	24.9	26.2	25.4	83.5	99.0	90.9
EEC (10)	12.0	12.6	12.6	48.8	55.0	53.2
U.S.S.R.	57.7	61.5	59.3	90.2	98.1	88.0
North & Central America	36.4	40.6	45.7	77.6	86.5	102.3
Canada	10.5	11.1	12.2	17.2	19.2	24.5
U.S.A.	25.3	28.7	32.7	58.1	64.5	74.8
South America	9.8	8.8	8.8	13.1	11.8	10.9
Asia	80.6	79.4	79.8	139.6	129.3	136.9
China(*a*)	29.0	28.0	27.5	62.7	54.2	57.0
India	22.6	22.0	22.3	35.5	31.6	36.5
Iran	5.5	5.8	6.1	5.8	5.7	5.8
Pakistan	6.7	6.9	6.9	10.0	10.8	11.4
Turkey	9.4	9.4	9.5	17.5	17.4	17.5
Africa	8.4	7.9	7.8	8.7	8.5	8.3
Oceania	11.2	11.4	12.1	16.5	11.2	16.7
Australia	11.2	11.3	11.9	16.2	10.9	16.3
Total world	**228.9**	**235.7**	**238.9**	**429.2**	**444.5**	**454.0**

(*a*) Excludes Taiwan Province; FAO estimates.

NOTE 1. Crop years shown cover northern hemisphere harvests combined with those of the southern hemisphere which immediately follow.
2. The 10 members of the EEC are: Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg, Netherlands and the United Kingdom.

Coarse grains

In the late sixties and early seventies, restrictions on wheat deliveries and low returns in the sheep industry caused a resurgence of interest in coarse grain crops and the newer oilseed crops. The resultant higher level of plantings and production has been maintained, despite the lifting of wheat delivery quotas and a general improvement in market prospects for wheat, wool and meat.

Oats

Oats is traditionally a cereal of moist temperate regions. However, improved varieties and management practices have enabled oats to be grown over a wide range of soil and climatic conditions. It has a high feed value and produces a greater bulk of growth than other winter cereals; it needs less cultivation and responds well to superphosphate and nitrogen. Oats has two main uses—as a fodder crop, following sowing or fallow or rough sowing into stubble or clover pastures or as a main crop. Fodder crops can either be grazed and then harvested for grain after removal of live stock or else mown and baled or cut for chaff. Oats produced in New South Wales are marketed through a statutory board while the Victorian Oatgrowers' Pool and Marketing Company Ltd and private merchants market the bulk of oats produced in Victoria. In South Australia the Barley Marketing Act was amended in 1977 to give the Australian Barley Board powers over oat marketing in that State. Under the legislation amendments the Board controls export sales and grain resold on the local market; however, direct sales between producers and consumers are outside the Board's supervision. In Western Australia, oats are marketed under a warehousing system operated by Co-operative Bulk Handling Ltd.

Oats is usually next in importance to wheat and barley among the grain crops. About three-quarters of the crop is used domestically as stockfeed or for human consumption.

OATS FOR GRAIN: AREA, PRODUCTION AND EXPORTS

		Production		*Exports*	
Year	*Area*	*Quantity*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	$m
1976–77	995	1,072	74.4	364	33.4
1977–78	1,076	990	69.1	218	19.6
1978–79	1,359	1,763	100.5	290	24.9
1979–80	1,123	1,411	98.8	472	43.8
1980–81	1,093	1,128	139.5	196	27.7
1981–82p	1,387	1,619	161.0	259	24.1

Barley

This cereal contains two main groups of varieties, 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes. Barley is grown principally as a grain crop although in some areas it is used as a fodder crop for grazing with grain being subsequently harvested if conditions are suitable. It is often grown as a rotation crop with wheat, oats and pasture. When sown for fodder, sowing may take place either early or late in the season, as it has a short growing period. It may thus provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock or sold for malting.

Crops sown for malting purposes require a combination of light textured soil of moderate fertility, reliable rainfall, and mild weather during ripening. The main barley-growing areas in Australia are situated in South Australia, but considerable quantities are grown also in New South Wales, Western Australia, Victoria and Queensland. In December 1980 a joint Commonwealth/Industry research scheme for the barley industry commenced operation. The scheme is financed by a levy on barley production and a Commonwealth contribution not exceeding the total of the levy.

Barley Boards

Barley is marketed by statutory marketing authorities in each of the mainland States. The Australian Barley Board controls marketing in both South Australia and Victoria while separate authorities operate in the three other States.

BARLEY FOR GRAIN: AREA, PRODUCTION AND EXPORTS

		Production				*Exports*	
				Total			
Year	*Area*	*2-row*	*6-row*	*Quantity*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha		—'000 tonnes—		$m	'000 tonnes	$m
1976-77	2,321	2,627	220	2,847	294.8	2,100	222.5
1977-78	2,803	2,261	123	2,383	205.0	1,325	121.8
1978-79	2,785	3,787	220	4,006	339.1	1,744	149.5
1979-80	2,482	3,545	159	3,703	449.8	2,962	353.5
1980-81	2,451	2,563	119	2,682	380.9	1,598	242.7
1981-82p . . .	2,677	3,303	208	3,511	492.8	1,561	243.7

Grain sorghum

The sorghums are summer growing crops which are used in three ways: grain sorghum for grain; sweet or fodder sorghum, sudan grass and, more recently, columbus grass for silage, green feed and grazing; and broom millet for brooms and brushware.

Grain sorghum has been grown extensively only in the last two decades. Rapid increases in production have resulted in a substantial increase in exports over this period. The grain is used primarily as stockfeed and is an important source for supplementing other coarse grains for this purpose.

The climatic conditions of Queensland and northern New South Wales are particularly suited to the growing of sorghum. In Queensland, grain sorghum production is concentrated in the Darling Downs, Fitzroy and Wide Bay-Burnett Divisions. In New South Wales, the northern and north-western slopes and plains are the main areas.

In Queensland, a degree of orderly marketing is ensured by the operation of the Central Queensland Grain Sorghum Marketing Board (a statutory authority in a defined area in central Queensland) and the Queensland Graingrowers' Association, which receives sorghum mainly from southern Queensland. A State statutory marketing board handles sorghum grown in New South Wales.

GRAIN SORGHUM: AREA, PRODUCTION AND EXPORTS

		Production		*Exports*	
Year	*Area*	*Quantity*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	$m
1976-77	532.1	956.0	80.3	829.2	76.3
1977-78	394.1	714.4	59.5	384.5	35.4
1978-79	468.7	1,125.2	97.4	516.3	45.5
1979-80	518.6	922.0	96.1	580.4	59.8
1980-81	657.9	1,203.9	152.0	462.7	57.5
1981-82p	651.2	n.y.a.	143.3	1,298.0	155.8

Maize

Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. Maize for grain is almost entirely confined to the south-east regions and Atherton Tablelands of Queensland, the north coast, northern slopes and tablelands and the Murrumbidgee Irrigation Area in New South Wales. Small amounts are grown in all States, except South Australia, for green feed and silage, particularly in association with the dairy industry.

A statutory board controls the marketing of maize in the Atherton Tablelands area of Queensland while the Queensland Graingrowers' Association markets maize grown in the south-east. In New South Wales, the Yellow Maize Marketing Board for the State of New South Wales (established in 1976) which handled the marketing of maize, ceased operation on 30 September 1981. A large proportion of the crop is sold directly to food processors.

MAIZE: AREA, PRODUCTION AND EXPORTS

		Production		*Exports*	
Year	*Area*	*Quantity*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	$m
1976–77	53.0	144.2	13.1	33.0	2.8
1977–78	45.4	130.1	12.2	11.1	1.6
1978–79	50.0	168.8	15.6	16.9	1.3
1979–80	54.1	150.9	19.8	7.7	0.9
1980–81	56.5	172.8	26.1	29.1	3.4
1981–82p	59.2	n.y.a.	25.5	14.2	1.9

Rice

In Australia, rice was first grown commercially in 1924–25 in the Murrumbidgee Irrigation Area, one of three irrigation areas in southern New South Wales where rice is now produced. Today, about 96 per cent of Australia's rice is grown in New South Wales. The remainder is grown in the Burdekin River basin and at Mareeba in Northern Queensland with small quantities grown in the Ord River region of Western Australia.

Rice is a summer growing crop in N.S.W. The combination of irrigation water and the relatively cloudless days characteristic of summers in temperate regions of the world is the main contributing factor to the extreme high yields per hectare often achieved by N.S.W. growers. In Western Australia and Queensland, a winter and a summer crop are grown.

State statutory marketing boards are responsible for the marketing of the N.S.W. and Queensland crops.

RICE: AREA, PRODUCTION AND EXPORTS

		Production		*Exports*	
Year	*Area*	*Quantity(a)*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	$m
1976–77	92.0	529.8	59.4	256.5	57.1
1977–78	91.4	489.7	61.1	277.5	66.6
1978–79	110.2	692.2	97.8	241.2	66.2
1979–80	116.4	613.2	93.8	457.3	129.9
1980–81	103.9	727.5	138.2	281.3	99.9
1981–82p	116.3	782.7	91.8	596.5	194.5

(*a*) In terms of paddy (or rough) rice.

Oilseeds

Specialised Oilseeds

The specialist oilseed crops grown in Australia are, sunflower, soybeans, rapeseed, safflower and linseed. Sunflower and soybeans are summer grown whilst the others are winter crops. In Australia, oilseeds are crushed for their oil, which is used for both edible and industrial purposes and protein meals for livestock feeds.

Oilseed crops are grown in all States but the largest producing regions are the grain growing areas of the Eastern States.

Sunflower

When crushed, sunflower seed yields a high quality dual purpose oil used primarily to manufacture margarine, salad and cooking oils.

Queensland produces about two thirds of the Australian crop with the Darling Downs and Central Highlands being the major regions. New South Wales is the next largest producer with the North West of the State dominating production. Smaller amounts are produced in all other states except Tasmania.

Soybeans

The major uses of soybean oil are in salad and cooking oils and margarine. Small amounts are used in the production of paints, detergents and plastics. Soybean also yields a high protein feed for livestock with a small proportion used to manufacture adhesives and synthetic fibres and meats.

Queensland and New South Wales produce virtually all of Australia's soybean crop. The main producing areas are the irrigation districts of the Darling Downs and northern New South Wales. Lesser areas include the Burnett and Lockyer regions of Queensland while production of raingrown soybeans is expanding on the North Coast of New South Wales.

In irrigated areas, soybeans have increasingly been used as a rotational crop for cotton.

Rapeseed

The main use of rapeseed oil has been in salad and cooking oils with a small amount being used for industrial purposes. However, the use of rapeseed oil with a maximum erucic acid content of five per cent to be used in margarine production has been permitted in New South Wales since late 1981.

The major production area is the south east of South Australia followed by the tablelands and slopes of New South Wales. Smaller levels of production also occur in Victoria, mainly in the Western Districts and in the south coast region of Western Australia.

Following significant increases in the 1960's and 1970's, rapeseed production declined rapidly due to problems of blackleg disease and erucic acid content. Production has recovered in recent years with the development of varieties to overcome these problems and in response to the crop rotation benefits of rapeseed.

Safflower

The oil from safflower is used in the production of cooking oil, margarine, soaps, paints, varnishes, enamels and textiles. In recent years, New South Wales and Queensland together have produced around 90 per cent of Australian output. In Queensland, most production occurs in the Central Highlands with smaller amounts coming from the Dawson-Callide Valley and the Darling Downs. New South Wales production is centred on the Central West.

Wide fluctuations in safflower production since the mid 1960's have been due to variable seasonal conditions affecting yields and the profitability of other crops which has influenced plantings.

Linseed

The oil from crushed linseed is used in the manufacture of paints, varnishes, technical inks and linoleum.

The main producing areas are the wheat belt of New South Wales, the Darling Downs in Queensland, the Western Districts of Victoria and, to a lesser extent, the south-eastern districts of Victoria. Linseed production has been generally declining in recent years.

Despite significant growth in the oilseeds industry during the late 1960's and 1970's, oilseeds remain a relatively young industry in Australian agriculture.

In recent years, production levels of the specialist oilseed crops has declined reflecting mainly the effects of drought conditions but also the rapid expansion in cotton production and farmer preference for more traditional crops such as wheat and coarse grains. The expected profitability of oilseeds relative to these crops will continue to influence future production levels in the industry. This profitability will be related to domestic and international markets for protein meals and vegetable fats and oils.

SELECTED OILSEED CROPS: AREA, PRODUCTION AND GROSS VALUE

Year	*Sunflower*	*Soybeans*	*Rapeseed*	*Safflower*	*Linseed*	*Total*	*Peanuts*
			Area ('000 hectares)				
1976–77	134.6	34.6	7.7	12.9	15.3	205.1	31.0
1977–78	220.4	49.9	19.1	39.0	43.8	372.2	30.3
1978–79	260.7	53.7	22.3	74.7	13.1	424.5	36.9
1979–80	221.1	56.5	41.6	53.6	17.2	390.0	31.7
1980–81	197.7	39.6	23.6	18.3	10.0	289.2	27.1
1981–82p	180.0	n.y.a.	15.5	33.1	6.7	n.y.a.	31.8
			Production ('000 tonnes)				
1976–77	74.9	55.2	8.5	6.3	16.4	161.3	31.9
1977–78	158.3	76.5	15.7	26.3	27.9	304.7	39.0
1978–79	186.2	98.7	23.4	57.7	12.9	378.9	62.3
1979–80	141.7	82.0	41.1	30.0	14.4	309.2	38.9
1980–81	139.0	73.2	17.2	8.1	7.4	244.9	43.2
1981–82p	n.y.a.	n.y.a.	14.1	19.0	6.4	n.y.a.	n.y.a.
			Gross Value ($ million)				
1976–77	21.5	14.7	1.5	1.4	3.4	42.5	14.4
1977–78	36.6	17.6	3.0	5.4	5.0	67.6	20.2
1978–79	45.8	24.6	4.8	11.0	2.6	88.8	28.7
1979–80	36.3	21.6	9.1	6.0	3.1	76.1	22.3
1980–81	34.3	22.4	4.5	2.2	2.2	65.6	36.6
1981–82p	30.2	n.y.a.	3.9	5.2	1.5	n.y.a.	43.8

Other Oilseeds

Peanuts and cottonseed are summer crops grown primarily for human consumption and fibre purposes respectively. The rapid expansion of the cotton industry in recent years has resulted in cottonseed becoming the major oilseed in Australia.

Peanuts

Peanut oil is used extensively as cooking and salad oil and in the manufacture of margarine.

The production of peanuts in Australia is centred on the Burnett and Atherton Tableland regions of Queensland. A small amount of production also occurs in New South Wales. Peanut production has been rising gradually for a number of years and 1978–79 was a record year due mainly to record yields.

Cotton

This annual shrub requires a hot climate and careful management, particularly in relation to weed, disease and insect control. Lint (long fibres) is extracted from the seed cotton in the ginneries and is used for yarn. The residue, consisting of linters (short fibres), kernels and hulls (outer seed coat), is treated in oil mills. Linters are used in the manufacture of felts and other materials where fibre length is of little importance. The kernels, when crushed, produce an oil which is used for food and for industrial purposes. The residual meal is a useful high protein stockfeed; the hulls may be used as fuel.

Over three-quarters of Australia's total production of cotton lint is grown in New South Wales, principally in the Namoi, Macquarie and Gwydir Valleys and the Bourke area. Irrigation water for these areas is provided from the Keepit, Burrendong, Copeton and Glenlyon dams and the Darling River. The rest is grown in Queensland, in the Emerald, St George, Biloela and Darling Downs areas. Most of these areas are also irrigated. Australian production has for some time satisfied most of the requirements of local mills for short and medium staple cotton. Since the mid 1970s there has been very strong investment growth in the cotton industry and the resultant surge in plantings has resulted in large amounts of cotton becoming available for export.

Exports from the 1981–82 crop will account for about 85 per cent of production, and are expected to be about 112,000 tonnes of raw cotton and lint, valued at around $150 million, with Japan and Hong Kong being the main markets.

A further expansion in Australian cotton plantings is expected in 1982–83 although low levels of water held in some dams may restrict the number of irrigations possible during the growing season. It is unlikely that local yarn spinners will increase production significantly in the medium term. Consequently any further growth in production is likely to be accompanied by a growth in cotton exports.

COTTON: AREA, PRODUCTION AND EXPORTS

Year	Area	Seed cotton (a) Quantity	Seed cotton (a) Gross value	Cottonseed(b)	Lint(c)	Raw cotton export Quantity	Raw cotton export Value f.o.b.
	'000 ha	'000 tonnes	$m	'000 tonnes	'000 tonnes	'000 tonnes	$m
1976-77	35.3	82.8	39.8	45.6	28.0	5.5	7.2
1977-78	41.6	131.5	61.2	72.1	44.2	9.8	10.9
1978-79	49.8	155.2	76.0	78.5	53.0	23.6	28.9
1979-80	75.0	243.7	135.3	135.8	83.2	48.5	66.9
1980-81	77.9	236.6	147.2	161.4	98.9	58.7	92.1
1981-82p	89.8	n.y.a.	159.5	189.3	116.0	80.5	117.1

(a) Before ginning. (b) Estimated by the Bureau of Agricultural Economics. (c) Provided by the Raw Cotton Marketing Advisory Committee.

Sugar

Sugar cane is grown commercially in Australia along the east coast over a distance of some 2,100 kilometres in a number of discontinuous areas from Maclean in northern New South Wales to Mossman in Queensland. The geographical spread contributes to the overall reliability of the sugar cane crop and of Australia's record as a reliable sugar supplier.

Approximately 95 per cent of production occurs in Queensland, with some 75 per cent of the crop grown north of the Tropic of Capricorn in areas where rainfall is reliable and the warm, moist and sunny conditions are ideal for the growing of sugar cane. The total area of land allocated to cane growing, among the 6,500 farms in 1981-82 is 398,000 hectares. Farm sizes range between 20-70 hectares.

Australian cane farmers are regarded as amongst the most efficient in the world and employ a high degree of mechanisation in ploughing, planting, harvesting, and transportation activities. The Australian industry was the first in the world to introduce mechanical cultivation and harvesting techniques and by 1964 the entire industry had converted to bulk handling.

The cane crop is generally planted in April/May and harvested from June to December the following year. The major proportion of each year's crop is from ratoons while in New South Wales most crops are allowed to grow for two seasons due to the slower growing conditions.

The organisation of the Australian sugar industry is complex. It is subject to a degree of broad overall supervision, and legislation of, by the Commonwealth and Queensland Governments, but is largely self-governing. The price of domestic refined sugar for sale to wholesalers and manufacturers is fixed annually under a formula contained in the Sugar Agreement between the Commonwealth and Queensland Governments. The Queensland Government controls the quantity of raw sugar produced through a system of mill peaks which is translated into cane quotas for growers. In addition the Queensland Government contracts with CSR Limited and Millaquin Sugar Company Pty Limited for the refining, marketing and distribution of home consumption needs, arranges through CSR Limited the export marketing of raw sugar, and regulates the division of industry proceeds between growers and millers.

There are 33 raw sugar mills located throughout the growing regions: 30 are located in Queensland and the remaining 3 in New South Wales. Refineries are located in each mainland capital city and at Bundaberg. The six bulk sugar export terminals located in Queensland are at present capable of storing 1.91 million tonnes. While raw sugar is the main product from mills, important by-products are bagasse (fibre) molasses, ash and filter mud.

Area, production and yield levels for sugar cane from 1976-77 to 1981-82 are provided in the following table.

SUGAR CANE: AREA, PRODUCTION AND YIELD

	New South Wales					Queensland				
	Sugar cane cut for crushing			Raw sugar(a)		Sugar cane cut for crushing			Raw sugar(a)	
Year	Area harvested	Production	Yield	Quantity	Yield	Area harvested	Production	Yield	Quantity	Yield
	'000 ha	'000 tonnes	t/ha	'000 tonnes	t/ha	'000 ha	'000 tonnes	t/ha	'000 tonnes	t/ha
1976-77	11.6	1,074.2	92.4	132.3	11.4	276.6	22,269.4	80.5	3,163.2	11.4
1977-78	14.7	1,162.4	79.0	134.4	9.1	280.4	22,330.8	79.6	3,209.3	11.4
1978-79	14.1	1,321.5	94.1	152.7	10.9	237.7	20,135.5	84.7	2,748.9	11.6
1979-80	11.8	1,291.5	109.1	155.8	13.2	255.4	19,859.6	77.8	2,807.2	11.0
1980-81	14.0	1,435.3	102.4	181.2	12.9	274.3	22,540.4	82.2	3,148.5	11.5
1981-82p . . .	13.8	1,463.6	105.8	184.7	13.4	301.7	23,590.7	78.2	3,250.4	10.8

(a) In terms of 94 net titre.

The domestic market is reserved entirely for sugar produced in Australia. This is achieved by an embargo on the import of sugar under Commonwealth/Queensland Sugar Agreements.

Domestic sales account for about 750,000 tonnes annually or approximately twenty per cent of the total industry sales. Granulated sugars account for about 75 per cent of the total domestic sales with liquid sugars (15 per cent), castor sugar (5 per cent), and raw sugar taking up the bulk of the remainder. About two-thirds of the sales of refined sugar products go to processed food and drink manufacturers.

The Australian sugar industry sells in excess of three quarters of its annual raw sugar production to customers overseas. Sales are usually made on a c.i.f. or c and f basis. Australia is one of the world's largest raw cane sugar exporters. In 1981 Australia exported 2.98 million tonnes compared with exports from Cuba of 7.07, Brazil 2.67 and the EEC of 5.34 million tonnes (raw) respectively.

In 1981–82 the domestic market and long-term contracts with, Korea, Malaysia, Singapore, New Zealand and China provided secure outlets for approximately 50 per cent of the industry's capacity, the balance of export sugar being sold on the free market.

Failure to re-negotiate a long-term contract with Japan (previous contract expired June 1981) has resulted in increased uncertainty for long term sales to that market, however an interim arrangement was entered into for Australia to supply 700,000 tonnes of sugar to Japan over 18 months from 1 July 1981.

The disposal pattern of Australia's sugar production is shown in the following table.

SUGAR: AREA, PRODUCTION, EXPORTS AND CONSUMPTION

		Production			Exports			
		Sugar cane		Raw sugar	Raw and refined sugar		Apparent consumption in Australia(a)	
Year	Area harvested	Quantity	Gross value	Quantity	Quantity	Value f.o.b.	Total	Per head
	'000 ha	mil. tonnes	$m	mil. tonnes	mil. tonnes	$m	'000 tonnes	kg
1976-77	288.2	23.3	472.2	3.3	2.6	637.5	707.5	50.6
1977-78	295.2	23.5	420.5	3.3	2.5	536.6	704.0	49.7
1978-79	251.7	21.5	396.5	2.9	1.8	448.2	710.1	49.5
1979-80	267.2	21.5	548.2	3.0	2.2	666.9	692.5	47.7
1980-81	288.3	24.0	799.7	3.3	2.6	1,146.2	721.4	49.0
1981-82	315.6	25.1	604.3	3.4	2.5	752.5	n.y.a.	n.y.a.

(a) Total quantity of sugar available for consumption in Australia comprises refined sugar and refined sugar contained in manufactured foods.

Australia has regularly participated in arrangements to regulate the international sugar market and is a signatory to the current International Sugar Agreement (ISA) which runs until December 1984. The joint Agreement seeks to regulate the flow of sugar onto the world free market and achieve agreed price objectives through a system of export quotas and stocks. Domestic controls on the sugar industry are an important adjunct in complying with ISA conditions.

Vegetables

Vegetables for human consumption

The area sown to vegetables reached a peak of over 200,000 hectares in 1945, but has remained static at around 106,000 hectares since 1975–76. However, yields from most vegetable crops have increased due to variety breeding for increased yields, greater use of irrigation and better control of disease and insect pests.

Because of the wide climatic range in Australia, supplies for main city markets are drawn from widely different areas, depending on the times of maturity of the various crops. Historically, market gardens were located near urban centres and, while many small scale growers still produce crops close to city markets, urban expansion, rising urban land values, improvements in transport and irrigation and developments in freezing, canning and drying have extended the industry far from the cities. Transport costs are reduced by the location of processing establishments in producing areas, although city markets still absorb the bulk of fresh and processed produce.

Potatoes. Potatoes require deep friable soils which, in Australia, are usually basaltic, alluvial or swampy in origin. Fertiliser requirements, which are generally high, vary with the type of soil. While potatoes require only moderate temperatures for growth, the greatest proportion of Australia's potatoes are grown as a summer crop because potato plants are killed by heavy frosts. In recent years an increasing proportion of potatoes has been grown under irrigation and potato growing has become increasingly mechanised, with individual growers having larger areas and becoming more specialised.

Over the last two decades increases in per capita consumption have followed population increases. Consumption of processed potato products is forecast to continue to increase at the expense of the fresh product. The main processed potato products are frozen chips, crisps, dehydrated granule and flake. Other, but less important, processed potato products are soup, baby foods, salads and canned potatoes.

Potato marketing. Seventy per cent of total production is sold through fresh market outlets with the remaining 30% going to processing. The principal forms of potato processing are canning, drying and freezing. The majority of processing potatoes are purchased by the three frozen french fry potato processors who operate in Tasmania and Victoria. Processors negotiate contracts directly with growers. South Australia and Western Australia have marketing authorities which monitor production, pricing and the sale of potatoes. Other States rely on potato merchants and agents for marketing.

Potato trading. Exports of fresh potatoes, and potato flour, meal and flakes have shown an overall increase in the last decade.

Imports of fresh potatoes for human consumption are generally prohibited on quarantine grounds. Imports of processed potatoes are insignificant.

Tomatoes. Tomatoes are grown generally for the fresh market. The major producing States are Queensland and Victoria. Processing is undertaken mainly in Victoria, New South Wales and South Australia.

Onions. Onions are grown throughout Australia with the major producing States being South Australia and Queensland. Processing is relatively insignificant.

Other Vegetables. The other major vegetables produced are carrots, cauliflowers and cabbages (mainly for the fresh market) and peas and beans (processing).

APPARENT CONSUMPTION OF VEGETABLES

(Kilograms per capita per year)

Year	*Potatoes*	*Other root and bulb vegetables*	*Tomatoes*	*Leafy and green vegetables*	*Other vegetables*	*Total, fresh equivalent weight*
1975–76	46.6	16.0	13.3	23.6	15.7	115.1
1976–77	48.7	16.1	13.7	22.9	16.5	117.9
1977–78	50.8	17.0	13.2	22.7	17.8	121.6
1978–79	51.9	17.3	13.8	27.7	19.7	130.3
1979–80	55.2	17.4	14.6	25.2	17.7	130.2
1980–81	55.2	17.6	15.6	22.4	17.6	128.3

VEGETABLES FOR HUMAN CONSUMPTION: AREA AND PRODUCTION

Year	French and runner beans	Cabbages	Carrots	Cauli-flowers	Onions	Green peas	Potatoes	Tomatoes	Total vege-tables
				AREA ('000 hectares)					
1976-77 . . .	7.3	2.4	3.3	2.6	4.3	19.0	33.9	8.6	107.9
1977-78 . . .	7.0	2.5	3.3	2.6	3.8	13.9	36.1	8.5	105.4
1978-79 . . .	8.1	2.7	3.5	3.1	3.7	15.7	34.6	8.2	107.4
1979-80 . . .	7.1	3.0	3.6	3.3	4.0	14.5	36.7	8.5	106.5
1980-81 . . .	(a)6.3	(a)2.5	3.7	(a)2.8	4.0	(a)10.8	35.7	9.1	103.0
1981-82p . .	n.y.a.	n.y.a.	n.y.a.	n.y.a.	4.0	n.y.a.	33.9	9.0	102.2

Year	French and runner beans	Cabbages	Carrots	Cauli-flowers	Onions	Green peas: Process-ing (shelled weight)	Green peas: Sold in pod (pod weight)	Potatoes	Tomatoes
				PRODUCTION ('000 tonnes)					
1976-77 . . .	36.4	70.3	85.6	70.8	105.3	60.8	2.5	728.5	178.1
1977-78 . . .	33.4	77.7	91.9	86.4	106.8	42.7	2.4	772.4	182.5
1978-79 . . .	45.0	127.6	105.0	116.4	105.2	51.4	2.4	794.6	172.6
1979-80 . . .	34.3	74.7	101.6	94.6	119.9	43.0	2.1	857.4	196.9
1980-81 . . .	(a)34.0	76.1	112.6	(a)79.2	114.8	(a)32.6	(a)1.5	865.8	216.8
1981-82p ..	n.y.a.	n.y.a.	n.y.a.	n.y.a.	126.9	n.y.a.	n.y.a.	n.y.a.	228.1

(a) Incomplete; information on this commodity was not separately collected in some States.

VEGETABLES FOR HUMAN CONSUMPTION: VALUE OF PRODUCTION AND VALUE OF EXPORTS

Year	Gross value	Export value f.o.b.(a)
	$m	$m
1976-77	295.1	11.5
1977-78	324.4	10.4
1978-79	403.4	12.5
1979-80	402.3	20.4
1980-81	509.0	23.9
1981-82p	529.3	28.7

(*a*) Fresh, frozen, simply or otherwise preserved or prepared vegetables.

PROCESSED VEGETABLES: AUSTRALIAN PRODUCTION

('000 tonnes—unless otherwise stated)

Item	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82p*
Quick frozen vegetables—						
Beans	20.9	17.3	25.9	16.1	19.2	22.5
Peas	53.1	34.5	46.3	38.9	33.5	47.3
Potatoes	45.4	43.6	58.2	65.8	77.9	94.3
Other	15.9	17.3	25.1	28.3	25.2	33.3
Vegetables preserved, canned or bottled (excluding pickles, etc.) (*a*)—						
Beans—Green	6.4	5.0	4.9	3.7	3.4	n.p.
Baked (including pork and beans)	24.1	21.4	22.9	26.1	21.3	25.0
Beetroot	25.4	26.7	28.4	25.9	23.3	26.1
Carrots	5.0	5.1	5.1	6.1	4.4	3.7
Cucumber (including pickled)	3.0	2.4	1.4	1.0	1.5	0.9
Gherkins—pickled	1.7	2.1	2.2	1.9	2.1	2.0
Olives—pickled	0.6	0.5	0.6	0.3	0.4	0.4
Onions (including pickled)	2.5	3.4	3.9	4.1	4.6	3.3
Peas—Green	12.7	9.2	15.1	9.7	9.4	n.p.
Tomatoes (excluding canned pulp)	10.7	13.0	11.8	13.1	15.3	n.p.
Tomato juice (million litres)	7.5	8.8	7.4	9.3	7.4	8.5

(*a*) Canned in tinplate or aluminium cans; bottled in glass bottles.

For further information on vegetables *see* the following publications: *Crops and Pastures, Australia* (7321.0), *Production Bulletin No.* 3: *Food, Drink and Tobacco, Australia* (8359.0), *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0) and *Value of Agricultural Commodities Produced, Australia* (7503.0).

Fruit (excluding grapes)

A wide variety of fruits is grown in Australia ranging from pineapples, mangoes and papaws in the tropics to pome, stone and berry fruits in the temperate regions.

Citrus fruits (predominantly oranges) are grown in all States except Tasmania and account for almost half of the production of all orchard fruits (including edible tree nuts). New South Wales and South Australia produce the greatest quantity of citrus, followed by Victoria; Queensland's production is much lower while that of Western Australia is very small. Pome fruits (apples and pears) account for about 40 per cent of orchard fruit grown in Australia. Tasmania, New South Wales and Victoria are the most important apple-growing States with significant quantities also being grown in the other States. About three-quarters of all Australian pears are produced in Victoria. Stone fruits (peaches, apricots, plums and prunes, cherries and nectarines) account for around one-eighth of orchard fruit production. Heaviest production is in Victoria, South Australia and New South Wales, with smaller quantities in the other States. Pineapples (about 80 per cent canned) and bananas (virtually all sold fresh) are the most important tropical fruits. Queensland produces almost all of the pineapples grown in Australia while about 60 per cent of bananas are grown on the sub-tropical north coast of New South Wales, most of the remainder on the Queensland coast and around 6 per cent in Western Australia. Other tropical fruits grown mainly in Queensland are passionfruit, papaws, mangoes, avocadoes, custard apples and macadamia nuts. Olives are grown mostly in Victoria. Almonds and figs are grown mainly in South Australia. Of the berry fruits, strawberries are widely grown, with heaviest production in Victoria and Queensland. Other berries (currants and raspberries) are grown predominantly in Tasmania.

SELECTED FRUIT STATISTICS

	Orchard fruit: number of trees ('000)				*Tropical, berry and other fruits: area (ha)*			
Year	*Apples*	*Oranges*	*Pears*	*Peaches*	*Bananas*	*Pineapples*	*Small, and berry fruit*	*Total area of fruit (ha)*
1976-77 . . .	6,229	5,126	1,679	1,634	7,555	5,875	976	96,248
1977-78 . . .	5,933	5,239	1,622	1,557	7,041	6,001	995	94,126
1978-79 . . .	5,964	5,299	1,602	1,531	8,062	6,390	1,015	96,998
1979-80 . . .	6,113	5,532	1,601	1,570	8,136	6,784	1,210	98,464
1980-81 . . .	6,099	5,872	1,622	1,649	8,558	6,583	1,240	100,535
1981-82p . . .	6,009	6,335	1,501	1,661	8,531	6,258	n.y.a	102,287

Year	*Apples*	*Apricots*	*Bananas*	*Cherries*	*Oranges*	*Peaches*	*Pears*	*Pine-apples*	*Plums and Prunes*
				PRODUCTION ('000 tonnes)					
1976-77 . .	301.6	26.7	115.1	6.7	321.7	66.3	105.3	111.5	22.2
1977-78 . .	258.4	24.8	97.8	7.3	356.5	62.2	108.0	98.6	18.6
1978-79 . .	344.9	31.0	113.1	6.8	368.6	64.8	127.6	105.1	28.9
1979-80 . .	298.8	26.4	125.1	(a) 3.9	392.1	71.5	124.3	123.3	(a) 15.0
1980-81 . .	306.9	30.6	124.3	6.5	424.5	79.2	145.6	123.3	20.8
1981-82p . .	n.y.a	n.y.a	124.6	5.3	n.y.a	63.1	n.y.a	123.4	19.7
				GROSS VALUE OF PRODUCTION ($ million)					
1976-77 . .	83.1	10.0	38.1	7.9	52.4	16.3	21.6	16.5	9.4
1977-78 . .	81.3	11.0	49.7	7.9	63.4	16.6	24.6	16.1	9.4
1978-79 . .	100.1	13.5	50.8	9.3	74.1	20.6	31.7	18.4	15.3
1979-80 . .	107.7	13.9	45.9	5.8	77.9	24.0	36.5	20.2	10.6
1980-81 . .	118.9	16.9	59.5	10.0	86.0	25.7	41.4	19.8	15.2
1981-82p . .	131.2	n.y.a	56.9	n.y.a	n.y.a	22.1	40.0	20.3	n.y.a

(a) Incomplete; information on this commodity was not separately collected in some States.

Processed fruit and fruit products

After rapid expansion in the 1960s, output of canned fruit declined and then levelled off due to the effects of contracting overseas markets for Australian canned fruit. Production of natural fruit juices has increased markedly in the last decade and this has reflected improvements in marketing methods, effective promotion and public awareness of the nutritious value of natural juices.

FRUIT PRODUCTION

Derived from the Annual Manufacturing Census and the recorded monthly production

	Unit	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82p*
Fruit juice based cordials and syrups(*a*)	mil litres	68.4	77.7	73.6	76.3	77.8	77.6
Natural fruit juice(*b*)—							
Single strength	mil litres	156.5	197.6	186.2	202.7	n.y.a.	n.y.a.
Concentrated(*c*)	"	12.6	17.8	15.7	24.6	n.y.a.	n.y.a.
Cider and perry	"	11.9	11.7	14.7	17.1	n.y.a.	n.y.a.
Canned or bottled fruit (excl. canned pulp)	'000 tonnes	179.7	184.3	224.9	257.5	225.3	140.4
Jams	'000 tonnes	26.9	28.4	31.8	21.8	24.0	29.1

(*a*) Containing at least 25 per cent by volume of pure fruit juices. (*b*) Excludes fruit drinks consisting of diluted fruit juices with or without artificial flavourings. (*c*) Excludes grape must, and comprises actual quantity of concentrated juices.

APPARENT CONSUMPTION OF FRUIT

(kg per capita per year)

	Fresh						
Year	*Oranges*	*Other citrus*	*Other fresh fruit*	*Jams, conserves, etc.*	*Dried tree fruit*	*Processed fruit*	*Total, fresh equivalent weight*
1975–76	33.5	6.2	36.1	1.9	0.5	10.1	99.0
1976–77	26.6	6.2	36.4	2.0	0.4	10.3	91.6
1977–78	29.4	6.3	33.4	1.8	0.7	10.7	89.8
1978–79	28.3	7.4	34.7	2.3	0.4	10.6	93.6
1979–80	34.0	6.4	39.5	1.6	0.6	12.1	106.7
1980–81	34.0	7.7	36.0	1.5	0.4	12.7	103.8

Fruit exports

The gross value of exports of fruit and fruit products (excluding grapes) has in recent years accounted for some 4 per cent of the value of all food crops and their products. Fresh or chilled fruit (mostly apples, pears and citrus) account for about 30 per cent of this; preserved fruit (mostly canned pears and peaches) make up most of the remainder; only small quantities of dried fruits (other than grapes) are exported.

Value of exports of fresh, dried and preserved fruit in recent years peaked at $90 million in 1972–73, trending downwards since that time although exports of preserved fruit showed some revival in 1976–77. Since 1977–78 there has been a significant increase in the value of exports of fresh fruit while preserved fruit fell a little from the relatively high 1976–77 value. Exports of fresh citrus will continue to be greatly influenced by crop prospects in the U.S.A.

Fresh fruit exports to Europe have been reduced in recent years mainly because of rising shipping costs and improved storage techniques in Europe. On the other hand, there has been some expansion to markets in other areas such as South East Asia. Effects of the E.E.C. import regime has shown in a decrease in processed fruit exports to Europe, although the U.K. remains Australia's main market.

FRUIT EXPORTS: VALUE F.O.B.

($ million)

	Fresh and chilled			*Canned or bottled*					
Year	*Apples*	*Pears*	*Oranges*	*Apricots*	*Peaches*	*Pears*	*Peaches and pears*	*Pine-apples*	*Fruit salad*
1976–77	9.4	8.1	1.0	0.9	14.5	16.1	2.1	1.7	4.5
1977–78	13.8	9.5	4.3	0.8	13.4	13.6	2.3	1.5	3.8
1978–79	15.6	15.7	5.6	0.8	12.2	17.2	1.9	1.2	4.3
1979–80	20.1	18.3	9.9	1.5	19.3	20.0	3.6	3.1	7.6
1980–81	15.3	20.0	8.0	1.3	16.0	20.6	3.0	3.5	9.6
1981–82p	18.9	13.7	8.9	1.0	15.4	13.7	2.1	3.6	7.5

FRUIT: VALUE OF PRODUCTION AND EXPORTS

($ million)

Year	Gross value: Orchard fruit	Gross value: Tropical, berry and other	Gross value: Total	Exports(a) value f.o.b.
1976-77 . .	227	64	290	72
1977-78 . .	246	78	324	79
1978-79 . .	306	82	388	95
1979-80 . .	325	82	407	131
1980-81 . .	366	94	460	131
1981-82p . .	n.y.a.	n.y.a.	463	122

(a) Fruit and nuts, excluding grapes (fresh and dried); includes fresh, dried and preserved and fruit preparations.

Fruit imports

Imports of fresh fruit are negligible, while most dried fruit imports consist of dates from Iran, the United States of America and China (excluding Taiwan Province). Imports of orange juice have fluctuated in the last 6 years ranging from 17.9 million litres in 1976-77 to 60.8 million litres in 1979-80.

Marketing and regulation of the fruit industry

Apples and pears. The Australian Apple and Pear Corporation has the function of promoting and controlling the export of Australian apples and pears as well as the promotion of trade and commerce in apples and pears within Australia. It also has power to promote, or engage in, research relating to the production, packaging, handling, transportation or marketing of apples and pears and to promote new apple and pear products and techniques.

The Stabilization Scheme for apples, which gives support for "at risk" exports to Europe, is being phased-out over the four export seasons 1981 to 1984. The Stabilization Scheme for pears was terminated at the end of the 1980 season. Separate underwriting schemes for all exports of apples and pears have been introduced to cover the five export seasons 1981 to 1985 to protect the industry from sudden serious downturns in the returns from the export of apples and pears. Under these schemes, the Government guarantees a minimum return of 95 per cent of the weighted average returns for all apple or all pear exports over the preceding four seasons. During the period stabilisation for apples is being phased out; any stabilisation payment that may be due will be reduced by the amount of any underwriting payments.

Fruitgrowing Reconstruction Scheme. For details *see* Year Book No. 61, pages 846-7.

Canned Fruit. On 29 November 1979 the Commonwealth enacted legislation restructuring the industry's marketing arrangements. Similar complementary legislation has been enacted by the three major canned deciduous fruit producing States of New South Wales, Victoria and South Australia.

Under the legislation the Australian Canned Fruits Corporation (replacing the Australian Canned Fruits Board) is empowered to acquire and sell the production of canned apricots, peaches and pears and is responsible for determining prices, terms and conditions for sales in both Australian and export markets. Sales are made through markets nominated by canners and approved by the Corporation. Markets are classified as Pool and Non-Pool with returns from Pool markets equalised by the Corporation. Entitlements for sales in Pool markets are allocated to canners prior to the start of each season.

The Corporation's administrative expenses are financed by a levy imposed on the production of canned fruits under the Canned Fruits Levy Act 1979.

The Corporation is advised in the performance of its functions by the Australian Canned Fruits Industry Advisory Committee.

The Australian Canned Fruit Sales Promotion Committee was established to promote the sale of canned deciduous fruit. The Committee is financed by a levy on canned fruit under the Canning-Fruit Charge Act 1959.

For further data on fruits and fruit products *see* the publications *Fruit, Australia* (7322.0), *Production Bulletin No. 3: Food, Drink and Tobacco, Australia* (8359.0), *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0) and *Value of Agricultural Commodities Produced, Australia* (7503.0).

Grapes

Grapes are a temperate crop which requires warm to hot summer conditions for ripening and predominantly winter rainfall. Freedom from late spring frosts is essential. They are grown for winemaking, drying and, to a minor extent, for table use. Some of the better known wine producing areas are the Murray River Valley, Sunraysia (N.S.W. and Victoria); Barossa, Clare, Riverland, Southern Districts and Coonawarra (S.A.); North Eastern Victoria and Great Western (Vic.), Hunter and Riverina (N.S.W.); Swan Valley and Margaret River (W.A.).

Nearly all the dried fruit is produced along the River Murray and its tributaries in Victoria and N.S.W. with small localised areas in other States.

VITICULTURAL STATISTICS: AREA, PRODUCTION AND VALUE

	Area		*Production: grapes used for—*			
					Total(a)	
Year	*Bearing*	*Total*	*Winemaking*	*Drying*	*Quantity*	*Gross value*
	'000 ha	'000 ha	'000 tonnes fresh weight	'000 tonnes fresh weight	'000 tonnes fresh weight	$m
1976–77	64.4	71.1	457.4	250.0	728.4	128.5
1977–78	64.9	71.1	430.3	236.3	693.6	141.6
1978–79	65.8	70.6	465.6	227.1	716.4	150.1
1979–80	65.2	69.7	502.5	339.2	865.3	231.1
1980–81	64.7	69.5	473.1	248.1	743.4	204.6
1981–82	64.6	69.5	499.7	373.1	896.9	184.5

(*a*) Includes grapes used for table and other purposes.

The bearing area of grapes has risen by about 8 per cent since 1972–73, the new plantings being mainly of specialised wine grapes. Production of wine grapes has increased by over 65 per cent since 1972–73. The multipurpose grape production base has not shown much change over this period, apart from annual variations due to seasonal conditions. Multipurpose grapes are used predominantly for winemaking and drying, the latter process being particularly susceptible to any adverse seasonal conditions. There was a diversion of multipurpose grapes to winemaking during most of the past decade and this resulted in a decline in the volume of grapes dried. However, in the early 1980s, there has been some reversal in this trend, and production of dried vine fruit in 1980 and 1982, while assisted by seasonal conditions, reached higher levels than had prevailed since the late 1960s. Since the domestic consumption of dried vine fruit is stable at about 1.7 kg per head per year, variations in the quantity of grapes dried, result in variations in the quantity available for export. At the time of writing (September 1982), the world market situation was uncertain. The large northern hemisphere production of 1981, which is expected again in 1982, has led to lower prices, and the market has been further affected by instability following the introduction of an EEC support regime for Greek dried vine fruit from 1981. The high level of this support has resulted in a large proportion of 1981 Greek sultanas remaining unsold as the 1982 harvest began. The Australian Dried Fruits Corporation is the body responsible for the organisation of the export trade in dried vine fruits. The Corporation also administers the statutory Dried Vine Fruits Equalisation Scheme and the Dried Sultana Production Underwriting Scheme.

Varietal Statistics: 1981 Season

Varietal information relating to vines, grape production by end use and yield per hectare, is obtained in a special collection conducted at 30 June in New South Wales, Victoria, South Australia and Western Australia of all growers who reported vines in the Agricultural Census. No varietal information is collected in the other States and Territories. There is continuing research into correct identification of varieties to find out which are most suitable for different wine styles and different regions and several varieties have recently been re-named. The varieties used in the next table are those recommended by the Commonwealth Grape Advisory Subcommittee which was abolished in September 1977. The data are aggregated from the States of New South Wales, Victoria, South Australia and Western Australia only.

VITICULTURE: AREA AND PRODUCTION BY VARIETY, 1981 SEASON

Variety	Area of vines at harvest: Bearing	Area of vines at harvest: Not yet bearing	Grubbings (Actual and/or intended)	Production: Grapes used for— Wine-making	Production: Grapes used for— Drying and table
	—hectares—		hectares	—tonnes (freshweight)—	
Red Grapes—					
Cabernet Sauvignon	3,931	212	92	23,563	22
Currant (incl. Carina)	1,827	109	79	235	15,180
Grenache	4,929	35	283	46,296	224
Mataro	1,483	15	81	13,458	196
Pinot Noir	210	66	2	1,312	3
Shiraz	8,382	194	401	66,189	363
Other red grapes	1,780	229	95	10,508	3,424
White grapes—					
Chardonnay	486	492	n.p.	2,701	n.p.
Chenin Blanc	285	109	9	2,804	-
Colombard	181	81	3	2,734	35
Crouchen	1,047	34	15	13,390	9
Doradillo	1,924	45	82	33,369	375
Muscat Blanc	456	121	3	4,555	147
Muscat Gordo Blanco	4,222	393	56	63,436	9,513
Palomino, Pedro Ximenes	2,565	64	73	35,096	38
Rhine Riesling	3,634	790	29	26,434	6
Sauvignon Blanc	193	124	n.p.	1,267	n.p.
Semillon	2,696	277	22	31,320	17
Sultana	17,661	543	160	52,952	219,106
Traminer	486	250	n.p.	3,501	n.p.
Trebbiano	1,710	98	39	24,539	32
Waltham Cross	1,489	88	40	2,635	13,483
Other white grapes	1,644	287	39	10,235	3,190
Total grapes	**63,217**	**4,659**	**1,607**	**472,531**	**265,370**

DRIED VINE FRUIT: PRODUCTION, EXPORTS AND CONSUMPTION

(Dried weight)

Year	Production: Raisins	Production: Sultanas	Production: Currants	Production: Total	Exports: Raisins/ sultanas	Exports: Currants	Exports: Total Quantity	Exports: Total Value f.o.b.	Consumption of dried vine fruit
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	$m	kg
1976–77	4.9	49.6	6.1	60.6	43.4	1.0	44.4	26.7	1.5
1977–78	5.4	50.9	4.3	60.6	34.0	2.0	36.1	35.8	1.3
1978–79	4.7	46.4	5.5	56.6	45.6	1.9	47.5	46.9	1.7
1979–80	5.3	71.8	5.8	82.8	39.2	2.3	41.5	55.1	1.9
1980–81	5.7	50.7	4.8	61.1	49.9	1.8	52.0	75.5	1.8
1981–82p	n.y.a.	n.y.a.	n.y.a.	n.y.a.	38.8	0.8	39.6	49.5	n.y.a.

Wine industry

Australia produces brandy and wine of every type. In recent years there has been a distinct trend towards greater consumption and production of unfortified or table wines. Until 1957–58 production of these wines (which include burgundy, claret, riesling, sauterne and sparkling wines) was less than half that of the fortified varieties (sherries, ports, etc.) By 1968, however, table wines had exceeded the volume of fortified wines. The Australian Wine and Brandy Corporation, which commenced operation on 1 July 1981, replacing the Australian Wine Board, is the body responsible for the control of the export trade in grape products. Like its predecessor, the Corporation has the power to regulate exports as well as promotion and publicity functions in export markets and in Australia.

PRODUCTION, CONSUMPTION AND EXPORT OF WINES

Year	Production	Exports: Quantity	Exports: Value f.o.b.	Consumption in Australia per capita
	mil. litres	mil. litres	$m	litres
1976-77	383.1	5.0	5.4	13.5
1977-78	339.6	4.7	5.4	14.2
1978-79	335.1	5.3	6.3	16.4
1979-80	414.2	6.1	8.4	17.3
1980-81	374.3	7.5	11.9	18.2
1981-82p	n.y.a.	8.5	14.0	19.3

For further details on viticulture, dried vine fruit, wine, etc. *see* the following publications: *Fruit, Australia* (7322.0), *Sales and Stocks of Australian Wine and Brandy* (8504.0) and *Viticulture, Australia* (7310.0)

Miscellaneous crops

The principal crops not covered above include fodder crops, tobacco, hops, and mushrooms which, in 1980-81, had gross values as follows:

Crops	Gross value	Per cent of total crop gross value
	$m	%
Fodder crops (hay)	58.3	1.1
Tobacco	62.0	1.2
Hops	8.1	0.2
Mushrooms	18.5	0.3
Other (incl. nurseries)	164.6	3.1

Fodder crops

As well as crops specifically for grain, considerable areas of Australia are devoted to fodder crops. These crops are utilised either for grazing (as green feed), or conserved as hay, ensilage, etc.

This development of fodder conservation as a means of supplementing pasture and natural sources of stockfeed is the result of the comparatively unreliable nature of rainfall in Australian agricultural areas.

FODDER CROPS: AREA AND PRODUCTION

Year	Hay(a): Area	Hay(a): Production: Quantity	Hay(a): Production: Gross value	Green feed or silage(b): Area	Green feed or silage(b): Silage made
	'000 ha	'000 tonnes	$m	'000 ha	'000 tonnes
1976-77	287	891	31.4	709	311
1977-78	313	795	35.4	862	210
1978-79	293	955	40.2	823	335
1979-80	265	819	39.1	947	270
1980-81	320	826	58.3	1,096	338
1981-82p	380	n.y.a.	n.y.a.	936	n.y.a.

(*a*) Principally oaten and wheaten hay. (*b*) Principally from oats, barley, wheat and forage sorghum.

FARMSTOCKS OF CEREAL GRAINS, HAY AND SILAGE

('000 tonnes)

At 31 March	Cereal grains			Hay	Silage
	Barley	Oats	Wheat		
1976	494	918	769	5,684	1,096
1977	487	890	803	5,016	842
1978	463	819	760	3,928	709
1979	637	1,256	880	5,355	753
1980	542	1,207	815	4,872	722
1981	518	933	860	4,764	578

Tobacco

Tobacco is a summer-growing annual which requires a temperate to tropical climate, adequate soil moisture and frost-free period of approximately five months. In Australia, all tobacco is grown under irrigation. Because of specialised requirements, production is limited to areas with suitable soils and climate. The main centres of production are the Mareeba-Dimbulah districts of north Queensland and Myrtleford in north-eastern Victoria. Other areas where tobacco is grown include Bundaberg, Beerwah and Texas (Queensland), Ashford (New South Wales) and Gunbower (Victoria). All tobacco grown in Australia is of the flue-cured type except for small quantities of burley tobacco produced mainly in Victoria.

TOBACCO: AREA, PRODUCTION AND OVERSEAS TRADE

Year	Area	Production (dried leaf)	Exports (value f.o.b.)		Imports (value)	
			Unmanufactured	Manufactured	Unmanufactured	Manufactured
	'000 ha	'000 tonnes	$'000	$'000	$'000	$'000
1976-77	9.4	16.1	522	4,981	26,440	20,569
1977-78	8.5	15.1	823	7,601	38,640	24,072
1978-79	8.1	15.0	693	7,074	36,148	23,588
1979-80	7.5	15.1	4,161	9,138	42,394	25,234
1980-81	7.1	14.5	2,893	8,559	44,007	31,129
1981-82p	6.2	n.y.a.	2,080	8,555	46,268	23,179

Marketing. In 1965 the Commonwealth and State Governments agreed to a stabilisation plan which provided for an annual Australian tobacco leaf marketing quota of flue-cured tobacco and a guaranteed minimum average reserve price. The plan is administered by the Australian Tobacco Board, constituted under the Tobacco Marketing Act 1965 and is comprised of representatives of the Commonwealth Government, tobacco-growing States, growers and manufacturers.

In April 1981 the tobacco industry was referred to the Industries Assistance Commission for inquiry and report as to whether assistance should be provided to the Australian tobacco growing and manufacturing industries after the 1983 selling season, and if so, what should be the nature and extent of such assistance.

The IAC was to report by the end of September 1982.

Hops

Hops are grown from perennial rootstocks over deep, well-drained soils in localities sheltered from the wind. The hop-bearing vine shoots are carried upon trellises, from which they are later harvested. The green hops are kiln-dried and baled on the farm. The dried hops can be further processed at centralised processing establishments into pellets, extract or high density packs. The pelleted form constitutes the bulk of the exported hops.

The area planted to hops in Australia is about 1,200 hectares. Nearly 60 per cent of plantings are in Tasmania (confined to the Derwent, Huon and Channel areas in the southeast, the Scottsdale-Ringarooma district in the north east, and the Gun Plains in the northwest of the state). The other hop producing areas are the Ovens and King Valleys in Victoria and a small area near Manjimup in Western Australia.

Australian hop production is about 2,300 tonnes, approximately 50 per cent of which is used by domestic breweries, with the remainder being exported.

Mushrooms

Statistics of mushroom growing were collected for the first time in all States for the year ended 30 June 1975.

MUSHROOMS: AREA, PRODUCTION, GROSS VALUE AND IMPORTS

Year	Area	Total production		Canned or bottled production	Imports			
					Dried		Canned or bottled	
		Quantity	Gross value		Quantity	Value f.o.b.	Quantity	Value f.o.b.
	hectares	tonnes	$m	tonnes	tonnes	$'000	'000 litres	$'000
1976-77	56	7,130	9.9	6,789	82	870	4,497	5,532
1977-78	55	7,289	12.6	6,611	97	998	5,030	6,855
1978-79	53	7,806	14.7	5,718	88	964	3,738	4,723
1979-80	57	8,340	16.9	4,793	93	1,082	4,482	5,486
1980-81	56	8,265	18.5	3,743	93	1,140	5,864	7,120
1981-82p	n.y.a.	n.y.a.	n.y.a.	n.p.	128	1,495	6,369	8,406

Livestock

Since 1861, annual enumerations of livestock 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 ten-yearly intervals from 1861 to 1971, and then from 1977 on in single years, are given in the following table.

LIVESTOCK: AUSTRALIA, 1861 TO 1981

('000)

Year	Cattle	Sheep	Pigs	Year	Cattle	Sheep	Pigs
1861	3,958	20,135	351	1951	15,229	115,596	1,134
1871	4,276	41,594	543	1961	17,332	152,679	1,615
1881	7,527	62,184	816	1971	24,373	177,792	2,590
1891	10,300	97,881	891	1977	31,533	135,360	2,229
1901	8,640	70,603	950	1978	29,330	131,445	2,217
1911	11,745	98,066	1,026	1979	27,112	134,222	2,301
1921	13,500	81,796	674	1980	26,203	135,985	2,518
1931	11,721	110,568	1,072	1981	25,168	134,407	2,430
1941	13,256	122,694	1,797	1982p	24,490	137,412	2,354

While livestock numbers (particularly sheep) have increased substantially since 1861, marked fluctuations have taken place during the period, mainly on account of widespread droughts which have from time to time left their impressions on the pastoral history of Australia.

Australia has suffered nine major widespread droughts since the keeping of rainfall records began:

1864–66 All States were affected except Tasmania.

1880–86 Southern and eastern mainland States were affected.

1888 All States were hit except Western Australia.

1895–1903 This drought, one of the worst on record, halved Australia's sheep population (originally 100 million) and cut cattle numbers (12 million) by 40 per cent.

1911–1916 Wheat crops were affected in most States, sheep numbers declined by 19 million and cattle by 2 million.

1918–1920 During this period parts of Western Australia were the only areas completely free from drought.

1939–1945 This prolonged drought affected crops and/or pastoral areas in all States. Sheep numbers fell from 125 million in 1942 to 96 million in 1945.

1965–1967 This drought, in its impact on Queensland, New South Wales and Victoria, ranked with the 1902 drought as one of the most severe on record. It resulted in a 40 per cent drop in the wheat harvest, a loss of 20 million sheep, and a decrease in farm income of $300-500 million. There was a chain reaction to other industries, with heavy losses being suffered by manufacturers of farm machinery, and the N.S.W. Railways. Effects of the drought were worsened by water rationing in irrigation areas.

1972 Widespread drought occurred throughout Australia.

Much of south-eastern Australia in 1982 experienced severe drought conditions following unusually low winter rains. Over half of Victoria and parts of western New South Wales have had the lowest winter rainfall ever recorded. Writing in September 1982, the Bureau of Meterology indicated that it was unable to predict drought-breaking rains but, with other relevant factors involved, persistence of drought into 1983 was by no means certain.

For further details of droughts in Australia *see* Yearbook No. 54, pages 991-96 *'Droughts in Australia'* and the Bureau of Meteorology's 'Commentary on Meteorological aspects of the current drought' issued in September 1982.

The years in which the numbers of livestock attained their peaks are as follows: cattle, 1976 (33,434,000); sheep, 1970 (180,080,000); and pigs, 1973 (3,259,000).

Cattle

Cattle-raising is carried out in all States, the main object in certain districts being the production of stock suitable for slaughtering purposes and in others the raising of dairy herds. While dairy cattle are restricted mainly to southern and to coastal districts, beef cattle are more widely distributed. Cattle numbers in Australia increased slowly during the 1960s and 1970s, despite drought conditions and heavy slaughterings, to a peak of 33.4 million in 1976. Since then, there has been a continuous decline, aggravated by drought conditions, to 24.5 million in 1982.

Beef cattle production is often combined with cropping, dairying and sheep. In the north (north of the 26th parallel), cattle properties and herd size are very large, pastures are generally unimproved, fodder crops are rare and beef is usually the only product. The industry is more intensive in the south because of the more favourable environment including more improved pasture.

For further details on cattle *see Livestock and Livestock Products, Australia* (7221.0).

CATTLE NUMBERS

('000)

31 March	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust. (incl. A.C.T.)*
1977 . . .	8,348	5,104	11,506	1,608	2,464	819	1,664	31,533
1978 . . .	7,330	4,572	11,490	1,242	2,271	733	1,674	29,330
1979 . . .	6,484	4,134	10,859	1,086	2,092	657	1,785	27,112
1980 . . .	6,097	4,252	10,332	1,067	2,065	649	1,727	26,203
1981 . . .	5,459	4,313	9,925	1,091	2,034	659	1,675	25,168
1982p . . .	5,379	4,137	9,765	1,010	1,935	628	1,622	24,490

Classification of cattle

CATTLE NUMBERS, BY AGE, SEX, PURPOSE

('000)

	31 March					
Classification	*1977*	*1978*	*1979*	*1980*	*1981*	*1982p*
Dairy cattle—						
Bulls used or intended for service	65	60	55	56	54	51
Cows, heifers and heifer calves	3,095	2,902	2,733	2,697	2,672	2,663
House cows and heifers	105	99	78	77	74	72
Total, dairy cattle	*3,265*	*3,062*	*2,867*	*2,830*	*2,799*	*2,786*
Beef cattle—						
Bulls used or intended for service	628	571	544	545	533	529
Cows and heifers (1 year and over)	14,021	12,728	11,774	11,727	11,269	10,999
Calves under 1 year	7,385	6,513	5,837	5,445	5,135	4,984
Other cattle (1 year and over)	6,235	6,456	6,090	5,656	5,431	5,192
Total, beef cattle	*28,269*	*26,268*	*24,245*	*23,373*	*22,368*	*21,704*
Total, all cattle	**31,533**	**29,330**	**27,112**	**26,203**	**25,168**	**24,490**

Comparison with other countries

SELECTED COUNTRIES CATTLE NUMBERS
(Millions)
(Source: US Department of Agriculture)

Country	*1980*	*1981*	*1982*	*Country*	*1980*	*1981*	*1982*
Argentina	59	59	58	India	241	242	242
Australia	26	25	24	Mexico	30	30	30
Brazil	93	93	93	United States of America	111	115	118
European Economic Community	79	78	78	U.S.S.R.	115	115	115

Sheep

With the exception of a short period in the early eighteen-sixties, when the flocks in Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising. Western Australia is the second largest sheep raising State followed by Victoria. Sheep numbers reached a peak of 180 million in Australia in 1970. They then declined rapidly up to March 1973 as producers turned off large numbers for slaughter and moved from wool-growing towards grain and beef production. By 1975, the numbers had again increased to 151,653,000, but in March 1978 the numbers had fallen to 131,442,000, the lowest since 1955. Improved seasonal conditions during 1978 and 1979 enabled producers to begin rebuilding their flocks. By March 1980, numbers had risen to 136.0 million. Subsequently, high levels of drought-induced slaughter led to a decline in numbers to 134.4 million by March 1981. Numbers have since increased to reach 137.4 million in March 1982.

SHEEP NUMBERS
(Millions)

31 March	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust. (incl. N.T., A.C.T.)*
1977	49.7	21.9	13.3	15.1	31.2	4.0	135.4
1978	48.0	22.0	13.4	14.1	29.8	4.0	131.4
1979	48.4	22.8	13.6	14.9	30.3	4.2	134.2
1980	48.6	24.4	12.2	16.0	30.4	4.2	136.0
1981	46.0	25.5	10.6	17.1	30.8	4.4	134.4
1982	48.4	25.2	12.3	16.7	30.2	4.5	137.4

SHEEP, BY AGE AND SEX
(Millions)

	Sheep: 1 year and over					
31 March	*Rams*	*Breeding ewes*	*Other ewes*	*Wethers*	*Lambs and hoggets (under 1 year)*	*Total, sheep and lambs*
1977	1.7	64.7	6.3	34.8	27.8	135.4
1978	1.7	63.6	5.4	32.6	28.2	131.4
1979	1.7	65.9	4.7	31.6	30.4	134.2
1980	1.7	66.5	5.0	30.5	32.3	136.0
1981	1.8	66.9	4.8	30.1	30.8	134.4
1982p	1.8	68.2	4.8	30.3	32.3	137.4

In 1981–82 provisional value of production data for the sheep and wool industry showed that the combined value of wool and sheep slaughtered accounted for about one-fifth the gross value of all agriculture. This proportion varies with wool and meat prices and seasonal conditions. Australia has about 15 per cent of the world's woolled sheep but produces nearly 30 per cent of the world's greasy wool output. In addition, in 1981–82 the sheep industry produced over half a million tonnes of mutton and lamb, a big decrease from the record production of 956,000 tonnes in 1971–72, which resulted from high slaughtering rates linked to very low wool prices prevailing at the time. Since 1973–74 there has been a strong growth in exports of live sheep for slaughter, exports reaching 6.0 million head in 1981–82.

SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS
(Millions)

Year ended 31 March	Number at beginning of season	Lambs marked	Live sheep exports	Sheep and lambs slaughtered(a)	Estimated deaths on farms(b)	Number at end of season
1977	148.6	38.4	3.0	34.1	14.6	135.4
1978	135.4	39.5	4.2	30.1	9.1	131.4
1979	131.4	42.5	3.7	26.9	9.1	134.2
1980	134.2	45.8	5.3	30.5	8.2	136.0
1981	136.0	43.7	5.5	31.7	8.1	134.4
1982p	134.4	44.9	6.3	28.3	7.3	137.4

(a) Comprises statistics from abattoirs and other major slaughtering establishments and includes estimates of animals slaughtered on farms and by country butchers; also includes animals condemned or those killed for boiling down. (b) Balance item.

LAMBING

Year ended 31 March	Number of breeding ewes at start of season	Mating intentions at start of season	Actual matings	Ratio of actual matings to intended matings	Lambs marked	Ratio of lambs marked to actual matings	Ratio of lambs marked to breeding ewes
	million	million	million	per cent	million	per cent	per cent
1977	68.5	63.0	58.0	92	38.4	66	56
1978	64.7	59.8	56.6	95	39.5	70	61
1979	63.6	58.5	57.1	98	42.5	74	67
1980	65.9	61.9	59.5	96	45.8	77	70
1981	66.5	60.3	58.1	96	43.7	75	66
1982	66.9	61.9	60.3	97	44.9	74	67

For further details on sheep, *see* the publication *Livestock and Livestock Products, Australia* (7221.0).

Pigs

Until the early 1950s the majority of pigs were reared in dairy areas where the on-farm separation of cream, associated with butter production, provided an abundant supply of skim milk; a traditional cheap and nutritious pig feed. With the virtual disappearance of on-farm cream separation and the introduction of wheat delivery quotas and generally low grain prices in the late 1960s, pig raising became increasingly associated with grain growing areas. Today most pigs are raised under intensive or semi-intensive conditions in large scale piggeries and fed on grain based rations. Pig numbers have remained fairly stable over the past decade, although there has been a decrease in the number of holdings raising pigs as pig production becomes more specialised.

PIG NUMBERS
('000)

31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (incl. N.T., A.C.T.)
1977	760	397	441	317	242	65	2,229
1978	737	401	463	311	237	64	2,217
1979	759	390	487	330	271	61	2,301
1980	829	422	510	398	293	63	2,518
1981	787	400	502	394	289	54	2,430
1982	759	407	503	373	263	47	2,354

For further details on pigs *see* the publication *Livestock and Livestock Products, Australia* (7221.0).

Poultry

Once part of the mixed farming sector, the poultry industry is now a highly specialised and distinct industry. The bulk of egg production is obtained from this commercial source, though many farm households and some private homes in suburban areas keep poultry to supply their domestic egg needs.

Some supplies from this source are also marketed. Because the data from this latter sector is incomplete, total poultry numbers for Australia are not available. There is an increasing tendency for specialisation within the industry into hatcherymen, egg producers and broiler producers. There are also separate research schemes funded jointly by industry and government for the egg and meat chicken industries but close liaison exists. Both sectors are good examples of the general movement towards specialised, large scale, capital-intensive production which is common to many agricultural industries.

POULTRY NUMBERS(*a*)
('000)

	Chickens			*Other poultry*			
31 March	*Hens and pullets for egg production*	*Meat strain chickens (broilers)*	*Total chickens(b)*	*Ducks*	*Turkeys*	*Other poultry*	*Total all poultry*
1977	15,982	27,184	43,341	187	347	397	44,272
1978	15,773	26,681	42,637	163	322	330	43,452
1979	16,189	26,825	43,214	247	448	321	44,229
1980	14,846	29,967	46,749	272	1,016	218	48,255
1981	15,187	29,077	46,386	228	750	175	47,539
1982p	14,799	29,211	44,309	241	701	206	45,457

(*a*) Data are for numbers of poultry on rural establishments as reported in the annual Agricultural Census. (*b*) Includes breeding stock and data not available for separate publication.

For further details on poultry *see* the publication *Livestock and Livestock Products, Australia* (7221.0).

Meat production, slaughterings and other disposals

The ABS collects details of slaughterings and meat production from abattoirs, commercial poultry and other slaughtering establishments and includes estimates of animals slaughtered on farms and by country butchers. The data relate only to slaughterings for human consumption and do not include animals condemned or those killed for boiling down.

PRODUCTION OF MEAT BY TYPE(*a*)
('000 tonnes)

	Carcass weight						*Dressed weight(b)*	
Year	*Beef*	*Veal*	*Mutton*	*Lamb*	*Pig meat*	*Total meat*	*Chickens*	*Total all poultry(c)*
1976-77	1,890	98	304	246	185	2,722	196	218
1977-78	2,080	104	261	253	199	2,897	220	246
1978-79	1,948	71	239	253	199	2,708	244	271
1979-80	1,510	54	275	273	220	2,333	282	313
1980-81	1,418	50	299	280	234	2,281	276	303
1981-82p	1,531	50	234	275	230	2,320	252	279

(*a*) Excludes offal. (*b*) Dressed weight of whole birds, pieces and giblets. (*c*) Includes other fowls, turkeys, ducks and drakes.

PRODUCTION OF MEAT : AUSTRALIA, 1931-32 TO 1980-81

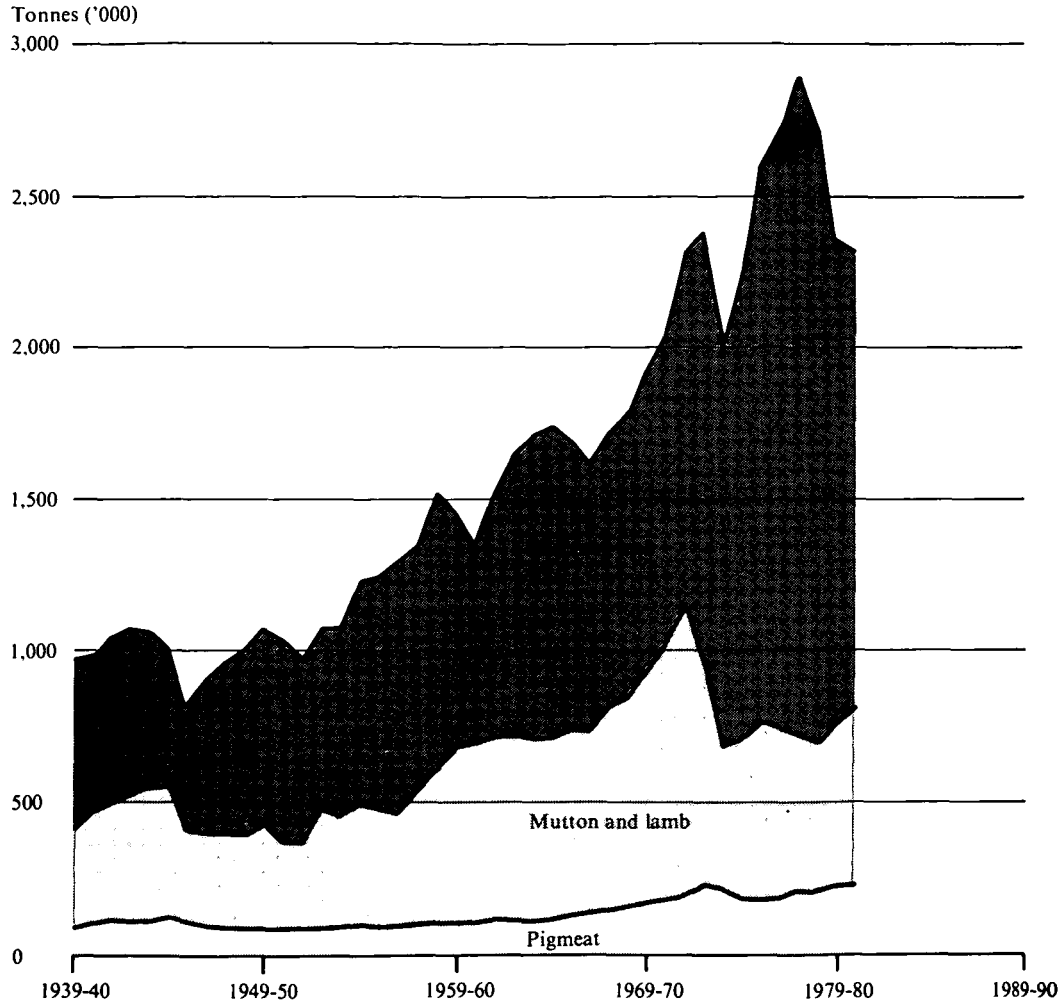


PLATE 36

NUMBERS OF LIVESTOCK AND POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION
(Million head)

Year	*Cattle*	*Calves*	*Sheep*	*Lambs*	*Pigs*	*Chickens (a)*	*Other fowls (b) and turkeys*	*Ducks and drakes*
1976 77	9.5	2.5	16.3	15.3	3.5	155.1	9.8	1.3
1977-78	10.4	2.5	13.8	15.3	3.7	174.7	10.7	1.7
1978-79	9.5	1.8	12.0	14.8	3.6	191.2	10.8	1.8
1979-80	7.4	1.5	14.1	16.5	3.9	222.5	11.3	2.2
1980-81	7.0	1.5	15.2	16.7	4.2	221.7	11.2	1.7
1981-82p	1.2	1.5	11.9	16.3	4.1	203.9	9.7	2.0

(*a*) Comprises broilers, fryers and roasters. (*b*) Comprises hens, roosters, etc.

Mutton and Lamb

Production of sheepmeats in Australia is closely associated with the wool industry. Sheep grazing often occurs on mixed farms in conjunction with beef and/or grain enterprises and in some areas producers specialise in lamb production. The supply of sheepmeat depends greatly on seasonal conditions, decisions to build up or reduce flock numbers, expectations of wool prices, live sheep exports and the pattern of domestic consumption of meat.

There was a movement out of sheep raising in Australia early in the 1970's principally as a result of low wool prices and many producers diversified into cattle and grains. Flock numbers declined from a peak of 180 million in 1970 to a low of 131 million by 1978. After 1978, wool and sheepmeat prices improved and the trade in live sheep for slaughter overseas continued to expand. As a result the national flock size increased slightly to 136 million by March 1980. Since March 1980, flock numbers have fluctuated as a result of climatic and market conditions before recovering to 137.4 million by March 1982.

Sheepmeat production declined rapidly from the high levels of the early 1970s, which were associated with flock reduction, to annual levels of between 500,000 and 600,000 tonnes since 1973–74. Lamb production has remained close to 270,000 tonnes per year in recent years, while mutton production has varied greatly between 221,000 tonnes and 304,000 tonnes.

A high proportion of lamb is consumed in Australia with per capita consumption remaining steady at about 14-16 kilograms per year. A high proportion of mutton produced is exported. Australia is the world's largest exporter of mutton, with Japan and the Middle East being the main markets.

Live sheep exports for slaughter overseas have increased from one million head in 1973–74 to just over 6 million in 1981–82, equivalent to 25,000 tonnes of mutton in 1973–74 and 158,000 tonnes of mutton in 1981–82 and representing almost half of all sheepmeat (lamb, mutton and live sheep) exported in 1981–82.

Beef and Veal

The cattle industry is very dependent on international trade in beef and is subject to great fluctuations. About half of Australia's beef and veal production is exported, with the U.S.A. and Japan as the main outlets.

Beef and veal production in Australia rose markedly in the seventies, reaching peak levels of over 2 million tonnes in 1977–78 and 1978–79, but declining to 1.5 million tonnes in 1981–82. The increase in production followed the rapid expansion of the beef herd that had occurred during the late sixties and early seventies mainly in response to relatively profitable beef prices and increased demand from overseas markets.

In the mid 1970's, poor economic conditions and heavy domestic supplies of beef in major importing countries led them to impose severe restrictions on their imports. With reduced international demand and heavy supplies in Australia, saleyard prices fell greatly and remained low for about four years. The depressed conditions were accompanied by a severe reduction in the national herd.

Movements in beef prices in Australia have closely followed those in the cyclical U.S. industry in recent years. Relatively improved export returns in conjunction with drought conditions in major producing areas have led to high levels of turnoff in 1982, pointing to a lower herd base and lower beef and veal production in the eighties. A generally pessimistic outlook implies very slow herd expansion through to 1985.

Pigmeat

Specialisation has given producers greater opportunity to concentrate on the quality of their product. Pigmeat production has risen steadily since 1975 to reach 230,000 tonnes in 1981–82. Average slaughter weights have also risen over the past ten years, reflecting the increased quantities of pigmeat going to canning and curing and the expanding sales of heavier pigs (between 50 and 70 kilograms) for the fresh pork trade.

Approximately 65 per cent of production is processed into bacon, hams and smallgoods, the rest is sold as fresh pork. Only about 2 per cent of the industry's output is exported. The increasing production of pigmeat therefore reflects a steady increase in per capita domestic consumption over the past five years.

Poultry meat

The poultry meat industry has developed rapidly since 1970 and both output and consumption have risen steeply. Genetic and technical improvements and the organisation of the industry into large-scale enterprises have raised efficiency and helped to reduce production costs relative to other meats. The price competitiveness of chicken meat compared with other meats, especially beef, continues to improve consolidating the position of poultry meat as the second most important meat after beef in Australian diets.

EXPORTS OF FRESH, CHILLED OR FROZEN MEAT

Year	*Beef*	*Veal*	*Mutton*	*Lamb*	*Pork*	*Poultry*
	QUANTITY (*a*) ('000 tonnes)					
1976-77	919.7	17.1	241.5	59.8	3.1	4.7
1977-78	1,095.5	19.8	199.0	57.0	1.3	5.6
1978-79	1,193.7	23.0	169.2	46.5	1.9	6.7
1979-80	846.6	17.4	182.1	49.6	1.9	7.3
1980-81	753.7	13.6	241.5	39.4	2.4	7.7
1981-82p	781.8	8.5	151.5	32.1	1.5	4.1
	VALUE f.o.b. ($ million)					
1976-77	603.7	14.5	121.3	46.3	4.6	5.6
1977-78	853.7	18.1	123.7	57.2	2.2	6.6
1978-79	1,339.2	26.6	135.2	52.0	3.1	8.0
1979-80	1,295.6	31.9	172.6	62.4	3.7	10.6
1980-81	1,086.4	22.9	248.2	62.3	5.7	12.1
1981-82p	1,018.7	14.4	89.7	50.8	3.1	7.2

(*a*) Quantity data on beef, veal, mutton and lamb exports are shown in carcass weight equivalents.

Exports of live animals

During the 1970's exports of live sheep to the Middle East for slaughter have substantially increased from 760,000 in 1971-72 to 6.0 million in 1981-82. Over the last five years a substantial trade in cattle for slaughter has developed, primarily with Asian countries and exports of breeding cattle especially have picked up in the past two years. During 1981-82 some 102,200 head of cattle were exported for either breeding or slaughter purposes.

For details of the regulation governing the export (and import) of live animals *see* Year Book No. 61 page 848.

EXPORTS OF LIVE ANIMALS

	Livestock			*Poultry*		
		Total(a)			*Total*	
Year	*Sheep and Lambs*	*Number*	*Value f.o.b.*	*Day old chicks*	*Number*	*Value f.o.b.*
	—'000—		$'000	—'000—		$'000
1976-77	3,388	3,431	57,109	279	329	205
1977-78	4,124	4,188	98,069	503	584	387
1978-79	3,865	3,955	110,611	448	624	626
1979-80	6,162	6,225	192,668	409	710	747
1980-81	5,740	5,842	208,483	862	974	832
1981-82p	6,009	6,112	214,886	821	941	751

(*a*) Also includes cattle, calves, buffaloes and pigs.

PRODUCTION AND EXPORT OF BACON, HAM AND CANNED MEAT

Year	Production			Exports			
	Bacon and ham(a)		Canned meat(b)	Bacon and ham(c)		Canned meat(d)	
	Bone-in	Bone-out		Quantity	Value	Quantity	Value
	tonnes	tonnes	tonnes	tonnes	$'000 f.o.b.	tonnes	$'000 f.o.b.
1976-77	15,848	43,432	52,677	489	1,127	30,294	36,393
1977-78	15,746	49,030	49,347	539	1,479	24,643	35,660
1978-79	18,545	51,682	44,775	564	1,734	25,202	45,197
1979-80	18,147	52,811	39,178	861	2,734	21,581	51,552
1980-81	18,878	55,564	36,431	528	1,991	17,400	42,139
1981-82p	19,080	55,114	32,542	523	1,959	14,235	33,426

(a) Production of bacon and ham 'on the bone' is shown in terms of 'bone-in' weight, while production of boneless bacon and ham is shown in terms of 'bone-out' weight. Production of canned bacon and ham, which is reported in terms of 'stated net weight of packs', is included in the 'bone-out' category. (b) Canned weight. Includes bacon, ham and meat and vegetables, but excludes rabbit, poultry and baby foods. (c) Cured carcass weight of smoked or cooked bacon and ham. Includes 'stated net weight of packs' of canned bacon and ham.
(d) Canned weight; excludes canned bacon and ham.

GROSS VALUE OF LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS(a)
($ million)

Year	Cattle and calves	Sheep and lambs	Pigs	Poultry	Total
1976-77	1,010.8	299.0	197.4	178.4	1,685.7
1977-78	1,176.9	344.8	212.7	220.0	1,954.4
1978-79	2,154.6	445.1	253.8	244.2	3,097.7
1979-80	2,386.0	654.3	311.3	307.2	3,658.8
1980-81	2,056.5	718.9	337.5	361.4	3,474.3
1981-82p	1,860.0	655.6	392.4	356.3	3,264.3

(a) Includes adjustment for net exports of live animals.

Consumption

Owing to diverse cutting practices by butchers and because of the difficulty of clearly defining the term 'retail weight of meat', it is considered impractical to derive a satisfactory factor for the purpose of expressing estimated meat consumption in terms of retail weight. Depending on cutting practices employed and whether or not bones, etc. sold to customers are included in retail weight of meat, the following retail weights as a proportion of carcass weight are generally acceptable: beef, 60 per cent to 75 per cent; mutton and lamb, 80 per cent to 95 per cent; pork 90 per cent to 95 per cent.

APPARENT CONSUMPTION OF MEAT AND MEAT PRODUCTS AS HUMAN FOOD

Year	*Beef and veal*	*Mutton*	*Lamb*	*Pigmeat(a)*	*Bacon and ham*	*Canned meat*	*Poultry meat*
			TOTAL ('000 tonnes)				
1976–77	976	66	188	61	78	24	222
1977–78	964	53	195	65	86	25	239
1978–79	795	66	202	55	93	21	271
1979–80	677	73	230	71	91	21	295
1980–81	663	58	239	84	100	22	296
1981–82p	749	51	244	70	n.y.a.	n.y.a.	277
			PER CAPITA PER YEAR (kg)				
1976–77	69.1	4.7	13.3	4.3	5.6	1.7	15.7
1977–78	67.5	3.7	13.7	4.5	6.1	1.7	16.8
1978–79	55.1	4.6	14.0	3.8	6.5	1.4	18.8
1979–80	46.4	5.0	15.8	4.9	6.3	1.4	20.2
1980–81	44.8	3.9	16.1	5.7	6.8	1.5	20.0
1981–82p	50.2	3.4	16.4	4.7	n.y.a.	..y.a.	18.5

(*a*) Comprises pork and includes smallgoods and estimates for trimmings from baconer carcasses.
NOTE: Beef, veal, mutton, lamb and pigmeat are expressed in terms of carcass weight, bacon and ham in cured carcass weight, canned meat in canned weight and poultry meat in dressed weight.

For further details on meat production and slaughtering *see* the following publications: *Livestock and Livestock Products, Australia* (7221.0), *Value of Agricultural Commodities Produced, Australia* (7503.0) and *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0).

Australian Meat and Live-stock Corporation

Legislation was enacted to establish the Australian Meat and Live-stock Corporation from 1 December 1977. The Corporation, which regulates and promotes the export of both meat and live-stock and the promotion of domestic consumption, replaced the Australian Meat Board. Major amending legislation was also passed in 1982.

The Corporation has the power to trade in either meat or livestock in a manner which accords with its adopted policy and with normal commercial practice. Its powers also extend, subject to the approval of the Minister, to engaging in sole trading or to permitting restricted trading by a specified holder or holders of meat or livestock licences and entering into transactions by way of meat futures or livestock futures contracts. The exercise of this sole or restricted trading power, is limited to circumstances where a monopoly buying power is, in the Corporation's opinion, distorting normal market forces.

Statutory arrangements provide for three industry consultative groups to serve as a link between the Corporation and relevant industry interests: the Meat Exporters and Abattoir Operators Consultative Group, the Live-stock Exporters Consultative Group and the Live-stock Producers Consultative Group. These groups:

- advise the Corporation on trade and market matters; and
- disseminate information on Corporation decisions and policies to people engaged in the meat and livestock industries.

The Corporation's main functions are to encourage, assist, promote and control the export of meat and livestock from Australia, and to promote the sale of meat in Australia. Exporters of meat and live-stock are licensed by the Corporation and have to comply with its requirements in relation to export trading. The Corporation assists exporters in overseas market development and conducts meat promotion activities in Australia and abroad. It has authority, also, to perform a wide range of other functions aimed at improving the production of meat and livestock and for the general benefit of the meat and livestock industries.

Wool

The Australian Sheep Flock contains nearly 14 per cent of the world's sheep, and produces over 24 per cent of the total annual production of wool. Approximately 75 per cent of the Australian Flock are of a single breed, the Merino, raised primarily for its heavy fleeces of fine quality wool.

Wool production

Wool as shorn from the sheep ('greasy wool') contains an appreciable amount of grease, dirt, vegetable matter and other extraneous material other than the clean wool fibre. The exact quantity of these impurities in the fleece varies between countries, differing climatic and pastoral conditions, with seasonal fluctuations and with the breed and condition of the sheep. It is, however, the clean wool fibre that is ultimately consumed by the textile industry and the term 'clean yield' is used to express the net wool fibre content present in greasy wool.

Since the 1946–47 season, the average clean yield of Australian wool has been assessed annually. This work was initiated by the former Australian Wool Realisation Commission and is carried on by the Australian Wool Corporation. In the early years, the average clean yield was assessed on the basis of a small number of tests and subjective appraisal while in later years an increasing proportion of the Australian wool clip has been subjected to laboratory tests. During the period of assessment the clean yield showed a continuous rise up to 1951–52, when it reached 57.5 per cent. It was 60.76 per cent in 1981–82.

Wool scoured and carbonised in Australia before export, however, has a somewhat lower clean yield than the whole clip, because much of the greasy wool treated locally for export in this form is dirty low-grade wool. The quantity of scoured and carbonised wool exported during 1981–82 was about 13 per cent of total raw wool exports in terms of greasy. For the clean yield of Australian scoured wools exported a standard factor of 93 per cent has been adopted.

The following table shows details of total wool (i.e. shorn, dead, fellmongered, and exported on skins) as well as the numbers of animals shorn, the average fleece weight and the gross value of the wool. A graph showing the production of wool in relation to the number of sheep appears on Plate 37.

SHEEP NUMBERS AND WOOL PRODUCTION : AUSTRALIA, 1880 TO 1982

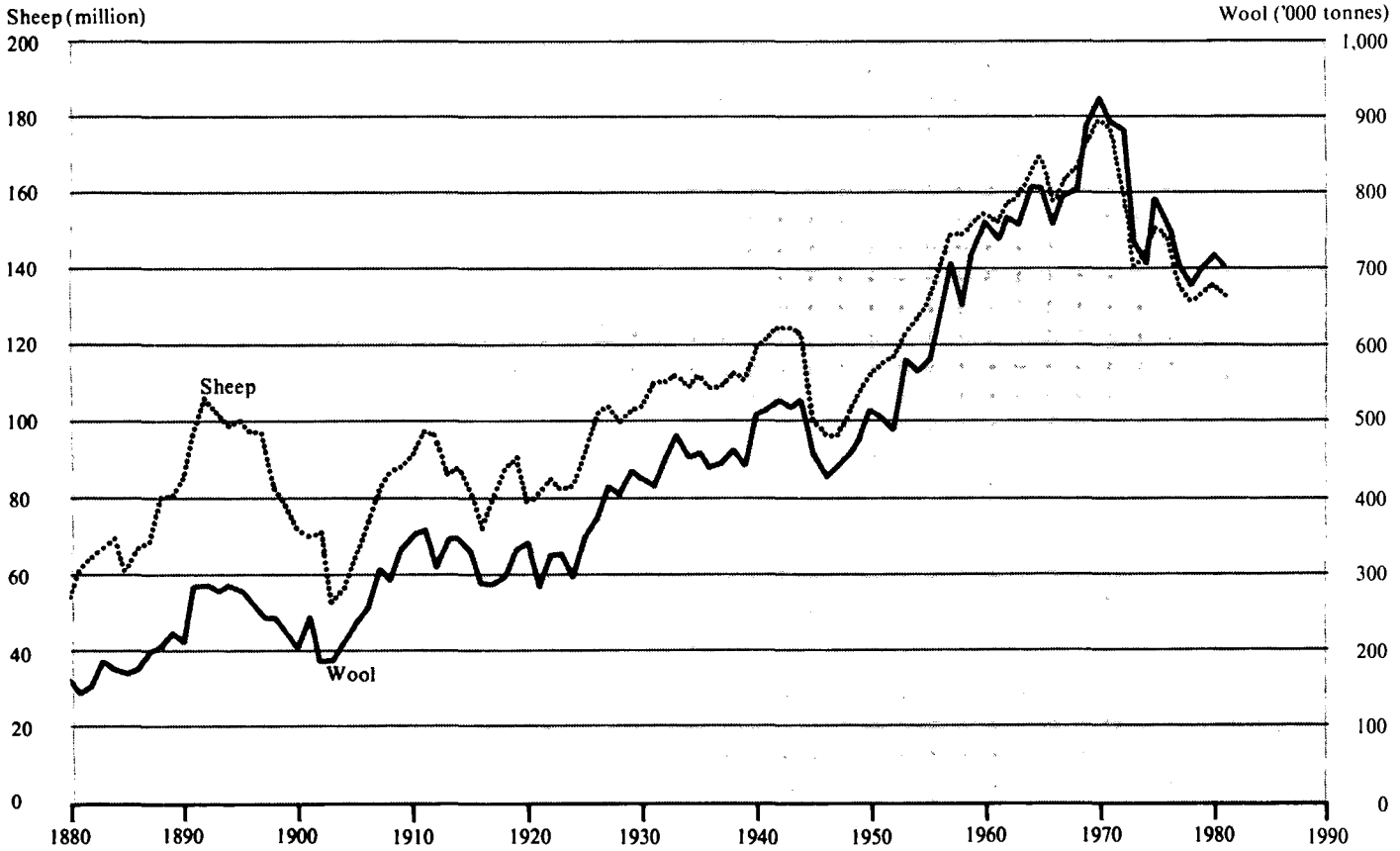


PLATE 37

SHEARING, WOOL PRODUCTION AND VALUE

Year	Sheep and lambs shorn	Average fleece weight	Wool production: Shorn wool	Wool production: Other wool(a)	Wool production: Total wool: Quantity	Wool production: Total wool: Gross value (b)
	million	kg	'000 tonnes	'000 tonnes	'000 tonnes	$m
1976-77	145.8	4.28	623.9	78.8	702.7	1,173
1977-78	143.5	4.22	605.5	71.6	677.0	1,206
1978-79	146.9	4.38	643.6	60.6	704.3	1,374
1979-80	148.5	4.33	642.4	66.1	708.5	1,651
1980-81	150.0	4.25	637.9	62.4	700.2	1,670
1981-82	154.4	4.25	655.8	54.9	710.7	1,754

(a) Comprises dead and fellmongered wool, and wool exported on skins. (b) Gross value is based, for shorn wool, upon the average price realised for greasy wool sold at auction and, for skin wools, on prices recorded by fellmongers and skin exporters.

The wool market

The principal method used by wool growers in selling their wool is through public auction. Individual wool growers consign their clips to one of a number of wool selling brokers who arrange for it to be stored, samples to be taken for laboratory specification, and make arrangements for the wool to be valued and offered at a rostered sale.

It is at such sales that the Corporation provides Reserve Price Support. The proportion of the clip sold at auction varies from year to year but is in the order of 80 per cent of all wool grown. For the remaining 20 per cent, a transaction price is agreed between buyer and seller and the sale concluded without the presence of other parties and without the protection of the Reserve Price Scheme. This selling option has greatest following in Western Australia while New South Wales and Victoria are also strong supporters of this selling system.

Wool receivals

Under the terms of the Wool Tax Act, all growers pay a tax on the gross value of first hand wool sales, to provide financial backing for wool promotion, research and the operation of a statutory reserve price scheme. The ABS collects details of the total amounts of taxable wool received by wool selling brokers and dealers each year. These figures exclude wool received by brokers on which tax had already been paid by other dealers (private buyers) or brokers.

TAXABLE WOOL RECEIVALS

Year	Receivals: Brokers (NCWSB)	Receivals: Dealers(a)	Receivals: Brokers and dealers	Dealers as per cent of total receivals	Shorn wool production(b)
	—'000 tonnes—			per cent	'000 tonnes
1976-77	476.3	151.5	627.8	24.1	623.9
1977-78	459.7	155.2	614.9	25.2	605.5
1978-79	481.4	164.8	646.2	25.5	643.6
1979-80	483.1	175.2	658.2	26.6	642.4
1980-81	523.8	134.2	658.0	20.4	637.9
1981-82	541.8	136.0	677.8	20.1	655.8

(a) Includes brokers who are not members of the National Council of Wool Selling Brokers of Australia (NCWSB). (b) Obtained from the annual Agricultural Census.

Wool marketing arrangements

The Australian Wool Corporation (AWC), established on 1 January 1973 through the amalgamation of the former Australian Wool Commission and Australian Wool Board, performs a number of functions within the market aimed at encouraging the demand for Australian wool and assisting the efficient and orderly disposal of the national clip. Central to these activities is a reserve price scheme, operated by the Corporation on behalf of the woolgrowing industry and with the support of the Commonwealth Government. This scheme was introduced with the formation of the Australian Wool Commission in November 1970. Its purpose is to provide a measure of protection to wool growers against unduly low prices resulting from temporary variations of demand at auctions.

The reserve price scheme has two component parts, a fixed and published 'floor' price for each wool type, and a flexible or floating reserve which is not disclosed.

Initially, the reserve price scheme was operated on a flexible basis whereby the Commission, and later the Corporation, bought wool which failed to reach a reserve price determined on a day-to-day basis. Since September 1974, as part of the reserve price program, the Corporation has been authorised to operate a floor price scheme. Under the floor price arrangements the Government sets a minimum average price for wool at the beginning of each season. The Corporation sets minimum prices for each wool type based on the Government's indicator floor price and purchases wool at auction which does not attract bids above the level of the appropriate floor price for that type. The Corporation continues to operate a flexible reserve price scheme above the level of the floor price to prevent 'pot-holes' in the market. The wool purchased by the Corporation is held in stock, some of it in Australia and some overseas, and sold when prices improve with a view to stabilising the market.

In order to finance losses arising from the Corporation's reserve price activities woolgrowers have since September 1974, been paying 5 per cent of gross proceeds from the sale of wool into a special fund called the Market Support Fund.

When the Fund was established, wool demand was extremely depressed. However, the market improved in subsequent years and the level of the Fund rose to about $493 million at the end of 1980-81. This balance was well in excess of requirements and the Government agreed to woolgrowers' strong requests for legislation to allow for a progressive return of contributions paid into the Fund. In June 1981, the Minister for Primary Industry declared 1974-75 to be the first such refund period and almost $42 million of the available $43.6 million paid into the Fund in 1974-75 was refunded to woolgrowers during 1981-82. The balance in the Fund at the end of June 1982 was around $588 million. Subsequent refunds will be made as the balance in the Fund and the likely support requirements permit.

The Australian Wool Corporation has other responsibilities which include participation in negotiations in respect of freight rates, administration of wool stores and the encouragement of greater efficiency within the existing wool marketing system.

To provide direct experience with all aspects of wool handling and marketing and demonstrate cost savings and handling efficiencies, the Corporation has since 1977 operated a direct wool marketing activity, available to growers on a limited basis. In July 1982 the Minister for Primary Industry announced his approval for this service to continue as a permanent feature of the Corporation's activities. The previous throughput constraint of 150,000 bales per annum will remain as a condition for this activity.

In operation, the Wool Marketing Service purchases wool direct from growers with the valuation based on full laboratory measurement. The wool is then prepared for re-sale and shipment by the Corporation in a variety of ways, though the auction system remains the principal selling option.

Wool testing

The Australian Wool Testing Authority has been in existence since 1957 but its role has become more prominent since the introduction, in 1971, of wool valuation techniques relying on objective specification of wool's main physical characteristics. From the first sales of wool in this manner in the early 1970's this technique has achieved universal acceptance and now more than 90 per cent of all wool sold at auction is accompanied by certified measurements for yield, (i.e. the amount of clean wool fibre), average fibre diameter and the percentage and type of vegetable fault.

At the direction of the Commonwealth Government the Authority which has operated as a division of the Corporation, was transferred to the private sector, effective from the beginning of July 1982. The new company, known as AWTA Ltd, will draw its directors from the Australian Wool Corporation, Wool Council of Australia, Australian Council of Wool Buyers, Federal Council of Private Treaty Wool Merchants, National Council of Wool Selling Brokers of Australia, Wool Scourers and Carbonisers Association of Australia and Wool Textile Manufacturers of Australia. In matters of significant policy, woolgrower interests have a majority vote.

AWTA Ltd, was incorporated in Victoria on 5 May 1982.

Wool promotion

The Australian Wool Corporation is responsible for the promotion of the greater use of wool both in Australia and overseas. The cost of promotion is shared by the Government and the woolgrowing industry. The woolgrowers' contribution for promotion is raised by means of a tax on wool sale proceeds which is currently at the rate of 2.5 per cent (part of a total 3 per cent levy used to finance both wool research and promotion). The Commonwealth's contribution to wool promotion has been set at $20 million annually for the 3 years commencing 1981-82. Most of the promotion funds are remitted to the International Wool Secretariat (IWS) with headquarters in London. Australia provides approximately two thirds of the IWS budget.

Wool research

The wool research program covers five broad areas; research into wool production, wool harvesting and distribution, and economic and textile research. Wool research activities funded from the Wool Research Trust Fund (WRTF) are financed by growers and the Government on a 50:50 basis with the grower's contribution raised by means of a 0.5 per cent levy on wool sale proceeds (part of the total 3 per cent levy mentioned above). In addition to the wool research which is funded in this manner the CSIRO and the Bureau of Agricultural Economics carry out considerable additional wool research which is funded from Consolidated Revenue.

Wool income

Fluctuations in wool prices have a marked effect on agricultural and national income. In 1945–46 the gross value of wool production was $117.2 million, representing 17.4 per cent of the gross value of all agricultural commodities produced, while in 1950–51, when prices reached a peak during the Korean War, wool was valued at $1,303.8 million, or 55.6 per cent of total agricultural industries. More recent figures for the contribution of wool income to total agricultural production and national exports reflect the growth in other commodities over the intervening years, rather than a decline in the fortunes of the wool industry.

Year	*Value of wool as a per cent of total agriculture*	*Value of wool exports as a per cent of total Australian exports*
1976–77	17.4	13.6
1977–78	17.3	10.5
1978–79	13.4	11.2
1979–80	14.0	9.2
1980–81	14.4	10.1
1981–82p	14.1	9.8

Stocks

Stocks shown below of raw and semi-processed wool were held by wool processors, scourers, fellmongers, brokers, dealers and the Australian Wool Corporation. They exclude wool on skins since this wool is not recorded as production until fellmongered in Australia or exported on skins.

WOOL STOCKS
('000 tonnes)

	Stocks of—					
	Raw Wool		*Semi-processed wool*		*Total wool*	
At 30 June	*Greasy*	*Clean*	*Greasy*	*Clean*	*Greasy*	*Clean*
1976	372.9	223.2	9.5	5.7	382.4	228.9
1977	265.6	156.3	8.6	5.1	274.2	161.4
1978	222.0	132.2	8.7	5.2	230.7	137.4
1979	162.0	96.4	9.1	5.5	171.0	101.9
1980	168.7	101.1	11.3	6.9	180.1	108.0
1981	153.2	91.6	10.8	6.5	164.0	98.1

Wool processing

Approximately 86 per cent of all wool passing through the Australian auction system comprises combing fleece and oddment types which are ultimately processed on the worsted system. The remaining 14 per cent, being the shorter or carding wools such as locks, crutchings, and lambs wool, is directed to the woollen system. This latter group is boosted some 5-10 per cent by noils combed out during worsted processing.

At present about two thirds of total carding types produced are processed in Australia.

Over recent years there has been a trend to increased early stage processing of Australian wool before export. Approximately 95 per cent of total Australian wool production enters international trade. However the percentage of exports as scoured or carbonised wool or combed wool top has risen from 10 per cent (33.1 thousand tonnes) in 1973-74 to 19 per cent (77.1 thousand tonnes) in 1981-82.

The main scope for expanded domestic processing remains with worsted types for export in scoured or combed top form. Japanese processors initiated the export of scoured worsted types from Australia and Japan became Australia's major export market for scoured wool in 1973-74.

Within Australia, in 1980-81 there were 28 operating establishments involved in early stage processing. Before 1975 the wool processing industry was largely centralised in cities close to major ports. Since then, however, a general trend towards decentralised inland locations has occurred.

It is anticipated that processed wool could represent 30-35 per cent of total wool exports in the late 1980's.

The principal factors responsible for this trend are:

Costs of effluent treatment or discharge are widely regarded as the most important.

Freight rates favour export in processed form, despite shipping concessions for greasy wool packed at higher densities.

Energy costs: electricity, coal and natural gas all cost less in Australia than in Japan and Europe.

Government policies such as the Export Expansion Grant Scheme and decentralization subsidies.

Wool consumption

Two series of calculations on Australian wool consumption are shown below.

1. Consumption of raw wool, which measures consumption in terms of scoured wool used by mills.
2. Consumption of processed wool, which is calculated from the usage of woollen and worsted yarn.

Raw wool comprises greasy, slipe, scoured and carbonised wool. This series has been included for comparison purposes with other countries.

This second series is considered to be a more satisfactory measure of Australian wool consumption, principally because allowance is made for significant quantities of wool tops exported. However, both series relate to consumption of wool by the wool textile industry, and should not be used as measures of consumption of wool at retail level. It has not been possible to estimate wool consumption at retail level because of the impracticability of obtaining reliable data concerning the wool content of the multiplicity of woollen and worsted piece-goods and finished articles exported and imported and held as stock by manufacturers, wholesalers and retailers.

CONSUMPTION OF RAW AND PROCESSED WOOL
('000 tonnes)

	Consumption of raw wool		*Consumption of processed wool*					
			Worsted yarn used (a)		*Woollen yarn used (b)*		*Total*	
Year	*Greasy*	*Clean*	*Greasy*	*Clean*	*Greasy*	*Clean*	*Greasy*	*Clean*
1975-76	48.7	26.9	14.3	7.8	17.3	9.9	32.7	18.2
1976-77	49.1	27.0	12.6	6.8	15.0	8.5	28.7	15.9
1977-78	47.5	28.0	11.9	6.9	14.2	8.7	27.3	16.2
1978-79	51.0	30.0	11.9	6.8	14.7	9.0	27.7	16.4
1979-80	56.1	30.9	12.4	6.7	15.8	9.0	29.3	16.3
1980-81	50.9	30.3	8.9	5.1	14.7	9.1	24.7	14.8

(*a*) Wool content of yarns containing a mixture of wool and other fibres. (*b*) Comprises pure and mixed woollen yarn.

Exports of wool

From its earliest days the Australian wool industry has been export oriented, and today approximately 95 per cent of total annual production of wool is exported.

The great bulk of this leaves the country in its natural 'greasy' state, but increasing quantities are being exported in part processed forms (i.e. scoured, carbonised, top and noil) and as wool on skins.

EXPORTS OF WOOL

	Selected exports ('000 tonnes: greasy basis)			*Total exports*	
Year	*Greasy and slipe*	*Scoured and carbonised*	*Exported on skins*	*Greasy basis (a)*	*Value f.o.b.*
				'000 tonnes	$m
1976-77	675.6	82.9	70.9	850.5	1,587
1977-78	493.6	70.7	64.4	647.0	1,289
1978-79	568.4	89.0	54.6	711.9	1,593
1979-80	505.3	93.7	59.5	658.5	1,734
1980-81	529.4	106.5	56.2	692.1	1,935
1981-82p	497.8	97.4	49.4	644.6	1,917

(*a*) Includes processed wool.

For further details on sheep shorn, wool production and overseas trade *see* the following publications: *Livestock and Livestock Products, Australia* (7221.0), *Sheep Numbers, Shearing and Wool Production Forecast, Australia* (7211.0), *Shearing and Wool Production Forecast, Australia (Preliminary)* (7210.0), *Livestock Products Australia* (monthly) (7215.0), *Overseas Trade, Australia* (5409.0, 5410.0), *Production Bulletin No. 4: Australia* (8360.0) and *Value of Agricultural Commodities Produced, Australia* (7503.0).

Dairying

Dairying occurs in all States in Australia but is mainly concentrated in the south-eastern region of the mainland, and in Tasmania, where rainfall is ample and fairly reliable. It is predominantly coastal, but has also developed inland in small areas close to population centres and, on a larger scale, in some irrigated regions in the Riverina of New South Wales and northern Victoria.

Australian dairy cattle have shown steady improvement in quality, as demonstrated by milk yield, over the years. This is attributable to improved breeding associated with herd recording; the use of artificial insemination; better feeding resulting from the use of improved pastures and supplementary feed; and better farming methods arising from the application of new management practices and the use of the latest technology; and a contraction of the industry to climatically more favourable areas. Typical of the developments which have occurred are the almost total change from on-farm separation and delivery of cream to the collection of whole milk by milk tankers from on-farm refrigerated milk vats and the introduction of Herringbone and Rotary type dairies on farms.

The manufacturing and processing sections of the industry are well advanced technologically and certain techniques and equipment developed in Australia are being used overseas. State Agricultural Departments give advice on the most suitable methods of production and inspect animals, buildings and production, so that the latest advances in technology are passed on to the farmer and that hygiene standards are maintained at a high level.

MILK CATTLE NUMBERS
('000)

31 March	Bulls used or intended for service	Cows and heifers used or intended for production of milk or cream for sale: Cows (in milk and dry)	Heifers: 1 year and over	Heifers: Under 1 year	House cows and heifers(a)
1977	65	2,174	537	385	105
1978	60	2,056	480	367	99
1979	55	1,921	442	369	78
1980	56	1,869	431	396	77
1981	54	1,819	460	393	74
1982p	51	1,810	466	387	72

(a) One year and over, kept for the establishment's own milk supply.

The economic position of the industry

During much of the 1970's the Australian dairy industry faced reducing demand and low export prices for dairy products which resulted in considerable contraction and rationalisation of all sectors of the industry. The downturn in the economic and trading environment was attributable to production policies adopted by major producing and consuming countries such as the EEC and USA coupled with protection of their domestic markets, which resulted in world production of most dairy products in excess of market opportunities.

Following a period of over a decade of gradual decline, milk production in Australia would appear to have stabilised. This largely reflects improved domestic and export prices which together have significantly improved producers returns. At current production levels, the industry is not as heavily reliant on the export market as in the past. Depressed prices in international trade are therefore, less likely to significantly affect Australian producers' returns than previously.

Adjustment

Over the decade 1971-80, there were three government schemes, relevant to the dairy industry, to aid adjustment in the rural sector. These were:

- The Marginal Dairy Farms Reconstruction Scheme (1971-74) where $15m was expended on assistance in the disposal of marginal dairy farms at market values to other primary producers wishing to build up their properties.
- The Dairy Adjustment Program (1974-76) where $38.2m was committed (of which $3.1m was contributed by the States as half share of carry-on assistance). It expanded build-up provisions of the previous Scheme and included farm development, diversification and rehabilitation assistance. To August 1975 it made available interest-free loans to help milk suppliers change over to refrigerated bulk milk delivery with concurrent assistance as necessary to dairy factories. From June 1976 it provided carry-on loans for producers experiencing difficulties (Commonwealth and States shared equally the cost of carry-on loans).
- The Rural Adjustment Scheme replaced the Rural Reconstruction Scheme on 1 January 1977 and incorporates most of the measures previously available under the Dairy Adjustment Program. Assistance approved for dairy farmers to 30 June 1982 totalled $29.9m.

Herd improvement

The Australian Dairy Herd Improvement Scheme was formerly known as the National Dairy Herd Improvement Scheme. The objective of the scheme is to obtain a better evaluation and selection of bulls and cows for breeding purposes through the provision of more accurate genetic information.

Government assistance

The downturn in the Australian dairy industry, resulting largely from the low international prices for dairy products, led in 1976–77 to the introduction of new domestic marketing arrangements and a Government scheme to underwrite minimum prices for the major dairy products.

The voluntary equalisation arrangements which had operated in the dairy industry since 1923 were considered to be in danger of collapse because of the phasing out of a production bounty which had applied for butter and cheese.

Legislative backing for a levy/disbursement scheme has become the basis for stabilised marketing arrangements. It is aimed at protecting the domestic price structure for prescribed dairy products from disruptive price competition and providing each manufacturer with an equalised return for their domestic and export sales of such products.

From 1976–77 to 1980–81 the Government has underwritten minimum prices for prescribed products. These prices are set annually on the basis of a minimum return per kilogram butter-fat in manufacturing milk.

In June 1981, following agreement with the dairy industry, the Government announced the introduction of a new underwriting scheme for prescribed dairy products to apply for two years from 1 July 1981. The objective of the new scheme is to protect industry revenue against the unexpected and sharp falls in market returns without masking the underlying long term trends. Under-written levels for 1982–83 in $'s per tonne are: butter $1850, skim milk powder $875, casein $2155, cheese $1575 and whole milk powder $1150.

The Government also assists by matching, on a dollar for dollar basis, expenditure of levy raised for the purpose of a program of research recommended by the Australian Dairy Research Committee.

PRODUCTION, UTILISATION AND GROSS VALUE OF WHOLE MILK

	Whole milk intake by factories			
Year	*Market milk sales by factories*	*Milk used in the manufacture of dairy products*	*Total intake*	*Gross value*
		million litres		($ million)
1978–79	1,504	4,144	5,648	627.7
1979–80	1,485	3,913	5,398	676.0
1980–81	1,513	3,668	5,181	885.1
1981–82p	1,527	3,672	5,199	1,011.4

These milk intake figures have been collected (from milk factories) by the Australian Dairy Corporation and replace statistics of whole milk production and utilisation previously compiled by ABS.

Domestic market

Over the past decade there has been a marked swing away from the production of butter and its by-products, skim milk powder and casein, to cheese and whole milk powder. This has been accompanied by an increased percentage of total milk production going to the fluid milk (including flavoured milk) market and being used in the manufacture of products such as yoghurt and table cream.

The combination of reduced total milk production in Australia and the growth in population has increased the importance of the domestic market and reduced the milk equivalent of exports. Increased emphasis is being placed by manufacturers on meeting the requirements of the domestic market and efforts are being made to supply the consumer with a more readily usable product. Recent developments include the introduction of ultra high temperature (UHT) treated milk products and butter-vegetable oil blends. Recognition of the importance of the domestic market has also been reflected in the introduction of improved new packaging and an increasing level of promotion of dairy products.

Except for cheese, the domestic market is virtually supplied from Australian produced dairy products. Cheese imports account for approximately 16 per cent of domestic cheese consumption.

Exports

Australia's export trade in dairy products has undergone a considerable change in the last decade both in terms of the volume and type of product traded and the direction of trade.

Declining milk production in Australia has reduced the overall availability of dairy products for export. In particular, reduced production of butter and skim milk powder has led to a decline in exports. As a result of uncertainty in the export market for casein, production of casein fell dramatically in 1981-82, and milk solids—non fat were transferred to skim milk powder production (SMP). Consequently, exports of SMP increased in 1981-82 to almost four times the 1980-81 level. Exports of cheese and whole milk powder, which had been increasing over recent years, showed marked decreases in 1980–81, and exports remained at these levels in 1981-82.

Britain was Australia's major outlet for dairy products until it joined the EEC in 1973. Australia's export markets are now more diversified. Japan and South-East Asia are the principal markets for skim milk powder; USA and Japan for casein; South-East Asia and the Middle East for butter; South-East Asia for whole milk powder; and Japan and the Middle East for cheese.

PRODUCTION AND TRADE OF BUTTER AND CHEESE

Year	Butter: Factory production	Butter: Exports (a) Quantity	Butter: Exports (a) Value f.o.b.	Cheese: Factory production (c)	Cheese: Exports (b) Quantity	Cheese: Exports (b) Value f.o.b.	Cheese: Imports
	'000 tonnes	'000 tonnes	$m	'000 tonnes	'000 tonnes	$m	'000 tonnes
1976-77	118.2	22.6	26.0	103.5	52.5	56.2	10.6
1977-78	111.7	17.5	22.7	115.6	47.0	55.6	11.3
1978-79	104.8	28.2	37.8	141.8	51.4	69.0	12.1
1979-80	84.3	17.9	28.7	154.2	61.1	94.4	10.9
1980-81	79.2	12.0	23.1	136.7	54.1	103.7	13.3
1981-82p	76.4	5.5	15.3	153.3	57.5	122.9	16.8

(a) Excludes ghee and butter concentrates. (b) Includes processed cheese exports. (c) Factory production is shown only for non-processed cheese.

Apparent consumption

CONSUMPTION OF MILK, BUTTER, CHEESE AND MARGARINE

Year	Apparent consumption Total: market milk	Apparent consumption Total: Butter	Apparent consumption Total: Cheese	Apparent consumption Per capita per year: market milk	Apparent consumption Per capita per year: Butter	Apparent consumption Per capita per year: Cheese	Margarine: Table	Margarine: Other
	mil. litres	'000 tonnes	'000 tonnes	litres	kg	kg	kg	kg
1976 77	1,419	81	72	100.5	5.8	5.1	4.7	3.4
1977 78	1,432	72	90	100.3	5.1	6.3	5.6	2.9
1978 79	1,453	65	89	100.7	4.6	6.2	5.9	2.9
1979-80	1,485	66	96	101.7	4.6	6.6	6.4	2.4
1980-81	1,514	64	98	102.2	4.3	6.6	6.7	2.5
1981-82p	1,526	65	104	102.2	4.3	7.0	6.9	2.7

For further details on the dairying industry *see* the publications, *Livestock and Livestock Products, Australia* (7221.0), and *Production Bulletin No. 3: Food, Drink and Tobacco, Australia* (8359.0).

Beekeeping

Beekeeping is practised by some producers as a separate industry, and is carried on by others in conjunction with other branches of agriculture. A feature of the industry is that many apiarists operate on a large scale with mobile equipment. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to obtain a continuous supply of nectar for honey from suitable flora. While honey production remains the predominant sector of the industry, production of breeding stock and provision of pollination services is significant.

NOTE: Statistics in the following table relate to apiarists with forty or more hives.

BEEKEEPING STATISTICS

Year	Number of apiarists	Number of beehives: Productive	Number of beehives: Total	Honey produced: Quantity	Honey produced: Average production per productive hive	Honey produced: Gross value	Beeswax produced: Quantity	Beeswax produced: Gross value
		'000	'000	'000 tonnes	kg	$'000	tonnes	$'000
1975 76	2,285	377	497	21.4	56.8	10,453	368	633
1976 77	2,274	348	493	14.9	42.9	8,405	275	777
1977-78	2,151	363	479	18.6	51.2	13,480	329	1,096
1978-79	2,201	369	501	18.3	49.5	14,111	349	1,213
1979-80	2,141	402	511	25.0	62.0	19,050	464	1,719
1980-81	2,224	379	530	19.5	51.6	15,815	366	1,530

EXPORTS OF HONEY AND BEESWAX

Year	Honey		Beeswax	
	Quantity	Value f.o.b.	Quantity	Value f.o.b.
	'000 tonnes	$'000	tonnes	$'000
1976-77	6.6	4,602	255	694
1977-78	4.3	4,228	145	542
1978-79	5.7	6,124	194	743
1979-80	11.4	11,572	218	917
1980-81	8.2	8,985	177	733
1981-82	12.8	10,596	303	1,216

Honey levy

The *Honey Levy Acts* (Nos. 1 & 2) 1962 impose a levy on domestic sales of honey. The current rate of levy is 2.05 cents per kg; it can be increased by regulation to a maximum of 2.70 cents per kg.

Additionally the *Honey Export Charge Act* 1973, imposes a levy on exports of honey. The current rate is 0.75 cents per kg; which may be varied by regulation up to 1.5 cents per kg.

Within the levy/export charge is the industry contribution to research of 0.25 cents per kg and the remainder is used to finance the operations of the Australian Honey Board.

Honey Exports

During 1981-82 the main features of the export honey market were a firming of prices around the middle of the year and assistance to exporters resulting from the steady devaluation of the Australian dollar against major trade currencies. These factors resulted in record exports and substantial reductions in the high levels of uncommitted stocks held at the beginning of the year.

For further information, *see* the publication *Livestock and Livestock Products, Australia* (7221.0).

Eggs and egg products

Recorded commercial egg production in mainland Australian States in 1981-82 fell by 4.3 per cent in comparison with 1980-81. Management of production through hen quotas continued in all States and was directly responsible for the containment of production after increases were recorded the previous year. Production fell in all States but notably in South Australia where the fall was 10.2 per cent. Other than in Victoria, where production was only marginally reduced, all remaining States recorded falls of 4 to 5 per cent.

While there will be some variation between the States in 1982-83 it is anticipated aggregate mainland production will again be in the order of 188 million dozen, the recorded figure for 1981-82.

EGGS AND EGG PRODUCTION: SUPPLY AND UTILISATION
(Eggs in shell weight)

Year	Production(a)		Exports	Processed food(b)	Apparent consumption in Australia as human food	
	Quantity	Gross value			Total	Per capita per year
	'000 tonnes	$ million	'000 tonnes	'000 tonnes	'000 tonnes	kg
1975-76	196.0	175.3	31.1	26.1	171.2	12.4
1976-77	192.7	178.6	22.2	22.4	173.1	12.4
1977-78	200.7	196.3	20.8	26.7	176.0	12.4
1978-79	195.7	196.9	16.3	20.5	180.1	12.6
1979-80	194.6	216.1	11.2	18.0	181.8	12.5
1980-81	202.4	227.4	18.9	23.2	183.3	12.4

(*a*) Includes estimates for uncontrolled commercial production and production by self-suppliers. (*b*) Includes egg products as pulp and powder; also includes wastage.

Egg Consumption

Egg production and consumption data is not available for areas of Australia which fall outside the control of State Egg Boards or for "backyard" production. On the basis of State Egg Board data, domestic consumption of shell eggs was marginally above 1980–81 figures in aggregate although two States showed small decreases. Egg product consumption recorded a 2 per cent increase above the previous year including all liquid, frozen and dried products.

Exports

Exports from Australia are predominantly in egg pulp form—white, yolk and whole egg—with Japan continuing to be the principal market. Over-supply on world markets and the emergence of additional countries into the world export trade have resulted in increasing competition with detrimental effect on available prices. Rising production, processing, packaging and freight costs in conjunction with price competition operate as an incentive to contain egg production as close as possible to levels of domestic demand. Such is the objective of hen quota controls operated by the States and while present export conditions prevail, export availability will continue to trend towards absolute minimums.

EXPORTS OF EGGS AND EGG PRODUCTS

			Eggs not in shell			
	Eggs in shell		*Liquid form*		*Dry*	
Year	*Quantity*	*Value f.o.b.*	*Quantity*	*Value f.o.b.*	*Quantity*	*Value f.o.b.*
	'000 doz	$'000	tonnes	$'000	tonnes	$'000
1976–77	1,293	655	12,693	9,151	35	96
1977–78	1,249	655	9,739	10,272	56	158
1978–79	962	514	8,200	9,790	99	374
1979–80	1,364	779	5,833	5,816	74	322
1980–81	1,423	1,113	8,508	8,891	50	337
1981–82p	1,143	1,096	5,013	6,400	62	219

For further details on eggs and egg products *see* the publication *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0).

Agricultural improvements

Fertilisers

The bulk of Australia's requirements of nitrogenous and phosphatic fertilisers is supplied by the domestic industry although in recent years imports of nitrogenous fertilisers have increased significantly. Requirements of potassic fertilisers are primarily imported. Production of nitrogenous fertilisers is based on both Australian natural and refinery gas and imported naphtha feedstocks. Production of phosphatic fertilisers is currently dependent upon imported phosphate rock, but some limited development of domestic rock deposits is underway.

The chief sources of Australia's supplies of phosphate rock are Nauru, Christmas Island and Florida, U.S.A.

As a result of widespread phosphate and sulphur deficiency in Australian soils, phosphatic fertilisers particularly single superphosphate account for a large proportion of usage both on crops and pastures.

Sulphur for use in superphosphate manufacture is obtained mainly from Canada and Mexico.

Principal crops and pastures fertilised, etc.

Information regarding crop and pasture areas treated with artificial fertilisers, and the quantity of artificial fertilisers (superphosphate, nitrates, etc.) used, is given in the following tables.

ARTIFICIAL FERTILISERS: AREA AND USAGE

Year	*Area fertilised*	*Super-phosphate used*	*Nitrogenous fertilisers used*	*Other fertilisers used*
	'000 ha	'000 tonnes	'000 tonnes	'000 tonnes
1975-76	18,975	2,216	353	296
1976-77	21,266	2,303	326	428
1977-78	24,324	2,538	490	383
1978-79	25,403	2,651	485	398
1979-80	n.a.	2,969	365	620
1980-81	n.a.	2,947	392	609

Since the Second World War there has been a great expansion of the area of sown pasture accompanied by an increased use of fertilisers. New pasture varieties (including tropical species) have been developed, and nutrient or trace element deficiencies in soils identified.

The main artificial fertiliser used in Australia is superphosphate, over half of which is used on pastures, mainly in areas with moderate to good rainfall. Large quantities are also used on cereal crops.

SUPERPHOSPHATE USAGE

	Selected crops and pastures					
Year	*Sown and native pastures*	*Lucerne*	*Wheat*	*Other cereals*	*Sugar cane*	*Total*
	AREA FERTILISED ('000 hectares)					
1975-76	8,568	346	6,276	3,092	267	18,975
1976-77	10,007	447	6,745	3,366	285	21,266
1977-78	11,325	469	7,827	3,960	289	24,324
1978-79	12,079	379	8,004	4,220	266	25,403
1979-80	14,703	n.a.	8,607	n.a.	262	n.a.
1980-81	13,964	n.a.	8,723	n.a.	291	n.a.
	SUPERPHOSPHATE USED ('000 tonnes)					
1975-76	1,027	53	665	354	26	2,216
1976-77	1,166	63	615	351	27	2,303
1977-78	1,335	67	635	392	25	2,538
1978-79	1,451	55	634	410	22	2,651
1979-80	1,820	n.a.	716	n.a.	26	2,969
1980-81	1,733	n.a.	756	n.a.	32	2,947

PRODUCTION AND IMPORTS OF FERTILISERS

Item		1976–77	1977–78	1978–79	1979–80	1980–81	1981–82p
		PRODUCTION					
Superphosphate (a)	'000 tonnes	3,137	3,388	3,680	4,202	3,770	3,550
Mixed chemical fertilisers (including complete manures)	'000 tonnes	870	828	993	1,050	n.y.a.	n.y.a.
Leaf and foliage type fertilisers (including dry and liquid form)	tonnes	n.p.	n.p.	n.p.	3,758	n.y.a.	n.y.a.
Manures (without added chemical fertilisers) (b)	tonnes	17,132	11,472	12,678	12,558	n.y.a.	n.y.a.
		IMPORTS					
Crude fertilisers (mainly natural phosphate)	'000 tonnes	1,330	1,612	2,381	2,181	2,294	2,362
	Value $m	42.5	55.6	83.4	80.4	102.1	128.6
Manufactured, mineral or chemical fertilisers—							
Nitrogenous (c)	'000 tonnes	22	23	29	75	86	108
	Value $m	2.6	2.6	4.2	9.4	12.7	16.2
Potassic (d)	'000 tonnes	165	162	174	215	213	239
	Value $m	9.6	9.1	9.9	15.5	21.5	25.2
Other (e)	'000 tonnes	71	35	72	81	66	92
	Value $m	8.9	5.1	10.3	7.2	14.8	19.1

(a) Includes double and triple superphosphate and ammonium phosphate in terms of single superphosphate. (b) Blood, bone and/or offal, and other material. (c) Mainly ammonium nitrate, ammonium sulphate, calcium ammonium nitrate, sodium nitrate and urea containing in the dry state more than 45 per cent by weight of nitrogen. (d) Mainly potassium chloride and potassium sulphate. (e) Includes phosphatic fertilisers and compounds of the main elements nitrogen, phosphorus and potassium (N.P.K. complete fertilisers).

Note: Production data are derived from the Annual Manufacturing Census and the recorded monthly production.

Aerial agriculture

Extensive use is made of aircraft for top-dressing and seeding, for spraying and dusting of crops and pastures and for pest and vermin extermination. The statistics below have been compiled from returns collected from the operators of aircraft engaged in aerial agriculture. The collection, which was commenced in 1956, is now the responsibility of the Department of Aviation.

AERIAL AGRICULTURE

Year ended 31 March	Area treated ('000 hectares)			Materials applied ('000 tonnes)		Productive hours flown ('000 hours)
	Top dressed and seeded	Sprayed	Total(a)	Super-phosphate	Seed	
1977	1,381	1,624	3,064	151.5	2.5	49.6
1978	2,403	1,782	4,260	287.2	3.8	69.5
1979	3,212	2,956	6,224	374.5	5.9	101.2
1980	4,416	2,412	6,907	514.2	6.4	127.3
1981	2,727	2,054	4,850	489.5	4.6	98.7
1982	2,461	2,760	5,395	276.7	2.9	86.3

(a) Includes other types of treatment (rabbit baiting, etc.).

Irrigation on agricultural establishments

Irrigation is one of the factors by which agriculture is further developed. The variability in stream flow and annual rainfall means that successful irrigation of crops and pastures is dependent on storage. Ground water supplies are also used in areas where the quantity is adequate and the quality is suitable. The area of land irrigated (approximately 1.6 million hectares in 1980–81) forms about 9 per cent of the total area under crops and only 0.3 per cent of the total area of agricultural establishments.

Most irrigation areas in Australia are supplied with water by a State authority, although there are also private schemes operating. The major reasons for expansion of the area irrigated have been public investment in the building of dams and reservoirs and private investment by farmers in irrigation plant and earthworks. Irrigation statistics are collected irregularly. Chapter 15, Water Resources, contains additional details of water conservation and irrigation with international, national and interstate aspects.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, AUSTRALIA 1980–81
('000 hectares)

	Method				
Crops and Pastures	*Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	49.7	16.6	n.a.	1.2	67.9
Other pastures (sown or native)	115.4	664.3	n.a.	20.8	800.5
Cereals for all purposes	53.6	320.2	n.a.	9.1	383.0
Vegetables for human consumption	57.4	8.4	0.7	3.9	70.4
Total fruit	30.2	12.1	9.1	3.5	55.0
Grape vines	11.9	26.8	5.3	1.6	45.6
All other crops	77.3	141.4	0.6	12.9	232.1
Total	**395.5**	**1,189.9**	**15.7**	**53.2**	**1,654.2**

SOURCE AND USAGE OF WATER FOR IRRIGATION, AUSTRALIA

Irrigation— area irrigated, by source 1980–81(b)			*Estimated annual water use in 1977(a)*			
			Irrigation	*Rural (excl irrigation)*	*Urban industrial*	*Total*
	('000 ha)	percentage of total area irrigated %	—million cubic metres—			
Surface water—						
State irrigation schemes	941.3	57				
Rivers, creeks, lakes	370.6	22		n.a.		
Farm dams	90.8	5				
Total surface water	1,402.8	85	11,554	742	2,493	14,789
Town or country reticulated(c)	15.4	1	..	..	..	..
Underground (ground water)	236.1	14	1,639	337	480	2,486
Total, all sources	**1,654.2**	**100**	**13,256**	**1,348**	**3,187**	**17,774**

(*a*) Estimated for an average climatic year; data source is the first *National Survey of Water Use in Australia*, Department of National Development and Energy and Australian Water Resources Council, Occasional Papers Series No. 1, AGPS, 1981. The data in the original are shown by drainage division and provide a sound basis for the efficient utilisation of existing resources and for the planning of future projects.
(*b*) Data source is the annual Agricultural Census and represents area actually irrigated. Total area will therefore agree with that shown in the table on crops and pastures irrigated by method of irrigation. (*c*) This source represents irrigation water which has come from either surface or underground sources.

Agricultural machinery on agricultural establishments

Statistics on the type of agricultural machinery on agricultural establishments were published in early issues of the Year Book. Additional information was published in the publication *Rural Land Use, Improvements, Agricultural Machinery and Labour, Australia*, 1974–75 (7103.0). Details of the sales of new tractors for agricultural purposes are given in the quarterly publication *Sales and Stocks of New Tractors, Australia* (8507.0).

Employment in Agriculture

Employment on agricultural establishments

Prior to 1976 data on employment collected at the annual Agricultural Census differentiated between permanent full-time employees and temporary employees. Full-time workers excluded casual or seasonal workers and other persons working only part-time. Casual or seasonal workers were shown as temporary employees.

In the past it has been difficult to maintain comparability of employment on agricultural establishments from year to year because of the changing number of lessees and share farmers and because of the tendency of many farmers to include part-time family helpers as full-time workers in their returns. Since the Second World War there has been a decline in the percentage of people living in rural areas due, in part, to a rising standard of living accompanying the introduction of new techniques and increasing use of capital equipment, fuel, fertilisers, and pesticides. As a result, a smaller agricultural labour force is now producing a larger output of farm products.

EMPLOYED PERSONS IN AGRICULTURE AND SERVICES TO AGRICULTURE ('000)

Month of August	*Males*	*Married women*	*All females*	*Persons*
1977	294.2	73.6	89.1	383.3
1978	274.9	63.7	78.1	353.0
1979	295.4	69.1	80.3	375.7
1980	285.9	77.1	92.4	378.3
1981	281.7	86.3	103.0	384.7
1982	282.5	87.0	100.1	382.5

Source: Monthly population survey conducted by the ABS throughout Australia. For further details *see The Labour Force, Australia* (6203.0).

Regulation of Australian agricultural industries

Year Book No. 61, pages 837–57, contains a summary of the means by which agricultural industries are assisted and regulated. It is not intended as a comprehensive statement of all the consultative and legislative assistance and control measures that exist, but rather as a description of the way in which these processes affect the crops, livestock and livestock products referred to earlier in this chapter.

Readers, however, are referred to the latest edition of *Rural Industry Information Papers* prepared annually by the Department of Primary Industry and published by the Australian Government Publishing Service. The *Papers* contain up-to-date information on production and market prospects for Australia's primary industries together with details of Government assistance measures.

CHAPTER 14

FORESTRY AND FISHERIES

FORESTRY

(*Source:* Forestry Branch, Department of Primary Industry)

Forestry in the States

Under the Australian Constitution land management is the sole responsibility of State Governments. Each State has a forest service responsible for the management and control of publicly-owned forests, in accordance with Forestry Acts and Regulations. Forest management aims to satisfy all reasonable demands by the community on the forest estate including timber production, provision of minor forest products, grazing, protection of native flora and fauna, recreation and watershed protection.

Forestry in the Territories

The Department of the Capital Territory is responsible for the management and control of forests in the Australian Capital Territory. Forestry in the Northern Territory is the responsibility of the Northern Territory Conservation Commission.

Commonwealth Forestry Administration

The Department of Primary Industry is responsible for forestry matters at the national level. Its primary responsibilities are the administration of a control on the export of unprocessed timber, liaison with State, national and international organisations concerned with forestry, provision of the Secretariat for the Australian Forestry Council and compilation of national statistics on the forest industries.

Existing Forest Estate

Native Forests

The total area of native forest, defined as land dominated by trees with an existing or potential mature height of twenty metres or more, including native stands of cypress pine in commercial use regardless of height, was estimated at 40.9 million hectares as at 30 June 1981. Thirty-five million hectares of the natural forests are dominated by eucalypts. For a more detailed examination of Australian native forests, *see* Yearbook No. 61, Chapter 24.

The following tables show classifications of native forest areas in Australia by forest type and ownership. Plantation areas are dealt with separately.

NATIVE FOREST AREAS CLASSIFIED BY FOREST TYPE, 30 JUNE 1981
('000 hectares)

Forest type group	*N.S.W.(a)*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Rainforest	253	-	1,074	-	-	472	38	-	1,837
Eucalypt									
Productivity—Class I(*b*)	1,220	631	204	-	185	502	-	-	2,742
Class II(*c*)	3,649	3,981	1,290	-	2,795	1,845	-	51	13,611
Class III(*d*)	8,320	293	3,140	-	19	-	-	-	11,772
Tropical eucalypt and paperbark	-	-	4,078	-	-	-	2,450	-	6,528
Cypress pine	1,908	6	1,685	-	-	-	778	-	4,377
Total	**15,350**	**4,911**	**11,471**	**-**	**2,999**	**2,819**	**3,266**	**51**	**40,867**

(*a*) Details last revised 30 June 1976; adjustment made to rainforest following 1981 re-inventory of this forest type. (*b*) Relatively high productivity. (*c*) Moderate productivity. (*d*) Relatively low productivity.

NATIVE FOREST AREAS CLASSIFIED BY OWNERSHIP, 30 JUNE 1981
('000 hectares)

Ownership category	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
State forestry(*a*)	2,866	1,916	3,126	-	1,922	1,272	312	-	11,414
Other public(*b*)	6,208	1,536	5,672	-	425	399	2,639	51	16,930
National parks (*c*)	993	853	1,394	-	105	122	315	-	3,782
Private (*d*)	5,283	606	1,279	-	547	1,026	-	-	8,741
Total	**15,350**	**4,911**	**11,471**	-	**2,999**	**2,819**	**3,266**	**51**	**40,867**

(*a*) Publicly owned land, permanently reserved or dedicated primarily for timber production. (*b*) Publicly owned land, vacant or occupied under lease, not specifically reserved for timber production, but on which control of timber rests with the Crown. (*c*) Publicly owned land, permanently reserved for purposes other than timber production. Some wood production is allowed in certain national and forest parks in Victoria. (*d*) Privately owned land, and leasehold where the Crown has no control over timber rights.

Plantations

Tree plantations of a few coniferous species now provide a large part of Australian-grown wood supplies. The large scale establishment of these plantations was commenced by State Forest Services early this century, and in the case of South Australia, last century, to overcome the shortage of native coniferous timber. In an eleven year period covered by the *Softwood Forestry Agreements Acts* 1967, 1972 and 1976, the Commonwealth provided financial assistance to the States in the order of $55 million for an extended program of softwood plantation development. A further Act in 1978, authorised financial assistance over the five year period terminating 30 June 1982 for the maintenance of the area of plantations established previously with Commonwealth funds.

Privately owned plantations amount to approximately two-fifths the area under State ownership. New plantations (including replanting) are currently being established at the rate of 30,000 hectares per annum, of which almost one-third is by private enterprise. A detailed account of the history and development of coniferous plantations and of the characteristics of individual species is included in Yearbook No. 59, page 880. The following table shows total area of plantations in Australia classified by species.

PLANTATION AREAS(*a*), CLASSIFIED BY SPECIES, 31 MARCH 1981
(Hectares)

Species group	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Coniferous—									
Pinus radiata	163,177	163,166	3,719	88,755	37,106	54,036	—	13,233	523,192
Pinus elliottii	4,749	—	93,823	—	124	—	—	—	98,696
Pinus pinaster	—	1,505	—	5,321	24,673	—	—	—	31,499
Pinus caribaea	1,285	—	18,924	—	—	—	1,604	—	21,813
Araucaria	1,550	—	42,250	—	—	—	1	—	43,801
Other coniferous(*b*)	8,868	3,290	5,553	504	154	405	2,500	851	22,125
Total coniferous	*179,629*	*167,961*	*164,269*	*94,580*	*62,057*	*54,441*	*4,105*	*14,084*	*741,126*
Broadleaved—									
Eucalyptus	16,483	13,118	2,851	861	8,300	5,166	—	—	46,779
Populus	2,402	350	—	—	—	—	—	—	2,752
Other broadleaved	—	21	517	—	—	124	—	—	662
Total broadleaved	*18,885*	*13,489*	*3,368*	*861*	*8,300*	*5,290*	—	—	*50,193*
Total	**198,514**	**181,450**	**167,637**	**95,441**	**70,357**	**59,731**	**4,105**	**14,084**	**791,319**

(*a*) Public and private ownership. (*b*) Includes all species other than P. radiata in private ownership.

Australian Forestry Council

Membership of the council comprises the State and Northern Territory Ministers responsible for forestry and the Commonwealth Minister for Primary Industry. Councils major functions are to make recommendations to the Commonwealth Government on national forestry matters and research coordination. It is serviced by a Standing Committee and specialist sub-committees.

Research

Commonwealth Scientific and Industrial Research Organization (CSIRO)

The Division of Forest Research in the Institute of Biological Resources conducts research in the four core areas of forest ecology and biology, silviculture, tree breeding and genetics, and harvesting.

The Division also conducts research into taxonomy, forest protection, forest assessment, and seed resource conservation and distribution. The Division maintains close liaison with relevant State authorities and, on occasion, collaborates with private companies. It operates seven regional stations in the States and the Northern Territory.

Within the Institute of Biological Resources (Divisions of Plant Industry, Entomology, Soils, Water and Land Resources and Wildlife Research) and the Institute of Energy and Earth Resources (Division of Groundwater Research) research is undertaken on forestry problems relevant to the disciplines pursued in these Divisions.

Within the Institute of Industrial Technology, the Division of Chemical Technology carries out a wide range of investigations relating to the properties of wood, the processing and uses of wood and wood products. The research programs of the Division are directed towards developing ways whereby Australia's forest resources can be more effectively utilised. The programs include processing of wood and timber, technology of fibre separation, wood and fibre properties, composite wood and paper products, assessment of cellulosic resources and conservation of wood-based materials. Technology for the production of liquid fuels from wood and other plant materials is also being investigated.

The Divisions provide assistance to individuals and industry, provide training and experience for overseas technologists and maintain co-operative aid projects with developing countries.

Education

The Australian National University's Department of Forestry in Canberra and the Faculty of Agriculture and Forestry of the University of Melbourne offer undergraduate courses leading to a Bachelor of Science degree in Forestry. Most States provide for sub-professional forestry training.

Timber and timber products

The selected details shown below have been compiled from the annual census of manufacturing establishments. For further details *see* Chapter 17, Manufacturing and Internal Trade.

MANUFACTURING ESTABLISHMENTS(*a*)—SUMMARY OF OPERATIONS, 1980–81

1978 ASIC code(b)	*Industry description*	*Establishments at 30 June*	*Persons employed (c)*	*Turnover*	*Value added*	*Fixed capital expenditure less disposals*
		No.	No.	$'000	$'000	$'000
2531	Log sawmilling	751	13,461	542,857	302,337	19,964
2533	Veneers and manufactured boards of wood	80	6,020	352,798	142,496	14,266
2537	Hardboard woodchips	9	752	168,816	71,354	3,717

(*a*) All manufacturing establishments owned by multi-establishment enterprises and single establishment enterprises; with four or more persons employed. (*b*) Australian Standard Industrial Classification. (*c*) Average over whole year includes working proprietors.

TIMBER AND SELECTED TIMBER PRODUCTS PRODUCED (*a*)

Item		*1978–79*	*1979–80*	*1980–81*
Undressed sawn timber—				
Recovered from sawn logs—				
Australian grown—				
Broadleaved	'000 cu m	2,128	2,143	2,217
Coniferous	"	982	1,136	1,190
Total	"	**3,110**	**3,279**	**3,407**
Woodchips (green weight)—				
Hardwood (broad leaved)	'000 tonnes	3,800	4,798	4,410
Plywood—				
Commercial—(surface measure)	'000 sq m	7,696	4,611	5,275
(1 mm basis)	"	38,517	38,619	42,494
Waterproof—(surface measure)	"	3,723	3,843	4,032
(1 mm basis)	"	42,975	46,591	48,680
Particle board (resin bonded)	'000 cu m	564	667	686
Wood pulp—				
Chemical	tonne	198,253	174,223	168,555
Mechanical	"			
Other	"	473,291	513,347	396,230
Paper—				
Newsprint	tonne	208,143	221,198	214,447
Printings	"	79,229	91,559	102,514
Writing (incl. cartridge)	"	(*b*)	(*b*)	(*b*)
Wrapping	"	321,309	382,032	411,322
Blotting	"	(*c*)	(*c*)	(*c*)
Duplicating	"	(*d*)107,640	(*d*)119,052	(*d*)118,526
Other paper	"	(*e*)27,490	(*e*)29,426	(*e*)23,680
Tissue and sanitary papers	"	97,701	104,559	108,343
Paperboard (incl. strawboard)	"	429,626	482,466	485,995

(*a*) Excludes production of small single establishment enterprises with less than four persons employed and establishments engaged in non-manufacturing activities but which may carry on, in a minor way, some manufacturing. (*b*) Combined with 'Duplicating' paper. (*c*) Combined with 'Other paper'. (*d*) Includes 'Writing (incl. cartridge)' paper. (*e*) Includes 'Blotting' paper.

Woodchips

The woodchip industry entails the procurement of wood and its mechanical reduction to chips about the size of an Australian 50 cent piece. These chips are either exported for pulping or retained for use in domestic pulping operations. In 1980–81 the production of hardwood chips in Australia amounted to 4,410,000 tonnes.

Timber and timber products

The major forest industries include the sawmilling, ply and veneer, reconstituted board (particleboard, fibreboard) and pulp and paper industries. The sawmilling industry is the largest single user of logs harvested from Australian forests (52 per cent), followed by the pulp and paper industry (37 per cent). Currently about 72 per cent of total volume of logs harvested are obtained from natural forests and the remainder mainly from coniferous plantations. This proportion will change over time so

that towards the end of this century about half the supply of logs may be from coniferous plantations. Total removals at that time are estimated at 23 million cubic metres compared to current log removal of 16 million cubic metres.

The value of imports of forest products in 1980-81 was in the order of $1,035 million while the value of exports of timber products was $238 million.

The following table shows the production, imports, exports and domestic consumption of sawn timber and major timber products

SAWN TIMBER AND MAJOR TIMBER PRODUCTS, 1980-81

(*Source:* Forestry Branch, Department of Primary Industry *and Australian Bureau of Statistics*)

Item		*Production (1)*	*Imports (2)*	*Exports (3)*	*Domestic Consumption (1 + 2 - 3)*
Sawn timber	cu m	3,332,836	1,060,045	35,032	4,357,849
Plywood	cu m	88,775	70,980	865	158,890
Railway sleepers	cu m	219,648	628	25,194	195,082
Particleboard	cu m	634,886	541	10,474	624,953
Hardboard	cu m	96,700	899	4,603	92,996
Newsprint	tonne	214,447	277,479	224	491,702
Printing and writing	tonne	216,231	234,048	14,362	435,917
Other paper	tonne	546,019	134,000	87,813	592,206
Paperboard	tonne	472,913	57,975	8,522	522,366

In addition to the products listed above, exports for 1980-81 of pulpwood (virtually all in the form of woodchips) was 4,142,880 tonnes (green).

FISHERIES

Collection and presentation of fisheries statistics

Source and basis of statistics

Statistics presented in this section of the chapter have been obtained principally from State Fisheries Authorities and Australian Bureau of Statistics collections. In New South Wales, South Australia, Western Australia and the Northern Territory the information is derived from returns collected from licensed fishermen. In Queensland the statistics have been based mainly on Fish Board receipts. Data for Victoria were obtained by the ABS from buyers and processors up to the end of 1978-79. However for subsequent years the Victorian State Fisheries Authority has introduced its own collection based on returns collected from licensed fishermen. Tasmania data are obtained mainly by the ABS from buyers and processors. Additionally, details of New South Wales tuna production are supplied by CSIRO and particulars of Australian pearl culture have been collected and supplied by the Fisheries Division of the Department of Primary Industry.

Australian fisheries production statistics are generally in terms of the form in which they are taken from the water. For example, the statistics of fish production published in this chapter are in terms of 'estimated live weights' which are calculated from landed weights by using conversion factors for each species in each State. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on an 'estimated live weight' basis and molluscs (edible) on a 'gross (in-shell) weight' basis. The figures for pearl-shell and trochus-shell refer to the actual quantities of dry shell for sale and exclude the weight of the fish.

For more details of employment and boats and equipment for general fisheries and particulars of the whaling industry *see* earlier issues of this publication.

Fisheries resources and their commercial exploitation

(*Source:* Fisheries Division, Department of Primary Industry)

Fish

Over 3,000 species of marine and freshwater fish occur in and around Australia. Australian fishermen concentrate their efforts on estuarine, coastal, pelagic (surface and mid-water swimming) and demersal (bottom living) fish that occur off the north-east, south-east and south-west coasts where the

majority of the human population is located. Off north Australia, barramundi (*Lates calcarifer*) constitutes the most important estuarine and coastal species, while in the south-east and south-west regions, mullet (mainly *Mugil cephalus*), bream (*Acanthopagrus* spp.) Australian salmon (*Arripus trutta*) and Australian herring (*Arripus georgianus*) are important catch components.

Major pelagic fisheries are Spanish mackerel (*Scomberomorus commerson*) off north Australia, and southern bluefin tuna (*Thunnus maccoyii*), snoek (*Leionura atun*), pilchards (*Sardinops neopilchardus*) and anchovies (*Engraulis australis*) off south-east Australia. Southern bluefin tuna are also fished off south-west Australia. Significant stocks of jack mackerel off southern Australia are as yet lightly fished.

A large multispecies demersal fishery exists off south-east Australia that targets on flathead (*Neoplatycephalus* and *Trudis* spp.) morwong (*Nemadactylus* spp.), redfish (*Centroberyx affinis*) gemfish (*Rexea solandri*) and blue grenadier (*Macruronus novaezelandiae*). Demersal inshore snapper (*Chrysophrys auratus*) fisheries exist off south-west and south-east Australia; in the latter region, stocks of whiting (*Sillaginidae*) are also fished. In the northern tropical region, reef fish such as cods (*Epinephelus* spp.) are exploited. A large demersal fishery for edible school and gummy sharks (*Galeorhinus australis* and *Mustelus antarcticus*, respectively) is centred in Bass Strait.

Establishment of the 200 nautical mile Australian Fishing Zone (AFZ), has brought portions of oceanic tuna stocks, and demersal and pelagic fish stocks presently exploited by foreign fishing vessels, under Australian control. A foreign pelagic gilnet fishery off the north coast catches sharks (mainly *Carcharhinus* spp.), tuna (*Thunnus tonggol*) and Spanish mackerel while a demersal pair trawl fishery off the north-west coast exploits a tropical, multispecies fauna that includes threadfin bream (*Nemipteridae*) tropical snappers (*Lutjanidae*), emperors (*Lethrinidae*) goatfish (*Mullidae*) and hair tails (*Trichiuridae*).

Crustaceans

Prawns (*Penaeus* and *Metapenaeus spp*) provide the most valuable fishery in Australia and are taken in estuarine, coastal and offshore waters of all States except Tasmania. The western and southern rock lobsters (*Panulirus longipes cygnus* and *Jasus novaehollandiae*), also a valuable resource, are taken on rocky reefs around the southern half of Australia. Bay lobsters (*Thenus spp* and *Ibacus spp*) are taken incidentally to prawn trawling operations. Crabs (*Scylla spp* and *Portunus spp*) are taken mainly in Queensland, New South Wales and Western Australia.

Molluscs (edible)

Naturally-occurring oysters are harvested in all States; in New South Wales and Queensland the Sydney rock oyster (*Crassostrea commercialis*) is cultured commercially. The introduction of the Pacific oyster (*Crassostrea gigas*) to Tasmania and South Australia has provided a limited supply in those States. Following a serious decline in catches in the scallop (*Pecten meridionalis*) fishery based on stocks in Port Phillip Bay, Victoria, new offshore beds were located in southern New South Wales, eastern Victoria, northern Tasmania and south-western Western Australia. However, substantial fluctuations in abundance have resulted in erratic production from year to year. A fishery based on the saucer scallop (*Amusium balloti*) is located off south and central Queensland and there is a small fishery for the same species in Shark Bay, Western Australia. An important abalone (*Haliotus spp*) fishery has been developed since 1964 in south-east Australia with Tasmania, Victoria and South Australia providing the bulk of the catch. There is also a small abalone fishery in south-west Australia. Mussels (*Mytilus planulatus*) are harvested in Victoria, Western Australia and New South Wales. Prior to 1978 small quantities of cephalopods, mainly squid, were produced in many localities. Feasibility fishing located promising squid resources (*Notutodarus gouldi*) in the south east. Squid (*Loligo spp*) form an important component to the trawl catch in the Arafura Sea.

Pearl-shell and trochus-shell

The shell of the Australian species of pearl oyster (*Pinctada maxima*) is taken from various localities in the tropical waters of Australia between Broome in Western Australia and Cairns in Queensland for the manufacture of buttons, knife handles, etc. Live pearl-shell is used for pearl culture, *Pinctada maxima* being capable of producing pearls which are the largest in the world and which command top market prices. Trochus-shell is found mainly on coral reefs off the Queensland coast, although small quantities occur in Western Australia.

Whales

Whales are now a protected species in the Australian Fishing Zone.

Fisheries administration and research

(*Source:* Fisheries Division, Department of Primary Industry)

The Commonwealth Parliament has enacted a number of laws dealing with fisheries in Australian waters beyond territorial limits. The fisheries laws of the States and the Northern Territory apply to all kinds of fishing within the territorial sea and in inland waters. These laws require the licensing of persons and boats in the commercial fisheries and provide a range of other regulatory powers. The Commonwealth Government laws relating to fishing are the *Fisheries Act* 1952, the *Continental Shelf (Living Natural Resources) Act* 1968, *Foreign Fishing Boats Levy Act* 1981 and the *Fisheries Agreements (Payments) Act* 1981.

Fisheries Act 1952

This Act applies to commercial fishing for swimming species, by Australians in waters extending from 3 to 200 nautical miles seaward of the territorial sea baseline of Australia and the external territories excluding the territorial sea of another country, and by foreign boats in the 200 nautical miles Australian fishing zone. The Australian fishing zone comprises waters which extend 200 nautical miles seaward of Australia's territorial sea baselines but does not include territorial seas within the accepted fishing zones of adjacent countries or waters adjacent to Australia's Antarctic Territory.

Continental Shelf (Living Natural Resources) Act 1968

This Act regulates the searching for and taking, from the continental shelf of Australia and the external territories, living sedentary species by Australians and foreigners. Sedentary species are those that, at the harvestable stage, are either immobile on or beneath the seabed or are unable to move except in constant physical contact with the seabed. The continental shelf is the seabed beyond the territorial sea and adjacent to permanently exposed land masses, extending to a depth of 200 metres or, beyond that depth, to where the exploitation of the seabed is possible.

Both these Acts require the holding of licences and empower the Minister to prohibit fishing activities as necessary for the conservation of resources and the management of the fisheries.

Foreign Fishing Boats Levy Act 1981; *Fisheries Agreements (Payments) Act* 1981

These Acts facilitate the imposition and collection of access fees for foreign boats fishing in the Australian fishing zone.

Administration

Australian fisheries are administered by the authority having jurisdiction over the waters concerned. In inland waters and in waters within territorial limits, administration is the responsibility of the State or Territory fisheries authority. In proclaimed waters, and on the continental shelf beyond territorial limits, administration is the responsibility of the Commonwealth Government which by agreement, has delegated to State fisheries authorities the necessary authorities for day-to-day administration of the Acts.

The Commonwealth and all State Parliaments as well as the Northern Territory House of Assembly have enacted amendments to fishery laws for the purpose of implementing the fisheries elements of the offshore constitutional settlement adopted by the Premiers' Conference in 1979. Those amendments, which were expected to come into force in 1982, authorise the Commonwealth and one or more States to enter into a formal legal arrangement to apply a single law (Commonwealth or State) to the management of a particular fishery from low water mark and to vest executive power under that law in:

(i) a joint authority, the membership of which would comprise the Commonwealth and the relevant State or States;

(ii) a State alone; or

(iii) the Commonwealth alone.

The administration of the fisheries is directed to a number of objectives of which the two most important are: conservation and management of the living resources of the Australian Fishing Zone to ensure that they are not endangered by over exploitation; and achievement of the optimum utilisation of the living resources by the Australian fishing industry and foreign interests. Consistent with these objectives, a number of controls have been introduced to prevent the depletion of the more heavily fished species. These controls take the form of seasonal closures, gear limitations, minimum size requirements and limited access rights, as well as outright prohibitions on the taking of certain species.

The Fisheries Development Trust Account (established under the *Fishing Industry Act* 1956) and the Fishing Industry Research Trust Account (established under the *Fishing Industry Research Act*

1969) are available to support financially, projects for the development and management of the fisheries and fishing industry which are consistent with the purposes of those Acts. The former was established with the proceeds of the sale of the assets of the Australian Whaling Commission and is replenished from Consolidated Revenue as necessary. The latter is a matching fund into which is paid each year an appropriation from Commonwealth Government Revenue equal to amounts collected from the fishing industry by the State Fisheries Authorities and paid into appropriate State research accounts for the same purpose.

Research

The main aim of fisheries research in Australia is to provide a background of biological, technical and economic information which will provide guidance for the efficient and rational utilisation of fisheries resources. To this end much of the research already undertaken has been directed at formulating recommendations for management of various fisheries. Research work, including feasibility fishing projects involving foreign fishing vessels, is also carried out and is expected to lead to the development of new fisheries, the expansion of under-exploited fisheries, greater economy in operations and the use of more efficient equipment and methods.

Organisations in Australia at present engaged in research into fisheries matters are:

(i) CSIRO Division of Fisheries Research, which has its headquarters and main laboratory at Cronulla, N.S.W. and regional laboratories in Western Australia and Queensland (fisheries science);

(ii) CSIRO Division of Oceanography which has its headquarters and laboratory at Cronulla, N.S.W.;

(iii) CSIRO Division of Food Research, conducts research into handling, storage, processing and transportation of fish at its laboratory in Hobart, Tasmania;

(iv) State fisheries departments (fisheries laboratories have been established in Perth, Hobart, Melbourne, Sydney, Brisbane, Darwin and Cairns); research vessels are operated by New South Wales, Victoria, Western Australia, Tasmania and South Australia;

(v) Fisheries Division, Department of Primary Industry, Canberra (economic and management research, fishing technology, extension and education service); and

(vi) private fishing companies (surveys of fisheries resources, research into handling, processing and marketing).

Boats and equipment used in fisheries

(*Source:* Fisheries Division, Department of Primary Industry)

Fish, crustaceans and molluscs (edible)

The boats used for the estuarine fisheries are mostly small vessels propelled by diesel or petrol engines of low power. The offshore vessels range up to 40 metres in length and are almost invariably powered by diesel engines. Most of them have either insulated holds and carry ice, or are equipped with dry or brine refrigeration. Some rock lobster vessels are fitted with wells in which the catch is kept alive.

The following are the types of equipment most commonly used in the main fisheries: *mullet*, beach seine, gill net; *shark* (edible), long-lines, gill net; *Australian salmon*, beach seine; *snoek*, trolling lines; *flathead*, Danish seine, otter trawl; *snapper*, long-lines, traps, gill net, hand-line; *morwong*, Danish seine, otter trawl, traps; *whiting*, handlines, Danish seine, beach seine, gill net; *garfish*, beach seine; *Spanish mackerel*, trolling lines; *tuna*, pole and live-bait, purse seine, trolling lines (lampara nets and purse seines are used for taking live bait for tuna); *prawns*, otter trawl, beam trawl, beach seine net; *rock lobster*, pots, traps; *scallops*, dredge, otter trawl; *abalone*, diving using hookah gear; and *pilchards, anchovies, jack mackerel* and *striped tuna*, purse seine.

Pearls, pearl-shell and trochus-shell

Ketch-rigged luggers about 15 metres long which carry crews of eight to fourteen members are used for pearl-shell fishing in northern Australia.

Production, processing and domestic marketing of fisheries products

Value of fisheries production

The following table shows the gross value and local value of fishing by States. Because the value of materials used in the course of production is not available for all States, it is not possible to show a comparison of net values. *Gross value of production* is the value placed on recorded production at the

wholesale price realised in the principal markets. In general, the 'principal markets' are the metropolitan markets in each State, although, in cases where commodities are consumed locally or where they become raw material for a secondary industry, these points are presumed to be the principal markets. *Local value* (i.e. gross value of commodities produced at the place of production) is ascertained by deducting marketing costs from the gross value of commodities produced. Marketing costs include freight, cost of containers, commission, and other charges incurred in marketing. Gross and local values of primary commodities produced involve some duplication as they include certain primary commodities which are consumed as raw materials to produce other primary commodities (e.g. hay consumed by livestock).

FISHERIES: GROSS AND LOCAL VALUE OF PRODUCTION

($'000)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust.*
				GROSS VALUE				
1975-76 . .	31,599	10,601	(*a*)17,137	(*b*)22,474	51,079	8,511	5,228	(*c*)146,629
1976-77 . .	36,059	16,014	(*a*)34,955	(*b*)27,199	69,094	11,662	11,357	(*c*)206,340
1977-78 . .	39,665	17,977	(*a*)40,808	(*d*)*23,615*	*88,340*	*12,609*	*10,337*	(*c*)233,351
1978-79 . .	42,698	20,025	58,214	(*d*)29,924	80,233	14,636	19,576	(*c*)(*g*)279,258
1979-80 . .	58,661	19,814	(*e*)62,789	(*d*)34,950	85,652	20,463	16,806	(*c*)(*g*)317,261
1980-81 . .	70,027	n.y.a.	(*e*)(*f*)86,292	(*d*)46,182	82,764	26,514	19,518	(*c*)(*g*)349,648
				LOCAL VALUE				
1975-76 . .	25,334	8,481	16,152	20,022	50,870	8,511	5,228	134,598
1976-77 . .	30,352	13,917	33,953	24,207	68,864	11,662	11,357	194,312
1977-78 . .	32,993	16,539	39,677	21,034	88,038	12,609	10,337	221,226
1978-79 . .	35,113	18,423	56,720	26,649	79,912	14,636	19,576	(*g*)264,980
1979-80 . .	48,405	17,377	61,130	31,114	85,015	20,463	16,806	(*g*)298,435
1980-81 . .	58,147	n.y.a.	84,459	41,140	82,102	26,514	19,518	(*g*)330,231

(*a*) Incomplete: excludes oysters and rock lobster in Queensland. (*b*) Incomplete: excludes oysters in South Australia. (*c*) Incomplete: *see* individual States. (*d*) Incomplete: excludes octopus, cuttlefish, oysters and scallops in South Australia. (*e*) Incomplete: excludes rock lobster in Queensland. (*f*) Incomplete: excludes shark in Queensland. (*g*) Includes value of pearling which has been excluded from State totals.

Production of selected fisheries

SELECTED FISHERIES PRODUCTS: PRODUCTION AND GROSS VALUE

1980-81

Product	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust.*
				QUANTITY (tonnes)				
Fish(*a*)	28,025	n.y.a.	(*b*)4,864	14,721	11,961	2,527	1,634	(*f*)63,731
Crustaceans(*a*)	3,215	n.y.a.	(*c*)15,294	5,227	13,121	1,553	4,287	(*f*)42,697
Molluscs (edible)(*a*)	10,003	n.y.a.	(*d*)2,800	(*e*)1,338	1,207	7,314	46	(*f*)22,707
				GROSS VALUE ($'000)				
Fish	27,893	n.y.a.	(*b*)7,036	16,311	10,128	3,654	2,267	(*f*)67,289
Crustaceans	15,608	n.y.a.	(*c*)75,590	26,183	70,648	8,385	17,195	(*f*)213,609
Molluscs (edible)	26,526	n.y.a.	(*d*)3,666	(*e*)3,688	1,988	14,476	57	(*f*)50,400

(*a*) Estimated live weight. (*b*) Excludes Shark in Queensland. (*c*) Excludes Rock Lobster in Queensland. (*d*) Incomplete. Excludes oysters in Queensland. (*e*) Incomplete. Excludes octopus, cuttlefish, oysters and scallops in South Australia. (*f*) Incomplete; *see* individual States.

SELECTED FISHERIES PRODUCTS: PRODUCTION, AND GROSS VALUE, AUSTRALIA

Product	*1978–79*	*1979–80*	*1980–81*
QUANTITY (tonnes)			
Fish(*a*)(*b*)	61 444	(*c*)57,047	(*c*)63,731
Crustaceans(*a*)	37,900	(*c*)37,370	(*c*)42,697
Molluscs (edible) (*a*)	25,285	(*c*)21,378	(*c*)22,707
Pearl-shell(*d*)(*e*)	185.0	309.6	226.0
Trochus-shell(*d*)(*e*)	—	n.p.	n.p.
GROSS VALUE ($'000)			
Fish(*b*)	56,501	(*c*)58,007	(*c*)67,289
Crustaceans	176,451	(*c*)184,137	(*c*)213,609
Molluscs (edible)	32,355	(*c*)37,178	(*c*)50,400
Pearl-shell(*d*)(*e*)	188	905	534
Trochus-shell(*d*)(*e*)	—	n.p.	n.p.

(*a*) Estimated live weight. (*b*) Excludes freshwater fish caught in Queensland. (*c*) Incomplete *see* individual States in table above. (*d*) Excludes manufacturing shell produced from pearl culture operations. (*e*) *Source:* Department of Primary Industry, year ended 31 December.

FISH: PRODUCTION, BY PRINCIPAL TYPES

	Tonnes estimated live weight			*Gross value* ($'000)		
Type	*1978–79*	*1979–80(a)*	1980–81(*a*)	1978–79	1979–80(*a*)	1980–81(*a*)
Tuna (*b*)	11,266	13,573	18,164	5,316	11,426	16,138
Mackerel	1,049	1,093	1,225	1,177	1,424	1,746
Snoek	186	121	145	76	58	75
Mullet	5,600	5,930	6,471	3,396	4,154	3,919
Bream (including Tarwhine)	794	809	929	1,481	1,686	1,877
Australian salmon	2,390	2,469	2,398	993	1,164	1,339
Ruff	1,163	1,092	1,077	443	493	458
Snapper	2,042	2,251	2,254	3,932	4,639	5,103
Morwong	1,447	1,288	2,088	1,356	1,642	2,371
Whiting	2,566	2,173	2,337	6,900	5,041	5,794
Flathead	2,169	1,372	1,494	1,896	1,594	1,724
Shark	7,399	5,275	5,708	8,429	4,101	5,295
Leatherjacket	227	356	440	159	254	361
Other	23,146	19,245	19,001	20,947	20,332	21,087
Total	**61,444**	**57,047**	**63,731**	**56,501**	**58,007**	**67,289**

(*a*) Excludes Victoria. (*b*) Includes estimates by CSIRO for New South Wales.

CRUSTACEANS: PRODUCTION, BY TYPE

(Tonnes live weight)

Type	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80(a)*	1980–81(*a*)
Murray crayfish Yabbies	(*a*)131	83	38	28	18	13
Rock lobster Bay lobster	(*a*)12,865	(*b*)12,875	(*b*)14,485	15,358	14,469	14,794
Prawns	19,478	23,095	19,272	21,724	21,994	26,921
Crabs	700	825	858	790	888	969
Total	**(*b*)33,173**	**(*b*)36,878**	**(*b*)34,653**	**37,900**	**37,370**	**42,697**

(*a*) Excludes Victoria. (*b*) Incomplete; *see* footnotes to figures for individual species.

MOLLUSCS: PRODUCTION, BY TYPE

(Tonnes estimated live weight)

Type	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80(a)*	1980–81 (*a*)
Octopus	(*c*)59	78	(*c*)92	(*c*)147	(*c*)250	(*b*)246
Squid	253	280	381	585	719	639
Cuttlefish	(*c*)19	(*c*)19	(*c*)29	(*c*)93	(*c*)144	(*b*)146
Oysters	(*b*)(*c*)10,273	(*b*)(*c*)10,793	(*b*)(*c*)9,786	(*b*)(*c*)6,740	(*b*)(*c*)8,251	(*b*)(*c*)8,277
Mussels	1,123	544	773	689	343	346
Pipi	195	207	303	285	1,108	287
Scallops	4,642	4,396	(*b*)9,121	(*b*)10,548	(*b*)5,594	(*b*)7,261
Abalone	5,256	6,313	5,057	6,197	4,970	5,505
Total	**(*d*)21,820**	**(*d*)22,630**	**(*d*)25,543**	**(*d*)25,285**	**(*d*)21,378**	**(*d*)22,707**

(*a*) Excludes Victoria. (*b*) Excludes South Australia. (*c*) Excludes Queensland. (*d*) Incomplete; *see* individual species.

Pearls, pearl-shell and trochus-shell

PEARL CULTURE AND PEARL AND TROCHUS SHELL FISHING OPERATIONS(*a*)

(*Source:* Department of Primary Industry)

		1978	*1979*	*1980*
QUANTITY				
Pearl and Trochus shell fishing operations—				
Production of—				
Pearl shell(*b*)	tonne	185.0	309.6	226.0
Trochus shell	tonne	—	n.a.	n.a.
Pearl culture operations—				
Live shell introduced	No.	438,496	358,022	347,397
	tonne	130.5	112.6	107.0
Production—				
Round and baroque pearls	No.	88,369	77,231	65,982
	momme(*c*)	55,553	54,500	50,704
Half pearls	No.	248,360	138,687	191,781
Manufacturing shell	tonne	66.7	133.6	75.1
VALUE ($'000)				
Pearl and Trochus shell fishing operations—				
Production of—				
Live pearl shell		813	739	911
Pearl shell		188	905	534
Trochus shell		—	n.a.	n.a.
Pearl culture operations—				
Production of—				
Round and baroque pearls		11,768	15,281	15,340
Half pearls		1,104	594	1,078
Manufacturing shell		58	309	328

(*a*) Figures refer to the year ended January for the Northern Territory and Queensland and to the year ended December for Western Australia. (*b*) Excludes manufacturing shell produced from pearl culture operations. (*c*) A momme is a pearl weight measurement equivalent to 3.769 grams.

Processing of fish, crustaceans and molluscs

Processing plants are located strategically throughout Australia close to fishing grounds. A number of shore-based plants have been established in remote areas of northern Australia to service the expansion of the northern prawn fishery.

Rock lobsters, prawns, abalone and scallops are frozen for export; tuna, snoek, Australian salmon and abalone are canned; small amounts of fish are smoked; and some molluscs are bottled. Hand labour is still used extensively in processing operations, but mechanisation is being progressively introduced.

Ice is used extensively for the chilling of fish taken in estuarine and inshore fisheries. Refrigeration is used particularly on vessels operating in the tuna fishery and prawn fisheries to chill or freeze the catch.

Fish, crustaceans and molluscs intended for export are processed in establishments registered under the Export (Fish) Regulations. Edible fish for local consumption is mainly dispatched fresh-iced to markets.

Domestic marketing of fisheries' products

Although virtually the whole of the tuna and Australian salmon catches are canned, the greater part of Australian fish production is marketed fresh or frozen.

Marketing arrangements for fresh fish vary. In New South Wales, fish marketing is the responsibility of the Fish Marketing Authority which operates the Metropolitan Fish Markets. In other coastal centres of New South Wales, fishermen's co-operatives may become registered as local fish markets. In Queensland until recently the Fish Board sold all production on behalf of fishermen in that State, except fish intended for export and interstate trade. However, new legislation was passed in March 1982 giving fishermen a choice of selling their catch either through the Fish Board, Fishermens' co-operatives or licensed private processors and wholesalers. In Victoria, South Australia, Western Australia and Tasmania, there is no restriction on market outlets. In Victoria, South Australia and Western Australia, most fish is sent to metropolitan wholesale fish markets for auctioning; small quantities are processed for sale locally, chiefly by co-operatives. Nearly all fresh fish in Tasmania is consigned direct to processors. The principal outlets for fish products in Australia are retail and catering establishments.

CHAPTER 15

WATER RESOURCES

This chapter is divided into two major parts:—water resources in Australia, and the management of these resources. The former provides information on such topics as the geographic background to water resources, surface and groundwater supplies and use and the drainage divisions in Australia. The latter summarises Australian and State assessment and management of water resources.

For information concerning general, descriptive and historical matter *see* Year Book No. 37, pages 1096–1141 and Year Book No. 51, pages 228–31.

An article on droughts in Australia appeared in Year Book No. 54, pages 991–6.

Introduction

Rainfall, or the lack of it, is the most important single factor determining land use and rural production in Australia. The chapter Climate and Physical Geography of Australia contains details on geographical and climatic features that determine the Australian water pattern. Australia is the driest continent in the world. The scarcity of both surface and groundwater resources together with the low rates of precipitation, which restrict irrigation and other uses (quite apart from economic factors), has led to extensive programs to regulate supplies by construction of dams, reservoirs, large tanks and other storages.

Geographic background

General. Water resources are determined by rainfall, evaporation and physical features including soil, vegetation and geology. Chapter 2, Climate and Physical Geography of Australia, contains a detailed description of the climatic features of the country. A brief description of the landforms appears in Year Book No. 61, pages 25–27. In assessing Australia's water resources, dependability and quality of supply must be considered, as well as amount.

Topography. The major topographical feature affecting the rainfall and drainage patterns in Australia is the absence of high mountain barriers; features range from sloping tablelands and uplands along the east coast Main Divide through the low plain and marked depression in the interior to the Great Western Plateau.

Drainage. Only one-third of the Australian land mass drains directly to the ocean, mainly on the coastal side of the Main Divide and inland with the Murray-Darling system. With the exception of the latter, most rivers draining to the ocean are comparatively short and account for the majority of the country's average annual discharge.

The interior lowlands exhibit endoreic drainage patterns and surface drainage is totally absent from some arid areas of low relief.

Climate. Australia's large area (7.7 million square kilometres) and latitudinal range (3,700 kilometres) have resulted in climatic conditions ranging from the alpine to the tropical. Two-thirds of the continent is arid or semi-arid, although good rainfalls (over 800 mm annually) occur in the northern monsoonal belt under the influence of the Australian-Asian monsoon and along the eastern and southern highland regions under the influence of the great atmospheric depressions of the Southern Ocean. The effectiveness of the rainfall is greatly reduced by marked alternation of wet and dry seasons, unreliability from year to year, high temperatures and high potential evaporation.

Settlement. The availability of water resources controls, to a large degree, the possibility and density of settlement; these, in turn, influence the quality of the water through production and disposal of waste. Most early settlements were established on the basis of reliable surface water supplies and, as a result, Australia's population is concentrated along the coast, mainly in the comparatively fertile, well-watered east, south-east and far south-west.

As settlement spread into the dry inland grazing country, the value of reliable supplies of underground water was realised. Observations of the disappearance of large quantities of the rainfall precipitated on the coastal ranges of eastern Australia eventually led to the discovery of the Great Artesian Basin which has become a major asset to the pastoral industry.

For further information on the influence of water resources on the spread of settlement in Australia *see* Year Book No. 61, page 860.

Surface supplies

Distribution and volume. As described above, permanent rivers and streams flow in only a small part of the continent. The average annual discharge of Australian rivers has been assessed at 343 x 10^9 cubic metres, of which 157 x 10^9 cubic metres is measured discharge and the remainder is estimated. This is small in comparison with river flows on other continents. In addition, there is a pronounced concentration of runoff in the summer months in northern Australia while the southern part of the continent has a distinct, if somewhat less marked, winter maximum.

Variability of flow. Even in areas of high rainfall, large variability in flow means that, for local regional development, most streams must be regulated by surface storage. However, in many areas evaporation is so great that storage costs are high in terms of yield. Extreme floods also add greatly to the cost of water storage, because of the need for adequate spillway capacity.

Potential development. Some 85 per cent of all water used in Australia is surface water. This quantity is about 15 x 10^9 cubic metres a year and represents about 12 per cent of the possible usable surface water available in Australia; it does not include the amount diverted for hydro-electric power generation and other purposes which does not affect the quantity of water available. However, the great variability of river discharge, high evaporation and lack of sites for storage on many catchments limit potential development. As an indication of the severity of the problem, Australia's runoff is estimated at 13 per cent of rainfall compared with 40 per cent in North America and Europe, 36 per cent in South America and Asia and 24 per cent in Africa, with the complementary figure representing the evaporation and transpiration percentage. There is, however, considerable scope for greater efficiency in water use.

Groundwater supplies

Groundwater is more important than surface water in about 60 per cent of the country. Australia's estimated annual groundwater recharge is 72 x 10^9 cubic metres, and annual groundwater usage is estimated at about 2.5 x 10^9 cubic metres.

An indication of the variability in quality and quantity of Australia's groundwater resources is given in the map sheets accompanying the Australian Water Resources Council's publication, *Groundwater Resources of Australia (1975)*.

Groundwater is divided according to its occurrence in the three main classes of aquifer:

(i) *Shallow unconsolidated sediments* comprise alluvial sediments in river valleys, deltas and basins; aeolian (windblown) sediments which generally occur in coastal areas; and lacustrine (lake) sediments. These sediments are often highly permeable and porous. Permeability and porosity may vary markedly according to orientation. Unconsolidated aquifers of this group generally occur at depths of less than 150 m and are often readily accessible to sources of water for recharge. Marked seasonal variations in water level are common.

(ii) *Sedimentary rocks* are generally made up of consolidated sediments. The aquifers owe their porosity to small voids between the grains which are often well compacted and cemented. They often cover significant areas, being continuous and of appreciable thickness. Rock strata usually dip quite gently. Nevertheless, over the full extent of the larger sedimentary basins, aquifers may reach great depths. Areas where recharge takes place may be small in relation to the extent of the aquifers. Water quality in individual aquifers may be quite good and fairly uniform over large areas. Some sediments contain a number of permeable and impermeable layers, creating a vertical sequence of separate aquifers, and water quality may vary greatly between them.

(iii) *Fractured rocks* comprise hard igneous and metamorphosed rocks which have been subjected to disturbance and deformation. Aquifers resulting from the weathering of any rock type are also included in this group. Water is transmitted mainly through joints, bedding planes, faults, caverns, solution cavities and other spaces in the rock mass.

The quality of groundwater varies considerably and sources are subject to pollution in much the same way as surface supplies. Locally, groundwater has also been polluted by poor drilling techniques which allow contamination of fresh or lower salinity waters by more highly saline waters, and also by the discharge of industrial wastes into underground drainage bores. The Port Phillip Basin has the problem of discharge of industrial and domestic waste underground, and in the Western Port Basin there has been control of groundwater withdrawal since 1968 to prevent overdraft and saltwater intrusion.

An Australian School of Drilling has been established under the auspices of the National Training Council to improve the skills of the water drillers.

For further details on the sources of groundwater and a table of the principal water-bearing basins in Australia, *see* Year Book No. 61, pages 865–6. A map showing the extent of known artesian basins throughout Australia is shown on page 273 of Year Book No. 48.

Drainage divisions and the use of surface and groundwaters

Groundwater and surface water have, in the past, tended to be viewed as separate resources because of their modes of occurrence, assessment and development. They are complementary components of the hydrologic cycle and in any assessment of the water resources of a region are not necessarily additive.

To promote a unified approach, river basins or groups of river basins have been adopted as the primary units of assessment. The *Review of Australia's Water Resources* 1975 (Department of National Development and Energy, Australian Water Resources Council, Canberra) contains a summary of the 244 river basins grouped into twelve divisions, together with a map showing the divisions. (*See* below.)

The conjunctive approach to water resources, even to importing water from outside the region, generally makes more water available for use than would be the case with independent use of the various sources. Year Book No. 61, pages 867–8 contains details of the conjunctive use of surface and groundwaters.

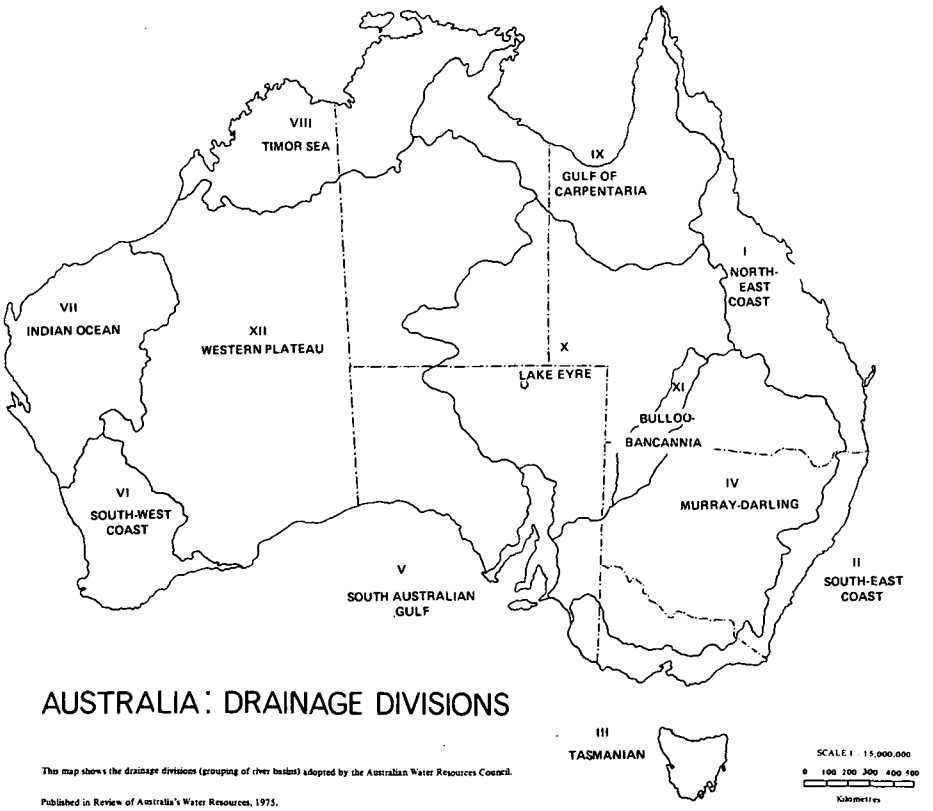


PLATE 38

In the *Review of Australia's Water Resources*, 1975 an attempt was made to assess the possible exploitable yield of surface water for each river basin (aggregating to Drainage Divisions) at the point of lowest practical downstream development, using the type of hydraulic structure considered technically feasible by the governments. These estimates take into account average annual flow, variability of flow, water quality and the availability of suitable sites for storage, but do not take into account economic factors.

AN ASSESSMENT OF THE POSSIBLE YIELD OF SURFACE WATER BY DRAINAGE DIVISION

(*Source:* Review of Australia's Water Resources, 1975)

Drainage division	*Adopted drainage area*	*Average annual discharge (a)*	*Possible exploitable yield*	*Estimated total yield of drainage area*	*Possible exploitable yield as percentage of total yield*
	mil. ha		mil. cu. m.		%
I North-East Coast	45	82,500	25,566	75,620	34
II South-East Coast	27	39,396	(*b*)15,992	37,499	43
III Tasmania	7	49,799	35,495	49,799	71
IV Murray-Darling	106	22,261	18,372	22,204	83
V South Australian Gulf	8	980	283	913	31
VI South-West Coast	31	7,290	1,841	4,935	37
VII Indian Ocean	52	4,160	490	3,815	13
VIII Timor Sea	55	74,260	16,423	74,260	22
IX Gulf of Carpentaria	64	58,230	10,094	49,180	21
X Lake Eyre	117	3,260	129	3,180	4
XI Bulloo-Bancannia	10	540	n.a.	540	n.a.
XII Western Plateau	246	—	—	—	—
Australia	**768**	**342,676**	**124,685**	**321,945**	**39**

(*a*) Includes fresh and marginal water but excludes brackish and saline water. (*b*) Includes a small amount of brackish water.

Groundwater is an important substitute for surface water in many parts of the country such as in the arid interior where the Great Artesian Basin provides the only reliable continuous supply of water for stock and domestic purposes. This Basin underlies 23 per cent of the continent and some 30,000 holes have been drilled, about 2,900 of which are still flowing. The high ratio of sodium to calcium and magnesium ions has an adverse effect on soil structure, rendering it impervious and generally unsuitable for irrigation.

Groundwater is increasing in importance as a source of water for irrigation, industry and domestic supply. There are many areas of intensive groundwater development which, although small, accounted for over a third of all groundwater withdrawals in 1975. The areas shown in the table below rely almost exclusively on groundwater from unconsolidated sediments.

Increasing use is made of conjunctive schemes, for example, where groundwater supplies are tapped to augment surface water or where, as in the Burdekin Delta, groundwater aquifers are artificially recharged during the summer wet season to enable water to be stored at low cost with negligible evaporation.

AREAS OF CONCENTRATED GROUNDWATER USAGE IN AUSTRALIA

(*Source:* Review of Australia's Water Resources, 1975)

Area	*Quantity*	*Use*
	mil. cu m/year	
Burdekin Delta (Queensland)	320	Irrigation of sugar cane
Namoi Valley (New South Wales)	108	Irrigation of small crops, including cotton
Condamine Valley (Queensland)	100	Irrigation of grain crops
Southeastern South Australia (*a*)	98	Irrigation, town supplies and industry
Bundaberg (Queensland)	94	Irrigation of sugar cane, industrial and domestic use
Lockyer Valley (Queensland)	70	Irrigation of small crops and fodder
Perth (Western Australia)	66	Irrigation of market gardens, domestic gardens and urban water supply
Hunter Valley (New South Wales)	53	Irrigation of small crops
Callide Valley (Queensland)	35	Irrigation of fodder and grain crops
Tomago Sands (New South Wales)	31	Urban water supply and industrial use
Pioneer Valley (Queensland)	31	Irrigation of sugar cane and domestic use
North Adelaide Plains (South Australia) (*a*)	21	Irrigation of market gardens
Botany Sands (New South Wales)	20	Industrial use
Sub-total	*1,047*	
Estimated total groundwater usage	**2,460**	

(*a*) Includes some water from limestone aquifers.

The first *National survey of water use in Australia*, published in 1981, gathered water use data on a national scale. The data provides a sound basis for the efficient utilisation of existing resources and for the planning of future projects. A summary of the results of the survey is given in the table below.

ESTIMATED ANNUAL WATER USE IN 1977 FOR AN AVERAGE CLIMATIC YEAR BY DRAINAGE DIVISION

(*Source*: The first *National survey of water use in Australia*; Department of National Development and Energy; Australian Water Resources Council, Occasional Papers Series No. 1; AGPS 1981)

Drainage division	*Surface waters ($10^6 M^3$)*				*Ground waters ($10^6 M^3$)*				*Totals ($10^6 M^3$)*			
	Urban industrial	*Irrigation*	*Other rural*	*Total*	*Urban industrial*	*Irrigation*	*Other rural*	*Total*	*Urban industrial*	*Irrigation*	*Other rural*	*Total*
North-East Coast	388	473	-	861	40	670	-	710	427	1,210	126	1,770
South-East Coast	1,400	453	186	2,030	125	368	52	545	1,540	821	238	2,590
Tasmania	157	110	25	292	0.5	-	-	0.5	157	110	25	292
Murray-Darling	287	10,200	491	11,000	42	504	233	778	337	10,700	775	11,800
South Australian Gulf	37	24	10	70	9	63	7	79	222	88	29	339
South-West Coast	187	224	20	431	182	24	5	210	369	248	25	642
Indian Ocean	0.5	-	1	1	36	6	5	47	36	6	6	48
Timor Sea	14	67	6	87	15	0.5	10	25	29	68	19	115
Gulf of Carpentaria	20	2	-	22	15	0.5	1	16	35	2	37	73
Lake Eyre	2	1	2	5	10	1	5	16	13	1	43	57
Bulloo-Bancannia	-	-	-	-	-	-	-	-	1	-	3	4
Western Plateau	0.5	-	1	1	5	2	19	26	21	2	22	44

NB: Totals may not be the sum of the figures in any row or column as figures have been rounded, and water sources such as farm dams, not falling in the categories of surface or groundwater, have been included in the totals section.

Total water use (gross applied water) in Australia for 1977, adjusted for average climatic conditions, has been estimated at 17 800 x $10^6 m^3$ annually, corresponding to an overall total per capita use of about 3,500 litres per day. Of this total, approximately 74 per cent is for irrigation, 18 per cent is for urban/industrial uses and 8 per cent is for other rural water use. Withdrawals for hydro-electric power have not been included. In terms of sources for the water used, by far the largest proportion (about 84 per cent) of water is drawn from surface water sources. Groundwater sources, although of importance in some regions, account for only 14 per cent of the water used. A very small proportion, less than 0.5 per cent of water used is derived from artificial recharge or from reclaimed water. Sources for the remaining water used were not indicated and would include supplies from small bores, rainwater tanks, farm dams and the like. Of the total surface water withdrawals, 77 per cent are used for irrigation, 18 per cent for urban/industrial purposes and 5 per cent for other rural purposes. Corresponding figures for groundwater withdrawals are 67 per cent, 18 per cent and 14 per cent respectively.

Major dams and reservoirs

A map entitled *Australia—Dams and Storages*, published in 1975 by the Department of Minerals and Energy (now the Department of National Development and Energy), shows the location, height of dam wall, capacity and purpose of Australia's major dams and water storages. In the lists below, only dams with a gross reservoir capacity of more than 100 million cubic metres have been included. It should be noted that the Hume Reservoir lies on the New South Wales-Victoria border.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA

Name and year of completion	*Location*	*Gross capacity (million cubic metres)(a)*	*Height of wall (metres) (b)*	*Purpose*
	NEW SOUTH WALES			
Eucumbene (1958)	Eucumbene River	4,807	116	Part of Snowy Mountains H/E Scheme
Hume (1936, 1961)	Murray River, near Albury	3,038	51	Irrigation, water supply, H/E
Warragamba (1960)	Warragamba River	2,057	137	Water supply for Sydney, H/E
Menindee Lakes (1960)	Darling River, near Menindee	1,794	18	Conservation, storage for Murray River Agreement
Burrendong (1967)	Macquarie River, near Wellington	1,677	76	Conservation, FC, water supply
Blowering (1968)	Tumut River	1,628	112	H/E, irrigation
Copeton (1976)	Gwydir River	1,364	113	Irrigation
Wyangala (1936, 1971)	Lachlan River	1,220	85	Irrigation, stock, etc.
Burrunjuck (1927, 1956)	Murrumbidgee River	1,026	79	Irrigation, H/E
Talbingo (1971)	Tumut River	921	162	H/E
Jindabyne (1967)	Snowy River	688	72	H/E
Lake Victoria (1928)	Murray River, near S.A. border	680	—	Conserves supplies for S.A.
Keepit (1960)	Namoi River, near Gunnedah	423	55	Conservation, irrigation, H/E
Glenbawn (1958)	Hunter River, near Scone	360	78	Conservation, irrigation, FC
Tantangara (1960)	Murrumbidgee River	254	45	H/E
Avon (1927)	Avon River	214	72	Water supply for Sydney
Lake Brewster (1952)	Lachlan River, near Hillston	150	-	Irrigation
Liddell (1968)	Gardiner Creek, near Muswellbrook	148	41	Cooling water for thermal electricity generation
Tallowa (1977)	Shoalhaven River, near Nowra	135	43	Water supply for Sydney
Googong (1978)	Queanbeyan River	125	59	Water supply for Canberra-Queanbeyan
	VICTORIA			
Dartmouth (1979)	Mitta Mitta River	4,000	180	Irrigation storage, H/E
Eildon (1927, 1955)	Upper Goulburn River	3,392	79	Irrigation, H/E
Waranga (1910)	Near Rushworth (Swamp)	411	12	Irrigation
Mokoan (1971)	Winton Swamp, near Benalla	365	10	Irrigation
Rocklands (1953)	Glenelg River	336	28	Domestic and stock water supply
Eppalock (1964)	Campaspe River	312	45	Irrigation, water supply
Cardinia (1973)	Cardinia Creek, near Emerald	287	79	Water supply for Melbourne
Upper Yarra (1957)	Yarra River	207	89	Water supply for Melbourne
Glenmaggie (1927, 1958)	Macalister River	190	37	Irrigation
Cairn Curran (1958)	Loddon River, near Newstead	149	44	Irrigation
Yarrawonga (1939)	Murray River	117	22	Irrigation
Toolondo (1952,1960)	Natural depression, near Horsham	107	-	Domestic and stock water supply
	QUEENSLAND			
Fairbairn (1972)	Nogoa River, central Qld	1,440	49	Irrigation, industrial
Somerset (1959)	Stanley River	893	50	Water supply for Brisbane, H/E
Fred Haigh (1975)	Kolan River, near Gin Gin	586	52	Irrigation
Ross River (1974)	Near Townsville	417	35	FC, water supply
Tinaroo Falls (1958)	Barron River	407	47	Irrigation, H/E
Glenlyon (1976)	Pike Creek, near Stanthorpe	261	62	Irrigation
Wuruma (1968)	Nogo River, near Eidsvold	194	46	Irrigation
Koombooloomba (1961)	Tully River	180	52	H/E, irrigation
Julius (1977)	Leichhardt River, near Mt Isa	127	35	Water supply, mining
Eungella (1969)	Broken River	131	46	Irrigation, industrial, mining, water supply
Beardmore (1972)	Balonne River	101	15	Irrigation, water supply
	WESTERN AUSTRALIA			
Lake Argyle (Ord) (1971)	Ord River, near Kununurra	5,720	99	Irrigation, FC, H/E
South Dandalup (1973)	Near Dwellingup	208	41	Water supply for Perth
Wellington (1933, 1944, 1960)	Collie River	185	37	Irrigation, water supply
Serpentine (1961)	Serpentine River	185	55	Water supply for Perth

For footnotes *see* end of table

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

Name and year of completion	*Location*	*Gross capacity (million cubic metres)(a)*	*Height of wall (metres) (b)*	*Purpose*
	TASMANIA			
Lakes Gordon and Pedder (1974)—				
Gordon	South West	11,728	140	H/E
Scotts Peak	South West	2,963	43	H/E
Serpentine	South West	2,963	38	H/E
Edgar	South West	2,963	17	H/E
Miena (1967)	Great Lake	2,390	18	Storage for H/E
Lake St Clair (1938)	Central Plateau	2,000 (est.)	3	Natural storage for H/E
Mackintosh (1980)	Mackintosh River, near Queenstown	922	75	H/E
Tullibardine (1979)	Tullibardine River, near Queenstown	922	25	H/E
Lake Echo (1956)	Lake Echo	725	19	H/E
Arthur's Lake (1965)	*Source of Lake River, near Great Lake*	*571*	*17*	H/E
Lake King William (Clark) (1949, 1966)	Derwent River	540	67	H/E
Devils Gate (1969)	Forth River, near Devonport	180	84	H/E
Rowallan (1967)	Mersey River	130	43	H/E
Cethana (1971)	Forth River, near Devonport	108	110	H/E
	NORTHERN TERRITORY			
Darwin River (1972)	Darwin River	259	31	Water supply for Darwin

(*a*) Includes 'dead water', i.e., water below the operational outlet of the reservoir. (*b*) As a general rule, the figures shown for height of wall refer to the vertical distance measured from the lowest point of the general foundation to the crest of the dam, i.e., the level of the roadway or walkway on the dam.

ABBREVIATIONS: H/E—hydro-electricity, FC—Flood control and/or mitigation.

MAJOR DAMS AND RESERVOIRS UNDER CONSTRUCTION OR PROJECTED

Name	*Location*	*Gross capacity (million cubic metres)(a)*	*Height of wall (metres)(b)*	*Purpose*
	UNDER CONSTRUCTION			
Wivenhoe	Brisbane River, near Fernvale, Qld	1,150	58	Water supply, FC, H/E
Thomson	Thomson River, near Erica, Vic.	1,110	160	Water supply, irrigation
Windamere	Cudgegong River, near Mudgee, N.S.W.	353	69	Irrigation
Glennies Creek	Hunter Valley, near Singleton, N.S.W.	284	67	Industrial, irrigation stock and domestic water supply
Awoonga High Dam	Boyne River, south of Gladstone, Qld.	255	46	Water supply, cooling water (power)
Boondooma	Boyne River, near Proston, Qld	212	50	Cooling water (power)
Blue Rock	Tanjil River, near Willow Grove, Vic.	200	75	Cooling water (power), domestic and industrial
Mangrove Creek	Mangrove Creek, near Gosford, N.S.W.	176	79	Water supply
	PROJECTED			
Burdekin Falls Dam	Burdekin River, Qld	1,860	68	Irrigation
Lower Pieman	Pieman River, near Queenstown, Tas.	641	122	H/E
Split Rock	Manilla River, Namoi Valley, N.S.W.	370	64	Irrigation
Spencer	Denison Creek, near Nebo, Qld	127	24	Mining, water supply
Bjelke-Petersen	Barker Creek, near Murgon, Qld	125	33	Irrigation
Bastyan (Lake Rosebery)	Pieman River, near Queenstown, Tas.	125	75	H/E
Harding Dam	Harding River, W.A.	114	42	Water supply

For footnotes and abbreviations *see* previous table.

The following table summarises dams and storages existing and under construction in each drainage division according to purpose, capacity and regulated discharge. Three storages counted as mainly for hydro-electricity in the South-East Coast Division and eight in the Murray-Darling are part of the Snowy Mountains Hydro-electric Scheme which, as a whole, makes a major contribution to irrigation.

LARGE DAMS—NUMBERS EXISTING AND UNDER CONSTRUCTION

(*Source:* Review of Australia's Water Resources, 1975)

Drainage division(a)	*Total number*	*Main purpose*				*Total capacity*	*Regulated discharge*
		Irrigation	*Hydro-electricity*	*Water supply*	*Flood control, recreation*		
						mil. cu. m	mil. cu. m.
I North-East Coast	33	12	1	20	—	4,100	1,300
II South-East Coast	99	5	5	87	2	10,700	2,700
III Tasmania	43	1	31	11	—	19,500	8,700
IV Murray-Darling	104	34	15	53	2	20,700	10,500
V South Australian Gulf	24	—	—	23	1	240	150
VI South-West Coast	24	8	—	15	1	870	360
VII Indian Ocean	1	—	—	1	—	(*b*)	(*b*)
VIII Timor Sea	8	5	—	3	—	6,100	1,900
IX Gulf of Carpentaria	4	—	—	4	—	140	10
X Lake Eyre	2	1	—	1	—	(*b*)	(*b*)
Australia	**342**	**66**	**52**	**218**	**6**	**62,350**	**25,620**

(*a*) Divisions XI and XII are not represented. (*b*) Negligible.

NOTE: 1. Although most dams are used for water supply, the greatest volume of water is reserved for irrigation.
2. 'Total capacity' of storages is not the same as 'gross capacity' which includes an estimate for water below the operational outlet of the reservoir.

Water quality

Water quality is an important factor in determining the potential use of a particular water resource. Its management is essentially aimed at maintaining each resource in a condition suitable for the beneficial use or uses considered appropriate by the community.

Quality of water may be highly variable over time. Runoff resulting from rainfall may pick up a whole range of contaminants in passing over and through the soil; evaporation results in the concentration of these dissolved solids while, on the other hand, storm waters can dilute the concentration of pollutants. Water quality, while being generally related to the quantity of flow, may also vary with the depth and breadth of a body of water.

In the long term, land use changes generally affect the quality of groundwater where runoff enters aquifers. For example, the replacement of deep rooted trees in the south-west of Western Australia by shallow rooted grasses for agriculture has disturbed the natural water and salt balance, mobilising salt and increasing stream salinity. About 160,000 hectares of land have been rendered too saline for normal crops and pastures, while water quality in the Wellington Dam storage continues to deteriorate because of this saline inflow, affecting irrigation users downstream as well as urban communities in the Great Southern Towns Water Supply region which rely on this source for domestic water. Elsewhere, salination of non-irrigated land, particularly in Victoria, is increasing mainly as a result of land clearing, and water quality will deteriorate as saline runoff and seepage finds its way into streams.

Although some Australian rivers are naturally saline, the quality of surface water is generally good. However, most types of water pollution experienced in advanced industrial countries also occur in Australia. The main problems relate to sewage, industrial effluents and increasing salinity mainly caused by agricultural activities. In some parts of Australia untreated or inadequately-treated sewage and trade effluents are discharged into inland and coastal streams used for town water supplies. Mining activities cause pollution by the discharge of ore-processing wastes or mine water into streams or by leaching from waste dumps as happened in the Molonglo River in New South Wales where zinc was being leached from tailings and slime dumps at Captains Flat. Remedial work at Captains Flat was undertaken to prevent further erosion and leaching of the waste dumps, and to minimise the flow of mine water discharging through springs into the Molonglo River.

Water supplies to many towns and small settlements throughout Australia are of low quality and can at times fall short of the World Health Organisation standards for drinking water. In many cases, relief may be possible through small water treatment plants.

The increasing salinity of the Murray River in recent years is a source of concern as the river is vital for irrigation and domestic water and provides much of Adelaide's water supply. The problem is the

increasing amounts of saline surface and underground water discharged from irrigation areas, compounded by concentration through evaporation. This is in addition to the river's quite high natural salt load. Groundwater mounds have progressively built up under some irrigation areas to the point where the water table has reached the root zone in some irrigation areas causing reduced productivity and, where saline, complete barrenness. As the sedimentary beds of the river basin were laid down under a marine environment, the groundwater is generally saline and, when drainage does return to the river, it carries large amounts of salt. Salinity levels in the river, however, vary seasonally. During periods of low flow or when seepage from the saturated banks returns following prolonged floods, the concentration of salts may increase significantly, approaching the salt susceptability limits of some crops. Citrus growers in some areas are having to install under-tree sprinkler systems to prevent yield depression, defoliation and other tree damage caused by saline water from overhead sprinklers. Present control measures include the provision of evaporation basins for the disposal of highly saline drainage water and the regulation of river flow to control water quality by dilution.

Salinity control and drainage is expensive and requires a co-ordinated approach. New South Wales, Victoria and South Australia have commenced, and in some cases completed, urgent salt interception projects recommended as the first stage of a co-ordinated plan of action developed by consultants engaged by the Commonwealth and these three States. Work is continuing on medium term salt interception and drainage projects. These are being funded under the Commonwealth's National Water Resources Program. By the end of 1981-82 a total of $35 million had been spent on salinity and drainage projects in the Murray Valley on a dollar-for-dollar basis between the States and the Commonwealth Governments. In the longer term, a River Murray water quality management plan is required, embracing the co-ordinated operation of engineering works in three States, river regulation procedures including possible dilution flow releases, and water quality standards for the various reaches of the river. *The River Murray Commission,* under its new powers in relation to water quality, has engaged consultants to undertake a two-year study aimed at providing a firm technical base for an appropriate water quality management plan.

Water management

Australia's water resources are managed by about 800 irrigation authorities, metropolitan water boards, local government councils and private individuals. State authorities dominate the assessment and control of water resources as, under the Commonwealth Constitution, primary responsibility for management of water rests with the individual State governments. The Commonwealth Government is responsible for matters relating to its Territories, and participates indirectly through financial assistance or directly in the co-ordination or operation of interstate projects through bodies such as the River Murray Commission. In other instances where political boundaries intersect some river basins, co-operation between governments has been necessary to develop resources.

Australia's attitudes to water resources management have changed substantially over the last twenty years. Water management is no longer seen just in terms of storing water and regulating streams for consumptive use, but also in terms of conserving unregulated streams in an unmodified landscape for wild life preservation or recreation purposes or for possible social or economic use by future generations. In addition, agricultural, industrial and urban development has led to greater attention being paid to water quality management.

In October 1975, the Commonwealth and State governments adopted a statement setting out the basic principles and goals underlying a balanced approach to the development and management of water resources in Australia. *See* Year Book No. 63, page 340, for further details.

The development of water resources in the States has an important bearing on the Commonwealth's broad interests in economic management, resource allocation, foreign exchange earnings, distribution of income and related matters. Consequently, the Commonwealth has participated in water resource matters in the States in instances of mutual Commonwealth/States concern or in the national interest. Currently a $200 million, five year National Water Resources Program, which was announced by the Prime Minister in February 1978, is financially assisting the States in the development, management and assessment of their water resources.

In response to recommendations in a report of a Senate Inquiry into the Commonwealth's role in water resources matters, a Commonwealth Water Policy was announced in March 1979. In co-operation with the States the Commonwealth is seeking to achieve the long-term beneficial use of Australia's water resources. Briefly, the main policy thrusts appropriate to the Commonwealth for this purpose were seen to be:

- ensure, as far as practicable, that water resource difficulties do not constrain national development;

- minimise losses and disruption caused by floods;
- encourage management practices which reverse trends in the deterioration of water quality and associated land resources;
- encourage a comprehensive approach to water/land planning and management;
- encourage the efficient use of water resources;
- encourage the development of financial and cost allocation policies appropriate to changing economic circumstances and community values; and,
- encourage public awareness and involvement in water resource issues.

A number of key water issues relating to the development and management of Australia's water resources are already receiving close attention: others are expected to emerge in the near future. Some relate to water quality, including that resulting from irrigation-induced and dryland salinisation, specific and widespread sources of pollution in both urban and agricultural areas, aquatic weeds, levels of treatment for urban water supplies, and the cost and technology of water re-use.

Water resources readily accessible to centres of demand are already substantially committed, although there is a widespread recognition of the considerable scope which still exists for increased efficiency in the use of existing supplies. However, on a local or regional basis, the availability of adequate water supplies is becoming a key factor in continuing economic development. It appears inevitable that new supplies, in certain situations, will depend on the processing of water resources of marginal quality and waste water to acceptable standards for domestic and industrial use. In turn, this will generate pressures for the development of more advanced water treatment technologies.

Perspective on Water Resources to the Year 2000 Study

The Government has commenced a study to develop a perspective on Australia's water resources to the year 2000. The study will identify water resources development and management issues which have a potential for impeding national development.

A Steering Committee has been established to supervise the study which is being undertaken by the Department of National Development and Energy. A range of consultants' studies has also been commissioned to provide data for the committee.

The study is scheduled for completion by March 1983.

Research and continuing assessment of water resources

Australian Water Resources Council (AWRC)

A widening awareness of the need for a co-ordinated Australian approach to water utilisation led to the formation in 1962 of the Australian Water Resources Council by joint action of the Commonwealth and State governments. The Council comprises the Commonwealth and State Ministers primarily responsible for water resources, with the Commonwealth Minister for National Development and Energy as Chairman, and is serviced by a Standing Committee consisting mainly of the heads of Departments responsible to these Ministers, and by six permanent technical committees.

The objective of the Council is to provide a forum for exchange of views relating to the development of policies, guidelines and programs which may be considered appropriate to assist in the most beneficial and orderly assessment, development and management of Australia's water resources.

See Year Book No. 61, page 869 for further details on the work of the AWRC.

Water resources research

Comprehensive programs of research and investigation are being pursued by State water and agricultural authorities, the Commonwealth Scientific and Industrial Research Organization (CSIRO), the Bureau of Meteorology and the Australian Water Resources Council, often in collaboration. The Commonwealth Water Research Fund was established in 1968 to provide support for a research program developed through the Australian Water Resources Council. The Fund is administered by the Department of National Development and Energy. The program covers fundamental and applied research into all aspects of water resources with the aim of providing a better basis for the assessment, planning, development and management of Australia's water resources. It complements research work being carried out by the government agencies, universities and other organisations and, in general, is used to stimulate new work not handled within existing programs. The program for the current 1980–83 program is diverse with emphasis on floodplain management, water storage management, nonpoint sources of pollution, salinity, waste disposal and reuse, drinking water quality, aquatic biology, groundwater, evapotranspiration and new instruments and techniques.

Water research by the CSIRO can be grouped under the following broad headings:

Water resource management. The aims of programs in this area are to develop ecologically sound methods for the management of irrigation water distribution systems and associated surface waters and to develop integrated methods of managing aquatic plants.

Groundwater research. The physical and chemical processes affecting the quantity and quality of groundwater are being investigated. Included are studies of natural interactions between surface water, groundwater, soils and rocks, and responses to man-made factors such as mining, waste disposal, agriculture, artificial recharge and pumpage.

Land management for water resources. Included in this area are studies of the processes involved in the movement of chemical pollutants and soluble salts from land to water resources, research into methods for controlling the quality of water resources by manipulating land and vegetation, investigations of processes involved in the recharge of water-table aquifers, and an analysis of the decision-making process in the management of land and water resources.

Hydrology and climatology. The objectives of research in this area are to advance the knowledge and basic understanding of hydrologic and climatic systems and processes and to develop better methods of collecting and presenting information about water resources and climate and assessing their use potential and limitations. In addition, the application of soil physics theory on movement of water in soils is being extended to the scale of landscape units and catchments.

Water and wastewater purification. A variety of projects are underway in this area, including the development of low-cost, energy-saving procedures for treating and recycling wastewater; the development of more effective processes for the removal of turbidity and colour from water, and for sludge disposal; and improvements in sewage treatment processes and the upgrading of effluents to the standard required for large-scale use.

Research is also concentrating on the simplification of continuous ion-exchange processes such as dealkalization, softening and desalination by the use of magnetic resins and adsorbents; the improvement of Sirotherm resins used in desalination operations; and studies of the surface chemistry of magnetite and natural colloids used in magnetic processes for the purification of water and wastewaters.

Investigations are also being undertaken to examine the levels, influence and methods of removal of nitrogen, phosphorus and non-biodegradable compounds in wastewaters and to protect the receiving waters for beneficial uses.

Review of water research in Australia

During the latter part of 1981 and the first half of 1982, the need to upgrade water research in Australia was examined in separate reports by the Commonwealth/States working group of the Australian Water Resources Council, CSIRO and the Bureau of Mineral Resources. In May 1982, CSIRO announced organisational changes to provide more appropriate focus for water research within the organisation. More recently (August 1982), following a close examination of the various reports, the Government announced its decision to establish a National Water Research Council and arrangements for improving the co-ordination of research within Commonwealth research agencies. The council, supported by the Commonwealth Department of National Development and Energy, will provide advice to the Government on research needs, priorities and programs.

International aspects

International water organisations

Australia liaises with international bodies and United Nations agencies concerned with water resources and participates in their activities in various ways.

Organisation for Economic Co-operation and Development (OECD). Australia's membership of the OECD since 1970 has involved participation in the work of Water Management Group which investigates and rationalises problems which are the subject of international concern, and develops strategies—economic, legal and technical—which might resolve them.

United Nations Educational, Scientific and Cultural Organization (UNESCO). The International Hydrological Decade (IHD) (1965–1974) was a period in which participating countries implemented an international program designed to advance the science and practice of hydrology. Following the conclusion of the IHD, an International Hydrology Program (IHP) was commenced and an Australian UNESCO Committee for the IHP (AUCIHP) was formed to co-ordinate Australian input to the IHP.

World Meteorological Organization (WMO). Through its Commission for Hydrology, WMO is the specialised UN agency dealing with operational hydrology—the measurement of basic hydrological elements, water resources assessment and hydrological forecasting. WMO has an Operational Hydrology Program (OHP) which is co-ordinated with and complemented by UNESCO's IHP. Within the OHP is the Hydrological Operational Multipurpose Subprogram (HOMS) involving the organised transfer of hydrological technology among members. Australia is a contributor to HOMS and has established a HOMS National Reference Centre within the Secretariat of the Australian Water Resources Council (AWRC). In Australia, hydrological and meteorological activities relative to water resources are co-ordinated by the AWRC for the Permanent Representative of WMO in Australia, the Director of Meteorology.

Economic and Social Commission for Asia and the Pacific (ESCAP). This Commission, through its committee on Natural Resources, reports on water policy issues in addition to other activities. By participation in this conference and in seminars arranged on selected topics, Australia contributes to, and benefits from, identification of the main problems of water resources management in a densely populated, developing region.

United Nations Environment Program (UNEP). Australia participates in a world registry of major rivers covering discharge and pollutants and of clean rivers so defined and in the development of methodology for analysis and planning of water resources management.

World Health Organisation (WHO). Australia is participating in the water quality monitoring component of the WHO Global Environmental Monitoring System (GEMS) which will provide a consistent global overview of changes in water quality.

National and interstate agreements

In the section on *Water Management* above, reference was made to the responsibilities of government on the national, state and local authority levels. In this section, some additional details are provided on their roles in the management of water resources.

The Murray-Darling Drainage Division's surface water resources are the most highly developed in Australia, with 91 per cent of the possible exploitable yield currently committed for use. The Division contains the continent's largest river system which can be divided into three main groups of rivers:

(a) the Darling River and its tributaries;
(b) the Murrumbidgee River and its tributaries; and
(c) the Murray River and its tributaries upstream from the confluence of the Murrumbidgee and the Murray.

The river basins that comprise the area under the control of the River Murray Commission are the nine basins in group (c) above and the three basins adjacent to the lower reaches of the Murray.

River Murray Waters Agreement

The *River Murray Waters Act* 1915 ratified an Agreement between the Commonwealth and the States of New South Wales, Victoria and South Australia. The Commonwealth Department of National Development and Energy is responsible for the Commonwealth's interest under the Act. Year Books prior to No. 39 contain a number of summaries of the historical events leading to the Agreement of 1914 which provided for a minimum quantity of water to pass to South Australia. Further details on the River Murray Waters Agreement and subsequent amendments may be found in Year Book No. 61, pages 870–2.

The River Murray Commission, established in 1917 to give effect to the Agreement and representative of each of the four Governments, is responsible for the management of the flow of water in the River Murray, the construction, maintenance and operation of storages and other regulatory works to make water available for irrigation, navigation, and urban purposes; and for the allocation of water between the three States. Dartmouth Dam—a major project of the River Murray Commission and the fourth largest water storage in Australia, was completed in November 1979. The reservoir has been storing water since November 1977.

Dartmouth and Hume Reservoirs together with Lake Victoria and the Menindee Lakes storages, are the key storages operated by the River Murray Commission to regulate the River Murray system. A series of weirs along the river provide for irrigation diversions by the three States. The major diversion weir is at Yarrawonga. A number of the weirs have locks to enable navigation of the river to be maintained.

Towards the end of 1976, the four Governments agreed that the River Murray Commission should assume the function of co-ordinating water quality and quantity management of the River Murray to the extent of taking account of water quality in its operations and investigations, monitoring the quality

of the river, and being authorised to make representations to the Contracting States on water quality issues. The Governments agreed to give the Commission interim authority in this regard pending the necessary legislative action and formal amendment of the Agreement.

A preliminary draft substitute Agreement prepared by the Commission in 1978 was accepted in principle by the four Governments as a basis for negotiations on a new Agreement. A major review of the Agreement (the first since 1914) was carried out in 1981 and endorsed by the four Governments. The review has proposed the expansion of the responsibilities of the River Murray Commission to include water quality in addition to water quantity in the main stem of the river and associated storages. The Commission has been authorised to operate within the terms of the new Agreement pending its ratification by legislation in the State and Commonwealth parliaments.

New South Wales–Queensland Border Rivers Agreement

This agreement came into effect in July 1947 and provided for the construction of a dam and several weirs on the rivers which constitute part of the boundary between the two States. This Act was amended in November 1968 to provide for storages on Pike Creek (Queensland) and the Mole River (New South Wales) and construction of further weirs on the Border Rivers and regulators on effluents of the Border Rivers and works for improvement of flow in streams which intersect the Queensland-New South Wales border west of Mungindi.

Glenlyon Dam on Pike Creek with a storage capacity of 261 million cubic metres was completed in 1976 and seven regulators on the Balonne-Culgoa River System have been constructed.

The Dumaresq-Barwon Border Rivers Commission, constituted of representatives of both States, administers the Agreement and the sharing of water.

Snowy Mountains Hydro-electric Scheme

This scheme was set up in 1949 by the Snowy Mountains Hydro-electric Power Act. Its prime purpose was to generate large quantities of peak load power and, by diverting the southern-flowing Snowy River through trans-mountain tunnels, to augment the flow of the Murray and Murrumbidgee Rivers to permit continuing expansion of irrigation in the fertile river plains. All storage works are now completed.

Details of the diversions and associated power works, together with details of construction, are given in Chapter 18, Energy.

The Snowy Mountains Council, constituted of representatives of the Governments of the Commonwealth, New South Wales, Victoria and the Snowy Mountains Hydro-Electric Authority, administers the operation of the Scheme, including the timing and amounts of electricity generation and water releases.

States and Territories

The foregoing text deals with water conservation and irrigation in Australia generally and with international, national and interstate aspects. The following survey covers the local pattern of water resources and the steps taken by the State Governments to bring about their development. In the various States, water policies 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 the management of irrigation water supplies is an area of major emphasis, with approximately two thirds of a million hectares under irrigation. In Queensland, up to the present, the predominant emphasis has fallen on water (mainly underground sources) for stock and the development of small irrigation schemes in sub-humid and humid areas, principally to stabilise production of such crops as tobacco, sugar, cotton and pastures. Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest relates almost exclusively to hydro-electric generation. The Northern Territory is concerned primarily with water supplies for population centres and mining and pastoral industries.

New South Wales

Administration

The Water Resources Commission, New South Wales, is a Statutory Authority formed in 1976 by a reconstitution of the Water Conservation and Irrigation Commission. Administrative authority is vested in the Chief Commissioner, who is assisted by two full-time Commissioners and two part-time

Commissioners. All five are appointed by the Governor. The operations of the Commission cover water conservation, control of irrigation areas, the establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, assistance under the provisions of the farm water supplies scheme, and river improvement works. An important function of the Commission is planning for the co-ordinated development and allocation of the State's water resources. This entails the assessment and projection of demand for all purposes and also involves the quantitative and qualitative assessment of the available resources. Another important planning function relates to flood plain management. The Water Resources Commission Act, 1976, has widened the initiatives which the Commission is able to take in the fields of flood plain management and flood mitigation management. The search for, and surveillance of, groundwater for water supply is another important planning activity.

Under the Water Act, 1912 (as amended) 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 399 of this chapter.

Schemes summarised

The bulk of irrigated land is along the Murray and its tributary, the Murrumbidgee, regulated by the Hume, Blowering and Burrinjuck dams. Smaller areas are served by the Wyangala Dam, Lake Cargelligo and Lake Brewster on the Lachlan (a tributary of the Murrumbidgee), by Glenbawn Dam on the Hunter River, by Keepit Dam on the Namoi River, by Burrendong Dam on the Macquarie River, by the Menindee Lakes Storage on the Darling River, by Copeton Dam on the Gwydir River and by Chaffey Dam on the Peel River. None of the other rivers are regulated by large head storages, though weirs and dams have been provided for town supplies, etc. in many places. In addition substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including irrigation areas, irrigation districts, water trust districts, flood control and irrigation districts, and river improvement districts. There are nine irrigation areas, although two of these, Yanco and Mirrool, are generally described under the one heading, namely, the Murrumbidgee Irrigation Area. Others are: Coomealla, Curlwaa, Hay, Tullakool, Buronga, Mallee Cliffs and Coleambally.

A detailed description of the Murrumbidgee Irrigation Area is contained in Year Book No. 61, pages 875–7. The Water Resources Commission controls land transactions and water supplies for the MIA, but has no jurisdiction over land transactions in neighbouring irrigation districts (although it is responsible for the operation and maintenance of the water supply in these areas). The other irrigation areas follow the same administrative pattern as the MIA.

Irrigation districts are set up under the Water Act, 1912 (as amended) for (*a*) domestic and stock water supply and (*b*) irrigation. The essential difference between an 'Area' and a 'District' is that, in the case of the former, all the land to be included in the Area is acquired by the Crown and then sub-divided into separate holdings. Within the District, however, existing ownership of land is not disturbed other than to acquire land required for water distribution works. Since the completion of the Hume Reservoir, several such districts have been established along the Murray to utilise the New South Wales share of the Storage. 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 will be irrigated, but additional water, when available, may be obtained by landholders. 'Water right' is the annual quantity that will cover 1 hectare to a depth of 100 mm.

The Water Act, 1912 (as amended) provides for the constitution of Trust Districts for domestic and stock water and irrigation, and empowers the Commission to construct, acquire or utilise 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.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. There are seven of these trusts.

The Lowbidgee Flood Control and Irrigation District, the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. Another district, Medgun, near Moree in the north-west, is also in operation.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, NEW SOUTH WALES 1980–81
(Hectares)

	Method				
Crops and Pastures	*Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	22,136	8,743	n.a.	677	31,556
Other pastures (sown or native)	43,944	224,109	n.a.	10,928	278,981
Wheat	11,464	125,024	n.a.	3,265	139,753
Other cereals for all purposes	14,471	138,940	n.a.	3,005	156,416
Vegetables for human consumption	8,495	2,191	72	270	11,028
Citrus fruit	4,290	3,658	249	396	8,593
Other fruit	2,299	1,260	1,982	563	6,104
Grapevines	1,342	6,414	1,244	45	9,045
All other crops	5,588	66,246	72	1,222	73,128
Total	**114,029**	**576,585**	**3,619**	**20,371**	**714,604**

SOURCES OF IRRIGATION WATER, NEW SOUTH WALES 1980–81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	414,298	58
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	228,508	32
from farm dams	20,033	3
Total surface water	*662,839*	*93*
Underground water supply (e.g. bore, spear, well) (*b*)	48,882	7
Town or country reticulated water supply	2,883	—
Total all water sources	**714,604**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

Future program

The program of development in hand includes the provision of additional dams, weirs, flood mitigation and drainage schemes and river management works.

Construction work continued on Glennies Creek Dam in the Hunter Valley, Windamere Dam on the Cudgegong River, Hay Weir on the Murrumbidgee River and a weir on the Darling River near Bourke.

The construction of surface and sub-surface drainage schemes continued in the Murray Valley to alleviate rising groundwater and salinity problems.

Feasibility and environmental assessments have been completed for the enlargement of Glenbawn Dam on the Hunter River.

Investigations are continually being carried out to assess demand and identify worthwhile projects which could be implemented as funds become available. Projects investigated include the inland diversion of coastal rivers and additional major dams in the Hunter Valley.

A comprehensive State Water Plan is being prepared. The Plan is intended to provide a broad framework for the efficient management and orderly development of the State's water and related land resources.

For more detailed information on Water Resources in New South Wales see the chapter entitled *Physical Development* in the latest edition of the New South Wales Official Year Book.

Victoria

Administration

Victorian Governments have been active in the development of country water supplies since the 1860's when major works to supply the Bendigo goldfields were undertaken. Local trusts to construct and operate waterworks under Government supervision were provided for in the *Water Conservation Act 1881*. Development under the trust system was greatly stimulated by the *Irrigation Act 1886*, which provided for the construction of national headworks by the State, and vested in the Crown the right to the use and control of all surface waters. By 1900 there were 33 irrigation trusts and 18 other rural water supply trusts, but the system of local control was then breaking down under financial difficulties.

The *Water Act 1905* established the State Rivers and Water Supply Commission to take over the Irrigation Trust districts (except the still-existing First Mildura Irrigation Trust) and to exercise the State's functions in the further control and development of surface waters outside the metropolis. The Commission now supervises all private diversions from streams and directly administers irrigation districts, rural waterworks and urban districts, flood protection districts and urban water supplies. It also supervises the activities of local urban water supply authorities, and local sewerage, river improvement and drainage authorities.

Works summarised

The State Rivers and Water Supply Commission's storages are augmented by Victoria's half share in River Murray Commission storages. Most of the water is for irrigation. However, about one quarter of irrigation production is from lands irrigated by 'private diverters', i.e., irrigators who are authorised to take water from streams, lakes, etc., but who do not come within the boundaries of an irrigation district.

Rural water supply systems

The principal irrigation systems in Victoria are:

- *Goulburn–Campaspe–Loddon.* The main storage is Lake Eildon with a capacity of 3,392 million cubic metres. The main products in these systems are dairy products, fruit, wool and fat lambs. Annual production of deciduous canning fruits in the eastern part of the system is about two-thirds of Australia's total.
- *Murray River System.* The Murray Valley Irrigation Area and the Torrumbarry Irrigation System are irrigated by water diverted at the Yarrawonga and Torrumbarry Weirs respectively. These areas are devoted mainly to dairying, fat lambs and canning fruit (Murray Valley) and dairying, fat lambs, vineyards, orchards and market gardens (Swan Hill). Downstream from Swan Hill, the First Mildura Irrigation Trust and four Commission Districts are supplied by pumping and produce mainly dried vine fruit, citrus fruits, and table and wine grapes.
- *Southern Systems.* The Maffra–Sale–Central Gippsland district, supplied from the Macalister River and regulated by Lake Glenmaggie, is devoted mainly to dairying.
- *Werribee and Bacchus Marsh.* These districts produce fresh fruit, vegetables and dairy products mainly for the local domestic market. Irrigation is supplied from the Werribee River system which is regulated by three main storages, viz. Pykes Creek, Melton Reservoir and Lake Merrimu.
- *Wimmera–Mallee Domestic and Stock Supply System.* Storages in the Grampian Ranges ensure farm water supplies over the riverless pastoral and cereal lands to the Murray. Without this supply, occupation of the region would be extremely hazardous. There are small areas of irrigation supplied from this system near Horsham and Murtoa.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, VICTORIA 1980–81
(Hectares)

Crops and Pastures	Method: Sprays	Furrows and/or Flood	Trickle	Other and multiple methods	Total
Pure Lucerne	3,305	4,737	n.a.	147	8,189
Other pastures (sown or native)	36,423	406,369	n.a.	7,910	450,702
Cereals for all purposes	2,573	29,893	n.a.	299	32,765
Tobacco	2,026	22	n.a.	87	2,135
Vegetables for human consumption	15,649	2,903	30	1,350	19,932
Fruit	5,730	5,035	2,020	699	13,484
Grapevines	3,290	11,555	380	143	15,368
All other crops	1,614	2,318	31	35	3,998
Total	**70,610**	**462,832**	**2,461**	**10,670**	**546,573**

SOURCES OF IRRIGATION WATER, VICTORIA 1980–81

Source of supply	Area irrigated	Percentage of total area irrigated
	(hectares)	%
Surface water		
from State irrigation schemes	439,656	80
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	55,848	10
from farm dams	25,223	5
Total surface water	*520,727*	*95*
Underground water supply (e.g. bore, spear, well) (*b*)	14,814	3
Town or country reticulated water supply	11,032	2
Total all water sources	**546,573**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

Future Programs

The Victorian Water Commission's program of capital works continues to emphasise an increasing proportion of expenditure on urban water services, including waste water treatment and disposal, water quality and works to protect the water environment from the adverse effects of land and water use.

The program also reflects national policy in budgetary constraints on works programs in the public sector, and an increasing requirement for justifiable economic viability.

Major provisions in the program include—

- the continuation of a construction program of major water conservation dams for urban, industrial and irrigation supply;
- construction of further within-system storage in the Bendigo area and development of proposals to augment supply to Geelong;
- the construction of large trunk pipelines to augment supply to and to enhance the operating capabilities of the Mornington Peninsula water supply system;
- further development of country water supply and sewerage facilities;
- continuation of works to divert salt from drainage flows in the Kerang Region to evaporative areas;
- the continuation of surface drainage programs in the Northern Irrigation Districts.

For more detailed information on Water Resources in Victoria see the chapter entitled *Water Resources and Sewerage* in the latest edition of the Victoria Year Book.

Queensland

Administration

The important primary industries of Queensland are subject to relatively frequent and serious losses by either drought or extensive flooding.

The right to the use and flow and to the control of water in watercourses, lakes, springs and artesian wells is vested in the Crown, and the Commissioner of Water Resources is authorised to take measures to conserve water and provide for its more equal distribution and beneficial use. Under the *Water Resources Administration Act 1978–1981*, he is required to (*a*) prepare a complete description of the natural water resources of the State, both surface and underground, (*b*) make and keep a record of all the natural water resources of the State, both surface and underground, (*c*) evaluate the present and future water requirements in the State, (*d*) plan the development of the water of the State, (*e*) take such steps as he thinks fit to protect the water resources of the State from anything detrimental to their quality or that results in or is likely to result in a diminution in their quantity, (*f*) investigate and survey any natural water resource, surface or underground, (*g*) co-ordinate the investigation, evaluation and development of plans for control of flood waters and mitigation of flood damage, (*h*) construct works for the conservation, replenishment, utilisation or distribution of the waters of the State, (*i*) manage water conservation, water supply and irrigation undertakings established under any Act of the State. As required under the *Water Act 1926–1981*, and the *Irrigation Act 1922–1979*, rights to underground and surface water are allocated and their use is controlled by a system of licensing of all artesian bores and sub-artesian bores in areas proclaimed by the Governor in Council and all conservation and use (other than for stock and domestic supplies) of flow in watercourses. The Commission is required to control use to share supplies as equitably as possible in periods of shortage of supply.

The Commissioner is required to prepare a co-ordinated program of work for the conservation, utilisation and distribution of water resources, and to make recommendations to the Government regarding the carrying out of works in this program. He is principally responsible for water conservation and supply works for rural purposes, including irrigation, stock and domestic supply. In planning such storages, economies to all users are accrued by providing, where possible, for dual or multi-purpose use of works for irrigation, rural, urban and industrial uses including power generation and mining purposes.

Summary of schemes

Unlike other States, the greater part of the area irrigated in Queensland is by individual private pumping plants taking supply from streams or underground sources, spread widely through the State, rather than in constituted irrigation areas where supply is provided by channel systems delivering water to farms. Because of the predominance of irrigation by private diversion pumping, most of the storages are used to release water downstream to maintain supplies for such purposes.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, QUEENSLAND 1980–81
(Hectares)

	Method				
Crops and Pastures	*Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	13,550	111	n.a.	359	14,020
Other pastures (sown or native)	15,437	3,303	n.a.	944	19,684
Grain Sorghum	7,393	10,003	n.a.	689	18,085
Other cereals for all purposes	14,939	14,791	n.a.	1,640	31,370
Sugar cane	49,819	42,000	354	9,542	101,715
Cotton	1,104	18,984	n.a.	640	20,728
Tobacco	3,181	54	n.p.	54	3,293
Vegetables for human consumption	15,357	2,605	554	940	19,456
Fruit	4,990	223	1,817	652	7,682
Grapevines	237	12	83	13	345
All other crops	9,836	8,453	13	1,027	19,329
Total	**135,843**	**100,539**	**2,825**	**16,500**	**255,707**

SOURCES OF IRRIGATION WATER, QUEENSLAND 1980–81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	52,923	21
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	51,082	20
from farm dams	21,934	9
Total surface water	*125,939*	*49*
Underground water supply (e.g. bore, spear, well) (*b*)	129,398	51
Town or country reticulated water supply	370	..
Total all water sources	**255,707**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

Irrigation areas

About 25 per cent of the area under irrigation annually, ie some 64,120 hectares, is concentrated in seven Irrigation Areas constituted under the *Irrigation Act* 1922–1979, where the supply is generally reticulated by channel systems (by means of gravity or by pumping) from the storage. In addition, some supply is also provided from streams regulated by the storage. A summary is set out on next page; further details are shown on page 883 of Year Book No. 61.

Irrigation areas	*Comments*
Dawson Valley	Around Theodore on Dawson River; cotton, graincrops and urban usage in Theodore and Moura.
Burdekin River	Complex system of conservation, irrigation, industrial and other uses; sugar cane, rice, seed and small crops; artificial recharging of underground water supplies from unregulated flows (Burdekin River)
Mareeba-Dimbulah	Hinterland of Cairns; tobacco, rice, peanuts and urban/hydro-electric uses; Tinaroo Falls Dam.
St George	Balonne River; cotton, soya beans and cereals, and urban uses; Beardmore Dam.
Emerald	Joint Federal-State undertaking based on State's largest storage—Fairbairn Dam; industrial and urban use, irrigation of cotton, soya beans and cereals.
Bundaberg	Joint Federal-State undertaking; sugar, tobacco and small crops and urban supplies for Bundaberg and adjacent shires; Fred Haigh Dam.
Eton	Hinterland of Mackay; sugar cane and water supply in Mackay area; Kinchant Dam.

A number of other schemes have been established under the *Water Act* 1926–1981, where water from storage is released downstream to maintain adequate supplies for pumping under licence to adjacent lands. Details on these and others currently under construction are in Year Book No. 61, pages 883–4.

Rural, stock and domestic supplies

Improvements to stock and domestic water supplies are assisted by Rural Water Supply Schemes and Bore Water Supply Areas (constituted under the Water Act). Investigation, design and administration of these schemes are carried out by the Queensland Water Resources Commission.

Underground water supplies

The availability of underground water, particularly the Great Artesian Basin, has played a major part in the development of the pastoral industry in Queensland. Underground water is also used extensively for irrigation on individual farms, particularly along the coastal fringe, and for domestic

purposes. Over half the area irrigated in Queensland receives its supplies from underground sources. In accordance with the requirements of the *Water Resources Administration Act* 1978–1981 the investigation of availability of underground water is being pursued by geological mapping, investigation drilling and hydro-geological assessment. The most important areas where water from this source is used for irrigation are the Burdekin Delta, Condamine Valley, Bundaberg, Lockyer Valley, Callide Valley and Pioneer Valley. The table on page 390 of this chapter provides the quantity and purpose of groundwater usage in these areas.

For more detailed information on Water Resources in Queensland see the chapter entitled *Land Settlement* in the latest edition of the Queensland Year Book.

South Australia

Administration

All major water resources and most public water supply schemes in South Australia are administered by the Engineering and Water Supply Department under the various statutes mentioned below.

- The Waterworks Act, 1932–1981, which empowers the Minister of Water Resources to impound or divert the water from any lake, watercourse or underground source for the purpose of establishing and maintaining public water supply schemes to serve proclaimed water districts throughout the State.
- The Water Conservation Act, 1936–1975, provides for the control of small reservoirs, bores, tanks, etc. established in remote areas as emergency water supplies or to assist local development.
- The River Murray Waters Act, 1935–1971, which ratifies the River Murray Waters Agreement, and under which the Engineering and Water Supply Department operates and maintains Lake Victoria storage, nine weirs and locks downstream of Wentworth, N.S.W., and barrages at the river mouth.
- The Water Resources Act, 1976–1981, which came into force from 1 July, 1976 and superseded the Control of Waters Act, 1919 and the Underground Waters Preservation Act, 1969, represents the culmination of the development of the Government's water resources policy involving the management of all aspects of water—surface and underground, quality and quantity. The Act provides for the control of diversions of surface waters from Proclaimed Watercourses and for the withdrawal of underground waters from Proclaimed Regions. Currently, the River Murray, Little Para River and Bolivar Effluent Channel are Proclaimed Watercourses, the Proclaimed Regions being the Northern Adelaide Plains, Padthaway and Angas-Bremer Irrigations. The legislation provides for control over the construction or modification of most categories of wells over the whole State and for the abatement of pollution of all waters. It establishes a South Australian Water Resources Council and Regional Advisory Committees as vehicles for public participation in the water resources management process. Currently, Regional Committees operate in respect of the River Murray; the Northern Adelaide Plains, Little Para River and Bolivare Effluent Channel; Padthaway; the North Para River; the Arid Areas and the Angas-Bremer Irrigation Area. In addition, the Act provides for a Water Resources Appeal Tribunal to give individuals the opportunity to appeal against decisions of the Minister pursuant to the Act.

Summary of schemes

Australian irrigation originated in the upper Murray in South Australia and the Mildura area of Victoria. South Australian irrigation commenced with an agreement involving the Chaffey brothers in 1887 whereby an area was made available for the establishment of certain irrigation works at Renmark. From this start, government, co-operative and private irrigation areas totalling more than 42,000 hectares have been developed in the South Australian section of the Murray Valley. The authority controlling River Murray irrigation is the Engineering and Water Supply Department which operates under policies determined by the Minister of Water Resources on advice of the S.A. Water Resources Council. The principal high land crops comprise citrus and stone fruits, and vines. The reclaimed swamps along the lower section of the Murray are used almost exclusively for pasture and fodder crops. Vegetable crops of various kinds are important in both types of irrigated lands.

Except for quantities held in various lock pools and natural lakes, no water from the Murray is stored within South Australia for irrigation purposes. Usage of the River is therefore planned on the basis of the minimum monthly flows to which South Australia is entitled under the River Murray Waters Agreement. This factor, plus the need to reserve water for city, town and rural water supply systems, has resulted in the expansion of irrigation from the River being rigidly controlled by the Government. In addition to irrigation from the River Murray there are considerable areas irrigated from underground sources by individual landholders in South Australia. The most important of these areas are the North Adelaide Plains (market gardens) and the Padthaway district of the south-eastern region (pastures, fodder, seed crops and vines).

CROP AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, SOUTH AUSTRALIA 1980–81
(Hectares)

Crops and Pastures	Method: Sprays	Furrows and/or Flood	Trickle	Other and multiple methods	Total
Pure Lucerne	9,160	2,970	n.a.	—	12,130
Other Lucerne-based pastures	2,499	521	n.a.	122	3,142
Other pastures (sown or native)	8,631	12,401	n.a.	281	21,313
Cereals for all purposes	1,379	924	n.a.	2	2,305
Vegetables for human consumption	5,167	303	26	180	5,676
Fruit	9,409	1,564	936	718	12,627
Grapevines	6,782	8,783	3,501	1,187	20,253
All other crops	1,329	601	17	81	2,028
Total	**44,356**	**28,067**	**4,480**	**2,571**	**79,474**

SOURCES OF IRRIGATION WATER, SOUTH AUSTRALIA 1980–81

Source of supply	Area irrigated	Percentage of total area irrigated
	(hectares)	%
Surface water		
from State irrigation schemes	19,121	24
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	18,454	23
from farm dams	3,331	4
Total surface water	*40,906*	*51*
Underground water supply (e.g., bore, spear, well) (*b*)	38,088	48
Town or country reticulated water supply	480	1
Total all water sources	**79,474**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

Adelaide Metropolitan Water Supply

In 1981–82, River Murray pipelines supplied 80 per cent of the total intake to the Metropolitan Adelaide Water Supply System. A maximum of 83 per cent was reached in 1977–78. The principal sources of supply for the ten storages in the Mt Lofty Ranges are the Rivers Onkaparinga, Torrens, South Para, Myponga and Little Para. For details on Adelaide Metropolitan Water Supply, see "Metropolitan Adelaide Water Resources Study", Engineering and Water Supply Department, June 1978.

Country reticulation supplies

A number of reservoirs in the Barossa Ranges and other local sources are augmented by the Morgan-Whyalla, Swan Reach-Stockwell and Tailem Bend-Keith pipelines which provide River Murray water to extensive country areas. A network of branch mains provides the means of conveying water to numerous towns and large areas of farmlands.

Surface and underground resources have been developed to supply most country centres not covered by the larger schemes. Victor Harbor and adjoining south coast resort centres are supplied from reservoirs and the River Murray. A reservoir on Kangaroo Island supplies Kingscote and adjacent farmlands. Underground resources of the lower south-east supply all towns in the region, the city of Mount Gambier and nearby farmlands being reticulated from the well-known Blue Lake. At the far northern opal mining town of Coober Pedy a reverse osmosis desalination plant provides a potable supply from brackish groundwater. Other centres in the far north obtain supplies from the Great Artesian Basin. For details on underground water resources in South Australia see "Underground Water Resources of South Australia", Bulletin No. 48, Department of Mines and Energy, Geological Survey of South Australia, 1978.

South-eastern drainage

A section of the South-East Coast Drainage Division extends into South Australia but has no co-ordinated drainage pattern to form a significant surface water resource. However, high rainfall in the area has led to the natural development of underground resources. Surplus water is not easily disposed of in the

valleys and low range terrain, so drainage systems have been undertaken by the Government in co-operation with landholders. For further details see "Environmental Impact Study on the effects of Drainage in the South East of South Australia", Southeastern Drainage Board, June 1980.

Murray River Irrigation Areas

Where irrigation water in excess of plant requirements has been applied, perched water tables develop. Rising to the level of tree roots, these cause the death of orchards from salination and water-logging. Most orchards and vineyards are now drained by plastic and tile drainage systems, thus restoring their health and productivity. At present, disposal of drainage water is achieved by pumping to basins on river flats where it evaporates or is discharged into the river when it is in flood. It may also be discharged into underlying sand and limestone aquifers. The usefulness of these aquifers is declining as they are becoming fully charged with water.

As a result of investigations made into alternative disposal schemes, a $25 million package of six salinity control measures was embarked upon in 1979. The measures combine engineering works, improved irrigation practices, and river regulation to reduce salinity to acceptable levels. The centrepiece of the programme is the Noora Drainage Disposal Scheme, progressive commissioning of which commenced in September 1982, with pumping from the Berri Basin.

When completed, the Scheme will allow drainage water presently held in river flat basins to be pumped to a large evaporation basin located well out of the river valley, approximately 20 km east of Loxton.

For more detailed information on Water Resources in South Australia see the chapter entitled *Physical Development* in the latest edition of the South Australian Year Book.

Western Australia

Administration

The Minister for Works and Water Resources administers the departmental irrigation schemes under the *Rights in Water and Irrigation Act, 1914–1978*. He is advised by an Irrigation Commission representing the local irrigationists and government, technical and financial branches. He also administers, under the *Country Areas Water Supply Act, 1947–1979*, the water supplies to certain country towns and reticulated farmland. As Minister for Works he controls minor non-revenue producing supplies to stock routes and a few mines and agricultural areas with their associated communities. A small number of town supplies are administered by local boards under the *Water Boards Act, 1904–1979*, which provides a large degree of autonomy with ultimate Ministerial control.

Irrigation

Irrigation schemes have been established by the Government on the coastal plain south of Perth in the Waroona, Harvey and Collie River and Preston Valley Irrigation Districts between Waroona and Donnybrook, the water being channelled from dams in the adjacent Darling Range. The success of dairying and stock raising and, to a lesser extent, vegetable growing, which have replaced citrus growing, has led to a gradual but substantial extension of irrigation areas in the south-west.

Although not yet comparable in size with the south-west irrigation districts, the irrigation areas at Carnarvon and on the Ord and Fitzroy Rivers in the Timor Sea Drainage Division in the north of the State are of increasing significance.

Since the mid 1930s, a centre of tropical agriculture has been developed at Carnarvon, near the mouth of the Gascoyne River. Initially, the principal source of irrigation water for the 160 plantations was private pumping from the sands of the Gascoyne River. Overpumping by the growers however, resulted in salt intrusion into the fresh water aquifer. Government controls were introduced and a major groundwater supply scheme upstream of the irrigation area has since been commissioned and provides approximately two-thirds of the irrigation water. The area specialises in growing bananas together with out of season vegetables for the Perth market. A tropical research station is maintained at Carnarvon by the Department of Agriculture.

The Ord River Irrigation Project in the Kimberley Division provides for the eventual development of an irrigation area of some 70,000 hectares of land, one third of which is in the Northern Territory. The first stage, in which water was supplied from the Kununurra Diversion Dam (capacity 98.7 mil. cubic metres) to 30 farms averaging 270 hectares plus a 970 hectare pilot farm was completed in 1965. Cotton was the principal crop, with grain sorghum and fodders for cattle fattening also important. Completion in 1971 of the Ord River Dam, which stores 5,720 mil. cubic metres in Lake Argyle, has allowed expansion of the area to be irrigated into the second stage. Five farms averaging 388 hectares were allocated in 1973. Since then, cotton has been phased out due to high off-farm costs and increasing costs of insect control specific to the cotton industry. Maize, peanuts and rice are the main crops being

grown at present with smaller areas of grain sorghum, soya beans, mung beans, pasture, cucurbits and bananas. A pilot sugar farm has produced high yields and has resulted in proposals for a sugar industry to be established. The proposals are being considered by the State Government.

The Camballin Irrigation District on the Fitzroy River flood plain in the West Kimberleys is dependent on diverted river flows and a small volume of storage behind the diversion structures on the Fitzroy River and Uralla Creek. Grain and fodder sorghums are the main crops. Although a large area was developed for irrigation, the expansion of activity that was expected by the Australian Land and Cattle Company was cut short in February 1982 when this company was placed in the hands of a receiver-manager and in May 1982 the receiver placed the project under 'care and maintenance'.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, WESTERN AUSTRALIA 1980–81
(Hectares)

	Method				
Crops and Pastures	*Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	755	63	n.a.	—	818
Other pastures (sown or native)	1,292	10,738	n.a.	339	12,369
Cereals for all purposes	147	589	n.a.	216	952
Vegetables for human consumption	2,219	321	39	299	2,878
Fruit	1,900	292	1,540	312	4,044
Grapevines	248	49	79	228	604
All other crops	468	2,436	58	74	3,036
Total	**7,029**	**14,488**	**1,716**	**1,468**	**24,701**

SOURCES OF IRRIGATION WATER, WESTERN AUSTRALIA 1980–81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	13,547	55
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	2,132	7
from farm dams	4,672	19
Total surface water	*20,351*	*82*
Underground water supply (e.g., bore, spear, well) (*b*)	4,104	17
Town or country reticulated water supply	246	1
Total all water sources	**24,701**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

Country water supplies controlled by Department of Public Works

Since 1947 enlargement and extensions of the Goldfields and Agricultural Water Supply and the development of the Great Southern Towns Water Supply have been carried out, mainly in accordance with a project known as the Modified Comprehensive Scheme. Under this scheme water has been supplied to towns and farms in the cereal and sheep districts of the State. Two years after the completion of the 1.7 million hectare scheme in 1961, an extension of 1.5 million hectares was agreed to with Federal-State funding.

Goldfields and Agricultural Water Supply

Water for the Eastern Goldfields is supplied by pipeline from Mundaring Reservoir in the Darling Range. The scheme now serves over 92 towns and 2.7 million hectares of farmland.

Great Southern Towns Water Supply

This scheme provides water to towns and localities from Wellington Dam to Narrogin and along the Great Southern Railway from Brookton to Tambellup, supplying 31 towns and 0.6 million hectares of farmland.

Local and Regional Water Supplies

As well as the two major water supply schemes, above, water is also supplied by the Government from 12 Regional Water Supply schemes to 43 towns and from 99 local water supply schemes to 101 towns. The water comes from a variety of sources including underground, artificial catchments and stream flow.

Underground water

Considerable use is made of groundwater by individual farmers, pastoralists, market gardeners and others, although the water quality varies from place to place and much of it is too saline for irrigation or even stock purposes. Artesian wells throughout the State and non-artesian wells within 'declared' areas must be licensed under the *Rights in Water and Irrigation Act, 1914–1978*. Industries also use groundwater in substantial quantities, especially in the processing of titanium, iron and alumina, and this demand has intensified the search for groundwater.

For more detailed information on Water Resources in Western Australia see the chapter entitled *Land Tenure and Settlement, Water Supply and Sewerage* in the latest edition of the Western Australian Year Book.

Tasmania

Main purposes of water conservation and utilisation

Because of the generally more adequate rainfall in Tasmania, scarcity of water is not such a problem as it is in most mainland areas, though not all streams are permanently flowing. The only large-scale conservation by reservoirs is for hydro-electric power generation, but there are some moderately-sized dams built by mining and industrial interests and by municipal authorities for town water supplies. 'Run of the river' schemes are quite adequate for assured supply in many municipalities. The main supply for Hobart and adjacent municipalities originates from a 'run of the river' scheme based on the Derwent River. The river is controlled in its upper reaches by eight dams, built for hydro-electric power generation, and these tend to stabilise river flow.

Until a few years ago irrigated areas were negligible except for long established hop fields, but there is a rapidly expanding use of spray irrigation on orchards, pastures, potatoes, beans and peas. Until recent years there has been almost complete dependence on natural stream flows, but the need for some regulating storages has become apparent. Increasingly, farmers are constructing storages of their own and the extension of this practice is foreseen as the logical solution in most areas, as valleys are narrow and steep sided. Single large reservoirs cannot economically serve large areas of suitable land, as nearly every valley is separated from others by pronounced hills, prohibiting the construction of cross-country channels.

Underground water suitable for stock, minor irrigation works and domestic use is exploited in the consolidated rocks of southern, midlands and north-western Tasmania. In the south and midlands, nearly all groundwater is obtained from Permian and Triassic rocks. In the north-west, water is recovered from a variety of rocks ranging from Precambrian dolomites, quartzites and schists to Tertiary basalts and Quaternary sands. The highest yields are obtained from the dolomites and the basalts. In the central north and north-east, unconsolidated Tertiary clays and gravels yield water of variable quality. In some coastal areas, notably King and Flinders Islands, water is obtained from aeolian sands.

The Mines Department is charged with the investigation of underground water resources. There is a great reserve of untapped permanent streams in the western half of the State, which is largely unsettled. The State's largest rivers discharge in the west, but diversion to the eastern half of the watersheds is not regarded as practicable. The Hydro-Electric Commission, however, has planned for the future development of four storage dams in the West Coast region on the Pieman, Murchison and Mackintosh Rivers.

Administration

In Tasmania, water supply was once exclusively the responsibility of local government authorities, but three statutory authorities, the Metropolitan Water Board, the Rivers and Water Supply Commission and the North West Regional Water Authority, now operate bulk supply schemes, piping water for distribution by the local government authorities in the Hobart, Launceston and N.W. Coast regions, and directly to certain industrial consumers. The Board is responsible for bulk supplies to the Hobart, Clarence, Glenorchy to Kingborough, Brighton, Green Ponds, New Norfolk, Richmond and Sorrell local government areas, while the Commission exercises a general control over the utilisation of the State's water resources and has specific functions in relation to local government authority water, sewerage and drainage schemes. The Authority controls the supply of water to the municipalities of Circular Head, Wynyard, Penguin, Ulverstone, Devonport, Latrobe and Kentish.

Rivers and Water Supply Commission. The Commission is empowered by the *Water Act* 1957 to take water at streams and lakes, or to issue others with licences to do so; licensing covers supply to specific industries and municipalities as well as for irrigation. The Commission is concerned with drainage trusts' operations, river improvements (including repairs after flood damage), stream gauging, its own regional water schemes, and with water supply, sewerage and drainage of towns. It operates in a similar manner to the Metropolitan Water Board in controlling the water schemes serving the East Tamar region (North Esk Regional Water Supply), the West Tamar area (West Tamar Water Supply) and the Prosser River Scheme, which was originally constructed to supply water to a sodium alginate industry at Louisville near Orford and to supplement the water supply of the township of Orford. The sodium alginate industry ceased production in December 1973. The North Esk Regional Water Supply was constructed to meet industrial requirements of the alumina refinery and other industries at Bell Bay, and to provide bulk supplies to surrounding municipalities on the eastern bank of the River Tamar and has since been augmented by the construction of a dam on the Curries River to supply the northern end of the Tamar Valley. The West Tamar Water Supply was constructed primarily to meet domestic requirements of urban areas in the Beaconsfield municipality. The local government authorities retain primary responsibility for reticulation and sale to consumers, except to certain industrial users.

In municipalities not serviced by the Metropolitan Water Board, the Rivers and Water Supply Commission or the North West Regional Water Supply Authority, the supply of water is a function of the local municipal council. Where the construction of water and sewerage schemes is beyond the financial capacity of a local government authority, or if it requires assistance to pay for water supplied from regional schemes, the Commission may make recommendations to the Minister for payment of a subsidy.

Irrigation

The Cressy-Longford Irrigation Scheme officially opened in 1974 and was the first major State irrigation project to be established in Tasmania. The source of supply is the Tailrace of the Poatina Hydro-Electric Power Station from which up to 160 thousand cubic metres per day may be available to farmers inside the Irrigation District and along the Liffey River downstream from Pitts Lane.

There are some 10,000 hectares fit for irrigation within the Irrigation District, half of which may be watered by gravity. The Scheme serves some seventy-two farms within the Irrigation District and another thirty may be supplied on the Liffey River and on the fringes of the Irrigation District.

Besides the Cressy-Longford Irrigation Scheme which is operated by the Rivers and Water Supply Commission, the following local bodies supply water for irrigation or inter-alia exercise control over its availability: the Lawrenny Water Trust on the Ouse River, the Clyde Water Trust on the Clyde River, the Macquarie Water Trust on the Macquarie River at Ross and the Campbell Town Council on the Elizabeth River.

The major portion of the 32,748 hectares irrigated in the State in 1980-81 were watered by private schemes either by pumping directly from unregulated streams or from on farm storages. Pasture still predominates as the main crop watered but potatoes and vegetables amount to 34 per cent of the total area irrigated.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, TASMANIA 1980-81

(Hectares)

	Method				
Crops and Pastures	*Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	773	29	n.a.	33	835
Other pastures (sown or native)	7,080	6,741	n.a.	320	14,141
Cereals for all purposes	1,231	43	n.a.	29	1,303
Vegetables for human consumption	10,351	57	n.p.	893	(*a*) 11,301
Fruit	1,620	102	553	200	2,475
All other crops	2,346	235	n.p.	98	(*a*) 2,679
Total	**23,401**	**7.207**	**567**	**1,573**	**32,748**

(*a*) Incomplete.

SOURCES OF IRRIGATION WATER, TASMANIA 1980-81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	1,798	6
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	14,213	43
from farm dams	15,623	48
Total surface water	*31,634*	*97*
Underground water supply (e.g., bore, spear, well) (*b*)	755	2
Town or country reticulated water supply	359	1
Total all water sources	**32,748**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

For more detailed information on Water Resources in Tasmania see the chapter entitled *Local Government* in the latest edition of the Tasmanian Year Book.

Northern Territory

Information on climatic conditions can be found in the chapter Climate and Physical Geography of Australia. A brief outline of contour and physical characteristics is in Chapter 27, The Territories of Australia.

Administration

Under the Northern Territory *Control of Waters Ordinance* 1938, control of natural waters is 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). The diversion of water is prohibited except under prescribed conditions. The Act requires that drilling for groundwater be carried out only by drillers who are registered under the Act. Registered drillers are required to provide the Government with information on bores drilled, including the location, depth and size of bore, strata encountered and water produced. In particular areas, described as Water Control Districts, where stricter control is necessary, the construction or use of a well or water bore without a permit can be prohibited.

Under the *Water Supplies Development Act* 1960, any landholder engaged in pastoral or agricultural production may seek information or advice from the Commissioner of Water Development who is appointed under the Act. He may also apply for an advance towards the cost of work proposed to be carried out. The Act also provides for a refund to the landholder of the cost of drilling an unsuccessful bore where the landholder has applied to the Commissioner for advice on its construction and has carried out all drilling operations in accordance with advice given.

The Water Division of the Department of Transport and Works carries out systematic stream gauging, the collection of data relating to the quantity and quality of surface and groundwater, the planning of water use for industrial, irrigation and town water supplies, and flood prevention and control. It also provides a general advisory service to the public on water resources and water conservation by providing information on the geology of the Territory, the prospects of obtaining groundwater, the possible location of bore sites, the method of drilling and equipping bores, stream flows, surveys of dam sites, the design of water supply schemes and reticulation lay-outs, and the chemical and bacteriological quality of water supplies. It is involved in water pollution studies and control,and carries out environmental assessments of water and related developments. The Division administers both of the acts described.

Underground water

For information on underground water resources in the Northern Territory *see* Year Book No. 55 and earlier issues, and the Australian Water Resources Council's publication, *Groundwater Resources of Australia*, 1972 and *Review of Australia's Water Resources*, 1975.

Of approximately 12,500 bores and wells registered in the Territory up to 30 June 1979, 51 per cent were for pastoral use, 13 per cent were investigation bores, 13 per cent served town and domestic supplies, 5 per cent were for crop use, 4 per cent were used on mining fields, and the remainder for various other uses.

Community water supplies

The largest water conservation projects in the Territory are the Darwin River Dam (259.0 million cubic metres) and the Manton Dam (15.7 million cubic metres) which both serve Darwin with a reticulated water supply. Groundwater from McMinns Lagoon area can be used to augment supply.

Most other towns and communities, including Alice Springs, Tennant Creek, Katherine, Jabiru and Nhulunbuy, are supplied from groundwater.

Investigations are continuing into groundwater supplies for aboriginal communities and irrigation supplies in the Alice Springs District and the Daly River basin.

Surface water measurement

The hydrological investigations required in the Northern Territory as part of the National Water Resources Assessment Program are being carried out by the Water Division. The program for the Northern Territory includes establishment of base streamgauging stations and pluviographs (automatic rainfall recorders). In particular areas of development where water supply or irrigation proposals require special or extra surface water data, supplementary gauging stations are built to obtain this information. Intensive studies are being undertaken in the Alligator Rivers Region and other mining areas for the collection of both quantitative and qualitative data for environmental and management purposes. The streamgauging network of the Division comprises gauging stations (base gauging and supplementary) and pluviographs. Several other organisations also operate gauging stations and pluviographs in the Northern Territory.

Irrigation for agricultural purposes in the Territory is not extensive, being confined to isolated locations near Darwin, Adelaide River, Coomalie Creek, Daly River, Katherine, Douglas River, Ti Tree and Alice Springs for the purpose of growing fruit, vegetables, fodder crops, pastures and some dairying. Some of this irrigation is carried out using bore water.

Both the Daly and Adelaide Rivers offer considerable potential for the development of either irrigation or hydroelectric schemes if these rivers were regulated. Investigations are being conducted into possible dam sites, agricultural surveys having already been conducted in these regions. There is increasing demand for water resources assessment studies and assistance for relatively small irrigation projects, and for investigation and design of surface water storages for recreational uses, especially in the more arid regions.

Australian Capital Territory

The climate of the Australian Capital Territory is such that annual evaporation exceeds the annual rainfall of about 600 mm. Primary producers have therefore found it necessary to practise water conservation, and to irrigate from groundwater supplies during dry periods.

Surface water

Surface water storages supplying Canberra (population about 228,000) and the city of Queanbeyan (population about 21,000) are located to the south-west and south-east. The storages to the south-west are in the heavily timbered, mountainous Cotter River catchment within the A.C.T., the storages being Corin Dam (75.5 million cubic metres), Bendora Dam (10.7 million cubic metres) and Cotter Dam (4.7 million cubic metres). These storages, can serve a population of 225,000. The storage to the south-east is in New South Wales in the Queanbeyan River catchment on the western slopes of the Great Dividing Range, the storage being Googong Dam (125 million cubic metres). This storage was only recently commissioned and can serve 70,000 people with the current trunk mains and distribution system. The total volume of water in storage at 30 June 1980 was 157 million cubic metres.

The existing storages on the Cotter and Queanbeyan River have an ultimate combined capacity to serve 450,000 persons. The remaining water resource within the A.C.T. is the Gudgenby River which is at present not utilised but has the potential to serve approximately 200,000 persons.

The A.C.T. water supply system is operated by the Department of Transport and Construction. This Department operates a network of stream gauging stations in the A.C.T. to monitor surface water resources. A number of the gauging stations are provided with telemeters which enable the Department to provide a flood warning system in association with the Bureau of Meteorology.

Groundwater

Groundwater in the A.C.T. and environs occurs mainly in fractures in crystalline rock such as granite and volcanic rocks; in folded and fractured slate; and rarely, in solution cavities in limestone. Alluvial aquifers of significance are restricted to the Lake George basin and small areas along mature sections of the Molonglo and Murrumbidgee Rivers. Groundwater has been used in the past by most primary producers to augment surface storage. Groundwater production bores in the A.C.T. have

yields ranging between about 0.4 and 20 cubic metres per hour; 3 cubic metres per hour is about the average yield. However, many farm bores have fallen into disuse as a result of the Government's resumption of freehold land within the A.C.T., and because of the rapid expansion of urban growth. The Bureau of Mineral Resources has provided a bore-siting, groundwater-quality and yield-prediction service in and around the A.C.T. since the early 1950's and until 1978 maintained a network of 48 observation bores which were monitored regularly for up to 25 years. Periodic monitoring of the bores recommenced in 1980 as a consequence of greatly increased demand for the Bureau's rural bore siting services during the current drought. Data are now being collected on groundwater occurrences within the A.C.T. and environs for preparation by the Bureau of a 1:100,000 scale hydrogeologic map.

Many bores have been drilled in the Canberra area for determination of ground conditions for specific projects such as dam sites, sewer tunnels, deep foundations for large buildings; disposal of household and industrial wastes, including radioisotopes; monitoring hydrocarbons, pollution of groundwater or for feasibility studies for urban development. These bores are generally monitored for short periods only. Long-term monitoring of water infiltrating from refuse-disposal areas commenced in 1977.

Control of irrigation and farm water supplies is exercised by the Conservation and Agriculture Branch of the Department of the Capital Territory. The Bureau of Mineral Resources of the Department of National Development and Energy provides technical advice to landholders and drilling contractors on groundwater and, occasionally, on runoff.

CHAPTER 16

MINERAL INDUSTRY

GENERAL

Geology and mineral resources

General geology

Most of the western and central part of the Australian continent consists of basement rocks of Precambrian age. Younger Palaeozoic rocks, mostly of geosynclinal origin, form a discontinuous belt several hundred kilometres wide extending from north Queensland to Tasmania. Mesozoic platform sediments form a broad zone separating the Palaeozoic and Precambrian rocks and extending from the Gulf of Carpentaria to central New South Wales. Cainozoic rocks occur mainly in Victoria, south-western New South Wales and southern South Australia, and as residual basalt cappings over extensive areas of the Palaeozoic rocks of eastern Australia.

Economic geology

Minerals of economic significance occur throughout Australia, their geological age ranging from Precambrian to Recent. Many of the large deposits such as those at Broken Hill (N.S.W.), Mount Isa (Qld), the Kalgoorlie and Pilbara regions of W.A. and the Alligator Rivers area of N.T. are Precambrian in age. In eastern Australia the major deposits such as the Elura, Cobar, Woodlawn and Rosebery base-metal deposits and most of the black coal deposits, are Palaeozoic in age. The black coals of the Moreton district of Queensland, northeast New South Wales and Leigh Creek, S.A. are of Mesozoic age. Deposits formed in Tertiary times include the brown coal in Victoria, the bauxites of Weipa (Qld), Gove (N.T.) and the Darling Range (W.A.) and the nickeliferous laterites at Greenvale (Qld).

Mineral resources

Australia is self-sufficient in most minerals of economic importance (and much more than self-sufficient in some). Known adequate reserves of major minerals with production sufficient for domestic demand and exports include aluminium (bauxite and alumina), black coal, copper, gold, iron ore, lead, natural gas, nickel, salt, silver, tin, tungsten, uranium and zinc. Reserves sufficient for domestic demand include clays (except light grade china clay), brown coal and dolomite.

For further details of principal Australian mineral deposits, and notes on principal mineral resources, *see* Year Book No. 61, pages 925–932 and the Australian Mineral Industry Quarterly and Annual Reviews.

Administration

All mineral rights in Australia are vested in the Crown except those on land which was granted before the Crown began to reserve mineral rights. In practice, these private mineral rights are important only in the New South Wales coalfields. In the States, these rights are held by the State Governments. On 1 July 1980, executive authority with respect to mining and minerals except in relation to certain prescribed substances within the meaning of the Atomic Energy Act (principally uranium) was transferred from the Commonwealth Government to the Northern Territory Government. Private mineral rights in the Australian Capital Territory are vested in the Commonwealth Government. The Commonwealth Government is able also to influence over-all development and production activity in the mineral industry by virtue of its statutory powers with respect to international trade, customs and excise, taxation, and loan raisings. Certain specially-formed bodies such as the Joint Coal Board and the Australian Atomic Energy Commission have been given administrative responsibility in defined areas.

Mineral exploration and development

Onshore. Each State or Territory has its own mining Acts or Ordinances and regulations governing the prospecting for and working of mineral deposits. These Acts, etc., are similar in principle but different in detail. They all make provision for a miner's right to prospect and for small mining leases

for mineral production. The principles embodied were established many years ago when mining operations were generally small scale and labour-intensive. Although amendments have been enacted to modernise the legislation, it is generally inadequate for the large-scale capital-intensive operations often involved with modern mineral development. For this reason a large enterprise may take the course of acquiring mining titles by negotiations with the appropriate Minister for Mines and having the agreed terms and conditions embodied in an Act of the State Parliament. This method of acquisition has been used in several cases where the leasing company undertook an obligation (such as the erection of a large treatment works) in return for leases over large areas for a long period, and has become more common in recent years (e.g. iron ore in Western Australia, coal and bauxite in Queensland, bauxite in the Northern Territory). Mining legislation enacted in recent years is simpler and more suited to modern conditions.

As a result of the introduction of large-scale modern prospecting methods (particularly airborne prospecting), small prospecting areas were found to be unsuitable in some instances, and steps have been taken in the States and Territories to ensure the availability of large areas for prospecting by interested persons. Large areas may be made available by provision within the Mining Acts or Ordinances for the issue of authorities to prospect over an area defined by a written agreement which also sets out provisions as to the amount of money to be spent, methods of prospecting, tenure of the agreement, etc.

The tenure of such areas is limited (usually to one or two years only) and, if renewed for a further period, is only over an area selected from the larger area (usually 50 per cent) as a result of work done during the life of the initial agreement. It does not give the holder any rights over, or authority to prospect on, land already held under a mining title within the agreed area. Unless specifically stated in an agreement, the discovery of minerals, whether inside or outside an area covered by an authority to prospect, gives the discoverer no legal rights except the right to apply for a mining lease over the area in which the discovery was made. Suitable prospects are converted to mining tenements by making application for lease under the appropriate mining Act.

Off-shore. Following the enactment of the *Seas and Submerged Lands Act* 1973 the High Court confirmed that the Commonwealth has sovereignty over the territorial sea and sovereign rights over the resources of the whole of Australia's continental shelf. However, in the offshore constitutional settlement between the Commonwealth and the States reached in June 1979, it was agreed that responsibility for mining within the outer boundary of the 3 mile territorial sea should lie with the States, while the Commonwealth should have responsibility for areas beyond.

The Minerals (Submerged Lands) Act 1981 passed by the Commonwealth Parliament in June 1981 follows the scheme of the offshore petroleum legislation amendments passed in 1980 and provides for Joint Commonwealth/State Authorities to be responsible for major matters under the legislation with the States being responsible for day-to-day administration. The legislation will be proclaimed to come into effect when complementary State legislation in respect of the 3 mile territorial sea, currently in preparation, is enacted. In the meantime administration of offshore mining is carried out under the States' onshore mining legislation on an interim basis.

The mining code under the new legislation provides for a two-stage system of titles: the exploration permit, which covers all forms of exploration, and the production licence, which covers development. The sharing of royalty between the State and the Commonwealth Governments is to be on a 60-40 basis for all offshore mining, including land-based underground mining.

Petroleum exploration and development

On-shore. In Australia, all petroleum is the property of the Crown. Consequently, full control of petroleum mining rights is vested in the Government or Administration of each State or Territory. Any company, organisation or individual proposing to undertake petroleum exploration or development must first satisfy the Government concerned that the necessary financial and technological resources are available to carry out the operation.

There are three main types of petroleum title:

(a) the permit, covering initial geological, geophysical and exploration drilling;
(b) the licence (in Victoria only), which covers detailed surveys and drilling; and
(c) the lease, which covers development operations and production.

Off-shore. In the offshore constitutional settlement between the Commonwealth and the States reached in June 1979, it was agreed that, as in the case of mining for other minerals, responsibility for administering petroleum exploration and production within the outer boundary of the 3 mile territorial sea would be a State responsibility, while the Commonwealth would have responsibility for the continental shelf beyond the 3 mile territorial sea.

Amendments to the *Petroleum (Submerged Lands) Act* 1967 passed by the Commonwealth Parliament in May 1980 made provision for a Joint Authority for the adjacent area of each State (beyond the 3 mile Territorial Sea limit) consisting of the Commonwealth Minister and the State Minister. The Joint Authorities will be concerned with major matters arising under the legislation, and in the case of disagreement the view of the Commonwealth Minister will prevail. Day-to-day administration will continue to be in the hands of the State Minister as the Designated Authority and State officials. The amended legislation together with complementary State legislation in respect of the 3 mile Territorial Sea will be proclaimed to come into effect in late 1982. In the meantime administration of offshore petroleum continues to be carried out under the 1967 legislation.

The mining code applicable under the legislation provides for a two-stage system of titles: the exploration permit, which covers all forms of exploration including drilling, and the production licence, which covers development and exploration. The sharing of royalty between the State and the Commonwealth Governments is to continue on a 60-40 basis, and any override royalty payments will continue to be retained by the States.

Mineral royalties

The collection by governments of royalties for the production of minerals within their area of authority is an internationally-accepted practice. In Australia, the responsibility for mineral royalties is largely a State concern, and all States currently collect some form of mineral royalty payments.

In recent years there has been an important basic change in the system of establishing royalty commitments, and it is now quite common for State Governments to negotiate special royalty rates with companies which are seeking mineral leases for large scale developments. These royalty rates may vary, depending on whether production is for export or for domestic processing. The rates for a particular mineral may also vary between producers. Important examples of this type of royalty agreement are the iron ore development agreements in Western Australia and coal development agreements in Queensland. Mineral royalties received by Governments in recent years are shown in the following table.

MINERAL ROYALTY RECEIPTS: GOVERNMENTS

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
New South Wales(*a*)	32,660	46,354	49,062	35,651	86,797	116,923
Victoria(*b*)(*c*)	29,893	32,696	48,446	60,111	90,554	118,611
Queensland(*a*)	36,753	50,842	53,651	53,679	73,522	73,329
South Australia	2,788	3,346	4,106	4,541	5,869	7,312
Western Australia	43,111	51,638	54,519	57,810	66,712	78,341
Tasmania	576	1,496	2,093	2,193	5,261	3,557
Northern Territory(*d*)	545	362	277	1,256	2,549	5,666
Commonwealth Government(*c*)	13,440	13,805	23,002	28,031	43,337	54,567
Total	**159,766**	**200,539**	**235,156**	**243,272**	**374,601**	**458,306**

(*a*) Includes royalties on sand and gravel from Crown lands. (*b*) Includes royalties on brown coal paid by State Electricity Commission. (*c*) Includes royalties received under the *Petroleum (Submerged Lands) (Royalty) Act* 1967–68. (*d*) Excludes the mining royalties paid into Aboriginal Benefits trust fund prior to 1978–79.

Control of Exports

The Commonwealth Government has constitutional power over exports from Australia. Under the Customs (Prohibited Exports) Regulations exports of nuclear sensitive material, hydrocarbons and certain raw or semi processed minerals are prohibited unless permission is granted by the Minister for Trade and Resources or an authorised person.

The fundamental objectives of the controls are:

(i) to protect the national interest and ensure fair and reasonable market prices are achieved;
(ii) to ensure adequate supplies are available for the domestic market;
(iii) to meet international and strategic obligations; and
(iv) to ensure the Government's nuclear safeguards and physical protection requirements on exports are met, consistent with Australia's international obligations in relation to uranium and nuclear materials.

Export controls are administered on coal, iron ore, bauxite, alumina, petroleum and petroleum products, tin, salt, uranium and materials of nuclear significance. Tin concentrates and refined tin are subject to quota restrictions established by the International Tin Council.

With regard to mineral sands, approvals to export are freely issued except where the Commonwealth considers there are environmental reasons which would make such exports undesirable. Exports of copper scrap and copper alloy scrap are embargoed and quotas apply to secondary copper ingots and basic shapes made from scrap material.

Exporters of common salt in bulk and of ores, concentrates, matte and oxides of nickel, lead, zinc, copper, manganese, tungsten, and blister and refined copper and lead bullion are given automatic approval to export, on application, to cover expected shipments over a 12 month period. All other minerals are not subject to control.

Joint Coal Board

The Joint Coal Board was established in 1946 under joint legislation of the Commonwealth Government and of the State of New South Wales to carry out special administrative functions in regard to the New South Wales black coal mining industry. In summary, the Board's functions are:

(i) to ensure that coal is produced in the State of New South Wales in such quantities and with such regularity as will meet requirements throughout Australia and in trade with other countries;

(ii) to ensure that the coal resources of the State are conserved, developed, worked and used to the best advantage in the public interest;

(iii) to ensure that coal produced in the State is distributed and used in such manner, quantities, classes and grades, and at such prices as are calculated best to serve the public interest and secure the economical use of coal and the maintenance of essential services and industrial activities; and

(iv) to promote the welfare of workers engaged in the coal industry in the State.

Queensland Coal Board

The Queensland Coal Board has functions similar to those of the Joint Coal Board. It also carries out research and sampling tests of Queensland coals. It makes funds available to colliery proprietors for equipment and makes grants and/or loans for the provision of amenities for employees and for communities in coal mining districts. The price fixing of coal sold within Queensland is another important function.

Australian Atomic Energy Commission

For details of the functions of the Australian Atomic Energy Commission *see* Chapter 18, Energy.

Government assistance

The Commonwealth Government and the various State Governments provide assistance to the mineral industry in a variety of ways. The main forms of assistance are discussed on the following pages.

Commonwealth Government assistance

Assistance provided by the Commonwealth Government takes the form of income taxation concessions, subsidies, bounties, and technical assistance, mainly through the work of the Bureau of Mineral Resources (BMR) and the Commonwealth Scientific and Industrial Research Organization (CSIRO) as well as through the National Energy Research, Development and Demonstration Program.

Income taxation concessions. As at 30 June 1982 income derived from mining principally for gold in Australia is exempt from tax. The exemption is also available in respect of income derived from mining principally for gold and copper if the value of the gold obtained is not less than 40 per cent of the value of the total output.

From July 1982 mineral exploration and development enterprises have the option of using special depreciation arrangements or those which apply to industry in general.

Special deductions for capital expenditure incurred in the exploration for and development of petroleum (including natural gas) are allowable to a petroleum mining enterprise engaged in these operations in Australia. Capital expenditure allowable to petroleum mining enterprises includes, broadly, the costs of exploratory surveys, drilling and well-head plant; plant for the liquefaction of natural gas; and of access roads and expenditure on housing and welfare. The enterprise is entitled to these special deductions against income from any source. While the special deductions for exploration expenditure are deductible immediately against the net income of the enterprise, the deductions for capital expenditure on development are allowable over the life of the oil or gas field or over ten years, whichever is less on a straight line basis.

An enterprise mining or prospecting for minerals other than petroleum and gold may also be allowed special deductions for capital expenditure. Broadly, allowable capital expenditure includes

expenditure on exploration and prospecting; preparation of a site for extractive mining operations; buildings; other improvements and plant necessary for those operations; access roads; certain treatment plant; and housing and welfare.

The allowable capital expenditure of a general mining enterprise, other than costs of exploration, may be deducted against income from any source over the life of the mine, or over ten years, whichever is the lesser. Expenditure incurred by a mining enterprise in exploring for general minerals is allowable as an immediate deduction against net income derived from mining operations. Annual deductions for depreciation on petroleum mining plant or general mining plant may be allowed in lieu of spreading the cost over the life of the oil field or mine. The cost of exploration plant may also be deducted under the depreciation provisions of the law. The investment allowance scheme may permit a deduction at the rate of 18 per cent of the cost of certain new plant.

Special deductions are allowable for capital expenditure incurred on certain transport facilities used primarily and principally in relation to minerals mined in Australia for the transport of raw minerals and certain specified products obtained from the processing of such minerals, or for transporting petroleum between the oil or gas field and a refinery or other terminal. The special deduction applies to expenditure incurred on a railway, road, pipeline or similar transport facility and on certain port facilities or other facilities for ships. Allowable expenditure on transport facilities is deductible in equal annual instalments over a period of ten or twenty years at the option of the mining enterprise.

An income tax rebate of 27 cents for each dollar of share capital subscribed may be available to shareholders of petroleum mining companies exploring or mining for petroleum in Australia, including off-shore areas, where those companies lodge appropriate declarations with the Commisioner of Taxation in respect of the moneys subscribed. By lodging those declarations, certifying that the capital subscriptions have been, or will be, spent on eligible outgoings within a specified period, the petroleum mining companies forgo deductions to which they might otherwise be entitled for capital expenditure.

Oil Supply Emergencies

The National Petroleum Advisory Committee (NPAC) was established in September 1979, to advise Commonwealth, State and Territory Governments on:

- appropriate arrangements for the equitable allocation of liquid fuels, during any period of supply shortage.
- priorities for the allocation of liquid fuels during periods of shortage.

Membership of NPAC is drawn from agricultural, general aviation, fishing, manufacturing, mining, shipping and transport industries, oil industry, trade union movement and motorists organisations as well as Commonwealth, State and Territory Governments. The Department of National Development and Energy provides the Secretariat for NPAC.

Payments to producers and importers of phosphate fertilisers. The *Phosphate Fertilisers Bounty Act* 1963 provides for a subsidy to be paid on phosphatic substances produced in Australia or imported and sold for use in Australia as a fertiliser. Phosphatic substances used as a supplement to stock food are also regarded as being used as a fertiliser. Subsidy is payable at the rate of $12 per tonne in respect of superphosphate where the available phosphorus content is not less than 8.5 per cent or more than 8.9 per cent by weight. Outside this range, subsidy is payable at $138 per tonne of the available phosphorus content of the substance. The intention of the Act is to assist consumers of phosphate fertilisers (primary producers). The Act expires on 30 June 1985.

Payments to producers and importers of nitrogenous fertilisers. The *Nitrogenous Fertilisers Subsidy Act 1966* provides for a subsidy to be paid on nitrogenous substances produced in Australia or imported and sold for use in Australia as a fertiliser. Nitrogenous substances used as a supplement to stock food are also regarded as being used as a fertiliser. Subsidy is payable at the rate of $20 per tonne of the nitrogen content of which the goods consist. The intention of the Act is to assist consumers of nitrogenous fertilisers (primary producers). The Act expires on 30 June 1985.

Bureau of Mineral Resources, Geology and Geophysics. The role of BMR is:

(i) to develop an integrated, comprehensive, scientific understanding of the geology of the Australian continent, the Australian offshore area and the Australian Antarctic Territory, as a basis for minerals exploration; this to be done where appropriate in co-operation with State Geological Surveys and other relevant organisations and having regard to priorities for the search for minerals approved by the Minister for National Development and Energy;

(ii) to be the primary national source of geoscience data and to publish and provide information; and

(iii) to undertake mineral resource assessments in accordance with programs and priorities approved by the Minister for National Development and Energy with the advice of the BMR.

At 31 August 1982, 509 officers were employed at the BMR, this included 161 professional officers (geologists, geophysicists, chemists, engineers and mineral economists) and 48 research scientists.

BMR's research program is carried out by four Divisions—Geophysics, Continental Geology, Marine Geoscience and Petroleum Geology and Petrology and Geochemistry. Mineral and petroleum resource assessments are undertaken by the Resource Assessment Division which includes Mineral and Petroleum Branches and a Uranium Resource Evaluation Unit. Other branches will handle planning and programs, special projects and geoscience services, and geoscience data.

The BMR maintains laboratories in Canberra engaged on geochemical, geochronological and petroleum technological studies and basic research into the design and testing of geophysical equipment. It also maintains geophysical observatories at Kowen Forest (Australian Capital Territory), Mundaring (Western Australia), Mawson (Antarctica), and Macquarie Island. The geophysical observatories are engaged in geomagnetic, ionospheric, and seismology research.

State Government assistance

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 generally give a free technical service to the mining industry.

New South Wales. The primary objective of the Department of Mineral Resources is to promote the responsible development of mineral resources in New South Wales. The Department administers the various Acts (Coal, Petroleum and Mining) and grants titles to encourage and facilitate the exploration for, prospecting and development of, the State's mineral resources. The Department's staff is deployed in many diverse areas of activity to encourage and assist mining and resource development projects by the mining industry.

A wide range of services, information and advice is provided on many subjects including geological and geophysical investigations, scientific and chemical research, geological and metallogenic mapping, prospecting, mining legislation and administrative procedures. The Geological and Mining Museum, one of the States's foremost specialist museums, is maintained by the Department, as is the reference library of geology, mining and allied topics situated at the Department's head office.

The Department is engaged in the continuous assessment of the State's mineral resources; its coal exploration and assessment programme in particular has identified many coal deposits of high commercial promise.

Victoria. The Department of Minerals and Energy comprises the Divisions of Administration, Energy, Geological Survey, Hazardous Materials, Mining and Oil and Gas. The Department conducts geological, groundwater and mineral surveys, produces geological maps, and issues scientific and technical reports thereon. Drilling operations are carried out and the results are used in sedimentary basin studies and to evaluate petroleum, mineral and groundwater potential. A comprehensive library and a geological museum are maintained, and a core library retains cores and cuttings from drilling operations. The administration of petroleum, pipeline, hazardous materials, mining and extractive industry legislation ensures that mineral and petroleum exploration and production (both on-shore and off-shore), mining and quarrying are regulated and controlled. Also that the manufacture, transport, storage and use of explosives and the storage and transportation of inflammable liquids and liquefied gases are carried on in a safe and effective manner. Technical assistance and limited loans and grants are available for mineral exploration and prospecting and for approved development operations. Five stamp batteries located throughout the State provide an ore-crushing service to enable test crushing to be made at nominal cost. Information is available on mining law and mineral statistics. Assays of ores; analytical services; advice on metallurgical treatments, industrial pollution and chemical problems are available. Information on the manufacture, handling and use of explosives, inflammable liquids and liquefied gases is also provided. Financial assistance is available to municipalities to reclaim mine-damaged land in areas where a reclamation committee recommends such action. The Department advises on, monitors, co-ordinates and implements energy policies.

Queensland. The Department of Mines provides assistance to mining by way of geological services, grants for construction and maintenance of roads in mining areas, repayable advances or subsidies for mine development, hiring of equipment, and assistance to prospectors. The Department maintains a concentration plant for tin ores at Irvinebank, an assay office at Cloncurry and diamond drilling plants in various parts of the State. The Queensland Coal Board carries out research and sampling tests of Queensland coals. It also makes funds available to colliery proprietors for equipment and makes grants and/or loans for the provision of amenities for employees and for communities in coal mining districts.

South Australia. The Department of Mines and Energy has as its principal functions the administration of mining and petroleum legislation including the granting of mineral leases and collection of royalties and fees; geological and geophysical investigations to ascertain the extent and nature of the State's mineral resources; drilling to test mineral deposits, petroleum reserves and underground water supplies; the testing and treatment of minerals, generally in arrangement with the Australian Mineral Development Laboratories; control of mining and rehabilitation; co-ordinating State Government activities and formulating policy advice in the discovery, assessment and development of all energy resources within the State.

Western Australia. The Western Australian Department of Mines operates fifteen State Batteries throughout the goldfields, for the treatment of ore (principally gold) from prospectors and small mine owners, at a nominal charge. Through its Geological Survey Division, the Mines Department carries out geological investigations and surveys throughout the State. The total expenditure in 1980-81; on activities classified as 'Mineral exploration', amounted to $902,000. The results of this work are made available in both map and report format. The Government Chemical Laboratories Branch of the Mines Department provides analytical and research services to the mining and mineral exploration industry.

Tasmania. The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery; for sinking, repairing or de-watering of shafts; for construction of dams and water races; for testing and proving a deposit of any mining product; for developmental work; and for diamond and other types of drilling. The Department has available for hire percussion and diamond drills for exploration. Other assistance is rendered to the industry through geological and engineering advice, ore-dressing research into metallurgical recoveries, and the selection and design of treatment plant.

Northern Territory. The Department of Mines and Energy encourages the development of an efficient mining and processing industry. Through six divisions the Department administers relevant legislation and provides a wide range of services.

The N.T. Geological Survey Division elucidates the regional geology and geophysics of the Territory, researches new mapping, geological survey and mineral search techniques and provides technical information through its computer indexes at Darwin and Alice Springs.

Registration and orderly administration of mineral and petroleum tenure, and provision of essential drafting services fall within the ambit of the Policy and Administration Division.

Mines Division provides expertise in mining development, occupational hygiene, environment protection, and offers metallurgical services at the Tennant Creek Battery and Darwin's Metallurgical Test Centre to further its aim to encourage, control and ensure the efficient, orderly and safe recovery and utilisation of the Territory's mineral resources.

The Industrial Safety Division provides inspectorial, training and advisory safety services in the fields of construction safety, dangerous goods and machinery safety. These services are provided from the division's offices at Darwin, Alice Springs, Tennant Creek and Katherine.

Advice to Government and the industry on energy conservation, exploration and development is provided by the Energy Division whilst the Resource Economics Division provides advice to the Government on economic and policy matters of major significance to the Department and economic and project evaluation consultancies services to other divisions.

Research

Research investigations into problems of exploration, mining, ore-dressing and metallurgy are conducted by Government bodies, by universities, by private enterprise, and by combined efforts of these bodies. A summary of their functions follows. (For further information on research *see* Chapter 25, Science and Technology).

Australian Atomic Energy Commission

For a more detailed description of the activities of the Australian Atomic Energy Commission *see* Chapter 18, Energy.

The Australian Mineral Development Laboratories

Technical consulting, contract research and process design for the mineral and associated industries is undertaken by The Australian Mineral Development Laboratories (Amdel). Operations are based in Adelaide with branch laboratories in Perth, Melbourne and Townsville. This organisation is controlled by a council comprising representatives of the mineral industry, the South Australian Government and the Commonwealth Government. Extensive facilities are available in the fields of analytical chemistry,

mineralogy, petrology, chemical metallurgy and mineral engineering, process instrumentation and control, water and waste water treatment and materials technology. Both long and short term applied research is carried out and all investigations are conducted on a strictly confidential basis. Services in the field of pollution and environmental control are also available through the Amdel group, Amdel (Aspect).

The Baas Becking Geobiological Laboratory

In 1965, the Baas Becking Geobiological Laboratory was established in the Bureau of Mineral Resources building in Canberra under the joint sponsorship of the Commonwealth Scientific and Industrial Research Organization, the Bureau of Mineral Resources, and the Australian Mineral Industries Research Association (*see* Research by private enterprise, page 423).

Subjects of current research are the carbon and sulphur geochemical cycles, the Proterozoic to Cambrian sedimentary basins, the devising of microbial techniques for enhancing the secondary recovery of oil and ore genesis. Geological research is coordinated with the field research programs of the Bureau of Mineral Resources, Geology and Geophysics.

Bureau of Mineral Resources, Geology and Geophysics

The Bureau of Mineral Resources is the largest geoscience research organisation in Australia. Its role is to develop an integrated scientific understanding of the geology of the Australian continent, its Territories and offshore areas, as a basis for mineral exploration and resource assessment. BMR's activities include:

- Studies of sedimentary basins and of sedimentary systems, which have continental development in Australia and which may be host to fossil fuels or mineral deposits. These include studies of the characteristics and origin of fossil fuels, and studies of the effects of surface processes on the bedrock of the Australian continent.
- Studies of the structure and characteristics of the crust and upper mantle relevant to the understanding of the evolution of the Australian continent and its mineral deposits.
- Research into geophysical exploration techniques and their application.
- Carrying out of airborne radiometric and magnetic surveys and their interpretation as a basis for mineral exploration.
- Carrying out a wide range of marine geological and geophysical investigations.
- The undertaking of basic geochemical, petrological, and mineralogical studies of major sedimentary and igneous rock suites.
- Studies of metalliferous deposits and of their environments.
- Multi-disciplinary studies of metallogenic provinces.
- Assessment of Australia's mineral resources, including petroleum.
- Establishment and maintenance of the National Geoscience Data Base.

Commonwealth Scientific and Industrial Research Organization

Minerals Research

Minerals research by the Commonwealth Scientific and Industrial Research Organization (CSIRO) is undertaken within the Institute of Energy and Earth Resources. The research has the objectives of improving methods of locating, evaluating, defining and characterising Australia's mineral resources and of planning their recovery, development and effective use consistent with the minimization of environmental stresses. Divisions of the Institute engaged in mineral research are the Division of Applied Geomechanics at Syndal (Vic.); the Division of Fossil Fuels at North Ryde (N.S.W.); the Division of Mineral Chemistry at Port Melbourne (Vic.); and Division of Mineral Engineering at Clayton (Vic.); the Division of Mineralogy at Perth (W.A.), North Ryde (N.S.W.) and Canberra (A.C.T.), the Division of Mineral Physics at North Ryde (N.S.W.), Lucas Heights (N.S.W.) and Port Melbourne (Vic.), and the Physical Technology Unit at Ryde (N.S.W.).

Department of National Development and Energy

The functions of the National Coal Research Advisory Committee which was established in 1964 have been incorporated into the National Energy Research, Development and Demonstration Council (NERDDC) which is administered by the Department of National Development and Energy. For details of NERDDC and the National Energy Advisory Committee (NEAC), which advises the Minister for National Development and Energy on matters relating to national energy policy *see* Chapter 18, Energy and Chapter 25, Science and Technology.

University Research

The various universities in Australia carry out research into various aspects of the mineral industry such as geology, ore mineralogy and genesis, mining techniques, mineral processing, extractive metallurgy, and materials and metals technology.

Research by private enterprise

Many of the large companies in the mineral industry conduct their own research in dealing with their particular Company's interests. In 1959 the major companies in the industry, formed the Australian Mineral Industries Research Association Limited to co-ordinate and manage sophisticated research programmes on a co-operative basis, carried out by the Australian Mineral Development Laboratories, CSIRO, Universities and by other research organisations.

Since then, the research activity has grown considerably in magnitude covering geology, ore genesis and exploration techniques, mining and rock mechanics, mineral processing, ecology, energy, analytical methods and miscellaneous other items.

International relations

Because Australia is a large supplier of certain minerals to the rest of the world, and because the welfare of the domestic industry depends to a large extent on the maintenance of a high level of exports, international relations are of considerable importance to the industry, and the Commonwealth Government takes an active role in international consultations and discussions relating to minerals. The most important international commitments are discussed below.

International Tin Agreement

The First International Tin Agreement (of the post-war period) was in operation for five years from 1 July 1956 to 30 June 1961. It was followed by the Second, Third, Fourth, Fifth and Sixth International Tin Agreements, which came into force on 21 February 1962, 21 March 1967, 1 July 1971, 1976 and 1982 respectively. Australia joined the Fourth, Fifth and Sixth Agreements as a 'producing' (i.e. exporting) member, whereas in the first three agreements Australia's status had been that of a 'consuming' (i.e. importing) member. Details of the Second and Third Agreements are given in Year Book No. 57, pages 911–12. Details of the Fourth Agreement are given in Year Book No. 61, page 942, and those of the Fifth in Year Book No. 66, page 376.

The objectives and provisions of the present (Sixth) Agreement are broadly similar to those of its predecessors. The International Tin Agreement establishes floor and ceiling prices for tin and, by the medium of a buffer stock and remedial trading, aims at confining the prices within these limits. The Sixth Agreement provides for a larger buffer stock than in the previous Agreements of up to 50,000 tonnes of tin metal. For the first time, financing of the buffer stock is to be shared equally between producers and consumers. In the event of persistent market disequilibrium through causes beyond the control of the buffer stock mechanism, the agreement provides for the regulation of exports and stocks to stabilise the market.

The International Tin Agreement is operated by the International Tin Council, which is made up of the following governments: *Producers*—Australia, Indonesia, Malaysia, Nigeria, Thailand, Zaire; *Consumers*—Belgium-Luxembourg, Canada, Denmark, Finland, France, Germany (Federal Republic of), Greece, India, Ireland (Republic of), Italy, Japan, Netherlands, Norway, Poland, Sweden, Switzerland, United Kingdom and Yugoslavia. The producing countries hold a total of 1,000 votes, distributed so that each country receives five initial votes and an additional number corresponding to its percentage as laid down by the Agreement. The consuming countries hold a total of 1,000 votes also distributed so that each country receives five initial votes and an additional number proportionate to quantities consumed. The allocation of votes in each category is periodically reviewed.

International Lead-Zinc Study Group

With the cessation of stockpile buying of lead and zinc by the United States Government in 1958, world producers were faced with the prospect of a serious imbalance between world supply and demand for these metals. To meet this problem, a series of meetings of interested governments was held at which Australia was represented. These meetings culminated in the formation of the International Lead-Zinc Study Group which was established in January 1960. The Study Group comprises the following Governments: Algeria, Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Czechoslovakia, Denmark, Finland, France, Germany (Federal Republic of), Hungary, India, Ireland (Republic of), Italy, Japan, Mexico, Morocco, Netherlands, Norway, Peru, Poland, South Africa

(Republic of), Spain, Sweden, Tunisia, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, United States of America, Yugoslavia and Zambia. The Group provides opportunities for inter-governmental consultations on international trade in lead and zinc and for studies of the world situation in lead and zinc having regard especially to the desirability of providing continuous, accurate information regarding the supply and demand position and its probable development.

Association of Iron Ore Exporting Countries (APEF)

Australia is a founder member of the Association of Iron Ore Exporting Countries (APEF). The other members of the Association are Algeria, India, Liberia, Mauritania, Peru, Sierra Leone, Sweden and Venezuela.

The objectives of the Association are to promote close co-operation among Member countries with a view to safeguarding their interests in relation to the iron ore export industry; to ensure the orderly and healthy growth of export trade in iron ore; to assist Member countries to secure fair and remunerative returns from the exploitation, processing and marketing of iron ore and to provide a forum for consultations and the exchange of information on problems relating to the iron ore export industry.

The Association consists of a Conference of Ministers, which meets biennially and is the supreme authority of the Association, a Board comprising representatives of member countries which meets twice a year, and a Secretariat which is located in Geneva.

Intergovernmental Council of Copper Exporting Countries (CIPEC)

The CIPEC was established in 1967 by the Governments of Chile, Peru, Zaire and Zambia as an intergovernmental consultative organisation.

Australia and Papua-New Guinea were admitted as Associate Members and Indonesia as a Full Member in 1975; Yugoslavia was admitted as an Associate Member in 1977. Associate Members may participate in meetings but have no voting rights and are not bound by CIPEC's decisions.

The key objectives of CIPEC are to co-ordinate measures to achieve continuous growth in real earnings from copper exports and to harmonise the decisions and policies of members relating to copper production and marketing.

International Bauxite Association

Australia joined the International Bauxite Association (IBA) as a founder member in October 1974. Other members are Dominican Republic, Ghana, Guinea, Guyana, Haiti, Indonesia, Jamaica, Sierra Leone, Surinam and Yugoslavia. Members account for about three-quarters of world bauxite production with Australia accounting for nearly one third of world production.

The objectives of the Association are to promote the orderly and rational development of the bauxite industry; to secure for members fair and reasonable returns from the exploration, processing and marketing of bauxite and its products for the economic and social development of their peoples, bearing in mind the recognised interests of consumers; and generally to safeguard the interests of member countries in relation to the bauxite industry.

The Association consists of a Council of Ministers which meets once a year and is the supreme organ, an Executive Board consisting of senior officials which meets three times a year and a Secretariat which is located in Kingston, Jamaica.

The IBA provides members with an opportunity to discuss common problems and evolve co-operative policies to facilitate further development of their bauxite/alumina/aluminium industries. To date the Association's work has been mostly concerned with exchanging views and information on a range of industry matters. The commercial and technical aspects of formulating minimum export prices for bauxite and alumina have received particular attention. In December 1981 the Council adopted recommendations on minimum CIF prices for bauxite and alumina sold by member countries in 1982. Australia was not included in the majority that voted for the recommendations and is not bound by them. The Association publishes a Quarterly Review and a bi-monthly newsletter.

The 1982 meeting of the Council of Ministers was held in Jamaica in November.

MINERAL INDUSTRY STATISTICS

Statistics in the following pages refer mainly to the mining industry, mineral production, mineral exploration, mineral processing and treatment, and overseas trade.

Mining industry statistics

This section contains statistics of the mining industry in Australia obtained from the annual census of mining establishments. The annual mining census is conducted throughout Australia on an integrated basis with other economic censuses, e.g. the annual census of manufacturing establishments, electricity and gas establishments and the periodic censuses of retail and wholesale trade establishments.

Statistics are also available for *enterprises* engaged in the mining industry. The latest statistics for mining are in respect of 1979–80 and were published in *Enterprise Statistics: Details by Industry Class, Australia*, 1979–80 (8103.0). Enterprise statistics for mining are now produced annually and should be available within two years of the end of the financial year to which they relate. A description of the statistics and broad summary tables, in respect of the 1977–78 and 1978–79 censuses and surveys are given in Chapter 17.

The following table shows key items of data for establishments in Australia for 1980–81 based on the 1978 edition of the *Australian Standard Industrial Classification* (ASIC). The 1978 edition of the classification replaces the 1969 preliminary edition which has been in use since the 1968–69 census.

A document fully describing the differences between the 1969 and 1978 editions of the ASIC is available on request.

MINING ESTABLISHMENTS: SUMMARY OF OPERATIONS BY INDUSTRY CLASS, 1980–81

Industry		*Establishments at 30 June*	*Average employment over whole year(a)*			*Wages and salaries (b)*		*Stocks*		*Total purchases, transfers in and selected expenses*		*Fixed capital expenditure less disposals*
ASIC code	*Description*		*Males*	*Females*	*Persons*		*Turnover*	*Opening*	*Closing*		*Value added*	
		No.	No.	No.	No.	$'000	$'000	$'000	$'000	$'000	$'000	$'000
	Metallic minerals—											
	Ferrous metal ores—											
1111	Iron ores	24	7,652	1,132	8,784	192,372	1,392,772	106,929	176,486	681,623	780,707	69,360
1112	Iron ore pelletising	2	742	39	781	14,586	115,502	27,909	34,937	115,515	7,015	1,369
	Non-ferrous metal ores—											
1121	Bauxite	5	1,888	226	2,114	40,924	284,195	12,740	13,515	54,614	230,356	29,340
1122	Copper ores	15	4,205	273	4,478	79,942	330,835	52,076	45,682	113,249	211,192	61,166
1123	Gold ores	70	2,543	148	2,691	51,823	216,297	26,739	36,061	75,955	149,665	74,080
1124	Mineral sands	19	1,883	147	2,030	33,012	162,023	31,207	43,912	79,609	95,119	7,609
1125	Nickel ores	5	2,310	236	2,546	50,668	259,621	27,430	30,536	104,369	158,359	50,172
1126	Silver-lead-zinc ores	12	6,808	387	7,195	131,690	617,618	78,987	90,903	185,811	443,724	91,048
1127	Tin ores	78	1,899	134	2,033	29,238	143,440	11,268	14,833	53,744	93,262	21,857
1128	Uranium ores	3	578	103	681	14,355	225,304	18,480	53,818	87,522	173,119	178,119
1129	Non-ferrous metal ores n.e.c.	17	1,489	210	1,699	31,232	155,279	29,180	36,665	58,747	104,016	21,000
11	*Total metallic minerals*	*250*	*31,997*	*3,035*	*35,032*	*669,843*	*3,902,888*	*422,945*	*577,348*	*1,610,756*	*2,446,534*	*605,119*
	Coal, oil and gas—											
1201	Black coal	123	28,280	707	28,987	678,189	2,708,587	240,269	297,030	1,061,414	1,703,934	722,327
1202	Brown coal	3	3,786	329	4,115	97,298	1,934,601	66,464	101,140	319,848	1,649,429	563,044
1300	Oil and gas	14										
	Construction materials—											
1401	Sand and gravel	342	1,663	198	1,861	27,058	184,734	11,264	13,411	85,932	100,949	8,883
1404	Construction materials n.e.c.	459	4,272	457	4,729	72,824	369,759	31,304	35,145	173,478	200,122	32,124
14	*Total construction materials*	*801*	*5,935*	*655*	*6,590*	*99,883*	*554,492*	*42,568*	*48,556*	*259,409*	*301,071*	*41,007*
	Other non-metallic minerals—											
1501	Limestone	50	700	16	716	12,012	46,127	8,575	10,586	25,515	22,623	59,562
1502	Clays	124	380	38	418	5,213	35,927	4,027	4,439	20,074	16,265	2,004
1504	Salt	24	614	90	704	13,145	53,230	6,759	10,502	24,207	32,765	23,223
1505	Non-metallic minerals n.e.c.	125	1,118	108	1,226	18,898	93,267	13,972	14,870	52,990	41,175	3,779
15	*Total other non-metallic minerals*	*323*	*2,812*	*252*	*3,064*	*49,268*	*228,550*	*33,332*	*40,397*	*122,786*	*112,828*	*88,567*
	Total mining (excl. services to mining)	**1,514**	**72,810**	**4,978**	**77,788**	**1,594,480**	**9,329,118**	**805,579**	**1,064,471**	**3,374,214**	**6,213,795**	**2,020,062**

(*a*) Includes working proprietors. (*b*) Excludes amounts drawn by working proprietors.

Mineral production

This section contains details of the output (quantity and value) of principal minerals produced and the metallic content of ores, concentrates, etc.

The statistics shown have been derived from data collected in the annual mining census and in returns to the various State Mines Departments, supplemented in some cases by information made available by the Department of National Development and Energy and from other sources.

For details of the scope of mineral production statistics and their relation to mining industry statistics, and the principles for measuring the output of minerals, *see* Year Book No. 61 and earlier issues.

Quantity of minerals produced

The following tables show particulars of the quantities of principal minerals produced and contents of principal metallic minerals produced during 1980–81 and earlier years. Further data are available relative to all minerals in the annual publication *Mineral Production, Australia* (8405.0)

QUANTITY OF PRINCIPAL MINERALS PRODUCED

Mineral		*1978–79*	*1979–80*	*1980–81*
METALLIC MINERALS				
Bauxite	'000 tonnes	25,541	27,629	25,450
Copper concentrate	"	819	812	866
Gold bullion(*a*)	kg	18,765	16,805	13,806
Iron ore	'000 tonnes	84,595	96,998	93,754
Lead concentrate	"	658	654	622
Lead-copper concentrate	tonnes	24,719	24,185	22,328
Manganese ore—				
Metallurgical grade	'000 tonnes	1,385	2,173	1,485
Mineral sands—				
Ilmenite concentrate(*b*)	"	1,207	1,336	1,259
Rutile concentrate	"	269	301	273
Zircon concentrate	"	454	447	461
Nickel concentrate	"	353	347	404
Tantalite-columbite concentrate	tonnes	127	166	235
Tin concentrates	"	22,618	23,083	24,204
Tungsten concentrates—				
Scheelite concentrate	"	3,129	3,864	3,800
Wolfram concentrate	"	1,840	2,411	2,463
Uranium concentrate	"	701	837	2,523
Zinc concentrate	'000 tonnes	879	903	845
COAL				
Black coal—				
Bituminous	'000 tonnes	75,332	74,402	88,766
Sub-bituminous	"	5,865	6,847	7,308
Brown coal—				
For briquettes	"	3,006	3,350	2,891
Other	"	29,095	29,544	29,212
Briquettes	"	1,131	1,253	1,081
OIL AND GAS				
Crude oil (stabilised)	'000 m^3	24,839	23,647	23,008
Natural gas	mill. m^3	7,686	8,876	10,269
Ethane	"	144	147	140
CONSTRUCTION MATERIALS(*c*)				
Sand	'000 tonnes	23,855	26,241	27,285
Gravel	"	13,958	14,998	14,338
Crushed and broken stone	"	54,223	56,123	53,891
Other (decomposed rock etc.)	"	32,899	38,072	41,162
OTHER NON-METALLIC MINERALS				
Asbestos (chrysotile)	tonnes	67,514	90,524	73,416
Brick, clay and shale	'000 tonnes	8,028	9,005	8,146
Limestone (including shell and coral)	"	10,813	11,521	11,894
Salt	"	5,339	5,335	6,799
Silica	"	1,618	1,884	1,828

(*a*) Includes alluvial gold. (*b*) Includes ilmenite from which titanium dioxide is not commercially extractable and beneficiated ilmenite. (*c*) Excludes dimension stone.

CONTENTS OF PRINCIPAL METALLIC MINERALS PRODUCED

Contents of metallic minerals produced		*1978–79*	*1979–80*	*1980–81*
Alumina (Al_2O_3)	'000 tonnes	n.p.	n.p.	n.p.
Antimony	tonnes	1,588	1,435	1,207
Beryllium oxide (BeO)	mtu(*a*)	—	—	—
Bismuth	kg	n.p.	n.p.	n.p.
Cadmium	tonnes	1,660	1,757	1,676
Cobalt	"	3,451	3,133	3,513
Copper	"	238,688	235,122	246,441
Gold	kg	19,584	18,273	15,991
Iron(*b*)	'000 tonnes	53,248	61,319	59,064
Lead	tonnes	423,492	n.p.	381,377
Manganese	"	662,326	1,039,141	717,209
Mercury	kg	—	—	—
Monazite	tonnes	17,385	14,033	12,676
Nickel	"	80,385	64,393	73,367
Palladium	kg	175	202	464
Platinum	"	69	83	69
Selenium	tonnes	—	—	63
Silver	kg	874,075	791,760	759,290
Sulphur	tonnes	398,616	369,358	338,734
Tantalite-columbite (Ta_2O_5 + Nb_2O_5)	kg	63,771	69,113	91,930
Tin	tonnes	12,011	12,379	12,690
Titanium dioxide (TiO_2)	"	958,499	1,028,859	1,008,386
Tungstic oxide (WO_3)	mtu(*a*)	355,771	449,372	451,245
Yttrium oxide (Y_2O_3)	kg	6,060	7,273	9,187
Zinc	tonnes	498,484	518,040	581 887
Zirconium dioxide (ZrO_2)	"	301,295	297,961	306,079

(*a*) Metric ton unit (mtu) equals 10 kilograms. (*b*) Excludes iron content of iron oxide not intended for metal extraction. Includes iron contained in iron concentrate.

Value of minerals produced

The following table shows the value of principal minerals produced during 1980-81 and earlier years. Further data are available in the annual publication *Mineral Production, Australia* (8405.0).

VALUE OF PRINCIPAL MINERALS PRODUCED
($'000)

Mineral	*1978–79*	*1979–80*	*1980–81*
METALLIC MINERALS			
Bauxite	n.p.	n.p.	n.p.
Copper concentrate	256,469	327,471	288,768
Gold bullion(*a*)	101,592	203,337	184,434
Iron ore	801,636	1,004,308	1,007,307
Lead concentrate	339,400	623,973	375,018
Lead-copper concentrate	16,531	41,193	23,904
Manganese ore—			
Metallurgical grade	60,465	95,737	59,207
Mineral sands—			
Ilmenite concentrate(*b*)	23,768	27,252	33,200
Rutile concentrate	51,267	76,481	82,301
Zircon concentrate	27,189	28,175	30,180
Nickel concentrate	n.p.	n.p.	n.p.
Tantalite-columbite concentrate	5,202	12,339	17,594
Tin concentrate	135,365	166,674	143,343
Tungsten concentrate—			
Scheelite concentrate	28,147	34,923	33,739
Wolfram concentrate	15,106	19,768	19,606
Uranium concentrate	47,832	62,342	192,755
Zinc concentrate	138,464	174,065	188,075
COAL			
Black coal—			
Bituminous	1,581,702	1,665,489	2,276,080
Sub-bituminous	64,847	94,607	116,380
Brown coal—			
For briquettes	..	..	..
Other	79,630	91,821	107,052
Briquettes	25,063	24,938	22,230
OIL AND GAS			
Oil and Gas	*919,793*	*1,190,260*	*1,665,786*
CONSTRUCTION MATERIALS(*c*)			
Sand	62,458	76,738	95,958
Gravel	44,091	52,612	61,030
Crushed and broken stone	204,547	252,376	263,159
Other (Decomposed rock etc.)	39,322	54,141	80,768
OTHER NON-METALLIC MINERALS			
Asbestos (chrysotile)	21,149	27,240	25,735
Brick clay and shale	15,513	23,054	23,706
Gems			
Opal(*d*)	43,128	64,135	49,490
Sapphire	23,817	24,672	19,783
Limestone (incl. shell and coral)	39,193	42,585	44,153
Salt	38,091	40,871	66,485
Silica	11,531	14,362	15,858

(*a*) Includes alluvial gold. (*b*) Includes ilmenite from which titanium dioxide is not commercially extractable and beneficiated ilmenite. (*c*) Excludes dimension stone. (*d*) Partly estimated.

Foreign participation of the mining industry in Australia

Summary information on foreign participation in the mining industry in Australia is shown in Chapter 24, Overseas Transactions. More detailed statistics are available in *Foreign Ownership and Control of the Mining Industry* (5317.0) and *Foreign Control in Mineral Exploration* (5323.0).

Mineral exploration (other than for petroleum and oil shale)

Definition

Exploration consists of the search for and/or appraisal of new ore occurrences and known deposits of minerals (including extensions to deposits being worked) by geological, geophysical, geochemical and other methods (including drilling). Exploration for water is excluded. The construction of shafts and adits is included if primarily for exploration purposes. Excluded are mine development activities carried out primarily for the purpose of commencing or extending mining or quarrying operations (including the construction of drives, shafts, winzes, etc. in underground mines, and the preparation of quarrying sites, including overburden removal, for open-cut extraction).

Sources of statistics

The statistics of exploration for minerals *other than petroleum and oil shale* are derived from the annual mineral exploration census conducted by the Australian Bureau of Statistics in each State and the Northern Territory (in New South Wales the census is conducted jointly with the State Mines Department).

Classification

The data obtained in the mineral exploration census are divided into the following categories:

(a) *Private exploration on production leases*—relates to exploration carried out on the production lease by privately-operated mines currently producing or under development for the production of minerals.

(b) *Other private exploration*—relates to exploration carried out by private enterprises on areas covered by exploration licences, authorities to enter, authorities to prospect and similar licences and authorities issued by State Governments for exploration of minerals. Also included is exploration by private enterprises which is not directly connected with areas under lease, licence, etc.

(c) *Exploration by government*—relates to exploration of minerals carried out by Federal and State Government Departments, local government authorities and business undertakings operated by those departments or authorities.

Expenditure, metres drilled

The following table shows expenditure and metres drilled on private mineral exploration other than for petroleum and oil shale in Australia during the last six years.

PRIVATE MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM AND OIL SHALE)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Expenditure ($'000)—						
On drilling	30,531	36,139	50,019	50,729	72,408	114,583
Other	69,450	97,835	108,378	131,780	213,722	319,915
Australia	**99,982**	**133,974**	**158,397**	**182,509**	**286,130**	**434,498**
Metres drilled ('000)—						
Drilled-core	456	469	410	639	617	1,065
Drilled-non-core	1,553	1,364	1,919	1,689	2,299	2,718
Australia	**2,010**	**1,834**	**2,329**	**2,328**	**2,917**	**3,783**

Oil shale exploration

Statistics of exploration for oil shale are derived from an annual exploration census conducted by the Australian Bureau of Statistics.

Exploration consists of the search for and/or appraisal of new ore occurrences and known deposits of oil shale (including extensions to deposits being worked) by geological, geophysical, geochemical and other methods (including drilling). The construction of shafts and adits is included if primarily for exploration purposes. Excluded are mine development activities carried out primarily for the purpose of commencing or extending mining operations (including the construction of drives, shafts, winzes, etc. in underground mines, and overburden removal, for open-cut extraction).

In 1980-81 expenditure in Australia on private exploration for oil shale amounted to $38,660,000 with 142,000 metres being drilled.

Petroleum exploration

Source of statistics

These statistics of expenditure on petroleum exploration have been obtained by the addition of values collected in a quarterly survey conducted by the Australian Bureau of Statistics. Other data shown were collected by the Bureau of Mineral Resources, Geology and Geophysics. Further information relating to petroleum exploration is published by the Australian Bureau of Statistics in its annual publication *Mineral Exploration, Australia* (8407.0) and by the Bureau of Mineral Resources in *The Petroleum Newsletter* (issued quarterly) and *The Australian Mineral Industry Annual Review*.

Scope

Petroleum exploration consists of the search for and/or appraisal of deposits of crude oil and/or natural gas and natural gas liquids by geological, geophysical, geochemical, and other exploration methods, including drilling. Included in the expenditure are the costs of drilling exploratory oil and/or gas wells and the testing of such wells. Also included are the costs of access roads, site construction, permits, licences and similar fees, relevant office buildings and furniture, transportation equipment, storage facilities, plant and equipment, and review work where these are undertaken primarily for purposes of exploration for deposits of petroleum. Details of developmental oil and/or gas wells are excluded.

Operations

The following table shows particulars of expenditure, and wells and metres drilled in petroleum exploration in recent years.

PETROLEUM EXPLORATION

		1978-79	*1979-80*	*1980-81*
Expenditure—				
Private sources	$'000	163,366	294,709	368,330
Government sources	$'000	4,737	5,020	5,351
Total	**$'000**	**168,103**	**299,729**	**373,683**
Wells (a)—				
Drilled (i.e. those which reached final depth)—				
As oil producers	No.	7	1	14
As gas producers	No.	3	8	24
As oil and gas producers	No.	—	—	—
Plugged and abandoned	No.	43	43	56
Total	**No.**	**53**	**52**	**94**
Average final depth of wells drilled	m	1,973	2,460	1,747
Drilling still in progress at 31 December (uncompleted holes)	No.	3	4	11
Wells drilled or drilling over 3,000 metres	No.	10	14	24
Metres drilled (a)—				
Completed wells	m	104,583	127,403	180,157
Uncompleted holes	m	5,026	10,205	19,151
Total	**m**	**109,609**	**137,608**	**199,308**

(a) *Source*: Bureau of Mineral Resources, Geology and Geophysics. Data relates to years ended 31 December.

Mineral processing and treatment

The extraction of minerals from ore deposits, as in mining and quarrying, is only a part of mineral technology, as few minerals can be directly used in the form in which they are mined. In most cases minerals must undergo considerable processing and treatment before utilisation. The sectors of the economy which carry out this work are classified for statistical purposes to Manufacturing Industry (*see* Chapter 17, Manufacturing and Internal Trade).

Principal products

The following table shows particulars of the production of certain important manufactured products of mineral origin during recent years.

PRODUCTION (a) OF PRINCIPAL MANUFACTURED PRODUCTS OF MINERAL ORIGIN

Commodity		*1978–79*	*1979–80*	*1980–81*
METALS(*b*)				
Non-ferrous—				
Alumina	'000 tonnes	6,921	7,290	7,235
Refined aluminium	tonnes	264,798	283,006	344,953
Blister copper(*c*)	"	170,458	163,608	170,420
Refined copper	"	137,863	137,000	159,437
Lead bullion (for export)(*c*)	"	162,185	167,744	149,027
Refined lead	"	217,992	204,287	206,127
Refined zinc	"	308,622	299,606	273,552
Refined tin	"	4,857	5,249	4,669
Ferrous—				
Pig iron	'000 tonnes	7,349	7,481	7,335
Steel ingots	"	7,431	7,374	7,012
Precious—				
Refined gold(*d*)	kg	15,563	15,038	12,494
Refined silver	"	302,032	293,966	315,584
FUELS				
Coal products—				
Metallurgical coke	'000 tonnes	4,620	4,367	4,676
Brown coal briquettes	"	1,131	1,253	1,081
Petroleum products—				
Diesel-Automotive oil	'000 tonnes	5,612	5,958	6,137
Industrial fuel and marine fuel	"	1,200	991	985
Fuel oil for burning	"	4,223	4,674	3,854
Automotive petrol	mil. litres	13,850	14,370	14,002
BUILDING MATERIALS				
Clay bricks	millions	1,914	2,172	2,287
Portland cement	'000 tonnes	5,085	5,201	5,656
Plaster of paris	"	347	419	n.p.
Plaster sheets	'000 sq m	48,508	54,770	63,617
CHEMICALS				
Sulphuric acid	'000 tonnes	1,940	2,172	1,976
Caustic soda	tonnes	n.p.	n.p.	n.p.
Superphosphate(*e*)	'000 tonnes	3,680	4,202	3,557

(*a*) Some products exclude production of single establishment manufacturing establishments employing less than four persons and production of establishments predominantly engaged in non-manufacturing activities but which may carry on in a minor way, some manufacturing. (*b*) Excludes secondary metal with the exception of pig iron and steel ingots. (*c*) Metallic content. (*d*) Newly-won gold of Australian origin. (*e*) Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate, i.e. 22% P_2O_5 equivalent.

Overseas trade

Exports and imports

For particulars of the quantities and values ($f.o.b. port of shipment) of the principal minerals and products exported from and imported into Australia during recent years. *See* Chapter 24. Overseas Transactions.

Considerable quantities of metallic ores, concentrates, slags, and residues are exported from Australia for refining overseas. The following table shows selected items exported during 1981 and their principal metallic content as estimated by assay.

PRINCIPAL METALLIC CONTENTS OF SELECTED ORES AND CONCENTRATES ETC. EXPORTED FROM AUSTRALIA, 1981

	Metallic contents—estimated from assay							
Ores and concentrates, etc.	*Copper*	*Lead*	*Zinc*	*Tin*	*Iron*	*Tungstic Oxides*	*Gold*	*Silver*
	tonnes	tonnes	tonnes	tonnes	'000 tonnes	tonnes	kg	kg
Copper concentrate	36,885	—	—	—	—	—	371	7,772
Blister copper	18,153	—	—	—	—	—	1,913	5,155
Copper matte, slags, etc. (*a*)	2,071	3,160	—	—	—	—	—	1,268
Lead concentrate	4,212	22,264	6,249	—	—	—	1,164	62,409
Lead bullion	—	136,593	—	—	—	—	9	333,498
Lead slags and residues	5	4159	—	49	—	—	10	496
Zinc concentrate	116	7,232	230,039	—	—	—	6	32,564
Zinc slags and residues	—	—	4,542	—	—	—	—	—
Tin concentrate	—	—	—	7,304	—	—	—	—
Iron ore—								
Pellets	—	—	—	—	1,629	—	—	—
Fines	—	—	—	—	23,825	—	—	—
Lump	—	—	—	—	19,380	—	—	—
Scheelite concentrate	—	—	—	—	—	2,891	—	—
Wolfram concentrate	—	—	—	—	—	1,443	—	—
Total metallic content	**61,444**	**173,408**	**240,830**	**7,353**	**44,834**	**4,334**	**3,474**	**443,162**

(*a*) Includes copper matte, copper slags and residues and copper-lead dross and speiss.

Prices

The following table shows average prices of some principal refined metals and ores and concentrates on Australian and certain major overseas markets. Prices of minerals such as iron ore, coal and bauxite are not shown as these minerals are commonly sold on a contract basis rather than on an open market basis.

AVERAGE DAILY PRICES OF SELECTED METALS AND METALLIC ORES AND CONCENTRATES: AUSTRALIAN AND OVERSEAS MARKETS(*a*)

(*Source:* Bureau of Mineral Resources, Geology and Geophysics)

METALS(*a*)

	Tin				*Aluminium*		*Gold*		*Silver*	
Period	*Aust. ($A—tonne)*	*L.M.E. (£Stg—metric ton)*	*Straits ($Malpicul)*	*Nickel U.S.A. ($US—lb)*	*Aust. ($A—tonne)*	*U.S.A. (USc—lb)*	*Premium markets ($A—f. oz) Australia and Overseas*	*U.K. ($US—f. oz)*	*Aust. ($A—kg)*	*U.K. (Stg new pence—f. oz)*
1980	15,440.51	7,225.74	2,160.36	3.43	1,501.83	76.76	547.45	606.11	615.92	898.11
1981	13,363.32	7,071.44	(*b*)32.34	3.45	1,501.25	61.05	407.22	459.99	298.82	515.07
1981										
Highest	15,287.00	8,560.00	(*b*)35.84	3.47	1,545.00	73.62	508.80	599.25	425.99	671.20
Lowest	11,733.00	5,750.00	(*b*)28.57	3.25	1,370.00	50.40	346.60	391.75	231.64	412.80

	Copper		*Lead*			*Zinc*			
Period	*Aust. ($A—tonne)*	*L.M.E. (£Stg—metric ton)*	*Aust. ($A—tonne)*	*L.M.E. (£Stg—metric ton)*	*U.S.A. (USc—lb)*	*Aust. ($A—tonne)*	*L.M.E. (£Stg—metric ton)*	*Prod. (Stg—ton)*	*U.S.A. (USc—lb)*
1980	1,959.15	941.21	843.27	388.68	42.87	713.10	327.37	798.00	38.61
1981	1,535.83	863.82	662.53	362.69	37.30	798.54	424.01	914.04	45.44
1981									
Highest	1,620.00	1,036.00	725.00	509.00	46.00	889.00	559.00	1,000.00	50.00
Lowest	1,440.00	754.00	650.00	277.00	30.00	716.00	307.00	825.00	41.25

For footnotes *see* next page.

ORES AND CONCENTRATES

Period	*Tin Aust.* (*$A–mtu*)	*Wolfram Europe* (*£Stg–mtu*)	*Ilmenite Europe* (*$A–metric ton*)	*Rutile Europe* (*$A–metric ton*)	*Zircon Europe* (*$A–metric ton*)
1980	135.99	142.70–146.79	18.50–20.50	320.00–350.00	53.33–62.50
1981	112.55	140.54–144.63	24.00–25.00	288.33–299.17	82.08–87.08
1981					
Highest	124.50	154.00	25.00	300.00	105.00
Lowest	105.60	120.00	24.00	270.00	75.00

(*a*) Where a daily price does not actually exist for a commodity, daily prices have been imputed from price data which are available.
(*b*) Shown in $-kg.
NOTE: Prices data shown are those quoted in the relevant markets and are mainly derived from information collected and compiled by the Bureau of Mineral Resources. Overseas data are supplied to the Bureau of Mineral Resources by the *Metal Bulletin* and *Metals Week*.

REVIEW OF RECENT DEVELOPMENTS IN THE AUSTRALIAN MINERAL INDUSTRY

(*Source:* Bureau of Mineral Resources, Geology and Geophysics)

Major developments in the Australian mineral industry during 1981 are reviewed briefly in subsequent parts of this section. Additional information on developments in the industry is available in *Australian Mineral Industry Annual Review* 1980 published by the Bureau of Mineral Resources, Geology and Geophysics. That publication contains comprehensive reviews of mineral commodities of importance to the Australian economy, as well as a general review of the industry's performance during the year. The *Australian Mineral Industry Quarterly*, Volume 34, Number 4, details Australia's identified mineral resources, 1981.

General Review of 1981

The gross domestic product (GDP) of Australia in 1981 was $140,783 million, of which an estimated $6,000 million was generated by the mineral industry, excluding smelting and refining. If smelting and refining were included, an estimated $2,400 million could be added to this figure, thus making the mineral industry the largest primary sector contributor to the GDP. Australia's export trade again increased in total value, although in real terms a decline was evident. Japan, USA and EEC were the main markets for mineral commodities.

Increased output and higher prices for some major commodities were sufficient to bring about yet another record ex-mine value of minerals produced in Australia in 1981 of about $8,759 million. The greater part of this increase was accounted for by the energy minerals, coal, crude oil and natural gas. Most other major commodities recorded downturns in quantities and values of production reflecting a continuation of gloomy conditions on world markets. Tin, gold, and silver output was higher than in 1980, but output of lead, copper, nickel, and silver was lower. Production of uranium oxide (yellowcake) almost doubled because of output from the newly operational mine and concentrator at Ranger, N.T. The downturn in the world steel industry resulted in reduced demand for Australian iron ore and manganese, although there was a slight increase in demand for Australian steel products. Because of reduced demand for rutile, and increased supplies, Australian mineral-sands operators cut back production, particularly on the east coast.

Imports—1981

The value of imports for mineral products rose by 10 per cent to $2,372 million. Crude oil and other refinery feedstock was the largest single mineral import, rising by 16 per cent to $2,011 million. Other significant mineral imports were gem diamonds and fertiliser materials (phosphate rock, elemental sulphur, and potassium salts). Imports of mineral primary products accounted for 9.8 per cent of the total value of merchandise imports compared with 12 per cent in 1980. Although the value of imports rose, the surplus in the balance of mineral trade rose substantially, increasing from $4,671 million in 1980 to $4,700 million in 1981.

Exports—1981

Australia's mineral exports rose in current dollars by 3 per cent to $7,072 million, a new record, but declined somewhat in real terms. Those mineral commodities which lost ground in current dollars as a result of depressed world industrial and trading conditions included gold, iron ore, lead, nickel, rutile, silver, tin, copper and zinc. However, black coal exports increased in both quantity and current dollar terms and remained the largest single export earner, accounting for $2,301 million or 36 per cent of the total value of mineral primary products.

Iron ore was the second largest export earner with a value of $1,123 million (a decrease of 4 per cent) followed by alumina which increased in value by 6 per cent to $1,086 million. In total, black coal, iron ore and alumina accounted for nearly 64 per cent of the total value of exports of mineral primary products.

Pattern of mineral trade—1981. Australia exported metals and minerals to more than 100 countries. Japan accounted for 46.3 per cent of Australian exports by value. Principal exports of mineral primary products to Japan were black coal, iron ore, aluminium, alumina, bauxite, copper, nickel, manganese ore and mineral sands.

The proportion by value of Australian mineral exports to the EEC was 17.5 per cent (including 5.5 per cent to the UK), and to the USA 11.6 per cent. To the EEC countries, exports were mainly iron ore, black coal, lead and copper, and to the USA alumina, nickel, bauxite, manganese ore, mineral sands, iron ore, lead, and zinc.

Bauxite, Alumina and Aluminium

In 1981, production of bauxite increased by 6 per cent to 25.54 million tonnes, alumina production to 7.1 million tonnes, while aluminium output was up 25 per cent to 379,000 tonnes. Australia was again the world's largest producer of bauxite and alumina.

The commissioning of the new alumina refinery at Wagerup, W.A., has been delayed until at least mid-1983. Initial rated capacity is to be 500,000 tonnes per year.

The first stage of the alumina refinery at Worsley, W.A., will be completed in 1983. Initial rated capacity is one million tonnes per year, with ultimate capacity of two million tonnes per year. Bauxite will be supplied from Mount Saddleback, W.A. All alumina produced will be exported.

Construction of the third potline at the Kurri Kurri, N.S.W., aluminium smelter has been deferred due to the depressed world aluminium market. The planned expansion will increase total capacity from 90,000 to 135,000 tonnes per year. Comalco's aluminium smelter at Boyne Island, near Gladstone, Qld, is supplied with alumina from the nearby Queensland Alumina Ltd (QAL) refinery. The smelter has a first stage design capacity of 103,000 tonnes per year and it is planned to expand capacity to 412,000 tonnes by the end of the decade. The rated capacities of the other two Australian aluminium smelters, at Point Henry, Vic., and Bell Bay, Tas., are 165,000 and 117,000 tonnes per year respectively. Point Henry uses Western Australian alumina while Bell Bay obtains its alumina from Queensland.

Construction of the Portland, Vic., smelter, which was to be commissioned in 1983, has been delayed. Initial capacity is to be 132,000 tonnes per year. The Tomago, N.S.W. smelter, to be commissioned in mid-1983, is proceeding to schedule and will have an initial capacity of 110,000 tonnes per year. The proposed Lochinvar, N.S.W., smelter has been abandoned.

Copper

A summary of the copper mining industry in Australia 1953 to 1975 and the sufficiency of present ore reserves was published in the *Australian Mineral Industry Quarterly*, Vol. 30, No. 1.

In 1981, mine production of copper decreased to 231,339 tonnes.

Work on two significant copper-zinc deposits near Benambra, Victoria, continues to delineate further base-metal resources.

Exploration drilling is continuing at the copper-uranium-gold prospect at Olympic Dam on Roxby Downs, S.A. where an exploration shaft is being sunk. Additional drilling at Balcooma, in northwest Queensland to obtain representative bulk samples for metallurgical testing has outlined mineralisation with 3 per cent copper and some lead, zinc and silver.

At Tennant Creek, N.T., the copper smelter and the Gecko mine were closed in late 1981 because of low copper prices. Copper ore is being mined at the Warrego mine and trucked to Mount Morgan, Qld, for smelting.

Drilling near Goonumble, near Parkes, N.S.W., has outlined possible resources of 86.4 million tonnes of 0.62 per cent copper and 0.59 g/tonne gold plus 166 million tonnes of 0.74 per cent copper, 0.12 g/tonne gold and 1.77 g/tonne silver.

Iron

A summary of growth of the Australian iron ore industry 1965 to 1975 was published in the *Australian Mineral Industry Quarterly*, Vol. 29, No. 1.

Mine production of iron ore in 1981 was 84.7 million tonnes, nearly 11 per cent lower than in 1980. Export of iron ore and iron ore pellets was 71.1 million tonnes valued at $1,123 million. Australia was the world's second largest exporter of iron ore in 1981 and the third largest producer.

Construction to extend mining along Robe River to East Deepdale was substantially completed in 1981. Large reserves of pisolitic limonite ore has been shown to exist at Yandicoogina, W.A. Total

reserves are 2,943 million tonnes, including 443 million proved reserved, 800 million probable and 1,700 million possible. The average ore content is 58.5 per cent iron, 10 per cent water, 4.5 per cent silica and 1.5 per cent alumina.

Additional reserves have been proved in the Sunrise Hill—Shay Gap area enabling mining to continue to the end of the 1980s.

Silver, lead and zinc

Mine production of lead and zinc metal in 1981 was 393,113 tonnes and 504,210 tonnes respectively, with lead being 9 per cent less and zinc metal 2 per cent more than in 1980.

A summary of the Australian lead and zinc industry from 1953 to 1973 was published in the *Australian Mineral Industry Quarterly*, Vol. 27, No. 4.

Production from the Que River lead-zinc-silver mine (Tasmania) reached the scheduled rate of 200,000 tonnes during the year 1981. Ore is treated at the Rosebery concentrator, and zinc concentrates refined at the Risdon refinery. Construction of the mine and treatment plant continued on schedule at the Elura lead-zinc silver deposit near Cobar, N.S.W. A decline shaft was begun in mid-1981 and production is expected to commence in late 1982. Zinc concentrates will be shipped to the Risdon (Tasmania) refinery. Published reserves are 27 million tonnes averaging 8.3 per cent zinc, 5.6 per cent lead and 139 g/tonne silver. A zone of potentially economic mineralisation about 2 kilometres north of the Hilton lead-zinc-silver mine (to be commissioned in 1984-85) near Mount Isa, Qld has been discovered. It is described as of similar size to the Hilton block where there are probable reserves of 45 million tonnes averaging 9.6 per cent zinc, 6.6 per cent lead and 150 g/tonne silver.

Exploration continues at Thalanga, Lady Loretta and Dugald River deposits in Queensland, Benambra, Vic., and Sorby Hills, W.A.

Black coal

Raw coal production in 1981 was about 110.9 million tonnes, almost 20 per cent higher than in 1980. Estimated saleable output also increased by about 20 per cent to 92.1 million tonnes. Total domestic consumption increased slightly from 36.4 million tonnes in 1980 to 37.4 million tonnes in 1981, although growth in both domestic consumption and consumption in the world steel industry was restricted. In 1981 exports were 50.7 million tonnes valued at $2,301 million, with Japan being the major market.

Increasing demand for steaming coal, particularly from Japan, has resulted in exports of steaming coal rising to almost 10.5 million tonnes in 1981. As a result, new mines have been opened and others are under development in Queensland and New South Wales. Exploration for coal has been stimulated and further rich deposits of coking coal and steaming coal have been located.

A paper entitled Coal Exploration in Australia has been published in the *Australian Mineral Industry Quarterly*, Vol. 31, No. 1. and Vol. 34, No. 2.

Petroleum

At the end of 1981 there were 18 fields producing stabilised crude oil (which includes condensate marketed as part of a crude oil stream): Moonie, Alton, Conloi, Kincora, Cabawin, Bennett, Silver Springs and Trinidad in Queensland: Barrow Island, Yardarino and Dongara in Western Australia; and Barracouta, Halibut, Mackerel, Cobia, Tuna, Kingfish and Marlin offshore from Victoria in Bass Strait. The production of stabilised crude oil in 1981 amounted to 22.8 million kilolitres, an increase of 2.7 per cent over the 1980 production level.

Natural gas production in 1981 was 11.3 million cubic metres, an increase of about 18 per cent over the 1980 production level. About 12 per cent of natural gas production was used in the field and processing plants, the balance being sold mainly as fuel to markets in New South Wales, Queensland, Victoria, South Australia and Western Australia.

Sixteen offshore exploration wells were drilled in 1981, two less than in 1980. However, during the first half of 1982 twenty-seven offshore exploration wells were drilled. Metres drilled decreased from 62,012 in 1980 to 44,946 in 1981. At 30 June 1982 there were seven offshore drilling vessels operating in Australian waters.

Offshore development drilling continued in 1981 in the Gippsland Basin on the Tuna platform (7 wells) and the Snapper platform (6 wells). The West Kingfish platform was installed in August 1981 and the Cobia platform in February 1982. The jacket for the Fortescue platform was completed in August 1982 ready for installation while at that time the Flounder platform was in the early stages of construction. Major development work commenced on the North West Shelf project during 1982 and by September the jacket for the first offshore platform was in position and work was in progress on the platform, site preparation for onshore treatment facilities and laying of the underwater pipeline.

Onshore exploration drilling activity rose from 77 wells in 1980 to 142 in 1981. During the first half of 1982 75 exploration wells were drilled. Metres drilled increased from 137,296 in 1980 to 325,651 in 1981. Drilling in 1981 was mainly centred in the Bowen-Surat Basin in Queensland, the Cooper Basin in South Australia and the Perth, Carnarvon and Canning Basins in Western Australia.

Forty-three onshore development wells were drilled in 1981, 21 more than in 1980. Metres drilled more than doubled from 37,484 in 1980 to 85,232 in 1981. New developments included commencement of construction of the Cooper Basin liquids scheme whereby petroleum liquids will be piped 659 kilometres from the Cooper Basin to a fractionation plant at Stony Point near Whyalla.

Production leases were granted for the Mereenie oil field in November 1981 following agreement with the Aboriginal land owners on royalties. A 20 well, two year appraisal program is under way and further assessment of the resource is expected as more wells are drilled. Present oil reserves are estimated at 64 million barrels and recoverable gas reserves are put at 0.9 TCF. A contract was signed in November 1981 for the use of Palm Valley gas in power generation at Alice Springs. Tenders for construction of a pipeline between Palm Valley and Alice Springs are to be called in late 1982.

In 1981 there were seven significant oil discoveries and 20 significant gas discoveries.

Nickel

A summary of the growth of the Australian nickel industry was published in the *Australian Mineral Industry Quarterly*, Vol. 28 No. 4.

Mine production of nickel in ore and concentrates was 74,355 tonnes in 1981. Australia was the fourth largest world producer. Production from Agnew, W.A., mine is being increased to reach 15,000 tonnes per year 'contained nickel' by 1984. The Mount Windarra mine reopened in 1981. The concentrates are toll-smelted at the Kalgoorlie smelter, together with those from Kambalda-St Ives-Nepean and the Carnilya Hill mine.

Mineral sands

The history of the mineral sands industry is presented in the *Australian Mineral Industry Quarterly*, Vol. 25 No. 1.

Australia is still the world's largest producer and exporter of natural rutile, ilmenite, zircon and monazite. Output of rutile, ilmenite and zircon concentrates was severely reduced but the production of monazite concentrates was maintained.

Diamonds

A detailed feasibility study is underway on the AKI kimberlite pipe in the Argyle area W.A., with a view to commercial production, possibly by 1985. Production from the smaller but high-grade Smoke Creek alluvials is also planned to begin on a small scale in 1983 with full-scale production planned for 1985 at an annual rate of 20 million carats.

Uranium

Government approval has been given for the development of mines at Jabiluka, N.T., Lake Way, W.A., and Honeymoon, S.A. This makes seven uranium ore mining and treatment projects with Commonwealth approval, the others being Yeelirrie, W.A., and the producing mines at Mary Kathleen, Qld, Ranger, N.T., and Nabarlek, N.T. (mined-out, but will produce yellowcake for some years).

An exploration shaft is being sunk at the large copper-gold-uranium prospect at Olympic Dam, on Roxby Downs, S.A., to obtain bulk samples for matallurgical testing. A decision on the development of the Yeelirrie project will be made by the operator in the near future. The open-cut mine and treatment plant at Ranger are in full operation and yellowcake is being exported. Total identified resources at Ranger 1 are about 124,700 tonnes U_3O_8. The Mary Kathleen mine and treatment plant will close in late 1982.

Mine production of U_3O_8 (yellowcake) in Australia in 1981 was 3,373 tonnes (2,860 tonnes contained U), and exports 1,625 tonnes of yellowcake.

REFERENCES

Further detailed statistics and information on the subjects dealt with in this chapter are contained in the annual printed publication *The Australian Mineral Industry Annual Review* and other publications issued by the Bureau of Mineral Resources, Geology and Geophysics, which also issues, in conjunction with the ABS a quarterly publication, *Australian Mineral Industry Quarterly* (8403.0). The annual ABS statistical publications, *Census of Mining Establishments, Summary of Operations, Australia (Preliminary)* (8401.0); *Census of Mining Establishments, Details of Operations, by Industry Class, Australia* (8402.0); *Mineral Production, Australia* (8405.0); *Mineral Exploration, Australia* (8407.0) and the irregular publication *Census of Mining Establishments, Industry Concentration Statistics, Australia* (8411.0), contains economic statistics of the industry prepared and published as soon as possible after the data have been compiled. Other current statistics on mining or mine products are contained in the *Monthly Summary of Statistics, Australia* (1304.0), the *Digest of Current Economic Statistics, Australia* (1305.0), and the monthly publication *Production Statistics, Australia* (8302.0). For uranium industry *see* Annual Reports of the Australian Atomic Energy Commission.

CHAPTER 17

MANUFACTURING AND INTERNAL TRADE

MANUFACTURING

Introduction

History

An historical summary of the development of the manufacturing industry in Australia since 1901 is contained in earlier issues of the Year Book.

Decentralisation and manufacturing industries

The decentralisation of secondary industries, and the steps taken by the Commonwealth and State Governments towards its development, are referred to in previous issues of the Year Book.

Bounties on manufacture

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. (*See* Chapter 22, Public Finance, for products on which bounties are paid.)

Government authorities

Industries Assistance Commission

The Industries Assistance Commission is a statutory authority which came into existence on 1 January 1974 as a result of a passing of the *Industries Assistance Commission Act* 1973 by the Commonwealth Parliament. The Commission replaced the Tariff Board, which since 1921 had been responsible for advising the Government on assistance for industries mainly in the secondary sector of the economy. (The *Industries Assistance Commission Act* 1973 was amended in March 1978.)

The Commission is an advisory authority, advising the Government. Its functions are to hold inquiries and make reports to the Government in respect to matters of assistance to industries in the primary, secondary and tertiary sectors of the economy and in respect to other matters referred to the Commission by the Government. The Government is required to seek the Commission's advice before it makes changes in the long term assistance afforded industries; but the Government is not obliged to accept the Commission's advice.

References from the Government requiring the Commission to inquire and report on certain matters mainly arise from representations to the Government from organisations, companies or individuals seeking assistance. References are also initiated by the Government and the Commission itself has the power to initiate an inquiry.

The receipt of a reference from the Government is the official document directing the Commission to inquire and report on matters in accordance with the terms of reference and the guidelines as set by the Government.

Public hearings are held by the Commission in Canberra and in capital cities throughout Australia. Any evidence presented to the Commission must be on oath or affirmation. The inquiry subject and the date and location of public hearings are advertised in the press and advised by Commission circular. The Commission normally releases draft reports to give interested parties an opportunity to examine and comment on these reports within the Commission's public inquiry system before the report is finally settled.

If after receiving a report from the Commission, the Government decides that assistance afforded a particular industry should be changed, it introduces a proposal to this effect in Parliament. Thus the final responsibility for altering assistance given to particular industries within Australia rests with Parliament.

Copies of the Commission's reports, when released for publication by the Government, are sold by Australian Government Publishing Service bookshops.

The Commission is also required to report annually to the Government on its operations and on the general structure of industry assistance within Australia and its effects on the economy.

Temporary Assistance Authority

The Temporary Assistance Authority (TAA), which replaced the Special Advisory Authority set up under the Tariff Board Act, came into operation on 1 January 1974 under the provisions of the *Industries Assistance Commission Act* 1973 (since amended).

The main function of the TAA is to undertake inquiries and submit reports to the Government within 45 days of receipt of a reference from the Government on the question of whether urgent action is necessary to provide assistance to any industry that is experiencing difficulty due to the importation of specified goods. If urgent action is necessary the Authority recommends the nature and extent of the assistance to be provided.

The Authority's reports on individual inquiries are normally made public once the Government's decision is announced and are available, as is the annual report, from the Australian Government Publishing Service bookshops.

Bureau of Industry Economics

In September 1976, the Australian Government announced that the Bureau of Industry Economics would be established as a centre for research into the manufacturing and commerce sectors. The Bureau began operations in May 1977. Being formally attached to the Department of Industry and Commerce, it has professional independence in the conduct and reporting of its research.

The major objectives of the Bureau are to:

- carry out research work needed to assist the Government in the formation of industrial policy
- assist the Industries Assistance Commission (IAC) and other government bodies by making submissions on the results of its research
- attract a high standard of professional staff and publish its research findings
- complement the work of other research agencies and co-operate with universities and colleges in developing research programs.

The Bureau is also concerned with developments in mining, rural industry, public services (for example education, health, defence) and trade in goods and services which are linked with the manufacturing and commerce sectors.

A Council has been set up to advise the Minister of Industry and Commerce about the Bureau's work and to ensure that it is relevant to contemporary and long term issues in manufacturing and commerce. Members of the Council are drawn from a wide range of industries and backgrounds, including the universities and the trade union movement. In this way the Council of Advice provides a major link between the Bureau and the community. The Council assists with the development of the work of the Bureau and the effective dissemination of the results of the Bureau's work.

In its investigations, the Bureau principally makes use of economics and related disciplines. Technical and social factors affecting industry structure and performance are also taken into account.

The techniques of economic analysis used include supply and demand estimation, industry structure-performance relationships, input-output analysis, econometrics, cost-benefit methods and socio-demographic investigations. In addition, the Bureau is associated with the large-scale models of the Australian economy under development by the IMPACT team and at the Melbourne University Institute of Applied Economic and Social Research.

The staff of the Bureau includes officers with backgrounds in business, consultancy, government and university teaching and research. An initial nucleus of about 30 persons has been established and it is envisaged that additional recruitment will bring the size of the Bureau to about 100 persons within a few years.

Project control and resource commitments are determined by means of a feasibility study. Within the broad topic under investigation, several specific projects may be justified in relation to previous research findings, data availability, relevance to long-term policy issues and overall budget constraints. Some projects require special surveys where existing data sources are inadequate or more detailed information is required for particular industries. In certain projects the Bureau will undertake joint research with organisations in the private sector and consultants may be engaged where this will significantly enhance the quality of the research or will remedy any lack of in-house expertise.

When initial findings are available, work-in-progress papers are prepared to discuss the methods employed and to ensure that specialist qualified observers have an opportunity to comment on objectives of the research programme. Final reports on projects will be widely distributed with the aim of informing industry groups, government policy makers and teaching and research institutions about industrial and commercial developments.

Standardisation

The *Commonwealth Scientific and Industrial Research Organization* has functions concerned with the improvement of efficiency in industrial operations. For further particulars *see* Chapter 25, Science and Technology, in this Year Book.

The *Standards Association of Australia* is the organisation responsible for the preparation, on a national basis, of Australian standards for materials and products and standard codes of practice.

Formed as the Australian Commonwealth Engineering Standards Association in 1922, it was reconstituted as the Standards Association of Australia in 1929, and was incorporated by Royal Charter in 1950. It is an independent body having the full recognition and support of the Commonwealth and State Governments and of industry. Approximately half its funds are provided by Commonwealth Government grant, the remainder coming primarily from membership subscriptions and from the sale of publications. Organisations, companies, and individuals are eligible for subscribing membership.

The Association is controlled by a Council comprising representatives from Commonwealth and State Governments and their departments, from associations of manufacturing and commercial interests, and from professional institutions. Standards are prepared by committees composed of expert representatives from the interests associated with the subject under consideration. This assistance is on a voluntary basis.

Preparation of a standard is undertaken in response to a request from any responsible source, subject to verification that the standard will meet a genuine need. Standards may relate to one or more of several aspects of industrial practice such as terminology, test methods, dimensions, specifications of performance and quality of products, and safety or design codes. In general, standards derive authority from voluntary adoption based on their intrinsic merit, but in many cases where safety of life or property or consumer protection is involved, they may have compulsory application through statutory reference.

The Association is the owner of a registered certification trade mark covering conformity of products to standards. Manufacturers of products covered by Australian standards may obtain a licence to use the Australian Standard Mark, under conditions established by the Association.

The Association has international affiliations and is a member, representing Australia, of the International Organization for Standardization (ISO) and of the International Electrotechnical Commission (IEC). Close links are maintained with overseas standards organisations, and the Association acts as Australian agent for the procurement of ISO and IEC publications and the standards of other countries.

The Association has two specialised libraries, one in Sydney and one in Melbourne, containing the national standards of all countries with standards organisations. These libraries provide necessary material for committee work and a free information service to those concerned with standards.

The headquarters office of the Association is in Sydney, and there is a major branch office in Melbourne. Branch offices are located also in other capital cities and at Newcastle, New South Wales.

The *National Standards Commission* was established in 1948 and is presently located at North Ryde, Sydney. The original purpose was to advise the Minister for Science and the Environment on matters relating to weights and measures. It operated under the *Weights and Measures (National Standards) Act*, 1948. This was replaced in 1960 with a new Act which took account of advances in measuring technology and its impact in Australia. Amendments to the 1960 Act were made in 1966 and 1978. The present role of the Commission provides for the establishment and use throughout Australia of uniform units of measurement, uniform standards of measurement of physical quantities and for the examination and approval of the patterns of measuring instruments used for trade in order to control design and quality.

The Commission has close contacts with all States and Territorial weights and measures authorities who ensure by regular inspections that trade instruments continue to comply with the approved patterns.

Close liaison is also maintained with the manufacturing industry, retailers, consumers and other users to ensure a balance between design, quality and cost.

The Commission has regular contacts overseas and provides the Australian member accredited to the International Organisation of Legal Metrology. The Commission is directed by a board of five part-time Commissioners.

The *National Association of Testing Authorities* (NATA) organises testing facilities throughout Australia to serve private and governmental needs. Membership is open to authorities whose testing laboratories conform to the standards of staffing and operations defined by the Association. Testing authorities may register their laboratories voluntarily. The Association assesses the competence of the laboratories and ensures that their standards of competence are maintained. Certificates of test issued

by registered laboratories may be endorsed in the name of the Association. NATA endorsed test certificates are generally accepted by governmental, industrial and commercial interests.

Laboratories are registered for performance of specific tests in the fields of acoustic and vibration measurement, biological testing, chemical testing, electrical testing, heat and temperature measurement, mechanical testing, metrology, non-destructive testing and optics and photometry.

The *Industrial Design Council of Australia* (IDCA) is engaged in activities aimed at encouraging better design in Australian-made goods and fostering a wider appreciation of good design throughout the community. The Council is representative of industry, commerce and government, together with designers and educationists. It is financed by donations from industry and commerce, and by Commonwealth and State Government grants.

The Council's Field Advisory Service has a diagnostic and counselling role, assisting smaller manufacturers throughout Australia with product development policy and direction. Field advisers are based in IDCA State offices in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart.

The Australian Design Award is granted for high-quality products of Australian design and manufacture. An index of these products is held in each State office. These products are also displayed in Australian Design Centres.

Regular contact is maintained with senior executives of manufacturing companies, departmental officers and designers through the Design Delegate program of lectures. Inquirers seeking professional design services are referred to qualified industrial designers. The Council is also concerned with raising the standard of training in industrial design in co-operation with education authorities.

The Council's National Secretariat is in Melbourne.

The *Australian Standard Commodity Classification* (ASCC) has been developed by the ABS to enable users to compare statistics of commodities produced in Australia with statistics of commodities imported and exported.

The ASCC manual (1207.0 and 1208.0) links production, import and export items at their most detailed level of comparability in the form of standard (ASCC) commodity items. In a large number of cases, however, due to the differences between production, import and export items, comparability is only achieved at fairly broad aggregate levels. In the ASCC, commodities are grouped under industries (as defined in the Australian Standard Industrial Classification (ASIC)) in which they are typically produced.

The first edition of the ASCC was restricted to commodities originating in manufacturing industries. The second edition, which relates to the year 1977–78 was extended to also include commodities originating in the agriculture, forestry, fishing, hunting and mining industries. The latest edition published is in respect of the year 1978–79 which was released late in 1981. Because of the relatively few changes that occurred in the component items of the ASCC, it was decided not to publish the 1979–80 edition of the ASCC manual. The 1980–81 edition is expected to be published early in 1983.

The classification will continue to be developed over the coming years to improve the alignment between production, imports and exports.

The ABS also publishes a statistical publication *Comparable Commodity Statistics of Production, Imports and Exports, Australia* (1310.0) containing commodity statistics of Australian production, imports and exports based on the standard (ASCC) items contained in the ASCC manual. The latest edition of this publication published in late 1981 relates to the year 1978–79 and contains Australian production, import and export commodity statistics of manufactured goods classified in accordance with the standard (ASCC) items in the third edition of the ASCC manual. The next edition of this publication, in respect of the year 1979–80, is expected to be published early in 1983. A similar statistical publication (1312.0) containing Australian production, import and export commodity statistics of goods originating in the agriculture and mining industries, classified in accordance with standard (ASCC) items in the 1977–78 edition of the ASCC manual was published late in 1981. The second edition of this publication, in respect of the year 1978–79, was published early in 1982. The next edition to be published is in respect of 1979–80 and is expected to be released late in 1982.

The *Australian Standard Industrial Classification* (ASIC) (1201.0 and 1202.0) was developed by the ABS as part of its program for the integration of economic statistics. Since its introduction by the ABS in the processing of the 1969 Integrated Economic Censuses, the ASIC has gained a wide acceptance by users of statistics outside the ABS and has been progressively applied in most ABS collections and compilations where data are classified by industry.

The ASIC has been devised for the purpose of classifying statistical units by industry. It has been designed primarily as a system for the classification of establishments (e.g. individual mines, factories, shops, etc.) although it may also be used for classifying other economic units such as enterprises.

The fundamental concept of this classification system is that an industry (i.e. an individual class, group, etc.) in the ASIC is composed of establishments that have been classified to it. Each industry

class is defined in terms of the predominant activities of the establishment classified to it and these activities are specified in the ASIC as *primary activities* of the individual industry classes. These industry definitions are revised only at relatively infrequent intervals so as to minimise the disruption to time series data assembled on an ASIC basis.

As a result of a recent comprehensive review of the classification, the 1978 Edition of ASIC has been published. This revised edition is being progressively introduced in all relevant ABS collections.

Productivity action

For information about the Productivity Group Movement and Productivity Promotion Council of Australia *see* Chapter 25, Science and Technology.

Manufacturing industry statistics

Manufacturing industry statistics from 1901 to 1967–68

A series of substantially uniform statistics exist from 1901 up until 1967–68 when the framework within which manufacturing statistics were collected was changed. Detailed manufacturing statistics in respect of this period are included in Year Book No. 57, pages 721–9, and in earlier issues.

Manufacturing industry statistics from 1968–69

As from the year ended June 1969, the Censuses of Manufacturing, Electricity and Gas have been conducted within the framework of the integrated economic censuses which include the Censuses of Mining, Retail Trade, Wholesale Trade, Construction and Electricity and Gas industries. As a result, manufacturing industry statistics for 1968–69 and subsequent years are not directly comparable with previous years.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The manufacturing establishment is thus one predominantly engaged in manufacturing, but the data supplied for it now cover (with a few exceptions) all activities at the location. The establishment statistics also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment.

Census units are classified to industry according to the Australian Standard Industrial Classification (ASIC), described in the ABS publication *Australian Standard Industrial Classification* (1201.0 and 1202.0). The ASIC defines the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the integrated economic censuses introduced in 1968–69 and the individual economic censuses conducted in previous years.

In the 1967–68 census there were approximately 62,600 manufacturing establishments (excluding electricity and gas establishments) with employment of 1,276,000. Of these, approximately 35,400, with employment of 1,097,000 would have been included in the 1967–68 census if ASIC had been used.

MANUFACTURING ESTABLISHMENTS: SUMMARY OF OPERATIONS, AUSTRALIA, 1968–69 to 1980–81

Census year	Establishments at 30 June	Average employment over whole year (a)			Wages and salaries (b)	Turnover	Stocks		Purchases, transfers in and selected expenses	Value added	Fixed capital expenditure less disposals
		Males	Females	Persons			Opening	Closing			
	No.	No.	No.	No.	$m	$m	$m	$m	$m	$m	$m
1968-69 . . .	35,939	927,211	334,066	1,261,277	3,908.1	18,646.5	3,102.5	3,319.6	11,514.9	7,348.8	903.0
1969-70 . . .	35,674	950,055	345,578	1,295,633	4,328.7	20,687.6	3,322.8	3,634.7	12,862.3	8,137.1	1,030.7
1970-71 . . .	No manufacturing census was conducted in respect of this year.										
1971-72 . . .	36,206	953,967	347,672	1,301,639	5,250.0	23,620.4	3,920.1	4,182.5	14,374.8	9,508.1	1,297.8
1972-73 . . .	36,437	951,610	345,485	1,297,095	5,820.0	26,352.4	4,187.2	4,306.3	15,963.0	10,508.5	1,244.4
1973-74 . . .	37,143	969,338	369,041	1,338,379	7,176.4	31,246.7	4,299.1	5,268.5	19,329.8	12,886.3	1,215.5
1974-75(c) . .	36,836	931,367	333,440	1,264,807	8,588.0	35,468.0	5,267.2	6,572.2	21,712.3	15,060.7	1,456.4
1974-75(d) . .	26,973	916,896	328,341	1,245,237	8,533.5	35,133.7	5,241.0	6,542.7	21,522.3	14,913.1	1,445.9
1975-76 . . .	27,507	888,523	311,917	1,200,440	9,472.4	39,485.3	6,581.1	7,023.3	23,371.7	16,555.8	1,451.7
1976-77 . . .	26,780	876,111	299,720	1,175,831	10,535.8	44,814.3	6,985.1	7,996.8	27,010.0	18,816.1	1,548.0
1977-78(e) . .	25,998	855,448	290,237	1,145,685	11,151.4	48,210.8	7,880.2	8,510.8	29,066.5	19,739.8	1,871.8
1977-78(f) . .	26,065	853,966	290,233	1,144,199	11,135.8	48,112.6	7,863.5	8,498.1	28,979.3	19,738.1	1,877.3
1978-79 . . .	26,312	852,982	290,909	1,143,891	11,966.4	55,211.3	8,515.4	9,299.6	33,765.4	22,230.1	2,262.8
1979-80 . . .	27,430	862,368	291,816	1,154,184	13,357.5	65,354.8	9,287.6	11,126.4	41,579.5	25,614.0	2,186.7
1980-81 . . .	27,681	859,092	290,746	1,149,838	14,911.4	73,711.8	11,064.3	12,409.7	46,526.1	28,531.1	2,882.7

(a) Including working proprietors. (b) Excluding the drawings of working proprietors. (c) These data and that of previous years includes the data of all manufacturing establishments. (d) These data and those of following years exclude single establishment manufacturing enterprises with fewer than four persons employed. (e) These data and those of previous years are classified to the 1969 (preliminary) edition of ASIC. (f) These data and those of following years are classified to the 1978 edition of ASIC.

The items of data on the census forms were standardised for all census sectors, which has meant changes in the content of the statistics. For example, the value of 'turnover' is now collected instead of the 'value of output' at the factory, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc., used. However the underlying concept of 'value added', is similar to the former concept 'value of production', even though its method of derivation is different.

Even though the concept of 'value added' is similar to 'value of production', direct comparison of 1968–69 and previous figures is not possible because of the change in census units already mentioned which has resulted in the 'value added' for the whole establishment being reported, not merely the 'value added' for the manufacturing process. Comparison is also affected, of course, by the change in the scope of the manufacturing census due to the adoption of ASIC. In addition, 'value added' as calculated for the Manufacturing Census differs from the concept used in National Accounts where the concept of 'value added' also excludes some administrative expenses and sundry charges and the change in stocks component is measured by valuing the physical change in stocks at current prices. It is not practicable in the Manufacturing Census to collect data fully in accord with the National Accounts concept of 'value added'.

For a more detailed description of the Integrated Economic Censuses reference should be made to Year Book No. 56, Chapter 31.

Since the introduction of the system of integrated economic censuses the comparability of manufacturing census data has been affected by two additional changes to collection practices:

(i) Commencing with the 1975–76 Manufacturing Census, only a limited range of data (i.e. employment and wages and salaries) is collected from single establishment manufacturing enterprises with less than four persons employed. This procedure significantly reduced both the statistical reporting obligations of small businesses and the collecting and processing costs of the Australian Bureau of Statistics without affecting the reliability of information for the evaluation of trends in the manufacturing sector of the economy (as these small enterprises contribute only marginally to statistical aggregates). In order to provide a link with past and future years, 1974–75 data was processed on both bases.

(ii) Commencing with the 1977–78 census the classification of census units to industry is based on the 1978 edition of the ASIC which replaces the 1969 preliminary edition in use since the 1968–69 census. In general the impact of the change in industrial classification is minimal at the ASIC Division and Subdivision levels. A document fully describing the differences between the 1969 and 1978 editions of the ASIC is available on request from the Australian Bureau of Statistics.

Multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed

Main structural aggregates relating to number of establishments, employment, wages and salaries, turnover, purchases, transfers in and selected expenses, stocks, and value added are shown in the following tables. Further detailed statistics are contained in the following ABS statistical publications: *Manufacturing Establishments, Details of Operations by Industry Class, Australia* (8203.0), *Manufacturing Establishments, Summary of Operations by Industry Class, Australia* (8202.0) and *Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size, Australia* (8204.0).

Summary of operations

The following table shows the summary of operations for manufacturing establishments.

MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY SUB-DIVISION: AUSTRALIA 1979–80 AND 1980–81

Industry sub-division		Establishments operating at 30 June	Average employment over whole year (a)			Wages and salaries (b)	Turnover	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added	Fixed capital expenditure less disposals
ASIC code	Description	No.	Males No.	Females No.	Persons No.	$m	$m	Opening $m	Closing $m	$m	$m	$m
					1979–80							
21	Food, beverages and tobacco	3,422	135,596	50,757	186,353	2,122	14,478	1,517	1,743	10,290	4,414	420
23	Textiles	650	21,668	15,831	37,499	409	1,806	315	373	1,156	708	46
24	Clothing and footwear	2,041	18,434	61,580	80,014	707	2,449	396	442	1,365	1,131	26
25	Wood, wood products and furniture	4,036	65,799	11,414	77,213	742	3,148	390	450	1,842	1,367	70
26	Paper, paper products, printing and publishing	2,800	73,687	27,892	101,579	1,238	4,551	507	615	2,411	2,248	179
27	Chemical, petroleum and coal products	909	44,644	15,650	60,294	832	5,975	858	1,147	4,064	2,201	356
28	Non-metallic mineral products	1,676	40,745	5,032	45,777	601	2,829	359	406	1,582	1,295	198
29	Basic metal products	523	87,481	6,626	94,107	1,358	8,930	1,381	1,661	6,231	2,979	324
31	Fabricated metal products	4,091	88,891	20,094	101,985	1,195	4,924	706	854	2,905	2,166	105
32	Transport equipment	1,418	120,771	16,113	136,884	1,625	6,283	1,009	1,252	3,977	2,560	217
33	Other machinery and equipment	3,706	120,543	38,885	159,428	1,805	6,783	1,399	1,634	3,835	3,182	161
34	Miscellaneous manufacturing	2,158	44,109	21,942	66,051	724	3,187	451	547	1,921	1,362	86
	Total manufacturing	**27,430**	**862,368**	**291,816**	**1,154,184**	**13,358**	**65,355**	**9,288**	**11,126**	**41,580**	**25,614**	**2,187**
					1980–81							
21	Food, beverages and tobacco	3,415	132,614	51,078	183,692	2,362	16,129	1,697	1,935	11,343	5,024	497
23	Textiles	634	21,399	15,524	36,923	448	2,015	372	373	1,247	769	38
24	Clothing and footwear	1,999	18,178	60,272	78,450	765	2,710	437	473	1,480	1,267	30
25	Wood, wood products and furniture	4,075	66,908	11,927	78,835	853	3,675	454	515	2,126	1,609	92
26	Paper, paper products, printing and publishing	2,816	73,274	29,136	102,410	1,404	5,255	612	704	2,779	2,568	204
27	Chemical, petroleum and coal products	904	44,404	15,267	59,671	933	7,068	1,132	1,302	4,725	2,513	302
28	Non-metallic mineral products	1,698	40,759	5,096	45,855	673	3,304	414	434	1,872	1,452	199
29	Basic metal products	529	89,455	7,027	96,482	1,561	9,750	1,637	1,977	6,910	3,180	946
31	Fabricated metal products	4,272	92,714	20,336	113,050	1,395	5,853	870	969	3,450	2,502	138
32	Transport equipment	1,404	113,438	14,999	128,437	1,675	6,412	1,272	1,295	3,880	2,555	155
33	Other machinery and equipment	3,767	122,699	38,693	161,392	2,058	7,954	1,632	1,849	4,564	3,607	178
34	Miscellaneous manufacturing	2,168	43,250	21,391	64,641	786	3,585	536	583	2,148	1,484	105
	Total manufacturing	**27,681**	**859,092**	**290,746**	**1,149,838**	**14,911**	**73,712**	**11,064**	**12,410**	**46,526**	**28,531**	**2,883**

(a) Includes working proprietors. (b) Excludes the drawings of working proprietors.

Employment

The statistics on the number of persons employed shown in the following table relate to the average whole year employment, including working proprietors and those persons working at separately located administrative offices and ancillary units in the State.

It should be noted that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in that State, even though the administrative offices or ancillary units may have served establishments located in another State.

MANUFACTURING ESTABLISHMENTS—MALES, FEMALES AND PERSONS EMPLOYED BY INDUSTRY SUB-DIVISION, 1980–81, AND TOTAL MANUFACTURING 1978–79 TO 1980–81

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
					MALES EMPLOYED					
21	Food, beverages and tobacco	41,743	39,626	25,794	12,035	8,326	4,024	604	462	132,614
23	Textiles	6,045	11,809	705	1,491	498	851	—	—	21,399
24	Clothing and footwear	5,376	10,523	736	1,168	287	76	n.p.	n.p.	18,178
25	Wood, wood products and furniture	22,470	16,606	10,742	6,639	6,550	3,472	80	349	66,908
26	Paper, paper products, printing and publishing	26,016	24,357	6,910	5,542	4,508	4,823	186	932	73,274
27	Chemical, petroleum and coal products	20,247	15,247	2,667	2,468	2,782	993	—	—	44,404
28	Non-metallic mineral products	14,996	10,590	6,269	3,234	4,566	781	929	171	40,759
29	Basic metal products	52,286	12,560	5,866	8,730	5,716	3,520			89,455
31	Fabricated metal products	34,319	29,200	11,490	7,240	8,129	1,713	195	428	92,714
32	Transport equipment	31,788	47,984	11,218	16,441	5,457	475	n.p.	n.p.	113,438
33	Other machinery and equipment	52,344	40,799	8,878	12,373	7,242	876	53	134	122,699
34	Miscellaneous manufacturing	15,487	18,443	3,044	4,088	1,813	338	17	20	43,250
	Total manufacturing									
	1980–81	**323,117**	**277,744**	**94,319**	**81,449**	**55,874**	**21,942**	**2,117**	**2,530**	**859,092**
	1979–80	323,871	281,959	93,636	83,498	53,461	21,520	2,015	2,408	862,368
	1978–79	321,354	279,315	91,200	82,635	53,001	21,386	1,691	2,400	852,982
					FEMALES EMPLOYED					
21	Food, beverages and tobacco	16,998	15,723	7,124	5,203	3,911	1,765	204	150	51,078
23	Textiles	4,796	7,902	599	1,091	259	876	—	—	15,524
24	Clothing and footwear	19,571	33,091	3,215	2,996	1,238	133	n.p.	n.p.	60,272
25	Wood, wood products and furniture	4,265	3,022	1,955	1,167	1,199	252	11	56	11,927
26	Paper, paper products, printing and publishing	12,117	9,272	2,464	2,122	1,946	720	113	382	29,136
27	Chemical, petroleum and coal products	9,258	4,725	406	459	357	62	—	—	15,267
28	Non-metallic mineral products	1,987	1,858	408	328	421	55	135	25	5,096
29	Basic metal products	3,753	1,485	344	735	465	124			7,027
31	Fabricated metal products	8,190	6,827	2,159	1,551	1,198	272	34	105	20,336
32	Transport equipment	3,505	8,806	620	1,644	270	145	n.p.	n.p.	14,999
33	Other machinery and equipment	19,507	12,604	1,185	4,193	1,048	99	7	50	38,693
34	Miscellaneous manufacturing	9,050	8,430	1,317	1,817	684	83	2	8	21,391
	Total manufacturing									
	1980–81	**112,997**	**113,745**	**21,796**	**23,306**	**12,996**	**4,586**	**534**	**786**	**290,746**
	1979–80	112,562	115,354	21,970	23,545	12,526	4,638	497	724	291,816
	1978–79	111,873	115,649	21,759	23,667	12,231	4,680	377	673	290,909
					PERSONS EMPLOYED					
21	Food, beverages and tobacco	58,741	55,349	32,918	17,238	12,237	5,789	808	612	183,692
23	Textiles	10,841	19,711	1,304	2,582	757	1,727	—	—	36,923
24	Clothing and footwear	24,947	43,614	3,951	4,164	1,525	209	n.p.	n.p.	78,450
25	Wood, wood products and furniture	26,735	19,628	12,697	7,806	7,749	3,724	91	405	78,835
26	Paper, paper products, printing and publishing	38,133	33,629	9,374	7,664	6,454	5,543	299	1,314	102,410
27	Chemical, petroleum and coal products	29,505	19,972	3,073	2,927	3,139	1,055	—	—	59,671
28	Non-metallic mineral products	16,983	12,448	6,677	3,562	4,987	836	1,064	196	45,855
29	Basic metal products	56,039	14,045	6,210	9,465	6,181	3,644			96,482
31	Fabricated metal products	42,509	36,027	13,649	8,791	9,327	1,985	229	533	113,050
32	Transport equipment	35,293	56,790	11,838	18,085	5,727	620	n.p.	n.p.	128,437
33	Other machinery and equipment	71,851	53,403	10,063	16,566	8,290	975	60	184	161,392
34	Miscellaneous manufacturing	24,537	26,873	4,361	5,905	2,497	421	19	28	64,641
	Total manufacturing									
	1980–81	**436,114**	**391,489**	**116,115**	**104,755**	**68,870**	**26,528**	**2,651**	**3,316**	**1,149,838**
	1979–80	436,433	397,313	115,606	107,043	65,987	26,158	2,512	3,132	1,154,184
	1978–79	433,227	394,964	112,959	106,302	65,232	26,066	2,068	3,073	1,143,891

Wages and salaries

The following table shows wages and salaries of all employees of manufacturing establishments including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

MANUFACTURING ESTABLISHMENTS—WAGES AND SALARIES BY INDUSTRY SUB-DIVISION, 1980–81 AND TOTAL MANUFACTURING 1978–79 TO 1980–81
($ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	789	735	410	194	146	67	13	7	2,362
23	Textiles	135	242	14	31	9	17	-	-	448
24	Clothing and footwear	242	435	35	38	13	2	n.p.	n.p.	765
25	Wood, wood products and furniture	301	207	128	87	79	44	1	5	853
26	Paper, paper products, printing and publishing	538	471	116	93	79	84	4	19	1,404
27	Chemical, petroleum and coal products	462	309	48	45	52	18	-	-	933
28	Non-metallic mineral products	263	184	92	49	68	12	20	3	673
29	Basic metal products	912	224	99	144	108	58			1,561
31	Fabricated metal products	543	455	156	99	111	21	3	7	1,395
32	Transport equipment	470	742	145	239	70	8	n.p.	n.p.	1,675
33	Other machinery and equipment	926	695	121	194	107	12	1	3	2,058
34	Miscellaneous manufacturing	302	333	47	71	28	5	-	-	786
	Total manufacturing									
	1980–81	**5,884**	**5,032**	**1,410**	**1,283**	**869**	**347**	**42**	**45**	**14,911**
	1979-80	5,253	4,563	1,253	1,186	734	298	33	37	13,358
	1978-79	4,689	4,102	1,125	1,052	671	266	28	34	11,966

Turnover

The following table shows the value of turnover of manufacturing establishments. The figures include sales of goods whether produced by the establishment or not, transfers out of goods to other establishments of the same enterprise; bounties and subsidies on production; plus all other operating revenue from outside the enterprise, (such as commission, repair and service revenue and rent, leasing and hiring revenue), plus capital work done for own use, or for rental or lease. Receipts from interest, royalties, dividends, and the sale of fixed tangible assets are excluded.

MANUFACTURING ESTABLISHMENTS—TURNOVER, BY INDUSTRY SUB-DIVISION, 1980–81 AND TOTAL MANUFACTURING 1978–79 TO 1980–81
($ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	4,838	5,029	3,367	1,219	1,075	489	71	41	16,129
23	Textiles	658	1,020	75	150	42	70	-	-	2,015
24	Clothing and footwear	921	1,524	97	130	32	6	n.p.	n.p.	2,710
25	Wood, wood products and furniture	1,322	871	509	380	327	242	5	18	3,675
26	Paper, paper products, printing and publishing	2,047	1,788	411	336	253	362	11	47	5,255
27	Chemical, petroleum and coal products	3,018	2,121	1,217	248	379	86	-	-	7,068
28	Non-metallic mineral products	1,236	787	577	257	333	72	179	21	3,304
29	Basic metal products	4,439	1,519	1,165	887	1,203	378			9,750
31	Fabricated metal products	2,194	1,797	794	443	494	87	20	25	5,853
32	Transport equipment	1,450	3,077	705	958	195	23	n.p.	n.p.	6,412
33	Other machinery and equipment	3,452	2,751	509	769	433	31	2	8	7,954
34	Miscellaneous manufacturing	1,324	1,573	240	290	137	21	1	1	3,585
	Total manufacturing									
	1980–81	**26,898**	**23,856**	**9,667**	**6,067**	**4,902**	**1,867**	**292**	**163**	**73,712**
	1979-80	24,109	21,233	8,304	5,415	4,259	1,656	251	127	65,355
	1978-79	20,650	18,228	6,591	4,536	3,499	1,401	186	119	55,211

Purchases, transfers in and selected expenses

The following table gives details of the value of purchases, transfers in and selected expenses. Figures include purchases of materials, fuels, power, containers, etc. and goods for resale, plus transfers in of goods from other establishments of the enterprise, plus charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses, sales commission payments and rent, leasing and hiring expenses.

MANUFACTURING ESTABLISHMENTS—PURCHASES, TRANSFERS IN AND SELECTED EXPENSES, BY INDUSTRY SUB-DIVISION, 1980–81 AND TOTAL MANUFACTURING 1978–79 TO 1980–81
($ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	3,384	3,549	2,379	831	779	348	44	29	11,343
23	Textiles	411	623	54	95	27	38	–	–	1,247
24	Clothing and footwear	541	805	43	72	15	3	n.p.	n.p.	1,480
25	Wood, wood products and furniture	776	492	287	237	182	140	3	9	2,126
26	Paper, paper products, printing and publishing	1,084	962	209	171	123	205	4	20	2,779
27	Chemical, petroleum and coal products	1,847	1,338	1,067	163	253	57	–	–	4,725
28	Non-metallic mineral products	721	414	332	141	188	47	161	16	1,872
29	Basic metal products	3,064	1,109	899	604	837	250			6,910
31	Fabricated metal products	1,285	1,005	519	259	307	50	15	10	3,450
32	Transport equipment	784	1,989	483	509	102	12	n.p.	n.p.	3,880
33	Other machinery and equipment	1,980	1,574	300	440	251	15	–	4	4,564
34	Miscellaneous manufacturing	775	955	150	173	84	11	1	–	2,148
	Total manufacturing									
	1980–81	**16,653**	**14,814**	**6,722**	**3,693**	**3,149**	**1,176**	**231**	**89**	**46,526**
	1979–80	15,071	13,353	5,777	3,426	2,663	1,046	179	64	41,580
	1978–79	12,353	11,109	4,388	2,704	2,176	862	117	57	33,765

Stocks

Statistics on the value of opening and closing stocks at 30 June are shown in the following table. Figures include all the stocks of materials, fuels, etc., and finished goods and work-in-progress of the establishment whether located at the establishment or elsewhere.

MANUFACTURING ESTABLISHMENTS—OPENING AND CLOSING STOCKS BY INDUSTRY SUB-DIVISION, 1980–81 AND TOTAL MANUFACTURING 1978–79 TO 1980–81
($ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
	OPENING STOCKS AT 30 JUNE									
21	Food, beverages and tobacco	555	579	190	230	77	59	7	–	1,697
23	Textiles	120	183	16	26	9	17	–	–	372
24	Clothing and footwear	150	245	14	23	3	–	n.p.	n.p.	437
25	Wood, wood products and furniture	151	112	59	48	45	38	1	1	454
26	Paper, paper products, printing and publishing	241	225	43	36	21	39	1	5	612
27	Chemical, petroleum and coal products	560	320	150	35	45	22	–	–	1,132
28	Non-metallic mineral products	158	101	56	34	52	9	36	2	414
29	Basic metal products	801	183	179	232	136	71			1,637
31	Fabricated metal products	328	306	90	62	62	14	4	3	870
32	Transport equipment	286	659	113	190	20	4	n.p.	n.p.	1,272
33	Other machinery and equipment	682	653	87	130	75	4	–	1	1,632
34	Miscellaneous manufacturing	203	241	28	44	17	3	–	–	536
	Total manufacturing									
	1980–81	**4,235**	**3,809**	**1,024**	**1,091**	**563**	**280**	**49**	**13**	**11,064**
	1979–80	3,538	3,216	871	866	508	233	45	11	9,288
	1978–79	3,183	2,959	748	839	512	226	38	12	8,515
	CLOSING STOCKS AT 30 JUNE									
21	Food, beverages and tobacco	663	652	200	265	86	60	7	1	1,935
23	Textiles	121	187	14	24	9	18	–	–	373
24	Clothing and footwear	159	266	16	27	4	–	n.p.	n.p.	473
25	Wood, wood products and furniture	174	121	67	53	56	44	1	1	515
26	Paper, paper products, printing and publishing	265	269	47	43	25	49	1	6	704
27	Chemical, petroleum and coal products	607	368	200	43	59	24	–	–	1,302
28	Non-metallic mineral products	175	106	54	33	54	10	70	2	434
29	Basic metal products	987	261	203	195	191	71			1,977
31	Fabricated metal products	371	333	106	67	70	14	4	4	969
32	Transport equipment	326	649	124	168	23	4	n.p.	n.p.	1,295
33	Other machinery and equipment	796	731	90	137	88	6	–	2	1,849
34	Miscellaneous manufacturing	211	265	33	49	22	3	–	–	583
	Total manufacturing									
	1980–81	**4,855**	**4,207**	**1,154**	**1,104**	**686**	**302**	**83**	**17**	**12,410**
	1979–80	4,246	3,840	1,036	1,110	556	276	50	13	11,126
	1978–79	3,560	3,217	867	858	510	235	42	11	9,300

Value added

The statistics on 'value added' contained in the following table have been calculated by adding to the value of turnover the increase (or deducting the decrease) in the value of stocks, and deducting the value of purchases, transfers in and selected expenses. A more detailed description of the method of deriving 'value added' is given on page 444.

MANUFACTURING ESTABLISHMENTS—VALUE ADDED, BY INDUSTRY SUB-DIVISION, 1980–81 AND TOTAL MANUFACTURING, 1978–79 TO 1980–81
($ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	1,563	1,553	998	423	306	141	27	13	5,024
23	Textiles	248	401	20	54	14	33	–	–	769
24	Clothing and footwear	389	740	55	61	18	4	n.p.	n.p.	1,267
25	Wood, wood products and furniture	568	388	231	148	156	108	2	10	1,609
26	Paper, paper products, printing and publishing	987	870	205	173	134	166	7	27	2,568
27	Chemical, petroleum and coal products	1,219	830	200	94	139	31	–	–	2,513
28	Non-metallic mineral products	531	377	243	115	147	26	53	6	1,452
29	Basic metal products	1,561	487	290	246	422	128			3,180
31	Fabricated metal products	952	819	292	188	194	37	5	16	2,502
32	Transport equipment	707	1,078	233	427	96	12	n.p.	n.p.	2,555
33	Other machinery and equipment	1,585	1,255	213	337	195	18	1	4	3,607
34	Miscellaneous manufacturing	557	641	95	122	57	10	–	–	1,484
	Total manufacturing									
	1980–81	**10,865**	**9,440**	**3 075**	**2,387**	**1,877**	**713**	**96**	**77**	**28,531**
	1979–80	9,745	8,505	2,692	2,233	1,643	654	77	64	25,614
	1978–79	8,675	7,377	2,322	1,851	1,322	549	73	61	22,230

Number of establishments

The following table shows the number of establishments in each State in operation at 30 June for the years indicated. These figures relate to manufacturing establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS IN OPERATION AT 30 JUNE 1981 BY INDUSTRY SUB-DIVISION, AND TOTAL MANUFACTURING 1978–79 TO 1980–81

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	999	975	585	372	334	121	20	9	3,415
23	Textiles	222	309	34	31	29	9	–	–	634
24	Clothing and footwear	747	1,004	91	86	61	6	2	2	1,999
25	Wood, wood products and furniture	1,382	1,129	628	304	444	149	12	27	4,075
26	Paper, paper products, printing and publishing	1,194	903	241	195	197	44	12	30	2,816
27	Chemical, petroleum and coal products	426	283	58	50	72	15	–	–	904
28	Non-metallic mineral products	576	393	307	131	216	47	18	10	1,698
29	Basic metal products	213	174	57	36	33	9	5	2	529
31	Fabricated metal products	1,679	1,153	546	353	425	82	16	18	4,272
32	Transport equipment	451	437	213	114	162	20	3	4	1,404
33	Other machinery and equipment	1,601	1,230	315	287	283	34	6	11	3,767
34	Miscellaneous manufacturing	844	736	216	172	170	22	4	4	2,168
	Total manufacturing									
	1980–81	**10,334**	**8,726**	**3,291**	**2,131**	**2,426**	**558**	**98**	**117**	**27,681**
	1979–80	10,158	8,902	3,170	2,143	2,301	543	101	112	27,430
	1978–79	9,803	8,546	2,886	2,119	2,202	552	87	117	26,312

Single establishment manufacturing enterprises with less than four persons employed

Summary of operations

The following table shows the summary of operations for single establishment manufacturing enterprises with less than four persons employed.

SINGLE ESTABLISHMENT MANUFACTURING ENTERPRISES WITH LESS THAN FOUR PERSONS EMPLOYED: SUMMARY OF OPERATIONS, BY INDUSTRY SUB-DIVISION, AUSTRALIA, 1980–81 AND TOTAL MANUFACTURING 1978–79 TO 1980–81

Industry sub-division						
ASIC code	*Description*	*Establishments operating at 30 June*	*Employment at 30 June (a)*			*Wages and salaries (b)*
			Males	*Females*	*Persons*	
			—No.—			$m
21	Food, beverages and tobacco	826	1,287	627	1,914	6.9
23	Textiles	238	308	200	508	2.0
24	Clothing and footwear	522	483	604	1,087	4.0
25	Wood, wood products and furniture	2,982	4,709	1,153	5,862	17.9
26	Paper, paper products, printing and publishing	1,246	1,664	924	2,588	12.2
27	Chemical, petroleum and coal products	225	322	142	464	2.8
28	Non-metallic mineral products	478	744	219	963	3.6
29	Basic metal products	103	171	30	201	1.0
31	Fabricated metal products	1,934	3,182	778	3,960	16.6
32	Transport equipment	658	1,087	238	1,325	5.5
33	Other machinery and equipment	1,580	2,415	743	3,158	15.9
34	Miscellaneous manufacturing	1,483	2,033	858	2,891	10.3
	Total manufacturing 1980–81	**12,275**	**18,405**	**6,516**	**24,921**	**98.6**
	1979-80	12,720	19,367	6,650	26,017	92.0
	1978-79	11,919	18,091	6,056	24,147	79.1

(*a*) Includes working proprietors. (*b*) Excludes the drawings of working proprietors.

Principal manufacturing commodities

The factory production of certain commodities is shown in the monthly publications of the ABS, and in the annual publication, *Manufacturing Commodities, Selected Principal Articles Produced, Australia (Preliminary)* (8365.0). A more comprehensive list of articles produced is contained in the annual publication, *Manufacturing Commodities, Principal Articles Produced, Australia* (8303.0).

The following table shows the total recorded production of some of the principal articles (i.e. of those for which production can be represented in quantitative terms) manufactured in Australia. A more complete list, where available, is published in the ABS publication 8303.0 mentioned above.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA

Commodity code	*Article*	*Unit of quantity*	*1978–79*	*1979–80*	*1980–81p*
	Acid (in terms of 100%)—				
401.29	Hydrochloric	tonnes	54,955	58,672	59,909
401.37	Nitric	"	177,329	166,647	168,868
401.57	Sulphuric	'000 tonnes	1,940	2,153	1,976
171.03, 04, 07, 08	Aerated and carbonated waters	'000 litres	985,757	935,732	1,031,259
	Air-conditioning equipment—				
657.03, 05	Room air conditioners (refrigerated)	No.	41,660	60,107	58,428
657.13, 15	Room air coolers (evaporative coolers)	"	56,495	89,691	117,623
657.21, 22, 23	Packaged unit air conditioners	"	23,902	30,448	30,629
	Animal feeds—				
	From wheat—				
152.06	Pollard	'000 tonnes	216	216	230
159.11	Poultry pellets and crumbles	"	1,276	1,455	1,425
159.15	Poultry mash	"	189	163	149
159.01	Canned dog and cat foods	'000 kg	190,436	199,578	194,602
159.02	Dog biscuits (whole)	"	7,802	5,839	5,649
159.03	Other manufactured dog and cat food	"	62,791	92,427	108,892
475.04, 06, 07, 85	Asbestos cement building sheets (finished)	'000 m²	38,908	n.p.	n.p.
	Bags, leather, fibre, etc.—				
	Handbags—				
864.31	Leather	'000	334	220	295
864.33	Plastic	"	376	335	257
864.39	Other	"	396	481	486
864.11–19	Suitcases, kitbags and trunks	'000	833	766	684
	Bath heaters—				
652.01	Electric	No.	5,434	5,295	4,303
652.03, 06, 08	Gas	"	n.p.	n.p.	90
652.05	Solid fuel	"	685	115	
779.02–37	Bathing suits(*a*)	'000 doz	372	n.p.	n.p.
	Baths (exclude infants' baths)—				
671.03	Pressed steel—Enamelled	'000	124	150	157
671.01, 04, 08	Other (exclude pressed steel, galvanised)	"	22	26	32
	Batteries, wet cell type—				
685.13, 15	Auto (S.L.I.) 6 volts	"	262	263	231
685.17, 19	Auto (S.L.I.) 12 volts	"	3,018	2,788	2,479
685.33, 35	Radio, homelighter, fencer	No. of 2 volt cells	12,686	18,408	11,072
685.43–65	Traction, plant and other	"	171,720	206,291	170,138
172.02, 04, 06	Beer (excluding waste beer)	mil. litres	1,986	2,023	1,987
064.21	Biscuits	'000 kg	125,175	124,055	129,748
372.52–66, 374.51–57	Blankets, Woollen—Pure and Mixtures	'000	1,167	972	857
152.02	Bran (wheaten)	'000 tonnes	99	89	95
172.21	Brandy	'000 litre al	2,382	1,921	2,410
777.41, 49	Brassieres	'000 doz	666	666	681
066.01–31	Breakfast food, cereal (ready to eat)	tonnes	78,850	77,333	81,504
472.01, 03	Bricks, clay	million	1,914	2,172	2,287
261.41	Briquettes, brown coal	'000 tonnes	1,131	1,230	1,081
051.30, 052.20	Butter—from cream (exclude whey cream)	'000 kg	97,663	81,733	84,077
773.51, 53, 74, 75, 83	**Cardigans**, jumpers, etc.	'000 doz	1,991	2,030	1,805
474.02	Cement, Portland	'000 tonnes	5,085	5,201	5,656
053.45	Cheese (non-processed)	'000kg	141,815	154,219	136,744
	Cloth (including mixtures)—				
373.10–52	Cotton(*b*)	'000m²	40,188	43,189	43,063
	Rayon and acetate—				
374.02, 06, 14	Pure	"	13,518	13,612	12,237
374.20–35	Synthetic (non-cellulosic)	"	113,969	121,423	124,509
372.02–50	Wool (excluding blanketing and rug)	"	7,641	9,128	10,555
435.22	Coke—Metallurgical	'000 tonnes	4,620	4,367	4,690
475.90	Concrete, ready mixed	'000m³	11,065	11,412	12,273
	Confectionery—				
104.06–18	Chocolate	'000 kg	51,575	53,192	58,019
104.21–29	Other	"	56,042	53,609	56,324
452.04	Copper, refined(*c*)	'000 tonnes	138	137	159

(*a*) Includes swim shorts. Excludes infants' and babies' swim-wear. (*b*) Excludes tyre-cord fabric and towelling. (*c*) Primary origin only.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA—*continued*

Commodity code	*Article*	*Unit of quantity*	*1978–79*	*1979–80*	*1980–81p*
171.06, 10	Cordials and syrups	'000 litres	109,192	114,736	121,784
777.01–29	Corsets and corselets	doz	152,274	128,985	133,605
611.01	Cycles (complete)	'000	203	263	211
804.01	**Dentifrices** (toothpaste)	'000 kg	7,333	7.057	6,700
499.42	**Electricity**	mil. kWh	90,857	95,910	100,782
523.76–78	Electrodes for manual welding	'000 kg	20,452	21,727	21,432
502.22–39	Engines, spark and compression ignition(*a*)	'000	230	236	n.p.
	Essences, flavouring—				
139.31	Domestic	'000 litres	462	724	655
139.35	Industrial	"	6,064	6,321	6,987
696.01, 03, 05	**Fans**, electric (propellor type)	No.	404,035	521,614	658,717
	Floorboards—				
332.06	Australian timber	m³	205,993	207,816	181,627
332.08	Imported timber	"		1,532	1,698
	Floor coverings—				
841.01–07	Textile	'000 m²	28,528	30,582	31,956
841.31–61, 69	Smooth surface and embossed	"	5,870	5,513	n.p.
841.67, 68	Timber parquetry	"	135	146	184
841.85	Underfelts, underlays, etc.(*b*)	"	7,821	7,745	7,728
692.21, 23	Floor polishers, electric	No.	10,252	8,146	6,989
	Flour—				
068.01	Self-raising	'000 kg	39,968	27,507	25,587
062.01, 10, 32	Wheaten(*c*)	'000 tonnes	1,078	1,085	1,110
	Fruit juices, natural—				
074.61–69, 79	Single strength	'000 litres	186,239	202,664	219,855
074.76, 89	Concentrated(*d*)	"	13,544	22,225	n.y.a.
781.06–29	**Gloves**, work(*e*)	'000 doz pairs	3,200	3,994	3,254
127.21	Glucose	'000 kg	47,751	50,140	50,738
832.58, 59	Golf clubs	doz	32,601	26,038	35,383
	Heaters, room—				
651.01, 03	Solid fuel	No.	5,093	7,426	n.p.
651.11–20	Electric radiators and fires	'000	758	606	694
651.04, 05, 21, 22, 26, 27	Gas fires and space heaters	No.	79,835	79,643	n.p.
775, 776	Hosiery—				
	Women's (including panty hose)	'000 doz pairs	6,109	6,734	7,691
	Men's	"	1,769	2,013	2,252
	Children's and infants'	"	1,346	1,325	1,369
051.56, 58, 59	**Ice cream**(*f*)	'000 litres	211,919	213,347	213,879
051.87, 89, 90	Infants', invalids' and health beverages from cows milk(*g*)	'000 kg	22,403	26,924	28,681
	Iron and steel—				
442.04, 08	Pig iron	'000 tonnes	7,349	7,481	7,335
442.80–83	Steel ingots	"	7,431	7,374	7,012
442.28	Blooms and slabs(*h*)	"	6,635	6,526	6,179
693.51, 61, 63	Irons, electric (hand, domestic)	'000	686	n.p.	n.p.
076.60	**Jams** (including conserves, jellies, etc.)	'000 kg	29,271	22,522	27,538
391.04	**Lard**	"	2,306	3,773	3,196
	Lawn mowers—				
699.52, 53	Petrol, rotary	No.	324,615	337,051	312,107
699.41, 45, 55, 61	Other types(*i*)	"	10,131	11,007	n.y.a.
453.04	Lead refined(*j*)	'000 tonnes	218	204	206

(*a*) Petrol and diesel. Excludes car, motorcycle, truck, tractor, aero, and marine engines. (*b*) Needled (or bonded) felts of jute or jute/hair mixtures (for all purposes). (*c*) Includes wheatmeal for baking, excludes sharps and other flour. (*d*) Excludes grape must. (*e*) Excludes fabric liners for dipped gloves but includes moulded or heat-sealed work gloves. (*f*) Includes ice cream combined with other confections, including those aerated milk-based confections which contain 10% or more butterfat. (*g*) Includes malted milk and milk sugar (lactose). (*h*) Primary mills output. (*i*) Petrol cylinder, electric and hand. (*j*) Includes lead content of lead alloys from primary sources but excludes lead-silver bullion.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA—*continued*

Commodity code	*Article*	*Unit of quantity*	*1978–79*	*1979–80*	*1980–81p*
	Leather—				
	Dressed or finished—				
301.43–65	Chrome tanned (including retanned)	'000 m²	5,872	4,457	4,377
301.31–37, 83–89	Vegetable tanned, by weight	'000 kg	2,254	2,426	1,462
301.67, 69	Vegetable tanned, by measurement	'000 m²	249	192	n.p.
	Lime—				
275.43, 45	Crushed	tonnes	238,821	288,688	331,761
479.18	Hydrated	'000 tonnes	113	132	153
479.12	Quick	"	422	429	390
802.21	Lipstick	'000 kg	39	41	38
063.11–21, 31	**Malt** (excluding extract)	'000 tonnes	460	537	565
	Margarine—				
121.01	Table	'000 kg	89,455	98,831	99,068
121.06, 08	Other	"	43,870	41,109	40,938
	Mattresses—				
844.22, 25, 27	Inner spring	'000	714	714	703
844.42, 45, 47	Rubber	"	10	10	10
844.52–67	Other	"	474	546	523
027.02–77	Meat, canned(*a*)	'000 kg	44,840	41,402	40,603
	Meters (domestic)—				
702.01	Electricity consumption	'000	237	n.p.	n.p.
703.01	Gas consumption	"	96	n.p.	n.p.
703.11	Water consumption	"	167	175	166
	Milk, condensed, concentrated and evaporated—				
051.21, 22	Full cream, coffee and milk, sweetened	'000 kg	16,630	[illegible],532	17,170
051.23, 052.42	Full cream, unsweetened	"	39,529	40,556	46,377
051.28	Skim	"	29,348	23,586	20,349
	Milk powder in powdered form—				
051.72, 73	Full cream	"	75,030	80,255	75,225
051.76–79	Skim	"	74,471	54,155	56,079
051.81, 82	Buttermilk or mixed skim and buttermilk	"	8,187	6,354	6,888
503.13–32	Motors, electric (excl. automotive)	'000	3,183	3,742	4,021
	Motor vehicles, finished—				
581.02–08	Cars	No.	298,046	321,997	244,597
581.10–16	Station wagons	"	58,532	77,291	72,432
582.04	Utilities	"	19,832	18,795	15,212
582.06	Panel vans	"	14,492	10,449	9,330
582.08–24	Trucks and truck-type vehicles	"	8,686	8,603	5,554
	Motor vehicles, partly finished—				
581.22–28, 582.31, 32	Cars, station wagons, utilities, vans	"	865	654	298
582.33–46	Trucks and truck-type vehicles	"	22,271	17,315	16,161
465.16, 17	**Nails**	tonnes	19,199	24,953	23,013
	Oatmeal and rolled oats—				
062.61, 63	For porridge, etc.	tonnes	17,683	19,086	20,916
393, 394	Oils and fats, crude—Vegetable	'000 kg	96,563	107,095	124,829
	Paints, etc.—				
	Architectural and decorative(*b*)—				
	Solvent thinned—				
410.01	Primers and undercoats	'000 litres	11,499	10,982	11,347
410.03, 05, 07	Finishing coats	"	27,585	28,322	27,640
	Water thinned—				
410.11, 13, 15	Plastic latex	"	38,054	42,760	30,021
410.17	Other water based	"	1,633	2,064	2,787
410.25	Tinting colours (all types) packed for sale or transfer out	"	579	616	525
	Paper—				
351.11	Newsprint	'000 tonnes	208	222	219
351.18–79	Other	"	633	727	764
352.11–33	Paperboard	"	421	483	486(*c*)
336.12	Particle board (resin bonded)	'000 m²	564	667	686
479.22	Plaster of Paris	'000 tonnes	347	419	443
479.32, 33	Plaster sheets—Non-acoustic	'000 m²	48,504	54,770	n.y.a.
334.32, 34, 36, 38	Plywood, 1 mm basis	"	86,440	89,933	93,397(*d*)

(*a*) Excludes poultry and baby food. (*b*) Excludes heavy duty coatings. (*c*) Excludes coated container board. (*d*) Excludes case plywood.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA—*continued*

Commodity code	*Article*	*Unit of quantity*	*1978–79*	*1979–80*	*1980–81p*
	Preserves—				
	Fruit—				
076.01-50	Canned or bottled	'000 kg	210,690	228,470	241,870
074.01	Pulp and puree—single strength	"	3,389	3,109	2,516
	Vegetables—				
094.02-47	Canned or bottled	"	139,787	134,792	121,311
092.02, 06, 10, 19	Quick frozen	"	143,073	160,646	168,735
	Pyjamas—				
774.27,29	Men's, youths' and boys', woven (suits only)	'000 doz	330	364	328
774.50-59, 64, 66	Women's, maids' and girls' (incl. nightdresses)	"	671	765	677
832.65, 85	**Racquet** frames (all types)	doz.	11,664	7,598	7,603
643.01-37	Radio receiving sets (including radiograms)	No.	163,036	199,017	n.p.
	Records (phonograph)—				
646.35, 65	Single play	'000	7,767	10,357	11,445
646.37, 41, 67, 71	Extended play	"	288	269	152
646.43, 45, 73, 75	Long play	"	22,117	21,248	22,289
657.33, 34, 35, 41	Refrigerators, domestic, electric and gas	"	247	279	286
403.02, 18-96, 404	Resins, synthetic and plastics, for all purposes	'000 tonnes	580	816	808
372.70, 72, 374.59	Rugs	'000	133	141	130
123.18-25	**Sauce**	'000 litres	32,713	33,796	33,465
062.04	Semolina	'000 tonnes	33	37	33
773.04-09	Shirts, woven (men's, youths' and boys'), collar attached (*a*)	'000 doz	460	497	534
653.01	Sink heaters, electric	No.	10,880	13,352	9,620
671.11-18	Sinks, steel and other (standard size)	"	209,786	n.p.	n.p.
805.01-13	Soap, for personal toilet use(*b*)	tonnes	32,503	31,388	32,095
	Soup—				
	Liquid—				
122.02	Tomato	'000 litres	n.p.	15,777	n.p.
122.09	Other	"	21,252	23,560	19,172
122.13, 15	Dry-mix	'000 kg	6,103	5,742	5,958
127.11-19	Starch (incl. cornflour)	"	150,760	158,521	151,914
461.20	Steel, constructional, fabricated	tonnes	497,215	550,870	611,606
	Stoves, ovens and ranges, domestic cooking—				
661.01-11	Electric(*c*)	No.	228,716	234,529	267,012
662.26, 31, 34, 36, 42, 43	Gas(*d*)	"	95,611	100,754	n.p.
662.01, 03	Solid fuel	"	4,341	5,771	5,608
	Sugar—				
102.01	Raw	'000 tonnes	2,989	2,997	3,323
405.36	Sulphate of ammonia	tonnes	220,553	199,956	217,902
415.07, 405.25	Superphosphate(*e*)	'000 tonnes	3,680	4,202	3,557
803.61	**Talcum** powder	'000 kg	4,254	4,302	4,838
	Tallow (including dripping), rendered—				
391.15	Edible	"	82,950	76,081	68,278
391.24	Inedible	"	326,948	270,069	248,067
643.57-60	Television sets (colour)	No.	292,161	331,971	357,799
	Tiles, roofing—				
475.30	Concrete	'000	151,361	186,960	189,396
472.12	Terracotta	"	50,600	46,420	49,390
	Timber—				
	From native logs—				
331.01-07	Hardwood, etc.	'000 m^3	3,110	3,280	3,407
331.09-19	Softwood	"			
661.21, 23	Toasters, electric (domestic)	No.	474,677	640,569	686,743
094.51	Tomato juice	'000 litres	7,538	8,974	7,805
094.53	Tomato paste and puree	"	8,236	16,828	16,189
373.58-64	Towels	'000 doz	933	932	942
671.51-59	Toilet cisterns	No.	591,131	513,087	541,261
683.03-11	Transformers, chokes and ballasts, for distribution of power and light, etc.	"	19,311	19,565	20,747

(*a*) Business or formal. (*b*) Excludes powdered shampoo. (*c*) Includes wall ovens but excludes cooking tops and portable units. (*d*) Upright and elevated (with ovens) including wall ovens, but excluding hotplates, stovettes, etc. (*e*) Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate i.e. 22% P_2O_5 equivalent.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA—*continued*

Commodity code	*Article*	*Unit of quantity*	*1978–79*	*1979–80*	*1980–81p*
773.90–97, 774.01–18, 36–49, 61–73, 91–97	Underwear (men's, women's, children's)	'000 doz	5,964	6,926	n.p.
692.02,04	**Vacuum** cleaners (domestic)	'000	219	251	236
	Wash basins—				
671.37	Earthenware	"	247	215	265
693.02–18	Washing machines, household, electric	"	358	372	n.p.
	Weatherboards—				
332.12	Australian timber	m^3	17,773	18,076	13,240
332.14	Imported timber	"	2,457	3,375	1,747
152.14	Wheatmeal for stock feed	'000 tonnes	364	342	482
519.01	Wheelbarrows (metal)	No.	207,788	200,453	176,409
	Wine, beverage—				
172.42	Fortified	'000 litres	59,469	57,619	53,620
172.46	Unfortified	"	232,508	261,504	246,596
341.31–45	Wood pulp (air dried)	'000 tonnes	672	688	708
242.07–11	Wool, scoured or carbonised	tonnes	83,570	89,335	90,253
242.33, 35	Wool tops, pure	'000 kg	19,599	19,887	19,887
	Yarn (including mixtures)—				
364.11–50	Cotton	"	21,103	21,837	21,696
363.47–75	Woollen	"	14,799	14,620	19,440
363.17–31	Wool worsted	"	5,603	5,227	
365.90, 366.03, 04, 16, 29, 30, 42, 55, 56, 88, 96, 97	Synthetic (non-cellulosic) fibres spun	"	10,505	9,880	10,939
457.04	**Zinc**, refined(*a*)	'000 tonnes	309	300	274

(*a*) Primary origin only includes small quantities of zinc dust.

Enterprise Statistics—Integrated Economic Censuses and Surveys

The Integrated Economic Censuses and Surveys conducted by the Australian Bureau of Statistics have, since 1977-78, included *enterprises* primarily engaged in Mining and Manufacturing annually, with Electricity and Gas Production and Distribution collected in 1977–78 and annually from 1979–80, while other economic sectors are approached on a rotating basis. Statistics in respect of enterprises have been published in *Integrated Economic Censuses and Surveys, Enterprise Statistics: Details by Industry Class, Australia* (Cat. No. 8103.0).

Below is a brief summary of the censuses collection units and methodology and a summary table of enterprise statistics. More detailed explanations on the censuses are shown in the above publication.

The business units, as standardised for purposes of the Integrated Economic Censuses and Surveys are at three levels: the establishment (and associated administrative offices and ancillary units); the enterprise; and the enterprise group.

The central unit from which statistical information was collected is the *enterprise*, defined broadly as the unit comprising all operations in Australia of a single operating legal entity. The term *legal entity* is used to cover a sole proprietor, or partnership, or company, but also includes co-operative societies and some government authorities mainly engaged in the industries included in the censuses and surveys.

The group of legal entities owned or controlled by a single company is recognised as a separate type of unit—the *enterprise group*. The basic unit for which most data were collected and tabulated is the *establishment*, defined in general as a unit comprising all the operations carried on by the one enterprise at a single physical location—such as an individual factory, shop or mine.

In the Integrated Economic Censuses and Surveys, information was collected using a common framework of reporting units (enterprises and establishments as defined above) and data concepts and in accordance with a standard industrial classification (the *Australian Standard Industrial Classification*, 1978 Edition). As a result the statistics for the industries covered by the censuses and surveys are provided with no overlapping or gaps in scope, so that aggregates for economic data such as value added, employment, wages and salaries, fixed capital expenditure and stocks are obtained on a consistent basis for all industries and business units covered by the censuses and surveys. A detailed description of the integration of economic censuses is contained in Chapter 31, Year Book No. 56, 1970.

ENTERPRISES—SUMMARY OF OPERATIONS BY INDUSTRY, AUSTRALIA

Industry and year	*Enterprises operating during year* (*a*)	*Persons employed at 30 June* (*b*)	*Wages and salaries* (*c*)	*Turnover* (*d*)	*Purchases and selected expenses* (*e*)	*Rent, leasing and hiring expenses* (*f*)	*Stocks at*(*g*) *30 June*	*Stocks at*(*g*) *30 June*	*Value added* (*h*)	*Fixed capital expenditure less disposals* (*i*)
	No.	No.	$m	$m	$m	$m	$m	$m	$m	$m
Mining (excluding services to Mining)—										
1978-79 . . .	745	68,351	1,092.9	6,296.5	2,062.5	58.7	812.0	781.7	4,144.8	1,030.2
1979-80 . . .	788	75,328	1,291.1	7,967.5	2,574.2	74.1	840.8	968.8	5,447.2	1,149.7
Manufacturing—										
1978-79 . . .	22,015	1,174,665	12,284.6	56,115.8	32,350.7	667.6	9,276.5	10,192.7	24,013.7	2,282.7
1979-80 . . .	22,938	1,158,941	13,485.7	65,222.9	39,556.0	777.2	10,071.1	12,143.9	26,962.3	2,376.1
Electricity and Gas Production and Distribution										
1978-79 . . .	(*j*)	(*j*)	(*j*)	(*j*)	(*j*)	(*j*)	(*j*)	(*j*)	(*j*)	(*j*)
1979-80 . . .	73	86,975	1,191.5	4,828.3	2,049.5	19.4	325.7	370.5	2,804.2	1,573.7
Retail Trade (*k*)—										
1979-80 (*l*) . .	90,395	732,234	4,382.6	45,031.0	34,952.0	1,158.8	4,574.9	5,164.8	9,510.1	428.5
Selected Services (*m*)										
1979-80 (*l*) . .	21,571	261,902	1,621.1	6,682.5	3,064.3	310.2	200.5	231.1	3,338.5	382.9

(*a*) The number of enterprises in operation for all or any part of the year which were in the scope of the censuses and surveys. (*b*) Working proprietors and employees, including part-time and casual employees as at 30 June. (*c*) Wages and salaries paid during the year to employees of the enterprise. Drawings of working proprietors are excluded. (*d*) Sales of goods, commission revenue, repair and service revenue, rent, leasing and hiring revenue (as from the year 1978-79 inclusive), government bounties and subsidies and all other operating revenue except interest, royalties and dividends. (*e*) Purchases by the enterprise of goods for manufacture or resale, containers, stores and supplies (except office supplies) and charges for fuels, electricity and water, freight and cartage, vehicle running expenses, sales commission expenses, repair and maintenance expenses, and commission and sub-contract expenses. (*f*) Amount paid for rent and leasing premises, vehicles and equipment. (*g*) Stocks of materials, fuels, etc. work in progress and finished goods owned by the enterprise. (*h*) This is derived as turnover plus increase (less decrease) in stocks, less purchases and selected expenses, and from 1978-79 inclusive less rent, leasing and hiring expenses. (*i*) Outlay on new assets (including progress payments) and land and secondhand fixed tangible assets less disposals. (*j*) Not collected for the year 1978-79. (*k*) Excludes bread and milk vendors and single establishment retail enterprises with turnover of less than $50,000. (*l*) Collected every five years as part of the rotating economic censuses and surveys. (*m*) Includes motion picture theatres, cafes and restaurants, hotels, accommodation, licensed clubs, laundries and dry cleaners, mens hairdressers and womens hairdressing and beauty salons.

Foreign Ownership and Control in Manufacturing Industry

Summary information on foreign ownership and control in the manufacturing industry is shown in Chapter 24. More detailed statistics are available in *Foreign Control in Manufacturing Industry, Study of Large Enterprise Groups,* 1972–73 (*Advance Release*) (5314.0), *Foreign Control in Manufacturing Industry, Study of Large Enterprise Groups,* 1975–76 (5315.0), *Foreign Ownership and Control in Manufacturing Industry,* 1972–73 (*Advance Release*) (5321.0) and *Foreign Ownership and Control in Manufacturing Industry,* 1972–73 (5322.0).

INTERNAL TRADE

Wholesale Trade

For summary tables showing final figures from the 1968–69 census of Wholesale Trade *see* Year Book No. 61, pages 1070–2. Further and more detailed statistics are included in separate publications published by Central and State offices of ABS.

Retail Trade

Retail census

The definition of retail trade, for the purpose of the most recent retail census which was taken for the year ended 30 June 1980, is the resale of new and used goods to final consumers for personal and household consumption. For information and detailed tables relating to the 1979–80 Retail Census, reference should be made to the series of final census publications (8622.0 to 8627.0) for 1979–80. Summary of operations of establishments classified by industry group for Australia for 1979–80 are set out in the following table.

RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS(*a*): SUMMARY OF OPERATIONS, BY INDUSTRY GROUP OR CLASS(*b*), 1979-80

ASIC Code(c)	*Industry group or class* / *Description*	*Establishments at 30 June (No.)*	*Persons employed at 30 June (No.)(d)*	*Wages and salaries(e) ($m)*	*Retail sales ($m)*	*Turnover ($m)*	*Stocks* Opening *($m)*	*Stocks* Closing *($m)*	*Purchases, transfers in and selected expenses ($m)*	*Value added ($m)*
				RETAIL ESTABLISHMENTS						
481	Department and general stores . . .	857	99,569	717.4	4,010.1	4,253.8	602.7	692.4	3,206.9	1,136.6
484	Clothing, fabrics and furniture stores . .	17,908	81,797	519.1	4,057.5	4,143.4	740.4	851.3	3,140.5	1,113.7
485	Household appliance and hardware stores(*f*)	8,196	43,542	319.7	2,575.9	2,965.6	448.2	517.8	2,252.9	782.3
486	Motor vehicle dealers, petrol and tyre retailers(*g*) . . .	26,516	175,995	1,319.2	12,467.6	18,203.2	1,625.7	1,752.8	15,130.8	3,199.6
488	Food stores	39,416	260,266	1,131.3	12,577.3	12,747.0	635.0	751.5	10,517.0	2,346.5
489	Other retailers . . .	17,607	76,209	406.9	3,251.5	3,385.4	469.1	549.9	2,489.4	976.7
	Total . . .	**110,500**	**737,378**	**4,413.6**	**38,940.0**	**45,698.4**	**4,521.0**	**5,115.6**	**36,737.6**	**9,555.4**
				SELECTED SERVICE ESTABLISHMENTS						
9133	Motion picture theatres	577	6,777	44.9	31.8	177.9	1.3	1.4	76.0	102.0
923	Restaurants, hotels and accommodation .	17,702	183,310	1,021.6	2,618.3	4,670.2	135.5	160.5	2,617.0	2,078.2
9241,2,3	Licensed clubs(*h*) . .	3,243	52,297	423.1	697.4	1,515.2	48.2	50.1	577.6	939.5
934	Laundries and dry cleaners	1,365	12,106	91.3	1.5	223.5	6.8	8.0	66.7	158.0
935	Hairdressers, beauty salons	2,265	12,282	78.2	12.2	173.3	4.8	5.7	50.7	123.4

(*a*) Excludes all bread and milk vendors and single establishment enterprises with turnover of less than $50,000 (except for ASIC classes 9232 and 9233 in ASIC group 923). For ASIC classes 9232 and 9233 all establishments are included irrespective of turnover size. (*b*) A class total or a total for a combination of classes has been shown where the scope of the census did not include all the ASIC classes in an ASIC group. (*c*) Australian Standard Industrial Classification. (*d*) Includes working proprietors. (*e*) Excludes drawings by working proprietors. (*f*) Includes household appliance and domestic hardware stores, watchmakers and jewellers, music stores and electric appliance repairers but excludes establishments predominantly engaged in selling building materials, paint, tools of trade, etc. (*g*) Establishments predominantly engaged in wholesaling new motor vehicles are included in this group. (*h*) Includes licensed bowling clubs, licensed golf clubs and licensed clubs, n.e.c.

Retail surveys

In intercensal periods, estimates of the value of retail sales by broad commodity groups are obtained quarterly by means of sample surveys for each State and Australia.

The following table shows the value of retail sales of goods in each of the commodity groups specified. The figures have been obtained from a sample based on the 1973–74 Retail Census. A new series based on the 1979-80 Retail Census will be commenced in April 1982. More detailed information concerning the quarterly surveys of retail trade is contained in the quarterly publication *Retail Sales of Goods, Australia* (8503.0).

VALUE OF RETAIL SALES: COMMODITY GROUPS (*a*)

($ million)

Commodity group	*1978–79*	*1979–80*	*1980–81*
Groceries	4,807.8	5,488.7	6,318.4
Butchers' meat	1,661.5	1,972.9	2,151.1
Other food (*b*)	2,646.7	2,940.3	3,430.0
Total food and groceries	*9,116.0*	10,401.9	11,899.5
Beer, wine and spirits	3,559.6	3,943.0	4,414.6
Clothing and drapery	3,876.3	4,144.0	4,691.6
Footwear	636.0	692.2	777.1
Hardware, china and glassware(*c*)	1,104.5	1,261.8	1,452.7
Electrical goods(*d*)	1,888.0	2,055.5	2,431.4
Furniture and floor coverings	1,365.0	1,484.7	1,732.9
Chemists' goods	1,359.1	1,472.1	1,650.6
Newspapers, books and stationery	961.0	1,088.4	1,287.9
Other goods(*e*)	2,304.3	2,554.3	2,845.0
Total (excluding motor vehicles, etc.)	**26,169.8**	**29,097.9**	**33,183.3**

(*a*) Excludes Northern Territory and Australian Capital Territory. (*b*) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish and wrapped lunches. (*c*) Excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc. (*d*) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (*e*) Includes tobacco, cigarettes, etc., sporting goods, etc., but excludes grain and produce and business machines.

Retail sales of goods at constant prices

The following table shows series of the value of retail sales of goods at constant prices. The scope of the series at average 1974–75 prices is identical to that of the series at current prices based on the 1973–74 Retail Census.

A detailed description of the nature of these estimates at constant prices, and of the sources and methods used in preparing them, can be found in the Explanatory Notes of the March 1978 issue of *Retail Sales of Goods* (8503.0).

VALUE OF RETAIL SALES OF GOODS AT CONSTANT PRICES BY BROAD COMMODITY GROUPS(*a*)

($ million)

	At average 1974–75 prices(b)					
Broad commodity group	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Food and drink	7,621.0	7,932.8	8,218.8	8,262.9	8,344.3	8,642.2
Clothing, hardware, electrical and furniture	6,217.3	6,221.2	6,101.1	6,144.2	6,330.7	6,814.5
Other	2,929.9	2,973.7	3,064.6	3,147.7	3,197.9	3,299.1
Total (excluding motor vehicles, parts, petrol, etc.)	**16,768.2**	**17,127.7**	**17,384.5**	**17,554.8**	**17,872.9**	**18,755.8**

(*a*) Excludes Northern Territory and Australian Capital Territory. (*b*) Series based on 1973–74 Retail Census.

CHAPTER 18

ENERGY

Introduction

Australia is an energy-rich country with major economically recoverable resources of coal and uranium; substantial resources of economically recoverable natural gas and significant, but more limited, resources of crude oil. Whilst there are no known deposits of heavy-oil or tar sands, there are extensive deposists of oil shale which are located primarily in Queensland. Thorium, solar, wave, hydro-power, wind, ocean thermal, wood, geothermal, tidal and crop resources also represent actual or potential energy sources.

Despite Australia's rich endowment of energy resources, it has not been insulated from the changing world energy situation. Indigenous oil supplies currently meet around two-thirds of Australia's oil needs with the prospect that, without further discoveries, the level of self-sufficiency will decline during the late 1980s. The remaining requirement has to be obtained from world markets at prices and conditions similar to those for any other oil importing country.

As at December 1981, estimates of remaining recoverable reserves of crude oil and natural gas liquids in commercial fields in Australia totalled 418 gigalitres (2.6 billion barrels), compared with about 297 gigalitres (1.9 billion barrels) which have already been produced. A further 154 gigalitres (967 million barrels) have been identified in deposists which are theoretically recoverable but considered uneconomic under present conditions or are awaiting further appraisal. About 78 per cent of Australia's proved and probable commercial liquid petroleum reserves are located in the Gippsland Basin around the South East corner of the continent.

Assessments made during 1980 and 1981 indicate that Australia's demonstrated economic recoverable energy resources total 1,353 exajoules (joules x 10^{18}) of which 58 per cent is accounted for by black coal, 26 per cent by brown coal, 12 per cent by uranium, with demonstrated oil and gas resources representing only 3 per cent of the total. On a State basis, 31 per cent of Australia's recoverable demonstrated economic energy resources (other than uranium) are located in Victoria, almost all of which is brown coal. Queensland accounts for about 40 per cent of national energy resources and New South Wales for 27 per cent; both these quantities being almost entirely black coal. Significant resources of natural gas are located in the Gippsland Basin (Victoria), the Cooper Basin (South Australia) and the North West Shelf (Western Australia).

In terms of world resources, Australia has about 19 per cent of the world's known low-cost uranium, 4.3 per cent of the world's coal, 1.2 per cent of the world's natural gas and about 0.3 per cent of the world's liquid petroleum resources. By comparison, Australia's population is about 0.3 per cent of the world total. This relative abundance, combined with substantial supplies of many raw materials, creates the opportunity for an expansion in energy exports and the development of energy intensive industries.

In recognition of the importance of energy resources to Australia's national wealth, policies have been developed to respond to the changing pattern of world energy supplies, in order to try to minimise uncertainty for the future and to take full advantage of the opportunities arising from the oil situation and to develop other energy sources which can substitute for oil in a wide range of uses, in both domestic and export markets. The basic aims of these policies are:

- to ensure that an adequate supply of energy particularly liquid fuels, is available at all times;
- to maintain a high level of self-sufficiency in liquid fuels, consistent with the economic utilisation of energy resources; and
- to promote the efficient development of indigenous energy resources, both for domestic use and for export to less energy rich nations.

More specific objectives, with particular relevance to the area of liquid fuels are:

- to encourage conservation through the efficient use of existing energy resources, with special emphasis on petroleum;
- to substitute petroleum based fuels by more abundant energy sources (e.g. coal, gas, etc);
- to encourage exploration for, and development of, conventional oil and gas resources; and
- to encourage research and development of alternative energy sources, including synthetic fuels.

The most significant measure adopted in pursuit of these objectives was the decision, taken by the Australian Government in August 1978, to raise the price of domestically produced crude oil to full import parity. In addition, a number of supplementary measures have been implemented in the areas of taxation policy, promotion of conservation and interfuel substitution, stimulation of exploration and development, support for energy research and development, improving preparedness for severe interruptions to oil supplies and active international co-operation.

In general, the Government believes that the supply of and demand for energy should be subject to commercial considerations in the market place and that the development of energy resources should generally continue to be the responsibility of private enterprise. Hence a primary emphasis has been on providing an appropriate economic framework in which Australia's energy resources might be developed and efficient energy use promoted.

The Australian Government's support of energy research and development (R and D) projects, through the *National Energy Research, Development and Demonstration Program,* is indicative of this approach to energy policy. Since the Program was introduced in 1978 it has committed $80.5 million to energy research and development in Australia. In accord with its view on the importance of commercial considerations in governing the energy market, the Program does not give financial assistance to projects to move to the commercialisation stage. The primary focus of the Program has been the co-ordination and support of R and D activity in Australia to achieve a full understanding of the extent and quality of Australia's resource base, and the development of appropriate technologies to enable these resources to be used to their fullest extent for the benefit of the Australian people.

Advice and co-ordination

International Energy Agency

The International Energy Agency (IEA) was established in Paris in November 1974 as an autonomous institution within the framework of the Organization for Economic Co-operation and Development. (Australia did not seek membership at that time.)

In January 1979 Australia applied for membership. This application was accepted by the IEA Governing Board in March 1979, and Australia formally became the twentieth member of the IEA in May 1979. Other members of the IEA are Austria, Belgium, Canada, Denmark, the Federal Republic of Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States of America. The Agency is supported by a permanent Secretariat headed by an Executive Director.

The objective of the IEA is to implement the International Energy Program as set out in the Agreement authorising the establishment of the Agency. This Agreement encompasses an Emergency Oil Sharing Scheme (EOSS) to be activated in an emergency supply situation, an information system on the international oil market, regular consultations with the major oil companies, the promotion of relations with oil producing and consuming countries, and long-term co-operation in energy aimed at reducing dependence on oil. The IEA's long-term co-operation program includes the promotion of energy conservation, the acceleration of the development of non-oil energy sources and the encouragement of energy research and development projects.

The IEA's chief concern is to transform oil-dominated energy economies to a more balanced use of the major available energy sources, oil, coal, nuclear and gas, and to ensure energy efficiency is maximised. Principles for Energy Policy have been adopted to provide a framework to assist governments in the definition of national energy policies. Within this context, the IEA regularly carries out reviews of member countries' energy policies and programs.

The IEA adopted in May 1979 a set of Principles for IEA Action on Coal which emphasised the need to expand the production, trade and use of coal. It subsequently created a Coal Industry Advisory Board, composed of eminent individuals in the international coal industry, to offer expert advice to the IEA on the implementation of the Principles. Australia has three representatives on the Board.

The main decisions-making body of the IEA is the Governing Board. The Board meets annually at Ministerial level and more frequently at senior official level. Standing Groups have been established to monitor developments in Long-Term Cooperation, the Oil Market, Emergency Questions and Relations with Producers and Other Consuming Countries, and Energy, Research and Development.

National Energy Office

Reviewing energy policy and providing policy advice on an ever increasing range of energy matters is a major task for the National Energy Office. It provides policy advice on energy pricing and taxation, and also provides departmental support for the National Energy Advisory Committee (NEAC) the National Petroleum Advisory Committee (NPAC) and the National Energy Research, Development

and Demonstration Council (NERDDC), and contributed substantially to participation by the Department of National Development and Energy in the work of the Australian Minerals and Energy Council (AMEC).

Research and Development

NERDDC

The Department of National Development and Energy through the National Energy Office provides policy and technical advice on energy research, development and demonstration (R,D & D) and administers the National Energy Research, Development and Demonstration Program (NERD & D Program).

The National Energy Research, Development and Demonstration Council (NERDDC) was established in May 1978. It advises the Minister for National Development and Energy on the development and co-ordination of a national program of energy research and the disbursement of funds under the NERD & D Program. Council consists of twelve members drawn from government, private industry and tertiary institutions who are appointed by the Minister on the basis of established expertise in the energy field. It is supported by seven Technical Standing Committees (TSC's), covering all major areas of energy technology, which provide expert technical advice. The NERD & D Program is funded from the accrued funds paid to the Coal Research Trust Account under the provision of the *Coal Research Assistance Act* 1977 and from the Energy Research Trust Account for which funds are provided from a Departmental Appropriation for energy research.

1981-82 was the fourth full year of operation of NERDDC. During this year, a further $19.5 million was committed to energy research projects over a wide range of energy technologies. This brought the total committed to date under the NERD & D Program to around $80 million. NERDDC and its TSC's also assist the Department in monitoring scientific and technical progress and performance of projects being supported.

Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Energy research within the Institute of Energy and Earth Resources is carried out with the objectives of improving methods of locating, evaluating, defining and characterising Australia's energy resources and of planning their development and effective use, consistent with the minimisation of environmental stresses. Divisions of the Institute engaged in energy research are the Division of Applied Geomechanics at Syndal (Vic.); the Division of Energy Chemistry at Lucas Heights (N.S.W.); the Division of Energy Technology at Highett (Vic.); the Division of Fossil Fuels at North Ryde (N.S.W.); the Division of Mineral Chemistry at Port Melbourne (Vic.); the Division of Mineral Engineering at Clayton (Vic.); the Division of Mineral Physics at North Ryde (N.S.W.), Lucas Heights (N.S.W.) and Port Melbourne (Vic.), and the Physical Technology Unit at Ryde (N.S.W.).

Research on certain renewable sources of energy is carried out in the Institute of Biological Resources (Division of Plant Industry, Tropical Crops and Pastures, Water and Land Resources and the Centre for Irrigation Research) and in the Institute of Industrial Technology (Divisions of Applied Organic Chemistry and Chemical Technololgy).

National Energy Advisory Committee (NEAC)

The National Energy Advisory Committee was established on an interim basis in February 1977 and as a permanent committee in February 1978. Its functions include the provision of advice on Australia's energy reserves and on factors likely to influence the pattern of energy supply and demand, and future costs, in Australia; the assessment and development of our energy resources; and economy in the use of energy. The Committee is also required to offer advice on the balance of resources for research relating to the development of energy sources in Australia, and on development both here and overseas in respect of methods and technology associated with the production and distribution of energy.

The Committee consists of 19 members who have been selected with a view to covering a wide spectrum of expertise in the energy area, and appointed on the basis of the personal contribution which they can make to the work of the Committee, as distinct from any representational role they might otherwise perform. Since its inception, NEAC has published the following reports: *An Australian Conservation of Energy Program* (September 1977); *Australia's Energy Resources: An Assessment* (December 1977); *A Research and Development Program for Energy* (December 1977); *Motor Spirit—Octane Ratings and Lead Additives* (February 1978); *Electric Vehicles* (June 1978); *Exploration for Oil and Gas in Australia* (December 1978); *Fuel Economy Goals for Passenger Cars* (May 1979); *Efficient Use of Liquid Fuels in Road Vehicles* (July 1979); *Liquid Fuels—Longer Term*

Needs, Prospects and Issues (December 1979); *Strategies for Greater Utilisation of Australian Coal* (May 1980); *Natural Gas: The Key Issues* (June 1980); *Alternative Liquid Fuels* (July 1980); *Energy Conservation in Buildings* (December 1980); *Australia's Energy Resources 1980* (December 1980); *Motor Spirit: Vehicle Emission, Octane Ratings and Lead Additives—Further Examination* (March 1981); *Nuclear Power in Australia: Regulation and Control* (June 1981); *Renewable Energy Resources in Australia* (July 1981); and *Petroleum Products: Demand and Supply Trends in Australia* (June 1982).

Other Organisations

The *LPG Task Force* was established in 1978 to provide advice to the Government on development of the use of LPG as an automotive fuel. Its membership comprises representatives of bodies associated with the fuel supply and transport industries as well as Commonwealth and State Government. Among the matters considered are the development and adoption of nationally uniform standards and regulations for LPG vehicles, fuel composition and exhaust emission requirements, development of shipping and other infrastructure, public awareness of automotive LPG and demonstration through conversion of Commonwealth fleet vehicles.

Two committees with advisory responsibilities in regard to indigenous and imported crude oil supplies, petroleum stocks, refinery operations, and the distribution of refined petroleum products were formed in 1979. They are the *Oil Supplies Advisory Committee* (OSAC) which consists of Commonwealth officers and representatives of oil production and refining companies operating in Australia, and the *Commonwealth/State Oil Supplies Liaison Committee* which consists of Commonwealth, State and Territory officials with responsibilities for oil supply matters. The two committees usually meet in joint session. Meetings are held approximately every three months or more frequently as circumstances dictate.

Resources

Black coal

Black coal is currently second to petroleum products as the largest source of primary energy in Australia. In geological terms it varies greatly in age, ranging from Permian to Miocene, or from about 225 million years to 15 million years of age. Within this range the Permian or oldest coal measures are of the highest quality. By world standards, in relation to present population and consumption, Australia is fortunate in the availability of easily worked deposits of coal. The country's main black coal fields are located in New South Wales and Queensland, not far from the coast and from the main centres of population. Coal is a complex organic rock composed principally of carbon, hydrogen and oxygen, but also containing nitrogen, sulphur and other elements. It has formed from accumulated vegetable matter, which has subsequently undergone chemical and physical changes due to organic decay and to pressure and heat arising from burial. Coal also contains varying amounts of non-combustible materials such as silt and clay deposited as sediment among the vegetable debris: these contribute to the mineral matter content of coal which is related to coal ash. Most Australian black coal deposits are classed as bituminous, but there is some sub-bituminous coal and a little anthracite. The bituminous coals have a wide range of properties: volatile contents range from high to low and, although ash tends to be high, the sulphur content is almost universally low.

Identified economic black coal resources amount to over 549,000 million tonnes. Demonstrated economically recoverable resources are currently about 30,000 million tonnes, almost all in the Sydney Basin in New South Wales and the Bowen Basin in Queensland. There are other coal-bearing basins in New South Wales and Queensland, and small deposits are being worked in Western Australia, South Australia and Tasmania.

For further details relating to the production of black coal in Australia *see* Chapter 16, Mineral Industry.

Brown coal

Australia's brown coal identified economic resources are estimated at 43,600 million tonnes. Nearly all are located in Victoria where demonstrated economically recoverable resources are about 36,200 million tonnes. Small deposits exist in other areas of south Gippsland, in south eastern Victoria at Gelliondale and in the south-central region at Anglesea, Bacchus Marsh and Altona. Deposits are also known at many places along the southern margin of the continent, as far north as central Queensland, and large deposits are being tested in the Kingston area of South Australia and the Esperance area of Western Australia.

Because brown coal has a relatively low specific-energy value and high water content, its utilisation depends on large-scale, low-cost mining and negligible transportation costs in its raw state.

In Victoria the brown coal industry has reached a high degree of sophistication in mining, on-site development for power generation, briquetting and char manufacture. In a Victorian Government *Green Paper* published in 1977 the then Victorian Ministry of Fuel and Power estimated that by the year 2000–01, Victorian brown coal requirements will be between 724 and 1,036 thousand terajoules, or between about 79 and 113 million tonnes per year (production of brown coal in Victoria during 1977–78 was 30,512,000 tonnes). The brown coal deposits of the Latrobe Valley have been developed by the State Electricity Commission of Victoria (SECV) for the generation of electricity. By the end of 1982, about 800 million tonnes of raw brown coal will have been mined.

Energy research and development statistics

Estimates of the expenditure on energy R&D carried out in Australia during 1979–80, and classified by energy objective, are presented in the table below.

The estimate of manpower resources devoted to energy R&D in Australia during 1979–80 was 2,570 man years. Of this amount, business organisations accounted for 980 man years, general government organisations for 789 man years and higher education organisations for 801 man years.

More detailed statistics are contained in the ABS publication *Research and Experimental Development; Energy Production, Utilisation and Conservation, All Sectors, Australia, 1979–80* (8110.0)

ENERGY RESEARCH AND EXPERIMENTAL DEVELOPMENT(a), AUSTRALIA, 1979-80
DETAILS OF R & D EXPENDITURE BY ENERGY OBJECTIVE(b)
($'000)

Energy objectives(b)			*Sector of performance(d)*			
Energy codes	*Description*	*Total expenditure(c)*	*Business enterprises(e)*	*General government and higher education*	*Source of funds(f)* *Industry*	*Government*
	Production and utilisation of energy—					
513	Oil and gas—mining extraction techniques	170	(g)	(g)	(g)	(g)
111	—refining, transport and storage	1,311	756	555	753	558
112,523,533	—other	5,278	(g)	(g)	(g)	(g)
113,114,514,524,534	Oil shale and tar sands	696	(h)1,593	(h)4,552	(h)1,636	(h)4,508
512	Coal—mining extraction techniques	4,961	2,169	2,793	1,653	3,308
121	—preparation and transport	5,523	3,865	1,658	3,385	2,138
122	—combustion	3,844	3,216	627	2,956	888
211	—conversion	7,761	2,285	5,476	1,183	6,578
123,522,532	—other	8,464	6,742	1,722	5,706	2,758
131	Solar—heating and cooling	7,224	3,103	4,121	2,925	4,299
132	—photo electric	1,800	521	1,279	596	1,204
133	—thermal electric	287	73	214	16	271
141	Nuclear—non-breeder—light water reactor					
142	—other converter reactor	18,558				
143,511,521,531	—fuel cycle		5,815	16,289	6,177	15,927
144	—supporting technologies					
145	—breeder	—				
146	—fusion	3,545				
151	Wind					
152	Ocean	907	278	629	174	733
153	Geothermal					
221	Biomass	4,091	1,704	2,387	1,486	2,605
154	Other sources and new vectors	1,283	668	615	434	849
	Conservation of energy—					
311	Industry	3,852	2,794	1,058	2,249	1,603
312	Residential and commercial	2,344	851	1,493	956	1,388
313	Transportation	4,775	3,502	1,273	2,551	2,225
314	Other	640	482	158	462	178
	Other energy R & D (including supporting technologies)—					
411	Electric power conversion	2,262	1,614	648	1,456	807
412	Electricity, transmission and distribution	3,182	1,888	1,294	2,054	1,128
413	Energy storage, n.e.i.	1,098	(i)	(i)	(i)	(i)
414	Energy system analysis	869	30	839	59	810
415	Other	2,503	(j)619	(j)2,982	(j)772	(j)2,830
	Total all energy objectives	**97,228**	**44,567**	**52,661**	**39,636**	**57,592**

(a) Refers to R & D activity predominantly directed towards producing, storing, transmitting, utilising and conserving energy. (b) The energy objective categories represent ultimate national needs rather than the immediate objective of the researcher or the organisation performing the energy R & D. (c) Includes expenditure associated with overhead staff providing indirect services to energy R & D. (d) The sector classification used is adapted from the guidelines specified by the OECD for use in the conduct of R & D studies. (e) Excludes enterprises in ASIC Division A—i.e. enterprises mainly engaged in agriculture, forestry, fishing and hunting. (f) In accordance with IEA practice, source of funds are classified as either Industry or Government. (g) Included with oil shale and tar sands (codes 113, 114, 514, 524, 534). (h) Comprises codes 513, 112, 523, 533, 113, 114, 514, 524, 534. (i) Included with other (code 415). (j) Comprises codes 413 and 415.

Petroleum

After World War II the Commonwealth Government actively encouraged petroleum exploration. The Bureau of Mineral Resources was able to provide much background information (mainly of the results of geological and geophysical surveys) to organisations participating in the search for petroleum and the State Mines Departments also afforded considerable assistance. The results of early efforts in the post war period were generally disappointing, but oil was struck at Rough Range, Western Australia, in 1953. Although the flow was short-lived, the discovery marked an important stage in the search, and provided a much needed stimulus for further exploration.

Petroleum is broadly defined as any naturally occurring hydrocarbon or mixture of hydrocarbons, whether in a gaseous, liquid or solid state (excluding coal). Nearly all petroleum occurs in sedimentary rock sequences which contain source and reservoir beds. Australian sedimentary basins that do contain petroleum are thought to be comparable in yield to overseas basins of the same type, but they lack the

anomalously rich basins that are found in parts of the Middle East, the United States of America and USSR. The nature of Australian source rocks and the temperatures that they have undergone have produced lighter oils and a higher proportion of gas to oil than is usual elsewhere in the world.

Recovery of oil, by means of wells drilled into a sub-surface reservoir that relies solely on the natural expansion of reservoir gas and/or on the natural drive of reservoir water, is called "primary". "Secondary" recovery methods involve pumping, gas lifting, gas injection or injection of water. Many other techniques, referred to as "tertiary", may further improve recovery. In modern production, various techniques for enhanced recovery are applied more or less from the beginning to obtain the optimum economic result, hence the ultimate recovery of oil depends on cost (including royalty and levy) and price. No combination of these techniques, however, is capable of recovering all of the oil in a reservoir.

The proportion of gas recovered from gas reservoirs is generally higher than the proportion of oil recovered from oil reservoirs. The ultimate recovery of gas is sensitive to cost (including royalty) and price. These factors control the number of wells that may be drilled to develop the reservoir, the pressure at which the field will have to be abandoned and the rate at which the field is to be produced. In terms of size, petroleum fields are not evenly distributed: large fields are few and they generally contain a major proportion of the total petroleum resources of a province. The large fields tend to be discovered early in the exploration of a province, and for this reason it is highly unlikely that the Gippsland Basin contains an oil field larger than Kingfish or that the Rankin Trend of the Dampier Sub-Basin contains a gas field larger than North Rankin.

Major prospects for new oil discoveries are in untested areas and it is likely that most of Australia's undiscovered oil will be contained in only a few fields. Extrapolation from known areas suggests that undiscovered oil will be of the lighter types and that more gas fields than oil fields will be found. Assessments by the Bureau of Mineral Resources, Geology and Geophysics in September 1980 of Australia's undiscovered petroleum as at 30 June 1980 indicate that there is an 80 per cent chance of finding, at least, another 150 million kilolitres (950 million barrels) of crude oil in Australia, and a 20 per cent chance of finding at least 600 million kilolitres (3,800 million barrels). The mean of the BMR estimate, which occurs at 34 per cent probability is, 420 million kilolitres (2,600 million barrels). This compares with demonstrated economic resources of 270 million kilolitres (1700 million barrels) and demonstrated sub-economic resources of 33 million kilolitres (208 million barrels) as at 31 December 1981. For further details see the National Energy Advisory Committee's Report No. 14, *Australia's Energy Resources 1980 (December 1980)*.

PETROLEUM RESOURCES (a) AS AT 31 DECEMBER 1981

(*Source:* Department of National Development and Energy)

	Demonstrated Economic (b)				*Demonstrated Sub-economic (c)*			
Basin	*Crude oil* 10^6*kl*	*Condensate* 10^6*kl*	*LPG* 10^6*kl*	*Sales gas* $10^9 m^3$	*Crude oil* 10^6*kl*	*Condensate* 10^6*kl*	*LPG* 10^6*kl*	*Sales gas* $10^9 m^3$
Bowen-Surat (Qld)	1	—	—	2	—	—	—	2
Gippsland (Vic)	244	29	62	196	—	—	—	—
Gippsland-Bass-Otway (Vic./Tas.)	—	—	—	—	18	9	9	39
Cooper (S.A./Qld)	12	8	15	95	—	—	—	1
Carnarvon-Canning (W.A.)	12	46	48	343	—	—	—	—
Carnarvon-Browse-Bonaparte (W.A./N.T.)	—	—	—	—	5	16	20	200
Perth (W.A.)	1	—	—	8	—	—	—	—
Amadeus (N.T.)	—	—	—	—	10	2	4	30
Total	**270**	**83**	**125**	**644**	**33**	**27**	**33**	**272**

(*a*) Based on the McKelvey classification which sub-divides resources in terms of the economic feasibility of extraction and their certainty of occurrence. (*b*) Demonstrated economic resources are resources judged to be economically extractable and for which the quantity and quality are computed from specific measurements and extrapolation on geological evidence. (*c*) Demonstrated sub-economic resources are similar to demonstrated economic resources in terms of certainty of occurrence but are judged to be sub-economic at present.

PETROLEUM PRODUCTION IN AUSTRALIA

(*Source:* Department of National Development and Energy)

Year	*Crude oil* $10^6 kl$	*Condensate (a)* $10^6 kl$	*LPG (b)* $10^6 kl$	*Natural (Sales) gas* $10^9 m^3$
1976	24.249(*c*)	n.a.	n.a.	5.929
1977	24.986(*c*)	n.a.	2.680	6.766
1978	24.426	.705	3.920	7.324
1979	24.532	.836	3.920	8.381
1980	21.325	.915	2.990	9.567
1981	21.790	1.140	3.210	11.268

(*a*) Commercial production of condensate. (*b*) Naturally occurring. (*c*) Contains condensate marketed as part of a crude oil stream.

Liquefied petroleum gas

Liquefied petroleum gas (LPG) is the most promising alternative liquid fuel for internal combustion engines in Australia in the short and medium term. The major constituents of LPG are propane, iso- and normal- butane, and propylene, which are gaseous at normal temperatures and pressures and are easily liquefied at moderate pressures or reduced temperature. In Australia the major sources of marketable LPG are crude oil and natural gas fields. LPG is also obtained as a co-product during oil refining and from petrochemical plants. Identified economically recoverable resources of 136,000 million litres are concentrated in Bass Strait, the North West Shelf and the Cooper Basin. In addition it is estimated by the Bureau of Mineral Resources, Geology and Geophysics, that there is an 80 per cent probability of future discoveries identifying a further 90 million litres of LPG. Production of naturally occurring LPG in Australia in 1981–82 was 3,027 million litres (about 85 per cent being extracted from crude oil and natural gas from the Bass Strait fields) most of which was exported to Japan. Most of Australia's 1981–82 consumption of LPG of 1,030 million litres was obtained from indigenous and imported crude oil processed at oil refineries around the country and as a by-product of the chemical industry.

Currently, of the major reserve basins, only Bass Strait is producing LPG at about 1.6 million tonnes per annum. The Cooper basin producers have announced their intention to proceed with a liquids scheme to recover LPG and condensate, to be on-stream in 1984. Annual output from the Basin could approach 500,000 tonnes by the mid 1980s. The North West Shelf Joint Venturers have announced firm plans to extract LPG from both domestic and export gas streams. Production of LPG from the North West Shelf, planned to commence in 1987, will be around 640,000 tonnes per annum and will be maintained at this level through the 1990s.

About 70 per cent of Australia's LPG production is exported (1.4 million tonnes in 1981–82) under relatively short term contracts. Exports could be expected to be diverted at relatively short notice to meet domestic needs, given sufficient incentive. On present analysis export of LPG from Australia would cease by the early 1990s.

Pricing of Australian crude oil

The pricing of Australian crude oil at import parity levels is fundamental to energy policy in Australia. Crude oil is a scarce and valuable resource and the Government considers that it should be competitively priced, to ensure that its usage recognises this value. Import parity pricing is considered essential to encourage:

- conservation of liquid fuels;
- exploration and development;
- substitution by more plentiful gaseous and solid fuels;
- the economic development of liquid fuel substitutes.

As a result import parity pricing provides the basis for the long-term security of supply for Australia and the continuous adaption of the Australian economy to changing world energy prices.

The present pricing and excise arrangements for locally produced crude oil are based on the June 1979 and earlier Commonwealth Government announcements. Producers receive the full import parity price for oil discovered after 18 August 1976 (new oil) and a return that varies according to the rate of annual production of the producing field (or area) for oil discovered before that date (old oil).

For old oil the producer return plus the excise (net of the applicable rebate) equals the import parity price paid by the refiner.

The return to producers from parity related old oil defined as the greater of:

- the first 953,925 kilolitres (6 Million barrels) per annum produced from each field; or
- a percentage of production (60 per cent for medium fields and 50 per cent for large fields in 1982–83).

Parity related production receives a return which depends on the rate of annual production of the producing field as follows:

- For small fields, that is those producing less than 317,975 kilolitres (2 million barrels) per annum, the producers receive the import parity price less an excise of $18.90 per kilolitre.
- For medium fields that is those producing at least 317,975 kilolitres (2 million barrels) but less than 2,384,813 kilolitres (15 million barrels) per annum, the producers receive $67.07 per kilolitre for Bass Strait and $67.63 for Barrow Island, the returns they were receiving on 30 June 1979 for parity related oil, plus 25 per cent of any increase in the import parity price since then.
- For large fields, that is those producing 2,384,813 kilolitres or more (15 million barrels) per annum, the producers receive $60.29 per kilolitre increased by the lesser of the percentage increase in the CPI since the September quarter 1978 or the percentage increase in the import parity price after 1 July 1979.

Producers receive a fixed return for that part of their old oil production which does not receive by the higher parity related return. Fixed returns received by the producers are based on the price applicable on 31 December 1978 ($14.66 per kilolitre for Bass Strait and $18.12 per kilolitre for Barrow Island) plus any increases in the compensation for credit terms since then.

The import parity price is currently reviewed every six months (1 January and 1 July) and is based on the landed cost of Saudi Arabian Light crude oil at the nearest refinery port to the producing field adjusted for domestic freight costs, quality differential and compensation for credit terms. The current import parity price, from 1 July 1982 is $223.12/kl ($35.46/barrel) for Bass Strait crude, $225.85/kl ($35.89/barrel) for Barrow Island, $210.66/kl ($33.48/barrel) for Dongara and $231.28/kl ($36.75/barrel) for Moonie and nearby areas. These prices are based on a $US32/bbl price for the marker crude, Saudi Arabian Light.

Royalties are paid to the relevant State Government for onshore production and are shared between the *Commonwealth and the State* under the *Petroleum Submerged Lands (Royalty) Act* 1967 in the case of offshore production.

Crude oil allocation scheme

The crude oil allocation scheme was introduced in 1965 to stimulate the production of Australian crude oil by guaranteeing a market for this production which was then a relatively expensive source of crude oil. The present allocation scheme first came into operation in September 1971. On 17 September 1980 the Minister for National Development and Energy announced the extension of this scheme, subject to some modifications, until 31 December 1984.

The scheme provides for the allocation of indigenous crude oil to refiner/marketers based on their market share of most refined petroleum products sold or consumed in Australia.

The only major petroleum product that currently does not attract a full allocation is fuel oil. By 1 January 1983, fuel oil sales will no longer make any contribution to a refiner's allocation of indigenous crude oil.

Another important modification made to the crude oil allocation scheme was that from 1 January 1981, producers of crude oil who continue the sale of gas condensate (liquid petroleum produced in association with natural gas) may retain an equivalent volume of crude oil for their own use for disposal. This producers' entitlement to crude oil is however subject to the crude oil excise and import parity pricing arrangements. Condensate marketed separately from a crude oil stream is not subject to allocation and excise and is sold at free market prices.

The crude oil allocation scheme facilitates an equitable distribution, to the refiners, of indigenous crude oil at the import parity price.

Pricing of liquefied petroleum gas (LPG)

In January and April 1980, the Government's decisions relating to the pricing of LPG were announced. The policy has been formulated against the background of relatively high proportions of domestically produced naturally occurring LPG being exported, in contrast to the need to import crude oil and some petroleum products to meet the demand for liquid fuels. The policy is designed to encourage the maximum efficient use of LPG in Australia, particularly in those areas such as automotive use, where LPG has a premium value. By this means Australia will reduce its dependence on imported oil and increase its security of supply.

To achieve this policy objective, the Commonwealth Government sets the price that the producers receive for LPG sold for automotive, domestic and traditional commercial/industrial uses at a level

such that the resulting retail prices provide an incentive for its use as an automotive fuel, and do not cause undue hardship to other users. The policy is designed to maintain an approximate 50 per cent differential between LPG and petrol prices at retail level for motorists in the Melbourne market, with flow-on benefits to other locations. The level of indigenous supply of LPG is determined by the levels of production of crude oil and natural gas, of which LPG is a co-product.

The Government's LPG price scheme is not intended to apply to large scale new non-traditional commercial/industrial uses, exports or sales for petrochemical uses. In these areas, the price is determined by commercial negotation.

The price set by the Government for both naturally occurring and refinery produced LPG is determined at the lesser of $205 per tonne indexed to increases in the import parity price since 1 January 1980, and the export parity price. Until 30 June 1981, the index linked price applied, but following a significant fall in the world market price for LPG, the prices applying have been based on the export parity price. At 1 July 1982, the price was $220.09 per tonne.

Under the excise arrangements announced on 8 April 1980, producers of naturally occurring LPG from fields in production prior to 17 August 1977 pay excise at a rate equivalent to 60 per cent of the excess of the weighted average of domestic and export prices over $147 per tonne. Naturally occurring LPG from fields brought into production on or after 17 August 1977 remains free of excise.

A factor in the retail price of LPG and reticulation gas produced from LPG and naphtha is the subsidy of $80 per tonne introduced during 1980 for household users and commercial and industrial users in areas without access to natural gas. The subsidy is due for review by March 1984.

Oil shale

Oil shales are fine-grained Clastic sedimentary rocks containing an organic material, kerogen (which is insoluble in ordinary petroleum solvents) and a minor proportion of soluble hydrocarbons (such as bitumen). To obtain oil from shale the kerogen must be heated to about 500°C. The kerogen then decomposes to produce a liquid hydrocarbon mixture (crude shale oil), gases, and a solid residue (spent shale).

In-ground demonstrated resources of shale oil are about 23,000 million barrels, at Rundle (2,650), Nagoorin (2,650) and Stuart (2,500) near Gladstone, Condor (about 8,200) near Proserpine, Duaringa (3,720) 100km west of Rockhampton, Julia Creek (about 1,500) Yaamba (1,630) near Rockhampton, and small deposits mainly in New South Wales, Queensland and Tasmania.

Three types of oil shale deposit have been identified in Australia. They range in geological age from Cambrian to Tertiary. Marine deposits, associated with limestone and marine shale are generally of low to medium grade. They include a comparatively small occurrence of Cambrian age at Camooweal in northwest Queensland, some small deposits of Permian age near Devonport in northern Tasmania and a very extensive deposit of Cretaceous age (including the Julia Creek deposit) in the Toolebuc Formation which underlies a large area of Central Queensland.

Lake deposits may extend over hundreds of square kilometres and may be hundreds of metres thick. They are generally of low to medium grade with average yields of up to about 100 litres/tonne. Lake deposits occur in a number of Tertiary basins in eastern Queensland including the Narrows Graben near Gladstone (containing the Rundle and Stuart deposits); the Duaringa Basin; the Hillsborough Basin near Proserpine (Condor); and the Yaamba Basin. Most of the lake deposits are in geographically favourable locations and for this reason appear to have the highest potential for exploitation.

Oil shales associated with coal seams are widespread in Permian and Jurassic strata in Queensland and New South Wales. The aggregate thickness of oil shale (generally up to 2 metres) and the areal extent (tens of square kilometres) of individual deposits are small relative to the other types of deposit, but yields of oil are high (400–700 litres/tonne). Many of these deposits are unsuitable for open-cut mining because of thick overburden and extensive faulting. Several deposits of this type were mined by underground methods in New South Wales between 1865 and 1952. During early exploitation most of the shale oil was refined to produce lighting oils and waxes and many of the small rich deposits were worked out. In later production, mainly during the Second World War, the emphasis was on the production of motor spirit and oils.

A number of oil shale deposits are currently being studied with a view to commercial development, the most significant projects being Rundle and Condor. Research and engineering studies are under way to examine the economic and technical feasibility of establishing a commercial-scale plant at Rundle to produce syncrude.

Uranium

Australia has about 19 per cent of the Western world's low-cost uranium reserves. Deposits occur in the Northern Territory, Western Australia, South Australia and Queensland.

The chief use for uranium is as a fuel in nuclear reactors. It is also used for power generation in atomic energy research programs. Relatively small quantities of uranium depleted in the fissionable

U^{235} isotope are used for ballast, counterweights and balances in aircraft, radiation shielding, in alloys as a catalyst, as a glass colorant and in electrical components. The requirement for uranium in power generation is so much larger than these other uses that natural uranium can be regarded for most practical purposes as a fuel for nuclear power reactors.

Consideration is being given to the establishment of a uranium enrichment plant, but at present there are no plans for the construction of nuclear power plants in Australia.

Uranium was first observed in Australia in 1894 but systematic exploration did not begin until 1944 following requests from the United Kingdom and United States Governments. A number of significant deposits were identified, particularly in the Katherine/Darwin region of the Northern Territory and the Mt Isa/Cloncurry region in Queensland. This initial phase of exploration activity reached a peak in 1954.

In the period 1954–71 about 9,200 tonnes of uranium oxide concentrate was produced from five plants at Rum Jungle, Moline and Rockhole in the Northern Territory, Mary Kathleen in Queensland and Radium Hill in South Australia. Uranium requirements for defence purposes decreased in the early 1960s and uranium demand and prices fell rapidly, whereupon exploration for uranium almost came to a standstill.

A revival in exploration in the late 1960s was encouraged by the announcement in 1967 of a new export policy, designed to encourage exploration for new uranium deposits while conserving known resources for future needs in Australia. The renewed exploration activity which followed was very successful—major discoveries were found in South Australia: Beverly (1969), Honeymoon (1972), Olympic Dam (1975)), and in the Northern Territory: Ranger (1969), Nabarlek (1970), Koongarra (1970), Jabiluka (1971)). These and other discoveries have led to substantial additions to Australia's reasonably assured uranium resources which now total 294,000 tonnes of uranium recoverable at less than US$80 per kg U.

Uranium production at the Mary Kathleen Mine resumed in 1976; production in 1981–82 was 935 tonnes U308.

On 25 August 1977 following consideration of the reports of the Ranger Uranium Environmental Inquiry, the Government announced its decision to allow development of the Ranger uranium deposit to go ahead, and to consider further development on the basis of stringent arrangements and controls concerning the environment and Aboriginal welfare in the region. Exports of uranium are subject to the Government's nuclear safeguards and non-proliferation policies. The Ranger Uranium Mine received authorisation for development under the Atomic Energy Act in January 1979 and production of uranium concentrate at a planned rate of 3,000 tonnes U308 a year commenced in late 1981. Government approval was given to the Nabarlek project in March 1979 and mining of the high grade deposit was completed in late 1979. Production of uranium concentrate from the stockpiled ore commenced in June 1980; production in 1981 was 1,426 tonnes U308. The Jabiluka project received development approval during 1982 and production of up to 4,500 tonnes U308 per year could commence towards the end of 1986. The Commonwealth approved the development of the Yeelirrie uranium project in Western Australia in June 1979. The project will be developed and controlled under the Western Australia Uranium (Yeelirrie) Agreement 1978 between the Western Australian Government and the Western Mining Corporation. Full scale production of uranium concentrate from the mine is not expected to commence before 1985–86 at the rate of about 2,500 tonnes U308 a year for ten years and 1,000 tonnes U308 a year for a further twelve years. The Lake Way Project in Western Australia received development approval in January 1982 and could commence production in 1984. The Honeymoon project in South Australia received development approval in October 1981. Small-scale production is scheduled to commence in 1983 and full-scale production in 1985–86.

Since the Government's 1977 decision to proceed with the further development of Australia's uranium resources, Australian uranium producers have entered into commitments for the export of 44,000 tonnes U308 over the period 1981 to 1996 for electricity generation in Japan, the Federal Republic of Germany, the Republic of Korea, the United States of America, Sweden, Belgium, Finland and France. The value of exports under these contracts is estimated at $A3,500 million in 1982 dollars.

The *Australian Atomic Energy Commission* (AAEC) was established as a Statutory body by the Commonwealth Parliament under the *Atomic Energy Act* 1953.

The AAEC's activities are controlled by a Commission which is responsible to the Minister for National Development and Energy. The Atomic Energy Act provides for the Commission to consist of five Commissioners including a Chairman.

Moving in its earliest days towards the planning and construction of a nuclear research establishment at Lucas Heights near Sydney, the Commission arranged for a nucleus of scientists and engineers to obtain training and experience through overseas attachments, mainly in the United Kingdom. By the late 1950s a research and development (R & D) program had been initiated at its research establishment.

The Commission's current program places emphasis on the following areas: nuclear fuel cycle; energy research and assessment; radioisotopes and radiation; and international relations. The commission operates two nuclear research reactors 'HIFAR' 10MW thermal and 'MOATA' 100kW thermal at Lucas Heights.

Current expenditure by the AAEC is of the order of $38 million a year. Staff totals some 1,200 professional, technical, trade, administration and support personnel.

The AAEC participates in the activities of the Australian Institute of Nuclear Science and Engineering. The Institute, which has a corporate membership comprising the Commission and the Australian universities, is concerned with the awarding of studentships, fellowships and research grants, with the organising of conferences and with arranging the use of AAEC facilities by research workers within the universities and colleges of advanced education. The Australian School of Nuclear Technology, located at Lucas Heights, is a joint enterprise of the AAEC and the University of New South Wales. Courses are provided regularly on such subjects as radionuclides in medicine, radiation protection and nuclear technology. Participants have been drawn from Australia, New Zealand, Asia, Africa, Papua New Guinea and the Pacific region.

The Government announced on 5 June 1981 that to provide an appropriate basis for the development, regulation and control of nuclear activities in Australia significant changes are necessary to Commonwealth legislation on nuclear matters. The Government has decided to establish a new legal base for these purposes in consultation with the States by developing State legislation complemented as necessary by the Commonwealth legislation.

For further details relating to the production of uranium in Australia *see* Chapter 16, Mineral Industry.

Thorium

Thorium is about three times as abundant in the earth's crust as uranium. However, because of the resistance of primary thorium minerals to chemical alteration, secondary thorium minerals are rare, thorium therefore occurs in fewer geological environments than uranium. The bulk of potentially exploitable resources of thorium occur in essentially lower grade accumulations than the exploitable resources of uranium. Most of the world's thorium resources occur in monazite, a complex silicate which is currently recovered primarily for its content of rare-earth oxides. Primary thorium minerals (including monazite) are resistant to oxidation and form economically important placer deposits. Large deposits occur throughout the world in beach and stream placers and also as hard-rock deposits in veins, sedimentary rocks, alkalic igneous rocks and carbonatites.

In Australia, by-product monazite in titanium-bearing minerals sands on the east and west coasts of the continent is currently the only economical source of thorium, although other occurrences of thorium minerals are known. Australia currently supplies about half of the world's monazite requirements.

The Commonwealth Government controls the export of thorium and thorium minerals under the authority of the Customs (Prohibited Exports) Regulations as amended from time to time by Statutory Rules. The export of minerals containing thorium and thorium compounds and alloys is prohibited without the approval of the Minister for Trade and Resources.

Solar energy

Solar energy is available to a varying extent, over the entire surface of the earth and because of this it is difficult to evaluate in the same terms as the more conventional, intensive energy sources. Like wind, tidal and wave energy, solar energy is renewable (in a sense, of course, it is inexhaustible) and shares with these energy sources a number of properties which make it both difficult and costly to collect, store and transform into useful work. Solar energy has the inherent characteristics of low intensity and of geographic, seasonal and daily variations.

The Bureau of Meteorology has at present 22 solar radiation stations, 18 of which have been operating since 1970. These make continuous routine measurements to standards recommended by the World Meteorological Organisation. They are supplemented by other measurements such as air temperature, dewpoint and wind, needed for many uses.

In the past, the lack of developed or potentially viable systems for collection, storage, transmission and utilisation and the problem of coping with the weather and seasonal fluctuations have contributed to a reticence to consider solar energy seriously, particularly for large-scale usage. Its future potential will depend largely on technological developments and the rate of escalation in fuel prices.

Solar energy is available in the form of low temperature heat when collected with commercially available flat plate collectors. These and other low grade heat applications for domestic and industrial

use, together with solar building design, are technologies available now, eg in the solar hot water industry sales have now reached $30 million per annum. Collection of heat at higher temperatures to produce steam is a new direction in solar technology and its potential use lies in reducing the consumption of liquid fuels in industry.

As a source of electricity, solar energy in some specialist applications is already cost effective, e.g. solar energy is currently being used for navigation and communication purposes. It may also have further uses in supplying remote communities and mining townships. Technologies are available now for air conditioning in those areas where electricity costs are high, but research is needed to improve their efficiency and reduce high capital costs. In the medium to longer term, plant material resulting from photosynthesis may be a useful source of liquid and gaseous fuels for transportation and there are even some longer range plans to use hydrogen as both an energy source and energy carrier.

Ocean thermal energy

Although the potential energy available from ocean thermal energy conversion (OTEC) is enormous, there are many problems to be overcome before it could become viable. These include the limited efficiency of the heat exchangers, the effect of micro-organisms and corrosion on underwater equipment and the economics of transporting power to land-based load centres. Many observers are pessimistic because of the complexity of these engineering problems and regard the potential of OTEC as speculative. In Australia, virtually no assessment of this energy source has been made. It has been suggested that tropical waters such as those off the Queensland coast would be suitable, but power generated from this area would be a considerable distance from the major power consumers in the south and not competitive with electricity based on coal. The first experimental plant, rated at 50 kW, commenced testing in the waters off the Hawaiian coast but little information on performance is yet available.

Wind energy

There are a number of difficulties in assessing wind power as an energy resource, most of these stemming from the fact that wind resources are sources of actual kinetic energy and like the other forms of solar-derived energy, cannot be defined and measured in the same way as resources of chemical, nuclear, or potential energy. Available wind energy varies with the wind speed, which in turn varies with geographic location, height above ground, time of day and the seasons of the year. Even over a restricted area, the wind speed can be sharply influenced by topography, shelter, sea breezes and diurnal heating.

Apart from a program carried out in South Australia in the 1950s there has been no systematic assessment of the wind resources of Australia. Wind measurements are made, however, at various sites throughout Australia for climatological and meteorological purposes.

The effective recoverability of wind resources is limited by the need to transmit the power over long distances in Australia and by the fact that no satisfactory means of storing wind energy on a large scale yet exists. At present the use in Australia of this resource is confined to windmills for water pumping and small electricity-generating wind machines. These have been a useful small-scale alternative to conventional sources of energy in remote and isolated areas of Australia and will probably continue to be so in the future.

Wind machines rated at 50 kW and 20 kW are currently being demonstated and tested on Rottnest Island in Western Australia and are expected to produce energy competitive with that produced by diesel power in the area and will provide valuable information for the assessment of energy from wind motors.

Future potential is almost entirely dependent on advances in technology which can make wind power competitive with conventional forms of power. However, in Australia there is not the same need for alternative means of large-scale electricity generation as in other countries because of our abundant coal resources. Therefore, it is unlikely that there will be large-scale use of this energy source in Australia this century.

Geothermal energy

Most of Australia's geothermal resources are of the conduction-dominated type. The most extensive and well documented study in Australia of subsurface temperatures has been made in boreholes in the Great Artesian Basin. In this basin, about 20 per cent of indexed water bores penetrate to depths greater than 1,000m and since geothermal gradients are generally greater than 30°C/1,000m, it is reasonable to assume that hot water can be obtained from such aquifers. Of the total number of indexed water bores, only a very small proportion have water temperatures greater than 100°C.

Australia's geothermal resources in other basins are probably comparable with that in the Great Artesian Basin, since the extrapolation of flow rates and temperatures to other sedimentary basins is considered geologically reasonable. The Great Artesian Basin extends mainly throughout Western

Queensland, which would limit its potential use to remote homesteads and small townships. Economic and technical difficulties suggest that in the foreseeable future the use of our geothermal resources will be largely restricted to hot water supply, for space heating and light industrial purposes.

In Australia, it has been estimated by the Bureau of Mineral Resources that identified (demonstrated and inferred) geothermal resources are about 1 per cent of Australia's annual primary energy consumption. This estimate, however, does not imply that these resources are economic, nor that they could be used for efficient electricity generation. Undiscovered geothermal resources may be many orders of magnitude greater than the above estimate.

Tidal energy

Tidal energy is a dispersed energy source derived from regular fluctuations in the combined gravitational forces exerted by the moon and the sun, at any one point on the earth's surface, as the earth rotates. The mean tidal range in the open ocean is about 1 metre, but under suitable hydraulic and topographical conditions, much higher tides than this build up in places around coasts, due to resonance. Because only two commercial tidal plants exist so far in the world, relatively little is known about the possible environmental impact of large-scale utilisation. It is unlikely, however, that tidal installations would be entirely without effect on the ecological life of bays and estuaries within their area of influence due, for instance, to silting and concomitant dredging.

Around Australia there are theoretically very large amounts of tidal energy available, especially on the north-west coast where the tidal range is as great as 11 metres and where the topography is suitable. The tidal potential of this region has been the subject of a series of investigations, including one carried out in 1965 on one of the most promising sites at Secure Bay. It was concluded that a minimum of 12 years design and construction time would be required, although the cost of electricity at the site would be similar to that derived from conventional thermal stations. However, the long distances to potential markets result in a doubling of these electricity generation costs. Subsequent studies by the State Energy Commission of Western Australia have indicated that lead times and construction costs could be reduced but not sufficiently to make tidal energy economically attractive even if a suitable electricity consumer were nearby.

The likelihood of early exploitation of this resource would appear to be less than in other countries, if only because of the long distances involved in transmission to population centres. In Australia, the major consumer regions are located along coastlines where the tidal range is very small.

Biomass

Biomass (matter of biological origin) can be utilised as an energy resource in a variety of ways. From the viewpoint of national energy priorities its major potential is as a source of liquid fuels for transport, particularly ethanol and methanol.

In 1979, the CSIRO completed a survey of the potential for the production of these fuels from agricultural and forestry resources in Australia. The resources considered were potential new energy crops and forest plantations, as well as the residues from existing crop and forest production. In estimating potential new crop production, it was assumed that all land with suitable climate, soil and terrain for an energy crop would be available for energy farming; except land at present under crops or sown pastures.

The total biomass resources considered could provide a net liquid fuels output of 460 petajoules, 65% of the energy used as liquid fuel in transport in 1977-78. This is a net figure, taking into account the liquid fuel input into production, but not socio-economic considerations such as the possibility that there may be more profitable or socially desirable uses for the land available for new crops. It must be considered as an upper limit only. Largely as a result of the cost of the feedstocks, liquid fuel from biomass is not currently cost competitive with petroleum-based fuels.

Other energy crops

Other types of crops, which produce materials more amenable to conversion to fuel, may offer more potential. Crops at present being considered for this purpose include cereal grains, cassava and sugar cane. Cereal grains and cassava produce starch. The conversion of sugar and starch to ethanol is a well established and straightforward industrial process. The major problems, which also arise with large tree plantations, are that crop production for energy must also compete with alternative uses of the agricultural resources employed (land, labour, capital, water, fertiliser) and that there are alternative uses for these crops, including human food, animal foodstuffs and fibre. The CSIRO is at present investigating the possibility of growing sugar cane, cassava and cereal grains for fuel production on land not now used for crop production. Their results may give an indication of the potential for producing energy in this way.

Ethanol from Sugar Cane

Over 100 megalitres of ethanol for industrial and potable use is already produced each year from molasses, a by-product of the cane sugar industry. There is however little scope to increase production of molasses, and an expanded cane-based ethanol industry would need to use whole cane juice as

feedstock. This is attractive because sugar cane has the highest yield of ethanol per hectare of the potential energy crops, averaging 7,000 litres. It has the added advantage that bagasse, the fibrous residue after crushing cane, can be used for the process heat, eliminating use of fossil fuel and substantially improving the energy balance for ethanol production.

There is considerable scope for expanded sugar cane production. Currently 350,000 hectares are assigned for growing cane. CSIRO has estimated that an additional 285,000 hectares could be used for cane production, but utilisation of most of this land would require the development of new irrigation and milling facilities. As an indication, this level of production would yield a net ethanol output equivalent to 7-10% of our current motor spirit needs. The major barrier to a fuel ethanol industry at present is the economics; the cost of production from cane is in the region of 60 cents per litre substantially higher than the cost of petrol.

Ethanol from Other Sources

Cereal and coarse grains (wheat, barley and grain sorghum) give much lower yields of ethanol per hectare, but much larger areas of land are available (11.6 million hectares), mainly in northern New South Wales and Queensland. Utilisation of much of this land would conflict with its present use as grazing land for sheep and cattle. Ethanol production from cereal grains yields a high protein by-product with potential for use as a human food additive or animal feed. The economics of a cereal based ethanol industry would depend heavily on whether markets would be available for the by-product.

Cassava is a tuberous crop with high starch content which grows in the same geographic regions as sugar cane but can tolerate poorer soil and lower rainfall. Cultivation trials on cassava are currently being conducted. The results suggest that cassava could well be grown as an ethanol feedstock in these areas, particularly on marginal agricultural land and land at present used for grazing. Cultivation trials are also being undertaken on sweet sorghum in Queensland and New South Wales, and on sugar beet in Tasmania.

Oil-seed crops

Owing to their poor compression ignition properties, ethanol and methanol are not ready substitutes for distillate as diesel fuel. On the other hand, recent research in Australia and overseas indicates that vegetable-oils give satisfactory performance as fuels in diesel engines, although further research is necessary to establish, for example, their effects on long term engine performance and durability.

In 1980-81 Australia produced 447,000 tonnes of safflower, sun-flower, soybean, rapeseed, linseed, cotton seed and peanuts from 418,000 hectares sown to oil seed crops. This yielded a net 126,000 tonnes of vegetable oil allowing for import and export of seed, and compares to an estimated Australian consumption of 220,000 tonnes.

At one tonne/hectare rapeseed or sunflower would yield 435 litres of oil, equivalent to 380 litres of dieseline per hectare. The cost of production is believed to be around 60c/litre, almost twice the cost of dieseline. CSIRO is gathering data on the scope for expanded production, under Project Crop-fuel.

Hydrocarbon plants

A number of plants produce hydrocarbon-like compounds which can be extracted and converted to liquid fuels by a catalytic cracking process. A recent study under the NERDD Program indicates that the extracts would cost $116 to $196 per barrel of oil equivalent. None of these crops are presently grown commercially.

Forests and Agricultural Residues

The rapid rate of depletion of fossil fuels is focussing attention again on wood as a renewable resource, and the potential production of fuels from agricultural wastes. Various fuels may be derived from wood, mainly methanol, ethanol and charcoal. Charcoal can be converted into fuel gas which is usable for a range of applications. Methanol can be produced by pyrolysis of wood and ethanol by hydrolysis and fermentation of cellulose.

Based on the definition and classification adopted by FORWOOD Conference, 1974, Australia's estimated productive forest area at 30 June 1978 was 43,825,000 hectares. Of this, plantations comprised 699,300 hectares (coniferous 655,100 and broadleaved 44,200 hectares). It is estimated that by 1984-85 total production and consumption in Australia will reach 1,442,000 tonnes in terms of primary energy consumer. This quantity represents 22.8 x 10^{15} Joules, an insignificant proportion of Australia's overall energy demand, although, especially in South and Western Australia, firewood has had some regional significance.

Another aspect of wood utilisation which is under study in Australia is forestry residues as a source of fuel. Forest residues are the products left after logging, stems which are removed in silvicultural treatments and the as yet untapped resources of woodland classed as unproductive. Mill residues comprise bark, sawdust, shavings, defective section of the tree bole and off-cuts. It is estimated that the

production of sawmill wastes in Australia is 3.5 million tonnes/year. After allowing for the quantities chipped for pulp and other uses, about 2 million tonnes would be available as fuel. Some of this would be included in the consumption of firewood by industry. Utilising the unknown volume of forest residues and unproductive woodlands involve problems of concentration and transport.

The immediate need however is for liquid fuels. It does not seem likely that ethanol from wood will be able to compete with that from other feedstocks which do not require hydrolysis. Methanol is more promising, and use of 15-16 million tonnes of wood to produce a net 4,400 megalitres of methanol may be possible. However, methanol from wood could not compete economically against methanol from coal or gas.

Electric power

The information contained in this section relates to situations existing and projects contemplated, and may be considerably affected by changes in policy or plans, or by developments in the projects themselves. Greater descriptive and historical detail about the various systems is contained in earlier issues of the Year Book.

Hydro-Power

With the exception of Tasmania, Australia is not well-endowed with hydro-electric resources because of its generally low rainfall and limited areas of high relief. Its hydro-electric resources are confined almost entirely to Queensland, New South Wales, Victoria and Tasmania.

In 1976 the World Energy Conference estimated Australia's gross theoretical hydro-electric capability at 53,500 gigawatt hours (GWh) per year. However, due to topography, economics or the committal of water for irrigation, only 22,500 GWh/year is considered to be capable of being ultimately developed.

Installed hydro-electric generating capacity in Australia is currently 6,250 MW which represents 24 per cent of the total installed generating capacity of public electricity supply authorities in Australia. This hydro-electric capacity generated 14,859 GWh in 1980–81 representing 16 per cent of total public electricity generation in Australia.

Future hydro development will mainly be confined to Tasmania, and to a lesser extent North Queensland, as most of the large lower cost sites have either been developed or are under development. By 1985 over 75 per cent of Tasmania's ultimate hydro potential would have been harnessed and with the exception of the Burdekin River in Queensland, Australia's remaining hydro potential will be confirmed to smaller more expensive sites.

Although hydro-electric power stations will continue to be constructed into the 1990s hydro's share of total generating capacity and electricity production will continue to decline as a result of the large expansion program for coal-fired power stations during this period.

Snowy Mountains Hydro-electric Power Act 1949*

In July 1949 the Commonwealth Government established the Snowy Mountains Hydro-electric Authority (*Snowy Mountains Hydro-electric Power Act* 1949) and empowered it: to generate electricity by means of hydro-electric works in the Snowy Mountains area; to supply electricity to the Commonwealth Government (i) for defence and other purposes, (ii) for consumption in the Australian Capital Territory; and to supply the surplus to the States of New South Wales and Victoria.

The Snowy Mountains Act is supported by a detailed agreement between the States of New South Wales and Victoria and the Commonwealth Government with regard to the construction and operation of the Scheme, the distribution of power and water, charges to be made for electricity, and other such matters. The Snowy Mountains Council, established under the terms of the Agreement and consisting of representatives of the Commonwealth Government, the Authority and the States of New South Wales and Victoria, directs and controls the operation and maintenance of the permanent works of the Snowy Mountains Scheme for the control of water and the production of electricity.

Snowy Mountains Hydro-electric Scheme

The Snowy Mountains Scheme is a dual purpose hydro-electric and irrigation complex located in south-eastern Australia and is one of the largest engineering works of its type in the world. It impounds the south-flowing waters of the Snowy River and its tributary, the Eucumbene, at high elevations and diverts them inland to the Murray and Murrumbidgee Rivers through two tunnel systems driven through the Snowy Mountains. The Scheme also involves the regulation and utilisation of the headwaters of the Murrumbidgee, Tumut, Tooma and Geehi Rivers. The diverted waters fall some 800

* *See also* Chapter 15, Water Resources of this issue and the special detailed article in Year Book No. 42, pages 1103-30.

metres and together with regulated flows in the Geehi and Tumut River catchments generate mainly peak load electricity for the States of New South Wales and Victoria and the Australian Capital Territory as they pass through power stations to the irrigation areas inland from the Snowy Mountains.

The Scheme was completed in 1974 with an installed generating capacity totalling 3,740 MW and an annual average output of over 5,000 GWh. An average of 2,300 GL of water per year has become available in the Murray and Murrumbidgee Rivers as a result of the Scheme. The electrical output of the Scheme is distributed to the Commonwealth (670 GWh/year) and to the States of New South Wales and Victoria which share the remainder of the output of the Scheme on a two-thirds/one-third basis respectively.

Utilisation of power from scheme

The Snowy Mountains Scheme is situated about midway between the principal load centres of Sydney and Melbourne and is connected to those cities by 330 kV transmission lines. It is, consequently, in a position to take advantage of the diversity in the power requirements of these two load systems, a most important factor in so far as it affects the economy of operation of the supply systems of the two States. The average annual notified energy of the Snowy Mountains Hydro-electric Scheme is 5,129 GWh a year. The Commonwealth Government reserves 670 GWh for supply to the A.C.T.; for convenience, the Commonwealth Government's requirements are drawn from the New South Wales transmission network by an exchange arrangement between the Commonwealth Government and the Electricity Commission of New South Wales. Electricity over and above that required by the Commonwealth Government is divided between the states of New South Wales and Victoria in the ratio 2:1.

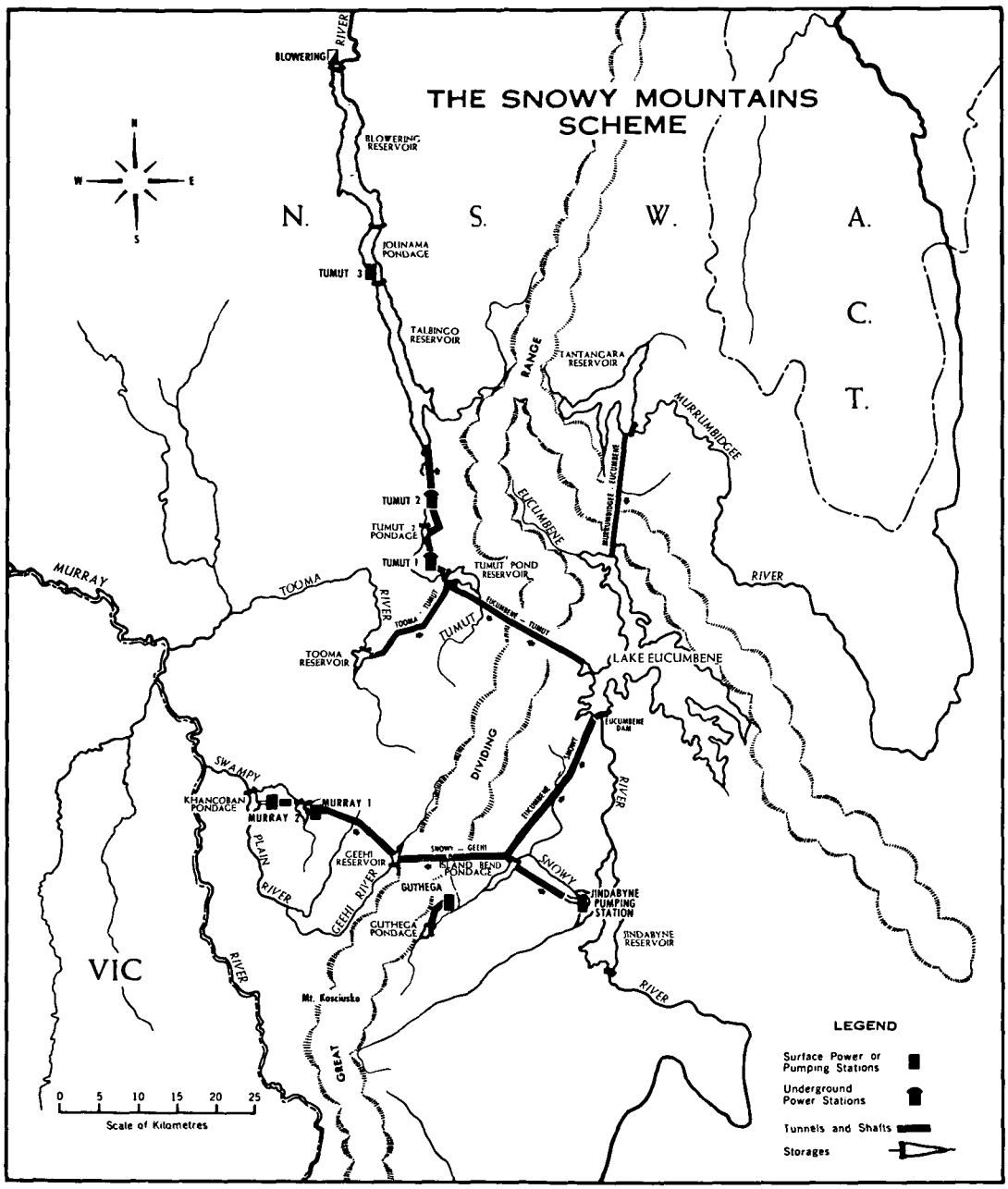

THE SNOWY MOUNTAINS SCHEME
N. S. W. A. C. T.
VIC
BLOWERING
BLOWERING RESERVOIR
JOUNAMA PONDAGE
TUMUT 3
TALBINGO RESERVOIR
TANTANGARA RESERVOIR
TUMUT 2
TUMUT 2 PONDAGE
TUMUT 1
TUMUT POND RESERVOIR
TOOMA RESERVOIR
LAKE EUCUMBENE
EUCUMBENE DAM
KHANCOBAN PONDAGE
MURRAY 2
MURRAY 1
GEEHI RESERVOIR
GRAND BEND PONDAGE
GUTHEGA
GUTHEGA PONDAGE
JINDABYNE PUMPING STATION
JINDABYNE RESERVOIR
Mt. Kosciusko
MURRAY
TOOMA
RIVER
TUMUT
EUCUMBENE
MURRUMBIDGEE
SWAMPY
PLAIN
GEEHI
SNOWY
GREAT
DIVIDING
RANGE
0 5 10 15 20 25
Scale of Kilometres
LEGEND
Surface Power or Pumping Stations
Underground Power Stations
Tunnels and Shafts
Storages

PLATE 39

Electricity generation and transmission

The following table shows details of thermal and hydro electricity generated in Australia during recent years.

ELECTRICITY (*a*)—THERMAL AND HYDRO

Year	*Million kWh*
1975-76	76,597
1976-77	82,522
1977-78	86,095
1978-79	90,857
1979-80	95,910
1980-81	100,782

(*a*) Figures represent estimates of total electricity generated by public utilities, factories generating for their own use, and factories supplying electricity for domestic and other consumption.

NEW SOUTH WALES

Electricity Commission of New South Wales and electricity supply authorities

The main function of the Commission is the generation and transmission of electricity, which it sells in bulk to distributing authorities (mainly local government bodies) throughout a large part of the State, to the Government railways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources except in the Snowy Mountains region.

The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities. At 30 June 1982 there were 27 retail supply authorities throughout the State, comprising 23 electricity county councils (consisting of groups of shire and/or municipal councils), 1 city council, 1 shire council, and 2 private franchise holders.

Most electricity distribution areas have been consolidated into country districts consisting of a number of neighbouring local government areas grouped for electricity supply purposes and administered by a county council comprising representatives elected by the constituent councils. Of the 175 cities, municipalities and shires in New South Wales, 172 are included in one or other of the 23 electricity county districts.

The Energy Authority of New South Wales

The Electricity Development Act, 1945, confers broad powers on the Energy Authority to coordinate and develop the public electricity supply industry. The functions of the Authority include the promotion of the wise use of electricity, especially its use for industrial and manufacturing purposes and for primary production. Technical advice is given to retail electricity supply authorities on various aspects of their activities such as the framing of retail electricity tariffs, public lighting and the standardising of materials and equipment.

The Authority administers the Rural Electricity Subsidy Scheme under which the rural electrical development of the State has now been virtually completed where the extension of supply is economically feasible. Under the subsidy scheme, local electricity suppliers receive subsidies from the Authority towards the cost of new rural lines. At 30 June 1982 the Authority was committed to the payment of $44,816,063 in subsidies, of which $38,924,304 had been paid. Further details of the operation of the scheme are given in Year Book No. 56, page 956.

The Authority also administers the Traffic Route Lighting Subsidy Scheme, which provides for financial assistance to councils towards the cost of installation of improved lighting on traffic routes traversing built-up areas with the objective of reducing the incidence of at night road accidents. Since the introduction of the scheme in 1964, subsidy has been approved in respect of some 1,866 kilometres of traffic routes throughout the State.

Generation and transmission

Of the State's electrical power requirements during the year ended 30 June 1982, almost all was generated in New South Wales (86.1 per cent by coal fired power stations, 10.1 per cent from the Snowy Mountains Hydro-electric Authority and 1.2 per cent by other hydro-electric stations). The remaining 2.6 per cent was supplied by various sources, including interchange with other States and other small generating authorities in New South Wales.

Major generating stations. At 30 June 1982 the major power stations of the State system of the Electricity Commission of New South Wales and their nominal capacities were as follows: Liddell (Hunter Valley), 2,000 MW; Munmorah (Tuggerah Lakes), 1,400 MW; Vales Point (Lake Macquarie), 2,195 MW; Eraring, 660MW; Wallerawang (near Lithgow), 1,240 MW. The total nominal capacity of the Electricity Commission's system as at 30 June 1982 was 9,196 MW. The greater part of the Commission's generating plant is concentrated within a hundred and eighty-five kilometre radius of Sydney.

Major transmission network. The retailing of electricity to 97 per cent of the population of New South Wales is in the hands of local distributing authorities, which obtain electricity in bulk from the Commission's major State network. This network of 330kV, 132 kV, 66 kV and some 33 kV and 22 kV transmission lines links the Commission's power stations with the load centres throughout the eastern portions of the State, extending geographically over 650 kilometres inland.

At 30 June 1982 there were in service; 3,808 circuit kilometres of 330 kV and 7,126 kilometres of 132 kV transmission lines (including 298 kilometres operating for the time being at 66 kV). There were also in service 4,385 kilometres of transmission line of 66 kV and lower voltages, and 517 kilometres of underground cable. The installed transformer capacity at the Commission's 167 substations was 27,722 MVA.

Separate systems and total State installed capacity. Several local government bodies operate their own power stations and generate a portion of their requirements which is supplemented by interconnection with the system of the Electricity Commission. Of these, the more important are the Northern Rivers County Council (installed capacity 13 MW) and the North-West County Council (17 MW). The aggregate effective capacity for the whole of New South Wales systems and isolated plants was approximately 9,229 MW at 30 June 1982, while the number of ultimate consumers at this date was 2,086,303.

Future developments

Future projects include the installation of 6,600 MW of coal-fired generating plant over the next six years. Three additional 660 MW units are being installed at Eraring Power Station on the central coast and will be commissioned progressively for full commercial service over the period 1982-1984. At Bayswater Power Station, which is situated in the Hunter Valley, construction has commenced on four 660 MW units. Two 660 MW units are also planned for Mount Piper Power Station which is located on the western coalfield near Wallerawang. Commissioning of the Bayswater and Mount Piper units is planned between 1985 and 1988.

Construction of a double circuit 500 kV transmission line between Eraring and Kemps Creek, west of Sydney is proceeding. This transmission line will initially operate at 330 kV but operation at 500 kV is planned late in 1983. A double circuit 500 kV transmission link will be constructed from Bayswater Power Station to Mount Piper Power Station and thence to Marulan where it will be interconnected with the existing transmission system between the Snowy Mountains and Sydney.

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, page 474). Apart from this area, major hydro-electric stations are in operation at the Warragamba Dam (50 MW) and Hume Dam (50 MW). In addition, there are six smaller hydro-electric installations in operation in various parts of the State. A pumped-storage hydro-electric system to produce 240 MW has been installed as part of the Shoalhaven Scheme in conjunction with the Metropolitan Water Sewerage and Drainage Board.

VICTORIA

State Electricity Commission of Victoria

Established under earlier legislation and currently operating under the provisions of the *State Electricity Commission Act* 1958, No. 6377 as a semi-government authority, the principal function of the Commission is to generate or purchase electricity for supply throughout Victoria. The Commission may own, develop and operate brown coal open cuts, and briquetting plant and develop the State's hydro-electric resources. The Commission is required to meet from its own revenue, which it controls, all expenditure involved in operating its power and fuel undertakings and to provide for statutory transfers to the Consolidated Revenue Fund of the State.

Since it began operating in 1921 the Commission has expanded and co-ordinated the generation, purchase and supply of electricity on a State-wide basis to the stage where its system generates almost

all the electricity produced in Victoria (which has an area of 228,000 sq km) and the transmission network covers practically the entire population of the State. As at June 1982, the Commission had gross fixed assets of $4,763 million, employed 21,891 persons, had a total income of $1,088 million and, during the preceding twelve months, had increased sales of electricity by 5.0 per cent.

Victoria's electricity system is based on the utilisation of the extensive brown coal deposits in the La Trobe Valley in Central Gippsland, about 140 to 180 km east of Melbourne. Total geological resources of brown coal in the La Trobe Valley are estimated at 107,800 megatonnes and, of this quantity, about 30,000 megatonnes are economically winnable and 11,000 megatonnes are readily recoverable using present mining techniques.

In 1981–82 the output of brown coal from the Commission's three open cuts at Yallourn, Yallourn North and Morwell totalled 36.3 megatonnes of which 33.4 megatonnes were used to produce 1.0 megatonnes of briquettes and 0.21 megatonnes was sold to the public. Sales of briquettes to the public totalled 591,000 tonnes, producing an income of $14.5 million and 347,000 tonnes were used as fuel in power stations.

Electricity generation transmission and supply

In 1981–82 the Commission generated in its thermal and hydro-electric power stations, or purchased 26,331 GWh. The total installed generating plant capacity at 30 June 1982 was 6,344 MW, inclusive of the capacity both within the State and available to Victoria from New South Wales.

The power stations are interconnected and feed electricity into a common pool for general supply. The major generating plant in the interconnected system is the 1,600 MW Hazelwood base load, brown-coal-fuelled power station near Morwell in the La Trobe Valley, which alone generates nearly 40 per cent of Victoria's electricity. Other brown coal power stations in the interconnected system comprise the established base load stations at Morwell and Yallourn and Yallourn 'W' station. Peak load thermal stations are located in Melbourne (Newport, and Spencer Street) and at Jerralang in the La Trobe Valley. Hydro-electric stations are located at Kiewa, at Eildon, and at Dartmouth, also on the Rubicon and Royston Rivers near Eildon and at Cairn Curran. All generators for public supply within Victoria are owned by the Commission except Spencer Street Power Station, which remains the property of the Melbourne City Council although operated as a unit of the interconnected system.

Generation in thermal stations is supplemented by supply from the Commission's hydro stations in the mountains in the north-east of the State and by entitlements from the Snowy Mountains Hydro-electric Scheme in south-eastern New South Wales (one third of output after provision for the Commonwealth Government's needs) and the Hume Power Station on the Murray River boundary with New South Wales (half of output). The Snowy Mountains Scheme is linked to the Victorian system by two 330 kV transmission lines which also allow for a two-way interchange with New South Wales.

At 30 June 1982 the electrical transmission and distribution system in the State supply network comprised 114,057 kilometres of overhead lines and 4,150 kilometres of underground lines. There are 4 auto-transformation stations, 26 terminal substations, 186 zone substations and 89,311 distribution substations. Transmission is mainly by 500, 330, 220 and 66 kV lines which supply the principal distribution centres and provide interconnection between the power stations. The total route length of the 500,330 and 220 kV lines is 3,763 kilometres.

The Commission sells electricity retail in all Victorian supply areas except for eleven Melbourne metropolitan municipalities. These municipalities purchase electricity in bulk from the Commission and retail it to approximately 273,800 customers within the municipalities concerned under franchises granted by the Victorian Government before the Commission was established in 1921. Bulk supply is also provided to several municipalities in New South Wales and to a number of towns and areas bordering the Murray River.

Complete electrification of the State has virtually been achieved and only a few remote areas do not receive supply. At 30 June 1982 the Commission had 1,342,700 retail customers excluding bulk sales, and the income derived was $871 million. There were 1,149,700 domestic, 81,300 industrial and 110,000 commercial consumers. In country areas electricity was supplied to about 81,300 farms. Sales of electricity during the period, including bulk supplies totalled 20,418 GWh and produced total income of $1,056 million.

Current and future development

Power station projects currently under construction are Yallourn W, Stage 2 and Loy Yang in the La Trobe Valley. Yallourn W is designed as a 4 unit, base load station of 1,450 MW capacity fuelled by brown coal. The first two 350 MW units are now in commission. The second two units, each of 375 MW capacity, are scheduled to begin operating in 1981 and 1982. The 500 MW natural gas fired power station at Newport came into operation in 1981. A hydro-electric station with one 150 MW unit built

at Dartmouth in conjunction with S.R. & W.S.C. Dam commenced operations early in 1981. The largest project is a major base load generating complex of about 4,000 MW capacity at Loy Yang in the eastern part of the La Trobe Valley, planned to come into service progressively from 1984. A new coalfield is being opened for this development.

QUEENSLAND

Organisations

The State Electricity Commission of Queensland's main functions are to plan and ensure the proper development and co-ordination of the electricity supply industry throughout the State; to enforce safety regulations; to control electricity charges: to raise capital for development and to administer the *Electricity Act* 1976-1982 which regulates the electricity supply industry in Queensland.

The Queensland Government has decided to amalgamate the functions of the Commission and the Queensland Electricity Generating Board. Enabling legislation is to be introduced as soon as possible, however, as an interim measure the Government has dissolved the Generating Board and appointed the Commission to perform the duties of that Board.

The Queensland Electricity Generating Board is responsible for generation and main transmission. It operates the State's major power stations and supplies, via its Statewide transmission network, energy in bulk to the seven distributing boards whose responsibility it is to distribute electricity to consumers in their respective areas. These boards are The South East Queensland Electrictity Board; The South West Queensland Electricity Board; The Wide Bay—Burnett Electricity Board; The Capricornia Electricity Board; The Mackay Electricity Board; The North Queensland Electricity Board and the Far North Queensland Electricity Board.

Four of these distributing boards (The South West Queensland, The Capricornia, The North Queensland and The Far North Queensland) also operate small internal combustion stations in their respective areas

Electricity generation, transmission and distribution

Over ninety per cent of the State's generation is derived from steam power stations fuelled by black coal. Hydro-electric stations located in North Queensland provide around 5 per cent, depending on rainfall in the catchment areas, with the balance being generated by gas turbine and diesel power stations using light fuel oil. The Roma diesel power station also uses locally produced natural gas. Electricity generated by the public supply authorities in Queensland in 1981–82 totalled 13,171 million kWh. In addition 182 million kWh were purchased in bulk from other producers of electricity for redistribution to consumers.

At 30 June 1982 the total generating capacity of the publicily-owned stations in the State was 3,591 MW, comprising 3,246 MW of steam plant, 132 MW of hydro-electric plant, 163 MW of gas turbine plant and 50 MW of internal combustion plant.

The regional locations, types and capacities of major publicly-owned power stations in Queensland are: Southern Region—Swanbank A (steam) 396 MW; Swanbank B (steam) 480 MW; Swanbank C (gas turbine) 30 MW; Tennyson (steam) 240 MW; Bulimba (steam) 180 MW; Middle Ridge (gas turbine) 60 MW. Central Region—Gladstone (steam) 1,650 MW; Gladstone (gas turbine) 14MW; Callide (steam) 120 MW; Rockhampton (gas turbine) 25 MW. Northern Region—Kareeya (hydro) 72 MW; Barron Gorge (Hydro) 60 MW; Collinsville (steam) 180 MW and Mackay (gas turbine) 34 MW.

The electrical transmission and distribution system within the State comprised 125,592 circuit kilometres of electric lines and at 30 June 1982 supplied approximately 873,500 customers. The main transmission voltages are 275 kV, 132 kV, 110 kV, 66 kV and in certain areas 33 kV and 22 kV. The single wire earth return system is used extensively in rural electrification and 33,933 kilometres of line for this system of distribution was in service at 30 June 1982.

Future development

There are four major generation projects being developed and under construction in Queensland and when completed will increase the installed generating capacity by 4,000 megawatts.

The Wivenhoe Pumped Storage Hydro Electric project when completed in 1984 will consist of two 250 MW pump/turbine generating units and will require the construction of 107 route kilometres of 275 kV transmission lines and one substation with a total transformer capacity of 624 MVA.

The Tarong Power Station will consist of four 350 MW generating units and the expected commissioning dates for each of these are May 1984, May 1985, February 1986 and November 1986. To connect this power station to the main transmission network will require the construction of 331 route kilometres of 275 kV transmission lines and 3 substations with a transformer capacity of 2,000 MVA.

The Callide "B" Power Station, expected to be completed by 1989, will consist of two 350 MW generating units and will involve the construction of 290 route kilometres of 275 kV transmission lines and installation of transformers with a capacity of 800 MVA.

The fourth power station is to be sited at Stanwell (24 km south-west of Rockhampton) and is expected to be producing energy by 1990. The power station will consist of four 350 MW generating units and will necessitate construction of almost 400 kilometres of 275 kV transmission line.

SOUTH AUSTRALIA

Electricity Trust of South Australia

In 1946 the assets of the Adelaide Electric Supply Co. Ltd were transferred to a newly-formed public authority, the Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supply and which took over the powers previously vested in the South Australian Electricity Commission. In addition to the powers specified in the Adelaide Electric Supply Company's Acts, 1897–1931, the Trust may supply electricity direct to consumers within a district or municipality with the approval of the local authority; arrange, by agreement with other organisations which generate or supply electricity, to inter-connect the mains of the Trust with those of other organisations; and give or receive supplies of electricity in bulk.

Capacity and production

Of the total installed capacity in South Australia at 30 June 1981, the Electricity Trust operated plant with a capacity of 2,090 MW, making it the most important authority supplying electricity in the State. There were approximately 568,000 ultimate consumers of electricity in the State, of whom 559,052 were supplied directly and approximately 8,700 indirectly (i.e. through bulk supply) by the Trust. Its major steam stations are Osborne (240 MW), Port Augusta Playford 'A' (90 MW) and Playford 'B' (240 MW), and Torrens Island (1,280 MW). The Trust also operates a turbo-generator station at Dry Creek (156 MW) and a small station at Port Lincoln (9 MW).

The two main fuels used by the Trust are sub-bituminous coal from Leigh Creek for the Playford power stations at Port Augusta and natural gas from the Gidgealpa-Moomba field for the Torrens Island and Dry Creek stations.

WESTERN AUSTRALIA

State Energy Commission of Western Australia

On 1 July 1975 the Government of Western Australia combined the State Electricity Commission and the Fuel and Power Commission to form a new organisation known as the State Energy Commission of Western Australia. The Commission is specifically charged with the responsibility for ensuring the effective and efficient utilisation of the State's energy resources and for providing its people with economical and reliable supplies of electricity and gas.

The Commission operates coal-burning power stations at South Fremantle, Bunbury and Muja and a coal and oil-burning station at Kwinana. A small hydro-electric station is situated at Wellington Dam near Collie and there are gas turbine generating units at Geraldton and Kwinana. A uniform tariff electricity supply is provided from these stations through an interconnected grid system to the Metropolitan Area and the South-West and Great Southern Areas, including an area extending to Koolyanobbing and northwards as far as Kalbarri, some 100 km north of Geraldton. The Commission also owns and operates diesel power stations at Esperance, Fitzroy Crossing, Halls Creek, Kondinin, Kununurra, Onslow and Port Hedland.

Small electricity supply systems too remote to be connected to the grid system or supplied from the Commission-owned diesel stations are still controlled by local government authorities but are being assisted through an agreement whereby the local generating plant and distribution system is operated by the Commission under a subsidy arrangement known as the Country Towns' Assistance Scheme. Under the scheme, the Commission undertakes to operate, maintain, replace or upgrade plant and supply equipment as necessary. At the present time there are 29 country towns supplied under the provisions of the Country Towns' Assistance Scheme.

At 30 June 1982 the Energy Commission's generating capacity from its interconnected grid system was 1,782 megawatts, while the capacity of its separate supply systems in country areas was 91.62 MW. During 1981-82 the Energy Commission synchronised the second 200 MW coal-fired generating unit at Muja Power Station, completing the Stage C extensions. This allowed the East Perth Power Station to be retired from normal service. Construction is now underway to duplicate the Stage C extensions with a power station that will be known as Muja Stage D. This will give Muja a capacity of 1,040 MW by mid-1985 making it the Energy Commission's biggest power station.

Work is proceeding on the conversion of two 120 MW units at Kwinana Power Station from oil to dual coal/oil firing. This project, due for completion in April 1983, follows the successful conversion in 1979 of two 200 MW units at the station from oil to dual coal/oil firing. Another venture with which the Commission is involved is the Dampier to Perth natural pipeline project. Gas to be drawn from the massive offshore reserves on the North-West Shelf will overcome restricted supplies presently available at Dongara, and is expected to reduce W.A.'s dependence on oil from about 70% to about 45% by the mid-1980's. The Energy Commission will be responsible for the purchase of gas at Withnell Bay, near Dampier, for sale to customers in the Pilbara and South-West of the State. Construction has commenced on the first section of the 1,500 km onshore pipeline to Perth and Wagerup.

The Commission is also studying various possible alternative methods of supplying power to remote areas of the State. Projects in this regard include the testing of wind powered electric generators on Rottnest Island and solar power plants at Meekatharra and at the Commission's Northern Gas Depot at Ballajura. The integration of separate power generation facilities in the Pilbara a transmission interconnection to the Eastern Goldfields and a hydro-electric power station at the Ord Dam are also being considered.

Natural gas is reticulated in most areas of the Perth metropolitan region and in Pinjarra, simulated natural gas (SNG) is reticulated in the Bunbury area, and tempered liquefied petroleum gas (TLP) is reticulated in Albany.

Some details of the Commission's activities for the year ending 30 June 1982 are: number of electricity customers 463,586, gas customers 107,995 in the metropolitan area; 5,742 in manufactured gas systems; electricity generated for interconnected system 5,488 GWh and 166 GWh for Country Towns' Assistance Scheme; natural gas supplied 1,358 GWh, manufactured gas supplied 35.8 GWh; fuel used for electricity generation included 3,012,406 tonnes of coal, 85,017 tonnes of fuel oil and 559 tonnes of distillate.

TASMANIA

A considerable part of the water catchment in Tasmania is at high level. The establishment of numerous dams has created substantial artificial storage which has enabled the State to produce energy at a lower cost than elsewhere in Australia and in most other countries. Another factor contributing to the low cost is that rainfall is distributed fairly evenly throughout the year with comparatively small yearly variations. Abundant and comparatively cheap supplies of electricity played an important role in attracting industry to Tasmania. For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930, *see* Year Book No. 39, pages 1192–3.

Hydro-Electric Commission

The Commission was created in 1930, taking over the activities of the Hydro-Electric Department and the existing small hydro-electric installations. Development initially concentrated on hydro-electric generation feeding into a State-wide power grid (King Island from 1951 and Flinders Island from 1968 are outside the grid and are supplied by diesel generators). Unusually low rainfall during 1967 severely restricted the State's generating capacity and prompted the construction of a substantial oil-fired thermal station with a capacity of 240 MW. This station, completed during 1974, is used as required.

Output and capacity of hydro-electric system

For information on the development of the Tasmanian generating system *see* Year Book No. 61, pages 984–985.

The generator capacity of the Tasmanian system was: hydro, 1,540.4 MW; oil-fired thermal, 240 MW; and diesel, 2.0 MW. Two generators in the Gordon River Hydro-Electric Scheme, Stage 1, were commissioned during 1978, increasing generating capacity by 288 MW. The hydro system's sustainable long-term average loading is estimated at 854 MW.

The current development program involves construction of a system based on the Pieman, Murchison and Mackintosh Rivers in Western Tasmania and the Gordon-below-Franklin Scheme, approved in July 1982. The Pieman Scheme which commenced in 1973 will add 385 MW to the grid and the Gordon-below-Franklin Scheme will provide a further 172 MW.

AUSTRALIAN CAPITAL TERRITORY

The supply authority is the A.C.T. Electricity Authority which took over the functions of the Canberra Electric Supply Branch, Department of the Interior, on 1 July 1963. Supply was first made available in Canberra during 1915 and was met from local steam plant. Connection to the New South Wales interconnected system was effected in 1929. The Authority electric supply requirements are met by a

Snowy Mountains reservation of 670 GWh's and the balance provided by the Electricity Commission of New South Wales. Locally-owned plant consists of 3 MW diesel alternators which are retained as a standby for essential supplies. The total number of ultimate consumers at 30 June 1982 was 83,138. During the year 1981–82 the bulk electricity purchased was 1,602 GWh and the system maximum demand was 485 MW.

NORTHERN TERRITORY

The Northern Territory Electricity Commission is a Statutory Authority operating under the *Northern Territory Electricity Act* 1978 (as amended to date), with responsibility for generation, distribution, transmission and sale of electricity in the Northern Territory. The Commission's responsibilities also include electrical safety and inspections.

In Darwin, the major electricity supply source is Stokes Hill Power Station, with an installed capacity of 141 megawatts, and standby gas turbines are located at Berrimah and Snell Street, with a combined capacity of 40 megawatts.

In the major centres of Alice Springs, Tennant Creek and Katherine, diesel power stations generate power with a capacity of 36.76 megawatts (Alice Springs), 7.8 megawatts (Tennant Creek) and 14.36 megawatts (Katherine). As additional sets are being installed at Alice Springs, provision is being made for dual firing in view of the forthcoming supply of natural gas from Palm Valley.

A new power station at Yulara (Ayers Rock Tourist Village) will be commissioned in September 1982 with an installed capacity of 2.6 megawatts. Tennant Creek's total capacity will rise to 9.6 megawatts by October 1982 with the installation of a sixth set.

The Commission operates a number of smaller diesel stations, by an agency arrangement, in the following smaller townships—Pine Creek (.95 MW), Elliott (.536 MW), Mataranka (.4 MW), Larrimah (.2 MW), Ti Tree (.318 MW), Borroloola (.56 MW), Newcastle Waters (.116 MW) and Timber Creek (.2 MW).

Many small communities in the Territory generate their own power using diesel fired conventional generating sets. The Department of Transport and Works has responsibility for the installation and maintenance of power generation in Aboriginal settlements, which comprise the greater majority of these small outlying communities.

Electricity and gas establishments

The census of electricity and gas industries covers distribution as well as production and is conducted as a component of the ABS's integrated economic statistics system. This system has been developed so that data from each industry sector conform to the same basic conceptual standards thereby allowing comparative analysis between and across different industry sectors. The results of this census are therefore comparable with economic data collections undertaken annually for the mining and manufacturing industries and periodically for the wholesale trade, retail trade and construction industries.

The following table shows a summary of operations of electricity and gas establishments for 1980–81. Further details are available in the publication *Electricity and Gas Establishments, Details of Operations, Australia, 1980–81* (8208.0)

ELECTRICITY AND GAS ESTABLISHMENTS—SUMMARY OF OPERATIONS, 1980–81

State or Territory	Establishments at 30 June	Employment at 30 June			Wages and salaries ($m)	Turnover ($m)	Stocks		Purchases, transfers in and selected expenses ($m)	Value added ($m)	Fixed capital expenditure less disposals ($m)
		Males (No.)	Females (No.)	Total (No.)			Opening ($m)	Closing ($m)			
New South Wales—											
Electricity	34	26,641	2,726	29,367	457.2	2,307.2	124.0	164.5	1,132.6	1,215.2	646.8
Gas	25	2,497	589	3,086	47.0	192.1	18.0	18.5	99.5	93.1	14.9
Victoria—											
Electricity	14	18,198	1,314	19,512	309.9	1,571.6	73.1	82.6	596.5	984.7	593.2
Gas	1										
Queensland—											
Electricity	11	10,412	1,356	11,768	178.1	1,018.2	48.7	63.9	558.2	475.3	351.9
Gas	7	604	110	714	9.1	53.0	3.9	5.6	26.4	28.3	5.2
South Australia—											
Electricity	13	5,392	365	5,757	90.7	362.6	20.2	23.7	143.6	222.6	70.0
Gas	2										
Western Australia											
Electricity	9	5,397	376	5,773	107.6	416.4	39.7	42.5	224.5	194.7	161.9
Gas	2										
Australia(*a*)—											
Electricity	86	66,516	5,954	72,470	1,139.2	5,621.1	310.1	382.3	2,652.3	3,041.1	1,838.6
Gas	38	8,497	1,501	9,998	151.0	692.9	44.1	48.2	286.3	410.7	104.3

(*a*) Includes Tasmania, Northern Territory and Australian Capital Territory. At the end of June 1981 there were 2 electricity and 1 gas establishment operating in Tasmania; 2 electricity establishments in the Northern Territory and 1 electricity establishment in the Australian Capital Territory.

National Energy Survey

In November 1980 a survey was conducted throughout Australia to obtain information about the number and type of selected domestic appliances held by households. It was undertaken as part of the regular population survey which is based on a multi-stage area sample of private dwellings (houses, flats, etc) and non-private dwellings (hotels, motels, etc) and covers about two-thirds of one per cent of the population of Australia. For the purposes of the National Energy Survey certain types of dwellings, such as non-private dwellings (e.g. hospitals, motels, hotels), caravan parks and dwellings occupied by more than one household, or diplomatic personnel or persons from overseas holidaying in Australia, were excluded.

The following table shows households by major appliances and facilities. Further data relating to the National Energy survey are published in *National Energy Survey: Household Appliances, Facilities and Insulation, Australia, November 1980* (8212.0)

HOUSEHOLDS BY MAJOR APPLIANCES AND FACILITIES, NOVEMBER 1980
('000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Electric refrigerator	1666.1	1242.3	710.3	441.2	407.1	131.7	29.4	69.6	4697.7
One door electric refrigerator (a)	1031.4	833.7	429.2	277.4	268.0	94.0	19.9	37.0	2990.5
Two door electric refrigerator (a)	773.8	492.6	353.1	203.4	178.0	41.3	14.0	36.7	2092.9
Non-electric refrigerator	5.4	*	8.5	*	3.1	*	*	—	21.6
Deep Freezer	690.2	503.9	333.1	206.8	180.9	76.9	18.2	28.6	2038.7
Stove	1377.8	1001.5	602.4	377.2	344.6	117.7	25.5	45.3	3892.0
Separate oven	278.5	242.1	109.0	63.8	64.4	14.6	3.2	24.2	799.9
Hotplate only	11.8	3.7	4.9	*	*	*	*	*	25.4
Microwave oven (b)	71.8	33.6	25.4	12.6	14.9	2.8	*	3.2	165.6
Electric frypan/skillet (b)	682.6	401.6	359.1	185.5	161.4	68.2	14.3	30.9	1903.5
Vertical grill (b)	166.9	103.2	50.8	50.6	28.5	14.6	2.6	6.0	423.2
Crockpot (b)	82.6	40.4	44.6	26.7	20.5	8.1	3.2	4.4	230.4
Dishwasher	227.9	190.5	108.4	39.4	39.5	14.2	3.4	17.4	640.7
Washing machine—									
Automatic	995.1	764.1	368.6	194.4	193.7	69.0	20.4	56.0	2661.3
Other	526.4	359.5	300.5	218.4	178.8	59.3	7.8	9.5	1660.1
Total	*1521.6*	*1123.6*	*669.0*	*412.8*	*372.5*	*128.3*	*28.2*	*65.5*	*4321.4*
Clothes drier (c)—									
Rotary	625.0	488.7	198.4	133.2	80.5	61.4	8.8	30.8	1626.9
Cabinet	76.0	60.6	11.6	28.6	10.3	5.2	*	2.8	195.4
Total	*701.1*	*549.3*	*210.1*	*161.8*	*90.8*	*66.6*	*9.1*	*33.6*	*1822.3*
Hotwater system—									
Shared	38.1	36.2	15.8	4.2	8.0	*	*	*	104.6
Non-shared	1584.6	1204.4	683.3	432.0	398.9	130.7	28.0	68.8	4530.6
Total	*1622.8*	*1240.5*	*699.1*	*436.2*	*406.9*	*131.7*	*28.6*	*69.4*	*4635.1*
Central heating	53.7	152.1	3.6	13.7	10.9	4.9	*	10.2	249.6
Oil heater	200.0	184.5	15.4	78.2	93.0	45.7	*	18.2	636.5
Fixed electric heater	192.7	329.6	30.5	65.4	31.6	49.2	2.4	40.3	741.6
Gas heater	189.6	633.4	10.6	135.2	61.8	10.5	*	7.0	1048.5
Woodfire/solid fuel heating	247.8	259.7	53.5	97.3	104.4	62.1	2.0	10.9	837.8
Portable heater	1400.2	858.4	511.2	368.5	308.2	115.6	4.7	56.1	3622.9
Air-conditioning	453.2	323.1	103.1	224.6	156.1	*	15.6	11.4	1288.3
Wall insulation (d)	138.6	185.0	52.4	32.6	17.2	16.7	2.8.	6.2	451.4
Ceiling insulation (d)	541.8	654.0	97.4	227.9	154.2	47.8	11.1	48.8	1783.1
Swimming pool—									
With filter	142.5	102.0	55.9	29.8	45.3	5.0	4.2	4.9	389.4
No filter	9.4	12.0	2.9	*	*	*	*	*	27.9
Total	*151.9*	*114.0*	*58.8*	*30.3*	*47.0*	*6.1*	*4.3*	*4.9*	*417.3*
All Households	**1676.7**	**1249.0**	**722.5**	**443.0**	**412.8**	**133.4**	**30.1**	**69.7**	**4737.3**

(a) Refers only to external doors. (b) Included only if used more than once a week. (c) Where a household owned more than one drier, only the one used most often was counted. (d) Excludes households in flats and mobile and improvised dwellings. * Subject to sampling variability too high for most practical uses.

REFERENCES

Because the supply and use of energy involves aspects of so many different activities, energy statistics appear in a wide range of ABS collections and a correspondingly wide range of ABS publications. In order to assist those involved in discussions of energy topics to locate the information available in the ABS that may be of relevance to a particular topic a Directory of ABS Energy Statistics (1107.0) has been issued.

Other organisations which produce statistics in this field include the Department of National Development and Energy, the Joint Coal Board, the Australian Institute of Petroleum, the Electricity Supply Association of Australia and the Bureau of Mineral Resources, Geology and Geophysics. State Government departments and instrumentalities also are important sources of energy data, particularly at the regional level, while a number of private corporations and other entities operating within the energy field also publish or make available a significant amount of energy information.

CHAPTER 19

HOUSING AND CONSTRUCTION

This chapter gives details of: the characteristics of dwellings obtained from censuses (pages 487–8); government activities in the field of housing (pages 488–98); financial arrangements associated with the erection or purchase of homes (pages 498–501); a summary of building activities (pages 502–5); summary of construction (other than building) activities (pages 506–7); and summary of construction industry statistics (pages 508–10).

Details of some other Government housing and accommodation assistance are provided in Chapter 9 'Social Security and Welfare' including Aged or Disabled Persons Homes (pages 218–9); Handicapped Persons Assistance (pages 219–20); Homeless Persons Assistance (page 220); and Youth Services Scheme (pages 220–21).

HOUSING

Census dwellings

Further information on dwellings obtained from censuses is available in the detailed tables of the publications issued for each individual census. A list of the 1981 Census publications is shown in the ABS *Catalogue of Publications, Australia* (1101.0). The most relevant 1981 census publication is *Summary Characteristics of Persons and Dwellings* (2435.0–2443.0). More detailed dwellings information is available on microfiche. Tables are listed in the *Catalogue of 1981 Census Tables* (2139.0).

At each census of the population, in addition to the questions relating to personal particulars, there have been a number of questions relating to dwellings. A 'dwelling' is 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, and includes, in addition to houses and self-contained flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. This section contains particulars of such information on dwellings as is available from the 1981 Census, together with information from earlier censuses.

Number of dwellings

The following table shows the number of occupied and unoccupied dwellings in Australia at each census from 1947 to 1981. Occupied dwellings are classified into 'private' and 'non-private' dwellings.

Private dwellings were classified by the census collector for the 1981 Census; collectors allocated each dwelling to one of the following categories:

Separate house
Semi-detached house
Row or terrace house
Medium density housing
Flat over three storeys
Caravan, houseboat, etc.
Improvised home
House or flat attached to a shop, office, etc.

Non-private dwellings include hotels, motels, boarding houses and hostels, educational, religious and charitable institutions, hospitals, defence and penal establishments, caravan parks, staff barracks and quarters, etc.

An unoccupied dwelling is defined as a structure built specifically for private living purposes and which is habitable though unoccupied at the time of the Census. The total number of unoccupied dwellings shown for any area does not represent the number of vacant dwellings available for sale or renting.

DWELLINGS(*a*): AUSTRALIA, CENSUSES, 1947 TO 1981

Census	Occupied			Unoccupied
	Private	Non-private	Total	
1947	1,873,623	34,272	1,907,895	47,041
1954	2,343,421	36,932	2,380,353	112,594
1961	2,781,945	35,325	2,817,270	194,114
1966	3,155,340	33,917	3,189,257	263,873
1971	3,670,553	24,006	3,694,559	339,057
1976	4,140,521	21,543	4,162,064	431,200
1981	4,668,909	22,516	4,691,425	469,742

(*a*) Excludes dwellings occupied solely by Aboriginals before 1966.

The total number of occupied and unoccupied dwellings in each State and Territory at the Censuses of 1976 and 1981 were as follows:

DWELLINGS: CENSUSES, 1976 AND 1981

State or Territory	Census 30 June 1976		Census 30 June 1981	
	Occupied(*a*)	Unoccupied	Occupied(*a*)	Unoccupied
New South Wales	1,499,001	152,960	1,669,596	153,251
Victoria	1,126,304	119,592	1,243,453	124,522
Queensland	602,426	62,686	703,964	83,366
South Australia	392,253	39,768	433,841	42,407
Western Australia	339,105	34,064	405,999	42,100
Tasmania	122,573	15,786	136,269	17,765
Northern Territory	23,270	2,292	29,563	2,368
Australian Capital Territory	57,132	4,052	68,740	3,963
Australia	**4,162,064**	**431,200**	**4,691,425**	**469,742**

(*a*) Includes non-private dwellings.

Commonwealth Government and Housing

Commonwealth Government activities in the housing field have, in the main, included the provision of money to State Governments under various agreements; financial assistance to defence (and eligible ex-service) personnel in the erection and purchase of homes; assistance to young married couples under the Homes Savings Grant Act and the Home Deposit Assistance Act; the operations of the Housing Loans Insurance Corporation; assistance in the provision of accommodation for the aged, Aboriginals and other groups in need and the provision of housing in the Territories. In 1981–82, the Commonwealth also introduced a Crisis Accommodation For Families Program. A Mortgage and Rent Relief Scheme is to be introduced during 1982–83.

Commonwealth Government—State Housing Agreements 1945–1981

There have been several Commonwealth-State Housing Agreements since the second World War. (Details of the 1978 Agreement and the 1979 Commonwealth-Northern Territory Housing Agreement are contained in Year Book No. 66, pages 454, 457). In addition, the *States Grants (Housing) Act* 1971 made provision for payment of a housing grant to the States amounting to $5.5m annually and the *Housing Assistance Act* 1973 authorised special advances to States of $6.55m in 1972–73 for rental housing.

1981 Housing Agreement (Schedule 1 to the *Housing Assistance Act* 1981)

This Agreement between the Commonwealth, the six States and the Northern Territory, the latest in the series of Agreements, is to operate for the 5 year term ending 30 June 1986. All financial assistance, comprising 'untied' loans, grants earmarked for pensioners and Aboriginals and 'untied' grants, is now subject to the terms of the Agreement. Each State decides on the allocation of 'untied' funds between home purchase and rental housing assistance and is required to match these funds on a $1 for $1 basis with funds provided from its own resources. Commonwealth loans to the States are repayable over 53 years at an annual interest rate of 4.5 per cent.

The Commonwealth has guaranteed a minimum level of funding of $200m for each year of the Agreement. Additional funding for each year is determined in the Budget context. Total funding for 1981–82 was $262.2m: $146m in loans and the remainder as grants of which $32m was allocated for pensioners, $34.2m for Aboriginals, and $50m was 'untied' assistance.

Total funding under the Agreement in 1982–83 is $332.9 million: $146 million in loans and the remainder as grants, of which $32.0 million is allocated for pensioners and $34.2 million for Aboriginals, and $120.7m is 'untied'. In addition, in 1982–83 each State may, subject to providing from its own resources the same amount as in 1981–82, nominate additional funds for welfare housing from its Works and Housing Program. These additional funds will be available at concessional CSHA loan terms and conditions ie, interest rate of 4.5 per cent, with principal repayable over 53 years.

Home Purchase Assistance

Funds available in the Home Purchase Assistance Account, comprising Commonwealth funds, involving funds arising from the operation of previous home purchase programs and State funds, are used principally to make loans to co-operative housing societies and approved State lending authorities for on-lending to home purchasers. The annual interest rate charged by a State to societies and approved lending authorities is to be not less than 5 per cent per annum in the first full financial year, increasing by 0.5 per cent per annum each year until a rate equivalent to 1 per cent below the current Commonwealth Savings Bank rate for housing loans is reached and thereafter varying with movements in this rate. Eligibility conditions are set by each State, but loans may only be made to those who cannot obtain mortgage finance on the open market, or from other sources. Provision is made in the Agreement for a number of flexible lending practices, such as escalating interest loans with income geared starts.

Rental Housing Assistance

Available funds, comprising Commonwealth funds, internally generated funds arising from the operation of rental housing programs, and State contributions, are used principally for the provision of rental housing by State housing authorities but may be used for other purposes such as urban renewal, funding of voluntary housing management groups, and allocations to local government bodies to provide rental housing. Each State determines eligibility for rental housing subject only to the condition that assistance is directed to those most in need. The level of rent is also fixed by each State and a policy of progressive movement to full market rents over the life of the Agreement is to apply in each State. Rental rebates are granted to those tenants who cannot afford to pay the rent fixed. A policy of uniform rental rebates is being developed by the Commonwealth and the States. Each State determines its own policy on sales of rental dwellings but all sales are to be at market value or replacement cost and on the basis of a cash transaction. Home purchase assistance funds can be used to finance the purchase of rental dwellings.

Housing Agreement (Servicemen)

Prior to 30 June 1971, housing for servicemen was provided under the terms of the 1956–1966 Housing Agreement which, in the main, was concerned with public housing and which expired on that date. With effect from 1 July 1971, a separate agreement was concluded between the Commonwealth and State Governments to provide for the construction of dwellings for allotment to servicemen and for improvements to existing accommodation occupied by them. Programmes are negotiated annually and the full capital cost is made available by the Commonwealth in repayable, interest-bearing loans to the States.

Operations under the 1978 Housing Agreement, the 1981 Housing Agreement and the Housing Agreement (Servicemen)

The following tables show Commonwealth funding under the last year of the 1978 Housing Agreement, the 1981 Agreement and the Housing Agreement (Servicemen), with the results of operations during 1980–81 the last year of the 1978 Housing Agreement.

1978 HOUSING AGREEMENT: SUMMARY 1980–81

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
				HOUSING FUNDS ($'000)				
Commonwealth loans to States for housing—	54 650	43 440	17 000	24 960	15 680	10 770	9 000	175 500
Rental Housing Assistance Program	32 790	21 720	–	9 960	9 408	6 462	–	80 340
Home Purchase Assistance Account	21 860	21 720	17 000	15 000	6 272	4 308	9 000	95 160
Housing Agreement (Servicemen) loans (*a*)	120	400	800	–	–	–	–	1 320
				NUMBER OF DWELLINGS				
Rental Housing Assistance Program—								
Commenced	1 886	944	690	994	514	704	415	6 147
Completed	3 089	954	647	1 379	753	668	456	7 946
Under construction at 30 June 1981	2 074	1 159	491	684	153	446	329	5 336
Home Purchase Assistance Account—								
Purchased—								
New	813	273	791	568	30	6	723	3 204
Other	1 000	1 385	746	1 684	139	407	–	5 361
New construction—								
Approved	236	318	770	698	164	51	174	2 411
Commenced	422	14	708	n.a.	164	42	n.a.	n.a.
Completed	527	210	705	n.a.	170	84	n.a.	n.a.
Sales of Rental Dwellings	250	527	206	178	95	56	149	1 461

(*a*) All loans were for upgrading of existing dwellings.

1981 HOUSING AGREEMENT: HOUSING FUNDS 1981–82

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
				($'000)				
Commonwealth loans to States for housing—								
Rental Housing Assistance	31 824	36 135	–	5 661	6 519	5 464	–	85 603
Home Purchase Assistance Program	13 640	–	14 148	15 100	6 519	3 500	7 490	60 397
Commonwealth Grants to States—								
Pensioners—Rental Assistance	12 430	7 447	5 009	3 033	2 589	992	500	32 000
Aboriginal—Rental Assistance	9 087	2 522	6 628	3 810	7 225	527	4 401	34 200
Untied—Rental Assistance	15 570	12 375	4 845	7 110	4 465	2 570	2 565	49 500
Untied—Home Purchase Assistance	–	–	–	–	–	500	–	500

Rental Assistance for Pensioners, Aboriginals and Other Persons in Need

From 1 July 1981, grants have been provided to the States and the Northern Territory for rental housing assistance for pensioners, Aboriginals and other persons in need under the 1981 Housing Agreement. In previous years, such grants were provided under separate arrangements, as described in earlier issues of the Year Book.

Grants may be used for purposes other than construction of housing eg, leasing from the private sector.

To 30 June 1981, grant payments earmarked for pensioners totalled $143,240,000. The number of units provided to 30 June 1981 amounted to 9,779. The Rental Assistance to Pensioner Scheme commenced in 1969 with the *States Grants (Dwellings for Aged Pensioners) Act* 1969.

Earmarking of grants for Aboriginals commenced in 1979-80, with $21.06 million being paid in 1979-80 and $22.1 million in 1980-81. During those two years 1123 dwellings were programmed. The States Grants for Aboriginal housing program previously administered by the Department of Aboriginal Affairs was amalgamated with the Housing Agreement grants earmarked for Aboriginals as from 30 June 1981 and is included in the Commonwealth funding shown above for 1981-82.

RENTAL ASSISTANCE TO PENSIONERS AND OTHER PERSONS IN NEED

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
Number of units provided								
1978-79 Pensioners . . .	460	230	173	81	77	26	—	1 047
1979-80 Pensioners . . .	622	236	214	284	150	50	—	1 556
Aboriginals . . .	136	58	202	44	118	20	—	578
1980-81 Pensioners . . .	540	275	208	342	137	59	—	1 561
Aboriginals . . .	140	51	176	47	117	14	—	545
Grants Paid (*a*) ($'000)								
1978-79 Pensioners . . .	5 695	3 388	2 050	1 343	1 086	438	—	14 000
1979-80 Pensioners . . .	12 132	7 186	4 495	2 856	2 361	970	1 590	31 590
Aboriginals . . .	6 000	2 000	6 100	1 500	4 000	400	1 060	21 060
Untied	16 410	13 045	5 105	7 495	4 710	3 235	2 650	52 650
1980-81 Pensioners . . .	12 421	7 409	4 790	2 945	2 459	976	1 650	32 650
Aboriginals . . .	6 300	2 100	6 400	1 600	4 200	400	1 100	22 100
Untied	17 070	13 570	5 310	7 790	4 900	3 360	2 750	54 750

(*a*) Grants provided under Part III of the *Housing Assistance Act* 1978.

Defence Service Homes

The *Defence Service Homes Act* 1918 assists certain former and serving members of the Defence Force to acquire a home on concessional terms.

The Defence Service Homes Corporation is, subject to the directions of the Minister for Veterans' Affairs, responsible for the administration of the Defence Service Homes Act.

Persons eligible for assistance under the Act include members of the Australian forces and nursing services enlisted or appointed for or employed on active service outside Australia or on a ship of war during the 1914-18 and 1939-45 Wars; persons who served in the warlike operations in Korea or Malaya or who have served on "special service" as defined in the *Repatriation (Special Overseas Service) Act* 1962; and members of the Defence Force who serve on continuous full-time service and national servicemen whose periods of service ended not earlier than 7 December 1972 and who meet certain prescribed conditions. The categories of eligible persons also include the widows and, in some circumstances, the widowed mothers of eligible persons, and persons domiciled in Australia and employed in certain sea-going service during the 1914-18 and 1939-45 Wars.

During 1981-82 the following loan conditions applied:

Maximum loan	:	$25,000
Interest rates	:	3.75 per cent per annum on the first $12,000; 7.25 per cent per annum on any excess over $12,000 up to $15,000; 10.00 per cent per annum on amount in excess of $15,000
Maximum repayment period	:	The maximum repayment period permitted by the Act is 45 years or, in the case of the widow or widowed mother of an eligible person, 50 years; but, normally, the repayment period is limited to 32 years.

Operations under the Defence Service Homes Act

Since the inception of the Defence Service Homes Scheme in 1919, 370,514 loans have been granted to persons eligible for assistance under the Act. All figures shown include homes which were provided originally under the Housing Agreements with the States, and taken over in accordance with those agreements.

The following tables give details of the operations under the Defence Service Homes Act in the year 1981-82. The earliest year for which details are given in the tables is 1977-78; for earlier years *see* previous issues of the Year Book. The figures shown include operations in the Northern Territory, Norfolk Island and in Papua New Guinea.

DEFENCE SERVICE HOMES ACT: NUMBER OF LOANS GRANTED

Year	Construction of homes	Purchase of new homes	Purchase of previously occupied homes	Enlargement of existing homes	Total
1977-78	2,379	695	2,970	71	6,115
1978-79	1,904	658	2,720	83	5,365
1979-80	1,734	566	2,846	105	5,251
1980-81	1,927	531	3,332	125	5,915
1981-82	2,694	570	3,818	203	7,285

DEFENCE SERVICE HOMES ACT: STATE SUMMARY OF OPERATIONS

Year	N.S.W.(a)	Vic.	Qld(b)	S.A.(c)	W.A.	Tas.	A.C.T.	Total
NUMBER OF LOANS GRANTED								
1977-78	1,729	1,486	1,109	582	763	128	318	6,115
1978-79	1,657	1,042	1,068	559	540	102	397	5,365
1979-80	1,751	1,111	1,039	450	474	107	319	5,251
1980-81	1,584	1,309	1,287	495	684	138	418	5,915
1981-82	1,569	1,563	2,031	709	806	198	409	7,285
CAPITAL EXPENDITURE ($'000)								
1977-78	24,948	22,417	15,700	9,769	11,049	1,807	4,631	90,321
1978-79	23,842	14,980	15,438	7,992	7,836	1,467	5,879	77,434
1979-80	25,035	15,835	15,149	6,235	6,923	1,508	4,740	75,425
1980-81	26,174	22,334	21,128	8,413	12,505	2,396	8,603	101,554
1981-82	34,350	34,710	44,690	15,318	18,537	4,362	9,723	161,690
LOAN REPAYMENTS ($'000)								
1977-78	24,299	19,076	8,513	5,068	6,912	1,590	(d)	65,458
1978-79	29,928	20,670	10,416	6,578	7,848	1,951	(d)	77,391
1979-80	33,425	21,865	13,062	7,361	8,359	1,951	(d)	86,023
1980-81	36,290	22,475	14,990	8,144	9,203	1,833	(d)	92,935
1981-82	29,825	22,278	14,915	7,933	8,980	2,013	(d)	85,944
NUMBER OF LOAN ACCOUNTS AT 30 JUNE								
1978	63,864	51,693	26,319	16,456	17,970	4,299	(d)	180,601
1979	62,255	50,192	26,093	16,131	17,540	4,152	(d)	176,363
1980	60,839	48,090	25,529	15,600	16,971	4,006	(d)	171,035
1981	58,371	46,591	25,086	15,099	16,510	3,915	(d)	165,572
1982	56,953	45,498	25,254	14,871	16,235	3,876	(d)	162,687

(a) Includes A.C.T. and Norfolk Island (b) Includes Papua New Guinea (c) Includes Northern Territory (d) Included in New South Wales.

Home Savings Grant and Home Deposit Assistance Schemes

The administration of the Home Savings Grant and Home Deposit Assistance Schemes is a function of the Department of Social Security. The purpose of the schemes is to encourage people to save over a period towards the ownership of their first home and to assist them financially with its acquisition by means of a tax-free grant. A further objective is to increase the funds available in Australia for housing purposes by rewarding savings made with those institutions that provide the bulk of private housing finance.

The Home Savings Grant Scheme was introduced in 1964. Persons who acquired their home on or before 31 December 1976 qualified under the *Homes Savings Grant Act* 1964, the conditions of which are explained in detail in Year Book No. 61, page 233. Details of grants made under this Act up to 30 June 1978 are available in Year Book No. 63, pages 415-6.

Persons acquiring their homes on or after 1 January 1977 but no later than 2 June 1982 may qualify under the *Homes Savings Grant Act* 1976. Persons who acquired between 18 March 1982 and 2 June 1982 may instead elect to apply under the *Home Deposit Assistance Act* 1982. Applications for a Home Savings grant may be made by persons who contract to buy or build, or commence to construct their first home in Australia. There is no restriction on the marital status or age of the applicant except

that persons under eighteen years of age must be married or engaged. The home must be intended as the applicant's principal place of residence. Persons who are not Australian citizens must have the right to reside here permanently. Applicants cannot have owned a home or received a grant before.

The amount of grant is related to the 'savings period', which is the period of one, two or three complete years immediately before the contract date, during which the applicant/s must have saved in an acceptable form. The grant is calculated on the basis of $1 for each $3 of acceptable savings, including savings held at the beginning of the savings period. A maximum grant of $667 is payable in respect of a savings period of one year, $1,333 for two years and $2,000 for three years. Grants of $667 first became payable for people contracting to buy or build their home from 1 January 1977. The larger grants first applied from 1 January 1978 and 1979 respectively.

A qualifying limit applies to the value of the home, including the land, for persons entering into their contracts after 24 May 1979. The limit is $35,000–$40,000 for contracts up to 18 August 1980; $45,000–$55,000 for contracts dated 19 August 1980 to 30 September 1980, and $60,000–$70,000 for contracts dated 1 October 1980–2 June 1982. The grant calculated on the basis of savings reduces progressively within these ranges, cutting out completely at the upper limit. A full grant, depending on the amount saved, is payable for homes valued at or less than the relevant lower value limit.

The main forms of savings that are acceptable are those most commonly used to accumulate savings for a home, that is, with banks (other than cheque accounts), building societies and credit unions. For those people who entered into a contract on or after 1 October 1980, another form of acceptable savings are Australian Savings Bonds held as Inscribed stock or for safe custody with a bank. Savings expended on or before the contract date in connection with the home, such as for the deposit on the home or for the land, are also acceptable.

A person who is eligible for a grant and whose contract is dated between 1 October 1980 and 2 June 1982, may also be eligible for a Family Bonus. A Family Bonus of $500 is payable for families with one dependent child and $1,000 for families with two or more dependent children at the contract date. A dependent child includes a student aged 16 to 25 years. The Family Bonus does not vary with the level of savings or the value of the home, provided the value does not exceed $70,000.

The Home Savings Grant Scheme terminated on 2 June 1982 following Royal Assent to the Home Deposit Assistance Act.

Home Deposit Assistance Scheme

The *Home Deposit Assistance Scheme* was introduced in 1982. Persons acquiring their homes on or after 18 March 1982 may qualify under the *Home Deposit Assistance Act* 1982. Applications for grants may be made by persons who contract to buy or build or commence to construct their first home in Australia. There is no restriction on the marital status or age of the applicant except that persons under sixteen years of age must be married or engaged. The home must be intended as the applicant's principal place of residence. Persons who are not Australian citizens must have the right to reside here permanently. Applicants cannot have owned a home or received a grant before.

The amount of grant is related to the 'savings period' which is the period of one or two complete years immediately before the contract date during which the applicant must have saved in an acceptable form. The grant is calculated on the basis of $1 for each $1 of acceptable savings, including savings held at the beginning of the savings period. A maximum grant of $1,250 is payable in respect of a savings period of one complete year and $2,500 for a two year savings period.

An income limit applies based on the combined taxable income of all applicants including breadwinner and spouse. For persons acquiring their homes between 18 March 1982 and 30 June 1982 a full grant may be paid, if combined taxable income for 1980–81 does not exceed $18,900. If income exceeds that figure a partial grant, reduced proportionately, may be payable for combined taxable income up to $21,700. For persons acquiring their homes between 1 July 1982 and 30 June 1983, combined taxable income for 1981–82 must not exceed $21,700 to be eligible for a full grant. If the income exceeded that figure a partial grant may be payable for combined taxable income up to $24,900. If, in the twelve months preceding home acquisition, an applicant has withdrawn from the workforce, or is earning less income for reasons beyond his control these and other special circumstances may be taken into account when testing income.

A person who is eligible for a grant may also be eligible for a Family Bonus. For families with one dependent child, $500 is payable and $1,000 is payable for two or more dependent children. A family with a child or children born or adopted up to 11 months after home acquisition may also be eligible. A dependent child includes a student aged 16–25.

The Family Bonus does not vary with the level of savings or the amount of income provided the maximum income limits are not exceeded.

Details of the new Home Deposit Assistance Scheme are available in a leaflet and can be obtained through the Department of Social Security or from most savings institutions and estate agents.

Operations under the Home Savings Grant Scheme

Particulars of applications received and approved during 1981–82 and from inception in respect of the *Homes Savings Grant Act* 1976, are set out below.

HOMES SAVINGS GRANT ACT 1976: OPERATIONS 1981–82

	N.S.W.	*Vic.*	*Qld*	*S.A.(a)*	*W.A.*	*Tas.*	*A.C.T.(b)*	*Aust.*
Applications received								
No.	21,159	26,703	12,571	9,237	8,768	2,556	1,809	82,803
Applications approved								
No.	11,217	17,377	7,748	5,940	5,168	1,950	1,251	50,651
Grants approved $'000	17,518	28,816	12,265	9,152	7,427	2,895	1,953	80,026
Average grant approved								
$	1,562	1,658	1,583	1,541	1,437	1,485	1,561	1,580
Expenditure from Consolidated Revenue								
$'000	24,446	40,680	18,296	13,313	10,498	4,262	2,993	114,488

(*a*) Includes Northern Territory. (*b*) Includes Queanbeyan, N.S.W.

HOMES SAVINGS GRANT ACT 1976: OPERATIONS, 1 JANUARY 1977 TO 30 JUNE 1982

Period	*Applications received*	*Applications approved*	*Grants approved*	*Average grant approved*	*Expenditure from consolidated revenue*
			$'000	$	$'000
1 January 1977 to 30 June 1977 . . .	11,850	8,447	5,491	650	5,035
1977–78	58,433	49,790	36,131	726	33,995
1978–79	57,178	51,626	55,514	1,075	20,000
1979–80	44,499	47,668	59,987	1,258	71,502
1980–81	46,038	39,640	53,136	1,340	44,592
1981–82	82,803	50,651	80,026	1,580	114,488
Total from 1 January 1977 . .	**300,801**	**247,822**	**290,285**	**1,171**	**289,599**

Mortgage and Rent Relief Scheme

In March 1982 the Commonwealth Government announced that it would offer up to $20 million a year to the States, the Northern Territory and the Australian Capital Territory for a period of three years, from and including 1982–83, for the provision of short term housing assistance to low income rent and mortgage payers who are experiencing genuine financial difficulty in meeting their rent or mortgage commitments.

Payment of the grants is conditional upon the States and Territories matching these sums dollar-for-dollar.

The 1982–83 allocation, which totals $20m, of Commonwealth grants to each State and Territory is as follows: New South Wales—$7.03m, Victoria—$5.3m, Queensland—$3.11m, South Australia—$1.76m, Western Australia—$1.74m, Tasmania—$0.57m, Northern Territory—$0.18m and Australian Capital Territory—$0.31m.

It was proposed that the States administer the scheme, and determine eligibility for assistance. At least 25 per cent of each State's grant is to be devoted to rental or mortgage relief.

Crisis Accommodation for Families Program

In 1981–82, the Commonwealth introduced a crisis accommodation program for families in distress. Grants are provided to the States, the Northern Territory and Aboriginal Hostels Limited for the construction, purchase or leasing of dwellings to provide short term emergency accommodation for families. The objective of the program is to assist both one and two parent families who have an immediate need for accommodation.

In the 1981-82 Budget, $2 million was provided for the commencement of the program. A further $4 million has been budgeted for 1982-83. Particulars of the allocations under this scheme for 1981-82 and 1982-83 are set out below.

CRISIS ACCOMMODATION FOR FAMILIES: BUDGET ALLOCATIONS
($'000)

Period	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1981-82	666	502	295	167	165	55	50	100	2,000
1982-83	1,326	1,000	600	334	332	108	100	200	4,000

Housing loans insurance

The Housing Loans Insurance Corporation was established under the *Housing Loans Insurance Act* 1965 to insure approved lenders against losses arising from the making of housing loans. For further information regarding the Corporation and earlier operation of the Scheme, *see* Year Book No. 61, pages 235-6.

Following amendments to the Act in mid 1977, loans for owner-occupancy homes are insurable without limit on loan amount, interest rate or term. A once-and-for-all premium of 1.4 per cent of the amount of the loan is charged by the Corporation for the insurance of loans up to, but less than, 96 per cent of valuation, with the premium rate falling progressively to a minimum of 0.1 per cent on loans of less than 76 per cent of valuation. On loans from 96 to 100 per cent of valuation, the premium charged is 1.4 per cent of the valuation of the loan plus 10 per cent of the amount so calculated. The amendments to the Act also empowered the Corporation to insure loans for rental housing projects and loans to developers and builders.

From November 1965, when the Corporation commenced operations, until the end of June 1982, 447,000 loans to the value of $9,557 million had been insured.

State housing authorities

The following paragraphs describe briefly the organisation of the various State housing authorities and their activities in the fields of home construction and provision of homes on a rental basis (*see* pages 499-501, for their financial advances to persons wishing to purchase or build a home). For summarised figures of total government construction of houses and other dwellings, *see* pages 502 and 504.

New South Wales—The Housing Commission of New South Wales. The Housing Commission of New South Wales was constituted in 1942, its principal function being the provision of low-cost housing to persons in the lower or moderate income groups.

Advances from the Commonwealth Government have provided most of the Housing Commission's capital funds and by 30 June 1982 had aggregated $1,236,244,000 of which $147,033,000 had been repaid. Other net funds of the Commission at 30 June 1982 comprised: repayable advances from the State, $177,147,000; public loans raised by the Commission, $17,744,000; grants from the Commonwealth Government, $179,760,000; grants from the State, $51,172,000 (including $10,594,000 from Consolidated Revenue and $40,577,000 mainly from proceeds of poker machine taxes); provision for maintenance of properties, $18,104,000; and accumulated surplus, $171,014,000. In addition, the Commission owed $68,485,000 to creditors, mainly for purchase of land and work-in-progress. These funds were represented by fixed assets, $1,762,145,000 (including $159,960,000 debtors for purchase of homes); and current assets, $19,338,000. In 1981-82, the Commission's income was $190,092,000 (including rent $162,323,000 and interest $17,664,000); expenditure was $170,425,000 (interest, $62,329,000).

The permanent dwellings provided by the Commission have been erected under the Federal-State Housing Agreements or from State loans and grants. In 1981-82, 2,405 houses and flats were completed for the Housing Commission by private builders on contract to the Commission.

Upon request by other State Departments, the Housing Commission will erect houses for employees of those Departments, the Departments providing the necessary lands and funds. In addition, the Commission erects (with State funds) dwellings for employees of industries connected with decentralisation and development. Specially designed units are erected by the Housing Commission to provide dwellings for elderly persons at rentals within their means. The rents of these units, as at 30 June 1982, were approximately $14.30 a week for elderly single persons and $23.20 a week for elderly couples. At 30 June 1982, 11,600 units had been completed.

Victoria—Ministry of Housing. The Ministry of Housing co-ordinates all Government housing activities in Victoria. The authorities within the Ministry are the Housing Commission, Registry of Co-operative Housing Societies and Co-operative Societies, Home Finance Trust (*see* page 499) and Government Employee Housing, Authority.

Housing Commission, Victoria. The Commission was set up in 1938 as a result of the Housing Act of the previous year. Following an amendment to the Housing Act in January 1979, the function of the Commission is defined as assisting the Minister to carry out his duties, which include the determination of the present and future housing needs of the people of Victoria and the taking of steps in relation to: the provision of accommodation for persons in need; the provision of adequate and suitable houses for letting or leasing; the sale of houses to eligible persons; the making of advances to eligible persons for home purchase; the improvement of existing housing by the establishment and enforcement of adequate housing standards; encouraging and assisting in the provision of finance for persons building, purchasing or renovating houses; the development and sale of land for housing; the preparation and implementation of urban renewal proposals; the provision of parks, gardens and community facilities in areas where land or houses have been provided; the provision of shops and commercial facilities or land therefor; the provision of movable units for the accommodation of pensioners on the land of a householder; the provision of housing for officers and employees of government departments and public authorities in circumstances where this is desirable; and the integration of housing under the Act with private housing.

Since the signing of the 1945 Housing Agreement, the construction of dwellings has been financed by the Commonwealth Government and Commission Funds.

At 30 June 1982, the Housing Commission had completed 93,437 dwelling units under the State Housing Scheme and Federal-State Agreements, Works and Services Loans, Service Personnel Agreements (Housing), and Grants for Aged Person Housing. Specially designed dwelling units are erected by the Commission to provide dwellings for elderly persons at rentals within their means. To 30 June 1982, 8,457 such units had been completed. These are also included in the figures for total constructions above.

Queensland—The Queensland Housing Commission. The Queensland Housing Commission was established in 1945 to assist in meeting the housing shortage. In addition, the Commission was empowered to build houses itself, either for sale or for rental.

During 1981–82 the Commission provided 2,816 dwelling units, bringing the total number under all schemes since the revival of housing construction in 1944–45 to 66,208. Of this number 41,955 houses, or 63.4 per cent, were for home ownership, and 24,253, or 36.6 per cent, were for rental.

In the field of rental housing the Commission administers and acts as the constructing authority under the Federal-State Housing Agreements and States Grants (Housing) legislation. Operating under the provisions of the *State Housing Act* 1945–1981, the Commission, through its scheme of mortgage finance, makes advances for the construction of dwellings to eligible persons who own a suitable building site. The number of dwellings completed during 1981–82 amounted to 2,002, making a total of 40,707 completions since the inception of the scheme. The Commission also has power to make advances, secured by mortgage, to firms for housing of employees. The Commission has power to sell houses under contract of sale conditions. Contract of sale agreements were made to purchase 143 of the Commission's houses during 1981–82.

South Australia—The South Australian Housing Trust. The South Australian Housing Trust was established under the South Australian Housing Trust Act, 1936. Under the Housing Improvement Act, 1940, the Trust became the housing authority to administer the Act and the Trust's powers were extended. It is also the housing authority for South Australia under the *Housing Assistance Act* 1981.

The primary role of the Trust is to provide housing for those in need and within their capacity to pay; and to do so in ways which contribute to the economic development of the State.

In fulfilling its primary role, the Trust aims to provide housing which is appropriate for the householders' needs, is of an acceptable and modern standard and is integrated within the surrounding environment.

The Trust makes housing available to those in need by the construction, purchase or leasing of property which is let to tenants at market-related rents, with a rent rebate scheme for those with special needs; by the sale of housing, including sales to sitting tenants; by the administration of mortgage relief for home owners in crisis; by its management of the emergency housing service and by the exercise of its responsibilities in relation to private sector accommodation under the Housing Improvement Act.

The Trust has a separate responsibility to government to act as the State's industrial property authority, to provide industrial premises for approved additions to or extensions of industrial facilities within the State.

In order to assist those in need a number of new schemes were commenced during the year. These include:

- provision of up to 50 houses to voluntary agencies and youth groups for use as youth shelters.
- the *Low Deposit Purchase Scheme*, designed to assist low-income people in purchasing a home through a nominal deposit and low interest loans.
- a *Home Purchasers in Crisis Assistance Scheme* to assist home buyers undergoing severe family and financial crises contributing to their inability to meet mortgage repayments.
- the *Design and Construct Scheme* under which private builders contract houses of their own design on their own land for the Trust.
- the *Housing Co-operatives Scheme* under which the Trust subsidises private rental co-operatives.

A total of 92,790 dwellings have been built, purchased or leased by the Trust since 1936. Subject to certain conditions, tenants may purchase the dwelling they rent from the Trust.

For further details *see* South Australian Year Book.

Western Australia—State Housing Commission of Western Australia. The activities of the State Housing Commission extend throughout the whole State. In addition to construction of a variety of dwellings for its own rental and purchase program as determined under the State Housing Act, the Federal State Housing Agreements prior to 30 June 1971, the *States Grants (Housing) Act* 1978, the 1978 Housing Agreement, and the 1981 Housing Agreement, its activities include: construction of houses for other Government Departments (both Commonwealth and State Government, and semi- and local government authorities) in Western Australia; and construction and maintenance of houses for the Government Employees' Housing Authority.

At 30 June 1982, the Commission had completed under all schemes since 30 June 1944 a total of 69,928 units of accommodation throughout the State (including 12,046 units completed under the *Defence Services Homes Act* 1918).

During the twelve months ended 30 June 1982, 1,036 units of accommodation were completed: metropolitan area, 425; country, 325; and north of the 26th parallel, 286. A further 425 units were under construction.

Building societies are a major source of housing finance in Western Australia. At 30 June 1982, it was estimated that the assets of permanent and terminating societies were about $2,415 million. Currently, 9 permanent and 430 terminating societies are operating. Under the 1981 Housing Agreement with the Commonwealth the State is required to allocate a proportion of the funds the State receives under the Agreement to the Home Purchase Assistance Account. Advances are made from the account to terminating building societies which in turn make loans available to eligible applicants being those persons unable to obtain mortgage finance assistance in the open market or from other sources.

Under the *Housing Loans Guarantee Act*, 1957–1973, the guarantees provided to financial institutions enable loans to be made to lending institutions with full security. The Act enables building societies and other approved bodies to make high ratio advances to families of low and moderate means without additional charge. The interest rate charged to the borrower may not exceed 14.25 per cent reducible. Loans may be made for up to 90 per cent of the value of the house and land. The maximum loan permitted in respect of the metropolitan region south of the 26th parallel is $36,000. For a new house situated north of the 26th parallel and in the North West or Eastern Land Divisions, the maximum loan is $65,700 and in the Kimberley Land Division $68,400.

Tasmania—Department of Housing and Construction (Housing Division). The Department of Housing and Construction, established in September 1977, is comprised of the Housing and Construction Divisions. The Housing Division is continuing the functions of the former Housing Department which was established in 1953 for the purpose of administering that portion of the *Homes Act* 1935 relating to the acquisition and development of land for housing purposes and the erection of homes for rental and sale to those deemed in need of assistance, and the *Casual Workers and Unemployed Persons Homes Act* 1936.

During 1981–82 dwelling completions numbered 698. The total number of dwellings constructed as at 30 June 1982 is 20,874, comprising 17,973 detached and semi-detached units, 1,547 elderly persons' units, 316 multi-unit flats, 1,009 villa units and 29 moveable units. The figures shown last year have been adjusted and the total units constructed includes 196 dwellings built prior to 1944.

The Division now allots all welfare housing accommodation on a rental basis. Weekly rental of a new typical standard home was between $40-50.00 at 30 June 1982. In certain necessitous cases, rental rebates are allowed. Under current policy a married couple occupying an elderly persons' unit and whose only income is the age pension pay $21.90 a week, while a single person solely dependent on the pension pays $13.50 a week.

Housing schemes in Australian Territories

Northern Territory. In 1946 control of all government-owned residences in the Territory (excluding those belonging to the Defence Services or Commonwealth Railways or attached to post offices) was vested in the Administration. The Northern Territory Housing Commission was established in 1959 and operates under authority of the *Housing Act* 1979. The Commission became autonomous on 1 October 1969 and, in addition to its role of providing residential accommodation to persons of limited means, its functions were broadened as from 1 July 1978 to include the provision of housing for employees of the Northern Territory Government and related authorities and the provision of residential, office, industrial or other accommodation for the Commonwealth and the Territory for public purposes and approved commercial and welfare organisations.

Australian Capital Territory. The Commonwealth Government provides houses and flats for rental to persons on low incomes who live or are employed in the Australian Capital Territory. At 30 June 1982 the Department of the Capital Territory controlled 6,498 houses and 3,263 flats for rental purposes. Government rental houses may be purchased by tenants.

Summary of rental activities of government authorities

The first of the following two tables shows the revenue from rental for dwellings under control of government housing authorities each year from 1976–77 to 1981–82, and the second shows the number of tenants paying rent for dwellings under control of government housing authorities at the end of each year 1976–77 to 1981–82.

GOVERNMENT HOUSING AUTHORITIES: REVENUE FROM RENTALS

($'000)

Year	*N.S.W.*	*Vic.(a)*	*Qld(b)*	*S.A.*	*W.A.(a)*	*Tas.*	*N.T.(a)*	*A.C.T.*	*Aust.*
1976–77	84,242	49,714	26,766	35,913	19,586	7,368	3,281	15,626	242,496
1977–78	99,566	53,753	32,069	42,331	24,337	9,855	4,467	20,538	286,916
1978–79	114,404	64,556	39,382	42,785	27,764	12,722	9,090	20,658	321,361
1979–80	127,584	68,819	42,924	46,775	28,882	16,100	11,768	20,123	362,975
1980–81	143,409	72,122	44,582	55,889	34,585	17,646	14,722	20,497	403,452
1981–82	162,323	82,322	51,112	60,420	36,648	21,557	16,288	22,896	453,566

(*a*) Figures relate to Housing Commission only. (*b*) Excludes rentals in respect of tenanted temporary dwellings.

GOVERNMENT HOUSING AUTHORITIES: NUMBER OF TENANTS PAYING RENT

Year	*N.S.W.*	*Vic.(a)*	*Qld(b)*	*S.A.*	*W.A.(a)*	*Tas.(c)*	*N.T.(c)*	*A.C.T.(c)*	*Aust.*
1976–77	80,510	40,053	20,772	38,601	24,818	6,695	3,428	10,967	225,844
1977–78	82,893	40,151	21,863	39,757	24,323	7,489	3,665	10,575	230,716
1978–79	85,997	40,049	22,730	40,780	25,011	8,238	5,540	10,550	238,895
1979–80	90,124	40,090	23,063	41,892	25,867	9,258	6,121	10,282	246,697
1980–81	93,178	41,708	23,581	43,652	26,060	9,886	6,635	10,014	254,714
1981–82	95,237	43,900	24,253	45,285	27,707	10,412	6,687	9,495	262,976

(*a*) Figures relate to Housing Commission only. (*b*) Excludes tenanted temporary dwellings. (*c*) Number of occupied dwellings at 30 June.

Advances to home purchasers

Many prospective home purchasers wish to borrow for the purpose of constructing or purchasing their own homes. Usually the loan is covered by way of mortgage of the home to be constructed or bought. Such loans are provided from a number of private sources and from agencies owned or guaranteed by the Commonwealth or State Governments. The information in this section concerns the direct loans made to home purchasers by the more important institutional lenders. Loans to institutions which in turn lend moneys to home purchasers and loans to contract builders, etc. are excluded as far as possible. The loans may be for the construction of new dwellings, the purchase of existing dwellings, for additions, renovations, etc., as first or subsequent mortgages, overdrafts and so on. While figures of all loans to home purchasers are not available, the institutions mentioned account for a significant proportion of total loans. Details of the terms and conditions of lending are given, together with available information on the number and value of loans made.

State and Territory authorities and agencies

New South Wales: State Bank of New South Wales—Sale of Homes Agency. A Sale of Homes Agency was established in 1954 to arrange for the sale on terms of houses erected by the Housing Commission of New South Wales. Since 30 November 1976, the sale of these homes on a terms basis has not been permitted, although the Agency still acts as agent for the Commission in collecting instalments payable by purchasers of homes sold prior to that date. The Agency's operations began with the sale to selected purchasers of 100 houses made available by the Commission during 1954–55 and 1955–56. The sales were made on the basis of 10 per cent deposit and repayment of the balance over a maximum period of forty years, with interest at 4.5 per cent per annum. Total advances under that scheme amounted to $646,648; at 30 June 1982 the advances outstanding amounted to $81,311 in respect of 28 houses.

Between 1 July 1956 and 30 November 1976, the Sale of Homes Agency acted as the agent of the Housing Commission in arranging the sale on terms of houses erected under the Federal-State Housing Agreements. The terms of sale provided for a minimum deposit of $200 and repayment of the balance over a maximum period of forty-five years, with interest rates since the inception of the scheme ranging from 4.25 to 6.75 per cent per annum. Particulars of the advances made by the Agency in connection with the sale of houses erected under the 1956, 1961, 1966 and 1973 Agreements and the *States Grants (Housing) Act* 1971 are given in the following table.

STATE BANK OF NEW SOUTH WALES—SALE OF HOMES AGENCY ADVANCES FOR HOMES SOLD UNDER THE 1956, 1961, 1966 AND 1973 FEDERAL-STATE HOUSING AGREEMENTS AND THE STATES GRANTS (HOUSING) ACT OF 1971

	Advances during year		*Total advances to end of year*		*Advances outstanding at end of year(a)*	
Year	*Number of houses*	*Amount*	*Number of houses*	*Amount*	*Number of houses*	*Amount*
		$'000		$'000		$'000
1976–77	22	573	29,176	246,802	18,905	144,899
1977–78	—	—	29,176	246,802	17,818	134,529
1978–79	—	—	29,176	246,802	16,802	125,126
1979–80	—	—	29,176	246,802	15,628	114,112
1980–81	—	—	29,176	246,802	14,517	103,869
1981–82	—	—	29,176	246,802	13,732	96,437

(*a*) Comprises principal outstanding and loan charges due but not paid.

Prior to 30 November 1976 the Sale of Homes Agency also acted as agent for the Housing Commission in arranging the sale of houses erected by the Commission on applicants' land. Under this scheme persons who had established a housing need could apply to the Commission to have a standard-type dwelling erected on their own land. The houses were sold, at a price equivalent to their capital cost, on the same terms as for houses erected under the 1956 to 1973 Housing Agreements and the *States Grants (Housing) Act* 1971. Up to 30 June 1982, 769 houses had been built at a cost of $8,223,000, the balance of indebtness at that date was $3,346,000.

State Bank of New South Wales—Other loans. The State Bank of New South Wales provides assistance to individuals for the erection or purchase of homes and for other approved purposes associated with homes. Advances are based on the bank's official valuation of the dwelling. The current rate of interest on new long-term loans for housing purposes is 13.25 per cent per annum.

Victoria: Housing Commission of Victoria. Commission policy is to encourage home ownership; of the 93,437 (1981–91,682) dwelling units built to 30 June 1982, under the State Housing Agreement the Federal State Agreements Housing Grants and Commission Funds, a total of 50,604 (1981–50,015) houses have been sold: 28,658 (1981–28,460) in the metropolitan area and 21,946 (1981–21,555) in the country.

Home Finance Trust. The Home Finance Trust is a corporate body constituted under the *Home Finance Act* 1962. It is authorised to receive money on deposit, the repayment of which is guaranteed by the Government of Victoria, for the purpose of making loans for housing on the security of first and second mortgages. Under the terms of the Act the Trust is precluded from making loans in certain circumstances.

The number of loans granted by the Trust to 30 June 1982 and subsisting totalled 2,074 (1981–2,198) on the security of first mortgage and 3,930 (1981–3,864) on second mortgage, the amount involved being $21.9 million (1981–$21.5 million) and $18.7 million (1981–$18.4 million) respectively.

(*See* Savings Banks, page 243 of Year Book No. 61, for activities of the State Savings Bank of Victoria.)

Queensland: Queensland Housing Commission. Loans from the Commonwealth and State Government are the major source of capital funds for the Commission. Under the *State Housing Act* 1945–81, an eligible person who is the owner of a suitable building site may obtain an advance, secured by mortgage on the land, from the Housing Commission for the erection of a dwelling. The Housing Commission also provides mortgage finance for the purchase of homes already built or to be built by private contractors. At 30 June 1982, the maximum advance under mortgage finance was $30,000 with interest chargeable at 8 per cent, and repayments over periods up to 45 years.

Western Australia: State Housing Commission of Western Australia. Under current policy all sales are on a cash basis, with finance funded from the Home Purchase Assistance Account where the family is eligible, or from other lending authorities where the family is ineligible for Home Purchase Assistance Account finance.

Assistance through Terminating Building Societies is available to acceptable applicants from the Loans Priority List under first mortgage conditions if they are able to meet the eligibility requirements. Funds are not available for second mortgages.

The interest rate on advances varies from 6 per cent to 13.5 per cent depending on family income, and the maximum repayment period is thirty years.

The Societies are required to accept no less than 3 per cent of the value of the house and land as a cash equity, but a deposit of 10 per cent or greater is sought by the societies. If the amount of finance required is in excess of the combined maximum advance and deposit provided, a second mortgage or personal loan will be required to bridge the gap.

In the metropolitan area, to be eligible for assistance, applicants' incomes cannot exceed $240.00 per week, plus $15.00 per week for each dependent child. The maximum value of house and land is $36,000 with a maximum advance of 90 per cent of the maximum valuation being obtainable.

The remainder of the State is divided into areas in which the income eligibility varies from $240.00 per week to $320.00 per week plus $15.00 per week for each dependent child in excess of two. The maximum advance in these areas is 90 per cent on the maximum value of house and land which varies from $36,000 to $72,000.

(*See* Savings Banks, page 243 of Year Book No. 61, for activities of the Savings Bank Division of the Rural and Industries Bank of Western Australia.)

Tasmania: Department of Housing and Construction, Housing Division. The interest rate on purchase contract loans at 1 July 1982 was 7 per cent. The number of loans outstanding at 30 June 1982 was 5,472 and the amount outstanding, $45,022,000.

Agricultural Bank of Tasmania. The Agricultural Bank of Tasmania is responsible for the administration of funds made under the Home Purchase Assistance section of the *Housing Assistance Act* 1978. A new Housing Agreement operating from 1 July 1978 consolidates all past agreements. The State has also provided State Loan Funds for lending under the Homes Act specifically available for first home builders. Interest rates vary from 6 per cent to 12.5 per cent depending on need. The term varies depending on the applicant's capacity to repay.

Principles which apply under the new agreement include:

- To facilitate home ownership for those able to afford it but not able to gain it through the private market.
- Provide assistance for home ownership in the most efficient way and thus exclude from eligibility those not in need, to minimise continued availability of assistance to those no longer in need and to accord benefits which are designed so that assistance being provided is related to the particular family's or individual's current economic and social circumstances.
- The States are able to exercise maximum autonomy and flexibility in the administrative arrangements necessary to achieve these principles.

The following table shows details for recent years.

AGRICULTURAL BANK, ADVANCES FOR HOUSING (*a*)

Particulars	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Advances approved:						
Number	393	366	366	281	386	354
Value ($'000)	8,355	8,354	7,532	6,551	10,129	9,448
Advances outstanding at 30 June ($'000)	38,832	43,726	49,190	52,740	58,250	65,056

(*a*) Excludes advances to Co-Operative Housing Societies.

Northern Territory: Loans Scheme. On 1 October 1979, the Northern Territory Government introduced a loans scheme to provide finance for the erection of houses, the purchase, enlargement or modification of existing dwellings or the completion of partially erected dwellings. This scheme was re-structured in August 1982 and loans are now provided to a maximum of $50,000 or 95 per cent of house/land valuation. The scheme incorporates a system of variable escalating interest rates with income geared starts. The initial starting interest rates vary according to the borrowers' incomes and escalate by annual increments of ¼ per cent per annum up to a common maximum rate. Where borrowers are capable of obtaining finance privately, loans are proportionately lower and on a second mortgage basis.

The restructuring also effects certain eligibility criteria. Single persons are now eligible to apply and loans can now be obtained for new or existing buildings whereas in the past, emphasis was placed on the purchase of new dwellings. A previous restructuring exercise carried out in January 1981 increased the income limit for borrowers and imposed a pre-requisite of twelve months residency prior to application. Potential borrowers who already owned a dwelling (including elsewhere in Australia) were no longer eligible.

Sales Schemes. Two schemes exist to allow eligible tenants of Northern Territory Housing Commission dwellings to purchase. Under the *General Public Sales Scheme,* sales are on a cash basis only to approved tenants who have completed a satisfactory tenancy of at least two years. A *Staff Sales Scheme* also operates to allow tenants of Northern Territory Public Service dwellings to purchase. The 1982 restructure removed the two year qualifying period requirement in respect of Northern Territory Public Service staff. Sales are for cash or on terms requiring a minimum deposit of 5 per cent of the purchase price with repayments over a maximum period of 45 years including interest at either 6.75 per cent or 9.75 per cent subject to a means test.

Australian Capital Territory: Loans to a maximum of $28,000 over a maximum term of thirty-two years may be granted by the Commissioner for Housing for the purchase or erection of dwellings in the Australian Capital Territory where the value of the dwelling does not exceed the median sale price of dwellings in the Territory. The following conditions must be satisfied before an applicant may qualify for the loan:

- may not already own a dwelling in the Australian Capital Territory or Queanbeyan
- must live or work in the Australian Capital Territory
- generally the applicant or their spouse must not have already received financial assistance from Government funds for housing in the Australian Capital Territory
- must not have assets exceedings $15,000.

In addition to the above qualifications a means test is applied to applicants for loans. Applicants whose joint income does not exceed 120 per cent of the Australian male seasonally adjusted average weekly earnings may qualify for a loan. An additional income allowance of $2.00 per week is made for each dependant child in excess of two.

The rate of interest for the first year of the loan is 5¾ per cent effective. Thereafter the interest rate increases by ¼ per cent each year until it reaches an effective rate of 13.5 per cent. At 30 June 1982, 11,714 houses were under mortgage to the Commissioner.

In the past government rental houses valued at market prices were available for sale to tenants, with government funds being provided to finance purchasers. On 11 August 1981 this policy was amended so that only tenants who qualified for a concessional interest rate mortgage were eligible to purchase a government house. It was decided to delay the application of this policy to existing tenants for a period of two years. The current basis of a sale is a minimum deposit of 5 per cent of the purchase price fixed by the Department of the Capital Territory with a first mortgage of up to $28,000 being provided by the Department. Mortgage repayment extends to a maximum of thirty-two years. A concessional interest rate commences at an effective rate of 5¾ per cent and escalates by ¼ per cent each year thereafter until a maximum non-concessional rate of 13.5 per cent is reached. To qualify for this concessional rate of interest the combined incomes of breadwinner and spouse must not exceed 120 per cent of the Australian male seasonally adjusted average weekly earnings with an allowance of $2.00 for each dependant child after the second being deducted from total gross income. Tenants not qualifying for the concessional rate of interest and who occupied government houses prior to the date of the policy change mentioned earlier may during the two-year moratorium period apply to purchase the house they are occupying. In these cases the basis of the sale is the same as above except that there is no means test and the effective interest rate is 13.5 per cent. At 30 June 1982 16,164 houses had been sold to tenants, with 8,684 of these currently under mortgage.

Savings banks, trading banks, life insurance companies and registered building societies

For information on loans approved to individuals for owner occupied housing *see* Chapter 21, Private Finance.

CONSTRUCTION

Building

Building activity is a significant indicator of the level of economic activity. In addition, the level of building activity and the types of buildings being constructed affect the Australian physical and social environment. Building approvals statistics give an indication of the potential future level of investment of private individuals, companies and government agencies in approved building construction. As such, they provide information about potential future building activity. Building activity statistics show the level of actual building construction activity in terms of the level of commencements and completions, building jobs under construction and the value of work done and yet to be done on building jobs.

The building statistical collections cover all new dwellings of any value, new other building jobs valued at $10,000 and over, and alterations and additions (to both dwellings and other building) valued at $10,000 and over. From 1966–67 to 1972–73, alterations and additions of $10,000 and over were included with new dwellings and new other building. From 1973–74, alterations and additions (of $10,000 and over) to new dwellings are shown separately, but for other building, new work and alterations and additions continue to be shown combined.

From the September quarter 1980 a new Building Activity Survey replaced the previous quarterly Building Operations Census. The major features of the new survey are as follows:

- replacement of the previous complete enumeration of private sector jobs involving new house construction or alterations and additions valued at $10,000 or more to houses by a sample survey; and
- continuation of the complete quarterly enumeration of jobs involving construction of new dwellings other than private sector houses, construction of new other buildings with an approval value of $10,000 or more and all alterations and additions with an approval value of $10,000 or more to buildings other than private sector houses.

Number of new houses

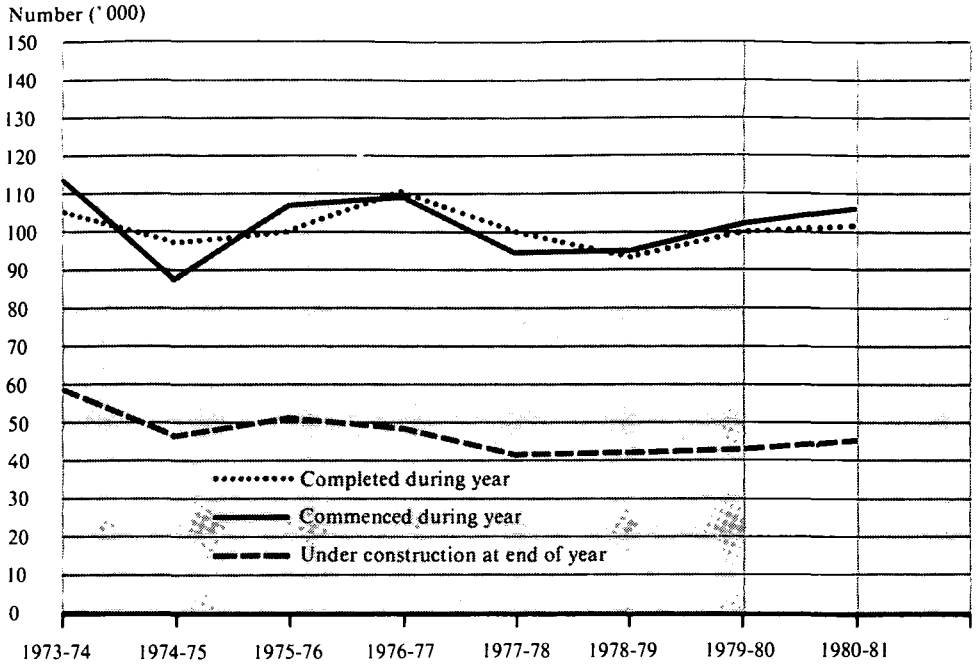
The following table provides a summary of the number of new houses approved, commenced, under construction and completed by type of ownership in each State and Territory for the year 1980–81. For a graph showing these details over an eight-year period, *see* Plate 40, page 503.

NUMBER OF NEW HOUSES, 1980–81
('000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Private Sector—									
Approved	38.5	21.5	25.2	5.3	10.3	1.9	0.7	1.8	105.3
Commenced	37.3	21.1	23.2	5.0	9.7	2.0	0.7	1.6	100.5
Under construction(*a*)	17.2	10.1	7.4	1.6	3.3	1.1	0.3	0.6	41.8
Completed	34.4	20.7	21.7	5.2	9.6	2.1	0.7	1.3	95.7
Public Sector—									
Approved	1.2	1.0	0.6	0.8	0.5	0.4	0.6	—	5.1
Commenced	1.3	0.9	0.5	1.0	0.5	0.4	0.6	—	5.2
Under construction(*a*)	0.9	0.7	0.2	0.6	0.2	0.1	0.4	—	3.1
Completed	1.8	0.8	0.4	1.2	0.5	0.5	0.6	—	5.7
Total—									
Approved	39.6	22.5	25.8	6.1	10.9	2.3	1.3	1.8	110.4
Commenced	38.5	22.0	23.7	6.0	10.2	2.5	1.2	1.6	105.8
Under construction(*a*)	18.2	10.8	7.6	2.2	3.5	1.2	0.7	0.6	44.9
Completed	36.2	21.5	22.1	6.4	10.1	2.5	1.3	1.3	101.5

(*a*) At end of period.

NEW HOUSES: AUSTRALIA, 1973-74 TO 1980-81



Note: Break in series from 1980-81

PLATE 40

Number of new houses approved by material of outer walls

The use of certain materials for outer walls is dictated by such factors as cost, durability, appearance and climatic conditions. Changes in the materials used over time indicate changes in the characteristics of the housing stock.

The following table shows the number of new houses approved in each State and Territory during the year 1980–81, classified according to the material of their outer walls.

NUMBER OF NEW HOUSES APPROVED BY MATERIAL OF OUTER WALLS, 1980–81
('000)

Material of outer wall	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Double brick(*a*)	5.9	2.2	3.4	2.1	8.7	–	1.0	–	23.4
Brick veneer	27.9	16.7	16.0	2.6	1.2	1.9	–	1.8	68.2
Timber	1.3	1.1	1.1	0.2	–	0.2	–	–	4.0
Fibre cement	4.2	1.0	4.7	0.8	0.8	0.2	0.1	–	11.8
Other	0.5	0.1	0.5	–	0.1	–	0.1	–	1.3
Not stated	–	1.4	–	0.3	–	–	0.1	–	1.8
Total	**39.8**	**22.5**	**25.8**	**6.1**	**10.9**	**2.3**	**1.3**	**1.8**	**110.5**

(*a*) Includes houses constructed with outer walls of stone or concrete.

Number of new other dwellings

The level of other dwelling construction is highly variable and does not follow the traditionally regular pattern experienced in house construction. This can be explained partly by the generally larger size of other dwelling construction jobs and also by the extent of speculative building of private flats, home units and similar other dwelling projects. Although construction of government-owned other dwellings is substantial, the proportion of government-owned other dwellings to total other dwellings constructed is smaller than that of government-owned houses to total houses.

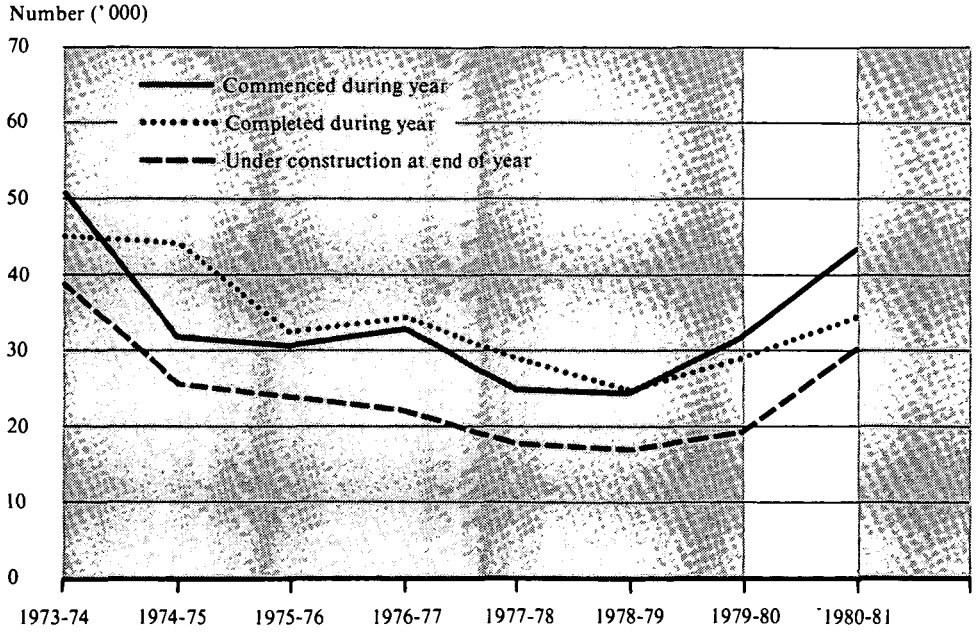
The following table shows the number of new other dwellings approved, commenced, under construction and completed by type of ownership in each State and Territory for the year 1980–81. For a graph showing these details over an eight year period, *see* Plate 41, page 504.

NUMBER OF NEW OTHER DWELLINGS, 1980–81
('000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Private Sector—									
Approved	17.7	4.1	12.8	1.1	5.1	0.5	0.5	0.7	42.4
Commenced	16.8	3.9	11.0	1.0	4.8	0.6	0.5	0.8	39.3
Under construction(*a*)	12.4	2.5	8.0	0.5	2.6	0.2	0.3	0.5	27.2
Completed	12.1	3.8	7.3	1.0	3.9	0.6	0.4	0.7	29.8
Public Sector—									
Approved	1.2	0.7	0.5	0.6	0.4	0.4	0.2	–	4.0
Commenced	1.3	0.8	0.4	0.6	0.4	0.4	0.2	–	4.1
Under construction(*a*)	1.3	0.5	0.3	0.3	0.2	0.2	0.2	–	3.1
Completed	1.7	0.6	0.4	0.7	0.6	0.4	0.2	–	4.7
Total—									
Approved	18.8	4.8	13.3	1.7	5.5	0.9	0.8	0.7	46.4
Commenced	18.1	4.7	11.5	1.6	5.2	0.9	0.7	0.8	43.4
Under construction(*a*)	13.8	3.0	8.3	0.9	2.8	0.5	0.5	0.5	30.3
Completed	13.8	4.4	7.8	1.7	4.5	1.0	0.6	0.7	34.4

(*a*) At end of period.

NEW OTHER DWELLINGS: AUSTRALIA, 1973-74 TO 1980-81



Note: Break in series from 1980-81

PLATE 41

Value of buildings

The following table shows the value of all buildings approved, commenced, under construction, completed, work done and work yet to be done in Australia for the year 1980–81, according to the class of building. The classification of other building by type of building is according to the function a building is intended to serve as specified on building authorisations.

VALUE BY CLASS OF BUILDING, 1980–81
($ million)

Class of building	*Approved*	*Commenced*	*Under construction(a)*	*Completed*	*Work done (b)*	*Work yet to be done (a)*
New houses	4,205.0	4,237.4	2,016.6	3,852.8	4,220.4	990.4
New other dwellings	1,365.3	1,514.8	1,221.2	1,023.0	1,278.4	686.3
Total new dwellings	*5,570.2*	*5,752.2*	*3,237.8*	*4,875.8*	*5,498.9*	*1,676.7*
Alterations and additions to dwellings(c)	*567.2*	*609.0*	*286.0*	*502.6*	*562.2*	*153.0*
Hotels, etc.	233.3	309.4	261.4	148.2	204.5	171.5
Shops	404.5	501.1	416.9	481.7	543.2	192.5
Factories	689.0	852.3	954.9	553.8	739.2	530.2
Offices	674.0	687.6	927.3	622.4	658.9	451.6
Other business premises	362.9	427.8	331.6	359.4	434.1	140.7
Education	375.9	440.9	433.8	437.9	419.9	246.0
Religion	37.3	42.5	35.0	35.3	40.1	18.5
Health	182.8	199.6	500.1	179.4	251.6	176.2
Entertainment and recreation	212.3	241.2	346.3	222.6	287.0	154.6
Miscellaneous	347.6	413.1	545.0	268.8	386.8	239.7
Total other building	*3,519.4*	*4,115.4*	*4,752.1*	*3,309.4*	*3,965.3*	*2,321.5*
Total building	**9,657.0**	**10,476.6**	**8,275.9**	**8,687.8**	**10,026.3**	**4,151.2**

(*a*) At end of period. (*b*) During period. (*c*) Valued at $10,000 or more.

Construction (other than Building)

These statistics relate to work by private contractors on construction (other than building) prime contracts valued at $100,000 or more, inclusive of all associated sub-contract work performed for the prime contractor. Alterations and additions undertaken as prime contracts valued at $100,000 or more are included in the statistics. Repairs and maintenance contracts, construction undertaken by government authorities involving their own work forces, and construction on their own account by enterprises in the private sector, are excluded.

A revised classification of prime contracts based on the International Classification of all Goods and Services (ICGS) was introduced in 1979-80. A more detailed description of ICGS and its effects on the statistics can be found in the September quarter 1979 edition of *Construction (other than building) Operations, Australia* (8708.0).

The following tables show the value of construction (other than building) activity undertaken as prime contracts commenced, under construction, completed, work done and work yet to be done in Australia for the years 1980–81 and 1981–82.

VALUE OF CONSTRUCTION (OTHER THAN BUILDING) PRIME CONTRACTS BY OWNERSHIP, 1980–81
($ million)

	Commenced	*Under construction(a)*	Completed	*Work done(b)*	*Work yet to be done(a)*
PRIVATE SECTOR					
Roadwork	143.4	78.9	125.8	142.1	31.8
Dams, water supply and distribution, sewerage and drainage	21.4	13.8	30.1	22.9	9.1
Electrical power transmission, heavy electrical generating plant	8.1	9.9	8.7	11.4	5.6
Harbours	17.9	18.8	16.4	19.8	6.5
Other heavy industrial plant etc.	571.0	699.6	277.7	457.1	382.6
Other (*c*)	191.7	231.7	90.3	155.7	123.0
Total	*953.4*	*1,052.6*	*549.1*	*809.1*	*558.5*
PUBLIC SECTOR					
Roadwork	180.9	140.2	204.6	191.1	65.6
Dams, water supply and distribution, sewerage and drainage	213.3	251.8	185.3	177.0	127.3
Electrical power transmission, heavy electrical generating plant	648.3	1,989.6	284.7	513.5	1069.0
Harbours	150.3	266.9	140.3	80.9	173.0
Other heavy industrial plant etc.	257.1	493.5	150.6	199.9	263.7
Other (*c*)	484.9	1,320.3	237.8	363.1	961.9
Total	*1,934.8*	*4,462.3*	*1,203.4*	*1,525.5*	*2,660.5*
TOTAL					
Roadwork	324.2	219.1	330.4	333.2	97.3
Dams, water supply and distribution, sewerage and drainage	234.7	265.5	215.5	199.9	136.4
Electrical power transmission, heavy electrical generating plant	656.4	1,999.4	293.4	524.9	1,074.6
Harbours	168.2	285.7	156.7	100.8	179.5
Other heavy industrial plant etc.	828.1	1,193.1	428.3	657.0	646.3
Other (*c*)	676.6	1,552.0	328.2	518.9	1,084.8
Total	**2,888.2**	**5,514.9**	**1,752.5**	**2,334.6**	**3,219.0**

1981–82
($ million)

	Commenced	*Under construction(a)*	Completed	*Work done(b)*	*Work yet to be done(a)*
PRIVATE SECTOR					
Roadwork	202.8	108.2	186.3	203.2	44.0
Dams, water supply and distribution, sewerage and drainage	44.6	41.9	23.2	47.0	12.7
Electrical power transmission, heavy electrical generating plant	10.6	13.5	12.0	16.3	5.1
Harbours	23.6	9.8	35.4	30.6	2.3
Other heavy industrial plant etc.	1,046.8	1,354.6	424.4	665.0	797.0
Other (c)	299.9	417.2	183.0	343.6	147.2
Total	*1,628.3*	*1,945.2*	*864.3*	*1,305.7*	*1,008.2*
PUBLIC SECTOR					
Roadwork	185.5	150.1	185.1	202.1	58.8
Dams, water supply and distribution, sewerage and drainage	198.1	379.6	130.0	234.3	151.3
Electrical power transmission, heavy electrical generating plant	844.3	2,565.3	499.0	752.5	1,391.6
Harbours	80.6	360.6	30.6	184.4	109.8
Other heavy industrial plant etc.	149.1	534.5	129.8	232.5	217.2
Other (c)	262.3	1,458.3	297.5	502.0	849.0
Total	*1,719.9*	*5,448.2*	*1,272.1*	*2,107.7*	*2,777.7*
TOTAL					
Roadwork	388.3	258.3	371.4	405.4	102.7
Dams, water supply and distribution, sewerage and drainage	242.7	421.5	153.2	281.3	164.1
Electrical power transmission, heavy electrical generating plant	854.9	2,578.8	511.1	768.7	1,396.7
Harbours	104.2	370.4	66.0	215.0	112.1
Other heavy industrial plant etc.	1,195.9	1,889.2	554.2	897.5	1,014.1
Other (c)	562.2	1,875.4	480.5	845.6	996.2
Total	**3,348.2**	**7,393.5**	**2,136.4**	**3,413.4**	**3,785.9**

(a) At end of period. (b) During period. (c) Comprises bridges, railways, pipelines, street and highway lighting, telecommunications and miscellaneous.

More detailed information on building activity is contained in *Building Activity, Australia* (quarterly) (8705.0). Current information is obtainable also in the *Monthly Summary of Statistics, Australia* (1304.0), the *Digest of Current Economic Statistics, Australia* (monthly) (1305.0), *Building Statistics, Australia: Number of New Dwellings, (Preliminary Estimates)* (quarterly) (8703.0), *Building Activity, Australia (Preliminary)* (quarterly) (8704.0), *Building Approvals, Australia* (monthly) (8702.0) and *Construction (other than Building) Operations, Australia* (quarterly) (8708.0). Details for particular States are available from publications issued regularly by the Deputy Commonwealth Statistician in each State.

The annual reports of the Commonwealth and State Government Housing Authorities show further details of government activities in the field of housing.

Construction Industry Statistics

This section contains statistics obtained from a sample survey of private sector construction establishments and of public sector enterprises engaged in construction activity, conducted in respect of 1978-79. This is the first time the ABS has obtained comprehensive information about the private sector construction industry, or of construction activity of the public sector.

The survey was undertaken in response to requests from both private and government organisations for such data about the construction industry. The private sector collection was conducted as a component of the ABS's integrated economic statistics system. This system has been developed so that data from each industry sector conform to the same basic conceptual standards, thereby allowing comparative analysis across different industry sectors. The results of this survey are therefore comparable with economic censuses undertaken annually for the mining, manufacturing and electricity and gas industries and periodically for the wholesale, retail and selected service industries.

Private Sector Construction Industry Statistics

The collection has provided detailed information on employment, wages, operating expenses, turnover, value added, capital expenditure, and on the structure and size of establishments in the private sector construction industry. The following tables show for private sector construction establishments, summary statistics relating to their operations; and statistics on the value of construction work done, by industry class and broad commodity group, for 1978-79. Further detailed statistics are contained in ABS statistical publications: *Private Sector Construction Establishments, Details of Operations by Industry Class, Australia,* 1978-79 (8714.0); *Private Sector Construction Establishments, Details of Operations by Industry Class, States and Territories,* 1978-79 (8715.0-8722.0).

Public Sector Construction Activity Statistics

Theoretically the same conceptual framework applies to both the public and private sectors, i.e. preferably all public sector establishments and ancillary units classified to the industries in Division E (Construction) of the Australian Standard Industrial Classification (ASIC) should have been included in the scope of the Survey. However, at the time the survey was conducted appropriate definitions of public sector establishments and ancillary units had not been developed, because of widely divergent accounting systems within the public sector.

The public sector collection therefore measured the significance of construction activity undertaken by public sector enterprises using their own workforces. It provided information on direct expenses, payments to contractors, and employment associated with new construction and major alterations and additions. Because of the different concepts used in the collection of these data, the public sector results cannot be validly aggregated with those for the private sector. The following table shows construction expenditure of public sector enterprises by type of construction activity and level of government, for 1978-79. Further detailed statistics are contained in ABS publication: *Construction Activity in the Public Sector, Australia,* 1978-79 (8712.0).

Enterprise and Industry Concentration Statistics

Industry statistics shown earlier relate to establishments. Statistics are also available for enterprises engaged in the construction industry. These have been published in the publication: *Enterprise Statistics, Details by Industry Class, Australia,* 1978-79 (8103.0).

Similarly, industry concentration statistics have been published for 1978-79. These aim to show the extent to which a few enterprise groups predominate in the construction industries, and are available in the publication: *Construction Industry Survey, Industry Concentration Statistics, Private Sector, Australia,* 1978-79 (8723.0).

PRIVATE SECTOR CONSTRUCTION ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY CLASS, AUSTRALIA, 1978–79

ASIC Code	Industry class	Establishments operating at 30th June	Average employment over whole year			Wages and Salaries	Turnover	Stocks		Total purchases transfers in and selected expenses	Value added	Fixed capital expenditure less disposals
			Males	Females	Persons			Opening	Closing			
		No.	No.	No.	No.	$'000	$'000	$'000	$'000	$'000	$'000	$'000
4111	House construction	13,347	28,898	10,597	39,495	197,127	2,576,494	385,757	445,478	2,004,902	631,313	36,216
4112	Residential building construction, n.e.c.	1,217	3,353	964	4,317	32,647	421,812	122,583	165,828	369,551	95,506	11,292
4113	Non-residential building construction	2,719	31,618	3,361	34,978	404,674	2,917,730	127,773	127,996	2,271,577	646,376	23,486
411	Total building construction	17,283	63,868	14,922	78,790	634,448	5,916,037	636,113	739,302	4,646,031	1,373,195	70,994
4121	Road and bridge construction	592	10,023	714	10,737	136,025	671,666	25,506	27,924	439,091	234,993	20,082
4122	Non-building construction, n.e.c.	1,310	23,389	1,929	25,318	355,490	1,469,844	51,088	72,065	912,560	578,261	52,497
412	Total non-building construction	1,903	33,412	2,643	36,054	491,515	2,141,510	76,595	99,990	1,351,651	813,254	72,579
41	Total general construction	19,186	97,280	17,564	114,844	1,125,963	8,057,546	712,708	839,292	5,997,682	2,186,448	143,573
4231	Concreting	2,040	7,548	1,661	9,208	68,807	327,936	7,361	8,023	194,098	134,500	4,333
4232	Bricklaying	3,386	7,295	1,732	9,027	33,004	132,478	3,260	3,154	51,390	80,983	1,988
4233	Roof tiling	499	1,550	386	1,937	11,817	72,340	2,629	3,436	47,235	25,912	529
4234	Floor and wall tiling	1,055	1,629	722	2,351	5,827	46,326	1,677	1,981	25,517	21,112	881
4241	Structural steel erection	311	2,916	265	3,180	37,676	103,631	3,601	5,273	46,534	58,769	3,061
4242	Plumbing	6,267	19,012	5,051	24,062	151,529	651,007	30,177	34,951	360,405	295,376	9,514
4243	Electrical work	4,420	20,781	4,046	24,827	205,439	682,940	37,169	39,192	359,486	325,478	8,957
4244	Heating and air-conditioning	599	7,131	863	7,994	84,683	368,708	16,652	18,075	243,491	126,641	3,655
4245	Plastering and plaster fixing	1,484	4,965	1,080	6,046	38,972	188,092	6,806	7,321	112,597	76,010	2,063
4246	Carpentry	2,362	5,348	1,303	6,650	36,778	137,076	4,461	5,132	64,154	73,593	2,887
4247	Painting	5,280	12,100	2,946	15,045	74,338	273,803	6,608	8,113	108,382	166,926	4,393
4248	Earthmoving and dredging	1,874	7,721	1,555	9,277	82,019	356,759	13,913	15,156	186,576	171,426	24,359
4249	Special trades, n.e.c.	2,588	9,849	2,212	12,061	92,423	422,456	20,753	22,833	242,602	181,934	8,899
42	Total special trade construction	32,165	107,845	23,821	131,666	923,312	3,763,552	155,066	172,640	2,042,467	1,738,660	75,519
41–42	**Total construction**	**51,351**	**205,125**	**41,385**	**246,510**	**2,049,275**	**11,821,098**	**867,773**	**1,011,931**	**8,040,149**	**3,925,108**	**219,093**

PRIVATE SECTOR CONSTRUCTION ESTABLISHMENTS—VALUE OF CONSTRUCTION WORK DONE BY INDUSTRY CLASS BY BROAD COMMODITY, AUSTRALIA, 1978-79

($'000)

Industry	*Building*				*Total Non-building*	*Demolition*	*Total construction work done*
	Houses	*Other residential buildings*	*Non-residential buildings*	*Total building*			
Total Building Construction (411)	2,540,254	536,414	2,799,341	5,876,008	66,732	880	5,943,621
Total Non-Building Construction (412)	10,034	2,588	36,024	48,645	2,031,479	199	2,080,323
Total General Construction (41)	2,550,287	539,002	2,835,365	5,924,654	2,098,211	1,079	8,023,944
Concreting (4231)	93,208	32,649	129,723	255,580	70,620	4	326,203
Bricklaying (4232)	76,310	12,881	38,590	127,779	4,279	13	132,071
Roof Tiling (4233)	60,677	3,464	5,739	71,681	26	-	71,707
Floor & Wall Tiling (4234)	28,185	3,313	12,766	44,263	875	-	45,138
Structural Steel Erection (4241)	2,831	582	53,537	56,949	44,947	183	102,080
Plumbing (4242)	314,717	52,327	244,463	611,507	30,613	-	642,120
Electrical Work (4243)	141,611	23,275	376,545	541,429	112,199	-	653,628
Heating & Air Conditioning (4244)	34,600	3,567	315,102	353,270	4,271	-	357,540
Plastering & Plaster Fixing (4245)	98,676	14,250	66,600	179,527	400	-	179,927
Carpentry (4246)	54,816	8,009	70,353	133,180	3,861	8	137,048
Painting (4247)	134,505	20,617	97,542	252,664	19,282	-	271,945
Earthmoving & Dredging (4248)	29,176	3,862	40,917	73,956	269,406	726	344,088
Special Trades n.e.c. (4249)	81,018	6,939	199,296	287,254	105,625	9,673	402,552
Total Special Trade Construction (42)	1,150,330	185,736	1,652,972	2,989,038	666,403	10,608	3,666,049
Total Construction (41-42)	**3,700,617**	**724,737**	**4,488,337**	**8,913,692**	**2,764,614**	**11,687**	**11,689,992**

PUBLIC SECTOR ENTERPRISES — CONSTRUCTION EXPENDITURE BY TYPE OF CONSTRUCTION ACTIVITY AND LEVEL OF GOVERNMENT, AUSTRALIA AND STATE, 1978–79

($'000)

Type of Government	*Building*				*Total Non-building*	*Demolition*	*Total value of expenditure on construction activity*
	Houses	*Other residential buildings*	*Non-residential buildings*	*Total building*			
Commonwealth Government	11,672	1,948	234,331	247,952	676,372	np	np
State Government	163,605	34,276	630,385	828,266	997,749	np	np
Local Government	4,727	3,022	123,672	131,420	781,882	np	np
Total Australia	**180,004**	**39,246**	**988,389**	**1,207,639**	**3,456,004**	**736**	**4,664,380**

CHAPTER 20

TRANSPORT AND COMMUNICATION

This chapter contains information on shipping; railways; tram, bus and ferry services; motor vehicles; road traffic accidents; roads; air transport; postal services; internal and overseas telecommunication services; radio communication stations; broadcasting and television; and government bodies concerned with these activities.

More detailed figures and particulars for earlier years are included in the publications listed at the end of the chapter.

TRANSPORT ORGANISATIONS

The Australian Transport Advisory Council

In April 1946, the State and Commonwealth Governments agreed to establish a co-ordinating and advisory committee at Ministerial level to review annually the various laws and regulations deemed necessary to safeguard the interests of the State Governments and road users generally and to consider matters of transport policy.

The Australian Transport Advisory Council (ATAC), thus established, is comprised of the Commonwealth Minister for Transport and Construction, the Minister for the Capital Territory, each State Minister responsible for transport and roads, and the Northern Territory Minister for Transport and Works. The New Zealand Minister responsible for transport attends as an observer.

The Council primarily considers policy matters relating to transport operations, co-ordination and developments. Its functions are: to initiate discussion and report to the respective Governments as necessary on any matter raised by the Council or any State or Commonwealth Government Authority; generally to exercise its purely advisory functions and to report as necessary to the respective Governments concerned on any matter which will tend to promote a better co-ordination of transport development, while at the same time encouraging modernisation and innovation to meet changing needs; and to assist in maintaining continuous and comprehensive research in relation to transport development in Australia and abroad, such research to be carried out for the benefit of Australian Transport authorities and agencies.

The regulation of and the executive responsiblity for transport is shared between the Commonwealth and State Governments. The ATAC is the meeting ground at a ministerial level and provides an effective means of inviting discussion and reaching uniformity of approach towards transport administrative procedures and policy. It also provides a means for reviewing and discussing national solutions to transport problems and the rectification of transport deficiencies generally. The Council has been active in: the establishment of special committees and conferences to examine and report on specific problems such as road safety, motor vehicle standards and safety features, motor vehicle emissions, transport economic research, driver licensing improvement, and highway planning; the exchange of views and the formulation of common policies on a wide range of transport matters; the effecting, at ministerial level, of Commonwealth/State and interstate co-operation on such matters as urban transport arrangements and funding, provision of funds for roads, construction and operation of interstate railway links, collecting of fines and fees interstate, policing of regulations, etc., and the publication of comprehensive surveys of Australian transport.

The Council is advised by the following four policy groups: *Co-ordinating and General Transport Group,* comprising principal Ministerial advisers, such as the Permanent Heads of the relevant Departments, deals with overall issues of policy co-ordination and development as well as topics which do not fall within the terms of reference of the other groups. *Railway Group,* comprising State and Australian National Railway Commissioners, together with Commonwealth Government representatives, advises on all railway matters considered by the Council. *Road Group,* comprising State Road Commissioners together with Commonwealth Government officials, advises the Council on matters concerned with the construction and maintenance of all classes of roads and their financing. The *Motor Transport Group,* consisting of the principal State officials in the motor vehicle safety and regulatory areas, together with Commonwealth Government representatives, advises the Council on

all matters arising from the work of the technical advisory committees and on vehicle safety standards, technical standards and on-road operation. The Group is advised by the following technical committees:

The *Advisory Committee on Vehicle Performance;* The *Advisory Committee on Road User Performance and Traffic Codes;* The *Advisory Committee on Vehicle Emissions and Noise;* The *Advisory Committee on Safety in Vehicle Design;* The *Publicity Advisory Committee on Education in Road Safety;* and Ad-hoc advisory committees. In addition to these technical committees, the Energy Working Group and the Advisory Committee on the Transport of Dangerous Goods report to the Co-ordinating and General Transport Group.

In March 1982, ATAC and the Australian Environment Council (AEC) jointly announced the establishment of the *Advisory Committee on Vehicle Emissions and Noise* (ACVEN), replacing the ATAC Committee on *Vehicle Emissions and Noise Standards Advisory Committee.* The Committee examines and makes recommendations on vehicle emissions and noise and reports jointly to the Motor Transport Group and the AEC Standing Committee. The Australian Motor Vehicle Certification Board was established by ATAC in July 1969 to advise State and Territory registering authorities on compliance by new motor vehicles with Australian Design Rules (ADR's). The Board's principal function is to issue Compliance Plate Approvals, based on manufacturers' submissions, that a vehicle complies with those Rules applicable at the date it is available in Australia in a registerable condition. Compliance with ADR's is a prerequisite to vehicle registration throughout Australia It reports to ATAC annually.

Transport Industries Advisory Council

The Transport Industries Advisory Council (TIAC) was formed following the March 1971 Australian Transportation Conference. The TIAC, an access channel between industry and the Commonwealth Minister for Transport and Construction, provides advice and comment to the Minister on policy issues as well as recommendations related to improving transport systems in Australia, including Aviation.

The 33 members (as at 30.6.82) of TIAC are drawn from senior management in all modes of transport, major consumers, Government bodies and unions. The Minister appoints members on the basis of personal expertise. New members, appointed annually, serve on the Council for extendable terms of three years. The full Council, which meets four times a year, operates through three geographically based working Committees, which were recently restructured into ad hoc subject specific project committees. The Council is represented at pre-budget economic consultative meetings with the Prime Minister and Cabinet Ministers.

Examples of topics currently under consideration by TIAC include the Australian rail systems and recommendations of the 1981 ARRDO Report, need for a national transport Strategy, road tanker safety, undeclared hazardous cargo, and industrial relations in the transport industry.

Marine and Ports Council of Australia

The Marine and Ports Council of Australia (MPCA) provides an advisory forum for Commonwealth and State Governments in which to discuss initiatives and developments in marine and port matters. Membership comprises the Commonwealth Minister for Transport and Construction (Chairman) and State and Territory Ministers whose portfolios include responsibility for port and marine matters.

Evolving from six meetings of a Commonwealth/State Ministerial Council for Port Development and Marine Affairs, the MPCA was convened for the first time in May 1976, bringing together Commonwealth and State policy-making machinery in relation to ports, the administration of shipping matters, cargo movements, shipping and marine laws, marine pollution control, safety and consultation on treaties. The Council now meets annually.

To assist the Council in its deliberations there exists a Committee of Advisers comprising Commonwealth, State and Territory ministerial advisers, generally at permanent head level or equivalent, who are responsible for marine and port matters. This Committee makes recommendations to Ministers on matters referred to them by Ministers or from within the Committee. In addition, several standing and Ad hoc Working Groups have been established to report and make recommendations to Advisers on legal, technical, operational and administrative issues of relevance to Council's activities.

Aviation Industry Advisory Council

The Aviation Industry Advisory Council (AVIAC) was established in 1978 to enhance the level of consultation between the aviation industry and the Government. The Council provides advice to the Commonwealth Minister for Aviation on policies, plans and programs relating to the aviation industry

within Australia, promotes the continuing development of a safe, efficient, economic aviation industry within Australia, and provides a forum for discussion of important matters of joint concern to the aviation industry and Government.

Membership of the Council consists of the Commonwealth Minister for Aviation (Chairman); Secretary to the Department of Aviation; Chairman of Qantas Airways Ltd, Australian National Airlines Commission (TAA), East-West Airlines; Joint Managing Directors of Ansett Transport Industries Ltd; National President of the General Aviation Association; and presidents of the Aircraft Owners and Pilots Association of Australia and the Royal Federation of Aero Clubs of Australia.

The AVIAC has established a Committee of Advisers to assist in the analysis and preparation of matters to put to the Council for deliberation and decision.

The Bureau of Transport Economics

The Bureau of Transport and Economics (BTE) is a professional research body which undertakes independent studies and investigations to assist the Commonwealth Government in formulating policy relating to all modes of transport.

The primary function of the BTE is to advise the Commonwealth Government on the economic, financial and technical aspects of air, road, rail and sea transport in Australia. In pursuit of this overall function, the BTE analyses the nature, capacity, performance and financing of transport systems. It also investigates the economic and resource allocation implications of such systems. The BTE has a secondary function of providing assistance to State and local governments, Commonwealth and State instrumentalities and the private sector to identify and address transport problems.

Although formally linked to the Commonwealth Department of Transport and Construction, the BTE has a considerable degree of professional and administrative autonomy and reports directly to the Minister for Transport and Construction on its program of research work.

SHIPPING

Control of shipping

Commonwealth Government navigation and shipping legislation

Commonwealth Government Acts concerned with shipping are: the *Navigation Act* 1912, the *Sea-Carriage of Goods Act* 1924, the *Seamen's Compensation Act* 1911, the *Seamen's War Pensions and Allowances Act* 1940, the *Pollution of the Sea by Oil Act* 1960, the *Pollution (Shipping Levy) Act* 1972, the *Pollution (Shipping Levy Collection) Act* 1972, the *Australian Shipping Commission Act* 1956, the *Beaches, Fishing Grounds and Sea Routes Protection Act* 1932, the *Submarine Cables and Pipelines Protection Act* 1963, the *Lighthouses Act* 1911, the *Explosives Act* 1961, the *Inter-State Commission Act* 1975, the *King Island Harbour Agreement Act* 1973, the *King Island Shipping Service Agreement Act* 1974, the *Ship Construction Bounty Act* 1975, the *Trade Practices Act*, 1974, Part X, the *Shipping Registration Act* 1981.

Navigation Act 1912 as Amended

One of the largest Commonwealth Acts, the *Navigation Act*, provides for various regulatory controls over ships and their crews, passengers and cargoes, mainly for the preservation of life and property at sea. Substantial penalties are provided for serious offences. The Act gives effect to a number of important international conventions produced under the aegis of the International Maritime Consultative Organisation (IMCO).

Many of the 43 sets of Regulations under the Act are to be replaced under a system of Marine Orders that has been introduced.

Taken in the order in which they appear in the Act, the main substantive matters dealt with are as follows:

Masters and seamen. Some sections deal with the examination of masters, mates and engineers for certificates of competency. Other sections ensure that appropriate conditions apply to crews serving on ships by providing for the supervision of the engagement, discharge and payment of wages; discipline at sea; the settlement of wages and other disputes; the return to their home port of distressed seamen; taking charge of wages and effects of deceased seamen and of those who have deserted or been left behind; and enquiries into deaths at sea. These matters are administered by Mercantile Marine Offices established at numerous ports. The health of seamen is cared for by the prescription of scales of medicines and medical stores to be carried by ships, and there are provisions to give effect to International Labour Organisation Convention requirements for the accommodation of crews. Plans for new or altered accommodation in ships have to be approved by a Crew Accommodation Committee.

There are requirements for the manning of ships, designed to ensure that sufficient officers and men are carried for safety and operational purposes. Manning disputes are dealt with by statutory Committees of Advice. The Act provides for a Marine Council to advise the Minister on the suitability of persons for engagement as seamen.

Ships and shipping. There are particularly important provisions dealing with ship safety in such matters as survey of ships, load lines, life-saving and fire appliances, prevention of collisions, and carriage of potentially dangerous cargoes. Whilst in Australia, all ships come under the survey provisions of the Navigation Act and require certificates issued by the Department of Transport and Construction unless they are registered in a country which is a party to the Convention concerned and hold valid certificates issued by their Governments and conforming to the requirements of the Safety of Life at Sea and Load Lines Conventions. There is power to detain any ship the condition of which does not conform with the conditions set out in its certificate or which appears to be overloaded or otherwise unseaworthy.

Passengers. These provisions deal with matters necessary or convenient for regulating the carriage of passengers in respect of such matters as numbers that may be carried, accommodation and health aspects.

Coasting trade. Under the coasting trade provisions of the *Navigation Act*, the Australian coastal trade is reserved for licensed vessels, i.e. those which employ seamen at Australian wage rates. The Act does not restrict the class of ships which may obtain a licence. It is open to any vessel irrespective of the registry to obtain a licence on compliance with this condition and to operate in the Australian coastal trade subject to permission being given for the importation of the vessel under the Customs (Prohibited Imports) Regulations where necessary. Provision exists for unlicensed vessels to operate in the coasting trade under single voyage permits in certain circumstances where licensed vessels are not available or are inadequate to meet the needs of the trade. Strict control is exercised over the issue of permits for the carriage of coastal cargoes.

Wrecks and salvage. There are provisions in relation to wrecks and salvage, covering preservation of life and of the wreck and its cargo and related matters.

Prevention, etc., of pollution by oil of the Australian coast, coastal waters and reefs. Under these provisions, where oil is escaping, or likely to escape, from a ship, the Minister is empowered to take action to prevent or reduce pollution of the area.

Limitation and exclusion of shipowners' liability. These sections give effect to an international convention and make provision on the widest possible basis for the limitation of shipowners' liability in Australia.

Courts of Marine Inquiry. There are provisions for the holding of Courts of Marine Inquiry to investigate the circumstances attending any casualties to ships that come within Commonwealth legislative authority, usually following a preliminary investigation. Such courts are provided with power to examine all the circumstances and to deal with the certificates of ships' officers found to have been at fault.

Several significant amending Navigation Acts have been passed in recent years but are not yet fully in force. Those Acts deal with a wide range of matters and many amendments of a general, formal or consequential nature are already in force. Other important groups of amending sections are being, or are to be, brought into operation as the necessary Parts of Marine Orders, and Regulations become ready. In accordance with a Premiers' Conference Agreement, the *Navigation Act* now in effect clearly delineates Commonwealth, State and Northern Territory responsibilities for shipping and navigation.

The amending Acts comprise the *Navigation Amendment Act* 1979 (No. 98 of 1979, which received Royal Assent on 22 October 1979), the *Navigation Amendment Act* 1980 (No. 87 of 1980, which received Royal Assent on 29 May 1980), the *Navigation Amendment Act* 1981 (No. 10 of 1981, which received Royal Assent on 25 March 1981) and the *Navigation (Protection of the Sea) Amendment Act 1981* (No. 36 of 1981 which received Royal Assent on 14 April 1981).

Shipping Registration Act 1981

The *Shipping Registration Act* 1981 received Royal Assent on 25 March 1981 and was proclaimed on 26 January 1982. This Act replaces Part I of the *U.K. Merchant Shipping Act* 1894 under which ships in Australia were registered as British ships. The Act provides for all ships on the British register in Australia to be automatically transferred to the new Australian register. The Act has two basic objectives namely the conferring of Australian nationality on Australian-owned ships and the registration of ownership.

Taken in order in which they appear in the Act, the main substantive matters are as follows:

Registration of Ships: This part deals with the obligation to register Australian-owned ships, the ships permitted to be registered, the application for registration, particulars to be entered in the Register, the

issue of Registration Certificates, Provisional Registration Certificates and Temporary Passes, changes in ownership, marking and naming of the ship, nationality of ships, flags to be flown, assuming and concealing Australian nationality.

Transfers, Transmissions and Mortgages: This part deals with the transfer, transmission of ship and shares, the taking out, transfer, transmission transfer and discharge of mortgages and the entry of this information into the Register.

Administration: This part deals with the appointment of the Registrar, delegation of the powers of the Minister and Registrar, the establishment of the Shipping Registration Office and Branch Offices.

Register of Ships: This part deals with the maintenance, rectification and inspection of the Register.

Transitional Provisions: This part deals with the change over from the previous law to the new legislation. This includes the completion of transactions commenced under the previous law and the acceptability of documents prepared under the previous law.

Australian Shipping Commission

The Commission was established by the *Australian Coastal Shipping Commission Act* 1956. The Commission's role has been to establish, maintain and operate interstate, overseas and territorial shipping services. The Commission's title was changed in October 1974 to the Australian Shipping Commission to reflect the increasing importance of its overseas trading activities. In 1980 the Australian Shipping Commission Act was amended to increase its borrowing powers and give it greater flexibility in having freight rates set.

As at 30 June 1982 the Commission, operating as the Australian National Line, owned and/or operated a fleet of thirty-three vessels. The fleet included 14 vessels engaged in overseas trades comprising five vehicle deck cargo ships totalling 106,297 tonnes deadweight; three cellular container ships totalling 95,628 tonnes deadweight and six ore-bulk carriers totalling 579,424 tonnes deadweight.

The fleet also included nineteen vessels engaged in coastal trades comprising one vehicle deck passenger ship, the *Empress of Australia* of 2,725 tonnes deadweight; eight vehicle deck cargo ships totalling 72,592 tonnes deadweight; one container bulkship of 12,093 tonnes deadweight in the Darwin trade; two bulk carriers in the 50-100,000 tonnes deadweight class; seven other bulk carriers each less than 50,000 tonnes deadweight totalling 154,332 tonnes deadweight.

The Line operated specialised terminals at Adelaide, Melbourne, Burnie, Devonport, Bell Bay, Sydney, Port Kembla, Brisbane, Mackay, Townsville and Cairns.

The *Empress of Australia* carried 121,381 passengers between Melbourne and Devonport together with 36,048 vehicles during the year ending 30 June 1982.

Shipbuilding Assistance

The shipbuilding industry in Australia has been assisted by the Government since the introduction of the shipbuilding subsidy scheme in 1947. The level of subsidy has been determined by the Government on the basis of inquiries into the industry by the former Tariff Board and, more recently, by the Industries Assistance Commission. These inquiries have been held in 1954, 1959, 1963, 1971, 1976 and 1977-79.

In May 1977, the Government sent a reference to the Commission on assistance to be accorded to the production of vessels under 6,000 tg. The Commission reported to the Government on 25 July 1979 and on 29 November 1979 the Government announced new, simplified assistance arrangements for the Australian shipbuilding industry, with the introduction of the new *Bounty (Ships) Act* on 1 July 1980.

Under this Act, bounty continues to be accorded to the production in Australia of vessels over 150 gross construction tons, or over 21 metres in the case of fishing vessels. Bounty is payable on a 'cost of construction basis', at a rate of 27½ per cent, phasing down to a long-term rate of 20 per cent to apply from 1 July 1986.

Under the previous Act, *the Ship Construction Bounty Act* 1975, which applies to vessels for which public tenders closed on or before 30 June 1980, bounty was calculated on the basis of the lowest acceptable Australian tender. At 30 June 1982, there were 7 vessels being constructed under this Act at registered yards. The Act will run its course until the last of these vessels is completed, by about mid-1983.

Vessels built at major yards include small cargo vessels, offshore supply vessels, passenger ferries, fishing vessels, dredgers and barges. In addition, there are numerous smaller yards building non-bountiable vessels such as pleasure craft, small fishing vessels, and other small craft. Construction of large ships in Australia ceased in 1978.

In 1981-82 a total of 59 vessels were completed at Australian yards (as compared with 53 in 1980-81, 37 in 1979-80 and 47 in 1978-79).

The figures for 1979–80 and 1980–81 reflect increased activity in the Australian shipbuilding industry and the amounts of Government financial assistance paid in these years show similar increases.

Total financial assistance to the Australian shipbuilding industry in 1981–82 amounted to $26.8m (as compared with $17.3m in 1980–81, $13.4m in 1979–80 and $10.8m in 1978–79).

Importation of Ships

The control of imports forms an integral part of the Government's shipbuilding assistance arrangements, complementing the bounty legislation. Under the Customs (Prohibited Imports) Regulations all ships are 'prohibited imports' and may not be imported into Australia except with the written permission of the Minister for Transport and Construction. For shipbuilding policy purposes, importation is permitted in the case of new vessels, second-hand vessels outside the size range 70-10,000 gross construction tons, and vessels of a type not available new from Australian yards.

Stevedoring Industry

In December 1977, legislation was introduced which provided for new administrative, financial and industrial arrangements for the stevedoring industry and abolished the Australian Stevedoring Industry Authority. The arrangements give the parties directly involved in the industry greater responsibility in the industry's affairs.

The Stevedoring Industry Finance Committee is responsible for the disbursement of funds collected through statutory man-hour and cargo levies.

A federal co-ordinating committee comprising representatives of the employers and the Waterside Workers' Federation (WWF) and Broken Hill Pty Ltd (BHP) and the Australian National Line oversees the operation of arrangements agreed to in the General Agreement between employers and the WWF. At the port level such matters are handled by Port Co-ordinating Committees set up in the major ports.

Under section 85A of the *Conciliation and Arbitration Act* 1904 a Port Conciliator Service was created to assist parties to an industry award to implement the procedures of that award for the prevention or settling of disputes.

A non-statutory Stevedoring Industry Consultative Council chaired by Sir Alan Westerman, CBE, has been established to provide a forum for discussion and liaison between government(s), user interests and the operating sections of the industry. The Chairman is appointed by the Commonwealth Government.

The Statutory provisions relating to the industry are contained in the *Stevedoring Industry Finance Committee Act* 1977, the *Stevedoring Industry Levy Act* 1977, the *Stevedoring Industry Levy Collection Act* 1977, the *Port Statistics Act* 1977 and sections 85A, 86, 87 of the *Conciliation and Arbitration Act* 1904.

Tasmanian Freight Equalisation Scheme

The Commission of Inquiry into Transport to and from Tasmania in its Report published in March 1976 found that because of Tasmania's physical separation from the mainland by sea, Tasmanian shippers suffer a cost freight disability in moving non-bulk cargoes by sea between Tasmania and the mainland.

Following on from the Report, the Commonwealth Government introduced, with effect from 1 July 1976, the Tasmanian Freight Equalisation Scheme. The Scheme is designed to equalise door-to-door freight costs of moving certain eligible commodities between Tasmania and the mainland by sea with those for moving similar commodities over comparable interstate mainland rail and road routes.

The northbound component applies to Tasmanian consignors of specified goods by sea that are bought for use or exported for sale on the mainland. Under the southbound component certain producer raw materials, machinery and equipment are eligible for assistance. The northbound component was introduced in July 1976 and the southbound component in July 1977. Assistance under the latter applied to shipments made from 1 July 1976.

In 1981–82 assistance provided under the Scheme for northbound cargoes totalled $27.7m, and $1.7m in respect of southbound cargoes. Since its inception assistance provided under the Scheme up to the end of 1981–82 totalled $148.6 million.

Responsibility for the administration of the Scheme lies within the Transport and Construction portfolio.

Revised rates of assistance for northbound cargoes were introduced on 1 July 1978 and revised southbound rates on 1 March 1980 following reviews of freight costs by the Bureau of Transport Economics. It is expected that revised rates of assistance for both northbound and southbound cargoes will be introduced during 1982–83.

Trade Practices Act 1974 (Part X—Overseas Cargo Shipping)

The Overseas Cargo Shipping provisions of the *Trade Practices Act* (Part X) are administered by the Transport and Construction portfolio.

Part X establishes conditions for the operation of outwards shipping conferences and individual shipowners operating in Australia's outwards trades. Conference agreements between several shipowners in a particular trade make provision for the fixing of common freight rates. They may also include provisions for pooling arrangements and shares of the trade and rationalised sailing schedules. With suitable safeguards, these arrangements can have beneficial effects for shippers in that conference arrangements can lead to regular and predictable services at stable freight rates.

Part X, therefore, exempts conferences from the generally applicable anti-restrictive provisions of the Act, and seeks to ensure adequate safeguards to protect shippers through:

- requiring the filing of outwards conference agreements;
- requiring shipowners to give undertakings to hold meaningful negotiations with the designated shipper body, the Australian Shippers' Council (ASC);
- providing for disapproval of a conference agreement to be exercised by the Governor-General on a number of prescribed grounds, such as a failure on the part of the shipowner to comply with an undertaking, lack of due regard to the need for overseas shipping services to be efficient, economical and adequate, prevention or hindrance of an Australian flag operator from engaging efficiently in overseas cargo shipping to a reasonable extent.

Comparable provisions apply to individual shipowners who are not party to a conference agreement.

Marine pollution

The *Pollution of the Sea by Oil Act* 1960, Part VIIA of the *Navigation Act* 1912 and the *Pollution of the Sea by Oil (Shipping Levy) and (Shipping Levy Collection) Acts* 1972 currently provide the Commonwealth power to deal with matters relating to marine oil pollution.

The Acts respectively provide for the control of discharges at sea and provision of control equipment and procedures on ships; empower the Minister to intervene to take action to prevent or reduce pollution and makes provision relating to limitation of liability of oil tankers for oil pollution damage; and provide for the collection of a levy to finance the National Plan to Combat Pollution of the Sea by Oil.

Maritime Industry Commission of Inquiry

For details *see* Year Book No. 61, pages 370–1.

Collection and presentation of statistics

Basic documents

From 1 July 1966 shipping statistics have been compiled by the Australian Bureau of Statistics from returns submitted by shipping companies or their representatives to Customs Houses at the various seaports throughout Australia. A return is required for the departure of a vessel from a port as well as for its arrival at that port.

On 1 July 1979 revised Bureau of Customs forms (B380/B381) came into operation bringing changes in concepts and definitions. At the same time improvements were made in the coverage of the shipping and cargo statistics collection. Consequently statistics for 1979-80 onwards are not always comparable with data for previous periods.

Scope of the statistics

Arrivals and departures of vessels are treated separately in shipping statistics. Not all vessels are included in the statistics, as returns are not required for (i) naval vessels; (ii) yachts and other craft used for pleasure; (iii) foreign fishing vessels that neither load nor discharge cargo; (iv) Australian registered fishing vessels operating from Australian ports; (v) geographical survey vessels, seismic survey vessels, oceanographic survey vessels; (vi) offshore oil drilling rigs and vessels servicing them; (vii) vessels of 200 registered net tonnes and under.

Period covered by the statistics

The shipping statistics presented relate to overseas vessels arriving at or departing from Australian ports within the financial year.

Vessel characteristics

Vessel recording

Vessel movement statistics are recorded as "Vessel Number" and "Vessel Calls". "Vessel Number" relates to the number of overseas direct arrivals to, or departures from Australia. "Vessel Calls" relates to the number of port visits that an overseas vessel makes in Australia. For example, an overseas vessel which arrives direct in Brisbane and makes a further call in Sydney before departing for an overseas port from Melbourne is counted as one under "Vessel Number" for both arrivals (Brisbane) and departures (Melbourne) and as one arrival call and one departure call for each of the three ports.

Vessel type

All vessels are classified from *Lloyd's Register of Shipping* according to one of 13 vessel types which describe them in terms of their structure or design. These 13 vessel types are amalgamated into four broad categories as follows:

Category	*Vessel types*
(a) general cargo vessels	Container Ships
	Roll on—Roll off
	General Cargo Ships
	Livestock Cargo
(b) tankers	Gas carriers: refrigerated
	Gas carriers: non-refrigerated
	Tankers: Crude oil and petroleum products
	Tankers: Chemical and specialised
(c) bulk carriers	Dry Bulk Carrier
	Bulk/oil Carrier
(d) other vessels	Multi-purpose
	Passenger
	Other

Type of service

Vessels are also classified according to the type of service they provide. The two types of service for which statistics are shown are:

(a) liner service, (according to conference and non-conference) relates specifically to a vessel which is operated by a carrier providing services on a specified route on a relatively regular basis and

(b) other service which refers to all vessels operating in other than a liner service.

Conference vessels—A 'conference' is an association of shipowners which regulates the freight rates and terms and conditions of carriage of goods in any particular trade. Conferences only operate liner services and not charter services. Conference arrangements normally include provisions for sharing the trade, rationalising sailing schedules and pooling arrangements for resources and/or revenue.

Country of registration

The country of registration or flag of the vessel refers to the country in which the vessel is registered according to *Lloyd's Register of Shipping*.

Recording of cargo loaded or discharged

Returns for arrivals show cargo discharged, and returns for departures show cargo loaded, in terms of Revenue Tonnes. A revenue tonne is the unit of quantity predominantly used in the shipping industry. It is the basis on which freight is charged and is obtained by adding mass (tonnes weight) and volume (cubic metres) units.

Container cargo

Statistics of container cargo refer only to cargo shipped in 20 ft or 40 ft standard international containers. To provide a standard measure, all statistics relating to containers are expressed in terms of 20 ft units. A 40 ft container is therefore recorded as two twenty-foot equivalent units (or TEU's).

Country of loading or discharge of overseas cargo

In statistics of overseas shipping and cargo, the country of loading, or discharge, of overseas cargo is the country of location of the port where the cargo was loaded on to, or is to be discharged from, a reporting vessel. The countries shown are not necessarily the countries of origin or ultimate destination of cargo because previous or subsequent transhipments of cargo are not taken into account. The statistics of cargo classified by the country in which it was loaded or discharged cannot therefore be compared directly with statistics of overseas trade classified by country of origin or consignment.

Trade area

Ports at which vessels load or discharge cargo are allocated to their respective countries, which are in turn allocated to trade areas in accordance with the Classification of Trade Areas for Cargo Statistics.

Units of measurement

The cargo carrying capacity of vessels has in the past been measured in terms of registered net tonnage. However, as from 1 July 1979 this statistic has been replaced by deadweight tonnage (DWT).

Deadweight tonnage. A measure of the total mass (weight, in tonnes) of cargo, stores, fuel, passengers and crew carried by the ship when loaded to her maximum summer loadline.

Gross tonnage. A measure of the enclosed internal volume of a ship and its superstructure, with certain spaces exempt, in units of 1 ton per 2.83 cubic metres.

Overseas shipping

The following table shows the movement of vessels and cargo to and from overseas countries, for the years 1975–76 to 1980–81.

OVERSEAS SHIPPING: VESSEL AND CARGO MOVEMENTS

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Arrivals—						
vessel details						
vessel number	5,772	5,830	5,615	5,677	6,249	5,995
DWT ('000 tonnes)	n.a.	n.a.	n.a.	n.a.	247,218	237,223
cargo discharged						
revenue tonnes ('000)	26,888	28,329	26,981	28,637	31,028	32,480
gross weight ('000 tonnes)	n.a.	n.a.	n.a.	n.a.	26,219	26,767
Departures—						
vessel details						
vessel number	5,824	5,824	5,668	5,655	6,168	5,922
DWT ('000 tonnes)	n.a.	n.a.	n.a.	n.a.	246,555	234,618
cargo loaded						
revenue tonnes ('000)	158,621	167,118	166,700	167,304	188,681	179,413
gross weight ('000 tonnes)	n.a.	n.a.	n.a.	n.a.	187,778	178,514

The following table shows particulars of overseas shipping which arrived at or departed from Australian ports according to the country of registration of vessels.

OVERSEAS SHIPPING: VESSEL DEPARTURES AND ARRIVALS BY COUNTRY OF REGISTRATION, 1980–81

	Departures		*Arrivals*	
Country of registration	*Vessel number*	*DWT ('000 tonnes)*	*Vessel number*	*DWT ('000 tonnes)*
Antilles (Netherlands)	6	86	4	80
Australia	164	8,915	168	9,087
Belgium-Luxembourg	27	1,350	25	1,300
Bermuda	16	545	16	545
China—excl. Taiwan	179	6,293	173	6,223
—Taiwan	27	1,448	26	1,388
Denmark	84	1,527	85	1,622
Finland	11	322	11	322
France	26	1,118	28	1,157
Germany, Federal Republic of	145	2,471	163	2,695
Greece	330	11,913	339	12,009
Hong Kong	133	3,352	127	3,363
India	82	2,918	82	2,844
Ireland	2	54	2	54
Italy	20	1,067	21	1,100
Japan	1,202	78,707	1,224	80,276
Korea, Republic of	143	3,409	149	3,539
Kuwait	40	1,189	41	1,228
Liberia	923	47,073	927	47,253
Malaysia	41	970	43	995
Nauru, Republic of	10	249	11	297
Netherlands	82	1,742	80	1,658
New Zealand	114	1,293	124	1,366
Norway	178	8,253	185	8,418
Panama	652	17,574	649	17,466
Philippines	30	1,481	30	1,464
Poland	16	281	15	266
Singapore, Republic of	251	4,797	259	4,820
South Africa, Republic of	16	307	14	273
Spain	1	111	1	111
Sweden	34	908	36	923
Thailand	3	211	3	211
Turkey	7	328	7	328
United Kingdom	513	15,527	520	15,658
United States of America	44	1,755	47	1,849
U.S.S.R.	162	2,036	162	2,034
Other countries	208	3,035	198	3,003
Total All Countries	**5,922**	**234,618**	**5,995**	**237,223**
With cargo	5,281	214,902	2,260	50,695
In ballast	641	19,715	3,735	186,528

Australian trading vessels

The following table shows particulars of all Australian trading vessels of 150 gross tons or more engaged in the regular overseas, interstate or intrastate services at 30 June 1982.

AUSTRALIAN TRADING VESSELS OF 150 GROSS TONS OR MORE
30 JUNE 1982

(*Source:* Department of Transport and Construction)

Vessels	*Number*	*DWT*	*Gross Tons*
Interstate—			
Australian owned, Australian registered	46	1,197,887	760,430
Australian owned, overseas registered	1	2,540	2,577
Overseas owned, Australian registered	7	126,907	87,853
Overseas owned, overseas registered	6	369,442	203,609
Interstate fleet	*60*	*1,696,776*	*1,054,469*
Intrastate—			
Australian owned, Australian registered	20	270,405	168,590
Overseas owned, Australian registered	1	58,077	36,088
Intrastate fleet	*21*	*328,482*	*204,678*
Coastal fleet	**81**	**2,025,258**	**1,259,147**
Overseas—			
Australian owned, Australian registered	17	640,829	433,438
Overseas owned, Australian registered	4	550,087	307,886
Overseas owned, overseas registered	7	225,306	145,751
Overseas fleet	**28**	**1,416,222**	**887,075**
Total Australian fleet	**109**	**3,441,480**	**2,146,222**

Harbour boards and trusts

For detailed information *see* the individual State Year Books.

Shipping at principal ports

The following table shows the total movement of overseas shipping and cargo at Australian ports, 1980-81.

OVERSEAS VESSEL AND CARGO MOVEMENTS AT AUSTRALIAN PORTS 1980-81

	Departures			*Arrivals*		
	Vessel details		*Cargo loaded*	*Vessel details*		*Cargo discharged*
Australian port	*Vessel calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*	*Vessel calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*
New South Wales—						
Sydney	1,529	32,579	5,790	1,501	32,344	3,045
Botany Bay	504	13,468	399	571	14,944	3,022
Newcastle	614	21,573	15,931	630	21,530	1,393
Port Kembla	240	10,709	6,967	250	10,801	595
Other	40	1,244	924	40	1,190	3
Total	*2,927*	*79,573*	*30,011*	*2,992*	*80,808*	*8,058*
Victoria—						
Melbourne	1,868	36,805	2,453	1,820	35,158	2,661
Geelong	262	6,733	2,724	266	6,715	1,505
Westernport	212	5,741	1,807	217	5,915	100
Other	127	3,213	1,054	128	3,192	214
Total	*2,469*	*52,492*	*8,037*	*2,431*	*50,980*	*4,480*
Queensland—						
Brisbane	1,052	20,321	1,460	946	18,607	1,516
Gladstone	291	13,553	10,124	313	14,207	697
Hay Point	202	18,537	14,964	202	18,533	—
Townsville	256	4,059	931	260	4,082	596
Weipa	96	4,652	3,978	96	4,652	47
Other	436	5,612	2,821	453	5,748	162
Total	*2,333*	*66,735*	*34,279*	*2,270*	*65,828*	*3,019*
South Australia—						
Port Adelaide	490	7,998	1,204	489	8,007	456
Port Lincoln	90	2,347	805	89	2,316	104
Port Pirie	93	1,676	760	95	1,681	39
Port Stanvac	36	2,839	163	44	3,087	2,097
Thevenard	43	612	405	49	710	—
Whyalla	29	512	233	26	422	105
Other	68	1,296	598	73	1,306	47
Total	*849*	*17,280*	*4,168*	*865*	*17,528*	*2,850*
West Australia—						
Fremantle	1,022	23,470	4,183	1,026	23,404	4,616
Bunbury	161	4,237	2,650	158	4,108	157
Dampier	395	37,731	34,396	397	38,153	234
Geraldton	156	2,969	1,425	157	2,995	105
Port Hedland	362	33,431	29,473	366	33,847	173
Port Walcott	120	16,209	13,902	123	16,570	36
Yampi Sound	38	2,205	2,200	38	2,205	—
Other	277	4,756	2,133	275	4,710	309
Total	*2,531*	*125,006*	*90,363*	*2,540*	*125,992*	*5,632*
Tasmania—						
Hobart	148	2,460	815	137	2,379	115
Launceston	119	3,119	1,864	119	3,228	68
Port Latta	25	2,254	2,093	27	2,315	12
Other	118	2,239	393	111	2,152	78
Total	*410*	*10,072*	*5,165*	*394*	*10,073*	*274*
Northern Territory—						
Darwin	108	1,094	27	108	1,095	449
Other	173	6,615	4,645	175	6,671	764
Total	*281*	*7,709*	*4,672*	*283*	*7,766*	*1,213*
Port not available	290	4,675	1,818	174	1,964	1,242
Total all ports	**12,090**	**363,543**	**178,514**	**11,949**	**360,941**	**26,767**

Shipping cargo

The following table shows details of container and non-container cargo loaded and discharged at Australian ports during 1980–81.

OVERSEAS CONTAINER AND NON-CONTAINER CARGO LOADED AND DISCHARGED AT AUSTRALIAN PORTS, 1980–81

('000 revenue tonnes)

	Loaded			*Discharged*		
Port	*Container cargo*	*Other cargo*	*Total*	*Container cargo*	*Other cargo*	*Total*
New South Wales—						
Sydney	1,034	4,958	5,991	2,038	2,609	4,647
Botany Bay	226	203	429	878	2,537	3,416
Newcastle	14	15,916	15,931	14	1,388	1,402
Port Kembla	–	6,967	6,967	–	595	595
Other	–	924	924	–	4	4
Total	*1,274*	*28,969*	*30,242*	*2,931*	*7,133*	*10,063*
Victoria—						
Melbourne	2,003	790	2,793	2,787	1,995	4,782
Geelong	16	2,709	2,725	7	1,501	1,508
Westernport	–	1;807	1,807	–	100	100
Other	3	1,051	1,054	–	214	214
Total	*2,022*	*6,357*	*8,378*	*2,794*	*3,810*	*6,604*
Queensland—						
Brisbane	455	1,058	1,514	320	1,687	2,007
Gladstone	–	10,124	10,124	–	698	698
Hay Point	–	14,964	14,965	–	–	–
Townsville	12	919	931	3	649	651
Weipa	–	3,978	3,978	–	48	48
Other	7	2,818	2,825	2	160	162
Total	*473*	*33,862*	*34,336*	*325*	*3,242*	*3,567*
South Australia—						
Port Adelaide	130	1,114	1,244	79	671	750
Port Lincoln	–	805	805	–	105	105
Port Pirie	–	760	760	–	39	39
Port Stanvac	–	163	163	–	2,097	2,097
Thevenard	–	405	405	–	–	–
Whyalla	–	233	233	–	105	105
Other	–	598	598	–	47	47
Total	*130*	*4,078*	*4,208*	*79*	*3,064*	*3,143*
West Australia—						
Fremantle	337	3,892	4,230	370	4,587	4,958
Bunbury	–	2,650	2,650	–	157	157
Dampier	–	34,396	34,397	–	234	234
Geraldton	–	1,425	1,425	–	106	106
Port Hedland	–	29,473	29,473	–	207	207
Port Walcott	–	13,902	13,902	–	36	36
Yampi Sound	–	2,200	2,200	–	1	1
Other	16	2,117	2,133	3	317	320
Total	*353*	*90,057*	*90,410*	*373*	*5,645*	*6,019*
Tasmania—						
Hobart	12	804	815	5	134	139
Launceston	2	1,862	1,864	–	74	74
Port Latta	–	2,093	2,093	–	12	12
Other	81	320	401	18	66	84
Total	*95*	*5,079*	*5,174*	*23*	*287*	*309*
Northern Territory—						
Darwin	–	27	27	–	486	486
Other	–	4,645	4,645	–	764	764
Total	–	*4,673*	*4,673*	–	*1,250*	*1,251*
Port not available	451	1,541	1,992	478	1,045	1,524
Total Australia	**4,798**	**174,615**	**179,413**	**7,003**	**25,477**	**32,480**

Overseas cargo according to major trade areas and vessel type

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas classified according to the major trade areas of the world and by vessel type.

OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA: MAJOR TRADE AREAS BY VESSEL TYPE, 1980–81

('000 revenue tonnes)

Trade area	*General cargo vessels*	*Tankers*	*Bulk carriers*	*Other vessels*	*All vessels*
		Loaded			
Europe	1,427	102	26,247	147	27,922
East Asia	1,339	177	11,579	37	13,132
Japan	3,556	1,212	113,797	9	118,573
N. America-E. Coast	465	82	1,875	2	2,424
N. America-W. Coast	244	17	2,721	115	3,096
Central America	23	31	47	–	100
S. America-E. Coast	67	32	453	–	552
S. America-W. Coast	20	1	80	5	106
West Africa	–	–	1	–	1
South East Africa	138	34	252	–	424
Red Sea	194	–	1,123	–	1,317
Persian Gulf	485	72	2,228	4	2,789
West India	141	32	406	–	579
East India	119	61	317	1	498
South East Asia	1,793	734	2,013	18	4,558
New Zealand	982	448	562	–	1,992
Papua New Guinea	440	192	39	–	670
Central Pacific	234	201	1	–	436
French Pacific	94	13	44	–	151
Pacific Islands	19	26	21	–	66
Other	10	–	14	–	25
Total Loaded	**11,789**	**3,465**	**163,820**	**338**	**179,413**
		Discharged			
Europe	2,019	666	285	44	3,014
East Asia	1,224	71	160	4	1,460
Japan	3,639	382	2,330	6	6,357
N. America-E. Coast	1,106	758	807	3	2,674
N. America-W. Coast	878	103	1,381	284	2,648
Central America	6	38	7	–	51
S. America-E. Coast	71	4	–	–	75
S. America-W. Coast	–	–	–	–	–
West Africa	6	–	10	–	16
South East Africa	187	82	14	1	285
Red Sea	24	500	–	–	524
Persian Gulf	11	7,788	507	–	8,306
West India	59	–	–	–	59
East India	64	12	–	–	77
South East Asia	631	2,780	80	11	3,503
New Zealand	1,227	40	256	–	1,524
Papua New Guinea	76	15	5	–	95
Central Pacific	44	–	–	3	47
French Pacific	6	–	–	–	6
Pacific Islands	34	–	1,063	–	1,096
Other	–	–	663	–	664
Total Discharged	**11,313**	**13,241**	**7,568**	**358**	**32,480**

Overseas cargo according to major trade areas and type of service

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas, classified according to the major trade areas of the world, by type of shipping service.

OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA: MAJOR TRADE AREAS BY TYPE OF SERVICE, 1980-81

('000 revenue tonnes)

	Loaded			*Discharged*		
	Liner service			*Liner service*		
Trade area	*Conference*	*Non-Conference*	*Other vessels*	*Conference*	*Non-conference*	*Other vessels*
Europe	897	160	26,866	1,589	375	1,049
East Asia	403	242	12,487	777	419	263
Japan	1,088	809	116,676	1,792	671	3,894
North America—E. Coast	402	36	1,986	810	141	1,723
North America—W. Coast	296	17	2,782	1,036	344	1,268
Central America	11	9	80	–	–	50
South America—E. Coast	16	29	507	21	46	8
South America—W. Coast	3	16	87	–	–	–
West Africa	–	–	1	5	–	10
South and East Africa	57	40	327	90	36	158
Red Sea	63	11	1,243	–	13	512
Persian Gulf	41	94	2,654	56	31	8,219
West India	106	20	453	40	5	14
East India	43	21	433	39	11	27
S.E. Asia	551	251	3,756	365	205	2,933
New Zealand	796	85	1,110	1,214	122	188
Papua New Guinea	215	79	376	40	16	40
Central Pacific	98	20	318	7	8	32
French Pacific	45	52	54	–	3	3
Pacific Islands	–	18	48	24	16	1,057
Other	–	–	25	–	–	664
Total	**5,132**	**2,011**	**172,270**	**7,905**	**2,462**	**22,113**

Overseas cargo according to country of registration of vessels

The following table shows the total overseas cargo, loaded and discharged, according to the country in which the vessels were registered.

OVERSEAS CARGO LOADED AND DISCHARGED, BY COUNTRY OF REGISTRATION OF VESSELS: AUSTRALIA

('000 revenue tonnes)

	1978–79		*1979–80*		*1980–81*	
Country of registration	*Loaded*	*Discharged*	*Loaded*	*Discharged*	*Loaded*	*Discharged*
Antilles (Netherlands)	197	409	10	277	8	81
Australia	4,087	1,116	6,254	1,545	6,876	1,330
Belgium-Luxembourg	1,389	176	1,334	549	1,125	222
Bermuda	737	194	586	84	451	20
China—excl. Taiwan	7,257	21	7,727	388	5,419	180
—Taiwan	2,371	14	2,180	42	1,201	–
Denmark	757	1,099	475	1,001	647	653
Finland	103	32	256	35	252	38
France	353	81	1,297	63	459	335
Germany, Federal Democratic Republic of	1,136	1,137	1,154	913	1,035	1,016
Greece	7,063	1,883	11,042	1,895	8,380	2,439
Hong Kong	2,237	333	2,225	549	1,975	624
India	1,696	88	2,055	152	2,349	221
Ireland	24	–	47	–	50	–
Italy	902	521	1,281	216	839	137
Japan	67,021	2,866	71,674	3,553	68,555	4,109
Korea, Republic of	3,499	48	3,369	80	3,066	303
Kuwait	93	72	127	51	151	–
Liberia	33,064	4,331	36,539	4,414	37,826	5,817
Malaysia	82	310	566	426	509	388
Nauru, Republic of	68	220	119	187	141	138
Netherlands	341	530	761	964	551	888
New Zealand	378	612	429	671	641	1,187
Norway	6,844	2,072	6,723	2,082	5,694	1,571
Panama	10,559	1,574	13,299	1,436	14,522	1,795
Philippines	1,262	51	997	240	1,305	46
Poland	83	56	82	144	71	156
Singapore, Republic of	2,252	1,138	2,787	812	2,786	1,054
South Africa, Republic of	209	112	230	197	195	96
Spain	147	80	114	–	–	105
Sweden	573	498	801	528	448	496
Thailand	–	272	–	134	–	197
Turkey	(*a*)	(*a*)	66	–	282	–
United Kingdom	8,248	5,519	9,413	5,606	8,214	5,446
United States of America	353	636	322	582	261	634
U.S.S.R.	695	202	1,122	310	1,291	320
Other Countries	1,222	329	1,216	904	1,838	436
Total All Vessels	**167,304**	**28,637**	**188,681**	**31,028**	**179,413**	**32,480**

(*a*) included in 'other countries'.

Vessels registered in Australia

The following table shows the number and gross tonnage of trading vessels of 150 tons or more registered in Australia at 30 June 1982, classified according to: (i) year of construction; (ii) type of trade in which the vessels were engaged; and (iii) vessels built in Australian or in overseas shipyards.

AUSTRALIAN-REGISTERED TRADING VESSELS, 30 JUNE 1982(*a*)

(*Source:* Department of Transport and Construction)

	Overseas and interstate vessels		*Intrastate vessels*		*Built in Australian yards*		*Built overseas*		*Total*	
Year of construction	*No.*	*Gross tons*	*No.*	*Gross tons*	*No.*	*Gross tons*	*No.*	*Gross tons*	*No.*	*Gross tons*
1975 and earlier	42	597,461	17	191,570	42	555,406	17	233,625	59	789,031
1976	5	167,700	-	-	3	28,267	2	139,433	5	167,700
1977	7	246,655	1	2,851	3	46,991	5	202,515	8	249,506
1978	9	161,695	-	-	1	25,849	8	135,846	9	161,695
1979	4	97,762	-	-	-	-	4	97,762	4	97,762
1980	-	-	1	2,792	-	-	1	2,792	1	2,792
1981	6	224,394	1	1,155	-	-	7	225,549	7	225,549
1982	1	93,940	1	6,310	1	6,310	1	93,940	2	100,250
Registered in Australia	**74**	**1,589,607**	**21**	**204,678**	**50**	**662,823**	**45**	**1,131,462**	**95**	**1,794,285**

(*a*) Excludes vessels of 150 gross tons and under.

Miscellaneous

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.

RAILWAYS

Government railways

Government railways in Australia operate in all States and Territories and provide an important means of transportation. In 1979–80 a total of 125.7 million tonnes of freight was carried, an increase of 141.7 per cent over the 52.0 million tonnes carried in 1959–60. However, in the same twenty-year period, the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 16.3 per cent from 479 million in 1959–60 to 401 million in 1979–80. The number of train-kilometres run during 1979–80 (151 million) was an increase of 3.4 per cent since 1959–60 (146 million), which is an indication of the trend towards heavier train loads with the more powerful motive power now available. Since the introduction of the first mainline diesel-electric locomotives in 1950, their numbers have increased greatly until at 30 June 1980 there were 1,727 throughout Australia. Diesel-electric locomotives during 1979–80 hauled 99 million train-kilometres, while electric and other locomotives hauled 4 million train-kilometres.

The Australian National Railways Commission (ANRC) assumed full control over the Tasmanian and non-metropolitan South Australian railways on 1 March 1978. This change is reflected in the figures for the 1977–78 financial year as many data items, previously available separately from these three systems, are now included in the figures shown for the ANRC. Urban rail services in South Australia remain the responsibility of the State Transport Authority (STA) and particulars of these are shown as the South Australian railway system.

Due to changes in accounting procedures and the introduction of a multi-modal system of travel, i.e. one ticket can cover a journey involving more than one mode, the STA cannot provide, in many instances, separate particulars for train, bus and tram services operated by that authority. Where data is not separately identifiable it has been included in relevant tables in the railway section of this year book.

Railway development

Details outlining railway development in Australia are given in Year Book No. 61, page 380. One feature of the Australian government railways is the variety of gauges to which they are built. There are three principal gauges: 'broad' (1,600 mm), 'standard' (1,435 mm), and 'narrow' (1,067 mm). Extensive route-kilometres of 1,067 mm gauge railway were built in areas where traffic volumes were initially known to be small and where it was imperative to minimise the costs of construction.

Government railway systems

The six government owned railway systems are operated by the State Rail Authority of New South Wales (SRA), Queensland Government Railways (QR), Victorian Government Railways (VR), Western Australian Government Railways (WAGR), the State Transport Authority of South Australia (STA), and Australian National Railways Commission (ANRC).

As the Australian National Railways Commission system includes routes in more than one State, and the Victorian system extends into New South Wales, the system route-kilometres shown in the following table do not represent route-kilometres within each State and Territory. The route-kilometres of each system open for traffic, according to gauge, at 30 June 1980 is shown in the following table.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY GAUGE AND SYSTEM 30 JUNE 1980

(Kilometres)

	Gauge			
System	*1600 mm*	*1435 mm*	*1067 mm*	*Total*
New South Wales	..	(*a*)9,773	..	9,773
Victoria	(*b*)5,859	313	12	6,184
Queensland	..	(*c*)111	9,793	9,904
South Australia	(*d*)142	..	..	142
Western Australia	..	1,377	(*e*)4,396	5,773
National	(*d*)2,395	2,609	2,683	7,687
Australia	**8,396**	**14,183**	**16,884**	**39,463**

(*a*) Includes 469 kilometres which are electrified. (*b*) Includes 328 kilometres of 1600 mm gauge line operating in New South Wales. Includes 420 route-kilometres which are electrified. (*c*) Operated by the State Rail Authority of New South Wales which is reimbursed for the cost of operations. (*d*) See page 493. (*e*) Excludes 148 kilometres of 1435 mm/1067 mm dual gauge line which is included in the 1435 mm gauge line.

The following table sets out the route kilometres of each government railways system from 1975 to 1980.

GOVERNMENT RAILWAYS: ROUTE KILOMETRES OPEN, BY SYSTEM, 1975 TO 1980

(Kilometres)

30 June—	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*National*	*Total*
1975	9,756	6,659	9,780	3,888	6,075	851	3,595	40,604
1976	9,755	6,653	9,844	3,894	6,163	849	3,595	40,753
1977	9,755	6,579	9,796	3,894	6,165	864	3,080	40,133
1978	9,763	6,364	9,787	(*a*)142	5,764	(*a*)	(*a*)7,890	39,710
1979	9,820	6,184	9,789	142	5,770	(*a*)	7,683	39,388
1980	9,773	6,184	9,904	142	5,773	(*a*)	7,687	39,463

(*a*) See page 527.

The SRA (1435 mm gauge) operates lines radiating southwest and west from Sydney, northwest from Newcastle, and north from Sydney to Brisbane. QR (1067 mm gauge) operates a coastal line from Brisbane to Cairns, with long branches inland from the major ports. VR (1600 mm gauge, with the 1435 mm gauge Albury to Melbourne line) operates a network throughout Victoria and extending into New South Wales. WAGR (1067 mm gauge) operates in south-western Western Australia, and also operates standard gauge (1435 mm) from Perth to Kalgoorlie, Esperance and Leonora. The STA (1600 mm gauge) operates railways in the Adelaide metropolitan area only. ANRC operates the non-metropolitan railways in South Australia (1600 mm and 1067 mm gauge), including the isolated Eyre Peninsula system (1067 mm gauge), the Tasmanian main line from Hobart to Launceston, with its branches (1067 mm gauge) and the railways (1435 mm gauge) from Kalgoorlie to Broken Hill (the

Trans-Australian Railway), Queanbeyan to Canberra, Port Augusta to Marree, and the new Central Australia Railway from Tarcoola to Alice Springs. Services on the line between Darwin and Larrimah, the North Australia Railway, (1067 mm gauge) were withdrawn on 30 June 1976 and the line was officially closed effective as from 11 February 1981.

With regard to urban rail, Sydney and Melbourne have major electrified suburban rail systems which include some underground lines. The Brisbane suburban system is being upgraded and electrified. Adelaide and Perth have smaller-scale, non-electric urban rail networks. Rail services in the urban and inter-urban areas of Sydney, Newcastle and Wollongong are provided by the SRA in conjunction with the Urban Transit Authority of New South Wales which has responsibility for co-ordination of transport services in these areas. Similarly, metropolitan rail services in Perth are operated by the WAGR on behalf of and at the direction of the Metropolitan Transport Trust.

See also details in the annual publication *Rail Transport, Australia* (9213.0), and Year Book No. 58, page 348.

The Commonwealth Government has enacted legislation for the construction of a standard gauge connection between Adelaide and the Trans-Australian Railway at Crystal Brook. Work on this project is being undertaken by the Australian National Railways Commission. When the link is completed, all mainland State capital cities will be connected to the standard gauge network.

The new all-weather standard gauge railway between Tarcoola, on the Trans-Australian Railway, and Alice Springs was officially opened in October 1980. Upon transfer of rail services to this new line, the narrow section of the Central Australia Railway from Marree to Alice Springs was officially closed effective as from 1 January 1981.

The Commonwealth Government also announced its intention to construct a standard gauge railway from Alice Springs to Darwin and $10 million is to be provided over three years for preliminary planning and design work. This work is also being undertaken by the Australian National Railways Commission.

Operations of Government railway systems

Particulars of train-kilometres, passenger journeys, passenger-kilometres, freight-tonnes carried, and freight tonne-kilometres included in this section refer only to operations for which revenue is received.

Summary of operations

GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, SYSTEMS, 1979–80

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*National*	*Aust.*
Train-kilometres ('000)(*a*)—							
Suburban passenger	22,372	13,174	4,116	3,977	1,713	..	45,352
Country passenger	9,932	6,208	4,087	..	1,003	2,896	24,126
Goods(*b*)	27,052	11,413	24,386	..	9,043	9,496	81,390
Total	**59,356**	**30,795**	**32,589**	**3,977**	**11,759**	**12,392**	**150,868**
Passenger journeys ('000)(*c*)—							
Suburban	204,961	85,755	28,006	(*g*)73,210	n.a.	..	n.a.
Country(*d*)	3,860	3,207	1,476	..	233	585	9,361
Total	**208,821**	**88,962**	**29,482**	**(*g*)73,210**	**n.a.**	**585**	**n.a.**
Passenger-kilometres ('000)(*e*)—							
Suburban	n.a.	1,363,645	n.a.	n.a.	n.a.	..	n.a.
Country	n.a.	399,131	n.a.	n.a.	94,046	249,343	n.a.
Total	**n.a.**	**1,762,777**	**n.a.**	**n.a.**	**n.a.**	**249,343**	**n.a.**
Freight—							
Tonnes carried ('000)(*d*)	39,686	13,453	38,440	..	21,388	12,704	125,671
Net tonne-kilometres (million)(*f*)	10,664.9	3,887.8	11,464.6	..	4,730.7	5,618.2	36,366.2

(*a*) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one kilometre for revenue purposes. (*b*) Includes mixed train-kilometres. (*c*) Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys. (*d*) Inter-system traffic is included in the total for each system over which it passes. (*e*) One passenger travelling one kilometre. (*f*) One tonne carried one kilometre. (*g*) See page 527.

Rolling stock

GOVERNMENT RAILWAYS: ROLLING STOCK INCLUDED IN CAPITAL ACCOUNT

(Number)

System and date	Locomotives: Diesel-electric	Locomotives: Electric	Locomotives: Other(a)	Locomotives: Total	Coaching stock	Goods stock	Service stock
30 June 1980(b)							
New South Wales	496	46	20	562	2,131	12,853	1,963
Victoria	266	35	39	340	1,518	12,138	1,164
Queensland	474	..	77	551	1,061	21,125	2,423
South Australia	2	..	4	6	172	1	12
Western Australia	189	..	21	210	128	10,056	485
National	300	..	24	324	111	11,512	1,181
Australia	**1,727**	**81**	**185**	**1,993**	**5,121**	**67,685**	**7,228**
30 June—							
1979 (b)	1,695	74	203	1,972	5,055	67,163	7,192
1978(b)	1,674	74	194	1,942	6,872	71,043	7,225
1977	1,646	74	262	1,982	7,615	75,694	6,616
1976	1,590	75	326	1,991	7,592	78,405	7,256
1975	1,573	75	332	1,980	7,624	78,810	7,614

(a) Includes non-passenger-carrying diesel power vans and steam locomotives. (b) Excludes jointly-owned stock.

Train-kilometres

Train-kilometres by type of service and motive power

GOVERNMENT RAILWAYS: TRAIN-KILOMETRES 1979–80

('000 kilometres)

	N.S.W.	Vic.	Qld	S.A.	W.A.	National	Aust.
Type of service—							
Passenger—suburban	22,372	13,174	4,116	3,977	1,713	..	45,352
Passenger—country	9,932	6,208	4,087	..	1,003	2,896	24,126
Goods(a)	27,052	11,413	24,386	..	9,043	9,496	81,390
Total	*59,356*	*30,795*	*32,589*	*3,977*	*11,759*	*12,392*	*150,868*
Type of motive power—							
Hauled by diesel-electric locomotives	32,299	15,575	29,882	2	9,630	11,515	98,903
Hauled by electric and other locomotives(b)	2,744	1,308	190	6	1	..	4,250
Powered coaching stock	24,313	13,913	2,517	3,968	2,127	876	47,716
Total	**59,356**	**30,795**	**32,589**	**3,977**	**11,759**	**12,392**	**150,868**

(a) Includes mixed train-kilometres. (b) Includes steam locomotives.

Total train-kilometres

TRAIN-KILOMETRES

('000 kilometres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	National	Aust.
1974–75	55,661	33,876	30,114	10,189	12,866	1,983	5,936	150,624
1975–76	54,943	33,818	30,813	10,304	12,856	1,748	5,595	150,078
1976–77	57,039	33,489	30,206	10,742	12,846	1,667	5,134	151,125
1977–78	56,860	32,013	30,199	(a)3,982	12,596	(a)..	(a)13,152	148,801
1978–79	55,622	30,856	32,100	3,957	12,068	..	12,918	147,520
1979–80	59,356	30,795	32,589	3,977	11,759	..	12,392	150,868

(a) See page 527.

Freight traffic

Freight carried

GOVERNMENT RAILWAYS: FREIGHT CARRIED(*a*), SYSTEMS

('000 tonnes)

Commodity and year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*National*	*Aust.*
1979-80—								
Grain	6,056	5,062	2,022	..	3,534	..	2,203	18,877
Other agricultural produce	1,223	311	1,874	..	177	..	73	3,658
Coal, coke and briquettes	20,068	867	25,637	..	1,775	..	1,923	50,270
Other minerals(*b*)	3,476	26	4,135	..	11,722	..	1,976	21,335
Iron and steel	2,127	749	(*c*)	..	—	..	760	3,636
Fertilisers	304	631	179	..	517	..	517	2,148
Cement	483	718	158	..	75	..	398	1,832
Timber	95	187	115	..	228	..	151	776
Containers	3,025	932	635	..	—	..	1,031	5,623
Livestock	119	128	844	..	19	..	290	1,400
All other commodities	2,709	3,843	2,841	..	3,340	..	3,383	16,116
Total	**39,685**	**13,454**	**38,440**	**..**	**21,388**	**..**	**12,704**	**125,671**
1978-79	33,482	11,190	36,542	..	19,288	..	10,623	111,125
1977-78	33,434	11,120	34,155	..	18,625	..	9,995	107,329
1976-77	33,777	10,971	34,237	6,402	19,003	1,644	3,909	109,943
1975-76	31,234	10,803	33,118	6,139	17,647	1,610	3,804	104,355
1974-75	33,476	11,057	30,208	6,738	16,153	1,731	4,102	103,465

(*a*) Inter-system traffic is included in the total for each system (including each National railway) over which it passes. (*b*) Includes sand and gravel. (*c*) Included in item "All other commodities".

Freight net tonne-kilometres

GOVERNMENT RAILWAYS: FREIGHT NET TONNE-KILOMETRES, SYSTEMS

(Million)

Commodity and year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*National*	*Aust.*
1979-80—								
Grain	2,313.4	1,527.6	(*b*)	..	1,009.5	..	365.0	n.a.
Other agricultural produce	626.6	101.6	(*b*)	..	75.2	..	21.2	n.a.
Coal, coke and briquettes	1,865.8	146.6	(*b*)	..	310.4	..	500.5	n.a.
Other minerals(*a*)	598.3	10.7	(*b*)	..	1,761.0	..	418.9	n.a.
Iron and steel	1,413.5	250.4	(*b*)	..	—	..	689.6	n.a.
Fertilisers	193.0	160.2	(*b*)	..	203.7	..	176.9	n.a.
Cement	178.8	118.2	(*b*)	..	31.1	..	65.9	n.a.
Timber	97.5	65.5	(*b*)	..	77.1	..	79.4	n.a.
Containers	1,723.1	368.7	(*b*)	..	—	..	769.0	n.a.
Livestock	88.0	41.6	508.9	..	7.9	..	154.3	800.7
All other commodities	1,566.7	1,096.7	(*b*)	..	1,254.9	..	2,377.6	n.a.
Total	**10,664.9**	**3,887.8**	**11,464.6**	**..**	**4,730.7**	**..**	**5,618.2**	**36,366.2**
1978-79	8,776.7	3,145.3	10,925.2	..	4,178.8	..	5,029.5	32,055.5
1977-78	9,243.3	3,108.7	10,417.2	(*c*)	4,273.1	(*c*)	(*c*) 4,794.2	31,836.5
1976-77	9,320.2	3,042.2	10,286.6	1,834.0	4,532.5	247.5	2,732.4	31,995.4
1975-76	8,566.9	3,071.4	10,101.2	1,686.6	4,542.4	231.8	2,609.0	30,809.3
1974-75	8,782.3	3,091.4	9,118.0	1,756.9	4,262.4	273.3	2,507.4	29,791.7

(*a*) Includes sand and gravel. (*b*) Not available separately. (*c*) See page 527.

Finance

GOVERNMENT RAILWAYS: GROSS EARNINGS(*a*), SYSTEMS, 1979–80

($'000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*(*b*)	*W.A.*	*National*	*Aust.*
Coaching—							
Suburban passenger	78,849	44,489	8,479	n.a.	n.a.	..	n.a.
Country passenger	32,155	12,224	7,498	..	3,638	12,748	68,263
Other	16,959	17,553	5,260	n.a.	2,357	—	n.a.
Total coaching	*127,963*	*74,266*	*21,237*	*n.a.*	*5,995*	*12,748*	*242,209*
Freight (goods and livestock)—							
Grain	(*d*)	51,714	23,754	..	37,245	15,853	n.a.
Other agricultural produce	(*d*)	4,268	16,723	..	4,211	747	n.a.
Coal, coke and briquettes	(*d*)	3,908	151,814	..	11,589	6,728	n.a.
Other minerals(*c*)	(*d*)	267	32,203	..	35,496	11,802	n.a.
Iron and steel	(*d*)	6,355	—	..	—	9,542	n.a.
Fertilisers	(*d*)	4,501	4,559	..	5,500	3,833	n.a.
Cement	(*d*)	4,851	2,296	..	1,256	2,206	n.a.
Timber	(*d*)	2,639	1,804	..	3,469	1,398	n.a.
Containers	(*d*)	6,498	8,943	..	—	15,539	n.a.
Livestock	(*d*)	1,521	21,139	..	403	5,444	n.a.
All other commodities	(*d*)	49,713	60,935	..	44,129	58,423	n.a.
Total freight	*331,185*	*136,235*	*324,170*	..	*143,299*	*131,514*	*1,066,403*
Miscellaneous	36,685	25,235	7,293	n.a.	24,964	13,709	107,886
Grand total	**495,833**	(*e*)**230,549**	**352,700**	**26,943**	**174,258**	**157,971**	(*f*)**1,438,254**

(*a*) Excludes Government grants. (*b*) See page 527. (*c*) Includes sand and gravel. (*d*) Not available separately. (*e*) Includes earnings from freight carried by VICRAIL on behalf of the S.R.A. of N.S.W. and the ANRC. (*f*) Includes South Australia.

GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1979–80

($'000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*National*	*Aust.*
Maintenance of way and works	126,388	(*b*)	111,770	n.a.	(*c*)41,139	n.a.	n.a.
Motive power(*a*)	280,690	(*b*)	167,823	n.a.	(*c*)47,053	n.a.	n.a.
Traffic	179,714	(*c*)339,417	106,409	n.a.	67,392	n.a.	n.a.
Other charges	170,763	53,170	36,501	n.a.	24,695	n.a.	n.a.
Total	**757,555**	**392,586**	**422,503**	(*d*)**74,391**	(*c*)**180,280**	**222,799**	**2,050,114**

(*a*) Includes maintenance of rolling stock. (*b*) Not available separately; included with traffic. (*c*) Includes provision of reserves for depreciation. (*d*) See page 527.

GOVERNMENT RAILWAYS: GROSS EARNINGS, WORKING EXPENSES, AND NET EARNINGS, SYSTEMS

($'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	National	Aust.
GROSS EARNINGS								
1974–75	291,373	129,942	183,687	47,950	106,844	8,266	41,367	809,429
1975–76	318,763	147,292	230,492	49,688	130,850	8,048	54,618	939,751
1976–77	351,875	163,512	262,561	54,284	137,323	8,780	62,590	1,040,925
1977–78	380,724	176,522	273,551	(c)6,113	149,477	(c)	(c)122,040	1,108,427
1978–79	379,033	192,656	310,418	24,550	154,597	..	131,829	1,193,083
1979–80	495,833	230,549	352,700	26,943	174,258	..	157,971	1,438,254
WORKING EXPENSES								
				(a)	(a)			
1974–75	415,234	243,393	227,925	80,466	103,696	19,973	55,847	1,146,534
1975–76	472,188	271,940	265,662	91,352	118,607	22,087	64,279	1,306,115
1976–77	570,272	301,232	299,044	103,629	132,024	23,340	52,628	1,482,169
1977–78	643,623	332,508	337,002	(c)25,723	148,708	(c)	(c)195,796	1,683,360
1978–79	679,999	347,802	365,070	71,043	159,737	..	204,738	1,828,389
1979–80	757,555	392,586	422,503	74,391	180,280	..	222,799	2,050,114
NET EARNINGS(b)								
1974–75	—123,861	—113,451	—44,238	—32,516	3,148	—11,707	—14,479	—337,104
1975–76	—153,425	—124,648	—35,170	—41,664	12,243	—14,039	—9,661	—366,364
1976–77	—218,397	—137,720	—36,483	—49,345	5,299	—14,560	9,962	—441,244
1977–78	—262,899	—155,986	—63,451	(c)—19,610	769	(c)	(c)—73,756	—574,933
1978–79	—300,966	—155,147	—54,652	—46,493	—5,141	..	—72,909	—635,308
1979–80	—261,722	—162,037	—69,803	—47,448	—6,022	..	—64,828	—611,860

(a) Includes provision of reserves for depreciation. (b) Excess of gross earnings over working expenses as shown in this table. (c) See page 527.

GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1980

($'000)

System	Net earnings —excess of gross earnings over working expenses	Plus grants and other earnings payable to railways: State Government grants	Road motor earnings	Other	Total	Less other expenses charged to railways: Interest and exchange	Sinking fund	Road motor expenses (a)	Other	Total	Surplus or deficit (—)
New South Wales	—261,722	(b)10,996	..	..	10,996	63,300	13,264	..	694	77,258	—327,984
Victoria	—162,037	-	84	-	84	..	..	424	..	424	—162,377
Queensland	—69,803	-	-	..	-	60,369	-	-	(c)500	60,869	—130,672
South Australia(d)	—47,448	49,752	-	-	49,752	-	-	-	-	-	2,304
Western Australia	—6,022	-	1,477	-	1,477	19,407	-	4,067	(e)14	23,488	—28,033
National	—64,828	58,100	-	-	58,100	4,233	-	-	-	4,233	—10,961
Australia	**—611,860**	**118,848**	**1,561**	**-**	**120,409**	**147,309**	**13,264**	**4,491**	**1,208**	**166,272**	**—657,723**

(a) Includes interest and exchange. (b) Grants to meet losses on country developmental lines, and the employer liability to the Government Railways Superannuation Account. (c) Demolished assets written off. (d) See page 527. (e) Australian currency revaluation adjustment.

Employment, salaries and wages

GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES (EXCLUDING CONSTRUCTION STAFF) AND SALARIES AND WAGES PAID(*a*), 1979–80

	N.S.W.	*Vic.*(*b*)	*Qld*	*S.A.* (*c*)(*d*)	*W.A.*	*National* (*e*)	*Aust.*
Salaried staff	9,372	5,388	4,078	630	2,114	2,278	23,860
Wages staff	33,227	17,361	20,870	3,172	7,425	8,395	90,450
Total staff	**42,599**	**22,749**	**24,948**	**3,802**	**9,539**	**10,673**	**114,310**
Salaries and wages paid $'000	598,052	281,413	315,246	31,401	112,646	153,111	1,491,869

(*a*) Excludes salaries and wages paid to road motor staff. (*b*) Includes construction staff. (*c*) See page 527. (*d*) Includes staff made available to the State Transport Authority by the ANRC. (*e*) Excludes staff made available to the South Australian STA.

Non-government railways

The Australian non-government railways covered in this section are those which operate outside industrial estates, harbour precincts, mines and quarries with a route distance exceeding two kilometres.

The figures in the following table have been compiled from information supplied to the Department of Transport and Construction or the Bureau of Transport Economics by the various railway operators. Prior to 1979–80 these statistics were collected and published by the Bureau of Transport Economics. In 1979–80 the collection was passed to the Department of Transport and Construction. All operators provided details of tonnes carried and most provided details of tonne-kilometres performed. In a few cases the tonne-kilometre figures have been estimated by the Department of Transport and Construction or the Bureau of Transport Economics using the advised average length of haul.

TRAFFIC TASK PERFORMED BY AUSTRALIAN NON-GOVERNMENT RAILWAYS 1975–76 TO 1980–81

Year	*Iron ore railways*	*Sugar tramways*	*Other non-government railways*(*a*)	*Total non-government railways*(*a*)
	TONNES CARRIED (million)			
1975–76	83.8	18.8	17.8	120.5
1976–77	86.6	20.1	20.3	127.0
1977–78	85.9	20.3	17.9	124.0
1978–79	79.5	18.6	19.6	117.7
1979–80	88.3	18.3	20.6	127.2
1980–81	88.5	20.6	20.2	129.4
	TONNE-KILOMETRES (million)			
1975–76	25,748	302	298	26,348
1976–77	26,646	322	369	27,337
1977–78	27,723	325	324	28,372
1978–79	24,930	299	324	25,553
1979–80	27,128	292	345	27,765
1980–81	28,264	351	324	28,939

(*a*) Includes transfers to and from Government railways.

TRAM, BUS, AND FERRY SERVICES

Systems in operation

Trams and trolley-buses. At 30 June 1981 tram services were in operation in Melbourne, Victoria and in Adelaide, South Australia. The last of the trolley-bus services ceased to operate in Australia with its replacement by buses in Perth, Western Australia, on 29 August 1969. Regular tram services ceased to operate in Ballarat on 19 September 1971 and in Bendigo on 16 April 1972. However services are operated in both cities, on an irregular basis, but generally at holiday periods, as a tourist attraction.

In many parts of Australia private lines used for special purposes in connection 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 tram used for the conveyance of passengers.

Buses. Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal bus services located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Wales; Rockhampton, Queensland; Fremantle and the Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern Territory; and for country road services operated by the Victorian Railways, the State Rail Authority of New South Wales, the Western Australian Government Railways, and the Australian National Railways. Particulars of bus services under the control of private operators for the States of New South Wales, Victoria, Queensland and South Australia are given in the annual publication *Rail, Bus and Air Transport, Australia* (9201.0) for years prior to 1976–77.

Ferries. Ferry passenger services are operated in the following States: New South Wales, at Sydney and Newcastle; Western Australia, on the Swan River at Perth; Tasmania, on the Mersey River at Devonport and on the Derwent River at Hobart; and the Brisbane River at Brisbane. Control is exercised by both government authorities and private operators. Particulars of the operations of these services are given in previous issues of this Year Book. There are no ferry passenger services in South Australia or Victoria.

Government and municipal tram and bus services

Because of the development in recent years of the various forms of public road transport under the control of single authorities and the gradual replacement of tram services by bus services, it is not possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL STATES AND TERRITORIES

		N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
				1979–80						
Route-kilometres at 30 June—										
Tram(*a*)	kilometres	..	220	..	11	..	..	..	..	231
Bus	"	1,066	290	790	955	9,722	464	100	786	14,173
Vehicle-kilometres—										
Tram	'000	..	23,547	..	783	..	..	..	..	24,330
Bus	"	64,660	12,739	20,630	36,775	44,525	9,511	1,581	13,541	203,963
Rolling stock at 30 June—										
Tram	number	..	733	..	26	..	..	..	..	759
Bus	"	1,718	311	570	824	962	312	46	369	5,112
Passenger journeys—										
Tram	'000	..	98,889	..	(*b*)	..	..	..	..	(*g*)98,889
Bus	"	194,366	19,872	47,861	(*b*)	56,646	17,184	1,209	19,500	(*g*)356,638
Gross revenue(*c*)—										
Tram and bus	$'000	54,233	40,545	19,772	(*b*)	18,614	4,164	377	5,619	(*g*)143,324
Working expenses(*d*)—										
Tram and bus	$'000	114,374	65,911	27,225	(*b*)	42,876	10,996	755	15,728	(*g*)277,865
Net revenue—										
Tram and bus	$'000	-60,140	-25,366	-7,454	(*b*)	-24,262	-6,832	-379	-10,109	(*g*)-134,542
Employees at 30 June—										
Tram and bus	number	6,372	4,589	1,476	(*b*)	2,255	601	86	865	(*g*)16,244
Accidents—										
Tram and bus(*e*)—										
Persons killed	number	4	6	–	–	2	–	–	–	(*g*)12
Persons injured	"	n.a.	652	329	398	442	36	–	60	(*f*)(*g*)1,917
				1980–81						
Route-kilometres at 30 June—										
Tram(*a*)	kilometres	..	220	..	11	..	..	..	..	231
Bus	"	1,091	n.a.	646	951	8,620	484	138	n.a.	11,930
Vehicle-kilometres—										
Tram	'000	..	24,062	..	802	..	..	..	..	24,864
Bus	"	65,551	13,163	19,600	37,197	45,983	9,973	1,857	n.a.	193,324
Rolling stock at 30 June—										
Tram	number	..	741	..	26	..	..	..	..	767
Bus	"	1,699	270	537	776	962	303	39	355	4,941
Passenger journeys—										
Tram	'000	..	100,474	..	(*b*)	..	..	..	..	(*g*)100,474
Bus	"	188,787	21,018	41,340	(*b*)	57,541	16,988	1,659	19,800	(*g*)347,133
Gross revenue(*c*)—										
Tram and bus	$'000	76,162	49,568	24,839	(*b*)	21,214	4,909	473	7,431	(*g*)184,596
Working expenses(*d*)—										
Tram and bus	$'000	136,254	93,638	28,558	(*b*)	45,229	13,133	1,430	19,192	(*g*)337,434
Net revenue—										
Tram and bus	$'000	-60,092	-44,070	-3,719	(*b*)	-24,015	-8,224	-169	-11,761	(*g*)-152,050
Employees at 30 June—										
Tram and bus	number	6,268	4,571	n.a.	(*b*)	2,259	601	96	n.a.	(*g*)13,795
Accidents—										
Tram and bus(*e*)—										
Persons killed	number	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Persons injured	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

(*a*) Gauge 1435 mm throughout. (*b*) Not separately available. See page 527. (*c*) Excludes government grants. (*d*) Includes provision of reserves for depreciation, etc., where possible. (*e*) Excludes accidents to employees. (*f*) Excludes New South Wales. (*g*) Excludes details of metropolitan tram and bus services operated by the South Australian State Transport Authority. See page 527. Minus sign (-) denotes deficit.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL

		1975–76	1976–77	1977–78	1978–79	1979–80	1980–81
Route-kilometres at 30 June—							
Tram	kilometres	228	228	228	231	231	231
Bus	"	11,217	12,142	12,649	12,828	14,173	11,930
Vehicle kilometres—							
Tram	'000	24,945	24,940	24,955	24,967	24,330	24,864
Bus	"	190,131	192,003	197,660	201,693	203,963	193,324
Rolling stock at 30 June—							
Tram	number	765	765	774	756	759	767
Bus	"	4,995	4,897	5,050	5,070	5,112	4,941
Passenger journeys—							
Tram	'000	107,375	104,188	102,581	(a)101,070	(a) 98,889	(a) 100,474
Bus	"	403,058	404,228	413,987	(a)357,558	(a) 356,638	(a) 347,133
Gross revenue(b)—							
Tram and bus	$'000	121,420	123,740	134,457	(a)123,741	(a) 143,324	(a) 184,596
Working expenses(c)—							
Tram and bus	$'000	208,241	239,107	267,281	(a)258,644	(a) 277,865	(a) 337,434
Net revenue—							
Tram and bus	$'000	-86,821	-115,366	-132,824	(a)-134,902	(a)-134,542	(a)-152,050
Employees at 30 June—							
Tram and bus	number	17,846	18,276	(a)16,613	(a)16,547	(a) 16,244	(a) 13,795
Accidents—							
Tram and bus(d)—							
Persons killed	number	22	25	22	(f)27	(a) 12	n.a.
Persons injured	"	(e)1,535	(e)1,609	(e)1,727	(a)1,885	(a) 1,917	n.a.

(a) Excludes details of metropolitan tram and bus services in South Australia. See page 527. (b) Excludes government grants. (c) Includes provision of reserve for depreciation, etc., where possible. (d) Excludes accidents to employees. (e) Excludes New South Wales.

MOTOR VEHICLES

Arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia, since they are the function of a separate authority or authorities in each State and Territory.

Tables in this section include vehicles owned by private individuals, local government authorities, State Governments, and the Australian Government (excluding those belonging to the defence services).

Survey of motor vehicle usage

A survey was conducted throughout Australia in late 1979 by the Australian Bureau of Statistics for the purpose of gathering information on the usage of motor vehicles. Previous surveys were conducted in 1963, 1971 and triennially since 1976. The owners of approximately 53,000 vehicles other than buses were approached for information relating to the usage of their vehicles over the twelve months ended 30 September 1979. The framework from which the sample was drawn was obtained from the motor vehicle registration authorities in all States and Territories. The survey was based on respondents' recollection of their usage of the selected vehicles over their period of ownership during the survey year.

The main purpose of the survey was to determine the total distance travelled by vehicles, classified according to area and purpose of travel. Information was also obtained from the survey on: (i) tonne-kilometres; (ii) average load carried; (iii) vehicle usage (i.e. for hire and reward, ancillary or other); (iv) main type of operation; (v) fuel consumption; (vi) occupant-kilometres; and (vii) driver characteristics.

The following table shows, for Australia, total annual kilometres travelled for the twelve months ended 30 September 1979 classified by vehicle type and purpose of travel. The percentage standard errors (S.E.%) indicate the extent to which the estimates can vary by chance because only a sample and not the total vehicle population was enumerated. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors. For example, if an estimate of 3,000 million kilometres has a standard error of 5 per cent (i.e. 150 million kilometres), then there would be approximately two chances in

three that a comparable complete collection would give a figure within the range of 2,850 million kilometres to 3,150 million kilometres and about nineteen chances in twenty that the figure would be within the range of 2,700 million kilometres to 3,300 million kilometres.

TOTAL ANNUAL KILOMETRES BY VEHICLE TYPE AND PURPOSE OF TRAVEL, TWELVE MONTHS ENDED 30 SEPTEMBER 1979 (FINAL)

	Laden business		*Unladen business*		*Total business (a)*		*Paid to and from work*		*Unpaid to and from work*		*Private*		*Total*	
Type of vehicle	*million kilo-metres*	*S.E. %*	*million kilo-metres*	*S.E. %*	*million kilo-metres*	*S.E. %*	*million kilo-metres*	*S.E. %*	*million kilo-metres*	*S.E. %*	*million kilo-metres*	*S.E. %*	*million kilo-metres*	*S.E. %*
Cars and station wagons	..	..	..	..	17,027.2	3.9	2,358.0	7.4	17,088.9	2.5	48,383.1	1.4	84,871.5	1.1
Motor cycles	..	..	..	..	168.9	10.4	52.5	15.7	606.6	5.5	940.1	5.0	1,768.2	3.6
Utilities and panel vans	5,315.1	5.5	2,232.2	8.1	8,298.3	4.7	376.3	15.8	2,219.8	7.5	5,033.3	5.2	15,928.0	2.6
Rigid trucks	3,801.8	1.7	1,658.2	2.4	5,460.1	1.7	36.4	10.6	167.9	20.0	172.7	6.4	5,837.2	2.0
Articulated trucks	1,806.1	1.2	773.5	1.4	2,580.4	1.0	3.6	21.0	19.5	7.2	4.0	11.6	2,607.4	1.0
Other truck type vehicles	..	..	..	..	232.0	8.7	3.5	35.4	28.7	13.2	192.7	8.6	456.9	5.4
Total	**10,922.9**	**2.7**	**4,663.9**	**4.0**	**33,766.9**	**2.3**	**2,830.3**	**6.5**	**20,131.5**	**2.3**	**54,725.9**	**1.3**	**111,469.2**	**0.9**

(*a*) Includes the total kilometres travelled for business purposes of cars, station wagons, motor cycles and utilities and panel vans predominantly used for private purposes. The dissection of business travel into laden/unladen was not sought for these vehicles.

Motor vehicles on register

Details of motor vehicles on the register are compiled by up-dating motor vehicle census data from information made available by the various motor vehicle registration authorities in the States and Territories. Censuses of motor vehicles have been conducted in respect of 31 December 1955 and 1962, and 30 September 1971, 1976 and 1979. At these census dates considerably greater information concerning the particulars shown in the tables following is available. Final detailed results of the 1979 census have been published in separate census publications for each State and Territory and for Australia.

MOTOR VEHICLE CENSUS: 30 SEPTEMBER 1979 (FINAL)
('000)

				Trucks					
State or Territory	*Motor cars and station wagons*	*Utilities*	*Panel vans*	*Rigid*	*Articu-lated*	*Other truck type vehicles*	*Buses*	*Motor cycles*	*Total (a)*
New South Wales	1,906.6	146.7	129.6	136.6	15.4	10.2	13.0	93.2	2,451.3
Victoria	1,554.4	109.2	54.9	127.8	10.4	9.8	9.0	48.5	1,924.0
Queensland	855.0	157.8	57.6	48.9	7.2	3.4	4.9	78.6	1,213.4
South Australia	543.8	42.0	23.8	38.7	4.6	5.0	3.6	30.4	691.8
Western Australia	521.1	58.2	46.9	52.5	4.0	5.5	4.3	27.2	719.6
Tasmania	175.1	19.2	10.4	11.6	1.4	2.0	2.0	4.6	226.1
Northern Territory	24.4	10.1	2.5	1.5	0.5	0.1	0.2	2.3	41.6
Australian Capital Territory	89.3	5.0	5.3	2.4	0.2	0.3	0.8	3.6	106.9
Australia	**5,669.6**	**548.2**	**331.0**	**419.9**	**43.7**	**36.3**	**37.8**	**288.3**	**7,374.7**

(*a*) Excludes tractors, plant and equipment, caravans and trailers.

MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE, AUSTRALIA
('000)

30 June	*Motor cars and station wagons*	*Utilities, trucks, panel vans, other truck type vehicles and buses*	*Total (excludes motor cycles)*	*Motor cycles*
1976	5,072.8	1,215.0	6,287.8	293.0
1977	5,243.0	1,279.6	6,522.6	295.5
1978	5,462.2	1,359.9	6,822.1	292.4
1979	5,657.2	1,412.7	7,069.9	288.2
1980	5,800.6	1,462.4	7,262.9	310.3
1981	6,021.0	1,544.3	7,565.3	352.3

MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION, STATES AND TERRITORIES

30 June	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1976	422.9	458.7	324.1	477.5	489.9	475.4	325.9	427.5	448.1
1977	431.1	463.3	464.8	494.9	520.3	490.9	338.6	450.0	459.6
1978	443.3	482.2	483.4	501.5	542.2	511.8	394.4	436.8	475.1
1979	455.0	494.4	498.3	506.7	552.4	529.7	386.9	474.3	487.1
1980	468.5	487.5	516.6	515.7	561.8	530.8	381.9	462.4	494.3
1981	479.8	499.3	539.1	522.1	569.8	542.7	408.0	465.0	506.8

(a) Excludes motor cycles, tractors, plant and equipment, caravans and trailers.

Registrations of new motor vehicles

Particulars of registrations of new motor vehicles are shown by type of vehicle in preliminary monthly bulletins, and by type and make of vehicle in monthly and annual bulletins of Motor Vehicle Registrations.

In these statistics 'registrations' mean registrations processed by the motor vehicle registration authorities in the States and Territories during the period.

A revised classification of motor vehicles has been adopted for publication of statistics of new motor vehicle registrations from 1 July 1976. The principal difference between this classification and that which it replaces involves the categories utilities, panel vans, trucks and other truck type vehicles. The principle of accepting vehicle-type data as recorded by the registration authority has also been accepted. Consequently, figures shown from July 1976 are not strictly comparable with data for previous periods.

REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

State or Territory	*Motor cars and station wagons*	*Utilities*	*Panel vans*	*Trucks*		*Other truck type vehicles*	*Buses*	*Total (excludes motor cycles)*	*Motor cycles*
				Rigid	*Articu-lated*				
1981-82—									
New South Wales	165,538	14,019	25,013	13,736	1,152	835	1,945	222,238	24,705
Victoria	121,960	8,382	3,296	12,992	953	693	1,201	149,477	15,731
Queensland	81,240	17,927	9,122	4,261	670	279	885	114,384	15,324
South Australia	36,890	2,926	3,063	2,811	402	204	222	46,518	7,050
Western Australia	42,329	4,749	5,656	4,786	317	98	473	58,408	5,835
Tasmania	12,210	1,487	979	562	82	84	108	15,512	1,110
Northern Territory	3,467	2,001	521	187	67	12	47	6,302	882
Australian Capital Territory	7,621	544	359	727	22	13	117	9,403	1,054
Australia	**471,255**	**52,035**	**48,009**	**40,062**	**3,665**	**2,218**	**4,998**	**622,242**	**71,691**
1980-81	462,487	47,474	37,391	36,485	4,269	1,939	4,170	594,215	70,799
1979-80	451,950	43,826	30,169	33,541	4,282	1,611	3,045	568,424	53,947
1978-79	463,453	41,591	32,068	33,756	4,496	1,891	3,171	580,426	37,278
1977-78	432,439	45,946	40,312	35,034	4,000	2,474	3,712	563,917	38,049
1976-77	447,103	(a)48,419	(a)39,532	(a)36,051	(a)4,752	(a)2,749	3,205	581,811	50,321

(a) Not directly comparable with previous figures.

Drivers' and riders' licences

At 30 June 1981, the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 3,087,347; Victoria, 2,181,714; South Australia, 771,993; Western Australia, 731,113; Tasmania, 236,728; Northern Territory, 67,588; Australian Capital Territory, 137,545. Particulars are not available for Queensland.

ROAD TRAFFIC ACCIDENTS

Compulsory fitting and use of seat belts and protective helmets in Australia

Information on the compulsory fitting and use of seat belts and protective helmets in Australia is given in Year Book No. 61, page 395.

Accidents involving casualties, persons killed, persons injured

Since 1 January 1980 the ABS in the compilation of national statistics on road traffic accidents has adopted a new definition of injury and injury accidents. An injury is now defined as injury to any person involved in a road vehicle accident resulting in the injured person being admitted to hospital. An injury accident is therefore defined as a non-fatal road vehicle accident in which at least one injured person was admitted to hospital. Statistics prior to this date on injury accidents and number of persons injured are therefore not comparable.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(*a*) (ADMISSIONS TO HOSPITALS): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED, 1980

				Per 100,000 of mean population			*Per 10,000 motor vehicles registered(b)*		
State or Territory	*Number of accidents*	*Persons killed*	*Persons injured*	*Number of accidents*	*Persons killed*	*Persons injured*	*Number of accidents*	*Persons killed*	*Persons injured*
New South Wales	9,911	1,303	11,463	192	25	222	39	5	45
Victoria	7,074	657	8,466	181	17	216	36	3	43
Queensland	4,195	557	4,803	184	24	211	33	4	38
South Australia	2,321	269	2,723	177	21	208	33	4	38
Western Australia	2,566	293	3,080	202	23	242	34	4	41
Tasmania	776	100	889	183	24	210	34	4	39
Northern Territory	347	63	402	299	54	346	74	13	86
Australian Capital Territory	222	30	228	100	14	103	21	3	22
Australia	**27,412**	**3,272**	**32,054**	**187**	**22**	**218**	**36**	**4**	**42**

(*a*) Accidents reported to the police or other relevant authority which occurred in public thoroughfares and which resulted in death within thirty days or personal injury to the extent that the injured person was admitted to hospital. (*b*) Number of motor vehicles (excluding tractors, plant and equipment) on register at 30 June 1980.

ROAD TRAFFIC ACCIDENTS INVOLVING FATALITIES

Year	*N.S.W*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
Accidents involving fatalities—									
1976	1,119	830	497	277	255	97	48	33	3,156
1977	1,118	835	515	270	259	99	39	26	3,161
1978	1,222	775	532	254	304	96	58	27	3,268
1979	1,125	750	544	277	257	83	43	24	3,103
1980	1,152	608	508	240	268	96	55	27	2,954
1981	1,130	677	510	196	217	97	63	24	2,914
Persons killed—									
1976	1,264	938	569	307	308	108	51	38	3,583
1977	1,268	954	572	306	290	112	47	29	3,578
1978	1,384	869	612	291	345	106	68	30	3,705
1979	1,290	847	613	309	279	93	53	24	3,508
1980	1,303	657	557	269	293	100	63	30	3,272
1981	1,292	766	594	222	238	111	70	29	3,322

ROADS*

An article dealing with the development of roads in Australia is given in Year Book, No. 60, pages 385-93.

Summary of roads used for general traffic

Proclaimed or declared roads. The table following 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 30 June 1981. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points: availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; the value of the roads as connecting links between centres of population or business; 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), construction or maintenance may not keep pace with gazettal of roads, and, therefore, the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS: LENGTHS, STATES, 30 JUNE 1981

(Kilometres)

Class of road	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Total*
State Highways and Freeways	(*a*)10,648	7,326	10,363		7,725	1,957	
Trunk roads	7,091	14,564	151	13,427	7,486		108,869
Ordinary main roads	18,330		8,606			1,195	
Total main roads	*36,069*	*21,890*	*19,120*	*13,427*	*15,211*	*3,152*	*108,869*
Secondary roads	(*b*)299	–	13,023	–	8,729	285	22,336
Development roads	3,474	–	8,036	–	–	84	11,594
Tourist roads	444	798	–	–	–	150	1,392
Other roads	2,498	(*c*)1,030	–	–	–	–	3,528
Total other roads	*6,715*	*1,828*	*21,059*	–	*8,729*	*519*	*38,850*
Grand total	**42,784**	**23,718**	**40,179**	**13,427**	**23,940**	**3,671**	**147,719**

(*a*) Includes 167 kilometres of freeways and tollways. (*b*) Metropolitan only. (*c*) Forest roads.

Total roads. The following table represents an attempt to classify all the roads open for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

ALL ROADS OPEN FOR GENERAL TRAFFIC LENGTHS, STATES AND TERRITORIES, 30 JUNE 1981

(Kilometres)

Surface of roads	*N.S.W.*(*a*)(*b*)	*Vic.*(*c*)	*Qld*	*S.A.*	*W.A.*(*d*)	*Tas.*	*N.T.*	*A.C.T.*(*e*)	*Total* (*a*)
Bitumen or concrete	70,277	63,196	47,562	20,586	32,593	7,808	5,598	1,865	n.a.
Gravel, crushed stone or other improved surface	66,616	48,197	34,481		39,214	13,952	4,123	327	n.a.
Formed only	39,188	24,183	56,362	81,536	46,126	521	4,956	42	n.a.
Cleared only	13,092	22,499	22,576		40,788	208	6,670	–	
Total	**189,173**	**158,075**	**160,981**	**102,122**	**158,721**	**22,489**	**21,347**	**2,234**	**n.a.**

(*a*) Excludes 15,397 kilometres of road dedicated but not trafficable. (*b*) Figures as at 30 June 1978. Later figures will not be available as the collection of this data has been discontinued in accordance with a decision arising out of the Review of the Commonwealth Functions. (*c*) Excludes roads coming under the responsibility of the State Electricity Commission (72 km), Melbourne and Metropolitan Board of Works (39 km) and Forests Commission (38,431 km). (*d*) Figures as at 30 June 1979. Figures as at 30 June 1981 are not yet available. (*e*) Figures as at 30 June 1980. Figures as at 30 June 1981 are not yet available.

* Includes bridges.

Expenditure on roads and bridges

Primary responsibility for the construction and maintenance of roads and bridges rests with State and local authorities. For detailed information *see* the individual State Year Books.

National Association of Australian State Road Authorities

The National Association of Australian State Road Authorities (NAASRA) was established in 1934. The present member authorities are: Department of Main Roads, New South Wales; Country Roads Board, Victoria; Main Roads Department, Queensland; Highways Department, South Australia; Main Roads Department, Western Australia; Department of Main Roads, Tasmania; Northern Territory Department of Transport and Works; Commonwealth Department of Transport and Construction.

The Association's objectives are to provide a central organisation where, by co-operative effort, a uniform approach to the improvement, planning and development of the Australian road system can be achieved. National standards for road and bridge construction and maintenance and improved administrative and financial control methods are developed by committees of experienced staff from the authorities, with secretarial services provided by a small staff located in Sydney.

This Secretariat arranges publication of the policies and standards which are widely used by road authorities, local government and universities; co-operates with the Standards Association of Australia on the preparation of national codes of practice; and acts as an Australian centre for contact with overseas road bodies and for the circulation of standards published by them.

The Association regularly confers with the Department of Transport and Construction, the Bureau of Transport Economics and the Australian Transport Advisory Council on major road policies. As part of the Commonwealth Government's external aid program and in conjunction with the Department of Foreign Affairs, member authorities of the Association conduct engineering training courses for experienced engineers from African and Asian countries.

The Association is a member of the Permanent International Association of Road Congresses (PIARC) and of the Road Engineering Association of Asia and Australasia (REAAA).

Australian Road Research Board

The Australian Road Research Board (ARRB) is a non-profit-making company founded in 1960 by the National Association of Australian State Road Authorities (NAASRA), and now located at Vermont in Victoria. It is financed by Federal and State Government Road Authorities whose permanent heads make up ARRB's Board of Directors. The Executive Director, a full-time employee and member of the Board, is responsible for administering the Directors' policies.

The ARRB regularly undertakes and sponsors road and road transport research over a comprehensive range of subjects and disseminates results to appropriate organisations, engineers and scientists involved in the design, location, construction, upkeep and use of roads. In selecting and monitoring its research projects, and developing a longer term research plan, ARRB is assisted by a senior advisory Steering Committee and four Technical Committees in the areas of Road Technology, Road Users, Road Transport and Local Government, the members of which are experts drawn from government, commerce and education.

ARRB disseminates road research information through its major biennial conferences, first held in 1962, and regular symposia, seminars and workshops and through its publications which include the *ARRB Conference Proceedings*, a quarterly journal *Australian Road Research*, the *Source Book for Australian Roads*, symposium and workshop papers and various reports and technical manuals arising out of its many research projects. ARRB also maintains a unique library of road literature and operates a computer-based information service which abstracts and indexes Australian road literature in the quarterly *Australian Road Index (ARI)*, and research projects in the annual *Australian Road Research in Progress (ARRIP)*. The machine-readable version of *ARI* and *ARRIP*, called Australian Road Research Documentation (ARRD), is available on AUSINET, the Australian Information Network.

ARRB acts as the Australian member of the Organisation for Economic Co-operation and Development's International Road Research Documentation (IRRD) system, contributing information on Australian literature and projects, IRRD information from all member countries is available to users of AUSINET. ARRB also maintains close contacts with road research organisations in other countries.

AIR TRANSPORT

Department of Transport

International Organisations. Australia is one of the 150 (as at 30 June 1982) members of the International Civil Aviation Organisation (ICAO). Australia has continued its membership of the (governing) Council since ICAO was established in 1947. Australia is also a member of the 15 man Air Navigation Commission which is responsible for drawing up international standards and procedures for the safety, regularity and efficiency of air navigation. In addition, Australia participates in the Commonwealth Air Transport Council, the South Pacific Regional Civil Aviation Council and the Airport Operators Council International.

International agreements. Australia had air service agreements in force with twenty-eight countries at 30 June 1982. Under these agreements Australia is granted rights to operate services between Australia to and through the countries in question; these rights are exercised by Australia's international airline Qantas. In return, the designated airlines of the other countries which are partners to these agreements are granted traffic rights in Australia. Australia also had air service arrangements granting traffic rights with four other countries at 30 June 1982.

International air services. At 30 June 1982, twenty-three overseas international airlines were operating regular scheduled air services to Australia. These were: Air-India (India), Air Nauru (Nauru), Air New Zealand (New Zealand), Air Niugini (Papua-New Guinea), Air Pacific (Fiji), Air Vanuatu (Vanuatu), Alitalia (Italy), British Airways (Britain), Canadian Pacific Air Lines (Canada), Cathay Pacific (Hong Kong), Continental Airlines (United States of America), Deutsche Lufthansa (Federal Republic of Germany), Garuda Indonesian Airways (Indonesia), Japan Air Lines (Japan), Jugoslovenski Aerotransport (Yugoslavia), KLM Royal Dutch Airlines (Netherlands), Singapore International Airlines (Singapore), Pan American World Airways (United States of America), Philippines Air Lines (Philippines), South African Airways (Republic of South Africa), Thai Airways International (Thailand), Malaysian Airways System (Malaysia), and Union de Transport Aeriens (France). Qantas, Australia's international airline, operates a fleet of 24 Boeing 747 jet aircraft. All shares in Qantas Airways Limited are owned by the Commonwealth Government.

International operations. The table following shows particulars of international airline traffic during 1981–1982 moving into and out of an area which embraces Australia and Norfolk Island. These figures do not include traffic between Australia and Norfolk Island.

AIR TRANSPORT: INTERNATIONAL AIRLINE TRAFFIC TO AND FROM AUSTRALIA(*a*), 1981–82p

Type of traffic	*Number of flights*	*Passengers*	*Freight tonnes*	*Mail tonnes*
Traffic to Australia—				
Qantas Airways Limited	3,974	947,471	34,094	941
Other airlines	6,586	1,245,869	56,549	5,498
All airlines	**10,560**	**2,193,340**	**90,643**	**6,439**
Traffic from Australia—				
Qantas Airways Limited	3,950	885,487	23,581	2,803
Other airlines	6,594	1,193,311	45,158	1,291
All airlines	**10,544**	**2,078,798**	**68,739**	**4,094**

(*a*) Australian mainland and Norfolk Island.

Statistics covering the operations of Australia's regular overseas services are shown in the following table. These operations include all stages of Qantas flights linking Australia with overseas countries.

AIR TRANSPORT: OPERATIONS OF AUSTRALIA'S REGULAR OVERSEAS SERVICES

		1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Hours flown	number	85,839	79,499	75,643	70,065	74,879	73,679
Kilometres flown	'000	65,221	61,586	58,962	59,040	59,109	58,188
Passengers—							
Embarkations	number	1,488,858	1,551,679	1,569,374	1,782,673	1,933,580	1,883,477
Passenger-kilometres	'000	10,541,870	11,318,928	12,029,554	14,317,936	16,296,416	14,876,509
Freight—							
Tonnes uplifted	tonnes	33,417	34,380	40,972	51,373	52,326	53,753
Tonne-kilometres	'000	243,911	258,748	301,253	373,534	412,518	418,849
Mail—							
Tonnes uplifted	tonnes	2,997	3,205	2,981	3,238	3,878	3,919
Tonne-kilometres	'000	26,217	27,788	27,618	32,019	36,226	36,581

Regular air services within Australia

Trunk route services. In June 1981 the Parliament passed a package of legislation consisting of the *Airlines Agreement Act* 1981 and the *Airlines Equipment Amendment Act* 1981, as well as the *Australian National Airlines Repeal Act* 1981 and the *Independent Air Fares Committee Act* 1981.

The Airlines Agreement Act ratified the 1981 Airlines Agreement between the Commonwealth, Ansett Transport Industries and TAA, which provided for the continuation of the two airline policy in respect of scheduled trunk route passenger services as well as repealing earlier Airlines Agreements. Successive Airlines Agreements have provided the basis for the two airline policy, under which scheduled passenger services on trunk routes are provided by the privately owned Ansett Airlines of Australia (a division of Ansett Transport Industries (Operations) Pty Ltd, a subsidiary of Ansett Transport Industries Ltd) and the Commonwealth owned Australian National Airlines Commission, trading as Trans-Australia Airlines (TAA). The 1981 Airlines Agreement also more clearly defined the role for regional and commuter operators.

The Airlines Equipment Amendment Act provided for the import, by specialist freight operators and regional airlines, of large turbo jet aircraft (the Commonwealth's power to control imports is the basic means of upholding the two airline policy). The Australian National Airlines Repeal Act provided for the restructuring of TAA as a public company, and the Independent Air Fares Committee Act provided for the establishment of a Committee with authority over fares for domestic regular public transport passenger services.

At 30 June 1982, the Ansett fleet included 16 Boeing 727s, 12 Boeing 737s, four McDonnell-Douglas DC 9s, three Electra freighters, nine Fokker F27 Friendships and three helicopters. At the same date, Trans-Australia Airlines operated a fleet of 12 Boeing 727s, three Airbus A300s, 10 McDonnell-Douglas DC 9s and eight Fokker F27 Friendships.

Regional services. In addition to their competitive trunk route services, both Ansett Airlines of Australia and Trans-Australia Airlines operate regional services, most of which are non-competitive. There are also a number of smaller regional airlines operating from Sydney (Air New South Wales and East-West Airlines), Adelaide (Airlines of South Australia), Perth (Airlines of Western Australia), Cairns (BPA Pty Ltd), and Darwin (Airlines of Northern Australia). Regional airlines are so-called because, in general, they serve specific geographic regions. Except for the independently-owned East-West Airlines and BPA Pty Ltd, all regional airlines are divisions of Ansett Transport Industries (Operations) Pty Ltd. The larger aircraft used by these regional airlines are Fokker F28 Fellowships and F27 Friendships.

Freight services. In addition to freight services provided by the passenger airlines, Interstate Parcel Express Company (IPEC) provides all-freight airline services with Argosy and DC 9 aircraft over a limited network including services across Bass Strait.

Commuter services. These are regular public transport flights with light aircraft operating to fixed timetables, but not operated under airline licences. They primarily provide airlinks between towns and country areas over routes which are not served by the major airlines. At 30 June 1982, there were 55 operators of commuter services in Australia, serving some 300 centres. Details of the operations of these commuter services are excluded from the statistics shown in this section.

Scheduled domestic airline services. Statistics of all regular airline services are set out in the following table.

AIR TRANSPORT: OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA(*a*)

		1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Hours flown	number	270,928	258,151	279,385	280,233	284,381	277,199
Kilometres flown	'000	130,100	122,933	134,702	135,409	138,185	137,264
Passengers—							
Embarkations	number	9,315,141	9,348,697	10,289,477	10,720,181	11,504,957	11,380,798
Passenger-kilometres	'000	7,280,993	7,329,665	8,180,418	8,618,671	9,485,635	9,747,272
Freight—							
Tonnes uplifted	tonnes	106,061	108,108	120,887	127,528	129,775	124,955
Tonne-kilometres	'000	97,499	96,315	106,460	110,746	109,603	107,851
Mail—							
Tonnes uplifted	tonnes	9,708	9,636	11,307	13,126	15,053	17,372
Tonne-kilometres	'000	9,113	9,148	10,718	12,518	14,206	16,397

(*a*) Includes flights of all Australian-owned airlines, with the exception of those of Qantas Airways Limited, between airports located within Australia. The domestic carrier, East-West Airlines, commenced services between Australia and Norfolk Island in March 1977 and particulars of these flights are included from that time. Prior to March 1977, Australia-Norfolk Island flights were serviced by Qantas and details of those flights were included with statistics of regular overseas services.

Internal airline passenger embarkation and disembarkation. The statistics set out in the next table have been compiled by aggregating all internal airline passenger traffic loaded and unloaded at each airport. They include passengers on flights between Australia and Norfolk Island. At ports where through-passengers transfer between flights, such passengers are counted as embarking as well as disembarking passengers.

INTERNAL AIRWAYS PASSENGER EMBARKATIONS AND DISEMBARKATIONS AT PRINCIPAL AUSTRALIAN AIRPORTS

Airport	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Sydney	4,788,086	4,839,215	5,274,577	5,539,561	5,961,807	5,858,143
Melbourne	4,125,932	4,149,390	4,552,462	4,743,757	5,104,448	5,046,031
Brisbane	2,119,538	2,075,381	2,252,888	2,282,641	2,521,119	2,636,552
Adelaide	1,454,917	1,615,684	1,729,030	1,801,084	1,931,395	1,930,219
Perth	629,530	704,041	792,768	830,273	910,637	929,949
Canberra	901,837	881,668	966,388	945,260	967,803	872,223
Coolangatta	314,780	320,425	409,151	457,789	570,137	632,791
Hobart	403,759	403,069	437,948	455,577	473,567	474,115
Cairns	275,439	270,147	307,525	345,344	387,095	426,064
Townsville	329,831	322,498	353,522	363,285	378,884	384,587
Launceston	304,784	309,341	353,596	387,456	390,215	380,512
Darwin	208,806	199,963	225,052	249,056	278,669	290,789
Mackay	249,196	244,025	254,954	253,229	261,982	197,892

General aviation activity, which covers all flying other than scheduled airline operations has grown rapidly throughout Australia in recent years and is an important sector of the Australian aviation industry. Hours flown by general aviation during 1980–81 were estimated at 1.83 million, approximately 4.4 per cent more than the previous year.

Aerodromes

The number of aerodromes throughout Australia and its external territories at 30 June 1982 was 445. Seventy-seven were owned by the Commonwealth Government and 368 by local authorities and private interests. The number of licensed helipads throughout Australia and its territories is 5. Capital expenditure on aerodrome and building construction was $46.429 million in 1981-82. Maintenance expenditure on Commonwealth Government-owned aerodromes during 1981-82 was $8.256 million. Expenditure on development and maintenance grants to licensed aerodromes participating in the Local Ownership Plan totalled $6.744 million.

Airway facilities

A total of 460 navigational aids were in service at 30 June 1982. The total includes 249 non-directional beacons (NDB) (includes 221 standard NDB's and 27 locators), 108 distance measuring equipment (DME), 11 international distance measuring equipment (DMEI), 74 VHF omni-directional ranges (VOR), 17 instrument landing systems (ILS) and one twin locator approach system.

One hundred and sixty-four aerodromes are now equipped with night landing facilities. One hundred and seven Australian-designed 'T' systems (T-VASIS) are operating. Eight long-range surveillance radars, two short range and seven secondary surveillance radars are also in operation. There are twenty-six fully-equipped Air Traffic Control Centres and forty-two flight service units in operation.

Air transport registrations, licences, etc., in force in Australia

At 30 June 1981 there were 6,525 aircraft registered in Australia. At the same time there were also 54,667 pilots' licences in force, of which 24,644 were private pilots' licences, 5,320 commercial pilots' licences, 1,477 senior commercial pilots' licences, 2,321 air transport pilots' licences, and 20,905 student pilots' licences. In addition there were 733 flight engineer licences, and 17 flight navigator licences in force.

Accidents and casualties

AIR TRANSPORT: ACCIDENTS INVOLVING CASUALTIES(*a*), AUSTRALIA(*b*)

	1976	*1977*	*1978*	*1979*	*1980*	*1981*
Number	33	36	48	37	48	39
Persons killed	55	45	58	35	61	53
Persons seriously injured	17	24	35	29	33	33

(*a*) Accidents involving civil aircraft (including registered gliders) which resulted in death or serious injury. Excludes parachutists and casualties involving non-registered aircraft. (*b*) Excludes accidents outside Australia involving aircraft on the Australian register; includes all accidents to overseas registered aircraft that occur in Australia.

POSTAL, TELECOMMUNICATION AND RADIOCOMMUNICATION SERVICES

In this section, particulars for the Australian Capital Territory are included with those for New South Wales, and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated. The Central Offices of the Department of Communications are located in Canberra and Melbourne.

Department of Communications

The Postal and Telecommunications Department was created on 22 December 1975. It replaced the Postmaster-General's Department, assuming those PMG functions remaining after the formation of the Postal and Telecommunications Commissions on 1 July 1975. Following the election in November 1980, the name of the Department was changed to the Department of Communications. A major activity of the Department is the administration of the *Wireless Telegraphy Act* 1905 which concerns the regulation and management of the radio frequency spectrum for radiocommunications within the Commonwealth and its Territories.

The Department also undertakes, planning for the development of broadcasting and television services in Australia and the determination of standards and practices for technical equipment used in broadcasting and television services for which formal responsibility attaches to the Minister for Communications pursuant to the provisions of the *Broadcasting and Television Act*. The Department is closely involved in the planning and procurement of the National Communications Satellite System (NCSS), in association with other government departments and agencies in particular AUSSAT PTY LTD, a government-owned company formed to own and operate NCSS.

Another function of the Department is to provide policy advice to the Minister on postal, telegraphic, telephonic, broadcasting and other like services which are subject to legislation for which the Minister for Communications is responsible.

Authorities responsible to the Minister for Communications have been established to provide within Australia a network of facilities which enable people and organisations:

- to send letters, printed matter, parcels and money in Australia and overseas and to receive such items within Australia from overseas;
- to converse by telephone in Australia and overseas;
- to send and receive written messages, data pictures and other visual matter by electrical means within Australia and to and from overseas;
- to relay on the telecommunications network, radio and television broadcasts emanating within Australia and those on relay to and from overseas.

Australian Postal Commission

The Australian Postal Commission was established under the *Postal Services Act* 1975. It commenced operations on 1 July 1975 and trades under the name Australia Post.

The establishment of the Australian Postal Commission was accompanied by a complete reorganisation of the management of postal services in Australia. The Commission was given a charter to improve postal services whilst avoiding the large financial losses of previous years. The Postal Services Act sets specific financial objectives for the Commission, which are designed to enable postal services to be operated on a business-oriented basis.

In accordance with the *Postal Services Act* 1975, the Australian Postal Commission is required to pursue, as far as practicable, a financial policy to secure revenue sufficient to meet all expenditure chargeable to revenue and provide at least half of its capital expenditure.

Since 1 July 1975, Australia Post has taken a number of initiatives to develop new services and maintain existing ones while at the same time maintaining competitive pricing. The initiatives include:

- the introduction on 1 July 1981 of Australia Post Express, a fast service for urgent postal articles;
- the introduction of reduced rate and discount mail services for bulk lodgment of mail;
- the introduction of a concessional rate for domestic greeting cards in November and December;
- the introduction of a new Postal Money Order Service;
- the revision of the Registered Publications Service;
- the introduction of an overnight parcel service between all capital cities;
- a new policy for rural and remote mail deliveries which provides for a minimum of twice-weekly delivery wherever practicable;
- the extension of the high-speed International Priority Paid service network;
- the extension of the Surface Air Lifted network; and
- the introduction of the Bulk Direct Mail Service for approved addressed advertising mail.

The Commission has undertaken a program to decentralise the mail network as a means of improving efficiency and, more particularly, the reliability of the mail service. Plans for decentralised mail networks have already been approved for New South Wales, Victoria and Queensland. These involve establishment of regional mail centres in metropolitan and country areas to replace the former highly centralised network which relied heavily on a single facility in the capital cities. The new arrangements are almost complete in New South Wales and Victoria and under way in Queensland. The following tables indicate Australia Post's financial results, services and operations for 1981-82. Selected tables also show figures for earlier periods.

AUSTRALIAN POSTAL COMMISSION: REVENUE AND EXPENDITURE, 1977 TO 1982
($'000)

Year ended 30 June—	*1977*	*1978*	*1979*	*1980*	*1981*	1982
Revenue—						
Mail services	435,790	456,739	528,978	582,200	668,676	767,843
Money order, postal order services	6,881	6,242	5,434	6,350	7,758	10,059
Commission on agency services	101,739	95,636	93,171	82,189	83,471	86,935
Other revenue	17,186	20,110	18,907	19,442	22,147	22,591
Total	**561,596**	**578,727**	**646,490**	**690,187**	**782,052**	**887,428**
Expenditure—						
Operating and general	395,675	426,100	476,915	530,875	625,005	696,026
Transportation	50,168	55,343	44,842	52,744	61,018	69,985
Depreciation, superannuation, long-service leave, interest	86,854	95,217	102,144	94,876	108,772	140,639
Total	**532,697**	**576,660**	**623,901**	**678,495**	**794,795**	*(a)906,650*

(a) Includes an abnormal adjustment to implement new depreciating accounting arrangements. See table below.

AUSTRALIAN POSTAL COMMISSION: STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 30 JUNE 1982

($'000)

Revenue—	
Mail services	767,843
Postal money order services	10,059
Commission on agency services	86,935
Other revenue	22,591
Total	*887,428*
Expenditure—	
Operating and general	696,026
Transportation	69,985
Depreciation	10,457
Superannuation	80,000
Long service leave	27,049
Interest	3,065
Total	*886,582*
Operating surplus (deficit) before abnormal item	846
Abnormal item—	
Adjustment to implement new depreciating accounting arrangements	(20,068)
Operating deficit after abnormal item	(19,222)
Appropriations—	
Unappropriated accumulated surplus/(deficit) brought forward	(12,743)
Deficit for the year	(19,222)
Accumulated deficit	(31,965)
Appropriation—	
For capital financing	(11,686)
Accumulated deficit carried forward	**(20,279)**

AUSTRALIAN POSTAL COMMISSION: SUMMARY OF TRANSACTIONS AFFECTING FIXED ASSETS, 1981–1982

($'000)

Class of assets	*Balance at 1 July 1981*	*Adjustments (a)*	*Additions in the year*	*Asset expenditure written out*	*Balance at 30 June 1982 (b)*
Land	35,984	(256)	2,913	59	38,582
Buildings	200,926	596	24,498	1,191	224,829
Motor vehicles	18,233	—	3,979	2,918	19,294
Plant and Equipment	57,870	(31,759)	7,798	422	33,487
Total of fixed assets	*313,013*	*(31,419)*	*39,188*	*4,590*	*316,192*
Less accumulated depreciation	66,887				63,234
Net book value of fixed assets	**246,126**				**252,958**

(*a*) Adjustments required to complete implementation of new depreciation accounting arrangements. (*b*) At cost.

AUSTRALIAN POSTAL COMMISSION: ANALYSIS OF TRANSACTIONS AFFECTING ACCUMULATED DEPRECIATION, 1981–82

($'000)

Class of asset	*Balance at 1 July 1981*	*Adjustments (a)*	*Depreciation provided for in 1981–82*	*Accumulated depreciation written out*	*Balance at 30 June 1982*
Buildings	38,577	153	4,555	734	42,551
Motor vehicles	6,140	—	3,715	1,806	8,049
Plant and Equipment	22,170	(11,506)	2,187	217	12,634
Accumulated depreciation	**66,887**	**(11,353)**	**10,457**	**2,757**	**63,234**

(*a*) Adjustments required to complete the depreciation accounting arrangements.

AUSTRALIAN POSTAL COMMISSION: PERSONS ENGAGED IN PROVIDING POSTAL SERVICES AT 30 JUNE 1981 AND 1982

	H.Q.	*N.S.W. (Incl. A.C.T.)*	*Vic.*	*Qld*	*S.A. (Incl. N.T.)*	*W.A.*	*Tas.*	*Aust. 1982*	*Aust. 1981*
Official staff (*a*)—									
Full-time Permanent	597	10,462	7,669	3,937	2,752	2,223	672	28,312	28,135
Full-time Temporary	10	2,520	1,061	258	64	183	51	4,147	4,611
Part-time	1	1,173	518	326	306	261	98	2,683	2,612
Other staff (*b*)	—	3,070	1,840	1,673	809	688	369	8,449	8,535
Total	**608**	**17,225**	**11,088**	**6,194**	**3,931**	**3,355**	**1,190**	**43,591**	**43,893**

(*a*) 'Official Staff' are those whose employment is governed by the *Postal Services Act* 1975. (*b*) Includes persons who are not employed under the Postal Services Act, but who are employed on the basis of business transacted. Also included are persons or organisations who hold road mail service contracts with the Australian Postal Commission.

AUSTRALIAN POSTAL COMMISSION: MAIL DELIVERY NETWORK AND POST OFFICES AT 30 JUNE 1981 AND 1982

	N.S.W	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust. 1982*	*Aust. 1981*
Contract road services	1,660	774	1,046	267	396	185	4,328	4,362
Households receiving mail	1,925,644	1,322,009	719,299	495,399	447,582	146,999	5,056,932	4,905,308
Businesses receiving mail	164,059	118,031	73,891	44,277	43,296	11,457	455,011	454,496
Post Offices—								
Official—								
At 1 July 1981	509	332	219	162	158	42	1,422	1,427
At 30 June 1982	507	332	217	157	158	41	1,412	1,422
Non-official—								
At 1 July 1981	1,149	916	562	483	329	196	3,635	3,742
At 30 June 1982	1,098	891	544	463	304	194	3,494	3,635
Total post offices	*1,605*	*1,223*	*761*	*620*	*462*	*235*	*4,906*	*5,057*

AUSTRALIAN POSTAL COMMISSION: TOTAL POSTAL ARTICLES HANDLED ('000)

Year ended 30 June	*Posted for delivery within Australia*	*Posted for places abroad*	*Received from abroad*	*Total postal articles handled*	*Mail carried on domestic air services (included in total handled)*	
					Articles	*Gross weight*
						kilograms
1977	1,975,417	82,158	140,802	2,198,377	496,470	6,448,310
1978	2,072,239	81,907	149,393	2,303,539	516,330	6,706,242
1979	(*a*)2,267,596	(*a*)87,757	149,278	(*a*)2,504,631	661,352	8,590,967
1980	2,379,953	94,826	156,573	2,631,352	769,391	9,994,392
1981	2,503,450	107,798	155,642	2,766,890	949,995	12,340,441
1982	2,606,124	105,154	165,276	2,876,554	1,083,876	14,079,557

(*a*) Estimating methods were refined in 1980 and volumes for 1979 have been reassessed on a comparable basis.

AUSTRALIAN POSTAL COMMISSION: ORDINARY POSTAL ARTICLES(a)
('000)

	Standard articles				Non-standard articles			
Year ended 30 June	*Posted for delivery within Australia*	*Posted for places abroad*	*Received from abroad*	*Total articles*	*Posted for delivery within Australia*	*Posted for places abroad*	*Received from abroad*	*Total articles*
1980	2,033,092	79,414	112,093	2,224,599	320,803	12,769	39,847	373,419
1981	2,124,622	90,569	110,463	2,325,654	349,352	14,440	40,897	404,689
1982	2,221,294	87,501	121,929	2,430,724	353,669	14,920	38,188	406,777
STATES—YEAR ENDED 30 JUNE 1982								
New South Wales	894,207	34,537	55,324	984,068	151,166	7,389	14,647	173,202
Victoria	589,329	27,422	42,766	659,517	110,524	4,171	15,515	130,210
Queensland	320,181	9,856	11,573	341,610	40,986	1,413	4,871	47,270
South Australia	191,183	6,796	4,679	202,658	23,354	723	1,141	25,218
Western Australia	175,265	8,516	7,587	191,368	21,902	1,188	2,014	25,104
Tasmania	51,129	374	..	51,503	5,737	36	..	5,773

(a) Includes Certified, Messenger Delivery and Priority Paid Mail.

AUSTRALIAN POSTAL COMMISSION: REGISTERED ARTICLES(a) AND PARCELS
('000)

	Registered articles				Parcels			
Year ended 30 June	*Posted for delivery in Australia*	*Posted for places abroad*	*Received from abroad*	*Total articles*	*Posted for delivery in Australia*	*Posted for places abroad*	*Received from abroad*	*Total articles*
1977	3,370	1,375	2,696	7,441	16,900	1,030	1,970	19,900
1978	3,122	1,422	2,794	7,338	18,234	1,068	1,998	21,300
1979	(b)3,092	1,371	2,790	(b)7,253	(b)19,838	1,088	2,018	(b)22,944
1980	3,107	1,451	2,758	7,316	22,951	1,192	1,875	26,018
1981	3,204	1,470	2,330	7,004	26,272	1,319	1,952	29,543
1982	2,938	1,458	2,854	7,250	28,223	1,275	2,305	31,803
STATES—YEAR ENDED 30 JUNE 1982								
New South Wales	988	752	1,846	3,586	11,065	534	1,228	12,827
Victoria	756	459	834	2,049	8,144	431	585	9,160
Queensland	510	88	46	644	4,327	109	205	4,641
South Australia	306	69	22	397	2,238	89	78	2,405
Western Australia	255	88	106	449	1,971	101	155	2,227
Tasmania	123	2	..	125	478	11	54	543

(a) Totals include Certified, Messenger Delivery and Priority Paid Mail. (b) Estimating methods were refined in 1980 and volumes for 1979 have been reassessed on a comparable basis.

AUSTRALIAN POSTAL COMMISSION: SPECIAL SERVICES: ARTICLES HANDLED
('000)

Year ended 30 June	*Certified mail*	*Messenger delivery*	*Priority paid mail*
1977	4,927	1,007	1,449
1978	5,473	1,013	1,783
1979	5,056	1,048	2,020
1980	5,780	1,169	2,350
1981	5,889	1,370	2,669
1982	5,897	1,434	2,793
STATES—YEAR ENDED 30 JUNE 1982			
New South Wales	1,818	1,022	1,403
Victoria	1,729	238	649
Queensland	939	56	297
South Australia	595	57	233
Western Australia	601	57	152
Tasmania	215	4	59

Telecommunications services within Australia

The Australian Telecommunications Commission commenced operations on 1 July 1975, taking over the telecommunications functions of the former Postmaster-General's Department.

The functions of the Commission as set out in the *Telecommunications Act* 1975 are:

- to plan, establish, maintain and operate telecommunications services within Australia;
- to operate such other services as the Commission is authorised by this Act to operate;
- to provide, at the request of the Australian Government, technical assistance outside Australia in relation to the planning, establishment, maintenance and operation of telecommunications services in countries outside Australia; and
- to do anything incidental or conducive to the performance of any of the preceding functions.

Financial results

The following tables show the earnings, expenses and funds situation for the latest available three years of the Commission's operations.

AUSTRALIAN TELECOMMUNICATIONS COMMISSION: REVENUE
($'000)

Year ended 30 June—	*1980*	*1981*	*1982*
Telephone rentals	602,655	674,102	833,201
Telephone calls	1,355,373	1,533,172	1,761,610
Telephone connections and rearrangements	102,091	119,556	142,727
Telegrams	32,497	33,005	30,165
Telex rentals	25,644	29,830	40,020
Telex calls	28,936	29,345	32,488
Other earnings(*a*)	133,613	190,430	244,166
Total	**2,280,810**	**2,609,440**	**3,084,377**

(*a*) Major items within this classification are: fees for advertisements in telephone directories, proceeds of sales of fixed assets, telephone service connection fees and telex call fees.

AUSTRALIAN TELECOMMUNICATIONS COMMISSION: EXPENDITURE
($'000)

Year ended 30 June—	*1980*	*1981*	*1982*
Maintenance of plant	576,760	644,515	790,826
Operating	399,873	482,387	556,407
General and administrative	178,739	191,762	238,097
Accommodation	99,382	116,484	128,527
Depreciation	447,383	533,680	577,216
Superannuation	—	—	—
Long service leave	—	—	—
Interest	367,127	408,125	518,187
Total	**2,069,264**	**2,376,953**	**2,809,260**

AUSTRALIAN TELECOMMUNICATIONS COMMISSION: FUNDS STATEMENT

($ million)

At 30 June—	*1980*	*1981*	*1982*
Source of funds—			
From the Commonwealth	—	—	—
From the public	268.6	204.4	341.8
From trading activities—			
Net trading result	211.5	232.5	275.1
Plus non-cash charges—			
Depreciation	454.5	542.0	586.7
Excess of liability over cash payment for—long service leave	16.4	19.4	22.2
superannuation	44.4	70.1	86.0
Total	*995.4*	*1,068.4*	*1,311.8*
Application of funds—			
Increase in fixed assets and stores holdings	998.3	1,199.7	1,340.7
Less non-cash charges capitalised—			
Depreciation	-13.6	-15.3	-16.9
Long service leave liability	-16.7	-17.0	-18.8
Superannuation	-55.3	-55.5	-59.0
Increase in current assets over current liabilities	76.9	-48.3	60.9
Plus transfers from long term liabilities	5.8	4.8	4.9
Total	*995.4*	*1,068.4*	*1,311.8*

A brief history of the development of telecommunications in Australia is shown in Year Book No. 59, pages 378-82. Common internal telecommunication operations comprise telephone, telegram, telex and data services. The following tables give details of these services.

TELEPHONE SERVICES IN OPERATION AT 30 JUNE 1982

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australia*
Ordinary exchange services—							
Automatic	1,771,362	1,368,315	674,360	443,210	398,946	126,266	4,782,459
Manual	18,380	3,433	12,797	4,683	797	—	40,090
Total	*1,789,742*	*1,371,748*	*687,157*	*447,893*	*399,743*	*126,266*	*4,822,549*
Party line services—							
Automatic	369	31	224	60	108	—	792
Manual	1,467	59	1,315	264	57	—	3,162
Total	*1,836*	*90*	*1,539*	*324*	*165*	—	*3,954*
Private branch exchange services—							
Automatic	219,859	106,121	56,101	55,689	49,158	11,070	497,998
Manual	456	56	895	263	43	—	1,713
Total	*220,315*	*106,177*	*56,996*	*55,952*	*49,201*	*11,070*	*499,711*
Public telephones—							
Automatic	11,025	6,461	4,931	2,966	2,907	1,126	29,416
Manual	426	21	294	99	102	—	942
Total	*11,451*	*6,482*	*5,225*	*3,065*	*3,009*	*1,126*	*30,358*
Total all services—							
Business automatic	516,390	400,505	208,812	126,809	130,514	36,787	1,419,817
Business manual	9,667	1,172	7,648	2,623	738	—	21,848
Non-business automatic	1,486,225	1,080,423	526,804	375,116	320,605	101,675	3,890,848
Non-business manual	11,062	2,397	7,653	2,686	261	—	24,059
Total Services	**2,023,344**	**1,484,497**	**750,917**	**507,234**	**452,118**	**138,462**	**5,356,572**

TELEPHONE INSTRUMENTS IN SERVICE

At 30 June—	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australia*
1980	2,885,117	2,053,799	861,909	621,592	566,831	173,742	7,152,990
1981	3,085,574	2,161,824	950,443	694,285	609,781	182,429	7,684,336
1982	3,232,912	2,200,273	1,047,193	730,349	652,825	191,531	8,055,083
Number per 100 population at 30 June	58.4	55.4	43.3	50.0	48.9	44.5	53.1

LOCAL AND TRUNK LINE TELEPHONE CALLS

Year ended 30 June—	*1980*	*1981*	*1982*
Effective paid local calls	4,786,559,000	5,300,578,000	5,451,452,000
Local calls per service	1,041	1,078	1,044
Trunk line calls	589,774,000	680,961,000	785,466,000
Trunk lines calls per service	129	139	150
Total calls	**5,376,333,000**	**5,981,539,000**	**6,236,918,000**

Subscriber Trunk Dialling (STD) facilities were introduced during the year 1961–62. For the year ended at 30 June 1982, 94.4 per cent of trunk calls were made by STD.

Telegrams

Telegrams can be lodged at any post office or telephone office or from any public telephone equipped for multi-coin operation. In addition, telegrams can be dispatched from any subscriber's telephone or telex service. The number of telegrams of various types transmitted within Australia is set out below.

TELEGRAM TRAFFIC

Year ended 30 June—	*1980*	*1981*	*1982*
Ordinary	4,631,985	4,320,353	3,808,525
Urgent	153,718	141,887	133,758
Meteorological	349,445	333,685	315,753
Service	295,747	265,086	200,580
Total telegrams	**5,430,895**	**5,061,011**	**4,458,616**

Telex

Particulars of the operations of the telex network, which are additional to the telegraph traffic shown above, are as follows.

TELEX NETWORK SERVICES AND INTERNAL CALLS

Year ended 30 June—	*Number of services*	*Internal calls during the year*
1980	29,731	37,415,000
1981	33,975	43,057,000
1982	37,802	44,209,000

Further detailed statistics are contained in the Commission's Annual Reports.

Overseas telecommunications services

The Overseas Telecommunications Commission (Australia) (OTC), established by the Overseas Telecommunications Act 1946, is a Commonwealth Statutory Authority responsible for the establishment, maintenance, operation and development of all public telecommunications services between Australia and other countries, between Australia and its external territories and with ships at sea. It has a specific responsibility under section 38A, to make its services available at the lowest possible rates of charges. OTC is responsible to the Commonwealth Parliament through the Minister for Communications.

Telephone, telex, public message telegram, phototelegram, switched data and leased circuit services are provided to most countries and places throughout the world by means of submarine cables, communications satellites and, in a decreasing number of cases, short wave radio. Television relay is provided to and from countries with access to satellite communications facilities. Recently introduced services include INTERPLEX (a large scale, common-use, leased-message switching system), MIDAS (a multimode international data acquisition service), OVERSEASFAX (an international facsimile service for document transfer) and INTERTEL (a comprehensive public message service for small businesses).

International consultation

OTC participates in the Commonwealth Telecommunications Organisation (CTO), the International Telecommunication Union (ITU) and the International Telecommunications Satellite Organisation (INTELSAT) which owns and operates the international telecommunications satellite system, and the International Maritime Satellite Organisation (INMARSAT), which operates an international satellite system for the provision of high-grade telecommunications, including distress and search and rescue communications, with ships at sea.

Establishments

The Commission's Head Office is in Sydney and it has offices in Melbourne and Brisbane. The Commission owns and operates International Gateway terminals at Paddington and Broadway in Sydney which interface with the national telecommunications network; cable stations at Cairns (Qld), Guam in the Mariana Islands and at Norfolk Island (at present under construction); satellite earth stations at Carnarvon (W.A.), Ceduna (S.A.) and Moree (N.S.W.); international radio stations at Doonside and Bringelly (N.S.W.) and at Gnangara (W.A.); and fourteen coast radio stations at points around the Australian coast and one at Norfolk Island for communicating with ships at sea.

Submarine cables

OTC is a part owner of the following submarine cables (the year in which they opened for service is in brackets): COMPAC, Sydney-Auckland-Suva-Hawaii-Vancouver (1963); SEACOM, Sydney-Madang-Guam-Hong Kong-Kota Kinabula (Malaysia)-Singapore (1967); TRANSPAC II, Hawaii-Guam-Okinawa (1975); HAW III, Hawaii-U.S. Mainland (1975); TASMAN, Sydney-Auckland (1976); A-PNG, Sydney-Port Moresby (1976); OLUHO, Okinawa (Japan)-Philippines-Hong Kong (1977); ASEAN P-S, Philippines-Singapore (1978); ASEAN I-S, Indonesian-Singapore (1980) and IOCOM, Penang-Madras (1981).

In November 1979 the Government gave approval for OTC to participate in a replacement Pacific cable system (ANZCAN) linking Australia and New Zealand with Fiji, Hawaii and North America, with onward connections to Britain and Europe. OTC's investment in the system, which is now under construction and will be entering into service in 1984, will be approximately $200 million.

Satellites

OTC is the fifth largest shareholder in INTELSAT which operates communication satellites over the Indian, Pacific and Atlantic Oceans, and a major shareholder in INMARSAT (see above). INTELSAT satellites now carry more than half of Australia's international telecommunications and, through OTC, provide capacity through which the remote area television service is provided by the ABC.

1981-82 Statistics

As at 31 March 1982, OTC staff totalled 2,616; revenue for the previous 12 months was $260 million and profit before tax was $47.7 million. Telephone service, which is available to 213 overseas destinations, provided about 68 per cent of revenue, telex about 17 per cent and telegraph about 4.1 per cent. International Subscriber Dialling (ISD), by which the customer can dial his or her own overseas telephone calls, is now available to more than 132 destinations. Over 99 per cent of international telex calls from Australia are now automatically subscriber connected.

More detailed statistics are contained in the OTC Annual Report.

Facilities to match growth

The high growth in demand for the Commission's services requires that the capacity of its major transmission and switching plant be at least doubled every three years. The OTC is applying computer techniques extensively in a number of its services, including telephone, telex, MIDAS (multimode international data acquisition service) and INTERPLEX (private message-switched networks).

Charges

Tariff reductions were introduced on selective routes in the high customer usage telephone and telex services. Some increases were necessary in telegram tariffs due to the high cost, labour intensive nature of the service.

Detailed information on OTC

The Commission reports on its operations to Parliament through its Minister about October each year. Traffic, financial and other information is contained in its Annual Report, copies of which are available on request to the OTC.

International telecommunication traffic

The following table shows particulars of overseas telecommunication traffic between Australia and overseas countries for the years ended 31 March 1981 and 1982.

INTERNATIONAL TELECOMMUNICATION SERVICES: YEARS ENDED 31 MARCH 1981 AND 1982

		Transmissions					
		From Australia		*To Australia*		*Total*	
Service		*1980–81*	*1981–82*	*1980–81*	*1981–82*	*1980–81*	*1981–82*
Telephone	'000 paid minutes	82,380	109,960	67,100	82,900	149,480	192,860
Telex	'000 paid minutes	20,024	22,648	20,425	23,450	40,449	46,098
Television programs . .	paid minutes	7,316	10,899	34,661	77,237	41,977	(*a*)97,051
Telegraph services . . .	'000 words	49,525	48,845	35,691	35,592	85,216	84,437

(*a*) Includes 8,915 paid minutes of television programs distributed within Australia by OTC.

Coastal stations

The Overseas Telecommunications Commission operates fourteen coastal radio stations at points around the Australian coast, and one at Norfolk Island. During the year ended 31 March 1982 the Coastal Radio Service handled 7,531,000 paid words to ships and 6,375,000 words from ships. Ship calls over the radiotelephone service extended over 536,000 paid minutes.

Radiocommunication stations authorised

At 30 June 1978 there were 460,171 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 6,316 were stations established at fixed locations, 24,000 were land stations which were established at fixed locations for communication with mobile stations, 13 were space and broadcasting stations, 420,442 were mobile stations and 9,400 were amateur stations. Particulars of broadcasting stations are shown on page 557.

BROADCASTING AND TELEVISION

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and, pursuant to the *Broadcasting and Television Act* 1942, is one of the responsibilities of the Minister for Communications. Federal bodies which are involved include the Australian Telecommunications Commission, the Australian Broadcasting Commission (ABC), the Special Broadcasting Service, the Australian Broadcasting Tribunal, the Department of Communications and the Overseas Telecommunications Commission.

Basically, the Australian broadcasting system is comprised of the following types of stations:

- national radio and television stations broadcasting programs produced by the Australian Broadcasting Commission;
- commercial radio and land television stations operated by companies under licence;
- public radio stations operated by corporations under licence on a non-profit basis; and
- stations operated under the aegis of the Special Broadcasting Service.

As from 1 January 1977, the Minister for Communications assumed the responsibility for broadcasting planning, including all matters relating to the technical operation of stations, and for the investigation of interference to the transmission and reception of programs.

The Commercial Radio and Television Service

Commercial radio and television stations are operated by companies under licences granted by the Australian Broadcasting Tribunal and with technical operating conditions determined by the Minister for Communications. The stations obtain income from the broadcasting of advertisements. At 30 June 1982 there were 135 commercial radio stations in operation in Australia. Call signs for radio stations are prefixed by numerals indicating each State of Australia. (2—New South Wales, 3—Victoria, 4—Queensland, 5—South Australia, 6—Western Australia, 7—Tasmania, 8—Northern Territory). In addition there were fifty commercial television stations and 110 commercial television translator stations in operation in Australia. A television translator station is a station of low power designed to receive the signals of another station and re-transmit them; it does not originate programs. There are nine limited coverage repeater stations in Australia operated by mining companies which transmit programs recorded on magnetic tape.

The Public Broadcasting Service

The Broadcasting and Television Act also makes provision for the grant of licences for the operation of public radio and television stations. At 30 June 1982, 30 public radio stations were broadcasting "special purpose" programs ranging from fine music to ethnic languages. A number of public radio stations are associated with tertiary educational institutions. There are no public television services in operation.

The Special Broadcasting Service

The Special Broadcasting Service (SBS) was established by the Commonwealth Government on 1 January 1978 to provide multilingual radio services and, if authorised by regulations, to provide multilingual television services. A regulation authorising the provision of mutilingual television services was gazetted in August 1978. The Service is also empowered by the *Broadcasting and Television Act* 1977 to provide broadcasting and television services for such special purposes as are prescribed by the Government.

In carrying out its functions the SBS provides:

- *multilingual broadcasting services to*:
  - the Melbourne metropolitan area and Geelong through radio station 3EA which broadcasts in 42 languages for 126 hours per week
  - the Sydney metropolitan area through radio station 2EA which broadcasts in 48 languages for 126 hours per week
  - the provincial centres of Newcastle and Wollongong in N.S.W. through 2EA translator stations.
- subsidies to public broadcasting stations in Adelaide, Brisbane, Canberra, Hobart, Perth, Albury, Armidale, Bathurst, Lismore and Newcastle for the production and presentation of ethnic radio programs.
- a subsidy to Whyalla Ethnic Broadcasters Inc. for the production of ethnic radio programs for presentation on commercial radio station 5AU Whyalla.
- *a multicultural television service* on VHF Channel 0 and UHF Channel 28 to the Sydney and Melbourne metropolitan areas and Geelong.

Broadcasting services

The Australian Broadcasting Tribunal

The Australian Broadcasting Tribunal came into being on 1 January 1977 and is responsible for certain of the functions previously performed by the Australian Broadcasting Control Board (abolished 31 December 1976), including the licensing and supervising of the operations (other than technical aspects) of all stations except national stations. The Tribunal is empowered to grant, renew, suspend or revoke licences, to determine program and advertising standards applicable to licensed stations, and to determine the hours of transmission of licensed stations. In particular, the Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister. The Tribunal may also conduct enquiries into the renewal of licences, the setting of standards of broadcasting practices, alleged breaches of licence conditions and such other matters as the Minister may direct.

The National Broadcasting Service

In sound broadcasting the programs of the National Broadcasting Service are provided by the Australian Broadcasting Commission through transmitters operated by the Australian Telecommunications Commission.

Technical facilities. At 30 June 1982 the National Broadcasting Service comprised 127 transmitting stations, of which ninety-four were medium frequency, sixteen frequency modulation and seventeen high frequency (six internal and eleven Radio Australia).

The medium-frequency transmitters operate in the broadcast band 526.5 to 1,606.5 kilohertz. The high-frequency stations, using frequencies within the band of three to thirty megahertz, provide services to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland.

Many of the programs provided by country stations are relayed from the capital cities using high-quality program transmission lines. A number of program channels are utilised to link national broadcasting stations in the capital cities of Australia. When necessary, this system is extended to connect both the national and commercial broadcasting stations.

At 30 June 1982 eighty of the Australian medium-frequency stations were situated outside the six State capital cities.

Program facilities. The programs of the Australian Broadcasting Commission cover a wide range of activities. The proportions of broadcasting time allocated on Radio 1 stations to the various types of program during 1981–82 were as follows: entertainment 58.1 per cent; news 8.3 per cent; sporting 13 per cent; spoken word 9.9 per cent; drama and features 0.2 per cent; parliament 7.6 per cent; religious 1.2 per cent; rural 0.8 per cent; and presentation 0.5 per cent. By contrast, the ABC's Radio 2 station's programming was: classical music 53.8 per cent; light music 0.4 per cent; entertainment 3.5 per cent; drama and features 5.1 per cent; young people's programs 0.2 per cent; education 5.9 per cent; spoken word 14.0 per cent; religious 3.7 per cent; news 8.3 per cent; rural 3.2 per cent; and presentation 1.4 per cent. Radio 3 (regional) stations feature a higher proportion of news and rural programs. Further particulars of the operations of the Australian Broadcasting Commission in respect of music, drama and features, youth education, talks, rural broadcasts, news, and other activities are shown in the Forty-ninth Annual Report of the Australian Broadcasting Commission.

Overseas Broadcasting Service

There are seven high-frequency stations at Shepparton, two at Lyndhurst, Victoria and two at Carnarvon, Western Australia which provide the overseas service known as Radio Australia. As in the case of the National Broadcasting Service, these stations are maintained and operated by the Australian Telecommunications Commission, and their programs are arranged by the ABC. The programs, which, as well as entertainment, give news and information about Australia presented objectively, are directed to most parts of the world but with special emphasis on Asia and the Pacific. They include 67 news bulletins a day. The overseas audience has been quite substantial in recent years, as evidenced by a large number of letters from listeners abroad (233,687 in 1981–82, and 377,697 in 1980–81), Radio Australia broadcasts in nine languages—English, Indonesian, Japanese, Neo-Melanesian, Thai, French, Standard Chinese, Cantonese and Vietnamese.

BROADCASTING STATIONS: 30 JUNE 1982

Type of station	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
National—									
Medium frequency	21	6	21	10	22	6	6	2	94
High frequency	1	2	2	–	1	–	–	–	6
Frequency modulation	3	2	3	3	2	2	–	1	16
Overseas—									
Short wave (Radio Australia)	–	9	–	–	2	–	–	–	11
Commercial—									
Medium frequency	43	24	29	10	17	8	2	2	135
Frequency modulation	2	2	1	1	1	–	–	–	7
Public broadcasting—									
Medium frequency	2	2	1	1	1	–	–	1	(*a*)8
Frequency modulation	8	4	3	2	2	2	2	–	23

(*a*) Includes broadcasting stations 2EA and 3EA operated by the Special Broadcasting Service.

Television services

The National Television Service

The National Television Service is provided by the Australian Broadcasting Commission through transmitters operated by the Australian Telecommunications Commission. The first national station (ABN Sydney) commenced regular transmission on 5 November 1956. At 30 June 1982, 251 stations were operating—86 transmitters and 165 translator stations.

The television programs provided by the Australian Broadcasting Commission cover a wide range of activities. The proportions of television time allocated among the ABC's various departments at 30 June 1982 were as follows: drama 18.83 per cent; public interest 11.55 per cent; sporting 16.96 per cent; news 6.72 per cent; variety and acts 5.16 per cent; education 26.8 per cent; musical performance 1.72 per cent; religious 1.08 per cent; special arts and aesthetics 1.52 per cent; cartoons 2.43 per cent; panel and quiz games 0.24 per cent; and presentation 6.81 per cent. The average weekly transmission time for the 251 national television transmitters was ninety-eight hours during the year ended 30 June 1982.

During the year ended 30 June 1982, thirty three new national translator channels went into operation in New South Wales, Victoria, Queensland, Western Australia and the Northern Territory.

Colour television

Colour television (PAL) was introduced in Australia late in 1974 and services became fully effective in March 1975.

TELEVISION AND TRANSLATOR STATIONS: 30 JUNE 1982

Type of station and location	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Total*
National—									
Metropolitan television	1	1	1	1	1	1	1	1	8
Country television	13	8	31	6	15	2	3	–	78
Translator	37	12	45	10	34	14	12	1	165
Total, National	*51*	*21*	*77*	*17*	*50*	*17*	*16*	*2*	*251*
Commercial—									
Metropolitan television	3	3	3	3	2	1	1	1	17
Country television	11	6	8	3	4	1	–	–	33
Translator	36	12	24	5	7	17	–	1	102
Total, Commercial	*50*	*21*	*35*	*11*	*13*	*19*	*1*	*2*	*152*

Related publications

More detailed figures and particulars for earlier years are included in the annual publications, *Rail Transport, Australia* (9213.0), *Commonwealth Government Finance* (5502.0), and *Motor Vehicle Registrations, Australia* (9304.0). Current information on subjects dealt with in this chapter appears in the *Monthly Summary of Statistics, Australia* (1304.0), the *Digest of Current Economic Statistics, Australia* (1305.0), *Overseas and Coastal Shipping, Australia* (annual) (9207.0), two monthly publications, *Registration of New Motor Vehicles, Australia* (9301.0) and *Motor Vehicle Registrations, Australia* (9303.0), one monthly publication, *Road Traffic Accidents Involving Fatalities, Australia* (9401.0), and the quarterly publication *Road Traffic Accidents Involving Casualties (Admissions to Hospitals), Australia* (9405.0).

Information additional to that contained in ABS publications is available in the annual reports and other statements of the Department of Transport and Construction, the Department of Aviation, the various harbour boards and trusts, the several Government railway authorities, the Australian Postal Commission, the Australian Telecommunications Commission, and the Australian Broadcasting Commission.

CHAPTER 21

PRIVATE FINANCE

This chapter contains statistics on the activities and structure of financial institutions including banks, building societies, insurance companies, finance companies, credit unions and co-operative societies together with descriptions of their operations and relevant controlling legislation.

MONEY

Currency

Australia has a decimal system of currency, the unit being the dollar which is divided into 100 cents. Australian notes are issued in the denominations of $1, $2, $5, $10, $20 and $50 and coins in the denominations of 1c, 2c, 5c, 10c, 20c and 50c.

For additional information on note issues and coinage, refer to the List of Special Articles, etc. towards the back of this Year Book.

AUSTRALIAN NOTES ON ISSUE

($ million)

	Last Wednesday in June					
	1977	*1978*	*1979*	*1980*	*1981*	*1982*
$1	57.4	60.8	64.7	68.6	74.1	78.8
$2	133.0	136.0	140.6	145.1	152.7	158.4
$5	121.8	126.7	135.5	143.2	153.9	165.6
$10	628.8	604.5	582.4	567.6	555.9	546.7
$20	1,489.0	1,620.5	1,756.4	1,903.9	2,060.0	2,169.8
$50	860.8	1,121.7	1,427.7	1,757.8	2,190.7	2,718.2
Total	**3,290.8**	**3,670.2**	**4,107.4**	**4,586.1**	**5,187.3**	**5,837.5**
Held by banks	*378.1*	*413.1*	*451.1*	*500.9*	*578.1*	*677.4*
Held by public	*2,912.8*	*3,257.1*	*3,656.3*	*4,085.2*	*4,609.2*	*5,160.1*

AUSTRALIAN DECIMAL COIN: NET ISSUES BY RESERVE BANK

($ million)

	Last Wednesday in June					
	1977	*1978*	*1979*	*1980*	*1981*	*1982*
1c	1.3	1.3	1.2	1.3	1.5	1.1
2c	2.1	2.4	1.9	2.4	2.9	2.0
5c	2.8	2.9	3.4	4.4	5.1	4.3
10c	3.2	3.5	3.7	4.9	5.8	5.5
20c	6.8	7.4	8.2	11.8	14.8	14.8
50c	11.0	15.4	10.0	12.3	12.1	18.4
Total	**27.2**	**32.9**	**28.4**	**37.0**	**42.1**	**46.2**

Volume of money

Statistics of the volume of money in the following table include notes and coins in the hands of the public, deposits of the public with trading banks (including the Reserve Bank) and deposits with all savings banks.

The volume of money is a measure of specified financial assets held by the non-bank public.

The financial assets included in the volume of money in the following table represent only part (albeit a major part) of the public's total holdings of liquid financial assets. An expanded view of the volume of money would include the public's holdings of such other claims as finance company debentures, deposits and shares of building societies, loans to authorised dealers in the short-term money market, government securities, etc.

VOLUME OF MONEY

(*Source:* Reserve Bank of Australia)

($ million)

Average of weekly figures for June	*Notes and coins in the hands of public*	*Deposits of public with all trading banks*			*Deposits with all savings banks(c)*	*Total volume of money*
		Current(a)	*Fixed(a)*	*Certificates of deposit(b)*		
1977	3,157	7,220	8,778	912	16,197	36,264
1978	3,542	7,724	9,314	718	17,854	39,151
1979	3,963	9,183	10,449	529	19,654	43,777
1980	4,420	10,423	10,243	3,012	21,061	49,159
1981	4,977	11,650	13,767	1,966	23,028	55,387
1982	5,570	11,330	16,948	3,024	24,800	61,671

(*a*) Excludes deposits of the Commonwealth and State Governments and inter-bank deposits. (*b*) Excludes holdings of the Commonwealth and State Governments and banks. (*c*) Interpolated 'weekly average' based on end-of-month figures.

FINANCIAL REGULATION

Commonwealth legislation for economic management

With Federation in 1901 the new Commonwealth Parliament was given power under Section 51 of the Commonwealth Constitution 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'. In 1911 the Commonwealth entered the field of banking with the establishment of the Commonwealth Bank of Australia, which conducted both trading bank and savings bank operations.

From 1911 to 1945 the functions of central banking became more and more the responsibility of the Commonwealth Bank and in 1945 the Commonwealth Parliament directed it to act as a central bank. In the ensuing period of economic growth and financial development, the need for effective regulatory control of finance through banks became increasingly recognised. During 1959 the Commonwealth Parliament enacted the following legislation:

(*a*) The *Banking Act* 1959 which applies to all banks operating in Australia, including the external territories of the Commonwealth, except State banks trading in their own State. The objects of the Act are:
- (i) to provide a legal framework uniform throughout Australia for regulating the banking system;
- (ii) to safeguard depositors of the banks from loss;
- (iii) to provide for the co-ordination of banking policy under the direction of the Reserve Bank;
- (iv) to control the volume of credit in circulation and bank interest rates; and
- (v) to provide machinery for the control of foreign exchange.

(*b*) The *Reserve Bank Act* 1959 which provides for the constitution and management of the Reserve Bank of Australia, the administration of the *Banking Act* 1959 and the management of the Australian note issue.

(*c*) The *Commonwealth Banks Act* 1959 which provides for the constitution and management of the Commonwealth Banking Corporation, Commonwealth Trading Bank of Australia, Commonwealth Savings Bank of Australia, and the Commonwealth Development Bank of Australia.

Information on more specific aspects of the growth and control of the banking industry is contained in earlier issues of the Year Book (Nos. 31, 37, 45, 46 and 61).

More recently, as a result of the further development of the financial market and the increasing significance in the market of the non-bank financial institutions such as finance companies, building societies and money market dealers, the *Financial Corporations Act* 1974 was introduced. The object of this Act is to assist the Government to achieve effective management of the Australian economy by providing a means for the examination and regulation of the activities of non-bank financial institutions having regard to economic stability, the maintenance of full employment, the efficient allocation of productive resources, the ensuring of adequate levels of finance for housing and the economic prosperity and welfare of the people of Australia. Details of the operation and application of the Act are given in Year Book No. 62, page 541.

Other Commonwealth legislation directly affecting financial institutions

Insurance. 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 *Life Insurance Act* 1945 generally regulating life insurance business in Australia; and the *Insurance Act* 1973 generally regulating general (non-life) insurance business in Australia. The *Marine Insurance Act* 1909 has limited application.

Life Insurance Act 1945. The objects of this Act are:

(*a*) to replace all State legislation on the subject of life insurance except that relating to the life insurance operations of State government insurance offices within the State concerned, and to provide uniform legislation for the whole of Australia;

(*b*) to appoint a Life 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; and

(*c*) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

The Act came into operation on 20 June 1946. The Life Insurance Commissioner issues an annual report which contains detailed information on the operations of life insurance companies.

Insurance Act 1973. The objects of this Act are:

(*a*) to appoint an Insurance Commissioner to exercise active supervision of the activities of companies conducting general (non-life) insurance business, apart from State government insurance whether or not extending beyond the limits of the State concerned and other organisations specified in the Act, with a view to securing the greatest possible protection for policy holders; and

(*b*) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

The Act came into operation on 19 June 1973. The Insurance Commissioner issues an annual report which contains detailed information on the operations of insurance companies.

State legislation

In each State there exists legislation designed to regulate the activities and monitor the solvency position of particular types of financial institutions which operate on a co-operative basis and lend predominantly to members or consumers. In general, they form the groups covered later in this chapter under the headings of Permanent Building Societies, Terminating Building Societies and Credit Unions.

In some States there is also legislation for the incorporation of State government bodies which operate as banks or insurance offices. Though the regulations in Commonwealth legislation do not directly apply to these bodies, details of their operations have been included in the relevant parts of this chapter because they have agreed to supply information consistent with regulatory reports on a voluntary basis.

BANKS

Reserve Bank of Australia

The Reserve Bank of Australia preserved and continued in existence the original corporate body known as the Commonwealth Bank of Australia under the new name Reserve Bank of Australia.

The general functions of the Reserve Bank are set out in Section 10 of the *Reserve Bank Act* 1959, which states:

'It is the duty of the Board, within the limits of its powers, to ensure that the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia and that the powers of the Bank under this Act, the *Banking Act* 1959, and regulations under that Act are exercised in such a manner as, in the opinion of the Board, will best contribute to:

(*a*) the stability of the currency of Australia;

(*b*) the maintenance of full employment in Australia; and

(*c*) the economic prosperity and welfare of the people of Australia'.

Management

The policy of the Reserve Bank is determined by a Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the

Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

Central Banking Business

Under the *Commonwealth Bank Act* 1911 and the war-time powers conferred by the National Security Regulations, the Commonwealth Bank gradually assumed the functions of a Central Bank. Part III of the *Commonwealth Bank Act* 1945 formally constituted the Bank as a Central Bank and granted the necessary powers to carry on the business of a Central Bank, these powers being carried through into the present Act constituting the Reserve Bank.

Note Issue Department

The Note Issue Department, established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank, was maintained in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, issue, re-issue and cancel Australian notes.

Rural Credits Department

The Rural Credits Department, established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce, was continued in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, make advances upon the security of primary produce placed under the legal control of the Bank, or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance is not to exceed one year.

RESERVE BANK OF AUSTRALIA: LIABILITIES AND ASSETS
($ million)

LIABILITIES

				Deposits of trading banks				
30 June—	*Capital and reserve funds*	*Special reserve—IMF special drawing rights*	*Australian notes on issue*	*Statutory reserve deposit accounts*	*Other*	*Deposits of savings banks*	*All other liabilities*	*Total*
1977	137.3	218.2	3,319.3	1,584.4	29.5	1,055.7	1,765.4	8,109.9
1978	1,189.3	218.3	3,688.1	726.7	10.7	1,122.6	1,723.0	8,678.8
1979	1,953.5	321.3	4,113.3	1,115.5	21.0	815.7	1,906.2	10,246.5
1980	4,061.8	389.6	4,549.3	1,376.1	9.6	553.3	1,067.5	12,007.1
1981	3,160.8	388.1	5 094.1	1,846.1	9.0	128.8	1,252.9	11,879.8
1982	2,556.9	352.3	5,837.5	2,118.4	23.0	195.3	1,663.6	12,746.9

ASSETS

30 June—	*Gold and foreign exchange (a)*	*Australian Government securities (b)*	*Loans, advances, bills discounted*	*Bank premises (c)*	*All other assets*	*Total*
1977	2,466.6	4,205.2	975.0	65.6	397.5	8,109.9
1978	3,047.6	4,365.8	707.0	72.5	485.8	8,678.8
1979	3,706.8	5,173.2	613.6	89.9	663.0	10,246.5
1980	5,504.3	5,197.6	608.3	112.1	584.8	12,007.1
1981	5,454.4	4,728.1	837.3	149.2	710.8	11,879.8
1982	6,518.5	4,771.2	573.0	160.3	723.9	12,746.9

(*a*) Includes currency at short call and International Monetary Fund drawing rights. (*b*) Includes Treasury bills and Treasury notes. (*c*) At cost, less amounts written off.

Trading banks

Commercial banking in Australia is conducted by thirteen trading banks. Five large private trading banks, together with the Commonwealth Trading Bank, are generally referred to as the major trading banks. These banks provide widespread banking facilities throughout Australia. The remaining seven banks comprise one small local bank, two overseas banks which have been represented in Australia for many years, three State-owned banks operating only within their respective States and one private bank.

The major trading banks are as follows: Commonwealth Trading Bank of Australia; Australia and New Zealand Banking Group; Bank of New South Wales; The Commercial Bank of Australia Ltd; The Commercial Banking Company of Sydney Ltd; and The National Bank of Australasia Ltd.

The other trading banks are: Bank of Queensland Ltd; Bank of New Zealand; Banque Nationale de Paris; The State Bank of New South Wales (previously The Rural Bank of New South Wales); State Bank of South Australia; The Rural and Industries Bank of Western Australia (Rural Department), and the Australian Bank Ltd.

Liabilities and assets

Balance sheet information contained in the following table does not relate to uniform accounting periods but rather to the balance dates of banks within the years shown.

AUSTRALIAN TRADING BANKS(*a*): LIABILITIES AND ASSETS(*b*)

($ million)

LIABILITIES

	Paid-up capital	*Reserve funds (used in business of banks)(c)*	*Final dividend proposed*	*Balance of profit and loss account*	*Total share-holders' funds(c)*	*Balances due to other* banks	*Deposits, bills payable and other* liabilities(*d*)	*Total*
1976	450.4	539.0	30.8	58.1	1,078.3	1,220.3	24,077.0	26,375.6
1977	529.7	663.3	37.1	72.9	1,303.0	1,741.9	26,286.1	29,331.1
1978	594.6	796.7	42.7	104.1	1,538.0	2,356.2	28,697.7	32,591.9
1979	692.9	1,203.5	55.6	145.6	2,097.6	2,914.0	33,511.1	38,522.7
1980	769.6	1,450.3	69.8	201.5	2,491.2	3,488.6	38,593.4	44,573.2
1981	859.3	1,719.1	89.6	304.3	2,972.4	4,217.6	45,661.5	52,851.5

ASSETS

			Australian public securities					
			Australian Government					
	Coin, bullion, notes and cash at Reserve Bank	*Money at short call overseas*	*Treasury bills and notes*	*Other securities*	*Local and semi-government securities*	*Other public securities*	*Other securities*	*Loans to authorised dealers in short-term money market*
1976	345.8	58.4	313.5	3,737.4	90.0	220.6	509.1	543.8
1977	338.2	82.4	93.3	3,531.5	117.3	197.1	630.8	368.5
1978	357.6	144.3	192.3	3,874.5	143.6	440.9	698.5	693.2
1979	368.7	162.6	154.5	4,156.5	183.9	419.5	892.8	580.0
1980	523.9	270.0	284.3	4,270.6	315.3	277.1	1,227.6	624.0
1981	576.9	169.8	693.2	4,597.6	329.4	222.5	1,565.7	454.6

	Statutory reserve deposit account with Reserve Bank	*Cheques and bills of, and balances with and due from other banks*	*Loans, advances and bills discounted*	*Bank premises, furniture and sites*	*Bills receivable and remittances in transit*	*All other assets*	*Total*
1976	791.3	982.1	14,817.6	369.7	2,147.0	1,449.1	26,375.6
1977	1,293.2	1,444.9	17,182.8	445.2	1,896.7	1,709.0	29,331.1
1978	666.6	1,534.9	18,768.2	504.2	2,173.7	2,399.3	32,591.9
1979	1102.5	2,424.2	21,509.3	554.3	2,414.0	3,599.8	38,522.7
1980	1,373.6	2,771.9	24,705.7	595.8	1,841.2	5,492.2	44,573.2
1981	1,826.0	3,190.4	29,376.9	700.2	2,077.8	7,070.6	52,851.5

(*a*) Excludes the overseas banks but includes the deposits and assets held against the deposits of the Savings Bank Division of the Rural and Industries Bank of Western Australia. (*b*) Relates to liabilities and assets both inside and outside Australia. (*c*) Includes inner reserves from 1979. (*d*) Includes inner reserves to 1978.

Figures shown in the table below are the average of liabilities and assets within Australia (including external territories) of the banks on the weekly balance days (Wednesdays) during the period concerned.

ALL TRADING BANKS: AVERAGE LIABILITIES AND ASSETS WITHIN AUSTRALIA

($ million)

LIABILITIES(*a*)(*b*)

	Deposits repayable in Australia						
		Current					
June	*Fixed*	*Bearing interest*	*Not bearing interest*	*Total*	*Balances due to other banks*	*Bills payable and all other liabilities to the public*	*Total*
1977	11,464.7	990.2	6,634.2	19,089.1	607.9	2,358.0	22,055.0
1978	11,596.0	1,045.0	7,105.3	19,746.2	682.8	2,907.5	23,336.6
1979	12,577.3	1,159.8	8,441.8	22,178.9	900.4	4,347.9	27,427.1
1980	14,755.5	1,247.7	9,639.9	25,643.2	790.0	5,555.3	31,988.5
1981	17,187.8	1,218.4	10,899.7	29,305.9	827.2	7,302.9	37,436.0
1982	21,613.8	1,243.4	10,633.4	33,490.7	1,173.8	11,243.9	45,908.4

ASSETS(*b*)

		Australian Government securities							
June	*Coin, bullion, notes and cash at Reserve Bank*	*Treasury bills and notes*	*Other securities*	*Local and semi-government securities*	*Loans to authorised dealers in short-term money market*	*Statutory reserve deposit account with Reserve Bank*	*Loans, advances and bills discounted*	*All other assets*	*Total*
1977	380.0	78.8	3,567.9	46.1	144.4	1,704.2	14,006.0	3,203.4	23,130.7
1978	409.4	97.9	3,609.1	45.1	190.9	734.0	15,683.1	3,920.2	24,689.7
1979	435.3	204.4	3,951.2	71.8	265.3	1,125.5	17,653.3	5,443.4	29,150.2
1980	485.6	182.8	4,118.1	205.1	384.3	1,385.6	20,385.7	6,928.5	34,075.7
1981	550.4	840.0	4,416.8	219.8	264.7	1,852.6	22,998.4	8,708.4	39,851.1
1982	641.9	502.1	4,984.5	239.8	336.3	2,113.1	26,214.3	13,123.4	48,155.6

(*a*) Excludes shareholders' funds. (*b*) Excludes inter-branch accounts and contingencies.

Major trading banks: classification of advances and deposits

In the classification of advances and deposits, borrowers and lenders are classified into two main groups:

Residents—comprising all institutions (including branches of overseas institutions) engaged in business in Australia and individuals permanently residing in Australia; and

Non-residents—comprising all other persons and institutions, including companies incorporated abroad, which, although represented, do not carry on business in Australia.

Residents are further classified into:

Businesses—partnerships, companies and other institutions engaged in business in Australia; individuals actively engaged in business or a profession on their own behalf; and mutual, co-operative and benefit societies which distribute their profits to members by way of dividends, rebates of charges for goods and services, or increased benefits.

Public authorities—local and semi-government authorities including separately constituted government business undertakings, but not the Commonwealth and State Governments.

Persons—individuals other than those carrying on a business or profession.

Non-profit organisations—organisations which are not operated for the purpose of making a profit or gain to individual members, but for the purposes of the organisations or for the benefit of the community in general.

MAJOR TRADING BANKS: CLASSIFICATION OF ADVANCES AND DEPOSITS WITHIN AUSTRALIA

($ million)

	Advances				*Deposits*			
	At second Wednesday of:				*At second Wednesday of:*			
	July 1980	*January 1981*	*July 1981*	*January 1982*	*July 1980*	*January 1981*	*July 1981*	*January 1982*
Residents—								
Businesses								
Agriculture, grazing and dairying	2,102.5	2,167.9	2,528.5	2,513.1	1,448.1	2,123.1	1,481.4	2,112.3
Manufacturing	2,282.6	2.097.6	2,196.3	2,313.2	558.5	640.3	665.7	715.4
Transport, storage and communication	312.7	317.3	377.4	399.4	190.7	214.1	222.7	247.0
Finance	960.1	908.4	907.8	986.4	1,073.7	1,030.7	1,219.6	1,496.7
Commerce	2,010.1	2,009.3	2,142.3	2,184.5	877.0	1,088.2	1,038.0	1,210.4
Building and construction	514.3	526.0	558.9	524.0	405.7	487.8	505.4	544.8
Other businesses	2,470.1	2,701.2	2,669.1	2,861.9	2,239.3	2,474.9	2,919.3	2,893.8
Unclassified	326.7	343.9	377.7	469.5	478.6	456.9	527.0	736.3
Total business	*10,979.1*	*11,071.7*	*11,758.0*	*12,252.0*	*7,271.5*	*8,516.1*	*8,579.2*	*9,956.5*
of which—								
Companies	6,362.1	6,335.6	6,680.9	7,146.2	3,145.1	3,592.2	4,065.0	4,382.5
Other	4,617.1	4,736.1	5,077.1	5,105.8	4,126.4	4,923.8	4,514.1	5,574.0
Public authorities	127.2	165.3	164.2	237.7	1,094.6	1,092.2	1,664.8	1,719.2
Persons	6,612.1	7,112.9	7,931.0	8,553.8	9,382.4	11,002.4	12,217.6	13,165.8
Non-profit organisations	156.8	169.3	164.2	186.6	855.4	808.6	988.6	977.8
Total residents	*17,875.3*	*18,519.3*	*20,017.5*	*21,230.1*	*18,603.9*	*21,419.3*	*23,450.2*	*25,819.3*
Total non-residents	*31.1*	*34.4*	*37.2*	*32.2*	*396.8*	*407.7*	*446.0*	*460.6*
Total	**17,906.4**	**18,553.7**	**20,054.7**	**21,262.3**	**19,000.8**	**21,827.0**	**23,896.1**	**26,279.9**

Interest rates

At 30 June 1982, the maximum rates of interest were: (i) on fixed deposits of less than $50,000, for periods of 3 months and less than 6 months—13.00 per cent to 15.25 per cent, 6 months and less than 2 years—13.00 per cent to 15.00 per cent, 2 years and less than 4 years—13.00 per cent to 14.50 per cent; (ii) on fixed deposits of $50,000 and over, 30 days to 4 years—not subject to maximum rate; (iii) on certificates of deposit of $50,000 and over, 3 months to 4 years—not subject to maximum rate; (iv) on overdrafts under $100,000—14.50 per cent; (v) on overdrafts over $100,000—not subject to maximum rate; (vi) on personal loans—9.25 per cent to 9.75 per cent.

Branches and agencies

At 30 June 1982 the major trading banks operated 4,780 branches, and the other trading banks 384 branches. Of the total 5,164 branches, 2,808 were located in metropolitan areas. Trading bank facilities were also available at 1,051 agencies throughout Australia.

Debits to customers' accounts

TRADING BANKS: AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS(*a*)

($ million)

June	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1977	5,443.8	5,209.3	1,421.8	789.7	875.5	184.0	36.3	150.7	14,111.2
1978	7,316.5	5,552.6	1,528.1	846.8	1,079.7	190.9	35.7	246.0	16,796.3
1979	8,147.8	7,050.1	1,712.4	924.5	1,370.3	243.8	43.1	186.9	19,678.9
1980	10,516.4	7,854.9	2,108.4	1,021.0	1,498.7	268.0	76.1	240.0	23,583.6
1981	12,319.1	8,871.0	2,522.5	1,169.6	1,821.4	280.6	78.4	346.8	27,409.3
1982	17,918.1	13,027.4	3,448.5	1,700.0	2,501.2	334.4	96.2	567.7	39,593.4

(*a*) Covers all trading banks and in addition the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank. Excludes debits to the Commonwealth and State Government accounts in capital cities

Savings banks

Prior to 1956 savings bank operations were conducted by the Commonwealth Savings Bank, two trustee savings banks in Tasmania, and State-owned banks in Victoria, South Australia and Western Australia. In January 1956 private savings banks were established as subsidiary companies by two of the private trading banks. By mid-1962 all the major private trading banks had established savings bank subsidiary companies. In May 1972 the Bank of New Zealand Savings Bank Limited was granted an authority to carry on savings bank business in Australia.

All savings banks, including trustee savings banks but not State savings banks, are subject to the *Banking Act* 1959.

Liabilities and assets

Balance sheet information contained in the following table does not relate to uniform accounting periods but rather to the balance dates of banks falling within the years shown.

SAVINGS BANKS (*a*): LIABILITIES AND ASSETS (*b*)

($ million)

LIABILITIES

	Paid-up capital	*Reserve funds (used in the business of the bank)(c)*	*Balance of profit and loss account*	*Total share-holders' funds (c)*	*Deposi-tors' balances*	*Balances due to other banks*	*Bills payable and all other liabilities (d)*	*Total*
1976 . . .	49.0	262.0	14.1	325.1	14,956.3	65.2	633.5	15,980.1
1977 . . .	60.0	302.9	19.1	381.9	16,432.0	133.7	682.5	17,630.0
1978 . . .	60.0	370.8	22.6	453.4	18,078.7	86.1	751.4	19,369.6
1979 . . .	85.0	639.2	32.9	757.1	19,811.6	105.1	622.9	21,296.7
1980 . . .	92.0	737.2	41.8	871.1	21,276.8	110.4	732.4	22,990.7
1981 . . .	92.0	858.2	51.1	1,001.4	23,070.2	139.7	876.3	25,087.5

ASSETS

			Australian public securities			
			Commonwealth and State Governments			
	Coin, bullion, notes and deposits with Reserve Bank	*Deposits in Australia with trading banks*	*Treasury bills and notes*	*Other securities*	*Local and semi-government securities*	*Other securities*
1976	1,099.3	314.4	48.6	2,896.5	3,898.6	55.8
1977	1,136.2	283.4	53.9	2,643.7	4,472.2	48.6
1978	1,146.9	218.4	97.1	2,514.5	4,899.8	54.5
1979	850.5	258.7	594.6	2,469.0	5,303.6	53.4
1980	616.6	252.2	1,070.6	2,112.9	5,662.8	56.8
1981	267.5	304.2	1,553.1	2,170.1	6,028.5	65.9

	Loans to authorised dealers in short-term money market	*Cheques and bills of, and balances with and due from other banks (e)*	*Loans advances and bills discounted*	*Bank premises, furniture and sites*	*Bills receivable and re-mittances in transit*	*All other assets*	*Total*
1976	68.2	322.9	6,805.1	204.9	55.8	210.1	15,980.1
1977	67.9	300.1	8,056.5	240.6	81.3	245.6	17,630.0
1978	118.0	351.4	9,371.4	276.6	71.2	249.6	19,369.6
1979	137.5	372.8	10,614.1	317.8	47.5	277.4	21,296.7
1980	178.9	406.8	11,930.8	365.9	70.4	265.9	22,990.7
1981	133.4	381.1	13,384.7	409.8	62.5	326.7	25,087.5

(*a*) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (*b*) This table relates to liabilities and assets both inside and outside Australia. (*c*) Includes inner reserves from 1979. (*d*) Includes inner reserves to 1978. (*e*) Includes deposits with and loans to specified lenders other than trading banks.

Branches and agencies

At 30 June 1982 the savings banks operated 5,703 branches and 12,011 agencies, of which 3,194 branches and 5,697 agencies were in metropolitan areas.

Development banks

Commonwealth Development Bank of Australia

The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act* 1959 and commenced operations on 14 January 1960. It was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the former Commonwealth Bank of Australia. The functions of the Development Bank are to provide finance for the purpose of primary production (which includes fishing, forestry and all forms of rural activity) and for the establishment or development of small business undertakings (i.e. with shareholders'/proprietors' funds not exceeding $3 million) in cases where such finance is not otherwise available on reasonable and suitable terms and conditions.

Two types of facility are provided—loans over medium to long terms and equipment finance over short terms. Loans to primary industry may be for all types of farm development, property purchase and restructuring of private mortgage debt. Loans to small businesses may be for establishment of new enterprises or for development of existing businesses in all sectors including manufacturing, retail and wholesale trade, transport, tourism, professions, entertainment and service industries. Equipment finance is provided for the acquisition of plant and vehicles for both primary industry and business undertakings.

The Commonwealth Development Bank is managed by a General Manager under the Managing Director of the Commonwealth Banking Corporation and its policy is determined by the Board of that Corporation.

Australian Resources Development Bank Limited

The Australian Resources Development Bank Limited was established in 1967 with equity capital of $3 million subscribed by the major trading banks. It was given the status of a bank under the *Banking Act* 1959 and opened for business on 29 March 1968. The main object of the Australian Resources Development Bank is to assist Australian enterprises to participate more fully in the development of Australia's natural resources. It provides finance to enterprises engaged in major developmental projects by direct loans, investing in equity capital or by refinancing loans made by trading banks acting individually or as a group. The Australian Resources Development Bank obtains funds by accepting deposits and by borrowing on the Australian and overseas capital markets.

The Primary Industry Bank of Australia Limited

The Primary Industry Bank of Australia Limited commenced operations on 22 September 1978 under the authority of the *Primary Industry Bank Act* 1977. The Bank has also been brought within the scope of the *Banking Act* 1959 including those provisions relating to the protection of depositors, advances policy, control of interest rates, furnishing of statistics, and alterations in the structure and ownership of the Bank.

The main objective of the Bank is to facilitate the provision of loans to primary producers for longer terms than are otherwise generally available. The Bank's role is restricted to refinancing loans made by banks and other financial institutions with terms of eight years or more but not exceeding thirty years.

The equity capital of the Bank is $5,625,000 consisting of eight shares. Seven shares are held by the Commonwealth Government and the six major trading banks while the eighth share is held equally by the four State banks.

REGISTERED BUILDING SOCIETIES

Permanent building societies

A permanent building society is defined as an organisation that: (a) is registered under relevant State or Territory legislation; (b) has rules or regulations that do not specify that it is to terminate on a specific date or when a specific objective is achieved; and (c) operates on a co-operative basis by borrowing predominantly from its members and providing finance to its members principally in the form of housing loans.

In 1976 a statistical collection was introduced covering the financial accounts of permanent building societies in all States and Territories of Australia. The statistics below summarise information collected from the 128 permanent building societies balancing in the 1980–81 financial year. More detailed descriptions and dissections of these statistics may be found in the annual publication *Permanent Building Societies: Assets, Liabilities, Income and Expenditure, Australia* (5632.0).

Information relating to the housing finance operations of permanent building societies is provided on pages 582-3. Detailed statistics on the operations generally of permanent building societies are available in the monthly publication *Housing Finance for Owner Occupation, Permanent Building Societies, Australia* (5610.0).

Summary statistics on the financial operations, assets and selected liabilities of permanent building societies registered under the *Financial Corporations Act* 1974, and which have assets in Australia exceeding $5 million, are given on pages 573-4.

PERMANENT BUILDING SOCIETIES: LIABILITIES AND ASSETS(*a*)

($ million)

Liabilities	*1980–81*	*Assets*	*1980–81*
Share capital and reserves:		Amount owing on loans	9,553.8
Non-withdrawable shares	26.8		
Withdrawable shares	8,286.5	Cash on hand	15.3
Reserves—		Deposits with—	
Statutory	108.6	Banks	879.1
Other(*b*)	135.0	Other	222.6
Deposits	3,262.7	Bills, bonds and other securities	1,155.6
Loans	269.7	Accounts receivable	36.3
Accounts payable	47.9	Physical assets	317.0
Other liabilities	52.0	Other assets	9.5
Total liabilities	**12,189.2**	**Total assets**	**12,189.2**

(*a*) At the balance dates of societies within the financial year shown. (*b*) Includes accumulated surpluses and deficits.

PERMANENT BUILDING SOCIETIES: INCOME AND EXPENDITURE

($ million)

Expenditure	*1980–81*	*Income*	*1980–81*
Interest on:		Interest from:	
Shares	696.6	Loans	1,069.5
Deposits	289.6	Deposits	102.5
Loans	17.3		
Wages and salaries	80.6	Income from holdings of securities	147.6
Management fees(*a*)	33.6		
Administrative expenses(*b*)	82.9	Management fees	17.6
Insurance premiums paid	2.2		
Other expenditure	67.8	Other income	19.9
Total expenditure	**1,270.6**	**Total income**	**1,357.1**

(*a*) Represents payments made by societies to separate management companies. (*b*) Includes Permanent Building Society Association costs, advertising, bank charges and other administrative expenses.

Terminating building societies

A terminating building society is defined as an organisation that: (a) is registered under relevant State or Territory legislation; (b) has rules or regulations which specify that it is to terminate on a specific date or when a specific objective is achieved; and (c) makes loans to members from funds obtained from lending institutions (usually government guaranteed), members' subscriptions, or from moneys provided under Commonwealth-State Housing Agreements.

In 1977 a statistical collection was introduced covering the financial accounts of terminating building societies in all States and Territories of Australia. The statistics below summarise information collected from the 6,532 terminating building societies balancing within the 1980–81 financial year. More detailed descriptions and dissections of these statistics may be found in the annual publication *Terminating Building Societies: Assets, Liabilities, Income and Expenditure, Australia* (5633.0).

Information relating to the housing finance operations of terminating building societies is provided on pages 582-3.

TERMINATING BUILDING SOCIETIES: LIABILITIES AND ASSETS(*a*)

($ million)

Liabilities	*1980–81*	*Assets*	*1980–81*
Share capital(*b*)	1.7	Amount owing on loans(*b*)	1,481.8
Accumulated funds(*c*)	26.8	Cash on hand and current accounts at banks	11.8
Loans from:		Deposits with:	
Banks	237.6	Banks	4.9
Commonwealth/State Home Builders' Fund(*d*)	919.1	Others	16.3
Others	323.9	Physical assets	0.2
Other liabilities	7.7	Other assets	1.8
Total liabilities	**1,516.8**	**Total assets**	**1,516.8**

(*a*) At the balance dates of societies within the financial year shown. (*b*) Borrowing members' subscriptions have been offset against 'Amount owing on loans'. (*c*) Includes accumulated surpluses and deficits. (*d*) Refers to loans made through the Commonwealth/State Housing Agreements.

TERMINATING BUILDING SOCIETIES: INCOME AND EXPENDITURE

($ million)

Expenditure	*1980–81*	*Income*	*1980–81*
Interest paid on borrowing members' subscriptions	3.7	Interest on:	
Interest on loans from:		Loans to members	107.0
Banks	24.1	Other	1.3
Other	77.8	Management fees	11.3
Salaries and secretarial fees	10.0		
Other expenditure	4.3	Other income	3.0
Total expenditure	**119.9**	**Total income**	**122.6**

CREDIT UNIONS

A credit union (or co-operative credit society) is defined as an organisation that: (a) is registered under relevant State or Territory legislation; and (b) operates on a co-operative basis by predominantly borrowing from and providing finance to its own members.

Credit union annual financial account statistics were first collected on a national basis from all registered credit unions for the year 1974–75 when there were 738 credit unions with a total of 909,547 members. The number of credit unions operating in 1980–81 was 620 with 1,622,253 members. Comprehensive financial account statistics are provided in the annual publication *Credit Unions: Assets, Liabilities, Income and Expenditure, Australia* (5618.0).

Statistics on the housing finance operations of credit unions are provided on pages 582-3, while on pages 573-4 are summary statistics on the financial operations, assets and selected liabilities of credit unions registered under the *Financial Corporations Act* 1974 which have assets in Australia exceeding $5 million.

CREDIT UNIONS: LIABILITIES AND ASSETS(*a*)
($ million)

Liabilities	*1980–81*	*Assets*	*1980–81*
Share capital and reserves:		Amount owing on loans(*c*)	2,114.8
Paid-up share capital	13.6	Cash on hand	9.9
Reserves—		Deposits with—	
Statutory	25.0	Banks	52.9
Other(*b*)	55.2	Credit Union Leagues or Associations	122.6
Deposits	2,342.4	Other	80.4
Loans	78.4	Bills, bonds and other securities	51.8
Accounts payable	14.6	Accounts receivable	12.4
Other liabilities	8.5	Physical assets	88.6
		Other assets	4.3
Total liabilities	**2,537.7**	**Total assets**	**2,537.7**

(*a*) At the balance dates of credit unions within the financial year shown. (*b*) Includes accumulated surpluses and deficits. (*c*) Net of unearned interest and allowance for doubtful debts.

CREDIT UNIONS: INCOME AND EXPENDITURE
($ million)

Expenditure	*1980–81*	*Income*	*1980–81*
Interest on:		Interest from:	
Deposits	192.8	Loans	290.4
Loans	6.3	Deposits	26.9
Wages and salaries	44.6		
Administrative expenses	31.1	Income from holdings of securities	4.4
Insurance premiums paid	7.4	Management fees	2.6
Allowance for doubtful debts	6.7	Bad debts recovered	1.1
Other expenditure	21.2	Other income	5.7
Total expenditure	**310.1**	**Total income**	**331.1**

SHORT-TERM MONEY MARKET

Authorised money market corporations

For some years prior to 1959 leading stockbrokers were actively engaged in operations which formed the basis of a short-term money market in Australia. The stockbrokers' operations involved the acceptance of short-term funds which were secured against government securities. These operations were severely limited by the lack of suitable short-term securities and by liquidity constraints. In February 1959 the Central Bank established the Official Short-Term Money Market by making available 'lender of last resort' facilities to selected dealers.

There are nine authorised money market dealers. They are required by the Reserve Bank to: (a) accept loans overnight, at call or for fixed periods, in minimum amounts of $50,000 and invest these funds in Commonwealth Government and other approved securities; (b) at all times be willing traders in the buying and selling of approved securities; (c) have a minimum paid-up capital of $400,000 and adhere to a maximum limit on the ratio of loans to shareholders' funds; and (d) consult regularly with the Reserve Bank on all market matters and furnish detailed information about their portfolios, operations, interest rates, balance sheets and profit and loss accounts. Under the 'lender of last resort' arrangements dealers may borrow from the Reserve Bank for a minimum of seven days and at a rate designed to discourage excessive recourse to the facility.

The following table contains details of selected liabilities and assets, and interest rates. Additional information on authorised dealers collected under the *Financial Corporations Act* 1974 is provided on pages 573-4.

SHORT-TERM MONEY MARKET: SELECTED LIABILITIES AND ASSETS AND INTEREST RATES OF AUTHORISED DEALERS

(*Source:* **Reserve Bank of Australia**)

	Liabilities to clients			*Asset holdings (face value)*			*Interest rates on loans accepted during month*				*Weighted average interest rate on loans outstanding (c)*
							At call		*For fixed periods*		
	All trading banks	*Other clients*	*Total*	*C'wealth Govt securities (a)*	*Commercial bills (b)*	*Banks' certificates of deposit*	*Minimum*	*Maximum*	*Minimum*	*Maximum*	
Month	*Average of weekly figures—($ million)*						*Per cent per annum*				
June—											
1977	144	702	846	830	130	22	3.00	15.30	5.00	13.80	9.33
1978	191	1,089	1,279	1,144	154	16	0.50	18.86	3.00	11.50	9.05
1979	265	1,213	1,478	1,247	190	18	1.00	18.25	3.10	11.00	7.75
1980	384	1,114	1,498	1,275	229	58	1.00	18.80	5.50	13.00	10.34
1981	265	1,122	1,387	1,395	258	25	5.00	21.60	11.75	15.00	13.04
1982	336	1,038	1,374	1,047	265	85	1.00	26.10	4.00	19.25	14.88

(*a*) Within 5 years of maturity. (*b*) Accepted or endorsed by banks. (*c*) Weighted average of rates paid on all days of the four or five weeks ending on the last Wednesday of the month.

Money market corporations

There are also companies without Reserve Bank 'lender of last resort' facilities which operate in a similar manner to authorised dealers. These companies are recognised under the *Financial Corporations Act* 1974 in the category of money market corporations which consists of registered corporations whose short-term borrowings are a substantial proportion of their total outstanding provision of finance, which is mainly in the form of loans to authorised dealers in the short-term money market and other liquidity placements, business loans and investments in Government, commercial and corporate paper.

The category of money market corporations also includes registered corporations providing short-term finance but which are themselves financed by related corporations with funds raised on a short-term basis, as well as corporations which borrow principally short-term and lend predominantly to related money market corporations.

Statistics on money market corporations registered under the *Financial Corporations Act* 1974 are contained in the tables on pages 573-4.

FINANCE COMPANIES

Information presented on finance companies in Australia in the following tables has been compiled from returns collected under the *Census and Statistics Act* 1905. For the purpose of these statistics a finance company is defined as an incorporated company which is, or a group of incorporated companies related under Section 6 of the uniform companies legislation each of which is, mainly engaged in providing to the general public (businesses as well as persons in their private capacity) any of the following types of credit facilities: instalment credit for retail sales, personal loans, wholesale finance, factoring, other consumer and commercial loans, finance leasing of business plant and equipment and bills of exchange transactions. A company is mainly engaged in providing these types of credit facilities if 50 per cent or more of its assets consist of balances outstanding with respect to such facilities, or if 50 per cent or more of its income is derived from such facilities.

The statistics for the financial year relate to those finance companies which have balances outstanding net of umatured income in the prescribed types of credit facilities of $5 million or more in total on an Australia-wide basis. The 1980–81 annual census of finance companies indicated that companies thus included accounted for 98.6 per cent of the total net balances outstanding on prescribed credit facilities of all finance companies.

Comprehensive information on the transactions and financial structure of finance companies is available in the monthly publication *Finance Companies, Australia* (5614.0) and the annual publication *Finance Companies: Assets, Liabilities, Income and Expenditure, Australia* (5616.0) respectively. Information on foreign ownership and control of finance companies is given in Chapter 24, Overseas Transactions.

Although individual corporations in the *Financial Corporations Act* 1974 categories of finance companies and general financiers may meet the above definition of a finance company, differences in definitions, scope and coverage generally mean that the statistics on pages 573-4 for those categories are not comparable with the statistics for finance companies shown below.

FINANCE COMPANIES: ASSETS, LIABILITIES, INCOME AND EXPENDITURE(*a*)

($ million)

	1978–79	*1979–80*	*1980–81*
Assets—			
Balances outstanding on finance agreements(*b*)	13,423.0	15,260.4	17,479.9
Cash on hand and bank deposits	65.4	51.4	27.7
Loans to authorised money market dealers	37.5	12.3	12.5
Investments in shares and securities	210.2	252.1	295.3
Physical assets	174.7	179.5	182.1
Other assets	283.0	313.5	372.2
Total assets	**14,193.6**	**16,069.5**	**18,369.6**
Liabilities—			
Paid-up capital	939.6	1,051.7	1,122.3
Reserves	423.8	459.1	532.7
Unappropriated profits	277.7	327.2	385.4
Borrowed funds—			
Bank loans and overdrafts	307.6	279.2	336.5
Debentures	6,538.6	6,937.9	7,538.3
Secured and unsecured loans	4,503.7	5,559.9	6,766.0
Other liabilities	1,202.7	1,454.3	1,688.4
Total liabilities	**14,193.6**	**16,069.5**	**18,369.6**
Income for year—			
Interest from finance agreements	1,925.3	2,214.9	2,559.4
Other income	140.2	146.8	206.2
Total income	**2,065.6**	**2,361.7**	**2,765.5**
Expenditure for year—			
Interest on borrowed funds	1,225.6	1,376.4	1,621.5
Wages, salaries and allowances, directors fees and emoluments	209.8	234.6	263.0
Other expenditure	401.7	485.3	507.2
Total expenditure	**1,837.2**	**2,096.3**	**2,391.8**

(*a*) At the balance date of companies within the financial year shown. (*b*) Excludes unmatured income of $3,208.4m in 1978–79, $3,602.3m in 1979–80 and $4,306.1m in 1980–81.

FINANCE COMPANIES: AMOUNT FINANCED AND BALANCES OUTSTANDING CLASSIFIED BY THE TYPE OF FINANCE AGREEMENT

($ million)

	1979–80	*1980–81*	*1981–82*
Amount financed during year—			
Instalment credit for retail sales and personal loans	2,279.0	2,518.9	2,746.7
Finance for housing	1,300.9	2,072.6	2,081.8
Wholesale finance	4,936.0	5,529.8	6,238.0
Factoring and other commercial loans	2,594.8	3,474.7	4,153.1
Leasing of business plant and equipment(*a*)	2,823.7	3,580.9	3,587.7
Bills of exchange(*b*)	795.3	888.8	2,083.7
Total amount financed on finance agreements(*c*)	**14,729.8**	**18,065.7**	**20,891.0**
Balances outstanding at 30 June (*d*)—			
Instalment credit for retail sales and personal loans	4,410.7	4,736.1	5,394.0
Finance for housing	2,879.5	4,000.5	4,851.0
Wholesale finance	1,332.7	1,329.8	1,495.4
Factoring and other commercial loans	3,689.7	4,526.7	5,512.4
Leasing of business plant and equipment(*e*)	6,552.2	8,351.9	9,609.1
Bills of exchange	108.6	104.7	124.5
Liquidity placements and loans to non-finance companies in group	362.8	613.3	581.7
Total balances outstanding on finance agreements	**19,336.2**	**23,663.0**	**27,568.1**

(*a*) Refers to the value of goods newly leased. (*b*) Refers to amounts paid for bills acquired. (*c*) Excludes amounts for liquidity placements and loans to non-finance companies in group. (*d*) Includes unmatured income. (*e*) Refers to the value of leasing agreements.

FINANCIAL CORPORATION STATISTICS

The statistics provided in the following tables have been compiled from monthly returns supplied to the Australian Bureau of Statistics by corporations registered under the *Financial Corporations Act* 1974 and which have Australia-wide assets exceeding $5 million. A summary of the objects and content of the Financial Corporations Act is given in Year Book No. 62, page 541. Information is also collected quarterly from registered corporations whose comparable asset figures exceed $1 million but not $5 million. Detailed statistics on all corporations registered under the Act are published in the monthly publication *Financial Corporations Statistics, Australia* (5617.0).

Descriptions of the categories *building societies, credit unions/co-operatives, authorised money market dealers* and *money market corporations* appear in the respective parts of this chapter. Descriptions of the other categories are as follows:

Pastoral finance companies—comprising corporations whose provision of finance is predominantly in the form of loans to rural producers largely associated with the provision of rural services.

Finance companies—comprising corporations not included in the categories *building societies, credit co-operatives, authorised money market dealers, money market corporations* or *pastoral finance companies* which rely substantially on borrowings in financial markets in Australia and/or from abroad and whose provision of finance is predominantly in the form of business and commercial lending, instalment credit to finance retail sales by others and/or other loans to individuals.

General financiers—comprising corporations which lend predominantly for business and commercial purposes, instalment credit to finance retail sales by others and/or other loans to individuals but which do not rely substantially on borrowings in financial markets in Australia and from abroad.

Intra group financiers—comprising corporations not elsewhere categorised which predominantly borrow within a corporation group and/or provide finance by lending within their corporation group or by investing in financial markets.

Other financial corporations—comprising registered corporations not included in any other specific category.

FINANCIAL CORPORATIONS WITH ASSETS IN AUSTRALIA EXCEEDING $5 MILLION: FINANCIAL OPERATIONS, SELECTED LIABILITIES AND ASSETS

($ million)

FINANCIAL OPERATIONS AND SELECTED LIABILITIES AS AT 30 JUNE 1982

		Financial operations			*Selected liabilities*		
			Borrowing lines and standby facilities available and unused from—(b)			*Borrowings from—*	
Category	*Number of corporations*	*Unused lending commitments(a)*	*Residents*	*Non-residents*	*Paid-up capital*	*Residents*	*Non-residents*
Building societies	81	265.8	522.5	–	(c)34.0	(c)12,814.9	9.7
Credit co-operatives	121	9.6	26.3	–	(c)	(c)2,171.5	–
Authorised money market dealers	9	5.3	–	–	36.9	1,277.9	0.1
Money market corporations	51	3,000.6	521.6	1,092.4	303.4	10,541.1	633.3
Pastoral finance companies	16	–	69.8	19.7	275.5	798.0	3.7
Finance companies	96	1,532.5	1,127.3	472.5	1,377.2	21,346.7	669.2
General financiers	90	107.0	181.0	31.9	182.2	1,764.3	163.2
Intra group financiers	12	–	28.8	167.0	187.8	(d)460.5	92.8
Other financial corporations	8	7.4	17.1	–	1.8	212.0	–
Total	**484**	**4,928.0**	**2,494.2**	**1,783.4**	**2,398.7**	**(e)51,387.2**	**1,572.0**

For footnotes *see* end of table.

ASSETS IN AUSTRALIA AT 30 JUNE 1982

Category	*Cash and bank deposits*	*Loans to authorised dealers in the STMM and other short-term placements(f)*	*Government and public authority securities*	*Bills of exchange and promissory notes discounted and held(g)*	*Other financial investments*	*Other assets arising from the provision of finance (h)*	*All other assets in Australia*	*Total assets in Australia*	*Assets overseas*
Building societies	1,098.5	224.9	421.6	851.3	18.6	10,391.4	511.8	13,518.1	
Credit co-operatives	75.9	193.6	23.3	19.1	10.5	1,862.2	125.6	2,310.3	
Authorised money market dealers	90.9	69.0	995.6	299.8	-	0.5	15.0	1,470.9	
Money market corporations	347.0	2,691.3	196.8	3,069.2	307.6	5,101.5	242.5	11,955.8	23.7
Pastoral finance companies	4.4	44.8	-	-	509.0	655.6	498.1	1,711.6	1.5
Finance companies	15.5	326.6	7.1	169.8	682.9	24,029.1	268.7	25,499.5	5.2
General financiers	3.7	54.1	3.3	53.5	90.4	2,152.7	322.1	2,679.5	1.9
Intra group financiers	(i)1.8	91.0	-	37.0	145.4	1,242.8	(j)44.3	1,562.2	n.p.
Other financial corporations	31.4	65.3	7.5	38.2	9.8	59.8	7.3	219.2	-
Total	**1,668.7**	**3,760.6**	**1,655.2**	**4,538.1**	**1,774.0**	**45,495.4**	**(j)2,035.3**	**60,927.1**	**(k)32.2**

(*a*) Includes all binding commitments to provide funds to residents of Australia other than those that are of a type which is usually completely disbursed within 30 days of approval; excludes commitments that do not have a quantifiable limit. (*b*) Includes all binding commitments (i.e. borrowing lines and standby facilities) to provide funds to reporting corporations; excludes standby facilities which do not have a quantifiable limit. (*c*) 'Paid-up capital' includes only fixed share capital; withdrawable share capital is included in 'Borrowings from residents'. (*d*) Excludes borrowings from related corporations not registered under the Financial Corporations Act. (*e*) Excludes borrowings from related corporations not registered under the Financial Corporations Act for Intra group financiers. (*f*) Includes short-term placements that are repayable at call or within 90 days; excludes funds placed with banks and related corporations, and purchases of government securities and bills of exchange. (*g*) Excludes bills that have been drawn or accepted by reporting corporations. (*h*) Includes holdings of bills that have been drawn by reporting corporations and loans that have been re-financed by the sale of bills accepted by reporting corporations. (*i*) Includes cash and current accounts and certificates of deposit but excludes other deposits with banks which are included in 'All other assets in Australia'. (*j*) Includes other deposits with banks for Intra group financiers. (*k*) Excludes 'Assets overseas' of Intra group financiers.

LIFE INSURANCE

Statistics in the following tables have been compiled from returns lodged under the *Life Insurance Act* 1945 (*see* page 561) and relate to the life insurance business of companies with head offices in Australia and the Australian business of companies with head offices overseas. Also included are the life business operations voluntarily reported by three State Government Insurance Offices.

Forty five life offices conducted life insurance business in Australia during 1980.

Information contained in the following two tables does not relate to uniform accounting periods but to the balance dates of organisations falling within the calendar year shown.

LIFE INSURANCE OFFICES: LIABILITIES AND ASSETS
($ million)

	1978	*1979*	*1980*
Liabilities—			
Shareholders' capital—			
Authorised	139.7	141.7	141.7
Less: unissued	79.3	80.5	82.8
Subscribed capital	60.4	61.2	58.9
Paid-up—			
In money	50.1	50.9	47.6
Otherwise than money	9.5	9.5	10.5
Total paid-up capital	59.6	60.4	58.1
Life insurance statutory funds—			
Ordinary and Industrial business	9,579.0	10,253.2	10,998.0
Superannuation business	4,500.1	5,322.1	6,519.5
Total statutory funds	14,079.1	15,575.3	17,517.5
Funds in respect of other classes of business	99.9	122.2	142.3
General reserves	236.1	267.0	326.5
Profit and loss account balance	61.0	67.3	87.2
Total shareholders' capital, insurance funds and reserves	*14,535.6*	*16,092.3*	*18,131.6*
Other liabilities—			
Deposits and deposits in suspence	143.1	137.4	125.1
Provision for staff benefits(*a*)	31.8	32.1	37.8
Claims admitted or intimated but not paid	273.4	284.9	297.1
Premiums paid in advance and in suspense	7.5	6.4	8.1
Sundry creditors	98.4	112.2	166.5
Bank overdraft	135.1	132.1	101.2
Reserves and provisions for taxation	235.8	251.9	302.1
All other liabilities	96.9	81.1	124.4
Total liabilities	**15,557.6**	**17,130.3**	**19,293.9**
Assets held in Australia—			
Fixed assets—			
Freehold and leasehold property, office premises	2,867.1	3,156.3	3,631.6
Furniture, etc.	35.3	42.1	38.4
Loans—			
On mortgage	1,320.0	1,274.1	1,304.2
On policies	300.9	303.2	321.6
Other loans	152.1	161.5	213.3
Investments—			
Government securities—			
Australian	2,715.7	2,916.9	3,087.9
Overseas	43.4	43.9	37.3
Securities of local and semi-governmental bodies	1,132.0	1,231.4	1,355.1
Other investments	3,593.7	4,133.1	5,160.7
Cash on hand, deposit and current account	155.7	213.3	143.5
All other assets	495.0	540.1	604.2
Total assets held in Australia	*12,810.5*	*14,016.4*	*15,897.8*
Total assets held overseas	*2,747.1*	*3,113.9*	*3,396.1*
Total assets	**15,557.6**	**17,130.3**	**19,293.9**

(*a*) Includes staff superannuation, long service leave, annual leave and other types of staff benefits.

LIFE INSURANCE OFFICES: REVENUE AND EXPENDITURE

($ million)

	1978	*1979*	*1980*
Balance of account at beginning of year—Australia and overseas	*12,695.4*	*14,125.1*	*15,511.1*
Revenue—Australia			
Premium income—			
Ordinary and Industrial business	902.8	929.1	987.1
Superannuation business	861.7	937.4	1,136.5
Consideration for annuities	24.7	28.9	28.5
Net interest dividends and rents	773.4	872.2	1,039.9
Other revenue	396.8	635.6	886.6
Total revenue—Australia	*2,959.5*	*3,403.2*	*4,078.6*
Revenue—overseas			
Premium income	304.6	359.2	376.7
Net interest dividends and rents	191.7	233.3	276.1
Other revenue	179.4	98.8	154.5
Total revenue—overseas	*675.8*	*691.3*	*807.3*
Total revenue	**3,635.3**	**4,094.5**	**4,885.9**
Total	**16,330.6**	**18,219.6**	**20,397.0**
Expenditure—Australia			
Payments on policies—			
Claims	629.0	674.8	755.5
Surrenders	574.0	641.2	728.1
Annuities	3.3	3.7	4.1
Bonuses paid in cash	11.3	11.4	13.6
Expenses of management—			
Commission	157.5	166.1	186.9
Other	256.1	275.2	311.3
All other expenses	271.2	422.0	440.3
Total expenditure—Australia	*1,902.5*	*2,194.2*	*2,439.8*
Expenditure—overseas			
Payments on policies	214.9	235.9	272.4
Expenses of management	100.8	119.8	137.2
All other expenditure	33.1	46.8	30.1
Total expenditure—overseas	*348.8*	*402.4*	*439.7*
Total expenditure	**2,251.3**	**2,596.6**	**2,879.5**
Balance of account at end of year—Australia and overseas	*14,079.4*	*15,623.0*	*17,517.5*
Total	**16,330.6**	**18,219.6**	**20,397.0**

LIFE INSURANCE OFFICES: NEW LOANS PAID OVER(*a*) BY CLASS OF SECURITY

($ million)

Class of security	*1978*	*1979*	*1980*
Mortgage of real estate	164.4	187.7	241.5
Companies policies	63.1	64.7	79.7
Other	57.0	47.2	96.7

(*a*) Excludes advances on premiums.

LIFE INSURANCE: SUMMARY

	Insurance and endowment policies			*Annuity policies*	
	Number of policies	*Sum insured ($ million)*	*Annual premiums ($ million)*	*Number of policies*	*Annuities per annum ($ million)*
ORDINARY AND INDUSTRIAL BUSINESS					
New policies issued—					
1978	508,014	12,192.9	119.3	22	–
1979	475,864	12,828.8	125.2	25	–
1980	448,504	13,808.4	127.8	21	0.1
Policies discontinued or reduced(*a*)—					
1978	693,711	5,401.8	91.4	121	–
1979	798,497	8,452.4	111.3	130	0.5
1980	757,585	7,169.4	108.9	152	0.1
Policies existing at end of—					
1978	7,334,739	58,815.2	888.4	1,293	1.5
1979	7,012,106	63,191.6	902.3	1,188	1.1
1980	6,703,025	69,830.6	921.2	1,057	1.1
SUPERANNUATION BUSINESS					
New policies issued—					
1978	98,836	9,422.2	206.8	17	16.9
1979	95,631	10,373.4	213.9	12	17.3
1980	120,405	13,954.3	287.4	23	19.6
Policies discontinued or reduced(*a*)—					
1978	81,437	4,599.6	118.5	12	18.5
1979	84,919	5,091.8	116.6	83	(–)4.4
1980	66,757	5,727.1	132.7	16	15.0
Policies existing at end of—					
1978	702,291	34,803.3	836.0	689	57.6
1979	713,003	40,084.9	933.3	618	79.3
1980	766,651	48,312.1	1,088.0	625	83.9

(*a*) Includes policies matured, surrendered, forfeited, transferred to overseas registers, converted to other classes of business, etc.

GENERAL INSURANCE

The following statistics have been compiled from returns collected under the *Census and Statistics Act* 1905 and relate to the operations of:

(*a*) *Bodies corporate* authorised to carry on insurance business under the *Insurance Act* 1973 (*see* page 561);

(*b*) *Brokers* in respect of business placed with overseas insurers; and

(*c*) *Government instrumentalities*, i.e. State Government Insurance Offices and Commonwealth Government and State Government instrumentalities in respect of their general insurance business.

These statistics are based on the following definitions:

Premiums comprise the full amount receivable in respect of direct insurance and facultative reinsurance business written or renewed within Australia (including business placed overseas by Australian brokers) during the year less (a) outward facultative reinsurance within Australia, (b) stamp duty and fire service charges paid, and (c) returns, rebates and bonuses paid or credited to policy holders. Premiums 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.

Claims comprise, for direct insurance and facultative reinsurance business, payments made during the year plus the estimated amount of outstanding claims at the end of the year less the estimated amount of outstanding claims at the beginning of the year. Salvage and other amounts recoverable have been deducted.

In many instances brokers have no knowledge of claims made by the insured on overseas insurers in respect of business placed through them. Because of this, no details of claims are collected from brokers.

Information contained in the following tables does not relate to uniform accounting periods but to the financial years of the organisations which ended during the years shown.

GENERAL INSURANCE: PREMIUMS AND CLAIMS BY PRINCIPAL CLASS OF BUSINESS

($ million)

Class of business	*1978–79*	*1979–80*	*1980–81*
PREMIUMS(*a*)			
Fire(*b*)	289.8	287.3	305.9
House Owners' and House-holders'	279.4	315.8	379.6
Contractors' All Risks	24.1	22.8	29.0
Marine and Aviation	118.7	130.0	146.7
Motor Vehicle Comprehensive	845.5	863.8	914.6
Compulsory Third Party (Motor Vehicle)	611.7	674.5	768.4
Employers Liability(*c*)	787.4	774.4	875.7
Public Liability(*d*)	98.9	111.0	134.4
All other	286.9	330.1	369.4
Total	**3,342.2**	**3,509.8**	**3,923.8**
CLAIMS(*e*)			
Fire(*b*)	154.5	218.9	245.7
House Owners' and House-holders'	180.4	217.3	267.8
Contractors' All Risks	11.2	13.0	18.8
Marine and Aviation	64.4	75.2	91.4
Motor Vehicle Comprehensive	628.0	650.7	740.2
Compulsory Third Party (Motor Vehicle)	605.7	673.1	850.5
Employers Liability(*c*)	599.1	698.2	922.4
Public Liability(*d*)	41.9	54.7	78.3
All other	132.0	160.6	194.3
Total	**2,417.2**	**2,761.6**	**3,409.4**

(*a*) Includes premiums received by brokers 1978–79, $95.9 million; 1979–80, $86.4 million; 1980–81, $89.1 million. (*b*) Includes sprinkler leakage, loss of profits, and crop and hailstone insurance. (*c*) Excludes workers' compensation insurance in the coal mining industry in N.S.W. (*d*) Includes product liability and professional indemnity insurance. (*e*) Excludes brokers.

PUBLIC AUTHORITY PENSION AND SUPERANNUATION SCHEMES

Public authority pension and superannuation schemes are established primarily to provide financial benefits on retirement to employees of Australian and State governments, local governments and statutory authorities created by governments.

In the public sector there are three types of schemes in operation:

(a) Self-administered superannuation funds;
(b) Schemes operated through life insurance offices; and
(c) Schemes funded from Consolidated Revenue.

Schemes of types (a) and (b) are included in the statistics below while type (c) schemes are not separately constituted funds and are therefore excluded. In addition schemes of some Australian Government trading enterprises are excluded. More detailed descriptions and dissections of these statistics may be found in the annual publication *Public Authority Pension and Superannuation Schemes, Australia* (5511.0)

PUBLIC AUTHORITY PENSION AND SUPERANNUATION SCHEMES OPERATED THROUGH SELF-ADMINISTERED FUNDS

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
	($ million)					
Income—						
Contributions—						
Employees	262.5	296.5	336.6	374.4	418.4	491.6
Employing authorities	356.1	472.1	558.2	635.7	759.9	874.4
Interest, dividends and rent	179.9	233.6	301.6	369.4	503.8	573.1
Transfers	8.8	52.2	68.3	55.1	49.3	61.3
Other income	30.9	13.9	16.5			
Total income	**838.3**	**1,068.4**	**1,281.2**	**1,434.7**	**1,731.4**	**2,000.3**
Expenditure—						
Pensions	244.1	289.1	350.4	410.4	471.1	547.1
Lump sum payments—						
On retirement, death, resignation or dismissal (*a*)	175.0	229.8	255.4	334.5	384.2	445.4
Gratuities	3.5	8.0	9.9	5.1	10.0	8.8
Other expenditure	33.5	32.8	89.4	59.2	66.8	73.6
Total expenditure	**456.0**	**559.7**	**705.1**	**809.1**	**932.1**	**1,074.8**
Assets at end of year—						
Cash—						
Deposits with Treasury	138.3	314.0	441.1	540.6	653.5	814.0
Other deposits and cash	121.5	97.5	93.2	105.1	64.5	85.4
Commonwealth Government securities	54.7	91.9	123.8	133.0	45.6	50.1
Local and semi-government securities	1,134.5	1,252.3	1,434.1	1,607.7	1,588.7	1,722.8
Mortgages	356.4	390.4	458.6	458.1	722.0	927.9
Loans to building societies	75.1	108.3	153.2	189.2	214.4	235.7
Company shares, debentures and notes	231.7	313.3	368.9	475.8	491.5	629.2
Other assets	466.9	545.0	668.4	888.5	1,251.7	1,549.4
Total assets (*b*)	2,579.0	3,112.7	3,741.3	4,397.9	5,031.7	6,014.5
Less Sundry creditors, etc.	68.9	84.2	129.4	155.1	100.4	103.0
Accumulated funds (*b*)	**2,510.1**	**3,028.5**	**3,611.9**	**4,242.8**	**4,931.4**	**5,911.5**
		(No.)				
Contributors at end of year	517,534	554,764	576,272	588,427	606,254	612,635
Pensioners at end of year—						
Ex-employees	65,987	69,745	70,396	73,988	76,122	78,667
Widows	37,560	37,322	38,985	38,153	39,647	40,089
Children	3,582	3,387	3,653	3,580	3,953	3,712

(*a*) Includes refunds of contributions to continuing members. (*b*) Includes assets of the Voluntary Savings Scheme of the State Superannuation Fund in South Australia.

PUBLIC AUTHORITY PENSION AND SUPERANNUATION SCHEMES OPERATED THROUGH LIFE INSURANCE OFFICES

		1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Income—							
Contributions—							
Employees	$ million	20.9	23.5	24.2	76.6	84.0	83.4
Employing authorities	$ million	33.9	38.4	41.4			
Contributors at end of year	No.	63,344	51,493	51,214	52,023	51,150	48,440

AUSTRALIAN INDUSTRY DEVELOPMENT CORPORATION

The Australian Industry Development Corporation (AIDC) was established by the *Australian Industry Development Corporation Act* 1970 and commenced operations on 1 February 1971. Within the objectives and broad policy guidelines defined in the Act, the Corporation operates as an independent commercial enterprise governed by its own Board of Directors.

The Corporation has a capital of $100 million, to be subscribed by the Commonwealth Government in instalments but the whole being available if required to meet obligations. The paid-up capital at 30 June 1981 was $62.5 million.

The central objectives of the Corporation are to promote the development of industries in Australia and support local participation in the ownership and control of industries and resources. Consistent with these objectives and the principle that AIDC must operate on a commercial basis and assist only in ventures which can demonstrate sound prospects, the Corporation provides finance, obtained by borrowing both in Australia and overseas, for Australian firms (including local firms with foreign partners) engaged in industries concerned with the manufacture, processing, treatment, transportation or distribution of goods, or the development or use of natural resources (including the recovery of minerals), or technology and activities that are connected with or incidental to those industries.

The Corporation's financial participation in a venture is governed by the prevailing terms and conditions under which it can itself obtain loan finance. The capital of the Corporation is provided as a base for its borrowings and is not directly used for assistance to industry projects.

The AIDC provides development capital both for start-up situations and for going concerns. Although the greater part of its financing is by loans, it also makes equity investments in industry. Where a company's capital needs can best be met by loan finance, AIDC does not seek an equity position. It aims to avoid involvement in the management of companies to which it provides financing.

Financing commitments approved since operations commenced, totalled $877 million at 30 June 1981, and operational loans and investments outstanding were $457 million.

INSTALMENT CREDIT FOR RETAIL SALES

Information relating to instalment credit for retail sales in Australia is given in the following tables. More detailed information may be found in the monthly publication *Instalment Credit for Retail Sales, Australia* (5631.0).

These statistics cover the operations of instalment credit schemes which relate primarily to the financing of retail sales of consumer commodities. In general, the term instalment credit is defined as relating to schemes in which repayment is made by regular predetermined instalments (predetermined by amount or by percentage of amount financed or balance outstanding). Types of instalment credit schemes covered include hire purchase, time payment, budget accounts and personal loans where these schemes relate to the financing of retail sales of consumer commodities.

Figures for amounts financed exclude interest, hiring charges, insurance, etc. Figures for balances outstanding and collections include interest, hiring charges, insurance, etc.

INSTALMENT CREDIT FOR RETAIL SALES BY TYPE OF BUSINESS: AMOUNT FINANCED BY COMMODITY GROUP, COLLECTIONS AND BALANCES OUTSTANDING, AUSTRALIA

($ million)

	Amount financed during year					*Collections and other liquidations of balances during year*	*Balances outstanding at end of year*
	Motor cars and station wagons		*Other motor vehicles (a)*	*Household and personal goods*	*Total*		
	New	*Used*					
Finance companies—							
1979-80	364.1	612.0	146.3	329.1	1,451.4	2,193.5	2,950.2
1980-81	407.1	620.0	162.1	373.1	1,562.2	2,181.6	3,054.7
1981-82	501.0	706.8	179.0	397.0	1,783.8	2,333.1	3,525.1
Other businesses(*b*)—							
1979-80	—	0.1	0.4	211.6	212.1	230.7	137.9
1980-81	—	0.1	0.4	228.2	228.7	240.0	147.2
1981-82	—	0.1	0.4	247.8	248.3	257.6	161.3
Total all businesses—							
1979-80	**364.1**	**612.0**	**146.7**	**540.7**	**1,663.5**	**2,424.2**	**3,088.1**
1980-81	**407.1**	**620.1**	**162.4**	**601.4**	**1,790.9**	**2,421.5**	**3,201.9**
1981-82	**501.0**	**706.9**	**179.4**	**644.8**	**2,032.1**	**2,590.7**	**3,686.4**

(*a*) Includes new and used motor cycles, boats, caravans, trailers and motor parts and accessories but excludes panel vans, utilities, trucks, tractors and other vehicles normally used for commercial purposes. (*b*) Businesses operating retail establishments, unincorporated finance businesses and businesses other than wholesalers and manufacturers.

INSTALMENT CREDIT FOR RETAIL SALES BY TYPE OF CREDIT: AMOUNT FINANCED BY COMMODITY GROUP, AUSTRALIA

($ million)

	Motor cars and station wagons		*Other motor vehicles (a)*	*Household and personal goods*	*Total*
	New	*Used*			
Hire purchase—					
1979-80	289.6	470.5	107.2	151.3	1,018.5
1980-81	315.6	467.1	120.8	183.6	1,087.1
1981-82	394.1	538.1	139.4	180.4	1,252.0
Other instalment credit—					
1979-80	74.5	141.5	39.6	389.5	645.0
1980-81	91.5	153.0	41.7	417.8	703.9
1981-82	107.0	168.8	40.0	464.4	780.2
Total instalment credit—					
1979-80	**364.1**	**612.0**	**146.7**	**540.7**	**1,663.5**
1980-81	**407.1**	**620.1**	**162.4**	**601.4**	**1,790.9**
1981-82	**501.0**	**706.9**	**179.4**	**644.8**	**2,032.1**

(*a*) Includes new and used motor cycles, boats, caravans, trailers and motor parts and accessories but excludes panel vans, utilities, trucks, tractors and other vehicles normally used for commercial purposes.

HOUSING FINANCE FOR OWNER OCCUPATION

A monthly statistical series was introduced in October 1975 to provide information on finance (secured by mortgage or other security, including secured personal loans and loans secured by contracts of sale) approved by significant lenders to individuals for the construction or purchase of dwellings for owner occupation. A lender is significant if over a financial year it approves loans to individuals for housing finance for owner occupation in excess of $250,000 or if at the end of a financial year it has balances outstanding on such loans exceeding $2 million.

The types of lenders considered in these statistics are trading and savings banks, permanent and terminating building societies, finance companies, government housing authorities and other government departments, insurance companies and credit unions.

The following tables provide information classified by type of lender and the use for which approved housing loans are intended (e.g. construction or purchase).

Purchase of newly erected dwellings represents the purchase of dwellings which have been completed or will be completed within a period of twelve months preceding the date of purchase and where the purchaser is, or will be, the first occupant.

Purchase of established dwellings represents the purchase of dwellings which have been completed for a period of greater than twelve months preceding the date of purchase or, if completed within twelve months, where the purchaser is not the original occupant.

The term *dwelling* includes houses and other dwellings where the latter is defined as a self-contained dwelling unit other than a house. (Examples of *other dwellings* are flats, home units, semi-detached cottages, villa units, town houses, etc.).

The term *number of dwelling units* refers to the number of houses and other dwellings for which loans secured by contract of sale or first mortgage only have been approved.

Comprehensive statistics on housing finance for owner occupation are available in the monthly publication *Housing Finance for Owner Occupation, Australia* (5609.0).

The following table summarises the housing finance operations of the significant lenders.

HOUSING FINANCE FOR OWNER OCCUPATION

($ million)

	Loans approved for—				
	Construction or purchase of dwellings	*Alterations and additions*	*Cancellations of loans previously approved*	*Loans advanced(a)*	*Loans approved but not advanced(a)*
1979-80	7,017.6	433.9	321.6	5,962.9	1,257.8
1980-81	7,470.8	501.8	390.3	6,461.8	1,170.0
1981-82	6,513.0	524.2	306.2	5,691.4	1,043.9

(*a*) Excludes Trading Banks; data not available.

HOUSING FINANCE FOR OWNER OCCUPATION: NUMBER DWELLING UNITS AND VALUE OF LOANS APPROVED TO INDIVIDUALS BY TYPE OF LENDER

	Banks		*Building societies*				*Credit unions and*	
	Savings	*Trading*	*Per-manent*	*Ter-minating*	*Finance companies*	*Govern-ment*	*insurance companies*	*Total*
CONSTRUCTION OF DWELLINGS								
(Number)								
1979-80	21,679	9,033	10,794	1,756	1,868	1,770	1,486	48,386
1980-81	21,358	8,613	9,873	1,442	1,462	1,968	1,405	46,121
1981-82	18,963	6,896	7,130	937	930	2,774	1,224	38,854
($ million)								
1979-80	535.1	175.7	338.8	47.1	65.7	42.6	36.5	1,241.5
1980-81	523.7	181.1	329.7	40.9	50.4	52.0	36.6	1,214.5
1981-82	486.6	154.4	256.2	28.9	36.8	75.1	31.4	1,069.4
PURCHASE OF NEWLY ERECTED DWELLINGS								
(Number)								
1979-80	11,146	4,114	10,773	1,495	1,656	4,049	1,310	34,543
1980-81	9,292	4,004	8,968	1,306	1,705	3,185	947	29,407
1981-82	8,249	3,603	5,572	1,026	1,243	2,640	768	23,101
($ million)								
1979-80	265.0	79.0	343.5	39.2	66.3	96.1	31.7	920.7
1980-81	238.0	80.0	306.2	37.6	75.0	84.6	27.5	848.8
1981-82	227.9	79.6	215.0	31.7	66.2	74.6	24.4	719.3
PURCHASE OF ESTABLISHED DWELLINGS								
(Number)								
1979-80	79,905	30,593	57,826	3,326	7,534	6,440	7,744	193,368
1980-81	79,197	32,642	55,113	2,897	10,991	7,736	7,592	196,168
1981-82	74,771	30,202	38,891	2,229	6,179	7,823	7,098	167,193
($ million)								
1979-80	1,897.3	578.8	1,683.6	88.4	272.5	140.6	194.2	4,855.4
1980-81	1,959.3	691.8	1,779.1	82.3	467.6	199.8	227.5	5,407.5
1981-82	1,934.6	650.3	1,344.3	70.1	288.7	219.4	217.0	4,724.4
TOTAL								
(Number)								
1979-80	112,730	43,740	79,393	6,577	11,058	12,259	10,540	276,297
1980-81	109,847	45,259	73,954	5,645	14,158	12,889	9,944	271,696
1981-82	101,983	40,701	51,593	4,192	8,352	13,237	9,090	229,148
($ million)								
1979-80	2,697.3	833.4	2,366.0	174.8	404.5	279.4	262.3	7,017.6
1980-81	2,721.1	952.9	2,415.1	160.8	593.0	336.4	291.6	7,470.8
1981-82	2,649.1	884.3	1,815.4	130.7	391.6	369.1	272.8	6,513.0

NEW CAPITAL RAISINGS BY COMPANIES LISTED ON AUSTRALIAN STOCK EXCHANGES

Information relating to capital raised by companies listed on Australian Stock Exchanges is given in the following tables.

These statistics cover capital raised through share and debenture subscriptions and by way of deposits, unsecured notes and loans secured over the entire assets of the company. The following funds are excluded from the collection: (a) all capital raised from Australian banks (other than direct equity investment), i.e. overdrafts, mortgage loans, term loans or debentures; (b) temporary advances or short-term deposits from any source; and (c) complete or partial issues by Australian companies on overseas markets taken up through overseas brokers.

Listed companies are companies incorporated in Australia whose shares, debentures or other securities are listed on one or more of the Australian Stock Exchanges. For such companies new capital includes: (a) all issues of ordinary shares if any ordinary shares are listed; (b) all issues of preference shares if any preference shares are listed; and (c) all issues of debentures, unsecured notes, secured and unsecured loans and deposits if any shares or other securities are listed.

The following notes relate to specific items in the tables:

New money

This is the net amount of cash transferred from the 'investing public' to the 'company sector'. For this purpose the *investing public* is defined to include all non-company subscribers, Australian life insurance companies, Commonwealth Government and private superannuation funds and banks. In practice, it is necessary to include in *new money* most subscriptions by companies holding less than 5 per cent of the ordinary shares of an issuing company as it is not practicable to separately identify all such subscriptions. However, where large subscriptions by companies holding less than 5 per cent of the ordinary shares in the issuing company are identified they are not included in *new money*. Subscriptions by Australian life insurance companies and Commonwealth Government and private superannuation funds are included in *new money* irrespective of their holdings of ordinary shares in the issuing company.

Amount not involving new money

This amount includes cash subscriptions received by issuing companies from associated companies. Also included are amounts which, although subscribed by the 'investing public' (i.e. subscribers other than 'associated companies'), are not retained by the issuing company or its associates, but are used to redeem shares, debentures or unsecured notes, etc., or are used to purchase from individuals existing shares, debentures, etc., in other companies, including existing shares, etc. in associated and subsidiary companies, and therefore do not represent a net transfer of cash from the 'investing public' to the companies. In the tables which follow, the *amount not involving new money* is obtained by deducting the amount of *new money*, from the total cash raised.

LISTED COMPANIES: NEW CAPITAL RAISED THROUGH ISSUES OF SHARES(a) AND THROUGH DEBENTURES, UNSECURED NOTES, LOANS AND DEPOSITS

($ million)

	Share capital								
	Total amount of issues commenced			*Cash raised during period*			*Debentures, unsecured notes, etc.*		
	Total amount including premiums etc.	*Type of consideration*			*Amount not involving new money*	*New money*	*Total amount raised (d)*	*Amount not involving new money (d)*	*New money*
		Other than cash(b)	*Cash*	*Total(c)*					
Year ended June—									
1977 . . .	832.5	278.9	553.6	524.3	53.0	471.3	7,488.7	6,279.0	1,209.6
1978 . . .	793.3	295.1	498.0	539.3	189.7	349.6	6,734.8	5,615.7	1,119.3
1979 . . .	919.5	372.9	546.5	513.1	183.0	330.2	7,532.1	6,653.7	878.4
1980 . . .	2,211.9	824.6	1,387.3	1,336.7	255.1	1,081.6	9,378.0	7,924.6	1,453.4
1981 . . .	4,171.0	1,642.2	2,528.8	2,625.7	479.0	2,146.8	12,682.5	11,066.1	1,616.4
1982 . . .	2,269.6	890.1	1,379.4	1,593.7	290.2	1,303.4	15,453.2	13,639.8	1,813.5

(a) Includes share subscriptions by overseas investors to issues in Australia. (b) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (c) Includes calls on issues commenced in earlier years. (d) Includes conversions, renewals, etc.

LISTED COMPANIES: NEW MONEY RAISED IN SHARES AND DEBENTURES, UNSECURED NOTES, LOANS AND DEPOSITS—INDUSTRY GROUPS

($ million)

	Manufacturing (a)	*Finance and property(b)*	*Commerce(c)*	*Mining(d)*	*Other(e)*	*All industries*
			SHARES			
Year ended June—						
1977	181.7	212.2	9.5	53.9	14.2	471.3
1978	142.3	100.9	41.9	43.1	21.4	349.6
1979	95.8	74.3	9.9	122.4	27.8	330.2
1980	419.9	119.8	55.2	396.1	90.7	1,081.6
1981	892.3	119.8	130.9	905.6	98.2	2,146.8
1982	479.7	116.3	91.1	501.3	115.0	1,303.4
			DEBENTURES, UNSECURED NOTES, LOANS AND DEPOSITS			
Year ended June—						
1977	147.4	939.7	31.3	67.6	23.4	1,209.6
1978	134.6	907.3	50.5	(f)—19.6	46.2	1,119.3
1979	302.5	605.9	8.2	(f)—57.8	19.4	878.4
1980	409.9	887.7	86.3	15.6	53.9	1,453.4
1981	337.4	1,145.3	57.1	5.8	70.6	1,616.4
1982	247.9	1,500.0	153.8	(f)—98.6	10.3	1,813.5
			TOTAL NEW MONEY RAISED			
Year ended June—						
1977	329.1	1,151.9	40.8	121.5	37.6	1,680.9
1978	276.9	1,008.2	92.4	23.5	67.6	1,468.9
1979	398.3	680.2	18.1	64.6	47.2	1,208.6
1980	829.8	1,007.5	141.5	411.7	144.6	2,535.0
1981	1,229.7	1,265.1	188.0	911.4	168.8	3,763.2
1982	727.7	1,616.3	244.9	402.7	125.4	3,116.9

(*a*) Includes extracting, refining, founding, engineering, metalworking, assembly and repairs. (*b*) Includes share capital raised by banks and insurance companies. (*c*) Includes oil distribution and primary produce dealing. (*d*) Includes oil exploration. Excludes smelting, refining etc., which is classified to manufacturing. (*e*) Includes primary production. (*f*) Excess of repayments over receipts.

RELATED PUBLICATIONS

Current and more detailed information on the subjects dealt with in this chapter is contained in the following publications:

Monthly Summary of Statistics, Australia (1304.0) *Savings Banks, Australia* (5602.0) (monthly) *Major Trading Banks, Australia* (5603.0) (monthly) *Banking, Australia* (5605.0) (quarterly) *Housing Finance for Owner Occupation, Savings Banks and Trading Banks, Australia* (5608.0) (monthly) *Housing Finance for Owner Occupation, Australia* (5609.0) (monthly) *Housing Finance for Owner Occupation, Permanent Building Societies, Australia* (5610.0) (monthly) *Finance Companies, Australia* (5614.0) (monthly) *Finance Companies: Assets, Liabilities, Income and Expenditure, Australia* (5616.0) (annual) *Financial Corporations Statistics, Australia* (5617.0) (monthly) *Credit Unions: Assets, Liabilities, Income and Expenditure, Australia* (5618.0) (annual) *General Insurance, Australia* (5620.0) (annual) *Life Insurance, Australia* (5621.0) (monthly) *Life Insurance, Australia* (5622.0) (annual) *New Capital Raisings by Companies Listed on Australian Stock Exchanges* (5628.0) (quarterly) *Instalment Credit for Retail Sales, Australia* (5631.0) (monthly) *Permanent Building Societies: Assets, Liabilities, Income and Expenditure, Australia* (5632.0) (annual) *Terminating Building Societies: Assets, Liabilities, Income and Expenditure, Australia* (5633.0) (annual).

CHAPTER 22

PUBLIC FINANCE

This chapter deals with the financial activities of the organisations which make up the three levels of government in the Australian political system—Commonwealth, State and Local—and which collectively constitute the public sector. An account is given of the activities of each level of government, with particular emphasis being given to Commonwealth authorities. Tables are then presented which bring together the transactions of all public authorities to highlight the role in the Australian economy of the public sector as a whole. Then follows a section on government borrowing activities at all levels.

COMMONWEALTH GOVERNMENT FINANCE

Financial provisions of the Constitution

The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth of Australia are contained in Sections 81 to 105A of the Commonwealth Constitution (*see* pages 16–19).

Two other sections which have a most important bearing on questions of Commonwealth finance are Sections 69 and 51. Section 69 provides for the transfer from the States to the Commonwealth of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments.

Sections 87 and 96 of the Constitution deal with the financial relations between the Commonwealth and the States. The full text of the Financial Agreement of 1927 was given in Year Book No. 31, page 21; accounts of this Agreement as affected by subsequent Agreements were included in later issues of the Year Book up to No. 37 (*see* pages 685–90); details of the main provisions appeared in further issues of the Year Book up to No. 50 (*see* pages 952–3); and details of current provisions for financial assistance to the States are given on pages 600-605 of this Year Book.

The *Audit Act* 1901 lays down the procedure which must be followed in accounting for the receipt and disbursement of public funds. The general administration of Commonwealth Government finances is the responsibility of the Commonwealth Minister for Finance.

Commonwealth Government Budget

The Commonwealth Government Budget records the transactions of those authorities of the Commonwealth Government whose receipts and payments are summarised in the statements of Public Account balances. In 1981–82 the change in cash balances was represented by the following—

	$'000
Cash receipts of the Consolidated Revenue Fund	40,592,799
plus cash receipts of Loan Fund	34,169,535
plus cash receipts of Trust Fund	14,131,068
Total	*88,893,402*
less cash payments from Consolidated Revenue Fund	40,592,799
less cash payments from Loan Fund	33,990,678
less cash payments from Trust Fund (including increase in investments of the Trust Fund)	14,460,497
Total	*89,043,974*
equals decrease in cash balances	150,573

Revenues from taxation and other sources are paid into the Consolidated Revenue Fund, from which the main expenditures are for defence, social services, payments to the States and general administration. The Trust Fund covers special transactions outside the ordinary operations of departmental expenditures, such as pension funds and moneys held for expenditure by the Commonwealth Government at some future time. The Loan Fund receives its funds from the sale of Commonwealth Government securities, and the expenditures from the Fund are made in accordance with the purpose of issue

of each loan. The main disbursements from the Loan Fund are to the States by way of distribution of the proceeds of loans raised by the Commonwealth Government on their behalf and by capital assistance grants, the remaining disbursements being mainly for Commonwealth Government purposes.

The estimated receipts and outlay of the Budget for 1982–83 are set out in the table which follows, together with figures for the years 1977–78 to 1981–82. The national accounting presentation of the Budget is shown in order to be consistent with other transactions figures given in this chapter.

It should be noted that some transactions undertaken by authorities covered by the Budget are not reflected in the change in cash balances, usually because they are not cash transactions or because a receipt and a payment are offset against each other so that only a net amount is included in published totals. The national accounting presentation of the Budget includes these additional transactions, further details of which may be found in Budget Paper No. 1, *Budget Statements 1982–83*.

OUTLAYS AND RECEIPTS OF THE COMMONWEALTH BUDGET

($ million)

(*Source:* Budget Paper No. 1 *Budget Statements 1982-83*)

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83 Budget Estimates*
Outlay—						
Net expenditure on goods and services—						
Current	5,125	5,546	6,128	7,253	8,509	9,524
Capital(*a*)	388	298	290	442	421	568
Total	5,512	5,844	6,417	7,696	8,930	10,092
Transfer payments—						
Personal benefit payments	8,280	9,108	9,910	11,232	13,089	15,149
Unfunded employee retirement benefits	139	162	181	207	252	298
Grants to States and local government authorities	8,738	9,349	10,302	11,514	12,642	14,404
Grants to the Northern Territory	53	290	361	469	539	648
Interest paid	1,649	1,971	2,223	2,561	2,881	3,243
Transfers overseas	417	477	520	576	667	728
Subsidies	372	445	589	746	859	961
Grants for private capital purposes	124	116	165	137	204	267
Purchase of existing assets	15	22	20	16	25	36
Total	19,788	21,940	24,269	27,457	31,159	35,735
Total expenditure	25,300	27,783	30,686	35,153	40,089	45,827
Net advances—						
States	1,261	1,129	817	853	782	864
Northern Territory	–	-2	79	83	80	83
Commonwealth authorities	101	66	110	179	344	285
Other sectors	76	37	-32	22	43	9
Total	1,438	1,230	974	1,138	1,250	1,241
Total outlay	*26,737*	*29,014*	*31,660*	*36,291*	*41,339*	*47,067*
Receipts—						
Taxation—						
Indirect taxes	5,834	7,178	8,584	9,958	11,182	12,868
Income tax on companies	3,213	3,151	3,547	4,856	5,258	5,486
Income tax on persons	12,129	12,804	15,040	17,543	21,224	23,346
Estate and gift duties	103	83	49	17	4	1
Tax on Certain Bank Transactions	–	–	–	–	–	80
Other direct taxes, fees, fines, etc.	15	18	19	21	28	35
Unfunded employee retirement contributions	61	63	67	73	86	97
Less remissions	8	8	1	1	2	1
Total	21,346	23,288	27,305	32,467	37,784	41,834
Other receipts—						
Interest, rent and dividends	1,834	1,946	2,033	2,280	2,585	2,939
Gross income of public enterprises	225	300	265	240	385	475
Net sales of existing assets(*b*)	22	24	24	195	36	146
Total	2,081	2,270	2,322	2,715	3,006	3,560
Total receipts	*23,427*	*25,558*	*29,627*	*35,181*	*40,790*	*45,393*
Deficit	**3,310**	**3,455**	**2,033**	**1,110**	**549**	**1,674**

(*a*) Expenditure on new fixed assets *plus* increase in stocks *less* sales of previously rented houses. (*b*) Excludes sales of previously rented houses.

Financing of the Commonwealth Government deficit

The deficit shown in the last line of the preceding table represents the net excess of Budget outlay over receipts. In other words, the estimated deficit shown for 1982–83 represents the Commonwealth Government budget sector's 'financing requirements'. Most such transactions involve the issue, repurchase, redemption or acquisition of Commonwealth Government securities, but some involve or are represented by changes in other assets or liabilities of the Commonwealth Government.

Specifically the deficit is financed as follows:

Net sales of Commonwealth Government securities (new issues *less* redemptions *less* net purchases from Commonwealth Government balances in the Trust Fund);

less net purchases of other investments from Commonwealth Government balances in the Trust Fund

plus minor items of indebtedness (such as borrowing by Australian Capital Territory housing trust account)

less net additions to cash balances, and funds provided for the International Monetary Fund and the Australian Wheat Board.

A table summarising the financial transactions of the Commonwealth Government budget sector for recent years is given on page 343, Statement No. 6 in 1982–83 *Budget paper* No. 1.

COMMONWEALTH AUTHORITIES

In addition to the group of authorities of the Commonwealth Government whose transactions are covered by the Budget (i.e. itemised in the Consolidated Revenue Fund, the Loan Fund, or recorded in a Trust Fund), there are a number of organisations owned or controlled by the Commonwealth Government whose transactions do not, for the most part, pass through the Public Account. This category includes public enterprises such as the Australian Postal Commission, Australian Telecommunications Commission, Overseas Telecommunications Commission, Qantas, Trans-Australia Airlines, the Australian Shipping Commission, the Snowy Mountains Hydro-electric Authority, the Reserve Bank and the Commonwealth Banking Corporation. Public enterprises, it should be noted, are bodies which aim at covering the bulk of their expenses by revenue either from sales of goods and services (trading enterprises), or by charges for services and net interest receipts (financial enterprises). As well as these enterprises, there are other public authorities which record most of their transactions outside the Public Account but have only minor independent sources of revenue and are financed almost entirely from funds voted to them each year from the Consolidated Revenue Fund. In order that the national accounting presentation may indicate as completely as possible the direct effect of the budget on demand, appropriations to this last group of authorities are treated as final expenditure in the Budget. Authorities in this category include the Australian Broadcasting Commission, Australian National University, National Capital Development Commission, and the Australian Atomic Energy Commission.

The transactions of Commonwealth Government bodies not covered by the Budget may be brought together and consolidated with the transactions recorded in the Budget to yield figures of the transactions of all Commonwealth Federal authorities. The remaining tables in this section have been prepared on that basis.

Public financial enterprises have been omitted from the consolidated accounts presented here largely on the ground that combining the income and outlay and capital financing transactions of the Reserve Bank, the publicly owned trading and savings banks, government insurance offices and other public financial institutions with the equivalent transactions of public trading enterprises and general government seems to provide a less meaningful account of public sector activity. For example, omission of the borrowing and lending activities of the government banks and the Reserve Bank allows attention to be centred on the borrowing and lending activities of general government and public trading enterprises, which are quite different in nature and economic effect from the financing activities of the banking system.

Coverage—Northern Territory government authorities

On 1 July 1978 the Northern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximating those of a State. In public authority finance statistics Northern Territory government authorities are grouped with State and local authorities from 1978–79 onwards. This results in a discontinuity in time series for the financial transactions of Commonwealth Government authorities because:

- In the period up to and including 1977–78 Commonwealth spending on State-type services in the Northern Territory is included under the various Commonwealth outlay categories such as final consumption expenditure and gross capital formation. Similarly, State-type taxation and income from N.T. public enterprises is included in the respective Commonwealth receipt categories.

- From 1978–79 onwards Commonwealth spending in respect of the Northern Territory consists to a large extent of grants and advances to Northern Territory government authorities while State-type taxation and income from N.T. public enterprises are no longer part of Commonwealth receipts.
- Not all State-type functions were fully transferred to the Northern Territory Government from 1 July 1978. Responsibility for health services was transferred on 1 January 1979 and responsibility for education services was transferred from 1 July 1979. The Commonwealth retains responsibility for certain State-type matters such as uranium mining and Aboriginal affairs (other than provision of services to Aboriginal communities).

COMMONWEALTH AUTHORITIES, 1980-81

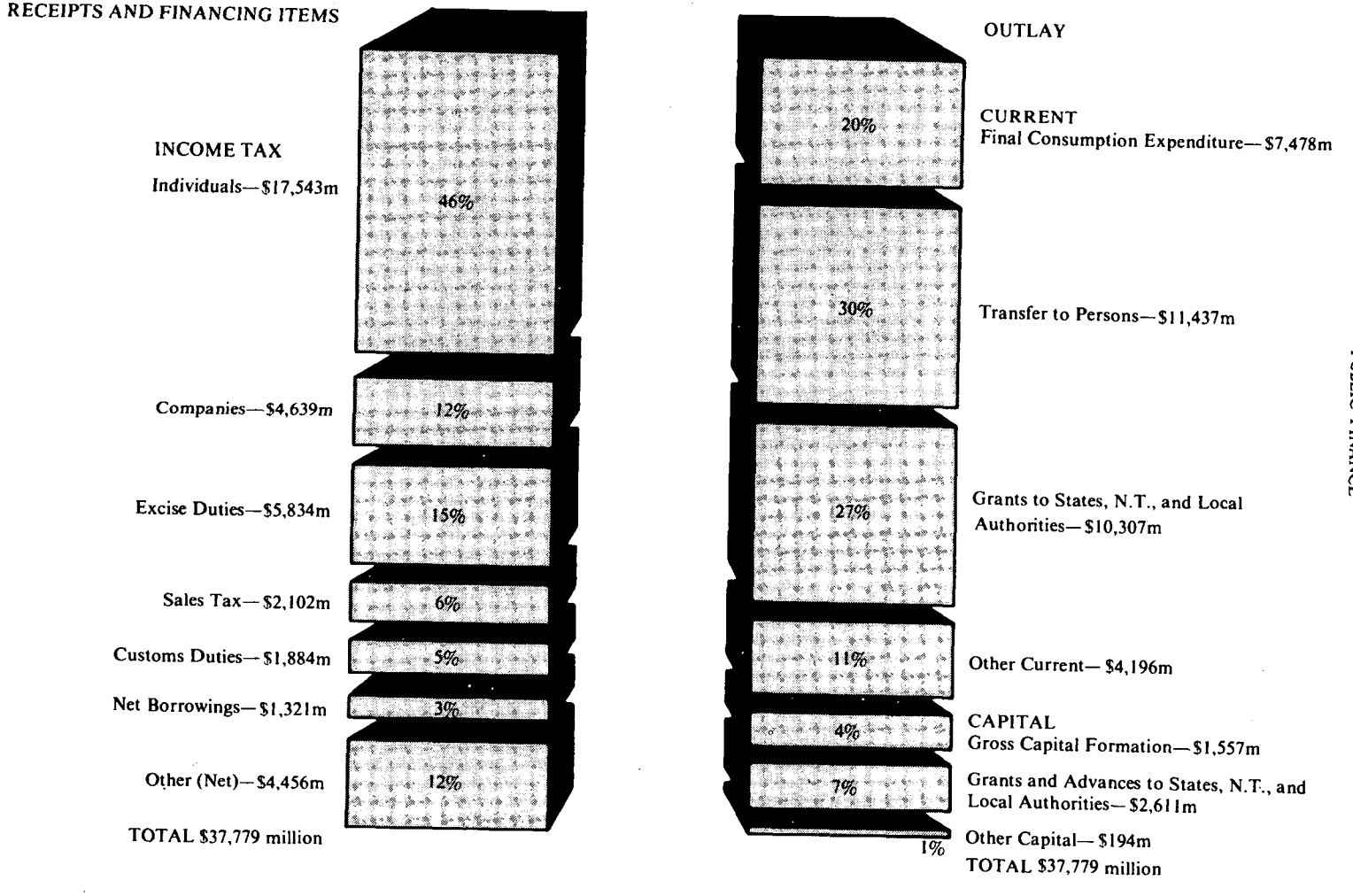


PLATE 42

Summary of outlay and receipts

The outlay and receipts, and outlay classified by purpose, of all Commonwealth authorities for the latest six-year period are given in the following tables.

COMMONWEALTH AUTHORITIES(*a*): OUTLAY AND RECEIPTS

($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
OUTLAY						
Current outlay—						
Final consumption expenditure	4,155	4,737	5,293	5,742	6,340	7,478
Interest, etc., paid	972	1,440	1,733	2,070	2,355	2,734
Transfers to persons—						
Personal benefit payments	6,091	7,390	8,281	9,105	9,899	11,230
Unfunded employee retirement benefits	106	121	139	162	181	207
Subsidies	271	287	380	513	674	887
Transfers overseas	370	388	417	475	520	575
Grants to States, Northern Territory and local government authorities	5,524	6,115	7,222	8,147	9,092	10,307
Total current outlay	*17,489*	*20,478*	*23,465*	*26,214*	*29,061*	*33,418*
Capital outlay—						
Expenditure on new fixed assets	1,578	1,667	1,772	1,498	1,603	1 744
Expenditure on existing assets	8	4	−14	−79	−38	−254
Increase in stocks	−75	−50	−121	−206	−67	67
Grants for private capital purposes	179	110	130	132	171	141
Grants to States, Northern Territory and local government authorities	1,567	1,546	1,516	1,492	1,570	1,676
Advances to States, Northern Territory and local government authorities	1,372	1,278	1,261	1,127	896	936
Advances to other sectors	178	110	52	18	6	53
Total capital outlay	*4,808*	*4,665*	*4,596*	*3,982*	*4,141*	*4,363*
Total outlay	**22,297**	**25,143**	**28,064**	**30,197**	**33,201**	**37,779**
RECEIPTS AND FINANCING ITEMS						
Receipts—						
Taxes, fees, fines, etc.	16,938	19,806	21,501	23,534	27,552	32,775
Income from public enterprises	434	657	819	1,011	993	1,014
Interest received from the States and the Northern Territory	855	1,032	1,174	1,278	1,376	1,569
Other interest, etc., received	119	156	202	179	233	269
Total receipts	*18,346*	*21,651*	*23,696*	*26,002*	*30,154*	*35,627*
Financing items—						
Depreciation allowances	406	442	494	550	596	679
Funds provided for (−), or received from (+), International Monetary Fund	–	–	–	28	61	−107
Net sale of securities—						
Treasury bills and notes	−770	363	194	1,547	705	1,312
Commonwealth Government securities	3,166	2,098	2,979	2,470	893	−187
Public corporations securities	18	446	331	193	442	196
Net receipts of private trust funds	217	60	152	155	175	293
Reduction in cash and bank balances	264	−297	214	−480	524	−433
Reduction in securities holdings	568	166	−232	−344	−589	206
Other funds available (including errors and omissions)—						
Other reserves and provisions	19	15	9	39	17	192
Capital transfers	146	151	167	41	59	
Change in creditors/debtors	−70	25	−4	−59	93	
Other	-12	22	63	54	72	
Total financing items	*3,951*	*3,492*	*4,368*	*4,194*	*3,047*	*2,152*
Total funds available	**22,297**	**25,143**	**28,064**	**30,197**	**33,201**	**37,779**

(*a*) Excludes financial enterprises.

COMMONWEALTH AUTHORITIES: OUTLAY, CLASSIFIED BY PURPOSE

($ million)

Purpose		*1978–79*		*1979–80*		*1980–81*
General public services—						
General administration, n.e.c.	910.3		1,005.9		1,191.1	
External affairs	600.2		664.1		746.3	
Law, order and public safety	172.8		198.6		215.2	
General research	224.1		272.3		314.2	
Total general public services		*1,907.3*		*2,140.9*		*2,466.8*
Defence		2,605.9		3,007.8		3,536.8
Education—						
General administration, regulation and research	32.6		31.9		28.4	
Transportation of students	3.4		2.1		2.6	
Primary and secondary education	829.5		817.7		947.3	
Vocational training	173.7		199.7		241.0	
University education	810.2		875.0		952.6	
Other higher education	562.3		583.2		650.1	
Other education programs	111.0		98.6		109.7	
Total education		*2,522.7*		*2,608.1*		*2,931.7*
Health—						
General administration, regulation and research	109.0		92.5		99.4	
Hospital and clinical services	1,802.3		1,972.2		2,313.5	
Other health services	986.0		1,097.8		1,229.6	
Total health		*2,897.3*		*3,162.4*		*3,642.5*
Social security and welfare—						
General administration, regulation and research	157.4		184.1		213.5	
Care of and assistance to—						
Aged persons	3,343.5		3,643.5		4,076.8	
Incapacitated and handicapped persons	794.9		901.0		1,006.6	
Unemployed and sick persons	1,061.0		1,104.7		1,240.5	
Ex-servicemen	895.7		1,005.8		1,238.6	
Widowed and deserted spouses	752.1		845.9		1,068.5	
Families and children	1,038.0		1,055.5		1,000.8	
Other social security and welfare services	49.8		54.2		63.3	
Total social security, etc.		*8,092.4*		*8,794.7*		*9,908.6*
Housing and community amenities—						
Housing	315.0		253.6		264.1	
Community and regional development	111.7		99.9		94.8	
Protection of the environment	14.3		14.5		11.4	
Community amenities, n.e.c.	0.5		1.2		1.2	
Total housing, etc.		*441.6*		*369.2*		*371.6*
Recreation and culture—						
General administration, regulation and research	0.1		0.3		0.4	
Cultural facilities	37.0		42.6		57.1	
Support of the creative and performing arts	24.6		25.2		28.1	
Broadcasting services and film production	186.2		206.2		264.3	
Recreational facilities and services	23.6		33.0		37.9	
Other programs	7.9		11.0		12.5	
Total recreation, etc.		*279.2*		*318.3*		*400.4*
Economic services—						
General administration, regulation and research	453.9		449.6		557.0	
Agriculture, forestry and fishing	308.1		385.8		489.4	
Mining, manufacturing and construction	137.7		369.3		220.0	
Electricity and water supply	17.2		34.7		70.6	
Transport and communication	1,801.0		2,029.9		2,324.5	
Other economic services	89.8		75.7		155.1	
Total economic services		*2,807.7*		*3,344.9*		*3,816.6*
Other purposes—						
General purpose inter-authority transfers	6,549.5		7,089.6		7,899.7	
Natural disaster relief	23.6		10.3		70.6	
Interest	2,069.6		2,354.7		2,734.1	
Total other purposes		*8,642.7*		*9,454.6*		*10,704.4*
Total outlay, all purposes		**30,196.8**		**33,200.9**		**37,779.3**
Of which—						
Current outlay		26,214.2		29,059.8		33,417.6
Capital outlay		3,982.6		4,141.1		4,361.7

Main components of outlay

The following tables give details of the main components of the outlay of Commonwealth authorities, i.e. final consumption expenditure, expenditure on new fixed assets, personal benefits payments, subsidies and payments to the States and the Northern Territory. More detailed information relating to outlay classified by economic type and purpose, and outlay under specific purpose headings such as education, social security and welfare, is given in *Commonwealth Government Finance* (5502.0). Additional details of public authorities' transactions engaged in particular fields of activity, e.g. health, may be found in the relevant chapters of this Year Book.

Final consumption expenditure and expenditure on new fixed assets

Final consumption expenditure consists of current expenditure on goods and services by public authorities other than those classified as enterprises, *less* any charges made for goods and services which they themselves provide. Expenditure on new fixed assets consists of purchases of new durable assets *less* sales of previously rented dwellings. Purchases of defence equipment are treated as current expenditure and expenditure on new construction and maintenance of roads is treated as capital. The following tables show dissections by purpose of final consumption expenditure and expenditure on new fixed assets for the six years ended 1980–81.

COMMONWEALTH AUTHORITIES: FINAL CONSUMPTION EXPENDITURE CLASSIFIED BY PURPOSE

($ million)

Purpose	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
General public services—						
General administration	665	728	843	866	953	1103
External affairs	92	98	106	116	136	157
Law, order and public safety	98	112	138	150	168	203
General research	131	152	170	183	210	251
Total general public services	*986*	*1,090*	*1,257*	*1,315*	*1,467*	*1,714*
Defence	1,680	1,999	2,184	2,401	2,786	3,291
Education	195	235	256	287	250	284
Health	416	466	504	504	534	616
Social security and welfare	194	212	249	283	321	380
Housing and community amenities	67	52	49	47	41	41
Recreation and culture	203	213	228	248	278	342
Economic services—						
General administration, regulation and research	167	206	284	353	338	420
Agriculture, forestry, fishing	114	125	135	144	157	178
Mining, manufacturing and construction	17	21	29	28	34	36
Transport and communication	93	95	96	109	103	142
Other	19	21	22	24	31	35
Total economic services	*410*	*469*	*566*	*657*	*662*	*811*
Other purposes	5	–	–	–	–	–
Grand total	**4,155**	**4,737**	**5,293**	**5,742**	**6,340**	**7,478**

COMMONWEALTH AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS, CLASSIFIED BY PURPOSE

I. GENERAL GOVERNMENT

($ million)

Purpose	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
General public services—						
General administration	62.2	60.0	49.7	39.9	60.9	86.0
External affairs	20.3	25.5	24.4	12.0	9.1	14.4
Law, order and public safety	9.4	10.9	15.3	22.1	30.0	11.5
General research	32.1	23.6	18.0	29.6	49.3	61.1
Total general public services	*124.0*	*120.1*	*107.4*	*103.7*	*149.3*	*173.0*
Education	73.4	62.2	54.2	50.7	33.2	31.6
Health	57.7	58.3	53.5	36.5	31.4	22.8
Social security and welfare	12.9	8.5	6.7	5.6	2.9	3.7
Housing and community amenities	131.1	112.1	61.3	15.5	6.2	3.1
Recreation and culture	32.1	29.8	25.2	27.7	34.2	51.0
Economic services—						
General administration, regulation and research	6.4	8.8	6.1	7.6	11.6	8.8
Agriculture, forestry, fishing	10.6	8.1	16.0	6.1	7.4	6.3
Mining, manufacturing and construction	1.8	1.0	1.2	0.6	0.7	0.7
Transport and communication	57.5	46.0	73.6	49.0	50.0	71.5
Other economic services	–	–	0.5	0.1	0.1	0.3
Total economic services	*76.3*	*63.8*	*97.4*	*63.4*	*69.8*	*87.7*
Other purposes	5.1	–	–	–	–	–
Total general government	*512.6*	*454.7*	*405.8*	*303.1*	*327.0*	*372.9*

II. PUBLIC ENTERPRISES

($ million)

Purpose	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Public trading enterprises—						
General public services	1.5	0.9	0.5	0.3	—1.4	1.4
Housing and community amenities—Housing	18.7	23.5	17.9	2.3	2.6	1.4
Sewerage and drainage	24.8	28.8	14.8	5.0	3.6	1.7
Economic services—						
Technical services, n.e.c.	0.2	0.2	0.5	0.1	0.1	0.1
Mining activities	–	–	–	16.5	60.4	–
Manufacturing activities	11.6	5.8	5.5	3.8	4.6	8.0
Electricity, water supply	31.6	48.5	52.0	17.9	7.7	12.7
Transport and communication—						
Air transport	67.5	41.0	145.8	136.9	160.5	115.7
Rail transport	45.5	35.9	40.2	46.3	49.8	40.6
Sea transport	46.6	136.9	138.3	36.6	7.1	10.0
Urban transit systems	5.7	1.6	7.2	6.7	0.6	1.2
Pipelines	51.3	18.2	2.1	7.7	2.4	17.7
Communications services	756.3	855.1	913.4	904.8	976.6	1,158.0
Total	*973.0*	*1,088.9*	*1,247.0*	*1,139.1*	*1,197.1*	*1,343.2*
Other economic services	4.5	15.3	27.6	10.2	0.8	2.6
Total public trading enterprises	*1,065.8*	*1,212.0*	*1,365.7*	*1,195.3*	*1,275.6*	*1,371.0*

Personal benefit payments

Total personal benefit payments during the latest six years are shown in the next table. Further information relating to items in this table is given in the appropriate chapters of this Year Book.

COMMONWEALTH AUTHORITIES: PERSONAL BENEFIT PAYMENTS
($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
General public services—						
General research—						
Queen Elizabeth fellowships	584	528	567	531	748	-
Marine Science grants and fellowships	-	-	-	-	-	2,265
Assistance to inventors	20	32	33	34	76	76
Education	162,455	193,970	212,647	224,928	225,232	244,341
Health	1,369,405	1,140,399	1,010,432	1,198,068	1,341,824	1,583,252
Social security and welfare	4,506,592	6,031,946	7,031,002	7,652,463	8,307,069	9,367,708
Recreation—						
Overseas study fellowships	193	190	102	38	1	5
Economic services—						
General administration, regulation and research—						
Hostel tariffs of unemployed migrants	148	195	728	1,892	2,560	3,570
Maintenance of migrant families	6,498	6,035	5,510	6,766	7,629	8,990
Stevedoring industry—attendance money, etc.	2,692	2,305	988	-	-	-
Widows' training scheme	47	21	-	-	-	-
National employment training scheme	31,056	12,809	16,163	16,931	10,511	-
Apprenticeship training	8,662	1,738	2,966	3,116	3,246	4,231
Skills training—individuals	-	-	-	-	-	3,728
Youth training—						
School to work transition	-	-	-	-	-	4,703
Pre-apprenticeship allowances	-	-	-	-	-	1,587
Special training—						
Aboriginals	-	-	-	-	-	3,564
Disabled persons	-	-	-	-	-	866
Other work and training assistance	-	-	-	-	-	1,148
Other	-	-	-	-	-	-
Total	*49,103*	*23,103*	*26,355*	*28,705*	*23,946*	*32,387*
Agriculture, forestry, fishing—						
War service land settlement—rent remissions, etc.	6	1	-	-	-	-
Allowances to agricultural trainees	-	-	-	-	-	-
Total	*6*	*1*	-	-	-	-
Mining, manufacturing and construction—						
Joint Coal Board—Welfare fund	4	4	3	7	14	43
Total economic services	*49,113*	*23,108*	*26,358*	*28,712*	*23,960*	*32,430*
Other purposes	*2,882*	*201*	*2*	-	-	-
Total	**6,091,244**	**7,390,374**	**8,281,143**	**9,104,774**	**9,898,910**	**11,230,077**

Subsidies

The following table shows details of Commonwealth Government outlay on subsidies and bounties. Other assistance to primary producers is included in, for example, tables relating to personal benefit payments and payments to the States, and additional information is given in Chapter 13, Agricultural Industries.

COMMONWEALTH AUTHORITIES: SUBSIDIES
($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
General public services—						
Departmental cafeteria compensation	125	–	10	–	–	–
General Services	–	–	–	–	25	36
Health—						
Serum laboratories	1,242	250	1,200	2,100	2,938	3,653
Health insurance organisations subsidy	–	1,748	9,064	6,588	2,638	488
Total	*1,242*	*1,998*	*10,264*	*8,688*	*5,576*	*4,141*
Housing and community amenities—						
N.T. Housing Commission assistance	50	96	429	–	–	–
Recreation and related cultural services—						
Canberra Theatre Trust subsidy	143	167	199	191	376	–
Economic services—						
Assistance to employers—						
Stevedoring industry assistance	28,571	27,066	21,953	16,598	15,797	16,700
Apprenticeship training	26,215	37,750	24,312	28,774	40,784	64,387
Technical Services	–	–	–	–	–110	–13
Total	*54,786*	*64,816*	*46,265*	*45,372*	*56,471*	*81,074*
Assistance to agricultural and pastoral enterprises—						
Dairy products subsidy	1,275	–	5,250	12,387	17,664	1,600
Dairy industry stabilisation	–	–	52,399	80,723	91,230	84,704
Wheat prices stabilisation payments	–	41,103	6,971	67,402	4,390	60,537
Wheat Industry Stabilisation (Reimbursement of borrowing costs)	–	–	–	–	7,712	23,198
Reimbursement by Wheat Board	–	810	–	–	–	–
Phosphate fertilisers bounty	20,133	38,733	42,057	46,202	51,425	46,763
Nitrogenous fertilisers bounty	13,044	15,180	13,329	10,413	7,300	4,605
Processed milk products bounty	167	–	–	–	–	–
Poultry industry assistance	11,401	11,128	10,625	9,772	18,275	20,467
Dried vine fruits stabilisation payments	–	658	768	216	–	–
Wool marketing assistance	–	–	–	–	–	–
Apple and pear stabilisation payments	2,705	4,168	595	463	2,891	815
Apple, pear and canning fruit emergency assistance	–	–	–	–	–	–
Beef industry assistance	–	–	84,953	32,543	–	2
Meat exports to U.S.S.R.	1,240	–	–	–	–	–
Beef cattle freight subsidy	–	296	807	–	–	–
N.T. transport of stud stock	7	–	–	–	–	–
Sanctions against USSR and Iran—compensation paid	–	–	–	–	–	5,906
Other	1	–	–	–	21	9
Total	*49,973*	*112,076*	*217,754*	*260,121*	*200,908*	*248,606*
Assistance to mining enterprises—						
Oil search subsidy	186	–	–	–	–	–
Revaluation adjustment assistance, etc.	–	–	–	–	–	–
Mary Kathleen Uranium Ltd—Costs concerning borrowing of uranium	–	168	102	–	–	–
Total	*186*	*168*	*102*	–	–	–

COMMONWEALTH AUTHORITIES: SUBSIDIES—*continued*
($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Assistance to manufacturing enterprises—						
Agricultural tractor bounty	3,628	4,880	5,700	5,490	8,263	6,979
Cellulose acetate flake bounty	109	–	–	–	–	–
Book bounty	6,749	8,034	9,538	12,463	13,662	15,005
Printed sheeting subsidy	–	300	451	500	737	555
Industrial research and development grants	19,300	15,400	13,649	22,750	30,599	46,413
Ship construction subsidy	40,966	21,301	7,605	3,559	833	-164
Shipbuilding bounty	1,553	7,674	7,800	8,326	13,530	13,720
Export incentive grants	62,825	973	1,303	20,012	170,000	200,000
Export market development grants	17,076	24,079	30,000	38,001	45,000	60,000
Metal-working machine tools bounty	1,585	2,350	3,977	7,048	12,700	13,583
Structural adjustment assistance	1,120	637	–	–	–	–
Refrigeration compressors bounty	1,367	–	–	–	–	–
Electronic components assistance	973	776	293	–	–	–
ADP equipment bounty	–	–	600	654	733	890
Commercial motor vehicles bounty	–	–	–	2,384	6,177	6,333
Injection moulding equipment bounty	–	–	–	–	2,010	2,000
Paper bounty	–	–	–	–	2,060	1,176
Penicillin bounty	–	–	–	–	–	862
Refined tin bounty	–	–	–	–	–	65
Non-adjustable wrenches bounty	–	–	–	–	–	367
Ship bounty	–	–	–	–	–	4,991
Other	26	–	149	730	606	869
Total	*157,277*	*86,404*	*81,065*	*121,917*	*306,910*	*373,644*
Assistance to air transport services—						
Air services subsidy	768	675	842	753	491	739
Assistance to sea transport services—						
Tasmania shipping service subsidy	5,488	4,109	2,000	2,000	2,000	2,300
Darwin shipping subsidy	–	–	–	–	–	1,500
Tasmanian freight equalisation scheme	–	16,409	20,927	24,700	27,561	29,473
Other	48	48	50	–	–	–
Total	*5,536*	*20,566*	*22,977*	*26,700*	*29,561*	*33,273*
Assistance to communications services—						
Newspaper postage subsidy	1,000	–	–	–	–	–
Other assistance to enterprises—						
Petroleum products prices scheme	–	–	–	42,929	63,429	108,552
Petrol prices equalisation	–	–	–	–	–	–
N.T. petrol prices equalisation	–	–	72	5,124	7,348	11,775
Export finance insurance subsidy	70	298	354	1,496	2,600	4,683
Liquified petroleum gas subsidy scheme	–	–	–	–	–	20,288
Total	*70*	*298*	*426*	*49,549*	*73,377*	*145,298*
Natural disaster relief—						
N.T. freight subsidies	–	15	–	–	–	–
Total	**271,156**	**287,279**	**380,333**	**513,291**	**673,695**	**886,811**

Grants and advances to the States and the Northern Territory

Commonwealth Government financial assistance to the States and the Northern Territory takes two main forms: (i) grants for general and specific purposes, and (ii) assistance for developmental and other specific purposes in the form of repayable advances. Some information about these forms of financial assistance is given below, but for more complete information reference should be made to the Commonwealth Government Budget Paper No. 7 *Payments to or for the States, the Northern Territory and Local Government Authorities*. Further information also appears in chapters of this Year Book dealing with the specific function which the payments are designed to serve.

Grants to the States and the Northern Territory

The following tables show details of grants to the States and the Northern Territory for general and specific purposes. More detailed figures appear in *Commonwealth Government Finance* (5502.0).

COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES AND THE NORTHERN TERRITORY, 1980–81

($'000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
FOR CURRENT PURPOSES								
General public services	131	178	39	37	25	11	3	424
Defence	509	382	552	82	138	88	–	1,751
Education	696,056	609,796	291,789	191,256	190,307	58,429	9,152	2,046,785
Health	499,931	331,377	194,975	135,812	164,886	47,626	24,364	1,398,971
Social security and welfare	14,549	9,851	6,383	6,095	4,572	2,390	628	44,468
Housing and community amenities	1,848	1,481	423	1,161	1,590	314	–	6,817
Recreation and culture	139	122	76	63	51	132	245	828
Economic services	16,554	6,522	8,832	3,966	2,667	961	45,457	84,959
Other purposes—								
States' Personal Income Tax sharing entitlements	1,839,065	1,354,860	1,093,078	691,540	734,172	298,602	274,177	6,285,494
Global allocation	–	–	–	–	–	–	–	–
Special grants	–	–	6,700	–	–	–	–	6,700
Additional Assistance Grant	–	–	–	–	–	–	20,000	20,000
Interest on State debt	5,835	4,254	2,192	1,408	947	534	–	15,170
Sinking fund on State debt	13,152	10,100	5,265	5,007	3,738	2,675	–	39,937
Natural disaster relief	14,871	–	8,583	92	1,167	–	–	24,713
Debt charge assistance	–	–	–	–	–	–	12,369	12,369
Local government assistance	109,780	76,554	50,714	25,871	28,243	9,624	1,440	302,226
Establishment grants	–	–	–	–	–	–	–	–
Total other purposes	*1,982,703*	*1,445,768*	*1,166,532*	*723,918*	*768,267*	*311,435*	*307,986*	*6,706,609*
Total grants for current purposes	**3,212,416**	**2,405,477**	**1,669,600**	**1,062,390**	**1,132,501**	**421,386**	**387,835**	**10,291,605**
FOR CAPITAL PURPOSES								
Education	108,241	94,258	45,255	28,854	29,220	10,765	4,586	321,179
Health	1,020	1,689	1,088	348	394	3,529	98	8,166
Social security and welfare	14,536	8,296	5,274	3,114	2,831	1,740	–	35,791
Housing and community amenities	27,698	15,988	15,370	11,469	12,177	3,940	13,746	100,388
Recreation and culture	330	717	2,830	330	330	1,135	165	5,837
Economic services—								
General administration, regulation and research	–	–	–	–	–	–	–	–
Employment of Aboriginals	–	–	–	–	9	–	–	9
Soil and water resources management	5,980	3,535	4,970	3,105	3,729	523	1,940	23,782
Assistance to agricultural and pastoral industries	669	709	425	415	405	46	89	2,758
Electricity, gas, water supply	–	–	250	2,600	–	–	–	2,850
Rail transport	–	–	–	863	–	–	–	863
Sea transport	–	–	–	–	–	–	–	–
Road systems and regulation	198,919	128,027	128,721	52,074	77,496	34,307	21,119	640,663
Urban transit systems	15,750	13,500	7,875	4,308	1,447	1,178	–	44,058
Total economic services	*221,318*	*145,771*	*142,241*	*63,365*	*83,086*	*36,054*	*23,148*	*714,983*
Other purposes—								
Capital assistance	140,854	109,473	57,777	56,787	40,320	30,539	38,284	474,034
Natural disaster relief	815	–	6,705	–737	1,447	–	–	8,230
Total grants for capital purposes	**514,810**	**376,192**	**276,540**	**163,529**	**169,805**	**87,702**	**80,028**	**1,668,606**
TOTAL GRANTS								
Total grants to the States	**3,727,226**	**2,781,669**	**1,946,140**	**1,225,919**	**1,302,306**	**509,088**	**467,863**	**11,960,211**

COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES AND THE NORTHERN TERRITORY

($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
FOR CURRENT PURPOSES						
General public services	7,910	13,140	11,450	11,905	12,641	424
Defence	897	1,199	1,362	1,744	1,794	1,751
Education	1,133,808	1,390,758	1,517,840	1,592,322	1,771,202	2,046,785
Health	942,673	720,325	1,038,323	1,114,339	1,227,257	1,398,971
Social security and welfare	64,137	24,844	36,500	46,177	49,647	44,468
Housing and community amenities	9,863	7,425	5,834	5,540	6,114	6,817
Recreation and culture	600	600	489	282	416	828
Economic services	28,008	40,539	45,548	51,609	75,068	84,959
Other purposes—						
States' Personal Income Tax sharing entitlements(*a*)	3,072,780	3,695,594	4,316,641	4,778,669	5,415,910	6,285,494
Global allocation	–	–	–	280,000	208,857	–
Special grants	38,800	27,000	24,800	21,700	12,400	6,700
Special revenue assistance	–	–	–	–	20,000	20,000
Interest on State debt	15,170	15,170	15,170	15,170	15,170	15,170
Sinking fund on State debt	30,200	31,635	33,747	35,959	38,148	39,937
Debt charges assistance	–	–	–	–	1,573	12,369
Natural disaster payments	807	1,925	2,311	2,679	1,641	24,713
Local government assistance	79,908	140,000	165,328	179,427	222,801	302,226
Establishment grants	–	–	–	330	7	–
Other	1,968	–	–	–	–	–
Total other purposes	*3,239,633*	*3,911,324*	*4,557,997*	*5,313,934*	*5,936,507*	*6,706,609*
Total grants for current purposes	**5,427,526**	**6,110,154**	**7,215,343**	**8,137,852**	**9,080,646**	**10,291,605**
FOR CAPITAL PURPOSES						
Education	319,246	327,763	343,108	363,718	325,109	321,179
Health	140,239	132,455	68,902	17,784	12,735	8,166
Social security and welfare	17,080	15,233	16,344	19,116	35,036	35,791
Housing and community amenities	79,402	37,171	12,310	13,128	89,626	100,388
Recreation and culture	11,036	8,976	5,540	5,767	5,405	5,837
Economic services—						
General administration, regulation and research	60	–	–	–	–	–
Employment of Aboriginals	–	–	–	–	–	9
Soil and water resources management	14,343	11,636	10,508	11,946	19,277	23,782
Assistance to agricultural and pastoral industries	12,585	8,550	7,413	7,167	2,720	2,758
Electricity, gas, water supply	4,081	3,910	2,125	1,885	2,805	2,850
Rail transport	3,472	490	14	–	–	863
Sea transport	1,285	15	–305	–178	–	–
Road systems and regulation	458,439	456,215	493,224	513,728	572,914	640,663
Urban transit systems	34,096	58,403	51,000	41,869	42,084	44,058
Other	1,829	832	–	–	–	–
Total economic services	*530,190*	*540,051*	*564,047*	*576,417*	*640,748*	*714,983*
Other purposes—						
Natural disaster relief	29,150	23,697	20,820	9,844	6,870	8,230
Capital assistance	430,333	452,000	477,930	477,936	450,803	474,034
Total grants for capital purposes	**1,556,676**	**1,537,346**	**1,508,923**	**1,483,710**	**1,565,384,**	**1,668,606**
TOTAL GRANTS						
Total grants to the States and the Northern Territory	**6,984,202**	**7,647,500**	**8,724,266**	**9,621,562**	**10,646,030**	**11,960,211**

(*a*) Prior to 1976–77 'Financial assistance grants'.

General purpose grants

Financial Assistance Grants. Details of the financial assistance grants arrangements existing in 1972–73 and previous years are given in earlier issues of the Year Book (*see* No. 60, page 578.)

Arrangements for the years 1973–74 to 1975–76 are embodied in the *States Grants Act* 1973. Under these arrangements the financial assistance grants increase each year in proportion to the

increase in average wages in Australia as a whole in the year ending 31 March in the year of payment and to the increase in each State's population in the year ending 31 December in the year of payment, and by a betterment factor of 1.8 per cent. Adjustments were made to these arrangements to reduce the grants when the Commonwealth assumed full responsibility for financing tertiary education from 1 January 1974 and on account of transfers of railways from South Australia and Tasmania to the Commonwealth. Financial assistance grants additional to the grants determined by the formula were paid to Western Australia in 1973–74 and 1974–75, and to Tasmania in 1974–75. In 1975–76, $220 million was paid to the States in addition to the amounts otherwise payable in that year and in the same proportion.

These arrangements were replaced by the *Personal Income Tax Sharing Entitlements* between the Commonwealth and the State and local governments which came into operation in 1976–77. A comprehensive description of this scheme is given in the Commonwealth Budget Paper *Payments to or for the States, the Northern Territory and Local Government Authorities.*

The following table shows the calculations underlying the States' tax sharing entitlements in 1980–81:

DISTRIBUTION OF STATES' PERSONAL INCOME TAX SHARING ENTITLEMENTS IN 1980–81

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Total*
(1) Population at 31 December 1980(*a*)	5,183,259	3,907,934	2,275,707	1,302,404	1,276,696	424,617	14,370,617
(2) Per capita relativities(*b*)	1.02740	1.00000	1.39085	1.52676	1.66516	2.00188	. .
(3) Row (1) weighted by Row (2)	5,325,280	3,907,934	3,165,167	1,988,458	2,125,903	850,032	17,362,774
(4) Percentage distribution of Row (3) between States (per cent)	30.67067	22.50754	18.22962	11.45242	12.24403	4.89572	100.00000
(5) Share of 39.87 per cent of $12,670.8 million(*c*)—Distributed according to Row (4) $'000	1,839,065	1,349,590	1,093,078	686,706	734,172	293,556	5,996,167
(6) Amount guaranteed under Section 8 of the Act (Financial Assistance Grants formula) (*d*) $'000	1,833,139	1,354,860	1,044,929	691,540	723,874	298,602	5,946,944
(7) States' entitlements under the Act ($'000) (*e*)	1,839,065	1,354,860	1,093,078	691,540	734,172	298,602	6,011,318

(*a*) Determined in accordance with section 9 of the *States (Personal Income Tax Sharing) Act* 1976. (*b*) Relativities specified in section 4 (1) of the Act. (*c*) Net personal income tax collections (excluding receipts from the Health Insurance levy) in 1979–80 as determined by the Commissioner of Taxation in accordance with section 6 of the Act. (*d*) The guarantee arrangements for 1980–81 were adopted at the 7 December 1979 Premiers' Conference. The guarantee ensures that each State will receive no less in real terms than the amount it received in 1979–80 as measured by the Consumer Price Index for the four quarters to March 1981 compared with the four quarters to March 1980 in the capital city of the State. (New South Wales 10.20 per cent, Victoria 9.80 per cent, Queensland 9.70 per cent, South Australia 9.70 per cent, Western Australia 9.20 per cent and Tasmania 9.50 per cent). (*e*) For New South Wales, Queensland and Western Australia, amounts in Row (5); for Victoria, South Australia and Tasmania amounts in Row (6).

Special Grants. These grants are paid to the financially weaker States as supplements to the financial assistance grants. They are paid on the recommendation of the Commonwealth Grants Commission. The recommendation by the Commission for payment of a special grant consists of two parts: one part is based on an estimate of the claimant State's financial need in the current financial year, and is treated as an advance payment subject to adjustment two years later when the Commission has compared in detail the audited budget results and standards of effort and of services provided in that year for both the claimant State and the States which the Commission takes as 'standard' (New South Wales and Victoria at present); and the other part represents the final adjustment to the advance payment made two years earlier and is known as the completion payment. Queensland has been the only applicant State in the period 1976-77 to 1980-81. (Tasmania, which had withdrawn from claimancy in 1974-75, applied on 30 June 1978 for a special grant in respect of 1977-78 but subsequently withdrew its application.) The following table shows special grants paid in recent years.

COMMONWEALTH GRANTS COMMISSION: SPECIAL GRANTS

($'000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Queensland—						
Advance or interim payment . .	18,000	14,000	16,000	11,000	25,000(*b*)	(*c*)
Completion payment (*a*) . . .	5,700	1,400	6,700	*33,500*	. .	(*c*)
Grand total	*23,700*	*15,400*	*22,700*	*44,500*	. .	(*c*)

(*a*) Actually paid two years subsequent to year shown. (*b*) Recommended by the Grants Commission in 1981–82 and paid in 1981–82. (*c*) There is to be no application by any State in respect of this year.

Capital assistance grants. Since 1970–71 the Commonwealth Government has provided a portion of the State's Loan Council programs in the form of interest-free capital grants. The grants replace State borrowings and thereby relieve them of debt charges they would otherwise have had to pay. These grants, which were authorised by the *States Grants (Capital Assistance) Acts*, totalled $345.9 million in 1974–75, $430.3 million in 1975–76, $452.0 million in 1976–77, $477.9 million in 1977–78 and 1978–79, $415.0 million in 1979–80, $435.8 million in 1980–81 and $435.8 in 1981–82.

Specific purpose grants

The Commonwealth Government has provided financial assistance for certain specific types of expenditure by the States for many years. Unlike the general purpose grants, these current and capital grants are 'tied', that is, they are subject to conditions as to the purposes for which they may be spent. Purposes for which such grants have been made include educational programs, hospital development programs, welfare services for the aged, road construction, natural disaster relief and, since 1974–75, assistance to local government authorities. Specific purpose grants amounted to $3,472.9 million in 1976–77, $3,904.9 million in 1977–78, $4,053.4 million in 1978–79, $4,538.1 million in 1979–80, $5,173.5 million in 1980–81 and $4,430.2 million in 1981–82. From 1979–80 onwards the figures include specific purpose grants made to the Northern Territory.

For details of the various specific purpose programs reference should be made to the Commonwealth Budget Paper *Payments to or for the States, the Northern Territory and Local Government Authorities.*

Advances to the States

The Commonwealth is also providing financial assistance for State projects by way of repayable advances. Borrowings of the Loan Council which are advanced to the States for their work programs and advances for State housing projects represent the largest proportion of the total funds advanced. Full descriptions of the various programs for which funds have been advanced in recent years are given in *Payments to or for the States, the Northern Territory and Local Government Authorities.*

The following table shows figures of advances to the States and repayments of advances. More detailed figures appear in *Commonwealth Government Finance* (5502.0).

COMMONWEALTH AUTHORITIES: NET ADVANCES TO THE STATES AND THE NORTHERN TERRITORY 1980–81

($'000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
Defence	-234	128	564	-20	-55	-3	-	379
Housing and community amenities	63,142	46,528	13,639	23,225	15,508	9,192	8,268	179,504
Economic services—								
Soil and water resources management	-2,374	-203	-718	-	345	-	-	-2,950
Forest resources management	1,711	470	739	120	739	883	-	4,662
Assistance to manufacturing	-	-	-	-	-	323	-	323
Assistance to agricultural and pastoral industries	981	-763	-29,825	1,084	909	-277	504	-27,388
Mining	222	-	-	-	-	-	-	222
Electricity, gas and water supply	-	-	-2,349	-90	-613	-2,989	-1,353	-7,394
Rail transport	4,904	5,116	1,534	-	-2,316	-	-	9,238
Sea transport	-	-	-95	-	-98	-132	-	-325
Other transport and communication	-	-	-570	-	-	-	-	-570
Total economic services	*5,444*	*4,620*	*-31,284*	*1,114*	*-1,034*	*-2,192*	*-849*	*-24,181*
Other purposes—								
State works programs	213,032	168,634	88,509	88,113	60,853	48,923	75,709	743,773
Special resource assistance	-	-	-	-	-	-	-	-
Natural disaster relief	26,869	-369	5,420	-2,036	7,405	-294	-	36,995
Total other purposes	*239,901*	*168,265*	*93,929*	*86,077*	*68,258*	*48,629*	*75,709*	*780,768*
Total net advances	**308,253**	**219,539**	**76,850**	**110,396**	**82,677**	**55,626**	**83,128**	**936,468**

Minus sign (-) denotes excess of repayments.

COMMONWEALTH AUTHORITIES: ADVANCES TO THE STATES AND THE NORTHERN TERRITORY ($'000)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
GROSS						
Defence	34,170	35,114	22,519	11,600	1,455	1,320
Housing and community amenities	558,810	474,741	441,646	355,424	211,497	222,003
Economic services—						
Assistance to agricultural and pastoral industries	50,328	31,981	37,489	39,812	40,739	14,274
Other	65,606	48,900	8,175	10,770	11,733	20,852
Other purposes—						
State works programs	860,667	904,000	955,867	955,867	901,606	948,068
Other	1,098	4,828	34,369	14,444	7,308	47,381
Total gross advances	**1,570,679**	**1,499,564**	**1,500,065**	**1,387,917**	**1,174,339**	**1,253,896**
REPAYMENTS						
Defence	681	734	789	840	894	941
Housing and community amenities	22,061	25,191	28,332	32,500	35,346	42,635
Economic services—						
Assistance to agricultural and pastoral industries	5,451	8,548	11,074	13,368	19,581	41,662
Other	11,997	13,116	13,351	15,375	19,333	17,508
Other purposes—						
State works programs	151,999	159,323	171,032	185,269	195,210	203,436
Other	6,096	14,589	14,343	13,398	7,974	11,247
Total repayments	**198,286**	**221,501**	**238,921**	**260,750**	**278,338**	**317,429**
NET						
Defence	33,490	34,380	21,730	10,760	561	379
Housing and community amenities	536,749	449,550	413,314	322,924	176,151	179,368
Economic services—						
Assistance to agricultural and pastoral industries	44,877	23,433	26,415	26,444	21,159	−27,388
Other	53,609	35,784	−5,176	−4,605	−7,600	3,344
Other purposes—						
State works programs	708,668	744,677	784,835	770,598	706,396	744,632
Other	−4,999	−9,761	20,026	1,048	−667	36,134
Total net advances	**1,372,393**	**1,278,063**	**1,261,144**	**1,127,167**	**896,001**	**936,468**

Minus sign (−) denotes excess of repayments.

Main components of receipts

The main components of the receipts of Commonwealth authorities are taxation, income of public enterprises and other factor income transfers, and borrowing and financing transactions. Taxation constitutes by far the major source of receipts. In recent years, however, borrowing has become an increasingly significant source of funds for Commonwealth authorities.

In what follows, an account is given of the system of Commonwealth Government taxation, and some details are given of the current operations of Commonwealth public enterprises. Borrowings and other financing activities of Commonwealth authorities are dealt with for convenience in a later section relating to the debt of all public authorities.

Commonwealth Government taxation—summary

The following tables show Commonwealth Government taxation receipts classified by type of tax for the past six years, and the proportion of each type to total collections.

COMMONWEALTH AUTHORITIES: TAXATION BY TYPE OF TAX(*a*)

($'000)

Type of tax	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Taxes—						
Income taxes—						
Individuals(*b*)	11,046,664	12,122,158	12,797,174	15,032,479	17,532,123	21,204,499
Superannuation Funds	–	–	–	7,618	11,129	19,816
Companies(*c*)	2,803,079	3,072,372	3,002,052	3,360,357	4,638,923	5,052,696
Dividend (withholding)	71,969	87,700	88,094	99,912	114,108	125,610
Interest (withholding)	24,408	30,153	25,975	41,018	46,596	78,957
Mining (withholding)	–	–	–	200	261	530
Total income taxes	*13,946,120*	*15,312,383*	*15,913,295*	*18,541,584*	*22,343,140*	*26,482,108*
Estate duty	76,189	95,823	82,061	48,398	17,123	4,167
Gift duty	11,486	6,574	1,445	529	–82	224
Rates on land	15,503	17,010	15,011	16,540	19,249	20,910
Customs duty on coal exports	121,329	100,165	93,524	90,716	84,947	96,734
Customs duties on imports	1,152,016	1,131,817	1,363,041	1,538,064	1,799,488	2,059,706
Excise duties—						
Crude oil and LPG	340,000	469,000	1,227,000	2,270,200	3,107,900	3,163,300
Other	2,145,420	2,264,490	2,617,686	2,695,138	2,726,125	2,829,855
Sales tax	1,650,256	1,757,702	1,769,840	1,864,813	2,102,254	2,854,266
Primary production taxes	189,006	179,368	283,092	278,270	352,753	234,109
Broadcast station licences	1,200	1,508	1,843	2,184	2,484	2,913
Television station licences	6,028	10,469	12,724	15,946	19,005	28,020
Stevedoring industry charge	46,884	28,955	19,004	20,137	19,483	18,232
Payroll tax	18,644	19,583	13,142	12,373	10,713	19,320
Departure tax	–	–	11,966	18,384	18,720	36,090
Other taxes	15,496	19,107	18,487	18,496	20,727	26,387
Total taxes	*19,735,577*	*21,413,954*	*23,443,161*	*27,431,772*	*32,644,029*	*37,876,341*
Fees from regulatory services	15,264	21,526	22,730	48,658	53,094	65,294
Fines	3,121	3,838	4,229	4,228	4,207	7,296
Unfunded employee retirement contribution	51,680	61,087	63,129	67,124	72,922	86,346
Other current transfers n.e.c.	678	554	403	569	663	928
Total taxation	**19,806,320**	**21,500,959**	**23,533,652**	**27,552,351**	**32,774,915**	**38,036,205**

(*a*) From 1978–79 excludes taxes collected by Northern Territory Government authorities. (*b*) Includes Medibank levy payable from 1 October 1976 to 31 October 1978. (*c*) Excludes income tax paid by public enterprises: 1976–77, $21.4m; 1977–78, $23.1m; 1978–79, $34.6m; 1979–80, $46.5m; 1980–81, $55.8m; 1981–82, $43.1m.

Taxes on income

A description of the development of income taxes in Australia appeared in Year Book No. 35, page 926. Since July 1942 the Commonwealth Government, under the uniform tax arrangement, has been the only authority imposing taxes on income.

The laws dealing with the assessment and imposition of income tax at 31 October 1982 were—*Income Tax Assessment Act* 1936 (later referred to as 'the Assessment Act'); Acts declaring rates of tax—*Income Tax (Rates) Act* 1982, *Income Tax (Individuals) Act* 1982, *Income Tax (Companies, Corporate Unit Trusts and Superannuation Funds) Act* 1982, *Income Tax (Non-resident Companies Act)* 1978, *Income Tax (Dividends and Interest Withholding Tax) Act* 1974, *Income Tax (Drought Bonds) Act* 1969, *Income Tax (Withholding Tax Recoupment) Act* 1971, *Income Tax (Bearer Debentures) Act* 1971, *Income Tax (Mining Withholding Tax) Act* 1979, *Income Tax (Film Royalties) Act* 1977, *Income Tax (Diverted Income) Act* 1981, Income Tax Regulations and Income Tax (Indexation) Regulations.

Both individuals and companies are liable for income tax. Private companies are subject to tax on certain undistributed income in addition to the primary income tax levied on all companies.

The operation of the *Assessment Act* is affected by other Acts, the more important of which are:

(a) *Taxation Administration Act* 1953, which provides for the administration of certain Acts relating to taxation and the screening for taxation purposes of applications for exchange control approval.

(b) *Income Tax (International Agreements) Act* 1953, which gives the force of law to agreements with other countries for the avoidance of double taxation. Australia has concluded comprehensive agreements for the avoidance of double taxation with the United Kingdom, the United States of America, Canada, New Zealand, Singapore, Japan, the Federal Republic of Germany, the Netherlands, France, Belgium, the Philippines, Switzerland, Malaysia,

Sweden and Denmark. Agreements with Norway and the Republic of Korea and a revised agreement with the United States have been signed but have not yet entered into force. Also, limited agreements dealing with airline profits have been concluded with France, Italy and Greece.

(c) *The States (Personal Income Tax Sharing) Act* 1976, which provides for the States to receive a specified proportion of net personal income tax collections to 30 June 1981.

(d) *The States (Tax Sharing and Health Grants) Act* 1981, operative as from 1 July 1981, under which the States are to receive a proportion of total Commonwealth tax collections.

(e) *Income Tax (Arrangements with the States) Act* 1978, which enables each State to increase or reduce personal income tax levied on residents of the State.

(f) *International Organizations (Privileges and Immunities) Act* 1963, and Regulations made under that Act, which provide for the exemption from income tax of certain income of international organizations and their officials.

(g) *Diplomatic Privileges and Immunities Act* 1967, which provides for the exemption from income tax of certain income of diplomatic representatives, their staff and families.

(h) *The Loan (Income Equalization Deposits) Act* 1976, which provides for the making of interest bearing income equalization deposits by primary producers with the Commissioner of Taxation.

(i) *Consular Privileges and Immunities Act* 1972, which provides for the exemption from income tax of certain income of consular representatives, their staff and families.

(j) *Loan (Drought Bonds) Act* 1969, which authorizes the issue of drought bonds and empowers the Commissioner of Taxation to declare when drought bonds have become redeemable.

(k) *Taxation Debts (Abolition of Crown Priority) Act* 1980, which abolishes priority accorded to certain Crown Debts.

(l) *The Crimes (Taxation Offences) Act* 1980, which established a number of criminal offences relating to the fraudulent evasion of income tax (and sales tax) by stripping companies or trusts of their capacity to pay.

A resident individual is required to lodge a return of income when his total income from all sources in Australia is in excess of $4,462 in 1982–83. However, in the case of a resident minor i.e., a person under the age of 18 years at the end of the year of income, a return is to be lodged where income exceeds $1,040. Except in the case of a non-resident in receipt of a taxable Australian social security or repatriation pension, allowance or benefit (in which case the position is the same as for a resident), a non-resident individual is required to lodge a return of income where his total income (other than dividends or interest on which withholding tax has been paid) from all sources in Australia exceeds $585. In the case of a non-resident minor, a return is to be lodged where income exceeds $136 in 1982–83. (see page 614).

Non-profit companies with total incomes in excess of $416 and all other companies, partnerships and trusts deriving income are required to lodge returns of income each year.

Where applicable, income tax payable is assessed and assessment notices showing the amounts payable are issued during the year following the year of income. For individuals the approximate amount payable, however, has already been collected during the income year (from employees by deductions from salary or wages and from non-employees by a provisional tax). The amount shown on the assessment notice is therefore adjusted against the amount already paid, and any difference is either collected or refunded.

Taxes on income—individuals

Pay-as-you-earn-system

Salary and wage earners are subject to tax instalment deductions by employers according to prescribed scales which show the amount to be deducted according to income. Under the group employer scheme, the amount deducted is required to be regularly remitted to the Australian Taxation Office.

Not later than 14 July each year, employers are required to supply each employee with a group certificate showing the amount earned and deductions made during the year ended 30 June.

Under the tax stamp scheme for employers other than group employers, a tax deduction sheet in two parts is used. Every four weeks the employer purchases tax stamps for the amount of deductions made each pay day and attaches the tax stamps to the tax stamps sheet in the space provided and the tax checks (attached to the stamps) in the space provided on the tax check sheet. At the end of the year the employer gives the employee the tax stamp sheet and sends the tax check sheet to the Taxation Office. The tax stamp sheet is then used in the same way as a group certificate.

Individuals with taxable income other than salary or wages of $1,000 or more in 1982–83 may be required to pay provisional tax in respect of that income. Provisional tax is not generally charged, however, where tax instalment (PAYE) deductions made in the previous income year exceeded 95 per cent of the net tax payable for that year and provisional tax was not imposed previously. The provisional amount is intended as an approximation to the tax which will be assessed after the return of income for the current year has been lodged. In order to account for an expected rise in provisional incomes in 1982–83, provisional tax is calculated using 1982–83 rates of tax applied to 1981–82 income increased by 10 per cent. The provisional amount is intended as an approximation to the tax which will be assessed after the return of income for the current year has been lodged. The assessment notice shows the tax assessed on income from the previous year less any provisional tax already paid for that year and provisional tax payable for the current year. Taxpayers may apply to vary the amount of provisional tax imposed if his or her circumstances change during the year.

Assessable income—individuals

Assessable income (from which deductions are made to arrive at taxable income) basically includes all receipts within the ordinary meaning of the word 'income', but excludes items of income that are specified as exempt. Assessable income specifically includes certain receipts such as casual profits arising from the sale of property held less than one year and profits arising from the sale of property acquired for the purpose of profit-making by sale regardless of the period the property is held before sale. The value to employees of allowances and benefits given by employers for services rendered is also specifically included in the assessable income of the employees. Receipts such as gifts (other than gratuities received by an employee in the course of employment), legacies, lottery wins and other receipts of capital generally do not form part of the assessable income.

Exemption from tax is provided by the Assessment Act in respect of a number of specified classes of income—for example, certain war pensions; invalid pensions; family allowances; income received from a scholarship, bursary or other educational allowance; the income of charitable institutions and public hospitals, certain foreign income where it has been taxed overseas, and income of certain Australian residents derived from personal services performed overseas.

Deductions

The taxable income to which the rates of tax are applied is arrived at by deducting from the assessable income any allowable deductions.

Deductions from assessable income are authorised for losses and outgoings incurred in gaining or producing assessable income or necessarily incurred in carrying on a business for that purpose except to the extent that they are of a capital, private or domestic nature, are incurred in gaining or producing exempt income, or are of the kinds that are specifically declared to be not deductible by provisions of the Assessment Act. In addition, certain other deductions are specifically authorised by the Assessment Act.

Deductions allowable include trading losses incurred in previous years, bad debts, certain home insulation expenditure, depreciation, gifts to various institutions and, in certain circumstances, rates and land taxes paid. Expenditure of a capital nature incurred under a contract entered into after 19 July 1982 in relation to mining operations, is eligible for deduction on a straight line basis by reference to the lesser of 10 years or the estimated life of the mine or oil field. Expenditure on mining plant may also be written off on that basis or, if the taxpayer chooses, by depreciation allowances. Exploration or prospecting expenses incurred by general (non-petroleum) mining companies are allowable as deductions against net assessable income from mining activities in the year in which the expenditure is incurred. Expenditure on exploration or prospecting for petroleum is immediately deductible against income from any source. Deductions are also available for the cost of converting certain oil fired industrial equipment to use other energy sources. The deduction, which replaces annual depreciation allowances, is an amount equal to the cost of the conversion. The deduction is allowable in equal instalments over 2 years, where costs were incurred after 30 April 1981. A special allowance of 40 per cent of the cost of certain capital expenditure incurred on the purchase or construction of certain non-oil fired plant to replace oil fired plant is also available. Normal depreciation allowances apply to the plant and the 40 per cent allowance takes the place of any investment allowance that otherwise might have applied. A special loading applies to increase the depreciation rates on eligible plant. For plant contracted for on or after 1 May 1981 the loading is set at 18 per cent. New and second hand plant (excluding structural improvements and motor vehicles of a kind previously excluded from the 18 per cent loading) acquired under a contract entered into, or the construction of which by the taxpayer commenced, after 19 July 1982 is to be depreciated on a prime cost basis at a rate of either 20 per cent or 33⅓ per cent. The 20 per cent rate applies to eligible plant of a kind that under the previous system qualified for depreciation at a prime cost rate (including the 18 per cent loading) of 20 per cent or less, and the 33⅓

per cent applies where the previous prime cost rate was greater than 20 per cent. Where applicable, the investment allowance continues to be available and, in cases where the previous depreciation arrangements confer greater benefits than under the present scheme, a taxpayer is entitled to retain the previous arrangements.

Certain expenditure of a capital nature incurred by primary producers in carrying out improvements to their land is deductible over 10 years. Capital expenditure on certain soil conservation operations is allowable in full in the income year in which the expenditure is incurred. Certain expenditure in connection with conserving or conveying water for use in a business of primary production is deductible in the year of expenditure. Expenditure incurred by a primary producer before 1 July 1984 in constructing stockyard or subdivisional fences where their construction is certified as being desirable for the eradication or control of bovine brucellosis or tuberculosis is also deductible in the year of expenditure. Certain new items of plant and machinery acquired for use in a business of primary production are depreciable in equal instalments over 5 years, as are certain structural improvements for the storage of hay, grain or fodder. New primary production plant of a kind that previously qualified for the special 20 per cent prime cost depreciation rate is eligible for a 33⅓ per cent prime cost rate if acquired under a contract entered into, or where construction by the taxpayer commenced, after 19 July 1982. Deductions are allowable in respect of cash deposits made by primary producers (income equalisation deposits), which fall for inclusion in assessable income on withdrawal.

Deductions may also be allowed in respect of expenditure on certain plant and machinery by way of an investment allowance. The rate of the allowance is 18 per cent of qualifying expenditure for plant contracted for after 30 April 1981.

Deductions are also allowable for the capital cost of connecting mains electricity to a property on which a business is carried on. A 100 per cent depreciation allowance is available for the cost of certain plant used in Australia exclusively to store fuel held for use in a business as fuel or as trading stock for disposal. Special concessions involving a deduction loading and income exemption are available for capital investment in the production of certain new Australian films. Special rates of depreciation on a prime cost basis are available for new and second-hand plant used in the production of basic iron and steel products. The new rate will be 20 per cent except where, under existing law, eligible plant would attract a rate of more than 20 per cent. In those cases, a 33⅓ per cent rate will apply. Depreciation allowances in respect of new non-residential income-producing buildings are available at the rate of 2½ per cent per annum in respect of the construction cost of eligible buildings where construction of the buildings commenced after 19 July 1982.

Living-away-from-home allowance. Where an allowance is paid to an employee under any award, industrial agreement, etc.—

(a) if it is received in cash and does not exceed $7 per week, a deduction is allowable of the amount of the allowance, up to $5 per week;

(b) if it is received otherwise than in cash and exceeds a value of $2 per week but does not exceed a value of $5 per week, a deduction is allowable of the excess of that value over $2 per week.

In any other case the deduction allowable is the amount which the Commissioner deems reasonable but may not exceed the total amount received less $2 per week.

Subscriptions. When they are paid in respect of membership of any trade, business or professional association or union.

Gifts. Those of $2 and upwards made to specified funds, authorities and institutions including public benevolent institutions, approved research institutions for scientific research, building funds for schools conducted by non-profit organisations, certain approved voluntary overseas aid organisations, etc.

Superannuation contributions of eligible self-employed persons and employees not covered by funds to which any other person contributes for their benefit that are paid after 19 August 1980 to approved funds are deductible to a maximum $1,200 in any one year of income. Any excess of contributions over $1,200 falls for consideration under the superannuation provisions subject to concessional rebate (see page 572).

Rebates of Tax

From the gross amount of tax calculated by applying the relevant rate to the taxpayer's taxable income, a deduction is made for any rebates allowable to the taxpayer.

Dependant, housekeeper and sole parent rebates. A concessional rebate of the relevant amount specified below for each *dependant* is allowable to a resident taxpayer if, during the whole of the year of income, the taxpayer is the sole contributor to the dependant's maintenance and that dependant does not have a separate net income in excess of $282.

Dependant	*Maximum rebate 1982–83*
	$
Spouse or daughter-housekeeper—where there is a dependent child or student child	963
Spouse or daughter-housekeeper—where there is not a dependent child or student child	830
Parent or parent-in-law	749
Invalid relative	376

If a person in one or other of these dependant categories is a dependant during part only of the year of income (such a person residing with the taxpayer is ordinarily regarded as a dependant throughout the period of residence), the maximum rebate is proportionately reduced. Rebates for a parent, parent-in-law or invalid relative are allowable only in respect of residents of Australia.

Where a person has a separate net income in excess of $282 while a dependant of a taxpayer, the rebate otherwise allowable is reduced by $1 for every complete $4 by which the separate net income exceeds $282, irrespective of the period over which the person has derived the income. When two or more people contribute to the maintenance of a person who is a dependant of both of them, the rebate allowable is apportioned between the contributing taxpayers.

A concessional rebate is allowable to a resident taxpayer in respect of a *housekeeper* who, during the whole of the year of income, is wholly engaged in keeping house in Australia for the taxpayer and has the care of (*a*) a child or step-child of the taxpayer, less than 16 years of age; (*b*) an invalid relative in respect of whom the taxpayer is entitled to a rebate or any child under 16 years classed as a dependant for this purpose; or (*c*) the taxpayer's spouse if in receipt of an invalid pension under the *Social Security Act*. Where there is a dependent child or student, the maximum rebate for 1982-83, is $963, otherwise it is a maximum of $830. A child under 16 years referred to in (*b*) will be classed as a dependant where the taxpayer contributes to that child's maintenance and the child's separate net income is less than $1,786.

If these conditions apply for only part of the year, a proportionate rebate may be allowed. Where the taxpayer is married, a rebate may be allowable for a housekeeper if the housekeeper is engaged in caring for an invalid spouse (*see* (*c*) above) or the Commissioner is of the opinion that, because of special circumstances, it is just to allow a rebate. The rebate is not allowable in respect of any period during which the taxpayer is entitled to a deduction for a daughter-housekeeper.

A concessional rebate of $580 is allowable to a *sole parent* i.e., a resident single, widowed or divorced person who has the sole care of a child under sixteen years of age or a student (up to 25 years of age, receiving full-time education at a school, college or university), whose separate net income is ordinarily less than $1,786. The sole parent rebate is not allowable where the taxpayer is entitled to a rebate for a housekeeper or daughter-housekeeper or is living in a de-facto relationship.

Concessional rebates

Resident taxpayers may be allowed a concessional rebate in respect of certain expenses listed below amounting in total to more than $1,590. The amount of the rebate for 1982–83 is 30.67 per cent of the excess of the total expenditure over $1,590, but the rebate cannot exceed the tax otherwise payable.

Medical, dental, optical, etc. expenses. Rebates are allowable in respect of medical, dental, optical and therapeutic treatment expenses paid by the taxpayer, less any amounts in respect of those expenses which are received or receivable by the taxpayer or any other person from a Government or friendly society or medical benefit fund. Included are amounts paid in respect of artificial limbs and eyes, hearing aids and medical and surgical appliances and the remuneration of an attendant of a person who is blind or permanently confined to a bed or invalid chair. Domiciliary nursing care benefits are to be disregarded in calculating the rebatable amount in respect of medical expenses.

Rebates in respect of the above medical, etc. expenses are allowable only for expenditure in respect of a resident taxpayer, spouse, children under 21 years of age or any other 'dependant' resident in Australia, but not a 'housekeeper'.

Funeral, burial or cremation expenses. Rebates are allowable only in respect of the taxpayer's spouse, children under 21 years of age or any other 'dependant', but not a 'housekeeper', provided the dependant was a resident of Australia at the time of death. The amount of expenses allowable in respect of any one dependant is limited to $100.

Adopted children. Legal expenses and court costs of the kind normally incurred by a taxpayer in adopting a child.

Payments of life, sickness and accident insurance premiums and payments to a Friendly Society, Superannuation, Sustentation or similar Fund. Amounts subject to rebate are limited to a total of $1,200 in respect of such payments made on behalf of the taxpayer, his spouse or children. In the case of self-employed and "unsupported" employees contributions that are deductible, the excess over $1,200 not allowed as a deduction may be allowed as a rebate within the $1,200 limit on such rebatable expenditure. Where policies are taken out on or after 1 January 1973 or where the first premium of a policy was paid on or after that date, rebates for premiums of such policies are *not* allowable if the benefits, other than death benefits, are payable within a period of 10 years of commencement of risk.

Education expenses. An amount not exceeding $250 is allowed in respect of each child of the taxpayer or 'dependant' under 25 years of age receiving full-time education. Education expenses include expenditure for recognised school uniforms, on school fees, board and accommodation, text books, stationery, equipment and fares.

Self-education expenses. These are allowable where they are paid by the taxpayer for or in connection with a course of education undertaken by him for the purpose of gaining qualifications for use in carrying on a profession, business or trade or in the course of employment. The maximum amount subject to rebate is $250.

Calls. One-third of the amount of calls paid by the taxpayer in the year of income on shares owned by him in a company carrying on as its principal business afforestation in Australia.

Rates and land taxes. These are allowable when they are paid by a taxpayer who is personally liable. The maximum amount rebatable is $300 and must be in respect of a sole or principal place of residence.

Other rebates

Zone allowance rebate. A separate rebate is allowable to resident taxpayers who have resided in Zone A or B (prescribed isolated areas) for more than one half of the income year. The rebates are as follows:

(a) Ordinary Zone A: A rebate equal to the sum of $216 and 50 per cent of rebates for dependants, as a sole parent or for a housekeeper;
(b) Ordinary Zone B: A rebate equal to the sum of $36 and 20 per cent of relevant rebates;
(c) Special Zone A: A rebate equal to the sum of $750 and 50 per cent of relevant rebates; and
(d) Special Zone B: A rebate equal to the sum of $750 and 20 per cent of relevant rebates.

The special basic rebate is available to a taxpayer residing or spending the required period in a zone area but at a place in excess of 250 kilometres by the shortest practicable surface route from the centre of a population centre of 2,500 or more (based on 1976 census data).

The rebates for dependants, as a sole parent or for a housekeeper that may be the subject of a percentage increment to the basic zone allowance are:

	1982–83		
		$	
Sole parent	(*a*)	713	
Housekeeper	(*a*)	830	
Spouse, daughter-housekeeper	(*a*)	830	
Parent or parent-in-law		749	
One child under 16 years, not being a student		376	
Each other child under 16 years, not being a student		282	(*b*)
Student		376	
Invalid relative		376	

(*a*) Where there is a dependent child under 16 or a student child under 25, the maximum rebate will be $963. (*b*) Where one of these persons has a separate net income in excess of $282 while a dependant of a taxpayer, the amount to be taken into account is reduced by $1 for every complete $4 by which that income exceeds $282, irrespective of the period over which it was derived. Where two or more people contribute to the maintenance of a person who is a dependant of both of them, the amount to be taken into account is apportioned between the contributing taxpayers.

Amounts for a parent, parent-in-law or invalid relative are allowable only in respect of resident dependants.

'Child' or 'children' includes a legally adopted child, a step-child or ex-nuptial child of the taxpayer. 'Student' means a person less than 25 years of age who is receiving full-time education at a school, college or university.

Overseas service rebate. Separate rebates are also allowable to certain members of the Defence Force serving in prescribed overseas localities. Where the period of service is more than one-half of the year of income, the rebate is equal to the ordinary Zone A rebate. Where the period is less than one-half of the year of income, a proportionate part of the ordinary Zone A rebate is allowable.

Unused leave rebate. Where a taxpayer's taxable income exceeds $17,894 and includes lump sum payments in consequence of termination of employment or retirement for unused annual leave or unused long service leave attributable to service after 15 August 1978 or both, a rebate is allowable to limit the marginal rate on such payments to the standard rate of 30.67 per cent.

Rebate for government and other loan interest. A rebate of tax may be allowed in respect of certain Government and other loan interest included in an individual's taxable income. Particulars are given on page 567.

Capital subscription rebate. Section 160ACA of the Income Tax Assessment Act provides for a rebate of tax to shareholders in respect of capital subscribed to certain petroleum exploration and mining companies. The rebate allowable is 27 cents for each $1 of amounts paid on shares after 30 April 1981 by way of application and allotment moneys and calls which are applied by a company towards the paid-up value of its shares. (Prior to 1 May 1981 the allowable rebate was 30 cents for each $1 subscribed after 24 August 1977). The allowance of the rebate is conditional upon the company lodging a declaration satisfying the Commissioner that the share moneys will be, or have been, spent on outgoings for exploration for petroleum and the development of petroleum fields. It is also conditional upon the company forgoing any right to a deduction under Division 10AA for the expenditure.

Health Insurance Rebate. Contributions made on or after 1 July 1981 in respect of a period of cover after that date to a registered health fund for basic hospital and/or medical insurance are rebatable at the standard rate (30.67 per cent for 1982–83).

Pensioner Rebate. A limited rebate is allowable for taxpayers in receipt of an Australian social security or repatriation pension on which Australian income tax is payable. The maximum rebate of $167 for 1982–83 means that no tax will be payable on taxable income up to $5,007. The rebate is gradually reduced where taxable income exceeds $5,007 until it fully shades out at a taxable income of $6,343 for 1982–83.

Dividend Rebate. Generally a rebate of 30.67 per cent is allowable to resident individual shareholders on up to $1,000 of dividends included in taxable income and received from resident public or private companies and non-resident companies the shares in which are listed on an Australian stock exchange.

Home Loan Interest Rebate. Home loan interest payments made on or after 1 July 1982 in connection with the purchase or constuction by a resident of a sole or principal residence in Australia are rebatable at the standard rate. There are two schemes available:

(i) A rebate will apply to interest attributable to such part of the interest rate as exceeds 10 per cent per annum calculated on a reducing balance basis, in respect of the first $60,000 of a loan.

(ii) The second scheme is unlike (i) in that it is limited to first home buyers during their first 5 years of home ownership and the amount of the rebate is subject to specified ceilings.

For primary producers, whose taxable income exceeds the average of the current and preceding four years taxable incomes, a rebate is allowable in respect of taxable income derived from primary production and in respect of other taxable income where it does not exceed $5,000. Where non-primary production income exceeds $5,000, the amount deemed to be derived from primary production is the amount, if any, that remains after deducting from $5,000 the excess of that income over $5,000. In determining the rebate, an averaging benefit is calculated by subtracting from the tax on the taxable income, the tax that would be payable if an average rate appropriate to the average on the taxable incomes of the current and four previous years had applied. The rebate is that proportion of the averaging benefit that the deemed primary production taxable income bears to the total taxable income.

Effective exemption from tax

For the income years 1972–73 to 1974–75 inclusive the income of a taxpayer without dependants was exempt from income tax if it did not exceed $1,040. In 1975–76 and 1976–77 after the application of the general concessional rebate of $540 and $610 respectively to resident taxpayers, the corresponding figures were $2,518 and $2,845. In 1977–78, with the composite tax scale applying, the figure was $3,402. For 1978–79 and 1979–80 no tax was payable unless taxable income exceeded $3,893 and for 1980–81 no tax was payable unless taxable income exceed $4,041 (except in the case of certain minors). For 1981–82 no tax was payable unless taxable income exceeded $4,195 (except in the case of certain minors). In 1982–83 (except for certain minors) no tax is payable unless taxable income

exceeds $4,462 in the case of a resident taxpayer or $585 in the case of most non-resident taxpayers. Special rates of tax apply where the trustee of a trust estate is liable to be assessed and to pay tax in respect of income where a presently entitled beneficiary is under a legal disability and to certain other income of a trust estate. The effect of deductions or rebates for dependants was to exempt resident taxpayers up to the incomes shown in the samples hereunder.

RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM INCOME TAX

($)

Income years ended June—	*Taxpayer with—* No dependants	Wife	Wife and one child	Sole parent
1978	3,402	5,335	5,335	4,761
1979	3,893	5,675	5,675	5,137
1980	3,893	5,698	5,698	5,153
1981	4,041	6,541	6,541	5,787
1982	4,195	6,788	6,788	6,007
1983	4,462	7,168	7,602	6,787

Rates of income tax on individuals

The table below shows the rates of income tax for the income year 1982–83. Rates for income years 1954–55 to 1973–74 were published in Year Book No. 60, page 590, for income years 1974–75 and 1975–76 they were published in Year Book No. 61, page 586, for income years 1976–77 and 1977–78 they were published in Year Book No. 62, pages 593 and 594, for income year 1978–79 they were published in Year Book No. 63, page 529, for income year 1979–80 they were published in Year Book No. 64, page 604 and for income year 1980–81 they were published in Year Book No. 65, page 567. For the income year 1981–82 they were published in Year Book No. 66, page 575.

The taxable income, including abnormal receipts, of *actors, artists, inventors,* etc. is taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

Interest derived from bonds, etc.

Interest derived from bonds, etc., issued between 1 January 1940 and 31 October 1968 by the Commonwealth Government, or on certain State semi-government loans issued free of State income tax, is subject to a rebate of income tax of 10 cents for each $1 of interest received. The rebate does not apply to interest received from bonds, etc., issued on or after 1 November 1968.

Rates of tax—individuals

The rates of tax on taxable incomes derived by both resident and non-resident individuals during the year ending 30 June 1983 (or substituted accounting period) are set out below. As from 17 August 1982 the tax-free threshold was withdrawn from non-resident taxpayers, other than those in receipt of taxable Australian social security and repatriation pensions and those who came to Australia on or before that date for a short working visit or who had made arrangements for such a visit by that date. A proportionate threshold of $585 applies to non-resident taxpayers for the 1982-83 income year.

GENERAL RATES OF TAX—RESIDENT INDIVIDUALS
1982–83 FINANCIAL YEAR, 1982–83 INCOME YEAR

Total taxable income				
Not less than—	*Not more than—*	*Tax at general rates on total taxable income*		
$	$	$		$
0	4,462	Nil		
4,462	17,894	Nil	+	30.67c for each $1 in excess of 4,462
17,894	19,500	4,119.5944	+	35.33c for each $1 in excess of 17,894
19,500	35,788	4,686.9942	+	46.00c for each $1 in excess of 19,500
35,788	..	12,179.4742	+	60.00c for each $1 in excess of 35,788

GENERAL RATES OF TAX—NON-RESIDENT INDIVIDUALS
1982–83 FINANCIAL YEAR, 1982–83 INCOME YEAR

Total taxable income				
Not less than—	*Not more than—*	*Tax at general rates on total taxable income*		
$	$	$		$
0	585	Nil		
585	17,894	Nil	+	30.67c for each $1 in excess of 585
17,894	19,500	5,308.6703	+	35.33c for each $1 in excess of 17,894
19,500	35,788	5,876.0701	+	46.00c for each $1 in excess of 19,500
35,788	..	13,368.5501	+	60.00c for each $1 in excess of 35,788

Income of Certain Minors

Special provisions in Division 6AA of the Assessment Act may apply to income, whether derived directly or through a trust, of a minor—a person who is under the age of 18 years at the end of the year of income. A minimum rate of tax equal to 46 per cent in 1982-83 is imposed on the eligible income of resident minors (subject to shading-in arrangements) where the income exceeds $1040. Consistent with the withdrawal of the tax-free threshold from resident individuals, the minimum income level of $1040 is not available to non-resident minors. For the 1982-83 year, tax is payable by a non-resident minor on eligible taxable income exceeding $136. Subject to shading-in arrangements, where eligible income exceeds $136 but does not exceed $1040, it is taxed at the rate of 30.67 per cent, except where the ordinary rate applicable to the eligible taxable income is greater. Where the eligible taxable income of a non-resident minor exceeds $1040, it is taxed on the same basis as that of a resident minor.

Income tax payable on specified incomes at general rates

The following table shows, for the income years 1977–78 to 1982–83, the actual income tax payable by resident taxpayers with various incomes and numbers of dependants. For 1977–78 the composite rate scale has been used, which incorporates the general concessional rebate.

COMMONWEALTH INCOME TAX PAYABLE ON SPECIFIED RESIDENT INDIVIDUAL INCOMES
1977–78 TO 1982–83 INCOME YEARS
($)

Net Income(a)	*1977–78(b)*	*1978–79(b)*	*1979–80(b)*	*1980–81(b)*	*1981–82(b)*	*1982–83(b)*
	TAXPAYER WITH NO DEPENDANTS					
$						
3,000	..	..	..	..	..	..
5,000	457.52	370.84	366.08	306.88	257.60	165.00
7,000	1,073.45	1,040.84	1,027.48	946.88	897.60	778.40
10,000	2,085.92	2,045.84	2,019.58	1,906.88	1,857.60	1,698.50
15,000	3,917.26	3,720.84	3,673.08	3,506.88	3,457.60	3,232.00
20,000	6,199.80	5,870.72	5,801.46	5,493.42	5,352.44	4,916.99
	TAXPAYER WITH DEPENDANT WIFE					
3,000	..	..	..	..	..	..
5,000	..	..	..	..	..	..
7,000	518.45	443.84	430.48	146.88	67.60	..
10,000	1,530.92	1,448.84	1,422.58	1,106.88	1,027.60	868.50
15,000	3,362.26	3,123.84	3,076.08	2,706.88	2,627.60	2,402.00
20,000	5,644.80	5,273.72	5,204.46	4,693.42	4,522.44	4,086.99

(*a*) Income remaining after allowing all deductions other than concessional deductions. (*b*) In 1976–77 previously allowable rebates for children and students were replaced by family allowances (formerly child endowment).

Income tax assessments—Individuals

The following tables show for the 1980–81 income year the number of taxpayers, taxable income, and net income tax assessed for individuals.

COMMONWEALTH INCOME TAX ASSESSMENTS(*a*): TAXABLE INDIVIDUALS BY GRADE OF TAXABLE INCOME

(Income derived in the year 1980–81)

Grade of taxable income	*Number of Taxpayers*			*Net income(b)*	*Taxable income(c)*	*Net tax*
	Males	*Females*	*Total*			
$ $				$'000	$'000	$'000
Under 5,000	167,325	254,521	421,846	1,921,230	1,888,807	63,010
5,000–5,999	162,717	216,577	379,294	2,122,561	2,082,277	167,868
	330,042	**471,098**	**801,140**	**4,043,791**	**3,971,085**	**230,878**
6,000–6,999	162,948	200,643	363,591	2,410,691	2,363,447	265,381
	492,990	**671,741**	**1,164,731**	**6,454,482**	**6,334,532**	**496,260**
7,000–7,999	168,438	185,693	354,131	2,709,961	2,655,278	360,438
	661,428	**857,434**	**1,518,862**	**9,164,443**	**8,989,810**	**856,697**
8,000–8,999	172,031	190,003	362,034	3,143,516	3,078,525	481,504
	833,459	**1,047,437**	**1,880,896**	**12,307,959**	**12,068,335**	**1,338,202**
9,000–9,999	195,623	200,638	396,261	3,849,951	3,770,255	649,779
	1,029,082	**1,248,075**	**2,277,157**	**16,157,910**	**15,838,590**	**1,987,981**
10,000–10,999	243,581	214,651	458,232	4,913,653	4,815,262	887,754
	1,272,663	**1,462,726**	**2,735,389**	**21,071,563**	**20,653,851**	**2,875,735**
11,000–11,999	273,341	184,952	458,293	5,378,893	5,267,724	1,019,128
	1,546,004	**1,647,678**	**3,193,682**	**26,450,456**	**25,921,576**	**3,894,863**
12,000–12,999	287,193	138,956	426,149	5,443,381	5,322,702	1,070,181
	1,833,197	**1,786,634**	**3,619,831**	**31,893,837**	**31,244,278**	**4,965,044**
13,000–13,999	274,069	101,891	375,960	5,189,311	5,070,253	1,053,652
	2,107,266	**1,888,525**	**3,995,791**	**37,083,148**	**36,314,531**	**6,018,696**
14,000–14,999	243,003	76,466	319,469	4,737,556	4,627,149	989,957
	2,350,269	**1,964,991**	**4,315,260**	**41,820,704**	**40,941,680**	**7,008,653**
15,000–15,999	217,605	59,192	276,797	4,388,303	4,286,507	939,846
	2,567,874	**2,024,183**	**4,592,057**	**46,209,006**	**45,228,187**	**7,948,499**
16,000–16,999	190,882	48,433	239,315	4,039,213	3,946,449	884,922
	2,758,756	**2,072,616**	**4,831,372**	**50,248,219**	**49,174,636**	**8,833,421**
17,000–17,999	168,627	42,533	211,160	3,775,416	3,689,594	850,739
	2,927,383	**2,115,149**	**5,042,532**	**54,023,635**	**52,864,230**	**9,684,160**
18,000–18,999	135,774	26,309	162,083	3,067,239	2,995,375	719,895
	3,063,157	**2,141,458**	**5,204,615**	**57,090,874**	**55,859,605**	**10,404,054**
19,000–19,999	112,329	19,818	132,147	2,637,680	2,574,665	644,133
	3,175,486	**2,161,276**	**5,336,762**	**59,728,554**	**58,434,270**	**11,048,187**
20,000–21,999	168,526	26,676	195,202	4,185,866	4,085,093	1,074,231
	3,344,012	**2,187,952**	**5,531,964**	**63,914,420**	**62,519,363**	**12,122,418**
22,000–23,999	110,612	15,139	125,751	2,957,127	2,884,045	802,253
	3,454,624	**2,203,091**	**5,657,715**	**66,871,547**	**65,403,408**	**12,924,672**
24,000–25,999	74,383	10,076	84,459	2,159,428	2,105,054	613,153
	3,529,007	**2,213,167**	**5,742,174**	**69,030,975**	**67,508,462**	**13,537,825**
26,000–27,999	49,780	7,086	56,866	1,574,347	1,531,909	463,739

For footnotes *see* end of table

COMMONWEALTH INCOME TAX ASSESSMENTS(*a*): TAXABLE INDIVIDUALS BY GRADE OF TAXABLE INCOME—*continued*

(Income derived in the year 1980–81)

Grade of taxable income	*Number of Taxpayers*			*Net income(b)*	*Taxable income(c)*	*Net tax*
	Males	*Females*	*Total*			
	3,578,787	**2,220,253**	**5,799,040**	**70,605,322**	**69,040,371**	**14,001,564**
28,000–29,999	34,178	5,277	39,455	1,173,270	1,141,843	357,489
	3,612,965	**2,225,530**	**5,838,495**	**71,778,591**	**70,182,214**	**14,359,052**
30,000–34,999	51,935	11,663	63,598	2,110,241	2,057,604	675,887
	3,664,900	**2,237,193**	**5,902,093**	**73,888,832**	**72,239,819**	**15,034,940**
35,000–39,999	23,840	4,740	28,580	1,091,523	1,062,521	374,319
	3,688,740	**2,241,933**	**5,930,673**	**74,980,356**	**73,302,339**	**15,409,259**
40,000–49,999	18,638	3,781	22,419	1,016,900	989,345	384,113
	3,707,378	**2,245,714**	**5,953,092**	**75,997,255**	**74,291,684**	**15,793,371**
50,000–99,999	14,777	2,935	17,712	1,161,539	1,133,870	510,732
	3,722,155	**2,248,649**	**5,970,804**	**77,158,795**	**75,425,554**	**16,304,103**
100,000 and over	2,091	478	2,569	424,076	413,149	223,082
Total	**3,724,246**	**2,249,127**	**5,973,373**	**77,582,871**	**75,838,703**	**16,527,185**

(*a*) Assessments in respect of 1980-81 income year issued during the period 1 July 1981 to 30 June 1982. (*b*) Net income is total assessable income less total deductions for expenses incurred in gaining assessable income. (*c*) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

The above table excludes details of assessments raised to trustees. However, the following table includes all 1980–81 income year assessments issued during the period 1 July 1981 to 30 June 1982.

COMMONWEALTH INCOME TAX ASSESSMENTS: TAXABLE INDIVIDUALS BY STATE OR TERRITORY OF RESIDENCE

(Income derived in the year 1980–81)

State or Territory of Residence	*Number of taxpayers*	*Taxable income(a)*	*Net tax*
		$'000	$'000
New South Wales	2,111,301	27,303,234	6,085,507
Victoria	1,655,809	20,859,160	4,572,015
Queensland	854,745	10,589,320	2,250,809
South Australia	537,048	6,497,520	1,358,805
Western Australia	532,694	6,702,045	1,444,290
Tasmania	166,912	2,066,602	439,586
Northern Territory(*b*)	41,707	601,760	131,471
Australian Capital Territory	99,034	1,471,390	356,096
Australia	**5,999,250**	**76,091,034**	**16,638,580**

(*a*) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (*b*) Assessments issued from South Australian Office.

Partnerships and trusts

Income tax returns are required to be lodged on behalf of partnerships and trusts which, as partnerships and trusts, are not required to pay tax except in certain specified circumstances when they may be assessed as individuals. In general, the net income remaining after allowing all deductions including expenditure incurred in gaining the income is distributed to the partners or beneficiaries concerned and is assessable for tax in the respective individual returns.

The following tables show for the 1979–80 and 1980–81 income years numbers, total business income and net income of partnerships and trusts. Greater detail is published in the statistical supplement to the annual report of the Commissioner of Taxation and in the report itself.

PARTNERSHIPS AND TRUSTS—INCOME YEAR 1979–80 (*a*)

Item		*Partnerships*	*Trusts*	*Total*
Number		550,781	218,021	768,802
Total business income	$'000	21,528,476	6,412,029	27,940,505
Net income (b)	$'000	6,614,342	2,009,659	8,624,001

(*a*) Assessments issued during the period 1 July 1980 to 30 June 1982. (*b*) Total net income adjusted by subtraction of loss.

PARTNERSHIPS AND TRUSTS—INCOME YEAR 1980–81 (*a*)

Item		*Partnerships*	*Trusts*	*Total*
Number		517,766	219,429	737,195
Total business income	$'000	21,242,985	7,523,546	28,766,531
Net income(b)	$'000	6,128,248	2,237,391	8,365,639

(*a*) Assessments issued during the period 1 July 1981 to 30 September 1982. (*b*) Total net income adjusted by subtraction of loss.

Taxes on income—companies

For taxation purposes companies are divided into two main groups—public and private. A company is regarded as a public company if, broadly, its shares are on the official list of a stock exchange—in Australia or elsewhere and it is not capable of being controlled by relatively few individuals—or it is a co-operative, non-profit or mutual life insurance company or a Government body established for public purposes. A subsidiary of a public company is itself classed as a public company, subject to its meeting certain tests specified in the Income Tax Assessment Act. A company that is not a 'public' company is classified as a 'private' company. Both public and private companies pay primary tax assessed on a taxable income ascertained on the same principles as for individuals.

Rates of tax. The rates of primary income tax for all companies and additional tax for private companies applicable to income years 1970–71 to 1981–82 are shown in the following table.

RATES OF INCOME TAX: COMPANIES, 1970–71 TO 1981–82 INCOME YEARS

(Cents per $)

	Resident private company			*Resident public company(a)*		*Non resident company*			
	On taxable income		*Additional tax on undistributed income*	*On taxable income*		*On dividends income*		*On other income*	
Income years ended 30 June	*Up to $10,000*	*On remainder*		*Up to $10,000*	*On remainder*	*Up to $10,000*	*On remainder*	*Up to $10,000*	*On remainder*
1971 and 1972	37.5	42.5	50	47.5	47.5	42.5	47.5	47.5	47.5
1973	45.0	45.0	50	47.5	47.5	47.5	47.5	47.5	47.5
1974	45.0	45.0	50	45.0	45.0	45.0	45.0	45.0	45.0
1975 and 1976	42.5	42.5	50	42.5	42.5	42.5	42.5	42.5	42.5
1977–1981	46.0	46.0	50	46.0	46.0	46.0	46.0	46.0	46.0

(*a*) Excludes co-operative, non-profit and life insurance companies.

For the income year ended 30 June 1974 the rate for companies other than friendly society dispensaries was 45 per cent, except that for the first $10,000 of taxable income of co-operative and non-profit companies (other than friendly society dispensaries) the rate was 42.5 per cent. The rate for friendly society dispensaries was 37.5 per cent.

For the income years ended 30 June 1975 and 1976 the rate for companies other than friendly society dispensaries was 42.5 per cent and for friendly society dispensaries it was 37.5 per cent.

For the income years ended 30 June 1977 to 1982 the rates were 46 per cent and 41 per cent respectively. Tax exemption levels for these years are set out below.

A non-profit company is not liable to income tax unless the taxable income exceeds $416. Where the non-profit company is a friendly society dispensary and the taxable income does not exceed $2,311 the maximum amount payable is 50 per cent of the excess over $416 less any rebate or credit to which the company is entitled. Where the taxable income of a non-profit company other than a friendly society dispensary does not exceed $2,542, the tax payable by the company is limited to 55 per cent of the amount by which the taxable income exceeds $416 less any rebate or credit to which the company is entitled. Other companies are assessed for income tax if the taxable income is $1 or more.

Non-resident companies are also liable to additional tax at the rate of 5 per cent of the company's reduced taxable income. Reduced taxable income means the amount remaining after deducting from taxable income net dividends included in assessable income and certain amounts relating to overseas ships, film royalties, insurance premiums and reinsurance income.

Details in respect of company income tax assessments for the 1979–80 income year are shown in the following table.

COMMONWEALTH INCOME TAX ASSESSMENTS: RESIDENT AND NON-RESIDENT COMPANIES BY GRADE OF INCOME AND OFFICE OF ASSESSMENT

(Income derived in the year 1979–80)

Grades of taxable income(a) ($) and office of assessment	*Taxable (b)*			*Non-taxable*		
	Companies	*Taxable income (a)*	*Net income tax assessed(c)*	*Companies*	*Taxable income (a) (d)*	*Loss(e)*
	No.	$'000	$'000	No.	$'000	$'000
Loss for year	–	–	–	73,726	–	1,168,674
Nil	–	–	–	55,211	–	–
1– 1,999	29,622	14,921	6,392	3,924	2,886	–
2,000– 9,999	17,418	89,746	36,814	4,463	23,142	–
10,000– 19,999	8,121	116,330	47,222	1,777	25,280	–
20,000– 39,999	6,967	199,218	80,874	1,201	33,728	–
40,000– 99,999	6,335	398,395	164,071	800	48,184	–
100,000– 199,999	2,938	411,484	169,031	246	33,881	–
200,000– 399,999	1,868	522,996	213,813	155	43,536	–
400,000– 999,999	1,437	897,128	354,176	96	53,569	–
1,000,000–1,999,999	684	955,388	358,431	41	58,662	–
2,000,000 and over	843	9,208,378	3,170,906	43	386,563	–
New South Wales	38,488	4,509,626	1,495,275	66,046	297,381	524,308
Victoria	18,757	6,038,894	2,268,854	33,609	293,783	383,808
Queensland	7,605	1,450,920	539,916	12,122	42,540	79,656
South Australia	5,318	294,386	114,357	13,991	32,824	70,314
Western Australia	3,114	377,819	132,606	10,068	24,902	74,958
Tasmania	1,347	91,799	35,407	2,676	5,398	23,837
Northern Territory	275	10,031	4,040	686	521	3,636
Australian Capital Territory	1,329	40,510	11,274	2,485	12,082	8,156
Total	**76,233**	**12,813,984**	**4,601,729**	**141,683**	**709,431**	**1,168,674**

(*a*) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (*b*) The figures are deficient in that detailed statistics of approximately 3700 assessments of taxable private companies with net tax of approximately $42 million were not available for inclusion in the table. (*c*) Excludes additional tax on the undistributed income of private companies. (*d*) Net tax assessed is nil because of rebates. (*e*) Not included in the figures shown for taxable income.

Yield of income taxes

Income taxes collected. The following table shows the net amounts of taxes collected and the proportions of the several components over recent years.

COMMONWEALTH INCOME TAXES COLLECTED: COLLECTION YEARS 1976–77 TO 1981–82

Source of income tax	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
	NET AMOUNTS COLLECTED ($'000)					
Individuals—						
Instalments—salaries and wages	8,528,863	9,638,786	10,397,606	12,160,308	14,120,691	17,417,317
Other payments	2,524,781	2,490,216	2,406,212	2,879,787	3,422,561	3,806,998
Companies	2,824,459	3,095,321	3,036,520	3,406,479	4,694,691	5,052,697
Withholding tax	96,377	117,852	114,069	141,130	160,965	205,098
Total	**13,974,480**	**15,342,175**	**15,954,407**	**18,587,704**	**22,398,908**	**26,482,110**
	PERCENTAGES					
Individuals—						
Instalments—salaries and wages	61.03	62.83	65.17	65.42	63.04	65.77
Other payments	18.07	16.23	15.08	15.49	15.28	14.38
Companies	20.21	20.18	19.03	18.33	20.96	19.08
Withholding tax	0.69	0.76	0.72	0.76	0.72	0.77
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Refunds of revenue. Income tax collections, as previously shown are net amounts after refunds of revenue made in the course of the year. Refunds are of two types: those charged to special appropriations under authority of the Income Tax Assessment Act and those charged to special appropriations under authority of the Audit Act. Income tax instalment refunds, by far the greatest part of income tax refunds, are made when the instalments deducted during the year exceed the tax assessed on incomes for that year. Refunds made from special appropriations under section 37A of the Audit Act include refunds of moneys paid to the revenue in error, refunds of tax overpaid, refunds due to the amendment of assessments, etc. Refunds of income tax to individuals and superannuation funds during the collection years 1976–77 to 1981–82 were: 1976–77, $1,501,555,000; 1977–78, $1,218,225,000; 1978–79, $1,407,257,000, 1979–80, $1,478,387,000, 1980–81, $1,560,519,000, and 1981–82, $1,850,765,000

Estate duty

Prior to 1 July 1979 estate duty was levied under the *Estate Duty Assessment Act* 1914 and was assessed on the net value of the estate less a statutory exemption. In respect of estates of persons who died after 21 November 1977 no duty was payable on that part of the estate which passed to or for the benefit of the deceased persons' widow or widower, children, grandchildren, parents or grandparents. Duty is not payable on estates of any person dying on or after 1 July 1979. For estates of persons who died before 1 July 1979, where no part of the estate passed to the relatives mentioned above, duty was payable on the net value less statutory exemption as follows:

–for qualifying estates of deceased primary producers—$24,000

–for other estates—$20,000

decreasing by $2 for every $8 by which the value of the estate exceeds $24,000 or $20,000 as the case may be.

Additional information concerning a rural property rebate and higher exemption levels for primary producers, special exemptions for defence personnel and a quick succession rebate is given in Year Book No. 63, page 534.

The rates of duty remained unchanged from1941 and increased as the value of the estate for duty increased, as follows: did not exceed $20,000, 3 per cent; $20,001 to $40,000, 3 per cent to 6 per cent; $40,001 to $240,000, 6 per cent to 26 per cent; $240,001 to $1,000,000, 26 per cent to 27.9 per cent; $1,000,000 or more, 27.9 per cent.

Particulars of the number and value of dutiable estates and duty assessed for recent assessment years are given in the following table.

COMMONWEALTH ESTATE DUTY ASSESSMENTS

		1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Estates	No.	15,154	9,828	6,449	1,767	218
Gross value as assessed	$'000	1,443,967	980,304	n.a.	n.a.	n.a.
Deductions(*a*)	"	356,792	268,164	n.a.	n.a.	n.a.
Statutory exemptions	"	344,482	175,141	n.a.	n.a.	n.a.
Dutiable value	"	742,693	536,999	n.a.	n.a.	n.a.
Net duty assessed	"	99,050	76,301	41,434	10,434	1,984
Average dutiable value	$	49,010	54,640	n.a.	n.a.	n.a.
Average duty assessed per estate	$	6,536	7,764	6,425	5,905	9,100

(*a*) Debts, Exempt Estate and State Probate Succession Duties.

Gift duty

Prior to 1 July 1979 the *Gift Duty Act* 1941 and the *Gift Duty Assessment Act* 1941 imposed a gift duty on gifts which were defined as dispositions of property made otherwise than by will, without adequate consideration in money or money's worth. Both the donor and the donee were liable to furnish a return, and both were jointly and severally liable for payment of the duty. However, if a return was furnished by the donor, the donee is relieved of this obligation. Under the *Gift Duty Assessment Act* 1978, gifts to the donor's spouse, children, grandchildren, parents or grandparents made after 21 November 1977 were not subject to duty. Gift duty is not levied on any gifts made after 1 July 1979.

Certain exemptions from duty were provided, the more important being: payments to an employees' superannuation or like fund; retiring allowances or gratuities granted to employees; gifts to organisations not carried on for the profit of any individual; gifts to the Commonwealth Government or a State; and small gifts not exceeding $100.

The rate of gift duty applicable to any particular gifts was fixed by reference to the total value of all gifts made by the same donor within the period of eighteen months before and eighteen months after the time of making that gift. Where the total value of all gifts as defined did not exceed $10,000 no duty was payable. The rates of duty that applied to 30 June 1979 were (*a*) $10,001 to $20,000, 3 per cent provided that the gift duty payable did not exceed one half of the amount by which the gift exceeded $10,000 or a proportionate amount where more than one gift is involved; (*b*) $20,001 to $40,000, 3 per cent to 6 per cent; (*c*) $40,001 to $240,000, 6 per cent to 26 per cent; (*d*) $240,001 to $1,000,000 and over, 26 per cent to 27.9 per cent.

Particulars of the number of gift duty assessments, value of gifts as assessed and duty assessed for recent assessment years are given in the following table.

COMMONWEALTH GIFT DUTY ASSESSMENTS

		1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Assessments	No.	7,480	4,352	995	875	233	27
Value as assessed	$'000	187,085	103,058	95,738	n.a.	n.a.	n.a.
Duty assessed	"	11,711	5,934	22,032	4,985	311	150

Customs duties

A description of the Australian Customs Tariff System is given in Chapter 24, Overseas Transactions. Details of duties collected on the import of commodities classified in accordance with the 'Brussels Nomenclature' are given in the following table.

GROSS CUSTOMS DUTIES ON IMPORTS ACCORDING TO BRUSSELS TARIFF DIVISIONS

($'000)

Brussels Tariff Division	*Source of receipts*	*1979–80*	*1980–81*	*1981–82*
1	Live animals; animal products	1,320	966	1,379
2	Vegetable products	2,305	2,920	3,936
3	Animal and vegetable fats and oils and their cleavage products; prepared edible fats; animal and vegetable waxes	3,042	1,799	2,788
4	Prepared foodstuffs; beverages, spirits and vinegar; tobacco	234,365	248,845	271,783
5	Mineral products	3,801	4,694	4,207
6	Products of the chemical industry and allied industries	51,785	50,111	59,324
7	Artificial resins and plastic materials, cellulose esters and ethers, and articles thereof; rubber, synthetic rubbers, factice and articles thereof	96,815	100,547	118,680
8	Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar containers; articles of gut (other than silkworm gut)	18,992	12,716	17,471
9	Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto and of other plaiting materials; basketware and wickerwork	21,043	23,157	23,849
10	Paper-making material; paper and paperboard and articles thereof	33,861	36,225	46,657
11	Textiles and textile articles	199,637	214,848	247,788
12	Footwear, headgear, umbrellas, sunshades, whips, riding-crops and parts therefor; prepared feathers and articles made therewith; artificial flowers; articles of human hair; fans	46,060	48,292	53,866
13	Articles of stone, of plaster, of cement, of asbestos, of mica and of similar materials; ceramic products; glass and glassware	31,934	37,994	45,187
14	Pearls, precious and semi-precious stones, precious metals, rolled precious metals, and articles thereof; imitation jewellery; coin	12,173	10,268	11,970
15	Base metals and articles of base metal	87,166	100,382	128,490
16	Machinery and mechanical appliances; electrical equipment; parts therefor	316,471	391,660	472,368
17	Vehicles, aircraft, and parts therefor; vessels and certain associated transport equipment	327,634	424,209	467,740
18	Optical, photographic, cinematographic measuring, checking, precision, medical and surgical instruments and apparatus; clocks and watches, musical instruments; sound recorders and reproducers; television image and sound recorders and reproducers, magnetic; parts therefor	32,531	37,755	46,762
19	Arms and ammunition; parts therefor	1,163	605	859
20	Miscellaneous manufactured articles	53,560	59,395	72,989
21	Works of art, collectors' pieces and antiques	578	19,642	3,751
22	Primage	8,838	5,681	2,336
	Total customs duties and primage	**1,585,071**	**1,832,712**	**2,104,181**

The *net* receipts of custom duties into consolidated revenue fund for these years are 1979–80, $1,538,064,000; 1980-81, $1,799,488,000; and 1981–82, $2,059,690,000.

Customs duties on imports as recorded in the Financial Statements prepared by the Minister for Finance for these years are: 1979–80, $1,538,075,018; 1980-81, $1,799,507,666; and 1981–82, $2,059,706,249.

Excise duties

Details of duties collected in relation to the production of specific commodities are given in the following table:

COMMONWEALTH EXCISE REVENUE: CLASSIFICATION OF GROSS REVENUE

($'000)

Source of revenue	*1979–80*	*1980–81*	*1981–82*
Beer	1,004,256	994,994	1,005,866
Spirits, including liqueurs, etc.	100,185	111,768	119,606
Tobacco (manufactured), snuff	22,867	21,203	19,737
Cigars and cigarettes	681,861	687,084	706,883
Aviation gasoline—by-law	4,428	4,589	5,236
Aviation gasoline—other	—	1	—
Other gasoline	752,998	760,297	776,914
Mineral turpentine	—	—	—
Coal tar and coke oven distillates, etc.	—	—	—
Aviation turbine kerosene	46,232	48,138	50,088
Kerosene, n.e.i.	—	1	84
Diesel fuel—by-law	107,743	116,819	130,747
Gasoline—commercial motor spirit/ethanol blends	—	6	21
Playing cards	116	57	86
Cigarette tubes, paper and papers	790	590	695
Matches	1,689	1,342	1,365
Wine—other than table wine (excise item 16)	—	1	—
Petroleum and liquid petroleum gas (excise item 17)	2,116,928	3,059,822	3,274,043
Coal	10,767	11,663	13,012
Canned fruit	160	—	—
Other and undistributed excise revenue	4	—	85
Total Gross Excise Duties	*4,851,025*	*5,818,374*	*6,104,467*
Total Gross Customs, Primage and Excise Duties	**6,436,095**	**7,651,086**	**8,208,648**
Total Customs, Primage and Excise Refunds and Drawbacks	78,196	82,776	82,847

Statistics of the value of duty included in the price of petroleum products purchased by Commonwealth Government departments and subsequently credited to those departments by the Department of Finance are not available. The *net* receipts into consolidated revenue fund for these years is: 1979–80, $4,965,338,000; 1980–81, $5,834,025,000; and 1981–82, $5,993,793,000. The quantities of commodities on which excise duty was paid are given in chapter 24, Overseas Transactions, page 692. Commonwealth excise received, as recorded in the Financial Statement prepared by the Minister for Finance during these years are: 1979–80, $4,964,954,815; 1980–81, $5,833,168,483; and 1981–82 $5,110,312,712.

Sales tax

The general rate of tax levied on all goods other than those specified in the schedules to the *Sales Tax (Exemptions and Classifications) Act* 1935 is 17.5 per cent and goods subject to special rates are taxed at either 2.5 per cent, 5 per cent or 30 per cent. Prior to 19 August 1981 these special rates were 2.5 per cent and 27.5 per cent.

Particulars of the sales of taxable goods in each rate class in each State for 1979–80 are given in the following table. The figures relate to sales during the period 1 July to 30 June.

COMMONWEALTH SALES TAX: SALE VALUE OF TAXABLE GOODS INCLUDED IN RETURNS IN EACH RATE CLASS, 1980–81

($'000)

	Gross sales of goods taxable at various rates(a)				
State	*2½%*	*15%*	*27½%*	*Other*	*Total*
	$'000	$'000	$'000	$'000	$'000
New South Wales and A.C.T.	1,277,674	4,482,807	886,733	78,946	6,726,160
Victoria	1,095,941	3,389,173	358,497	73,609	4,917,220
Queensland	292,516	1,416,908	64,517	24,226	1,798,167
South Australia	264,598	745,899	47,245	4,181	1,061,923
Western Australia	166,585	708,380	43,101	31,694	949,760
Tasmania	34,330	164,832	9,552	6,313	215,027
Northern Territory	2,464	40,420	1,052	474	44,410
Australia—1980–81	**3,134,108**	**10,948,419**	**1,410,697**	**219,443**	**15,712,667**
1979–80	2,786,008	9,572,596	1,263,933	205,116	13,827,653
1978–79	2,536,155	8,334,453	1,544,234	148,993	12,563,835

(*a*) Estimated.

Sales of taxable goods included in returns lodged with the Australian Taxation Office and sales tax payable for Australia are shown in the following table for recent years.

COMMONWEALTH SALES TAX: SALE VALUE OF GOODS INCLUDED IN RETURNS AND COLLECTIONS

($ million)

	Taxation Office		*Bureau of Customs*	
Year of sale	*Gross taxable sales*	*Net collections*	*Net collections*	*Total net collections*
1974–75	7,739	1,103	51	1,154
1975–76	9,044	1,360	49	1,408
1976–77	10,752	1,589	61	1,650
1977–78	11,367(*b*)	1,695	63	1,758
1978–79	12,564	1,699	71	1,770
1979–80	13,828(*b*)	1,787	78	1,865
1980–81	15,713(*b*)	2,015	88	2,102
1981–82	18,297	2,731	123	2,854

(*a*) Represents gross taxable sales less discounts, goods returned, bad debts and other adjustments. (*b*) Adjusted.

Sales tax is payable on goods transferred to stock for sale by retail and goods used in the business of the taxpayer. Exempt sales relate to goods exempted from sales tax under the *Sales Tax (Exemptious and Classifications) Act* 1935. The figures shown do not represent the total sales of all commodities, as vendors trading only in exempt goods are not required to be registered and, consequently, the volume of their sales is not included. In addition, non-taxable sales (i.e. goods sold by one registered taxpayer to another registered taxpayer) are excluded.

Primary production taxes and charges

The following section shows current rates of charges and levies on primary production. Further information is given in Chapter 13, Agricultural Industries.

Expenditure on research, funded from industry levies, is usually matched dollar-for-dollar by the Commonwealth Government.

Grain Export Inspection Charge. Under the *Grain (Export Inspection Charge) Act* 1979 a levy is imposed on exports of wheat, oats, barley and sorghum to recoup about half the cost of export grain inspection. The levy is 4.5 cents per tonne on bulk grain, 25 cents per tonne on bagged grain and 29 cents per tonne on grain in containers.

Wheat Export Charge, Wheat Levy and Wheat Tax. For details *see* Chapter 13, Agricultural Industries.

Wool Tax. The *Wool Tax Acts* 1964 (Nos 1 to 5) As Amended, impose a levy of 8 per cent on the gross value of shorn wool sold of which 5 per cent is levied for the market support activities of the Australian Wool Corporation and 3 per cent to provide the growers' contribution towards wool research (0.5 per cent) and promotion (2.5 per cent).

Wool Inspection Fees. Under the *Wool Industry Act* 1972, fees are imposed on the inspection of wool to recoup about half the cost of operating the Australian Wool Measurement Standards Authority. A fee for registering a wool sampling site is set at $100 and is payable once only. The fee for providing pre-sale test certificates in respect of samples drawn at registered sites is currently 53 cents per certificate.

Tobacco Charge. The rates of Tobacco Charge currently collected under the *Tobacco Charges Acts* (Nos 1 to 3) 1955 (as amended by the *Tobacco Charge Amendment Act* 1982) and used to fund research into tobacco growing problems are:

(*a*) in respect of leaf grown in Australia and sold to a manufacturer:
  (i) 2.5 cents per kilogram of leaf, payable by the grower on leaf sold and
  (ii) 2.5 cents per kilogram of leaf, payable by manufacturers on leaf purchased.

Dairy Industry Stabilization Levy. The Dairy Industry Stabilization Levy Act imposes a levy on the production of butter, butteroil, ghee, various milk powders, casein, caseinates and certain varieties of cheese. The levy is collected on products sold on the domestic market or used in the manufacture of other products. Basically the rate of levy is fixed at the difference between the domestic market return and the assessed average export return.

The purpose of the levy is to protect the domestic market through the equalisation of returns to manufacturers.

Dairying Research and Promotion Levy. The Dairying Industry Research and *Promotion Levy Act* 1972 provides for the imposition of a levy on all milk produced and sold in Australia. The Act provides for the levy to be payable by dairy farmers either on a whole milk or butterfat basis. Moneys collected from the levy finance the administration and promotional activities of the Australian Dairy Corporation and the industry contribution to the research programme recommended by the Australian Dairying Research Committee. The Dairying Industry Research and Promotion Levy Regulations prescribe levies of either 13.8 cents per 100 litres of whole milk or 345 cents per 100 kilograms of butterfat.

Canned Fruits Levy. The *Canned Fruits Levy Act* 1979 imposes a levy on the production of canned fruits in Australia.

The operative rates are:

Containers not exceeding 150 grams—1.6875 cents/doz. containers.

Containers exceeding 150 grams but not exceeding 320 grams—3.375 cents/doz. containers.

Containers exceeding 320 grams but not exceeding 490 grams—6.75 cents/doz. containers.

Containers exceeding 490 grams but not exceeding 680 grams—10.125 cents/doz. containers.

Containers exceeding 680 grams—13.5 cents/doz. containers plus 8.1 cents/doz. containers for each 450 grams by which the gross weight of the container exceeds 900 grams.

The funds raised are to be used to finance the operation of the Australian Canned Fruits Corporation.

Honey Levy. The *Honey Levy Acts* (Nos 1 & 2) 1962 impose a levy of 2.05 cents per kilogram on honey sold for domestic consumption.

Honey Export Charge. The *Honey Export Charge Act* 1973 imposes a charge of 0.75 cents per kilogram on honey exports.

The funds are used to finance the operations of the Australian Honey Board and provide the industrys' contribution to research.

Livestock Slaughter Levy. The *Livestock Slaughter Levy Act* 1964 imposes a levy which is payable on all cattle, calves, bobby calves, sheep, lambs, goats and buffaloes slaughtered for human consumption. The funds are used by the Australian Meat and Livestock Corporation (AMLC) for marketing and promotion, by the Australian Meat Research Committee (AMRC) for production and economic research and by the CSIRO for meat processing research. The Slaughter Levy also provides the funds for the eradication of brucellosis and tuberculosis in cattle and buffaloes.

The levies are:

	Cents/Head				
	AMLC	*AMRC*	*CSIRO processing research*	*Disease eradication*	*Total*
Cattle	79.4	35	3	400	517.40
Calves	28.58	9	1.4	133	171.98
Bobby calves	7.94	2.5	0.3	40	50.74
Sheep, lambs, goats	7.94	3.33	0.3	—	11.57
Buffaloes	79.4	35	3	400	517.40

Livestock Slaughter—Export Inspection Charge. Under the *Livestock Slaughter (Export Inspection Charge) Act* 1979, a charge is imposed on livestock slaughtered at export works to recoup about half of the cost of meat inspection incurred by the Commonwealth Government. The charges are:

Cattle (180 cents/head), calves (60 cents/head), bobby calves (18 cents/head), sheep, lambs and goats (18 cents/head), buffaloes (180 cents/head), horses, donkeys, mules (180 cents/head), pigs (60 cents/head).

Export Inspection Charge—Overtime Recoveries—Meat. Under the *Customs Act* 1901 and the *Commerce (Trade Descriptions) Act* 1905, a levy at the rate prescribed in the Export Meat Regulations is levied on export meat-works to recover fully the cost of providing export meat inspection services outside normal hours.

Livestock Export Charge. The Livestock *Export Charge Act* 1977 imposes charges which apply to all cattle, buffaloes, sheep, lambs and goats exported live from Australia. The funds are allocated to the Australian Meat and Livestock Corporation (AMLC), the Australian Meat Research Committee (AMRC) and for disease eradication.

The charges are:

	Cents/Head			
	AMLC	*AMRC*	*Disease eradication*	*Total*
Cattle	79.4	35	400	514.40
Sheep, lambs, goats	7.94	3.33	—	11.27
Buffaloes	79.4	35	400	514.40

Export Inspection Charges—Miscellaneous. By arrangement, Commonwealth inspectors are provided to (i) abattoirs that are not registered export establishments to inspect meat for domestic consumption, (ii) State Dried Fruit Boards to inspect dried fruit for domestic use and to (iii) Australian Wheat Board for the issue of quality certificates.

The inspection charge in those cases is arrived at by agreement between the parties concerned.

Export Inspection Charge—Overtime Recoveries—Products Other than Meat. Fees are levied to recover the cost of providing export inspection, outside normal hours, for a number of products including field and horticultural crops, fish and dairy products. The fees are prescribed by the *Export Regulations* to the *Commerce (Trade Descriptions) Act*, 1905 and *Customs Act* 1901.

Pig Slaughter Levy. A slaughter levy under the *Pig Slaughter Levy Act* 1971 is payable on all pigs slaughtered for human consumption. The funds are used by the Australian Pig Industry Research Committee for production and marketing research and by the Pigmeat Promotion Advisory Committee for promotional activities within Australia. The present operative levy is 70 cents per pig. Of this amount 60 cents is for promotion and 10 cents for research.

Meat Chicken Levy. A levy is payable under the *Meat Chicken Levy Act* 1969 on meat chickens hatched for human consumption. The funds are used by the Australian Chicken Meat Research Committee for research into problems associated with the chicken meat industry. The operative rate of levy is 0.1 cent per chicken.

Poultry Industry Levy. The *Poultry Industry Levy Act* 1965 imposes a levy on domesticated fowls kept for commercial purposes. The operative rate of levy is 7.5 cents per bird per fortnight with a maximum of $2.00 per hen per annum. The levy is designed to provide assistance to the poultry industry.

Wine Grapes Levy. The *Wine Grapes Levy Act* 1979 imposes a levy on prescribed goods used at a winery in Australia in the manufacture of wine. The operative rate of levy is $2.40 per tonne of fresh

grapes with provision for conversion of dried grapes and grape juice to their fresh grape equivalents. Funds raised by the levy are used to finance the Australian Wine and Brandy Corporation.

Dried Fruits Export Charges. The *Dried Fruits Export Charges Act* 1924 imposes a levy of $4.50 per tonne on the export of dried currants, sultanas and raisins. The funds are used to finance the Australian Dried Fruits Corporation.

Dried Vine Fruits Equalisation Levy. The *Dried Vine Fruits Equalisation Levy Act* 1978 imposes a levy on domestic sales of dried vine fruit which is equal to the difference between the assessed returns per tonne from the domestic market and the assessed average returns per tonne from export. The purpose of the levy is to facilitate the equalisation of returns to producers from all markets. Because of the buoyant nature of the export market for dried vine fruit, no levies applied in either the 1979, 1980 or 1981 seasons.

Dried Fruits Levy. The *Dried Fruits Levy Act* 1971 imposes a levy on dried fruits of a season received for packing in order to fund industry research programmes. The operative rates of levy are for dried vine fruits $1.00 per tonne, dried tree fruits $5.00 per tonne and dried plums $2.50 per tonne.

Dried Fruit—Export Inspection Charge. Under the *Dried Fruit (Export Inspection Charge) Act* 1981, a charge is imposed on all dried fruit exported from Australia to recoup about half the cost of export inspection incurred by the Commonwealth Government. The operative charge is $5.50 per tonne.

Apple and Pear Levy. The *Apple and Pear Levy Act* 1976 imposes a levy on the production and sale of apples and pears in Australia excluding fruit sent for export and pears delivered for the manufacture of canned fruit. The rates of the levy are: fresh market 7 cents per box; juicing 70 cents per tonne; processing $1.40 per tonne.

The *Apple and Pear Export Charge Act* 1976 provides for the imposition of a charge on apples and pears exported from Australia. The rate of charge is 7 cents per box.

Monies collected from both the levy and the export charge are used to fund the operations of the Australian Apple and Pear Corporation.

Barley Research Levy. The *Barley Research Levy Act* 1980 imposes a levy on barley delivered for sale. The levy is disbursed for research by State barley research committees. The operative rate of levy is 15 cents per tonne.

Cotton Research Levy. Under the *Cotton Levy Act* 1982 a levy is imposed on the production of cotton. The levy will be used to fund research programs. The operative rate of levy will be $1 per 225kg of raw cotton.

Oilseeds Research Levy. The *Oilseeds Levy Act* 1977 imposes a levy on the production of sunflower seed, safflower seed, soybeans, linseed and rapeseed. The levy is used to fund research programmes. The operative rate of levy is $1 per tonne.

Fishing Licences and Charges. Under the *Fisheries Act* 1952 and the *Continental Shelf (Living Natural Resources) Act* 1968, domestic and foreign boats and crews may be licensed to fish in the Australian Fishing Zone. Other charges such as access fees for foreign countries are also levied under the Fisheries Act. The rate of licence fees is set out in the Fisheries Regulations and Continental Shelf (Living Natural Resources) regulations.

Fish—Export Inspection Charge. Under the *Fish (Export Inspection Charge) Act* 1981, a charge is imposed on fish for which an export permit has been issued to recoup about half the cost of inspection incurred by the Commonwealth. The charges are:

- Rock lobster—3.9 cents per kilogram
- All other shellfish except oysters, squid, cuttlefish and octopus—2.5 cents per kilogram
- All other fish except oysters in the shell or half shell—0.34 cents per kilogram
- Oysters in the shell or half shell—1.0 cents per dozen.

COMMONWEALTH PRIMARY PRODUCTION TAXES

($'000)

	1978–79	1979–80	1980–81	1981–82
Apple and pear export charge	212	197	216	183
Apple and pear export duty	129	11	444	—
Apple and pear levy	565	627	604	716
Barley research levy	—	—	314	429
Butterfat levy	—	—	—	—
Canned fruit export charge (replaced by canned fruit levy 1.1.80)	176	133	718	863
Canning fruit charge	123	99	58	52
Dairy industry stabilization levy	80,255	93,549	82,339	79,711
Dairying research and promotion levy	5,674	5,689	6,119	7,218
Dried fruits export charge	227	189	236	193
Dried fruits levy	89	90	119	87
Dried vine fruits levy	—	—	1,187	—
Dried vine fruit equalisation levy	—	—	—	688
Honey export charge	24	56	51	93
Honey levy	186	200	233	241
Livestock slaughter levy—				
Cattle	5,734	7,305	6,916	6,901
Pigs	572	769	1,086	2,043
Sheep and lambs	1,311	3,165	3,261	2,843
Goats, buffalo, calves and bobby calves	—	281	296	317
Eradication of disease	9,710	20,453	21,066	21,038
Meat export charge—				
Cattle meat	31	46	118	110
Other meat	289	771	918	986
Oil seeds research levy	375	409	277	276
Meat chicken levy	189	234	235	211
Poultry industry levy	10,603	17,834	20,939	20,805
Tobacco charge	514	504	519	539
Wheat export charge	60,000	—	30,000	—
Wheat tax	3,466	3,085	2,012	3,108
Wheat levy	—	—	38,318	25,147
Refunds of wheat export charge and wheat levy	—	—	—	-38,733
Wine grapes charges (replaced by wine grapes levy 1.7.79)	1,030	1,174	65	11
Wine grapes levy	—	—	1,224	1,065
Wool tax	101,608	121,400	132,864	138,492
Refunds of 5% additional wool tax	—	—	—	-41,524
Total	**283,092**	**278,270**	**352,753**	**234,109**

Pay-roll tax

Commonwealth pay-roll tax came into operation on 2 May 1941 and provided for the imposition of a tax on wages paid or payable in respect of any period of time occurring after 30 June 1941. The tax was payable by employers on all wages and salaries paid or payable in excess of a general exemption. The rate of tax, 2.5 per cent, was not changed after its inception, but the general exemption was increased over the years from $173.33 to $1,733.33 per month ($2,080 per annum to $20,800 per annum).

From 1 September 1971, in accordance with an agreement between the Commonwealth Government and the States following the June 1971 Premiers' Conference, the Commonwealth Government vacated the pay-roll tax field in favour of the States. It continued, however, to impose pay-roll tax in the Australian Capital Territory and the Northern Territory. The laws relating to pay-roll tax in the Territories are the *Pay-roll Tax (Territories) Assessment Act* 1971 and the *Pay-roll Tax (Territories) Act* 1971.

From 1 December 1974 the rate of tax payable in the Territories has been 5 per cent with a statutory exemption of wages up to $1,733.33 per month ($20,800 per annum) or a proportion of that amount in the case of an employer who is an employer also in a State.

The *Pay-roll Tax (Territories) Assessment Act* 1976 raised the level of the general exemption from pay-roll tax in the Territories from $20,800 to $48,000 per annum with effect from 1 January 1977. However the exemption was reduced by $2 for every $3 by which the annual pay-roll exceeded $48,000. The maximum general exemption was increased to $60,000 from 1 July 1978 under the *Pay-roll (Territories) Assessment Amendment Act* 1978. Commonwealth pay-roll tax in the Northern Territory was terminated from 1 July 1978 by the *Pay-roll Tax (Territories) Assessment Amendment Act (No. 2)* 1978 giving the Territory the right to levy its own pay-roll tax.

The *Pay-roll Tax (Territories) Assessment Amendment Act* 1979 increased the maximum exemption level in the Australian Capital Territory to $66,000 with effect from 1 January 1979. The exemption level was further increased to $72,000 with effect from 1 January 1980 under the *Pay-roll Tax (Territories) Assessment Amendment Act* 1980. Phasing out remains at $2 for each $3 by which the annual wages payable exceed the maximum exemption level.

Gross collections of pay-roll tax in 1980–81 and 1981–82 amounted to $17,007,851 and $19,319,922 respectively.

Gross operating surplus of public enterprises

The *gross operating surplus* of public *trading* enterprises is the excess over working expenses of total revenue from charges before providing for capital consumption and other costs of capital (i.e. interest, debt redemption). *Financial* enterprises do not charge directly, at least not in full, for the services they render; that expenditure is largely financed by net receipts of interest and other transfer income. By convention, the output of these enterprises is valued at cost, so that no operating surplus is recorded in their production accounts. The profits of these enterprises are attributable to their property income. *Income* (including depreciation) of public financial enterprises is therefore arrived at after deducting interest paid and working expenses (i.e. net current expenditure on goods and services) from total receipts of interest and non-dwelling rent.

In the following table the revenue, working expenses and gross operating surplus of public trading enterprises are shown; public financial enterprises are reflected simply on the basis of their income (including depreciation). Further information relating to the more important of these enterprises may be found in the chapters dealing with banking, housing, railways, electric power generation, etc.

COMMONWEALTH AUTHORITIES: PUBLIC TRADING ENTERPRISES(a): REVENUE, WORKING EXPENSES AND GROSS OPERATING SURPLUS, CLASSIFIED BY INDUSTRY

($ million)

Industry	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
REVENUE						
Manufacturing	48.9	54.7	58.5	74.3	65.2	68.5
Electricity	84.1	96.2	105.1	100.6	105.6	129.7
Water supply, sewerage and drainage	7.6	9.6	12.5	12.9	14.2	16.0
Transport and communication—						
Air transport	704.7	808.7	929.7	1,074.3	1,336.4	1,467.5
Rail transport	108.2	122.9	121.7	131.4	157.6	180.7
Sea transport	204.3	282.6	319.4	372.7	422.9	464.2
Urban transit systems	14.0	16.8	15.8	10.2	10.7	18.6
Pipelines	—	2.8	11.7	18.1	23.4	23.3
Communication	2,008.7	2,314.7	2,521.3	2,811.9	3,121.1	3,564.1
Total transport, etc.	*3,039.9*	*3,548.4*	*3,919.5*	*4,418.7*	*5,072.4*	*5,718.5*
Commerce	207.9	149.6	249.8	360.4	199.1	149.1
Property and business services—						
Housing	23.0	22.6	27.6	25.6	27.9	31.3
Other	25.5	25.7	36.5	38.7	43.5	45.8
Total property, etc.	*48.4*	*48.3*	*64.1*	*64.3*	*71.4*	*77.1*
Community, social and personal services	22.8	22.7	28.1	41.1	52.7	61.5
Total revenue	**3,459.6**	**3,929.5**	**4,437.6**	**5,072.3**	**5,580.6**	**6,220.3**
WORKING EXPENSES(b)						
Manufacturing	46.9	52.4	55.6	68.6	60.1	63.0
Electricity	37.3	48.3	56.9	39.7	48.4	68.5
Water supply, sewerage and drainage	4.9	6.1	7.3	5.8	6.8	9.2
Transport and communication—						
Air transport	647.6	722.7	833.8	969.2	1,267.5	1,402.5
Rail transport	154.3	170.1	184.9	187.0	205.2	225.7
Sea transport	184.2	231.2	260.4	312.8	377.7	410.5
Urban transit systems	16.7	19.1	20.0	16.0	19.2	26.9
Pipelines	—	1.4	3.4	3.1	3.7	4.7
Communication	1,219.8	1,456.4	1,600.6	1,769.8	1,989.2	2,311.0
Total transport, etc.	*2,222.6*	*2,601.0*	*2,903.0*	*3,258.0*	*3,862.6*	*4,381.4*
Commerce	248.3	160.7	255.0	348.6	189.3	148.4
Property and business services—						
Housing	24.4	24.4	28.8	30.1	33.4	38.7
Other	24.3	23.8	35.0	37.0	42.3	44.5
Total property, etc.	*48.8*	*48.2*	*63.8*	*67.1*	*75.6*	*83.2*
Community, social and personal services	19.7	19.1	24.0	33.5	42.9	52.1
Total working expenses	**2,628.4**	**2,935.8**	**3,365.6**	**3,821.4**	**4,285.7**	**4,805.8**
GROSS OPERATING SURPLUS						
Manufacturing	2.0	2.3	2.9	5.6	5.0	5.5
Electricity	46.8	47.9	48.2	60.9	57.3	61.2
Water supply, sewerage and drainage	2.6	3.5	5.2	7.0	7.4	6.8
Transport and communication—						
Air transport	57.1	86.0	95.9	105.1	68.9	65.0
Rail transport	–46.1	–47.2	–63.2	–55.5	–47.6	–45.0
Sea transport	20.1	51.4	59.0	60.0	45.2	53.7
Urban transit systems	–2.7	–2.4	–4.1	–5.8	–8.5	–8.3
Pipelines	—	1.4	8.3	15.0	19.7	18.6
Communication	788.9	858.2	920.7	1,042.1	1,131.9	1,253.1
Total transport, etc.	*817.3*	*947.5*	*1,016.5*	*1,160.7*	*1,209.8*	*1,337.1*
Commerce	–40.4	–11.1	–5.3	11.8	9.8	0.8
Property and business services—						
Housing	–1.5	–1.8	–1.2	–4.5	–5.5	–7.4
Other	1.2	1.8	1.6	1.7	1.2	1.3
Total property, etc.	*–0.3*	*—*	*0.4*	*–2.9*	*–4.3*	*–6.1*
Community, social and personal services	3.2	3.6	4.0	7.6	9.8	9.3
Total gross operating surplus	**831.2**	**993.8**	**1,072.0**	**1,250.9**	**1,294.9**	**1,414.6**

(a) Excludes Northern Territory public trading enterprises from 1978–79. (b) Excludes depreciation and interest charges.

STATE AUTHORITIES

The State authorities dealt with in this section include the central government of each State, statutory bodies created by or under State legislation to carry out activities on behalf of the central government, and incorporated organisations in which individual State governments have a controlling interest.

The transactions of many of the State authorities are itemised in State Consolidated Revenue Funds or in Trust Funds, so that a satisfactory coverage of their transactions can be obtained from a detailed analysis and reclassification of the published accounts whose receipts and payments are summarised in the statement of Treasury balances for each State. The remaining statutory bodies and other publicly owned or controlled organisations maintain accounts entirely, or largely, separate from the public accounts, although there may be transactions between them and State governments (such as advances and capital contributions, interest and dividends, and votes for running expenses and capital works) which would affect the public accounts. The accounting reports of this group of organisations have to be collected and analysed in order to present a complete statement of the transactions of State authorities—or at least methods of analysis need to be adopted which adequately reflect their transactions so that they are, in principle, covered by the statistics.

In the figures which follow in this section, all expenditure by State central government authorities on certain institutions, whether direct (e.g. new building charged to Loan Fund) or indirect by way of current or capital grants to the bodies administering them, has been treated as final expenditure on goods and services by State authorities; fees and gifts from persons or private businesses to these institutions are not included, nor is the expenditure of the institutions from their own resources. Universities and hospitals are particular examples of organisations for which this practice has been adopted.

Many of these State authorities have been granted autonomy by State legislatures to the extent that they are largely financially independent. Some of these are funded from earmarked tax revenues and are vested with independent borrowing powers. A considerable number of others belong to the category of public enterprises, since they are able to charge for their services so as to cover their costs of operation. These bodies have usually been created to control a specific activity or provide a specific service within a State. It is often the case that in other States similar activities are carried out, or services are provided, by central government or local authorities. Details of the activities of autonomous or semi-autonomous State authorities engaged in such fields as construction and maintenance of roads and bridges, provision of water supply and sewerage services, harbour facilities, transport, electricity and gas, housing and banking may be found in chapters relevant to those subjects and in State Year Books.

Details of the transactions of State authorities are given in the tables which follow. Reference should be made to the introduction of *State and Local Government Finance, Australia* (5504.0) for definitions and descriptions of items appearing in these tables, and also for further details of the organisations covered by the figures. Additional information relating to the activities of the State authorities may also be found in the Year Books of the individual States.

Coverage—Northern Territory government authorities

On 1 July 1978 the Nothern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximating those of a State. In the period up to and including 1977–78 receipts and outlays relating to the Nothern Territory are included with Commonwealth receipts and outlays but from 1978–79 onwards they have been grouped with the receipts and outlays of State authorities.

Outlay and receipts

The outlay and receipts of State authorities for the six year period ended 1980–81 are given in the following table.

STATE AUTHORITIES(*a*): OUTLAY AND RECEIPTS

($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
OUTLAY						
Final consumption expenditure	6,820.2	8,139.5	9,243.4	10,227.0	11,624.2	13,568.5
Gross capital formation—						
Increase in stocks	30.5	29.7	62.7	36.5	64.4	120.2
Expenditure on new fixed assets	3,905.9	4,190.9	4,768.2	5,205.0	5,638.1	6,487.5
Expenditure on existing assets (net)	179.4	147.4	103.1	76.4	11.9	12.6
Total gross capital formation	*4,115.8*	*4,367.0*	*4,934.0*	*5,317.9*	*5,714.4*	*6,620.3*
Transfer payments—						
Interest	1,224.3	1,469.3	1,723.1	1,978.0	2,203.4	2,597.0
Personal benefit payments	220.2	247.3	280.3	283.5	308.3	296.6
Subsidies	46.6	59.0	89.6	101.0	113.7	144.1
Transfers overseas	0.1	0.1	0.1	0.1	0.1	0.2
Grants for private capital purposes	57.7	49.8	64.3	73.1	65.1	62.5
Grants to local authorities	347.3	414.1	479.0	513.0	588.0	684.4
Total transfer payments	*1,896.1*	*2,239.6*	*2,636.4*	*2,948.7*	*3,278.7*	*3,784.8*
Net advances—						
To the private sector	170.0	189.7	214.0	114.8	96.7	89.9
To public financial enterprises	84.7	83.4	109.0	91.0	53.3	98.5
To local authorities	18.6	16.0	9.3	12.8	10.4	14.4
Total net advances	*273.4*	*289.1*	*332.3*	*218.6*	*160.4*	*202.8*
Total outlay	**13,105.5**	**15,035.2**	**17,146.1**	**18,712.2**	**20,777.8**	**24,176.4**
of which—						
current outlay	8,451.9	10,117.3	11,583.2	12,859.4	14,569.0	17,015.4
capital outlay	4,653.6	4,917.9	5,563.0	5,852.8	6,208.9	7,161.0
RECEIPTS AND FINANCING ITEMS						
Receipts—						
Taxes, fees, fines, etc.	3,469.5	3,973.4	4,300.7	4,667.7	5,264.8	6,047.2
Income from public enterprises	327.2	348.4	378.3	469.3	639.2	689.1
Property income	468.9	622.9	733.5	774.7	989.1	1,184.9
Grants from the Commonwealth Government—						
for current purposes	5,427.5	6,110.2	7,215.3	8,137.9	9,079.6	10,290.4
for capital purposes	1,556.6	1,537.3	1,508.9	1,483.8	1,565.4	1,668.9
Grants from local authorities	32.4	32.1	36.0	35.5	43.2	49.9
Total receipts	*11,282.1*	*12,624.3*	*14,172.6*	*15,568.8*	*17,581.3*	*19.930.4*
Financing items—						
Net borrowing—						
Public trading enterprises	564.1	667.0	890.5	1,185.6	1,445.6	1,827.2
General government	113.0	126.4	120.9	207.3	273.9	338.5
Advances from the Commonwealth Government (net)—						
For loan works purposes	708.7	744.7	784.8	770.6	704.5	741.7
Other	663.8	533.4	476.3	356.6	191.5	194.8
Net receipts of private trust funds	32.6	244.6	229.8	241.9	251.0	288.8
Reduction in cash and bank balances	-741.5	-408.0	-31.4	-239.2	-138.6	-86.0
Reduction in security holdings—						
Investment of private trust funds	11.9	-62.1	-95.7	-113.8	-135.0	-92.7
Investment of governmental trust funds and public corporations	-5.8	-58.5	-121.7	-54.9	-66.1	32.1
Other funds available (including errors and omissions)—						
Depreciation allowances	310.5	356.2	412.5	469.6	498.5	552.4
Other	166.3	267.2	307.4	319.9	171.2	449.2
Total financing items	*1,823.4*	*2,410.8*	*2,973.5*	*3,143.4*	*3,196.5*	*4,246.0*
Total funds available	**13,105.5**	**15,035.2**	**17,146.1**	**18,712.2**	**20,777.8**	**24,176.4**

(*a*) Excludes financial enterprises. Includes Northern Territory authorities from 1978–79.

The following table provides details of the outlay and receipts of State authorities in each of the six States and the Northern Territory.

STATE AUTHORITIES(*a*): OUTLAY AND RECEIPTS BY STATE, 1980–81

($ million)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
OUTLAY								
Final consumption expenditure	4,596.6	3,497.0	1,932.0	1,322.1	1,375.6	488.4	356.5	13,568.5
Gross capital formation—								
Increase in stocks	74.9	22.7	14.1	8.7	-3.4	1.5	1.8	120.2
Expenditure on new fixed assets	2,207.1	1,793.4	1,039.9	446.5	610.3	226.9	163.4	6,487.5
Expenditure on existing assets (net)	-12.7	31.0	-8.7	-10.3	-3.1	-	16.5	12.6
Total gross capital formation	*2,269.3*	*1,847.0*	*1,045.3*	*444.8*	*603.8*	*228.4*	*181.7*	*6,620.3*
Transfer payments—								
Interest	793.9	764.1	426.0	258.3	209.7	124.3	20.8	2,597.0
Personal benefit payments	155.2	59.5	31.1	19.5	19.1	11.6	0.6	296.6
Subsidies	56.7	46.4	18.4	11.1	6.2	4.9	0.4	144.1
Transfers overseas	0.1	-	-	-	-	0.1	-	0.2
Grants for private capital purposes	24.5	9.0	16.2	8.0	3.7	0.4	0.6	62.5
Grants to local authorities	226.6	180.6	137.7	44.0	66.7	22.3	6.5	684.4
Total transfer payments	*1,256.9*	*1,059.6*	*629.5*	*340.8*	*305.4*	*163.6*	*28.9*	*3,784.8*
Net advances—								
To the private sector	-11.7	25.5	17.1	-0.8	2.2	9.6	47.9	89.9
To public financial enterprises	63.3	1.6	-	29.7	0.2	3.8	-	98.5
To local authorities	4.4	0.6	4.3	-0.1	-1.7	2.9	4.0	14.4
Total net advances	*56.0*	*27.7*	*21.4*	*28.8*	*0.7*	*16.3*	*51.9*	*202.8*
Total outlay	**8,178.8**	**6,431.4**	**3,628.2**	**2,136.5**	**2,285.7**	**896.7**	**619.0**	**24,176.4**
of which—								
current outlay	5,743.2	4,489.8	2,473.4	1,639.7	1,641.2	645.2	382.8	17,015.4
capital outlay	2,435.6	1,941.6	1,154.8	496.8	644.6	251.4	236.2	7,161.0
RECEIPTS AND FINANCING ITEMS								
Receipts—								
Taxes, fees, fines, etc.	2,448.8	1,790.9	726.1	433.9	481.3	135.0	31.4	6,047.2
Income from public enterprises	124.8	320.0	99.5	79.2	38.2	66.3	-38.8	689.1
Property income	345.2	257.3	273.3	99.3	159.8	28.2	21.5	1,184.9
Grants from the Commonwealth Government—								
for current purposes	3,217.6	2,405.2	1,668.9	1,062.6	1,131.0	418.6	386.6	10,290.4
for capital purposes	514.8	376.2	276.5	163.5	169.8	87.7	80.3	1,668.9
Grants from local authorities	16.5	12.4	7.0	4.1	2.5	7.5	-	49.9
Total receipts	*6,667.7*	*5,161.9*	*3,051.3*	*1,842.5*	*1,982.6*	*743.3*	*481.0*	*19,930.4*
Financing items—								
Net borrowing—								
Public trading enterprises	658.6	721.2	191.8	59.7	122.6	71.0	2.3	1,827.2
General government	99.3	8.4	126.2	7.2	37.8	2.0	57.7	338.5
Advances from the Commonwealth Government (net)—								
For loan works purposes	213.0	168.6	88.5	88.1	60.9	48.9	73.6	741.7
Other	95.2	50.9	-11.7	22.3	21.8	6.7	9.5	194.8
Net receipts of private trust funds	25.5	7.8	192.6	16.1	34.6	12.1	-	288.8
Reduction in cash and bank balances	118.1	20.0	-205.2	45.9	-55.3	-7.5	-2.0	-86.0
Reduction in security holdings—								
Investments of private trust funds	-16.9	-21.0	-	-14.4	-29.3	-11.2	-	-92.7
Investments of governmental trust funds and public corporations	-7.7	48.9	-14.7	4.1	-4.2	5.7	-	32.1
Other funds available (including errors and omissions)—								
Depreciation allowances	210.1	130.3	81.3	50.3	61.8	11.6	7.0	552.4
Other	115.8	134.4	128.1	14.6	52.4	14.1	-10.0	449.2
Total financing items	*1,511.1*	*1,269.5*	*576.9*	*294.0*	*303.1*	*153.4*	*138.0*	*4,246.0*
Total funds available	**8,178.8**	**6,431.4**	**3,628.2**	**2,136.5**	**2,285.7**	**896.7**	**619.0**	**24,176.4**

(*a*) Excludes financial enterprises.

STATE AUTHORITIES, 1980-81

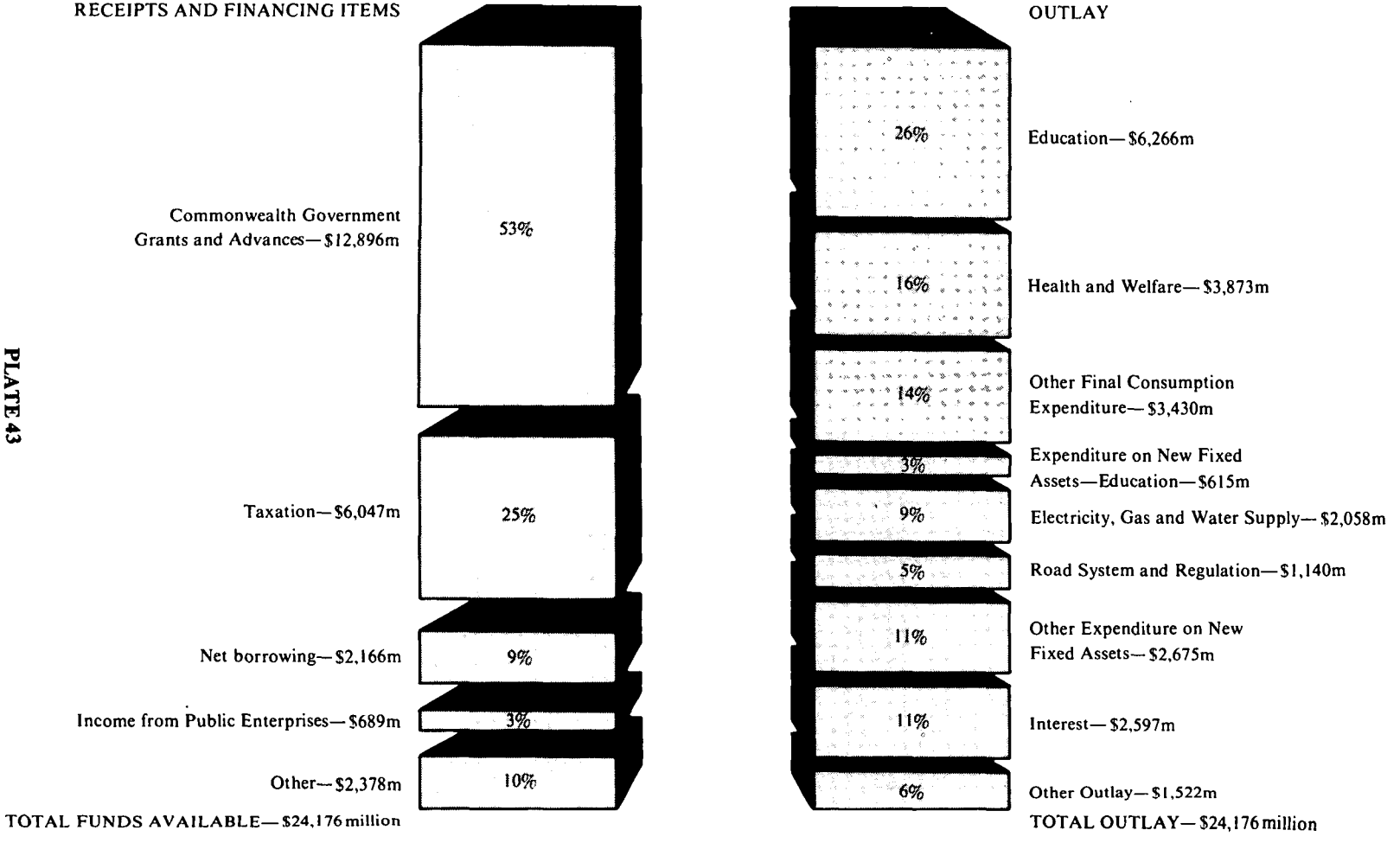


PLATE 43

Main components of outlay

The main component of the outlay of State authorities is expenditure on goods and services. As in the case of authorities of the Commonwealth Government, this expenditure consists mainly of final consumption expenditure and expenditure on new fixed assets. The following tables show final consumption expenditure and expenditure on new fixed assets classified by purpose for State authorities.

STATE AUTHORITIES(*a*): FINAL CONSUMPTION EXPENDITURE CLASSIFIED BY PURPOSE

($ million)

Purpose	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
General public services—						
Law, order and public safety	659.5	771.7	881.9	994.6	1,174.6	1,377.2
General administration, n.e.c.	408.8	505.2	586.7	662.4	778.5	917.8
Education	3,222.8	3.872.0	4,388.4	4,766.7	5,409.3	6,265.7
Health	1,835.8	2,209.8	2,485.7	2,760.1	3,074.6	3,591.3
Social security and welfare	108.9	124.1	147.0	181.2	214.4	282.1
Housing and community amenities—						
Housing	4.4	5.4	3.9	4.5	4.0	1.6
Community and regional development	20.7	24.1	26.4	35.7	35.7	42.5
Protection of the environment, and community amenities	17.6	22.0	24.8	28.3	32.3	39.0
Recreation and culture	79.2	97.2	120.6	147.0	168.5	193.3
Economic services—						
Agriculture, forestry, fishing	267.6	297.1	339.9	373.1	429.8	492.7
Mining, manufacturing and construction	45.4	48.4	54.3	62.1	70.9	82.8
Electricity, gas and water supply	7.6	6.1	8.1	9.7	9.8	14.1
Rail transport (*b*)	1.4	1.0	1.2	0.7	1.0	0.8
Sea transport	4.1	4.6	5.3	2.5	1.9	2.4
Road systems and regulation	10.7	13.6	13.7	17.2	18.8	21.3
Other transport services, n.e.c.	4.5	4.2	4.0	7.6	9.5	15.1
Other economic services(*c*)	120.6	131.9	149.5	171.8	188.4	224.9
Other purposes	0.8	1.3	2.0	1.9	2.2	3.5
Total	**6,820.2**	**8,139.5**	**9,243.4**	**10,227.0**	**11,624.2**	**13,568.5**

(*a*) Excludes financial enterprises. Includes Northern Territory authorities from 1978–79. (*b*) Includes suburban rail transport systems. (*c*) Includes general administration, regulation and research.

STATE AUTHORITIES(*a*): FINAL CONSUMPTION EXPENDITURE CLASSIFIED BY PURPOSE 1980–81

($ million)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
General public services—								
Law, order and public safety	487.7	306.6	214.9	133.4	146.2	48.6	39.9	1,377.2
General administration, n.e.c.	336.2	187.5	140.6	58.0	92.9	45.0	57.7	917.8
Education	2,133.2	1,790.8	831.9	644.1	574.4	205.4	85.9	6,265.7
Health	1,268.0	873.5	492.6	344.2	421.4	119.1	72.4	3,591.3
Social security and welfare	63.8	62.6	66.3	25.1	31.2	7.2	25.9	282.1
Housing and community amenities—								
Housing	-1.6	3.0	-2.9	0.9	-0.2	0.3	2.0	1.6
Community and regional development	12.3	17.6	..	4.5	..	0.7	7.4	42.5
Protection of the environment, and community amenities	7.9	14.1	2.1	7.9	2.7	0.8	3.4	39.0
Recreation and culture	51.9	40.8	27.1	26.3	21.6	13.5	12.1	193.3
Economic services—								
Agriculture, forestry, fishing	126.8	129.5	120.8	34.7	39.8	30.0	11.1	492.7
Mining, manufacturing and construction	30.2	9.5	9.3	9.3	13.6	4.0	7.0	82.8
Electricity, gas and water supply	3.5	-2.6	6.8	-0.1	5.5	1.0	..	14.1
Rail transport(*b*)	..	0.4	..	..	0.4	..	..	0.8
Sea transport	3.3	-0.1	-2.4	1.5	..	0.2	..	2.4
Road systems and regulation	3.6	8.1	2.9	-0.1	0.6	1.2	5.0	21.3
Other transport services, n.e.c.	3.3	2.1	..	0.2	0.6	0.2	8.7	15.1
Other economic services(*c*)	66.3	52.0	22.1	32.1	23.5	11.3	17.7	224.9
Other purposes	0.5	1.3	-0.2	0.1	1.6	-0.1	0.3	3.5
Total	**4,596.6**	**3,497.0**	**1,932.0**	**1,322.1**	**1,375.8**	**488.4**	**356.5**	**13,568.5**

(*a*) Excludes financial enterprises. Includes Northern Territory authorities. (*b*) Includes suburban rail transport systems. (*c*) Includes general administration, regulation and research.

STATE AUTHORITIES(a): EXPENDITURE ON NEW FIXED ASSETS CLASSIFIED BY PURPOSE

($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
General public services—						
Law, order and public safety	64.1	73.3	91.7	100.3	114.0	131.9
General administration, n.e.c.	82.1	87.6	112.1	116.1	108.2	108.4
Education	618.2	574.2	659.9	677.6	623.5	614.8
Health	326.9	334.0	322.8	332.2	285.9	258.0
Social security and welfare	8.8	12.1	10.7	13.4	13.6	12.6
Housing and community amenities—						
Housing	260.4	237.6	298.1	271.7	273.3	350.0
Community and regional development	35.0	42.5	38.2	33.9	47.1	69.1
Protection of the environment, and community amenities	330.8	343.8	352.5	344.6	351.2	371.4
Recreation and culture	25.2	33.5	51.4	70.0	75.4	95.2
Economic services—						
Agriculture, forestry, fishing	173.3	204.7	219.1	216.4	224.1	260.8
Mining, manufacturing and construction	61.9	61.8	68.0	55.9	96.1	120.8
Electricity and gas	538.1	650.1	834.5	1,099.9	1,381.4	1,784.9
Water supply	237.7	260.2	278.3	274.8	266.3	273.2
Rail transport(b)	277.1	312.4	386.0	439.8	456.0	509.5
Sea transport	84.9	94.8	116.6	147.4	160.5	257.2
Road systems and regulation	689.6	772.1	830.5	913.0	1,028.3	1,140.2
Other transport services, n.e.c.	31.2	29.9	38.7	42.4	54.3	50.9
Other economic services(c)	60.4	64.9	58.3	54.3	78.9	78.1
Other purposes	0.1	0.5	0.8	1.3	-0.1	0.5
Total	**3,905.9**	**4,190.0**	**4,768.2**	**5,205.0**	**5,638.1**	**6,487.5**

(a) Excludes financial enterprises. Includes Northern Territory authorities from 1978–79. (b) Includes suburban rail transport systems. (c) Includes general administration, regulation and research.

STATE AUTHORITIES(a): EXPENDITURE ON NEW FIXED ASSETS CLASSIFIED BY PURPOSE 1980–81

($ million)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
General public services—								
Law, order and public safety	42.0	24.0	25.0	8.3	24.9	4.6	3.2	131.9
General administration, n.e.c.	34.2	14.2	31.1	2.3	7.5	8.3	10.9	108.4
Education	220.4	169.2	87.0	57.2	45.1	24.6	11.4	614.8
Health	64.1	62.3	49.8	24.8	40.7	13.5	2.8	258.0
Social security and welfare	5.2	2.1	2.2	1.8	0.9	0.2	0.2	12.6
Housing and community amenities—								
Housing	150.4	54.4	18.2	40.6	41.4	23.7	21.3	350.0
Community and regional development	48.5	4.7	..	1.6	1.7	..	12.5	69.1
Protection of the environment, and community amenities	149.2	149.7	0.8	20.4	47.7	..	3.6	371.4
Recreation and culture	18.0	34.8	19.4	12.9	3.3	1.9	4.9	95.2
Economic services—								
Agriculture, forestry, fishing	74.6	63.1	51.2	21.4	35.9	13.2	1.7	260.8
Mining, manufacturing and construction	46.8	51.7	12.2	2.9	5.8	0.8	0.5	120.8
Electricity and gas	495.6	615.3	325.0	114.5	155.1	74.1	5.8	1,784.9
Water supply	71.2	115.7	17.0	15.6	35.4	5.8	12.5	273.2
Rail transport(b)	246.4	123.3	104.7	..	34.7	0.3	..	509.5
Sea transport	101.0	40.6	84.4	5.5	9.1	5.7	11.0	257.2
Road systems and regulation	414.1	213.0	207.4	94.3	115.6	45.1	50.8	1,140.2
Other transport services, n.e.c.	5.7	15.6	..	19.6	2.8	1.9	5.3	50.9
Other economic services(c)	20.3	39.8	4.6	2.8	2.2	2.9	5.5	78.1
Other purposes	-0.3	0.1	..	..	0.6	0.2	..	0.5
Total	**2,207.1**	**1,793.4**	**1,039.9**	**446.5**	**610.3**	**226.9**	**163.4**	**6,487.5**

(a) Excludes financial enterprises. Includes Northern Territory authorities. (b) Includes suburban rail transport systems. (c) Includes general administration, regulation and research.

Main components of receipts

The major source of funds available to State authorities is in the form of financial assistance by way of grants and advances from the Commonwealth Government. Taxation is also an important source of revenue, and central government borrowing by way of Commonwealth Government securities issued on behalf of the States, as well as borrowing by statutory bodies, accounted for a significant proportion of the total funds available.

Details of Commonwealth Government financial assistance to the States and the Northern Territory have already been given in the section dealing with Commonwealth Government authorities, and government borrowing activities are dealt with later in this chapter.

The following tables provide details of the taxes collected by State authorities classified by type of tax. Further information relating to State taxes may be found in *Taxation Revenue, Australia* (5506.0).

STATE AUTHORITIES(*a*): TAXATION BY TYPE OF TAX

($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Estate, gift, probate and succession duties	226.9	251.5	241.1	205.4	171.4	158.1
Property taxes—						
Land tax	200.1	218.1	236.7	258.0	290.9	324.5
Metropolitan improvement rates	15.1	15.8	16.2	18.1	19.2	19.7
Other	1.7	1.6	1.4	1.1	0.9	1.0
Total property	*216.9*	*235.5*	*254.3*	*277.2*	*311.0*	*345.3*
Liquor taxes	95.8	120.9	140.6	155.2	174.7	202.5
Taxes on gambling—						
Lotteries	85.9	109.6	129.2	149.0	195.8	229.4
Poker machines	83.4	92.0	98.2	108.0	120.7	139.0
Racing	161.9	180.5	194.1	205.4	227.4	245.5
Other	8.3	12.0	12.5	17.3	21.8	18.6
Total gambling	*339.5*	*394.1*	*434.0*	*479.7*	*565.7*	*632.4*
Taxes on ownership and operation of motor vehicles—						
Vehicle registration fees and taxes	334.3	397.0	461.3	499.5	497.8	544.8
Drivers', etc., licences and fees	54.3	59.9	60.4	74.4	75.3	83.0
Stamp duty on vehicle registration	84.2	116.5	126.0	141.0	151.1	173.9
Road transport taxes	15.6	15.9	14.5	13.8	14.7	16.3
Road maintenance contributions	44.4	44.7	44.5	45.3	6.4	0.6
Motor car third party insurance surcharge and duties	12.5	12.9	13.4	13.7	18.7	23.1
Total motor vehicles	*545.2*	*646.8*	*720.1*	*787.7*	*764.0*	*841.6*
Pay-roll tax	1,161.2	1,305.9	1,418.5	1,526.4	1,695.0	1,922.9
Fire brigades contributions from insurance companies, etc.	85.3	99.0	113.0	120.8	137.8	157.1
Stamp duties, n.e.i.	550.8	666.7	702.6	800.2	993.4	1,241.7
Fees from regulatory services, n.e.i.	38.5	44.9	49.0	55.4	61.8	71.6
Other taxes, fees, fines, etc.	209.8	208.6	227.6	259.5	390.1	473.2
Total taxation	**3,469.8**	**3,973.9**	**4,300.7**	**4,667.6**	**5,264.7**	**6,046.4**

(*a*) Includes Northern Territory authorities from 1978-79.

STATE AUTHORITIES: TAXATION BY TYPE OF TAX, 1980–81

($ million)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
Estate, gift, probate and succession duties	92.8	52.4	1.9	2.6	5.4	3.0	–	158.1
Property taxes—								
Land tax	135.8	120.8	18.8	17.3	25.7	6.1	–	324.5
Metropolitan improvement rates	–	15.2	–	–	4.5	–	–	19.7
Other	0.3	–	–	0.5	0.2	–	–	1.0
Total property	*136.1*	*136.0*	*18.8*	*17.8*	*30.4*	*6.1*	–	*345.3*
Liquor taxes	80.7	49.4	33.2	13.9	18.0	5.3	2.0	202.5
Taxes on gambling—								
Lotteries	83.6	103.1	11.1	17.0	9.2	5.0	0.5	229.4
Poker machines	139.0	–	–	–	–	–	–	139.0
Racing	104.8	78.0	28.2	12.3	17.7	4.1	0.4	245.5
Other	5.4	3.4	5.0	0.3	–	3.3	1.2	18.6
Total gambling	*332.7*	*184.5*	*44.3*	*29.5*	*27.0*	*12.4*	*2.1*	*632.4*
Taxes on ownership and operation of motor vehicles—								
Vehicle registration fees and taxes	221.6	128.5	82.6	40.3	48.0	20.8	3.1	544.8
Drivers', etc., licences and fees	30.7	27.7	12.6	4.1	5.4	2.1	0.3	83.0
Stamp duty on vehicle registration	61.9	64.6	15.8	19.1	7.1	5.4	–	173.9
Road transport taxes	1.7	8.4	2.4	0.1	3.0	0.8	–	16.3
Road maintenance contributions	–	–	0.2	0.1	–	0.3	–	0.6
Motor car third party insurance surcharge and duties	–	16.9	–	2.0	3.7	0.5	–	23.1
Total motor vehicles	*315.9*	*246.2*	*113.5*	*65.7*	*67.2*	*29.7*	*3.4*	*841.6*
Pay-roll tax	786.6	522.1	237.8	148.3	161.6	49.1	17.4	1,922.9
Fire brigades contributions from insurance companies, etc.	50.3	50.7	28.8	12.8	14.5	–	–	157.1
Stamp duties, n.e.i.	508.8	335.8	200.6	77.7	93.4	21.0	4.3	1,241.7
Fees from regulatory services, n.e.i.	26.9	16.5	15.1	4.6	5.7	1.1	1.7	71.6
Other taxes, fees, fines, etc.	117.9	196.0	32.0	60.9	58.2	7.0	1.2	473.2
Total taxation	**2,448.8**	**1,789.6**	**726.1**	**433.9**	**481.3**	**134.9**	**31.9**	**6,046.4**

LOCAL AUTHORITIES

In each State of Australia and in the Northern Territory there exists a system of local government whose powers and responsibilities are generally similar and cover such matters as the construction and maintenance of roads, streets and bridges; water, sewerage and drainage systems; health and sanitary services; the supervision of building; and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions, there are also many which may be performed by a local 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, swimming pools, 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. vary considerably from State to State, and even within States.

The areas over which local government bodies, numbering almost 900, exercise general control, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as cities, corporate towns and district council areas; in Western Australia as cities, towns and shires; and in Tasmania and the Northern Territory as cities and municipalities. In New South Wales some local authorities in an area have combined to form County Councils which provide services such as electricity and water supply. Within shires there are also some municipal units known as urban areas. Apart from the Australian Capital Territory and the more sparsely populated parts of New South Wales, South Australia and the Northern Territory, practically the whole of Australia comes within local government jurisdiction. For further details *see* State Year Books.

Coverage—Northern Territory local authorities

On 1 July 1978, the Northern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximating those of a State. In the period up to and including 1977–78 receipts and outlays relating to the Northern Territory are included with Commonwealth Government receipts and outlays but from 1978–79 onwards they have been grouped with the receipts and outlays of State and local authorities.

Area, population, dwellings, and rates and penalties for ordinary services

The area, population, dwellings, and the amount of rates and penalties collected for ordinary services in the incorporated areas of each State are shown in the following table. Particulars of dwellings are in accordance with the definition used in the Census, and are compiled from information collected on the Census Schedules. In the table, where the boundary of a capital city statistical division cuts across a local government area, the area of that capital city statistical division has been estimated. Particulars of population for capital city statistical divisions take account or those local government areas which overlap with capital city statistical division boundaries.

The item 'Rates and Penalties for Ordinary Services' relates to general and other special or local rates (excluding water and sewerage rates) levied or declared or, where the cash accounting system operates, the rates collected.

LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS, AND RATES AND PENALTIES FOR ORDINARY SERVICES—30 JUNE 1979

Location (a)	*No. of local authorities*	*Area*	*Population*	*Dwellings (b)*	*Rates and penalties—ordinary services*
		square kilometres	'000	'000	$'000
New South Wales—					
Sydney Statistical Division	45	12,406	3,193	1,094	(c)296,089
Other	157	693,254	1,877	617	(c)179,348
Total New South Wales	*202*	*705,660*	*5,070*	*1,711*	*(c)475,437*
Victoria—					
Melbourne Statistical Division	56	6,110	2,740	929	(d)261,475
Other	155	221,490	1,112	377	(d)100,933
Total Victoria	*211*	*227,600*	*3,852*	*1,306*	*(d)362,408*
Queensland—					
Brisbane Statistical Division	9	3,080	1,015	338	76,798
Other	124	1,723,920	1,183	378	93,256
Total Queensland	*133*	*1,727,000*	*2,198*	*716*	*170,054*
South Australia—					
Adelaide Statistical Division	34	1,842	933	333	70,049
Other	96	149,681	349	126	25,228
Total South Australia	*130*	*151,523*	*1,282*	*459*	*95,277*
Western Australia—					
Perth Statistical Division	26	5,364	884	306	61,804
Other	112	2,522,675	358	114	27,961
Total Western Australia	*138*	*2,528,039*	*1,242*	*420*	*89,765*
Tasmania—					
Hobart Statistical Division	7	940	168	58	14,811
Other	42	67,394	249	88	19,906
Total Tasmania	*49*	*68,334*	*417*	*146*	*34,717*

(*a*) Unincorporated areas are excluded in all States. (*b*) Dwelling figures are intercensal estimates of stocks of dwellings. (*c*) Based on year ended 31 December 1978. (*d*) Based on year ended 30 September 1979.

Outlay and receipts

The following tables show details of the outlay and receipts of all local authorities for the years 1975–76 to 1980–81, and of local authorities in each of the six States and the Northern Territory in 1980–81. Figures shown for 1980–81 are based on limited data and may be subject to significant revision as more complete accounting information is collected.

LOCAL AUTHORITIES(a): OUTLAY AND RECEIPTS

($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	1980–81
	OUTLAY					
Final consumption expenditure—						
General public services	194.5	228.4	269.6	302.5	357.4	418.1
Education	7.4	8.5	8.5	9.5	10.3	11.7
Health	40.0	41.6	45.5	52.8	50.1	59.4
Social security and welfare	14.0	17.8	26.4	34.4	37.3	46.0
Housing and community amenities—						
Community and regional development	11.4	13.5	12.6	16.4	25.4	29.1
Protection of the environment	56.1	65.1	70.5	82.5	113.2	121.6
Other	10.1	10.6	12.9	15.3	26.3	30.7
Recreation and culture	159.4	167.4	192.0	215.6	237.2	278.7
Economic services	53.1	63.2	75.4	87.7	105.4	115.9
Other purposes	3.3	4.4	10.7	11.5	8.0	10.3
Total	*549.3*	*620.2*	*724.3*	*828.1*	*970.9*	*1,121.5*
Gross capital formation—						
Expenditure on new fixed assets—						
General public services	98.9	102.7	118.0	131.0	154.0	161.8
Education	3.2	4.2	2.8	2.8	2.3	1.4
Health	2.4	2.4	1.8	3.0	3.4	3.3
Social security and welfare	5.8	6.5	7.9	10.7	12.3	17.0
Housing and community amenities—						
Community and regional development	3.4	4.4	9.4	11.8	4.3	3.0
Protection of the environment	121.8	126.7	135.0	134.4	165.7	166.9
Other	8.6	9.1	10.4	7.9	14.2	16.4
Recreation and culture	85.9	75.5	103.6	139.6	147.5	146.9
Economic services—						
Mining, manufacturing and construction	10.8	8.6	9.1	9.6	5.5	9.6
Electricity and gas	112.7	131.4	121.7	122.0	144.7	155.5
Water supply	61.0	60.9	75.3	85.0	92.8	115.9
Road systems and regulation	599.6	607.0	650.7	708.3	707.0	763.2
Other transport services, n.e.c.	1.8	6.4	6.3	2.8	3.7	2.5
Other economic services(b)	5.4	6.5	7.1	7.9	15.8	20.3
Other purposes	1.6	2.3	7.9	2.7	12.4	14.7
Total	*1,122.9*	*1,154.5*	*1,267.0*	*1,379.5*	*1,485.6*	*1,598.5*
Expenditure on existing assets and stocks (net)	36.5	23.5	27.9	2.0	-3.2	14.2
Interest paid	177.5	215.4	252.9	289.7	310.9	342.3
Grants to State authorities	32.4	32.1	36.0	35.5	43.2	49.9
Net advances to the private sector	5.7	6.1	4.5	12.8	8.1	5.7
Total outlay	**1,924.1**	**2,051.7**	**2,312.7**	**2,547.6**	**2,815.5**	**3,132.1**
of which—						
current outlay	750.1	857.8	1,001.5	1,144.1	1,311.3	1,502.1
capital outlay	1,174.1	1,193.9	1,311.2	1,403.5	1,504.1	1,630.0
	RECEIPTS AND FINANCING ITEMS					
Receipts—						
Taxes, fees, fines, etc.—						
Rates on land	879.7	1,023.9	1,120.9	1,214.8	1,339.2	1,494.9
Licences, etc.	35.7	48.5	43.3	49.0	60.9	71.2
Total	*915.4*	*1,072.4*	*1,164.2*	*1,263.8*	*1,400.0*	*1,566.1*
Income from public enterprises	138.3	181.6	188.9	186.0	193.1	176.3
Property income	42.0	55.9	82.2	93.8	106.2	136.8
Grants from State and Commonwealth authorities	453.7	427.6	493.2	530.4	605.4	707.8
Total receipts	*1,549.5*	*1,737.3*	*1,928.5*	*2,074.2*	*2,304.6*	*2,587.0*
Financing items—						
Net borrowing	287.3	332.0	309.4	333.3	328.8	374.9
Advances from State and Commonwealth authorities	18.6	16.0	9.3	12.8	10.4	10.4
Net receipts of private trust funds	2.3	3.3	3.3	1.7	13.7	-25.7
Reduction in cash and bank balances	-40.9	-148.8	-48.5	8.2	8.8	-63.4
Reduction in security holdings—						
Investments of governmental funds and trading enterprises	-9.1	-12.6	-69.4	-57.9	-59.7	-19.4
Other funds available (including errors and omissions)—						
Depreciation allowances	46.7	52.8	58.5	73.3	74.3	88.0
Other	69.7	71.6	121.7	102.1	134.6	180.5
Total financing items	*374.6*	*314.4*	*384.2*	*473.4*	*510.8*	*545.2*
Total funds available	**1,924.1**	**2,051.7**	**2,312.7**	**2,547.6**	**2,815.5**	**3 132.1**

(a) Includes Northern Territory authorities from 1978-79. (b) Includes general administration, regulation and research.

LOCAL AUTHORITIES: OUTLAY AND RECEIPTS, 1980–81

($ million)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Total
OUTLAY								
Final consumption expenditure—								
General public services	173.1	104.7	70.2	25.7	28.1	13.8	2.4	418.1
Education	0.8	10.8	–	–	0.1	–	–	11.7
Health	20.4	22.6	8.7	2.2	4.6	0.9	–	59.4
Social security and welfare	9.5	31.6	–	2.1	2.2	0.5	0.1	46.0
Housing and community amenities—								
Community and regional development	14.6	5.9	3.6	3.0	1.9	0.1	–	29.1
Protection of the environment	51.4	42.1	6.0	14.1	4.5	3.0	0.3	121.6
Other	16.7	4.1	5.4	1.5	2.4	0.3	0.2	30.7
Recreation and culture	96.9	83.7	35.8	21.5	31.4	6.4	3.1	278.7
Economic services	19.4	66.2	17.6	7.4	5.0	–1.2	1.4	115.9
Other purposes	0.1	0.9	–	2.8	4.2	0.7	1.5	10.3
Total	*402.9*	*372.7*	*147.3*	*80.4*	*84.5*	*24.6*	*9.2*	*1,121.5*
Gross capital formation—								
Expenditure on new fixed assets—								
General public services	50.8	75.2	23.1	6.2	5.2	1.2	0.1	161.8
Education	0.1	1.2	–	–	0.1	–	–	1.4
Health	1.6	1.0	0.1	0.2	0.4	–	0.1	3.3
Social security and welfare	5.2	8.8	0.5	0.5	1.2	0.3	0.3	17.0
Housing and community amenities—								
Community and regional development	0.5	0.6	0.6	0.3	1.0	–	–	3.0
Protection of the environment	66.5	11.0	68.6	8.8	5.2	6.9	–	166.9
Other	9.5	1.6	1.3	0.8	2.9	0.3	–	16.4
Recreation and culture	44.7	53.9	9.0	9.4	23.4	4.4	2.0	146.9
Economic services—								
Mining, manufacturing and construction	7.6	2.0	–	0.1	–	–	–	9.6
Electricity and gas	147.2	7.6	–	–	0.7	–	–	155.5
Water supply	56.6	–	55.7	–	–	3.6	–	115.9
Road systems and regulation	301.9	165.4	129.3	54.9	80.2	27.9	3.5	763.2
Other transport services, n.e.c.	0.7	0.6	1.0	0.2	–	–	–	2.5
Other economic services(*a*)	9.2	8.4	–	1.2	1.4	0.1	0.1	20.3
Other purposes	–	–	–	8.5	2.8	2.8	0.6	14.7
Total	*702.1*	*337.4*	*289.2*	*91.1*	*124.4*	*47.6*	*6.8*	*1,598.5*
Expenditure on existing assets and stocks (net)	12.8	16.2	–7.0	0.9	–8.8	–0.3	0.3	14.2
Interest paid	144.3	63.2	84.8	14.9	19.8	14.4	0.9	342.3
Grants to State authorities	16.5	12.4	7.0	4.1	2.5	7.5	–	49.9
Net advances to the private sector	5.7	0.2	–	–	–	–0.3	–	5.7
Total outlay	**1,284.3**	**802.0**	**521.2**	**191.5**	**222.3**	**93.5**	**17.2**	**3,132.1**
of which—								
current outlay	563.4	441.4	239.1	97.5	104.3	46.5	10.1	1,502.1
capital outlay	720.9	360.7	282.1	94.1	118.0	47.0	7.1	1,630.0
RECEIPTS AND FINANCING ITEMS								
Receipts—								
Taxes, fees, fines, etc.—								
Rates on land	537.8	449.7	225.4	119.2	112.4	43.9	6.4	1,494.9
Licences, etc.	24.1	23.9	11.4	5.8	3.9	1.9	0.2	71.2
Total	*561.9*	*473.6*	*236.8*	*125.0*	*116.3*	*45.9*	*6.5*	*1,566.1*
Income from public enterprises	47.9	22.9	92.9	0.4	–0.2	12.3	–	176.3
Property income	71.3	20.0	22.6	6.8	10.8	4.5	0.8	136.8
Grants from State and Commonwealth authorities	232.8	189.4	139.5	45.1	69.7	23.2	8.2	707.8
Total receipts	*913.9*	*705.9*	*491.8*	*177.3*	*196.6*	*85.9*	*15.5*	*2,587.0*
Financing items—								
Net borrowing	155.5	50.0	122.5	15.5	23.4	8.0	–	374.9
Advances from State and Commonwealth authorities	4.4	0.6	4.3	–0.1	–1.7	2.9	–	10.4
Net receipts of private trust funds	–14.5	–	–11.3	–	–	–	–	–25.7
Reduction in cash and bank balances	14.6	33.1	–88.7	–3.6	–9.3	–7.4	–2.1	–63.4
Reduction in security holdings—								
Investments of governmental funds and trading enterprises	–9.4	–17.0	–	–	–	7.0	–	–19.4
Other funds available (including errors and omissions)—								
Depreciation allowances	88.0	–	–	–	–	–	–	88.0
Other	131.8	29.5	2.6	2.4	13.3	–2.9	3.8	180.5
Total financing items	*370.4*	*96.1*	*29.4*	*14.2*	*25.7*	*7.6*	*1.7*	*545.2*
Total funds available	**1,284.3**	**802.0**	**521.2**	**191.5**	**222.3**	**93.5**	**17.2**	**3,132.1**

(*a*) Includes general administration, regulation and research.

ALL PUBLIC AUTHORITIES

In the following tables the transactions of the Commonwealth Government, State and local authorities have been brought together and consolidated to provide details of the outlay and receipts of the public authority sector as a whole.

Summary of outlay and receipts

The outlay and receipts of all public authorities for the years 1975–76 to 1980–81 are set out in the following table.

ALL PUBLIC AUTHORITIES(*a*): OUTLAY AND RECEIPTS
($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
OUTLAY						
Final consumption expenditure	11,524.5	13,496.4	15,260.8	16,797.3	18,935.1	22,168.2
Gross capital formation—						
Increase in stocks	–35.7	18.9	–47.5	–162.1	8.1	204.4
Expenditure on new fixed assets	6,607.0	7,011.1	7,806.8	8,083.0	8,726.3	9,829.9
Expenditure on existing assets (net)	215.6	174.0	106.6	–7.7	–39.7	–244.6
Total gross capital formation	*6,786.9*	*7,166.2*	*7,865.9*	*7,913.3*	*8,694.8*	*9,789.7*
Transfer payments—						
Interest	1,511.1	2,084.4	2,520.6	3,055.1	3,488.9	4,099.7
Transfers to persons	6,417.1	7,758.8	8,700.8	9,550.4	10,388.0	11,733.8
Subsidies	317.8	346.3	469.9	614.3	788.1	1,031.8
Transfers overseas	370.1	387.8	417.3	474.9	520.1	574.8
Grants for private capital purposes	236.3	151.9	194.4	204.9	235.7	203.4
Total transfer payments	*8,852.3*	*10,737.1*	*12,303.1*	*13,899.6*	*15,420.8*	*17,643.5*
Net advances—						
To the private sector	296.3	255.3	281.6	137.8	93.2	91.6
To public financial enterprises	63.6	90.8	98.5	80.8	–7.9	84.3
To overseas	79.0	42.7	0.3	18.4	79.1	70.8
Total net advances	*438.9*	*388.8*	*380.4*	*237.0*	*164.5*	*246.8*
Total outlay	**27,602.7**	**31,788.6**	**35,810.2**	**38,847.2**	**43,215.0**	**49,848.1**
of which—						
current outlay	20,140.5	24,073.7	27,369.3	30,492.1	34,120.3	39,608.2
capital outlay	–7,462.2	7,714.9	8,440.9	8,355.0	9,094.8	10,239.8
RECEIPTS AND FINANCING ITEMS						
Receipts—						
Taxes, fees, fines, etc.	21,322.7	24,852.1	26,965.8	29,465.2	34,217.1	40,388.3
Income from public enterprises	899.3	1,186.6	1,386.3	1,666.5	1,825.2	1,879:8
Interest, etc., received	622.4	826.9	1,003.1	1,043.7	1,324.1	1,586.8
Total receipts	*22,844.5*	*26,865.5*	*29,355.3*	*32,175.5*	*37,366.4*	*43,854.8*
Financing items—						
Net borrowing—						
Treasury notes	–769.6	363.2	193.5	1,546.8	705.3	1,312.2
Commonwealth Government securities	3,165.5	2,097.5	2,979.2	2,469.6	893.4	–187.4
Local authority and public corporation securities	869.6	1,445.4	1,531.4	1,712.1	2,216.6	2,398.1
Other general Government securities	113.0	126.4	120.9	207.3	273.9	338.5
Total net borrowing	*3,378.5*	*4,032.4*	*4,824.9*	*5,935.8*	*4,089.1*	*3,861.4*
Funds provided for, or received from I.M.F.	—	—	—	27.9	60.6	–106.7
Net receipts of private trust funds	251.6	308.3	385.1	398.5	439.3	555.8
Reduction in cash and bank balances	–518.9	–854.2	133.9	–710.6	394.1	–582.1
Reduction in security holdings	565.4	33.2	–518.4	–570.9	–850.2	126.3
Other funds available (including errors and omissions)—						
Depreciation allowances	762.7	851.5	965.0	1,093.3	1,168.6	1,319.8
Other	319.1	552.0	664.3	497.3	546.9	818.7
Total financing items	*4,758.2*	*4,923.1*	*6,454.9*	*6,671.4*	*5,848.4*	*5,993.2*
Total funds available	**27,602.7**	**31,788.6**	**35,810.2**	**38,847.2**	**43,215.0**	**49,848.1**

(*a*) Excludes financial enterprises.

ALL PUBLIC AUTHORITIES, 1980-81

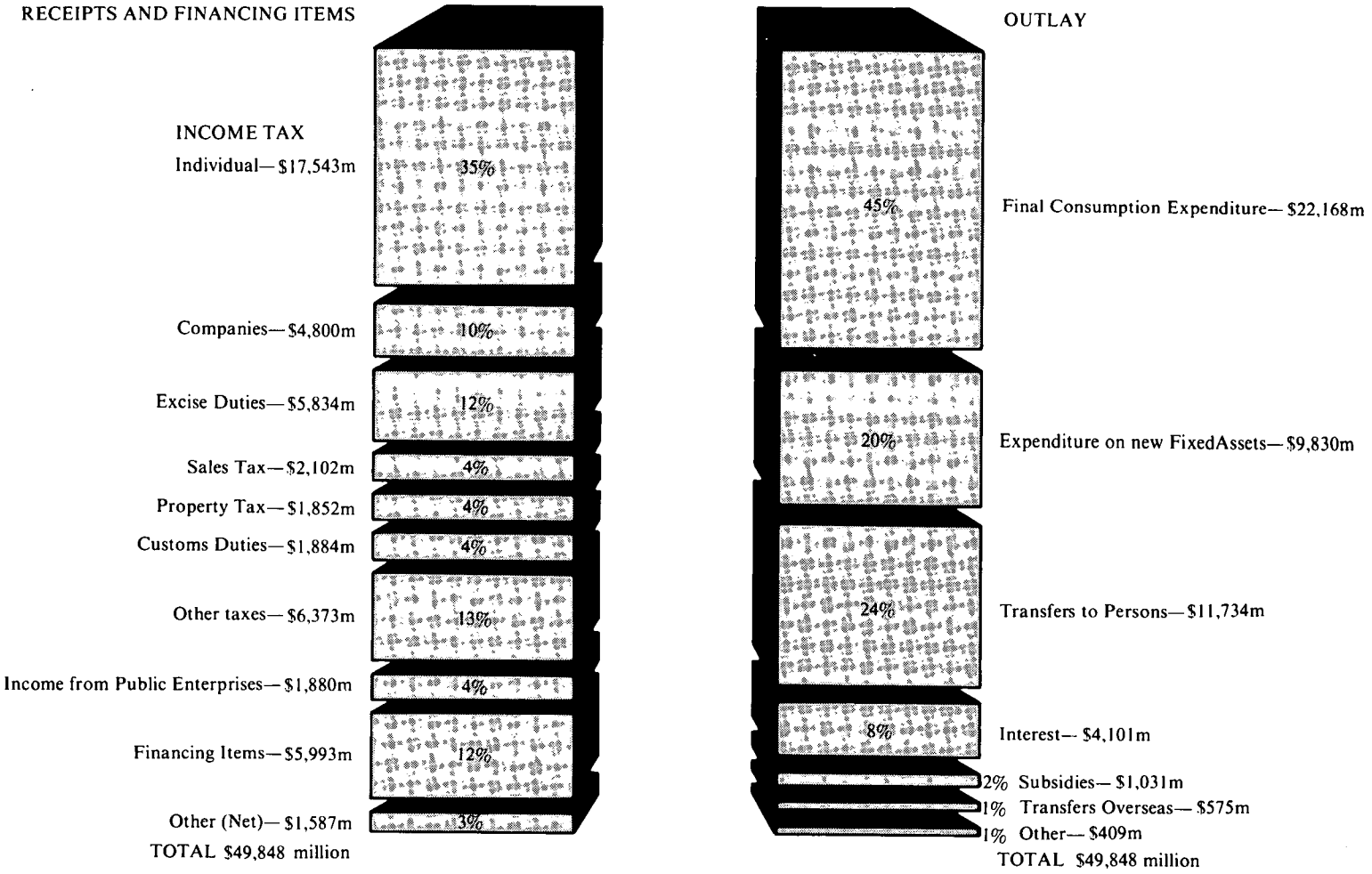


PLATE 44

Main components of outlay

The following tables show final consumption expenditure and expenditure on new fixed assets of all public authorities classified by purpose for the years 1975–76 to 1980–81.

ALL PUBLIC AUTHORITIES(a): FINAL CONSUMPTION EXPENDITURE CLASSIFIED BY PURPOSE
($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
General public services—						
General administration, n.e.c.	1,264.3	1,457.7	1,690.1	1,819.8	2,071.9	2,417.4
External affairs	91.7	98.2	105.8	116.4	135.6	156.5
Law, order and public safety	761.8	887.8	1,029.7	1,155.9	1,359.9	1,601.6
General research	130.5	152.0	170.1	182.6	209.6	251.4
Defence	1,679.9	1,998.6	2,184.5	2,401.3	2,786.4	3,290.8
Education	3,425.1	4,115.1	4,653.1	5,063.1	5,669.8	6,561.6
Health	2,291.9	2,717.5	3,034.9	3,317.2	3,658.9	4,266.6
Social security and welfare	316.4	353.7	422.1	498.3	573.5	708.4
Housing and community amenities—						
Housing	14.4	6.7	3.6	7.1	14.4	15.5
Community and regional development	82.9	85.8	86.5	93.1	92.0	101.3
Protection of the environment	80.7	90.8	98.2	115.5	153.2	167.5
Community amenities	9.2	10.1	11.7	13.4	18.8	20.9
Recreation and culture	441.3	477.2	540.8	610.8	683.6	813.5
Economic services—						
Agriculture, forestry, fishing	386.4	427.2	479.0	521.8	592.3	676.5
Mining, manufacturing and construction	69.7	78.6	93.7	101.2	116.4	134.5
Electricity, gas and water supply	7.6	6.1	8.4	9.8	10.2	14.8
Transport and communication	141.8	152.9	157.6	180.6	191.7	245.4
Other economic services(*b*)	319.0	374.3	478.5	575.8	586.9	710.0
Other purposes	9.5	6.0	12.7	13.5	10.2	13.8
Total	**11,524.5**	**13,496.4**	**15,260.8**	**16,797.3**	**18,935.1**	**22,168.1**

(*a*) Excludes financial enterprises. (*b*) Includes general administration, regulation and research.

ALL PUBLIC AUTHORITIES(a): EXPENDITURE ON NEW FIXED ASSETS CLASSIFIED BY PURPOSE
($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
General public services—						
General administration	243.2	250.2	278.4	285.0	315.2	350.5
External affairs	20.3	25.5	24.4	12.1	9.1	14.4
Law, order and public safety	74.9	85.2	108.8	124.6	150.5	150.5
General research	32.1	23.6	18.0	29.6	49.3	61.1
Education	694.7	640.6	717.0	731.2	659.0	647.9
Health	387.0	394.7	378.1	371.7	320.6	284.2
Social security and welfare	27.4	27.2	25.3	29.7	28.8	33.3
Housing and community amenities—						
Housing	351.4	328.5	337.8	274.6	279.0	354.8
Community and regional development	95.8	95.1	91.8	61.8	61.7	82.1
Protection of the environment	483.9	501.5	503.9	487.6	522.4	540.4
Community amenities	3.6	3.4	4.2	3.3	5.3	5.6
Recreation and culture	143.4	138.8	180.3	237.3	257.3	293.1
Economic services—						
Agriculture, forestry and fishing	184.0	212.9	235.3	222.9	232.2	267.7
Mining, manufacturing and construction	86.1	77.2	83.7	86.3	167.1	139.1
Electricity and gas	671.9	803.7	985.1	1,230.7	1,532.3	1,952.0
Water supply	309.2	347.4	376.6	368.8	360.7	390.1
Rail transport(b)	322.6	348.3	426.2	486.1	505.8	550.1
Sea transport	133.0	233.0	255.9	186.3	171.1	272.3
Road systems and regulation	1,323.4	1,411.3	1,536.7	1,653.4	1,761.3	1,919.3
Air transport	87.5	52.9	162.1	150.9	180.7	174.0
Pipelines	57.4	22.2	8.6	11.9	8.2	20.5
Other transport services, n.e.c.	34.1	34.4	46.2	48.0	52.8	52.4
Communications	756.6	855.4	913.6	905.0	976.9	1,149.6
Other economic services(c)	76.8	95.4	99.9	79.7	106.6	109.6
Other purposes	6.8	2.8	8.7	4.0	12.4	15.1
Total	**6,607.1**	**7,011.1**	**7,806.7**	**8,082.9**	**8,726.3**	**9,829.9**

(a) Excludes financial enterprises. (b) Includes suburban rail transport system. (c) Includes general administration, regulation and research.

Main components of receipts

Taxes and net borrowing constitute the main sources of financing of the activities of the public authorities. Details of the debt of public authorities are given in the next section of this chapter. Taxation, by type of tax, for the years 1975–76 to 1980–81 was as follows.

ALL PUBLIC AUTHORITIES: TAXATION, BY TYPE OF TAX
($ million)

	1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Income tax—						
Individuals	9,213	11,047	12,122	12,797	15,040	17,543
Companies(a)	2,600	2,899	3,190	3,116	3,501	4,800
Estate, gift, probate and succession duties	314	339	344	289	220	175
Customs duties	1,044	1,273	1,232	1,457	1,629	1,884
Excise duties	2,331	2,485	2,734	3,845	4,965	5,834
Sales tax	1,408	1,650	1,758	1,770	1,865	2,102
Primary production taxes	116	189	179	283	278	353
Payroll tax	1,179	1,325	1,438	1,540	1,707	1,937
Property taxes	1,113	1,285	1,392	1,507	1,667	1,859
Liquor taxes	98	123	143	158	177	206
Taxes on gambling	340	395	435	481	567	634
Taxes on ownership and operation of motor vehicles	551	653	729	796	772	849
Stamp duties, n.e.i.	555	672	708	806	1,000	1,250
Other taxes, fees, fines, etc.	462	518	563	622	829	963
Total	**21,323**	**24,852**	**26,966**	**29,465**	**34,217**	**40,388**

(a) Includes dividend and interest (withholding) taxes. Excludes income taxes paid by Commonwealth Government public enterprises.

Level of government

In the following tables details are given for 1980–81 of the outlay and receipts of all public authorities, broken down by level of government in order to show their relative contributions to various expenditure programs, and their roles in financing these programs through taxes and transfers.

ALL PUBLIC AUTHORITIES(*a*): OUTLAY AND RECEIPTS BY LEVEL OF GOVERNMENT, 1980–81
($ million)

	Commonwealth authorities	*State authorities*	*Local authorities*	*All public authorities*
	OUTLAY			
Expenditure on goods and services—				
General public services—				
General administration, n.e.c.	1,190.1	1,026.2	579.9	2,796.2
External affairs	170.9	–	–	170.9
Law, order and public safety	214.6	1,509.1	–	1,723.7
General research	312.5	–	–	312.5
Defence	3,290.8	–	–	3,290.8
Education	315.8	6,880.5	13.1	7,209.4
Health	638.6	3,849.3	62.7	4,550.6
Social security and welfare	384.0	294.7	63.0	741.7
Housing and community amenities—				
Housing	–5.5	351.6	24.2	370.3
Community and regional development	39.7	111.6	32.1	183.4
Protection of the environment	11.4	408.0	288.5	707.9
Community amenities	1.2	2.4	22.9	26.5
Recreation and culture	392.5	288.5	425.5	1,106.6
Economic services—				
Agriculture, forestry and fishing	184.5	753.5	5.6	943.6
Mining, manufacturing and construction	44.5	203.6	25.4	273.5
Electricity, gas and water supply	13.0	2,072.2	271.4	2,356.6
Transport and communication	1,556.4	1,997.4	829.8	4,383.6
Other economic services	466.9	303.0	50.7	820.6
Other purposes	–	4.4	25.0	29.4
Total expenditure on goods and services	**9,222.0**	**20,056.0**	**2,720.0**	**31,998.0**
of which—				
Final consumption expenditure	7,478.1	13,568.5	1,121.5	22,168.1
Expenditure on new fixed assets	1,743.9	6,487.5	1,598.5	9,829.9
Increase in stocks	66.8	120.2	17.4	204.4
Expenditure on existing assets (net)	–254.0	12.6	–3.2	–244.6
Transfer payments—				
Interest	2,734.1	2,597.0	342.3	4,100.5
Transfers to persons	11,437.2	296.6	–	11,733.8
Subsidies	886.8	144.1	–	1,030.9
Transfers overseas	574.6	0.2	–	574.8
Grants for private capital purposes	140.9	62.5	–	203.4
Grants to the States—for current purposes	9,903.8	–	38.3	(*b*)
—for capital purposes	387.8	–	–	(*b*)
Grants to the Northern Territory				
—for current purposes	1,588.6	–	11.6	(*b*)
—for capital purposes	80.0	–	–	(*b*)
Grants to local authorities	22.0	684.4	–	(*b*)
Total transfer payments	*27,755.8*	*3,784.8*	*392.2*	*17,643.4*
Net advances to—				
The private sector	–4.0	89.9	5.7	91.6
Public financial enterprises	–14.2	98.5	–	84.3
The States	852.8	–	–	(*b*)
The Northern Territory	83.1	–	–	(*b*)
Local authorities	–	14.4	–	(*b*)
Overseas	70.8	–	–	70.8
Total net advances	*988.6*	*202.8*	*5.7*	*246.8*
Total outlay	**37,779.3**	**24,176.4**	**3,132.1**	**49,848.1**
of which—				
current outlay	33,417.6	17,015.4	1,502.1	39,608.2
capital outlay	4,361.7	7,161.0	1,630.0	10,239.8

(*a*) Excludes financial enterprises. (*b*) In consolidated figures for all public authorities, inter-authority grants and advances are not shown.

ALL PUBLIC AUTHORITIES(*a*): OUTLAY AND RECEIPTS BY LEVEL OF GOVERNMENT, 1980–81—*continued*

($ million)

	Commonwealth authorities	*State authorities*	*Local authorities*	*All public authorities*
RECEIPTS AND FINANCING ITEMS				
Receipts—				
Taxes, fees, fines, etc.—				
Income tax—				
Individuals	17,543.2	–	–	17,543.2
Companies(*b*)	4,799.9	–	–	4,799.9
Estate, gift, probate and succession duties	17.0	158.1	–	175.1
Customs duties	1,884.4	–	–	1,884.4
Excise duties	5,834.0	–	–	5,834.0
Sales tax	2,102.3	–	–	2,102.3
Payroll tax	10.7	1,922.9	–	1,933.6
Primary production taxes and charges	352.8	–	–	352.8
Property taxes	19.2	345.3	1,487.5	1,852.0
Liquor taxes	3.0	202.5	–	205.5
Taxes on gambling	–	632.4	–	632.4
Taxes on ownership and operation of motor vehicles	7.8	841.5	0.1	849.4
Stamp duties, n.e.i.	8.4	1,241.7	–	1,250.1
Departure Tax	18.7	–	–	18.7
Fees from regulatory services	53.1	71.6	–	124.7
Other taxes, fees, fines, etc.	120.4	631.2	78.5	830.1
Total taxes, etc.	*32,774.9*	*6,047.2*	*1,566.1*	*40,388.2*
Income from public enterprises	1,014.4	689.1	176.3	1,879.8
Property Income—				
Interest received—				
From the States and the Northern Territory	1,569.0	–	–	(*c*)
Other	196.7	657.5	136.8	987.2
Land rent, royalties, dividends	72.2	527.4	–	599.6
Grants from the Commonwealth Government—				
For current purposes	–	10,291.6	–	(*c*)
For capital purposes	–	1,668.6	–	(*c*)
Direct grants from Commonwealth Government to local authorities	–	–	22.0	(*c*)
Grants from State authorities	–	–	684.4	(*c*)
Grants from local authorities	–	49.9	–	(*c*)
Total receipts	**35,627.2**	**19,931.3**	**2,585.6**	**43,854.8**
Financing items—				
Net borrowing—				
Treasury bills and notes	1,312.2	–	–	1,312.2
Commonwealth Government securities	-187.4	–	–	-187.4
Local authorities and public corporation securities	196.0	1,827.2	374.9	2,398.1
Other general government securities	–	338.5	–	338.5
Total net borrowing	*1,320.8*	*2,165.7*	*374.9*	*3,861.4*
Advances from the Commonwealth Government—				
For loan works purposes	–	741.7	–	(*c*)
Other	–	194.2	–	(*c*)
Advances from State authorities	–	–	14.4	(*c*)
Funds provided for or received from I.M.F.	-106.7	–	–	-106.7
Net receipts of private trust funds	292.8	288.8	-25.7	555.9
Reduction in cash and bank balances	-432.7	-86.0	-63.4	-582.1
Reduction in security holdings	206.3	-60.6	-19.4	126.3
Other funds available (including errors and omissions)—				
Depreciation allowances	679.4	552.4	88.0	1,319.8
Other	192.2	448.9	177.9	819.0
Total financing items	**2,152.1**	**4,245.1**	**546.5**	**5,993.4**
Total funds available	**37,779.3**	**24,176.4**	**3,132.1**	**49,848.1**

(*a*) Excludes financial enterprises. (*b*) Includes dividend, interest and mining (withholding) taxes. Excludes income taxes paid by Commonwealth Government public enterprises. (*c*) In consolidated figures for all public authorities, inter-authority grants and advances are not shown.

PUBLIC SECTOR BORROWING

Figures given in this section do not purport to show either 'public debt' or 'net public debt', but are designed to provide details of securities issued on behalf of the Commonwealth Government and the States, together with some details of the amounts borrowed by State and local authorities with independent borrowing powers.

For a number of reasons, this information cannot be aggregated, without adjustment, to provide a measure of the 'debt' of public authorities. There are forms of debt not evidenced by the issue of securities, such as Commonwealth Government advances to the States for specific capital purposes. Governments themselves maintain significant holdings of their own securities; for example, the Commonwealth Government, in the National Debt Sinking Fund, the Loan Consolidation and Investment Reserve, and in other Trust Funds, holds large investments in securities issued either directly by itself or on behalf of the States. Some of the securities issued on behalf of the States and held by the Commonwealth Government represent the proceeds of overseas loans, securities for which were issued directly by the Commonwealth Government, the Australian currency counterpart proceeds of the loans being invested in special loans to finance State works programs. A number of State public corporations and local authorities also maintain significant investments in government securities (including their own securities). Aggregation of the figures for securities on issue which follow would clearly involve a substantial degree of duplication; the sum of securities on issue therefore cannot be regarded as representing 'net public debt'.

Commonwealth Government and States: Government securities on issue

Under the 1927 Financial Agreement between the Commonwealth Government and the States, the Commonwealth Government accepted responsibility for the securities of State governments then on issue and was empowered to arrange for all future borrowings on behalf of the Commonwealth and the States and to issue Commonwealth Government securities for all moneys borrowed.

A National Debt Sinking Fund, which is administered by the National Debt Commission, was established by the *National Debt Sinking Fund Act* 1923 for the redemption of securities issued on behalf of the Commonwealth Government. Under the terms of the Financial Agreement, the sinking funds existing in respect of the States' debts were also placed under the control of the Commission. The Commonwealth Government is reimbursed by the States for interest, exchange, etc. paid on their behalf, and the securities are redeemed from the Fund to which both the Commonwealth and the State governments make pre-determined contributions. The amounts to be contributed were varied when the *National Debt Sinking Fund Act* 1966 repealed all previous legislation on sinking funds relating to securities on issue on behalf of the Commonwealth Government, and again in 1976 when the Act was amended to reflect the amendments to the Financial Agreement. In 1976 the Commonwealth assumed the responsibility for over $1,000 million of States' debt existing as at 30 June 1975. As a consequence, the separate States' Sinking Funds were absorbed into the National Debt Sinking Fund, with separate accounts being maintained for the Commonwealth and each State.

For further information relating to the recent operations of the National Debt Sinking Fund reference should be made to the fifty-seventh annual report of the National Debt Commission. Particulars of the creation and operation of sinking funds by the *National Debt Sinking Fund Act* 1923 are included in issues of the Year Book prior to No. 23, and a general description of the provisions applying between 1966 and 1976 is given in issue No. 61.

In the tables which follow, details are given of transactions in Commonwealth Government securities issued on account of the Commonwealth Government and the States. Amounts relating to overseas loans are shown in Australian currency equivalent calculated on the basis of the rates of exchange ruling at 30 June in each year shown. All amounts shown are at face value.

For figures which permit accurate analysis of the structure and movement of securities issued on behalf of the Commonwealth and States, refer to the Commonwealth Budget Paper No. 8, *Government Securities on Issue.*

Net movement in securities on issue

Summary details of the net movement in securities issued for Commonwealth Government purposes and on account of the States during the period 1976–77 to 1981–82, are given in the following group of tables.

NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE

($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
NEW SECURITIES ISSUED						
Securities repayable in Australian currency—						
Treasury bonds	1,581.0	965.7	1,018.5	1,485.7	2,774.7	3,385.8
Australian savings bonds	736.3	719.6	531.2	806.1	2,024.0	1,312.9
Special bonds	–	–	–	–	–	–
Income equalization deposits	–	–	33.1	73.5	72.0	57.6
Drought bonds	0.2	–	–	–	–	–
Advance loan subscriptions	(*a*)-21.7	(*a*)0.4	(*a*)-4.6	–	–	–
Overdue securities	–	–	–	–	–	–
Tax-free stock	–	–	–	–	–	–
Debentures	–	–	–	–	–	–
Stock issued to Government savings banks under special agreements(*b*)	35.4	57.9	35.8	36.5	54.6	53.3
Treasury notes	4,105.7	1,766.7	4,245.1	7,870.4	12,058.1	12,594.5
Treasury bills—						
Internal	(*a*)323.8	(*a*)365.2	(*a*)-187.7	141.8	2,234.2	1,718.0
Public	(*a*)450.0	(*a*)200.0	(*a*)500.0	500.0	14,706.0	14,200.0
Total	*7,210.8*	*4,075.5*	*6,171.3*	*10,913.9*	33,923.6	33,322.1
Securities repayable in overseas currencies(*c*)	424.2	1,738.3	1,453.8	482.1	178.2	831.3
Total new securities issued	**7,634.9**	**5,813.9**	**7,625.1**	**11,396.0**	**34,101.8**	**34,153.4**
REDEMPTIONS, REPURCHASES, CANCELLATIONS(*d*)						
Securities repayable in Australian currency—						
Treasury bonds	243.0	114.6	222.6	1,035.6	2,587.1	2,317.0
Australian savings bonds	176.7	174.8	164.4	586.2	2,093.4	1,913.9
Special bonds	180.3	133.3	72.7	44.6	251.4	122.8
Income equalization deposits	–	–	20.4	16.4	45.1	55.2
Drought bonds	2.8	0.6	0.2	0.2	0.1	0.1
Advance loan subscriptions	–	–	–	–	–	–
Overdue securities	-2.2	0.8	1.8	0.6	-1.5	-3.3
Tax-free stock	–	0.1	0.3	–	–	0.9
Debentures	3.5	3.7	3.8	4.0	4.2	4.4
Stock issued to Government savings banks under special agreements(*b*)	7.2	6.6	9.6	6.3	6.4	5.6
Treasury notes	4,192.5	1,773.3	3,198.3	7,665.2	10,145.9	12,441.9
Treasury bills—						
Internal	–	–	–	–	2,888.3	1,509.7
Public	–	–	–	–	15,306.0	14,700.0
Total	*4,803.8*	*2,207.8*	*3,694.2*	*9,359.1*	*33,326.4*	*33,068.1*
Securities repayable in overseas currencies(*c*)	-121.1	-26.3	-165.7	340.4	922.5	131.3
Total redemptions, etc.	**4,682.8**	**2,181.4**	**3,528.5**	**9,699.5**	**34,248.9**	**33,199.4**
NET MOVEMENT						
Securities repayable in Australian currency—						
Treasury bonds	1,338.1	851.1	795.9	450.1	187.6	1,068.8
Australian savings bonds	559.6	544.8	366.8	219.9	-69.4	-601.0
Special bonds	-180.3	-133.3	-72.7	-44.6	-251.4	-122.8
Income equalization deposit	–	–	12.7	57.1	26.9	2.4
Drought bonds	-2.6	-0.6	-0.2	-0.2	-0.1	-0.1
Advance loan subscriptions	-21.7	0.4	-4.6	–	–	–
Overdue securities	2.2	-0.8	-1.8	-0.6	1.5	3.3
Tax-free stock	–	-0.1	-0.3	–	–	-0.9
Debentures	-3.5	-3.7	-3.8	-4.0	-4.2	-4.4
Stock issued to Government savings banks under special agreements(*b*)	28.2	51.3	26.2	30.2	48.2	47.7
Treasury notes	-86.8	-6.5	1,046.8	205.2	1,912.2	152.6
Treasury bills—						
Internal	323.8	365.2	-187.7	141.8	-654.1	208.3
Public	450.0	200.0	500.0	500.0	-600.0	-500.0
Total	*2,406.9*	*1,867.8*	*2,477.2*	*1,554.8*	*597.2*	*254.0*
Securities repayable in overseas currencies(*c*)	545.2	1,764.7	1,619.5	141.7	-744.3	700.0
Net movement in securities on issue	**2,952.1**	**3,632.4**	**4,096.7**	**1,696.5**	**-147.1**	**954.0**

(*a*) Net issue. (*b*) Recorded in Commonwealth Government Loan Fund as State domestic raisings. (*c*) Australian currency equivalent at rates of exchange ruling at 30 June in each of the years shown. (*d*) Includes conversions from one type of security to another, which affect the net movements of individual loan categories, but do not affect the overall net movement.

NOTE: For securities repayable in overseas currencies the amounts shown also include an element due to exchange rate variations in Securities on Issue.

Government securities on issue.

The following table provides details of government securities on issue on account of the Commonwealth Government and the States, repayable in Australian and in overseas currencies.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH GOVERNMENT AND STATES

($ million)

	30 June—					
	1977	*1978*	*1979*	*1980*	*1981*	*1982*
For Commonwealth Government purposes—						
Repayable in Australian currency—						
Treasury bonds	4,494.7	4,949.3	5,269.8	5,523.6	5,037.4	5,570.0
Australian savings bonds	1,637.3	1,669.3	1,700.5	1,496.0	1,215.7	381.2
Special bonds	145.5	110.3	93.8	75.9	30.4	11.1
Income equilization deposit	–	–	79.4	136.4	163.3	165.7
Drought bonds	1.3	0.8	0.5	0.4	0.3	0.2
Advance loan subscriptions	4.2	4.6	–	–	–	–
Overdue securities	4.6	5.3	3.5	3.0	4.4	7.8
Treasury notes	369.6	363.1	1,409.9	1,615.2	3,527.4	3,680.0
Treasury bills—						
Internal	1,491.0	1,856.2	1,668.5	1,810.3	1,156.2	1,364.5
Public	1,300.0	1,500.0	2,000.0	2,500.0	1,900.0	1,400.1
Total	*9,448.4*	*10,458.9*	*12,225.9*	*13,160.8*	*13,035.1*	*12,580.4*
Repayable in overseas currencies(*a*)	1,743.4	3,533.1	5,178.9	5,326.4	4,618.7	5,335.7
Total Commonwealth Government	*11,191.8*	*13,991.9*	*17,404.8*	*18,487.2*	*17,653.8*	*17,916.1*
On account of States—						
Repayable in Australian currency—						
Treasury bonds	10,788.7	11,185.3	11,660.6	11,856.8	12,530.7	13,067.0
Australian savings bonds	111.5	624.3	959.8	1,384.2	1,595.2	1,828.7
Special bonds	583.0	484.9	428.7	402.0	196.0	92.5
Tax-free stock	15.1	15.0	14.8	14.7	14.7	13.9
Stock issued to Government savings banks under special agreements	448.0	499.3	525.5	555.7	603.9	651.6
Debentures	23.4	19.8	15.9	11.9	7.7	3.3
Overdue securities	1.6	0.1	0.1	–	–	–
Total	*11,971.4*	*12,828.6*	*13,605.4*	*14,225.4*	*14,948.2*	*15,657.0*
Repayable in overseas currencies(*a*)	127.2	102.2	75.9	70.0	33.3	16.3
Total States	*12,098.5*	*12,930.8*	*13,681.3*	*14,295.3*	*14,981.5*	*15,673.3*
of which—						
New South Wales	3,959.1	4,222.6	4,466.3	4,666.8	4,885.4	5,108.1
Victoria	3,031.8	3,244.3	3,427.6	3,584.9	3,758.1	3,932.4
Queensland	1,644.0	1,753.9	1,856.0	1,931.8	2,022.4	2,113.0
South Australia	1,491.9	1,602.7	1,701.5	1,781.1	1,871.1	1,961.9
Western Australia	1,160.8	1,237.3	1,307.3	1,360.7	1,423.8	1,486.3
Tasmania	811.0	870.0	922.6	969.9	1,020.8	1,071.6
Total Commonwealth Government and States	**23,290.3**	**26,922.7**	**31,086.0**	**32,782.6**	**32,635.4**	**33,589.4**

(*a*) Australian currency equivalent.

State and local authorities' borrowings

The borrowings of Commonwealth, State and local authorities come within the purview of the Loan Council under a 'gentlemen's agreement' originating in 1936. The Loan Council determines maximum interest rates and other terms and conditions of loans raised by authorities and approves the aggregate annual borrowing program for authorities borrowing more than $1.5 million in the financial year. The total program approved is distributed by the Council between the States, and each State determines the distribution between individual authorities of its share of the overall borrowing program approved for such authorities. Authorities which individually borrow less than $1.5 million in the financial year are also subject to the terms and conditions applying under the 'gentlemen's agreement', and it is the responsibility of the States to ensure that these authorities conform with these terms and conditions. No aggregate annual limit on their borrowings is imposed by the Loan Council.

The following table shows the aggregate borrowings by the State and local authorities in each of the years 1975–76 to 1980–81. It will be seen that the amounts borrowed by local authorities vary between the States, reflecting a number of factors including, importantly, variations between the States in the range of services provided by local government authorities. For example, the high figures for Queensland reflect, in part, borrowings by the Brisbane City Council which carries out a number of functions (e.g. metropolitan bus services and sewerage services) which in other States are undertaken by State authorities.

For further information relating to the figures given in the table, reference should be made to the Commonwealth Budget Paper No. 7, *Payments to or for the States, the Northern Territory and Local Government Authorities.*

NEW MONEY BORROWINGS BY STATE AND LOCAL AUTHORITIES
($'000)

	New South Wales	*Victoria*	*Queensland*	*South Australia*	*Western Australia*	*Tasmania*	*Total*
STATE AUTHORITIES(*a*)							
1975–76	205,312	256,930	102,411	39,490	44,309	17,720	666,172
1976–77	253,883	326,717	127,517	50,100	54,019	21,432	833,668
1977–78	332,215	388,620	198,721	73,220	78,689	30,771	1,102,236
1978–79	371,800	412,756	194,726	83,953	111,081	34,139	1,208,455
1979–80	472,761	382,657	235,264	56,830	108,692	34,445	1,290,649
1980–81	472,761	382,657	223,264	56,830	117,358	44,445	1,297,315
LOCAL AUTHORITIES(*b*)							
1975–76	163,847	63,043	102,097	16,831	27,845	14,503	388,166
1976–77	191,932	65,893	116,118	21,674	32,380	17,053	445,050
1977–78	202,230	84,493	117,993	19,424	36,481	17,405	478,026
1978–79	215,641	81,795	126,709	24,621	39,286	17,841	505,893
1979–80	235,407	90,702	147,948	26,604	40,336	15,426	556,423
1980–81	251,261	95,769	154,245	25,087	42,354	15,120	583,836

(*a*) New money borrowings by State-type authorities in the Northern Territory in 1980–81 were $31,762,000. (*b*) New money borrowings by local authorities in the Northern Territory are not included in the table. These borrowings are as follows: 1975–76, $597,000; 1976–77, $1,194,000; 1977–78, $1,697,000; 1978–79, $631,000; 1979–80, $1,240,000; 1980–81, $842,000.

Further references

For further detailed information on the subjects covered by this chapter *see* the annual bulletins published by the ABS: *Australian National Accounts—National Income and Expenditure* (5204.0); *Commonwealth Government Finance* (5502.0); *State and Local Government Finance, Australia* (5504.0); *Taxation Revenue, Australia* (5506.0) and *Government Financial Estimates, Australia* (5501.0). Current information in summarised form is given in *Quarterly Estimates of National Income and Expenditure, Australia* (5206.0), and is also contained in the *Monthly Summary of Statistics, Australia* (1304.0), and the monthly *Digest of Current Economic Statistics, Australia* (1305.0).

Additional details of the transactions of public authorities engaged in particular fields of activity, such as defence, transport and communication, health and welfare, education, etc., may be found in other chapters of this Year Book.

CHAPTER 23

NATIONAL ACCOUNTS

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

Estimates of national income and expenditure have been compiled by the ABS since 1944–45 and have been published annually as papers entitled *National Income and Expenditure* accompanying the Commonwealth Budgets. (Other national accounting publications are also produced regularly. A list of these can be found at the end of this chapter under the heading 'Further references').

NATIONAL INCOME AND EXPENDITURE

Description of National Income and Expenditure Accounts

A brief description of the conceptual basis of national accounts is given in this section, but for a more detailed treatment of the concepts and structure of the Australian national accounts reference should be made to *Australian National Accounts, Concepts, Sources and Methods* (5216.0).

Definition and relationship of the concepts of product, income and expenditure

The main concepts of product, income and expenditure in the Australian National Accounts are defined and expressed in equivalents as follows.

Gross domestic product is the total market value of goods and services produced in Australia within a given period after deduction of the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. Thus, gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services. *Gross farm product* is that part of gross domestic product which derives from production in agriculture and services to agriculture. *Gross non-farm product* arises from production in all other industries.

Gross domestic product at factor cost is that part of the cost of producing the gross domestic product which consists of gross payments to factors of production (labour, land, capital and enterprise). It represents the value added by these factors in the process of production and is equivalent to gross domestic product less net indirect taxes.

Domestic factor incomes is that part of the value added within a given period by factors of production (labour, land, capital and enterprise) which accrues as income to their suppliers after allowing for the depreciation of fixed capital. It is equivalent to gross domestic product at factor cost less depreciation allowances.

National income is the net income accruing within a given period to Australian residents from their services in supplying factors of production (labour, land, capital and enterprise) in Australia or overseas plus indirect taxes less subsidies. It is equivalent to domestic factor incomes plus indirect taxes less subsidies and net income paid overseas.

National disposable income is the net income accruing within a given period to Australian residents from their services in supplying factors of production, from net indirect taxes and from net transfers from overseas. It is equivalent to national income less net transfers overseas plus net withholding taxes received from overseas.

Gross national expenditure is the total expenditure within a given period on final goods and services (i.e. excluding goods and services used up during the period in the process of production) bought by Australian residents. It is equivalent to the gross domestic product plus imports of goods and services less exports of goods and services.

Household income is the total income, whether in cash or kind, received by persons normally resident in Australia in return for productive activity (such as wages, salaries and supplements, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash social service benefits, interest, etc.). It includes the imputed interest of life offices and superannuation funds, which is the benefit accruing to policy holders and members from investment income of the funds. It also includes third party motor vehicle and public risk insurance claims paid to persons in respect of policies taken out by

enterprises. However, it excludes any income which might be said to accrue to persons in the form of undistributed company income. It also includes any property income received by non-profit organisations such as private schools, churches, charitable organisations, etc.

Framework of accounts and sectors

In the Australian national accounts, four internal sectors are distinguished: corporate trading enterprises (including public trading enterprises), financial enterprises (including the nominal industry), households (including their unincorporated enterprises) and general government. All of these internal sectors engage in productive activity, receive and disburse income and accumulate assets. In this publication no accounts are shown for individual internal sectors. The transactions of the internal sectors are summarised in three accounts: a domestic production account (Table 1, page 654), a national income and outlay account (Table 3, page 655) and a national capital account (Table 4, page 656). In addition, there is an overseas sector having an account (Table 6, page 657) which shows a summary of the transactions into which overseas governments, persons and businesses enter with Australian residents.

The framework of sectors and accounts underlying the Australian national accounts is set out in the following diagram. The heavy rectangles depict the minimum system of four accounts which represent the consolidated accounts of the nation. The light rectangles represent the accounts for institutional sectors. The subdivision of the domestic production account represents production accounts for establishments classified according to industry. Selected transactions from such production accounts are shown in *Australian National Accounts, National Income and Expenditure* (5204.0). Such production accounts can be developed in detail to produce input-output tables.

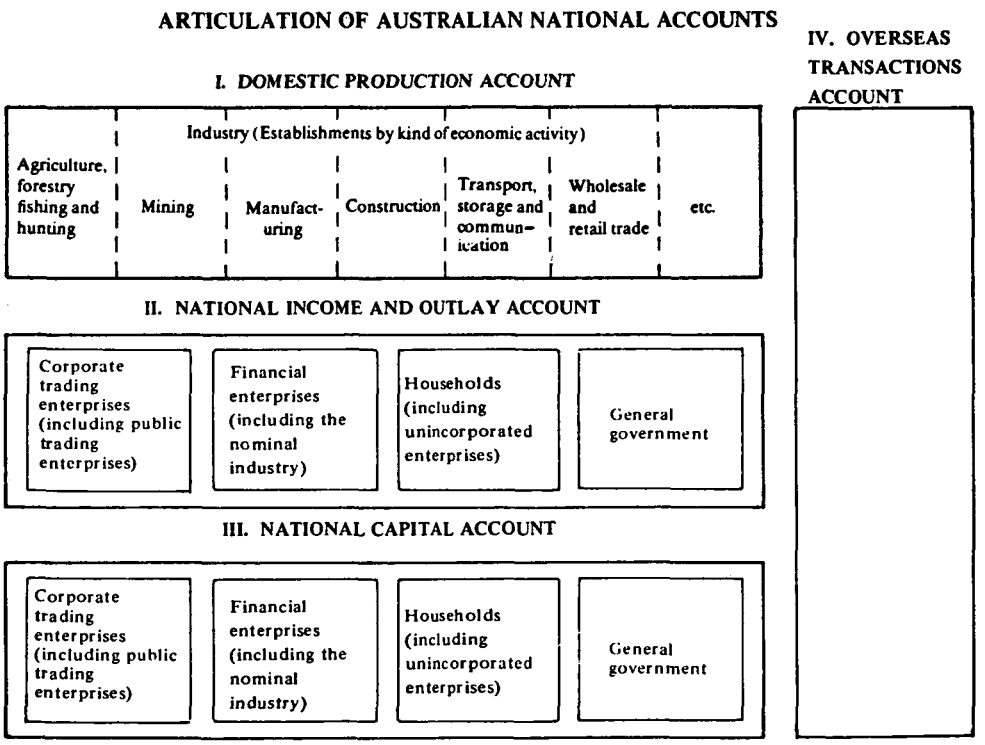


PLATE 45

Description of the accounts

The *domestic production account* is a consolidation of the production accounts of all producers regardless of sector. The production account is shown as receiving revenue from the sale of goods and services to final buyers; all intermediate goods and services are cancelled out, since they represent a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes less subsidies, and, since the account is presented from the point of view of the producing unit, the wages and salaries paid to employees. The balance is the gross operating surplus which may be divided into depreciation allowances and net operating surplus. Depreciation allowances is carried to the national capital account (or the sector capital accounts) and net operating surplus, together with wages and salaries and indirect taxes less subsidies, is carried to the national income and outlay account (or sector income and outlay accounts). In input-output tables, the domestic production account is broken up into accounts for separate industries, and transactions associated with intermediate usage of goods and services are shown in the production accounts for the separate industries.

The *national income and outlay account* is shown as receiving wages, salaries and supplements, net operating surplus and indirect taxes less subsidies from the domestic production account. From this income are deducted net payments of income and miscellaneous transfers to overseas; the remainder is the national disposable income. The outlay side of the account shows that this disposable income is largely used for final consumption expenditure and the balance is the nation's saving. The national income and outlay account is a consolidation of the sector income and outlay accounts.

The *national capital account* is a consolidation of the sector capital accounts. It shows on the receipts side depreciation allowances transferred from the domestic production account and saving transferred from the national income and outlay account (or from the sector income and outlay accounts). On the payments side are shown purchases by all sectors of new buildings and capital equipment, the increase in stocks of all sectors and a balance described as net lending to overseas. This concept of net lending to overseas includes increases (and, negatively, decreases) in Australia's overseas monetary reserves. The net lending to overseas is also the balance on current transactions in the overseas transactions account.

The *overseas transactions account* records all transactions of a current nature between Australian and overseas residents. Although this is an account for the overseas sector, the items are named from the Australian viewpoint. The account shows that Australia's current receipts from overseas consist of the value of Australia's exports of goods and services, property income received from overseas, transfers from overseas and withholding taxes from overseas. These receipts are used for Australia's imports of goods and services and payments of property income and transfers to overseas; the balance of current receipts represents net lending to overseas. Positive net lending to overseas corresponds to a surplus on current transactions with overseas, and negative net lending corresponds to a deficit. The transactions in property income shown in this account differ from estimates shown in balance of payments statistics because, in the national accounts, undistributed company income is not imputed to the beneficial owners. For this reason, net lending to overseas differs from the balance on current account shown in balance of payments statistics.

Estimates at constant prices

For certain kinds of intertemporal comparison, it is desirable to derive measures which attempt to remove the direct effect of price changes during the periods under review. Such estimates, conventionally described as 'at constant prices', are presented in Tables 2 and 5 (pages 655 and 656 respectively) for gross domestic product, exports and imports of goods and services, and gross national expenditure and its principal components.

Chapter 4 of *Australian National Accounts, Concepts, Sources and Methods* (5216.0) contains a discussion of the conceptual problems involved in making these estimates. Chapter 12 of that publication contains a brief account of the sources and methods used in preparing the estimates.

It should be noted that estimates at constant prices involve approximations and assumptions, and care must be taken in the interpretation and use of results.

Reliability and revisions

Estimates of national income and expenditure are necessarily prepared from a very wide range of statistical information, some of which is available quickly and some of which is available only after a delay of several years. Some of it is closely related to the desired national income concepts, but some of it is not completely satisfactory in various respects, including coverage, concepts and timing. Estimates, in particular for the most recent years, are therefore subject to revision. This applies particularly to estimates based on income tax statistics—income of companies, non-farm unincorporated enterprises,

depreciation, and part of private gross fixed capital expenditure—which are subject to substantial revisions for the last one or two years because tabulations of income tax statistics become available progressively one to two years after the end of each financial year.

It is not possible to put precise limits on the degree of revision likely to any particular series, nor to state degrees of reliability in a statistical sense. These depend in large part on the range and quality of the basic statistical data.

National income and expenditure tables

NOTE. Items in all current price tables are numbered from 1 to 25, with or without the addition of a letter, and this system is used to identify the corresponding credit and debit entries in the accounts. In some cases the items correspond exactly, while in other cases an entry in one table is the sum of two or more entries in other tables; here the total is given a number, and the components have a number and a letter. In the remaining type of case all entries are given the same number and a distinguishing letter, because in this group one item is not the sum of one or more entries. The relationship between these items can still be traced through because the sum of all credit entries must equal the sum of all debit entries. A description of the numbered items can be found in *Australian National Accounts, Concepts, Sources and Methods* (5216.0).

The figures shown in Tables 1-6 are as published in *Budget Paper No. 10, National Income and Expenditure, 1981–82* (5213.0). The figures shown in Table 7 are consistent with those published in *Quarterly Estimates of National Income and Expenditure, Australia, June Quarter 1982* (5206.0).

TABLE 1

DOMESTIC PRODUCTION ACCOUNT

($ million)

		1979–80	*1980–81*	*1981–82*
	Final consumption expenditure—			
1	Private	69,711	78,434	88,754
2	Government	18,732	22,180	25,454
	Gross fixed capital expenditure—			
3	Private	16,668	21,642	26,781
4	Public enterprises	4,810	5,717	5,836
5	General government	4,050	4,351	4,575
6	Increase in stocks	576	187	1,548
7	Statistical discrepancy	–677	596	1,062
	Gross national expenditure	*113,870*	*133,107*	*154,010*
8	Exports of goods and services	21,572	22,151	22,807
9	*Less* Imports of goods and services	20,917	24,761	28,582
	Expenditure on gross domestic product	**114,525**	**130,497**	**148,235**
10	Wages, salaries and supplements	61,720	71,684	82,390
	Gross operating surplus—			
	Trading enterprises—			
11*a*	Companies	13,462	16,005	17,066
11*b*	Unincorporated enterprises	14,568	15,125	16,298
11*c*	Dwellings owned by persons	8,009	8,939	10,523
11*d*	Public enterprises	2,624	2,835	3,382
11*e*	Financial enterprises	2,828	3,063	3,930
11*f*	*Less* Imputed bank service charge	2,767	3,266	3,945
	Gross domestic product at factor cost	*100,444*	*114,385*	*129,644*
12	Indirect taxes *less* subsidies	14,081	16,112	18,591
	Gross domestic product	**114,525**	**130,497**	**148,235**
	Gross farm product	7,442	7,123	7,412
	Gross non-farm product	107,083	123,374	140,823

TABLE 2

EXPENDITURE ON GROSS DOMESTIC PRODUCT AT AVERAGE 1979–80 PRICES

($ million)

	1979–80	*1980–81*	*1981–82*
Final consumption expenditure—			
Private	69,711	71,789	74,374
Government	18,732	19,768	20,333
Gross fixed capital expenditure—			
Private	16,668	19,510	21,984
Public	8,860	8,975	8,276
Increase in stocks	576	318	1,406
Statistical discrepancy	-677	573	931
Gross national expenditure	*113,870*	*120,933*	*127,304*
Exports of goods and services	21,572	20,525	20,588
Less Imports of goods and services	20,917	22,722	25,555
Expenditure on gross domestic product	**114,525**	**118,736**	**122,337**
Gross farm product	7,442	6,614	7,638
Gross non-farm product	107,083	112,122	114,699

TABLE 3

NATIONAL INCOME AND OUTLAY ACCOUNT

($ million)

		1979–80	*1980–81*	*1981–82*
10	*Wages, salaries and supplements*	*61,720*	*71,684*	*82,390*
11g	Net operating surplus	30,814	33,773	37,089
	Domestic factor incomes	*92,534*	*105,457*	*119,479*
13	*Less* Net income paid overseas	1,741	1,914	2,366
12*a*	Indirect taxes	14,886	17,115	19,670
12*b*	*Less* Subsidies	805	1,003	1,079
	National income	*104,874*	*119,655*	*135,704*
14	*Less* Net transfers to overseas	324	355	424
15*g*	Withholding taxes from overseas	141	161	205
	National disposable income	**104,691**	**119,461**	**135,485**
	Final consumption expenditure—			
1	Private	69,711	78,434	88,754
2	Government	18,732	22,180	25,454
15 to 19	Saving	16,248	18,847	21,277
	Disposal of income	**104,691**	**119,461**	**135,485**

TABLE 4

NATIONAL CAPITAL ACCOUNT

($ million)

		1979–80	1980–81	1981–82
11*h*	Depreciation allowances	7,910	8,928	10,165
	Saving—			
15	Increase in income tax provisions	1,562	785	365
16	Undistributed (company) income	1,209	1,809	1,428
17	Retained income of public financial enterprises	414	482	640
18	Household saving	9,609	11,612	13,272
19	General government surplus on current transactions	3,454	4,159	5,572
	Finance of gross accumulation	**24,158**	**27,775**	**31,442**
	Gross fixed capital expenditure—			
	Private—			
3*a*	Dwellings	4,851	6,132	6,658
3*b*	Non-dwelling construction	2,572	3,934	5,173
3*c*	Equipment	9,065	11,576	14,950
4	Public enterprises	4,810	5,717	5,836
5	General government	4,050	4,351	4,575
	Total gross fixed capital expenditure	*25,528*	*31,710*	*37,192*
	Increase in stocks—			
6*a*	Private non-farm	969	552	910
6*b*	Public authority	8	213	319
6*c*	Farm	-401	-578	319
7	Statistical discrepancy	-677	596	1,062
21	Net lending to overseas	-1,269	-4,718	-8,360
	Gross accumulation	**24,158**	**27,775**	**31,442**

TABLE 5

GROSS FIXED CAPITAL EXPENDITURE AND INCREASE IN STOCKS AT AVERAGE 1979–80 PRICES

($ million)

	1979–80	1980–81	1981–82
Gross fixed capital expenditure—			
Private—			
Dwellings	4,851	5,458	5,286
Non-dwelling construction	2,752	3,507	4,103
Equipment	9,065	10,545	12,595
Total private	*16,668*	*19,510*	*21,984*
Public	8,860	8,975	8,276
Total	**25,528**	**28,485**	**30,260**
Increase in stocks—			
Private non-farm	969	531	755
Public authority	8	189	273
Farm	−401	−402	378
Total	**576**	**318**	**1,406**

TABLE 6

OVERSEAS TRANSACTIONS ACCOUNT

($ million)

		1979–80	*1980–81*	*1981–82*
9a	Imports f.o.b.	15,828	19,188	22,450
9b	Transportation	3,023	3,348	3,697
9c	Travel	1,478	1,561	1,692
9d	Government transactions	264	287	316
9e	Other goods and services	324	377	427
9	*Imports of goods and services*	*20,917*	*24,761*	*28,582*
13*a*	Property income to overseas	2,122	2,385	2,828
14*a*	Personal transfers overseas	347	439	491
14*b*	General government transfers overseas	565	627	731
21	Net lending to overseas	−1,269	−4,718	−8,360
	Use of current receipts	**22,682**	**23,494**	**24,272**
8*a*	Exports f.o.b.	18,579	18,816	19,130
8*b*	Transportation	1,887	2,013	2,108
8*c*	Travel	762	949	1,123
8*d*	Government transactions	123	126	158
8*e*	Other goods and services	221	247	288
8	*Exports of goods and services*	*21,572*	*22,151*	*22,807*
13*b*	Property income from overseas	381	471	462
14*c*	Personal transfers from overseas	588	711	798
15*g*	Withholding taxes	141	161	205
	Current receipts from overseas	**22,682**	**23,494**	**24,272**

TABLE 7

MAIN AGGREGATES AT CURRENT PRICES, 1959-60 TO 1981-82

($ million)

Year	1 Final consumption expenditure: Private	2 Final consumption expenditure: Government	3 Private gross fixed capital expenditure	4 Public gross fixed capital expenditure	5 Increase in stocks	6 Statistical discrepancy	7 (1 to 6) Gross national expenditure
1959-60	9,040	1,302	2,191	1,214	168	-26	13,889
1960-61	9,586	1,409	2,415	1,256	478	-92	15,052
1961-62	9,876	1,528	2,328	1,380	-219	-179	14,714
1962-63	10,592	1,605	2,580	1,434	253	-153	16,311
1963-64	11,429	1,771	2,913	1,586	120	-138	17,681
1964-65	12,360	2,056	3,398	1,852	561	-20	20,207
1965-66	13,143	2,371	3,657	2,066	109	-81	21,265
1966-67	14,196	2,708	3,825	2,184	360	-178	23,095
1967-68	15,488	3,175	4,164	2,369	113	-313	24,996
1968-69	16,773	3,299	4,730	2,525	682	-56	27,953
1969-70	18,473	3,665	5,161	2,745	440	83	30,567
1970-71	20,411	4,198	5,837	2,937	446	-32	33,797
1971-72	22,665	4,788	6,330	3,296	13	197	37,289
1972-73	25,422	5,452	6,684	3,483	-286	557	41,312
1973-74	30,039	6,846	7,764	3,979	1,171	1,520	51,319
1974-75	36,441	9,219	8,536	5,652	1,016	1,209	62,073
1975-76	43,519	11,462	10,331	6,694	111	536	72,656
1976-77	49,785	13,411	11,860	7,155	1,131	384	83,726
1977-78	55,187	15,106	12,701	7,949	-480	868	91,331
1978-79	62,119	16,735	15,139	8,160	1,255	28	103,436
1979-80	69,711	18,732	16,668	8,860	576	-677	113,870
1980-81	78,434	22,180	21,642	10,068	187	596	133,107
1981-82	88,754	25,454	26,781	10,411	1,548	1,062	154,010

Year	8 Exports of goods and services	9 Imports of goods and services	10 (7+8-9) Gross domestic product	11 Gross domestic product at factor cost	12 National income	13 Household income	14 Wages, salaries and supplements
1959-60	2,142	2,285	13,746	12,271	12,484	10,851	6,961
1960-61	2,166	2,601	14,617	13,046	13,227	11,660	7,500
1961-62	2,458	2,204	14,968	13,433	13,495	12,109	7,748
1962-63	2,481	2,610	16,182	14,539	14,590	12,900	8,202
1963-64	3,150	2,860	17,971	16,199	16,232	14,321	8,948
1964-65	3,035	3,473	19,769	17,809	17,859	15,665	10,035
1965-66	3,122	3,617	20,770	18,626	18,671	16,467	10,845
1966-67	3,468	3,695	22,868	20,595	20,549	18,246	11,850
1967-68	3,549	4,134	24,411	21,930	21,867	19,189	12,911
1968-69	3,877	4,268	27,562	24,821	24,766	21,587	14,303
1969-70	4,736	4,758	30,545	27,522	27,434	23,821	16,079
1970-71	5,032	5,092	33,737	30,450	30,441	26,673	18,447
1971-72	5,605	5,217	37,677	33,982	34,098	30,169	20,575
1972-73	6,944	5,353	42,903	38,661	39,030	34,608	22,966
1973-74	7,810	7,782	51,347	46,045	47,286	42,555	28,127
1974-75	9,921	10,246	61,748	55,134	57,005	52,916	36,115
1975-76	11,005	10,836	72,825	64,301	67,149	61,876	41,580
1976-77	13,206	13,788	83,144	73,396	76,533	70,690	46,926
1977-78	13,999	15,030	90,300	79,980	82,930	77,981	51,488
1978-79	16,503	17,889	102,050	90,072	93,741	86,935	55,415
1979-80	21,572	20,917	114,525	100,444	104,874	96,575	61,720
1980-81	22,151	24,761	130,497	114,385	119,655	110,160	71,684
1981-82	22,807	28,582	148,235	129,644	135 704	126 388	82 390

Further references

Detailed annual estimates of national income and expenditure are published in *Australian National Accounts, National Income and Expenditure* (5204.0). Less detailed annual estimates are first published in a Budget Paper *National Income and Expenditure* usually in August. Quarterly estimates are published in *Quarterly Estimates of National Income and Expenditure, Australia* (5206.0).

Australian National Accounts, Gross Product by Industry, 1980–81 was published in November 1982.

The Bureau also compiles input-output tables for the Australian economy. Tables for the year 1974–75 were published in *Australian National Accounts, Input-Output Tables* 1974–75 (5209.0) in September 1981. Preliminary tables for 1977–78 were published in *Australian National Accounts, Input-Output Tables (Advance Release)* 1977–78 (5214.0) in December 1982.

Other national accounts publications which may be of interest are:

Australian National Accounts, National Income and Expenditure (Advance Release) (5201.0).

Quarterly Estimates of National Income and Expenditure, Australia (Preliminary) (5205.0) (June quarter only).

Historical Series of Quarterly Estimates of National Income and Expenditure, Australia (5207.0).

CHAPTER 24

OVERSEAS TRANSACTIONS

This chapter includes statistics of overseas trade, balance of payments, and overseas investment by private investors; however, because of limitations of space, the statistics are mainly restricted to summarised form.

OVERSEAS TRADE

Constitutional provisions and legislation

Constitutional provisions

By the Commonwealth of Australia Constitution Act, section 51 (1), the power to make laws with respect to trade and commerce with other countries was conferred on the Australian 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 1 January 1901. Other references to trade and commerce are contained in sections 87 to 95 of the Constitution.

Commonwealth Government Legislation

Commonwealth Government legislation affecting overseas trade includes the *Customs Act* 1901, the *Customs Tariff Act* 1982 and the *Customs Tariff (Anti-Dumping) Act* 1975. The *Customs Tariff Act* 1982 provides the statutory authority for imposing the actual rates of duty operative from time to time, while the *Customs Tariff (Anti-Dumping) Act* 1975 provides protection for Australian industry against various forms of unfair trading.

The Customs Tariff

The first *Australian Customs Tariff* was introduced by Resolution on 8 October 1901, from which date uniform duties came into effect throughout Australia. The *Australian Customs Tariff* has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting concessional treatment to certain imports from countries, the subject of various Trade Agreements. Customs collections are a major source of revenue, but in its protective character the tariff has an important influence on the Australian economy.

The customs value of imported goods is established in accordance with the provisions of the *Customs Act* 1901. Valuation must follow precise rules and practices to ensure consistency and equity in the treatment of goods subject to ad valorem rates of duty. Customs values are also the basis for import trade statistics.

On 30 November 1981, Australia adopted the international value system which is expressed in the Agreement on Implementation of Article VII of the General Agreement on Tariffs and Trade (GATT).

This GATT Agreement provides that the customs value shall be based, as far as is possible, on the actual price of the goods. The price may be subject to a limited range of adjustments for such matters as packing costs and other consideration, passing from the buyer to the seller. The price cannot be used as a basis for valuation if the buyer and seller are related and the price has been influenced by that relationship.

Where there is no price or the price cannot be used the Agreement provides other valuation methods.

Concessional rates. In addition to the concessional rates applicable to imports from all sources complying with particular ownership or other conditions as set out in Part I of Schedule 4, concessional rates apply to certain goods the produce or manufacture of specified developing and declared preference countries and to goods the subject of the New Zealand/Australia Free Trade Agreement, the Canada/Australia Trade Agreement, the Papua New Guinea/Australia Trade and Commercial Relations Agreement and the South Pacific Regional Trade and Economic Cooperation Agreement.

Details of the rules regarding the determination of origin and the provisions applying to direct shipment are set out in sections 151 and 151A of the *Customs Act* 1901.

A full list of developing and declared preference countries and goods excluded from the special rates of duty normally applicable, in the case of developing countries, is given in the *Australian Customs Tariff.*

General rates. General rates apply to goods from all countries which do not qualify for concessional rates of duty under a particular tariff classification.

By-law provisions. Customs By-laws and Ministerial Determinations are legal instruments, made in accordance with the provisions of the *Customs Act* 1901, to authorise admission of imported goods at rates of duty lower than those normally applicable. The rates of duty that apply where concessional entry has been granted are contained in the *Customs Tariff Act* 1982 and are normally identified by the words 'as prescribed by by-law'. The most frequently used by-law provision is Item 19 in Schedule 4 to the *Customs Tariff Act* 1982 which allows admission of goods at concessional rates, 'being goods a suitable equivalent of which that is the produce or manufacture of Australia is not reasonably available'. Normally, by-laws identify goods by general description, have neither quantity nor time limitations and may be used by any importer. Ministerial Determinations may be either in that form or, if it is necessary to limit the availability of concessions to ensure that the tariff protection accorded to local industry is maintained, be restricted in some way, e.g. quantity or time limitations. By-laws and notices of the making of Ministerial Determinations are published in the Commonwealth of Australia Gazette.

Anti-Dumping and Countervailing Duties. The *Customs Tariff (Anti-Dumping) Act* 1975 provides protection for Australian industry against various forms of unfair trading. Under this Act, Anti-Dumping duty may be imposed on goods that are sold to Australian importers at a price which is less than the 'normal value' of those goods. Countervailing duty may be imposed on goods on which a subsidy or bounty has been paid. Anti-Dumping or countervailing duties may however be imposed only where it can be demonstrated that there is a causal link between the dumped or subsidised imports, and injury suffered or threatened.

For details on calculation of Anti-Dumping or Countervailing duties, see the *Customs Tariff (Anti-Dumping) Act* 1975 and the publication: *Facts about the Australian Dumping Law* which are available from Customs Houses in capital cities or from the Department of Industry and Commerce, Canberra, ACT 2600.

Import controls

Import controls, by global tariff quotas or import licensing, are introduced to assist local industry following inquiry and report by the Industries Assistance Commission and the Temporary Assistance Authority. At present, the textile, apparel, footwear and motor vehicle industries are assisted by import control. Import licensing firmly limits import quantities, provides for penal and seizure action and may be selectively applied to particular goods or countries. As such, it differs from global tariff quotas which allow imports up to a predetermined level, above which additional duties may be imposed. As part of the seven year Quota Control programme for Textiles, Clothing and Footwear, which commenced on 1 January 1982, a portion of quota is allocated by tender. At present some 98 groups of commodities are subject to import control. Further information on import controls may be obtained from the Australian Customs Service, Department of Industry and Commerce, Edmund Barton Building, Barton, ACT 2600.

Export controls

Export restrictions. Section 112 of the *Customs Act* 1901 provides that the Governor-General may, by regulation, prohibit the exportation of goods from Australia and that this power may be exercised by: (*a*) prohibiting the exportation of goods absolutely; (*b*) prohibiting the exportation of goods to a specified place; and (*c*) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with. Goods subject to this export control are listed in the Customs (Prohibited Exports) Regulations.

Exchange control—Banking Act 1959. As an integral part of the framework of exchange control, a control over goods exported from Australia is maintained under the provisions of Part III of the Banking (Foreign Exchange) Regulations to ensure that the full proceeds of such goods are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations to control the movement out of Australia of capital in the form of securities and currency.

Trade descriptions

The Commerce (Trade Descriptions) Act 1905. This Act, administered by the Australian Customs Service of the Department of Industry and Commerce, gives power to require the application of a proper trade description to certain prescribed goods imported into or exported from Australia. Goods which must bear a prescribed trade description upon importation into Australia are specified in the Commerce (Imports) Regulations. As regards exports from Australia, marking requirements are prescribed in regulations issued under the Act and in relation to specified export commodities.

Trade promotion and incentives

Each year the Commonwealth Government through the Department of Trade and Resources undertakes an extensive overseas trade promotion and publicity program.

Trade Displays, Fairs and Exhibitions

For many years Australia has organised or participated in numerous major trade fairs, exhibitions and displays throughout the world.

Initially, the emphasis was on participation in general trade fairs directed at the public and the general commercial community. However, with the development of specialised export promotion techniques and the greater diversity of goods available for export, emphasis is now being placed on individual Australian trade displays and participation in specialised trade shows directed almost entirely at the business community. In addition, display rooms in Trade Commissioner offices are currently in use in Singapore, Kuala Lumpur, Seoul, Hong Kong, Jakarta, Port Moresby, Suva, Bangkok and Wellington. Limited display space is also available in Tokyo and Manila.

Trade Missions

At present the following types of trade missions are in use:

Survey missions. These are organised to obtain precise knowledge about the export trade potential for specific products in one or more overseas markets. Such methods are used to explore export prospects in new or developing areas where commercial intelligence is not readily available or where a complex industry is involved and the industry requires special export knowledge.

Specialised and general trade missions. Arrangements are made for specific industries or groups of firms representing a number of industries to participate in a planned selling campaign in overseas markets with known sales potential. The mission visits the market, publicises its products and negotiates sales.

Publications and Advertising

The Department of Trade and Resources produces a range of English language and multi-lingual publications for distribution overseas through its Trade Commissioner posts. Special publications are produced for major Australian promotional activities overseas. The promotional activities are also supported by appropriate editorial publicity and advertising in foreign media publications.

Export Education

The Commonwealth Government recently completed a three-year 'Export Now' Campaign. This has been replaced by an Export Education program involving seminars, workshops and training activities to help Australian exporters to penetrate overseas markets.

Export Awards

The Department of Trade and Resources in conjunction with the Confederation of Australian Industry runs an annual program of Export Awards for Outstanding Export Achievement. In addition various other awards are also given from time to time.

Export Incentives

The Commonwealth Government provides financial incentives to encourage exports. The Export Market Development Grants Act was introduced in 1974 and will operate until 30 June 1988. The scheme, administered by the Export Development Grants Board which is responsible to the Minister for Trade and Resources, is designed to encourage exporters and potential exporters to seek out and develop overseas markets. The scheme covers exporters of primary products, industrial goods, certain services including tourism, know-how and industrial property rights, whether the exporter is an individual, partnership, company or marketing organisation.

The scheme operates by way of taxable grants, to a maximum of $200,000 in respect to eligible expenditure incurred on overseas market research and development.

The Board also administers the Export Expansion Grants Act which will be allowed to lapse on its due expiry date of 30 June 1983. This scheme, which was introduced on 1 July 1978, was designed to reward improved export performance. Grants, which are taxable, are calculated on a formula applied to the increase in exports in a year, over the average annual exports in the three preceding years. The scheme covers a wide range of goods and services.

However some products are specifically excluded from the scheme, including minerals, greasy wool, wheat, sugar, livestock, most meats, woodchips, hides, skins and tallow from sheep and cattle, meat meal, unwrought aluminium, unrefined lead and copper, gold and silver, gold coins and waste and scrap materials.

Government authorities

Export Finance and Insurance Corporation

The Export Finance and Insurance Corporation (EFIC) was established by the Commonwealth Government in 1975 to provide Australian exporters with a specialised range of insurance guarantee and finance facilities not normally available from commercial sources. The EFIC took over the functions of the Export Payments Insurance Corporation which had been operating since 1956.

Australian Overseas Projects Corporation

The Australian Overseas Projects Corporation was established in November 1978 as a statutory authority of the Commonwealth Government to encourage the export of Australian goods and services. Its prime objective is to assist Australian consultancy and construction organisations to compete for contracts for overseas development projects, particularly those which are beyond the resources of individual firms and require a turnkey or multi-disciplinary approach, or require a government-to-government involvement. The Corporation's major functions are, on request, to act as prime contractor, consortium member or agent on behalf of Australian organisations.

Trade relations

Trade Policy

Australia is very reliant on international trade for its economic well-being. A sustantial proportion of Australia's agricultural and mineral production is exported. Australia is a major world exporter of a range of commodities including coal, iron ore, bauxite, alumina, manganese, mineral sands, wool, meat, wheat and sugar. Imports, particularly capital equipment, play a vital role in the country's economic development. Consequently, Australia is dependent on a stable international trade and payments system to secure its general trading objectives.

Australia's fundamental trade policy objectives include:

- the maintenance of an open international trade and payments system
- the maintenance of an equitable framework of rules based on the principles of multilateralism, non-discrimination, predictability and transparency, and which provides for progressive trade liberalisation
- in relation to agricultural trade, fair and predictable access to major markets, restraints on subsidised competition in third markets and stability in commodity markets
- the maintenance of secure and stable markets for minerals and assistance in obtaining stable and remunerative prices for mineral exports.

General Agreement on Tariffs and Trade

The General Agreement on Tariffs and Trade (GATT) is a multilateral treaty which provides the main framework of rules for the conduct of world trade. It also provides a forum in which countries can discuss and seek to overcome their trade problems as well as negotiate to enlarge world trading opportunities. The aim of the GATT is to liberalise world trade and place it on a secure basis, thereby contributing to economic growth and development.

The GATT entered into force in January 1948 with Australia being an original signatory. Since that date GATT membership has expanded to 87 countries, with a further 32 countries applying its rules on a de facto basis.

Seven rounds of multilateral negotiations to liberalise world trade have been held under the GATT, the most recent of which was the Tokyo Round (1973-1979). Concessions negotiated by member countries are incorporated in their 'Schedules of Concessions' which form an integral part of each country's obligations under the GATT. These concessions generally involve commitments not to increase tariffs on specific products above specified levels. The Tokyo Round negotiations also resulted in a number of agreements on non-tariff measures which clarified and expanded the existing rules of the GATT. These agreements included codes of conduct on subsidies and countervailing duties, government procurement, customs valuation, standards, import licensing, anti-dumping, trade in civil aircraft and a group of texts under the heading 'Framework for the Conduct of International Trade'. The latter includes texts which deal with reciprocity, more favourable treatment and fuller participation for developing countries, trade measures for balance of payments purposes, safeguard action for development purposes, consultation, dispute settlement and surveillance. There are also arrangements relating to bovine meat and dairy products.

All major developed countries have acceded or intend to accede to most of these agreements and Australia has already acceded or intends to accede to those on customs valuation, anti-dumping, import licensing, standards, subsidies, countervailing duties, the Framework texts and the arrangements on bovine meat and dairy products.

An important aspect of the GATT's work is to oversee the application of the trade rules established under its auspices. The main features of the General Agreement are:

- trade without discrimination; the guarantee of most-favoured-nation tariff treatment to all Contracting Parties
- agreement on commercial policy rules for international trade, including restrictions on the use of subsidies and quantitative restrictions
- provision of mechanism for consultations and dispute settlement
- safeguard, or emergency protection, provisions, enabling countries to apply temporary measures to industries seriously threatened by imports
- special recognition of the needs and capabilities of developing countries.

The highest body of GATT is the Session of Contracting Parties which usually meets annually. GATT decisions are generally arrived at by consensus, rather than vote, though two-thirds majority votes are required for the granting of 'waivers', (authorisations for members to depart from specific GATT obligations). Between Sessions of the contracting parties the Council of Representatives is authorised to act on both routine and urgent matters. The Council meets about six times a year.

In 1975 a Consultative Group of 18 comprising high level officials from key member countries was established to operate essentially as an executive steering group to assist GATT members carry out some of their major responsiblities more effectively.

The Committee on Trade and Development (CTD) reflects the GATT's increased focus on the problem of developing countries and has the duty of following all activities of GATT to ensure that problems of concern to developing countries are given priority attention. The CTD was formed after the introduction, in 1965, of Part IV of GATT which embodies commitments to individual and joint action by Contracting Parties, aimed at ensuring that the developing countries can increasingly find the means to raise living standards and promote rapid economic development through increased participation in international trade. This commitment has been elaborated by the Framework agreement enabling differential and more favourable treatment for developing countries, as a permanent legal feature of the world trading system.

A number of other committees have also been established to supervise implementation of the Tokyo Round agreements, examine the situation of countries using trade restrictions for balance of payments purposes, the agreement on textiles, anti-dumping practices and financial/administrative questions. Working parties are set up to deal with current questions, such as requests for accession, verification that agreements concluded by members are in conformity with GATT and to investigate disputes.

The developed country contracting parties to the GATT have introduced tariff preferences for developing country products under the Generalised System of Preferences (GSP).

The Australian System of Tariff Preferences for Developing Countries, in common with those of other donors, is a unilateral, non-reciprocal and non-contractual provision of specified preferential tariff advantages. Accordingly, Australia reserves the right at any time to modify, withdraw, suspend or limit the preferential treatment for any item or with respect to any beneficiary.

Australia's system of tariff preferences was introduced in 1966 (the first in the world) and has since been substantially revised and expanded through reviews in 1974, 1976 and 1979. On 1 January 1981 the system was further extended to include most textile, clothing and footwear products. Most dutiable manufactured and substantially processed primary products are now covered by the system. Margins of preference offered under the system are generally 10 to 15 per cent below the General Tariff rate.

The system is designed to assist developing countries to overcome their disadvantages in competing with other countries in the Australian market, providing always that such imports do not cause or threaten injury to Australian industry. A range of products where developing countries generally are already competitive on the Australian market are excluded from the system and preferences on a number of additional products have been withdrawn because of disruption to local industry. In some cases specific beneficiaries have been excluded from a preference.

Proposals for the addition or withdrawal of products from the system are referred to the Industries Assistance Commission for inquiry and report within 45 days. This procedure gives all interested parties the opportunity to submit their views in evidence to a public inquiry.

Market advisory services

The Australian Government has established a Market Advisory and Preferences Section in the Department of Trade and Resources to advise and assist developing countries and countries with centrally planned economies in the marketing of their products in Australia. The Section, which is located in Canberra, is supported by two experienced Australian Trade Commissioners—one located in Sydney and the other in Melbourne—to maintain contact with the commercial sector and provide direct practical assistance.

To further assist developing countries the Government has established the International Trade Development Centre in Sydney. The Centre houses the Sydney office of the Market Advisory Services and provides a venue for small national trade displays or product orientated international displays by developing countries.

The Centre is operated by the Department of Trade and Resources and is funded under Australia's development assistance programme.

Bilateral arrangements

West Europe—Although the EEC has formal trading arrangements with a large number of countries providing either free trade or preferential treatment, no such arrangement has been concluded with Australia. However, in the context of the Multilateral Trade Negotiations Australia was able to gain improved access into Community markets for a number of agricultural products. In addition, Australian exports of a range of agricultural and industrial products are benefitting from progressive tariff reductions which have been implemented by the Community from 1 January 1980.

In recent years, Australia has suffered a large and growing trade deficit with the EEC which has reflected an imbalance of trading opportunities. Since 1977 Ministerial and high level officials' discussions between Australia and the EEC have been directed towards correcting this situation. In May 1979 a bilateral settlement with the EEC was concluded within the Multilateral Trade Negotiations which provides certain Australian agricultural exports, particularly beef and cheese, with valuable new openings and guaranteed levels of access in EEC markets.

While agriculture remains the dominating feature of the bilateral relationship, there is significant potential for developing Australia's role as a supplier of a wide range of minerals and energy resources and in attracting increased European investment to resource based development projects in Australia.

Trade agreements

Asia

People's Republic of China—signed 1973. The Agreement provides, inter alia, for reciprocal most favoured nation treatment for imports, while recognising the preferential arrangements extended by both countries. The Agreement includes schedules of goods which each country is interested in exporting to the other. It also provides that exchanges of goods and technical services under contracts and agreements will be at reasonable international market prices; that payments in relation to trade will be in freely convertible currency; and that each country will promote the inter-change of trade representatives, groups, and delegations, and encourage the commercial exchange of industrial and technical expertise. The Agreement also established a Joint Trade Committee to further the aims of the Agreement. A protocol on Economic Co-operation to the Trade Agreement was signed in September 1981. The Protocol has the objective of notifying to enterprises and organisations of the two countries that their Governments have agreed on a range of industry and industry sectors regarded as holding prospects for co-operation between the two countries, and the form in which co-operation projects may be implemented.

Japan—signed 1957. The current Agreement on Commerce between Australia and Japan was initially signed in 1957, amended in 1963 and formally ratified on 27 May 1964. It provides for reciprocal most favoured nation treatment of imports while recognising the preferential arrangements of both countries; for certain commitments by Japan in regard to some important Australian export commodities including wool, soft wheat, sugar, canned meat, leather, butter and cheese; and for equal opportunity for Japanese products in relation to Commonwealth Government purchases from suppliers overseas. It also provides for close consultation between the two countries on matters relating to trade.

Republic of Korea—signed 1975. The current Agreement replaced an earlier Agreement entered into by Australia and the Republic of Korea in 1965. The present Agreement states that the two governments are to take all appropriate measures to facilitate, strengthen, and diversify bilateral trade in accordance with the General Agreement on Tariffs and Trade; recognises the need to improve the conditions of world commodity trade; declares support in principle for international commodity agreements, and expresses support in principle for the conclusion of long-term commercial contracts between organisations and enterprises of the two countries. The Agreement also established a Joint Trade Committee to further the aims of the Agreement.

Philippines—signed 1975. The current Agreement replaces an earlier Agreement entered into in 1965. Provides, inter alia, for reciprocal most favoured nation treatment of imports from either country; recognises preferential agreements of both countries; encourages Australian investment and joint ventures in the Philippines. Provides for a Joint Commission to meet annually, or more frequently if required. The Agreement entered into force in May 1979.

Thailand—signed 1979. Provides, inter alia, for strengthening and diversification of bilateral trade; supports trading arrangements among ASEAN countries; supports international commodity agreements; encourages economic, commercial and industrial co-operation, including investment in Joint Ventures. Provides for a Joint Trade Committee to meet annually or as required.

Socialist Republic of Vietnam—signed in 1974. Provides, inter alia, for reciprocal most favoured nation treatment for imports and expresses support for the principle of long-term commercial contracts.

Indonesia—signed 1972. The current Agreement replaced an earlier Agreement signed in 1959. It provides, inter alia, for reciprocal most favoured nation treatment of imports; expresses support for trade initiatives and arrangements among member countries of the Association of South East Asian Nations (ASEAN); declares support in principle for international commodity agreements and encouragement for Australian commercial investment in Indonesia and provides for consultations as required on trade matters.

Malaysia—signed 1958. The Agreement provides for each country to accord preferences to the other on certain specified goods. The exchange of these preferences was placed on a more flexible basis by an Exchange of Letters on 21 February 1975. The Agreement further provides for protection of Malaysia's tin and rubber exports to Australia and of Australia's wheat exports to Malaysia against dumped or subsidised competition. There are also certain guarantees of market access for Australian wheat in the Malaysian market and for natural rubber in the Australian market provided that the Papua New Guinea natural rubber crop is absorbed. The agreement also assures Malaysia that Australian tariff or import licensing treatment of natural rubber will be the same as for synthetic rubber.

Pacific

New Zealand—The New Zealand-Australia Free Trade Agreement (NAFTA) signed in 1965 came into force on 1 January 1966 and formally established a free trade area between Australia and New Zealand. However, complete free trade was not thereby achieved. The Agreement provides only for free trade in certain scheduled goods. Provision is made for additions to the free trade schedule. It also provides in respect of non-scheduled goods, for the two governments to agree on special measures (including the remission or reduction of duties) beneficial to the trade and development of each country.

The 1933 Agreement continues in effect as part of the Free Trade Agreement except as superseded or modified by it. Following the termination in early 1973 of the trade agreements which they had with Britain, Australia and New Zealand entered into an interim arrangement on tariffs and tariff preferences on 7 May 1973. This has been replaced by the Agreement on Tariffs and Tariff Preferences which came into effect on 1 December 1977 and allows for the continuation of the contractual right of both countries to margins of preferences in each others' markets.

In March 1980 the Primce Ministers of Australia and New Zealand agreed upon a framework for further detailed exploration and examination of possible arrangements for a closer economic relationship with the central objective of the gradual and progressive liberalisation of trade between the two countries on all goods.

Papua New Guinea—The Papua New Guinea-Australia Trade and Commercial Relations Agreement (PATCRA) which came into force in 1977 provides, inter alia, that subject to certain exceptions, trade between Australia and Papua New Guinea shall be free of duties and other restrictions.

Pacific Islands—The South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA) which came into force in January 1980 provides, inter alia, that Australia will progressively provide duty free and unrestricted access for as wide a range of Forum Island country products as possible.

Americas

Canada—signed 1960. Provides for each country to give the other tariff preferences on specific goods and for the exchange of preferences in each country's tariff derived from the preferential agreements each had with Britain. The termination of these agreements with Britain created a need for Canada and Australia to review their own preferential trading arrangements. An Exchange of Letters governing the future operation of the 1960 Agreement was signed on 25 October 1973. The Exchange provides for a continuation of the tariff preferences, but on a more flexible basis, with some other modifications of provisions of the 1960 Agreement, particularly those relating to indirect shipment of goods and to anti-dumping procedures.

Brazil—signed 1978. The Agreement represented a significant development in strengthening trade and economic links between Australia and Brazil. It basically confirms GATT rights and obligations and emphasises industrial co-operation including investment. A significant feature is the ten year initial life of the Agreement to cover long term commodity contracts. It also establishes a Joint Consultative Committee.

Europe

East Europe—The development of Australia's trade relations with the countries of East Europe began as part of a policy of market diversification away from West Europe in the mid 1960s.

Formal trade agreements Australia has signed with the German Democratic Republic, Hungary, Bulgaria (all in 1974), Romania (in 1975) and Poland (in 1978—supplementary to the earlier 1966 Agreement) are broadly similar in their provisions. They either confirm reciprocal most favoured nation treatment of imports while recognising preferential arrangements or, as in the Trade Agreements with Hungary, Poland, and Romania, acknowledge that trade between Australia and these countries is to be in accordance with the rights and obligations of both countries under the General Agreement on Tariff and Trade. They provide for the encouragement and facilitation of the further development of mutually beneficial trade and economic relations and express support in principle for the conclusion of relevant international commodity agreements aimed at improving the conditions of international trade in primary products.

There are provisions to encourage and facilitate the development of economic co-operation and the negotiation of long-term commercial contracts between respective enterprises and organisations and the interchange of commercial trade and technical representations, groups and delegations. Mixed Commissions are also established by these Agreements to provide a forum for regular bilateral discussions on trade development and trade related issues and problems.

In addition, the Agreements with the German Democratic Republic and Bulgaria provide for the exchange of indicative lists of goods each country is interested in exporting to the other.

The Agreement with the U.S.S.R. (signed 1965) provides for reciprocal most favoured nation treatment of imports and recognises the preferential agreements of both countries. A supplementary Agreement on the Development of Trade and Economic Relations was signed in 1973 and provides, inter alia, for encouragement and facilitation of trade between the two countries; encouragement of industrial and technical co-operation; support for international commodity agreements; and established a Mixed Commission to provide a forum for regular consultations on measures to develop bilateral trade and on bilateral trade problems, and to further the aims of the Agreement.

Other bilateral Trade Agreements are in force with Yugoslavia (signed 1970) and Czechoslovakia (signed 1972). A protocol (to the Trade Agreement with the German Democratic Republic) on Industrial and Technical Co-operation was signed in Berlin in 1977.

Middle East

Bahrain—The Agreement on Trade, Economic and Technical Co-operation was signed in May 1979. The Agreement expresses the intention of the two Governments to develop and expand trade and economic relations by the establishment of a Joint Committee, the facilitation of joint ventures in the two countries, and encouraging the exchange of technology and technical expertise between commercial enterprises.

Iraq—The Agreement on Trade; Economic and Technical Co-operation was signed in March 1980. The Agreement provides, inter alia, for the exchange of most favoured nation treatment between Australia and Iraq, encouragement to the negotiation of commercial contracts between relevant organisations and commercial enterprises and the establishment of a Joint Governmental Commission.

Saudi Arabia—The Agreement on Economic and Technical Co-operation was signed in March 1980 and provides for the facilitation of joint ventures in each country, encouraging the exchange of scientific and technological research, and the establishment of a Joint Commission.

Oman—signed 1981. The Agreement on Trade, Economic and Technical Co-operation expresses the intention of the two governments to develop and expand trade and economic relations. Provides for the facilitation of joint ventures in the two countries and encourages the exchange of technology and technical expertise. The Agreement also established a Joint Commission.

Kuwait—signed 1982. The Agreement on Economic and Technical Co-operation expresses the intention of the two Governments to develop and expand trade and economic relations. Provides for the facilitation of joint ventures in the two countries and encourages the exchange of technology and technical expertise and establishes a Joint Commission.

Others

India—signed 1976. The Agreement confirms that trade between the two countries shall be conducted in accordance with the provisions of GATT. It provides for encouragement and co-operation between India and Australia and establishes a Joint Trade Committee to meet annually and review the operation of the Agreement and advance its objectives.

Trade services

Trade Commissioner Service

The stimulation of interest abroad in Australia's exports is an important government activity in which the Australian Trade Commissioner Service plays a prominent part. A brief account of the establishment and growth of the Trade Commissioner Service before the 1939-45 War is available in Year Book No. 51, page 496. Since the War the Service has increased steadily; by late 1982 there was an establishment of 162 Trade Commissioners and Assistant Trade Commissioners in Australia and at 53 posts in 43 countries.

Trade Commissioners are responsible for providing commercial intelligence in their territories in the fields of manufactured goods, rural commodities, resources, energy and technical and allied services. Particular facilities provided for Australian exporters and export organisations include: surveying market prospects; advising on selling and advertising methods; arranging introductions with buyers and agents; providing reports on the standing of overseas firms; advising and assisting business visitors; helping to organise and carry through trade missions, trade displays, newspaper supplements, and other promotion and publicity media; providing information on import duties, import licensing, economic conditions, quarantine and sanitary requirements, and other factors affecting the entry and sale of goods and services and helping to attract desirable investment.

In some countries Trade Commissioners also participate in inter-governmental negotiations in the resources and commercial fields. In certain countries where there is no diplomatic or consular mission, Trade Commissioners are called upon to act as the Australian government representative.

Trade Commissioners and Assistant Trade Commissioners are drawn from both private enterprise and the public service. Applications for entry are invited periodically by public advertisement.

The Trade Commissioner Service is administered by the Department of Trade and Resources (as distinct from the diplomatic and consular services administered by the Department of Foreign Affairs), but in countries where there is an Australian diplomatic or consular mission it is the practice for Trade Commissioners to be attached to that mission and to hold an appropriate diplomatic or consular rank—Minister (Commercial), Counsellor (Commercial) or First or Second Secretary (Commercial).

The countries where Australian Trade Commissioner posts are located are shown in the following list. Except where indicated the missions are located in capital cities only. Algeria; Argentina; Austria; Bahrain; Belgium; Brazil (Rio de Janeiro); Britain; Canada (Vancouver, Toronto, Ottawa); China, People's Republic; Egypt, Arab Republic of; Fiji; France; Germany, Federal Republic of; Greece; Hong Kong; India; Indonesia; Iran; Iraq; Israel; Italy (Rome, Milan); Japan (Tokyo, Osaka); Kenya; Korea, Republic of; Kuwait; Malaysia; Mexico; Netherlands; New Zealand (Wellington, Auckland); Papua New Guinea; Philippines; Saudi Arabia (Jeddah, Riyadh); Singapore; South Africa (Johannesburg); Spain; Sweden; Switzerland (Geneva); Thailand; United Arab Emirates (Abu Dhabi); United States of America (Washington DC, Chicago, Houston, Los Angeles, New York, San Francisco); U.S.S.R.; Venezuela; Yugoslavia, Socialist Federal Republic of.

Full details of the Australian Trade Commissioner posts are available from the Department of Trade and Resources, Canberra, A.C.T. 2600.

Australian Trade Correspondents and Marketing Officers

Detached Australian Trade Correspondents and Marketing Officers supplement the work of the Trade Commissioner in whose territory they are located. Correspondents are situated in various locations throughout the world.

Trade representation in Australia

Details of Trade Representatives in Australia are available from the Department of Foreign Affairs, Canberra, A.C.T. 2600.

Collection and presentation of statistics

Source of data

Overseas trade statistics are compiled by the Australian Bureau of Statistics from documentation submitted by exporters and importers or their agents to the Australian Customs Service as required by the Customs Act.

Scope of the statistics

The statistics presented below are, with one exception, recorded on a *general trade* basis, i.e. total exports include both Australian produce and re-exports, and total imports comprise goods entered directly for domestic consumption together with goods imported into Customs warehouses. The statistics of import clearances, however, are recorded on a *special trade* basis, i.e., clearances comprise goods entered directly for domestic consumption together with goods cleared into the domestic market from Customs warehouses.

Exports of Australian produce are goods, materials or articles which have been produced, manufactured or partly manufactured in Australia, except goods which were originally imported and have undergone only repair or minor operations which leave them essentially unchanged.

Re-exports are goods, materials or articles originally imported which are exported either in the same condition in which they were imported or after undergoing repair or minor operations which leave them essentially unchanged. Minor operations include blending, packaging, bottling, cleaning, sorting, husking or shelling.

Total exports are the aggregate of exports of Australian produce and re-exports.

The following are excluded from overseas trade statistics:

(a) direct transit trade, i.e., goods being trans-shipped or moved through Australia for purposes of transport only;
(b) bunkers and stores supplied to vessels and to aircraft prior to departure overseas or arrival in Australia;
(c) migrants' and passengers' effects exported or imported; and parcels post exports and imports of small value, for which Customs entries are not required;
(d) certain materials under inter-governmental agreements for defence and similar projects for which Customs entries are not required;
(e) vessels and aircraft engaged in the transport of passengers or goods between Australia and other countries;
(f) the sale or purchase of any vessel and/or aircraft intended for use on overseas routes;
(g) fish and other sea products landed in Australia or abroad directly from the high seas by Australian vessels;
(h) entries lodged on informal clearance documents (ICD) for values not exceeding $250;
(i) export consignments where the value of the goods in each transaction is less than $250.

Statistical period

Exports. Exports are recorded statistically in the month in which the entries are both finalised by the Australian Customs Service and passed to the ABS for further processing. Regular exporters or their agents may provide details of their export shipments on a periodic rather than an individual shipment basis by submitting weekly or monthly returns. These 'periodic returns' must be submitted to the Australian Customs Service within seven days of the end of the period in question covering all shipments during that period. All other exporters are required to report each individual shipment prior to the ship's departure. Approximately 90 per cent of monthly export values are recorded on periodic returns. The statistical month for Customs outports (generally ports other than those at which the main Customs Office in each State is located) closes on the twenty-first of each month, whereas for mainports the statistical month is the calendar month. Because of these factors export statistics for a particular month do not necessarily represent all of the commodities actually exported during that month. Analysis of past data has shown that in aggregate approximately 40 per cent of export trade by value for a particular month reflects actual shipments during that month, 55 per cent by value was actually exported during the previous month with the remaining 5 per cent by value exported in earlier months. For individual commodities the percentage by value representing actual exports in a month may vary considerably.

Imports. Imports are recorded statistically in the calendar month in which the import entries were both finalised by the Australian Customs Service and passed to the ABS for further processing. Import entries may be lodged early using the check-to-arrive system or the documents may be delayed because

of various validation checks carried out by Customs prior to the entries being passed to the ABS. Import statistics for a particular month do not necessarily represent entries lodged or commodities actually imported during the month in question. Analysis of past data has shown that in aggregate approximately 70 per cent of import trade by value recorded for a particular month was actually imported during that month, 25 per cent was actually imported during the previous month with the remaining 5 per cent being imported in earlier months. For individual commodities the percentage by value representing actual imports in a month may vary considerably.

State

From 1 July 1978, *State* statistics for exports comprise State of origin of Australian produce and State of final shipment of re-exported goods. State of origin is defined as the State in which the final stage of production or manufacture occurs. Previously *State* was the State in which the export document was lodged with the Australian Customs Service. Because of this change, figures from 1 July 1978 are not directly comparable with those for previous periods.

For imports the State is that in which the import entry was lodged with the Australian Customs Service. The port of lodgement of the import entry is not necessarily the port of discharge of the goods or of final consumption. Goods forwarded interstate after import, whether in containers or not, are recorded as being imported at the port of lodgement of the import entry.

Valuation

Exports. Goods actually sold to overseas buyers prior to shipment are valued at the free-on-board (f.o.b.) Australian port of shipment equivalent of the actual price at which the goods were sold. Goods shipped on consignment are valued at the f.o.b. Australian 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 are dispatched for sale. The recorded value of exports includes the value of the outside package, other than international containers used for containerised cargo.

Imports. The recorded value of imports is the customs value (formerly referred to as the value for duty). On 30 November 1981, Australia changed its system of valuation from the Brussels Definition of Value (BDV) to the GATT Agreement on Customs Valuation. The Agreement reflects one of a number of trade related codes of conduct established during the round of Multi-lateral Trade Negotiations (MTN) concluded in 1979. The GATT Agreement differs from the Brussels Definition of Value in that it offers a set of practical rules on the valuation of imports rather than a list of conceptual guidelines. Under the Agreement the primary basis for establishing the customs value is the price actually paid or payable, provided a number of conditions are met. The most important condition is that the buyer and seller must be independent of each other. If the conditions are not met the practical rules are used to determine the customs value. The recording of the value of imports remains on a free-on-board (f.o.b.) basis (i.e. the charges and expenses involved in delivering the goods from the place of exportation to Australia are excluded). The recorded value also continues to include the value of outside packages, other than international containers used for containerised cargo. The change in the basis of valuation is expected to have a negligible effect on value and duty import statistics. For details of the method of valuation used prior to 30 November 1981, *see* Year Book No. 66, page 633.

Merchandise exports and imports

In accordance with standards recommended by the United Nations: Merchandise exports are defined as all goods which subtract from the stock of material resources in Australia as a result of their movement out of the country. Merchandise exports, therefore, exclude goods exported with the reasonable expectation of re-import within a limited time. A complete list of commodities not included in merchandise trade is shown under section 9 (b) of the *Australian Export Commodity Classification* (AECC). These include, for example, coin being legal tender and goods for temporary exhibition outside Australia;

Merchandise imports are defined as all goods which add to the stock of material resources in Australia as a result of their movement into the country. Merchandise imports, therefore, exclude goods imported with the reasonable expectation of re-export within a limited time. A complete list of commodities not included in merchandise trade is shown under Section 9 (b) of the *Australian Import Commodity Classification* (AICC). These include, for example, coin being legal tender and goods for temporary exhibition in Australia.

Goods excluded from merchandise trade are for convenience termed non-merchandise and such trade is shown separately in some tables. Total trade is the sum of merchandise and non-merchandise.

Commodity classification

Exports and imports are classified according to the items of the AECC and AICC respectively, which, from 1 July 1978, have been based on the *Standard International Trade Classification*, Revision 2 (United Nations, Statistical Papers, Series M, No. 34, Revision 2, 1975). Copies of, or extracts from these classifications may be obtained from offices of the ABS in Canberra and in each capital city.

Australian Standard Commodity Classification

The Australian Standard Commodity Classification (ASCC) has been developed by the ABS to enable users to compare statistics of commodities produced in Australia with statistics of commodities imported and exported.

The ASCC manual (1207.0 and 1208.0) links production, import and export items at their most detailed level of comparability in the form of standard (ASCC) commodity items. In a large number of cases, however, due to the differences between production, import and export items, comparability is only achieved at fairly broad aggregate levels. In the ASCC, commodities are grouped under industries (as defined in the Australia Standard Industrial Classification (ASIC)) in which they are typically produced.

The first edition of the ASCC was restricted to commodities originating in the manufacturing industries. The second edition, which relates to the year 1977–1978 was published in 1980 and has been amended to also include commodities originating in the agriculture, forestry, fishing, hunting and mining industries.

The classification will continue to be developed over the coming years to improve the alignment between production, imports and exports.

The ABS also publishes a statistical publication, *Comparable Commodity Statistics of Production, Imports and Exports* (1310.0) containing commodity statistics of Australian production, imports and exports based on the standard (ASCC) items contained in the ASCC manual. The second edition of this publication, was published in 1980, relates to the year 1977–78 and contains Australian production, import and export commodity statistics of manufactured goods classified in accordance with the standard (ASCC) items in the second edition of the ASCC manual.

Country

A country is defined as a geographical entity which trades, or has the potential to trade, with Australia in accordance with Australian Customs provisions. External territories under Australian administration *are* treated separately whilst self-governing territories and dependent territories under the administration of other countries *may* be treated as individual countries in Australian overseas trade statistics. *Exports:* for exports, *country* refers to the country to which the goods were consigned at the time of export. Where the country of consignment is not determined at the time of export, goods are recorded as exported *For orders* and in those cases where it was found to be impossible to determine the destination, as *Destination unknown. Imports:* for imports, *country* refers to the country of origin of the goods which is defined as the country of production for Customs purposes.

Quantity data

Where quantities are shown they are generally expressed in terms of the normal unit of quantity used in the appropriate industry and as specified in the *Australian Export and Import Commodity Classifications* (1203.0, 1204.0) published by the ABS. Quantities are not tabulated in respect of statistical items for which there is no appropriate unit of quantity (e.g. a statistical item which covers a number of commodities that cannot be recorded under a single unit of quantity).

Excess of exports or imports

The excess of the value of exports or imports does not represent the balance of trade. The balance of trade is the excess of exports or imports on a *balance of payments* basis. Details of the adjustments (relating to coverage, timing and valuation) made to total recorded exports and imports for balance of payments purposes, are set out in the annual publication *Balance of Payments, Australia* (5303.0). Some information may be found in the section relating to the balance of payments, page 698.

Overseas trade statistics

Total overseas trade

The following table shows the total trade of Australia with overseas countries from 1976–77 to 1981–82.

OVERSEAS TRADE
($m)

Year	*Exports*	*Imports*	*Excess of exports (+) or imports (-)*
1976–77	11,652	10,411	+1,241
1977–78	12,270	11,169	+1,101
1978–79	14,241	13,752	+ 489
1979–80	18,871	16,218	+2,653
1980–81	19,177	18,965	+ 212
1981–82	19,586	23,003	-3,417

Plate 46 below shows the overseas trade of Australia from 1962–63 to 1981–82.

OVERSEAS TRADE 1962-63 TO 1981-82

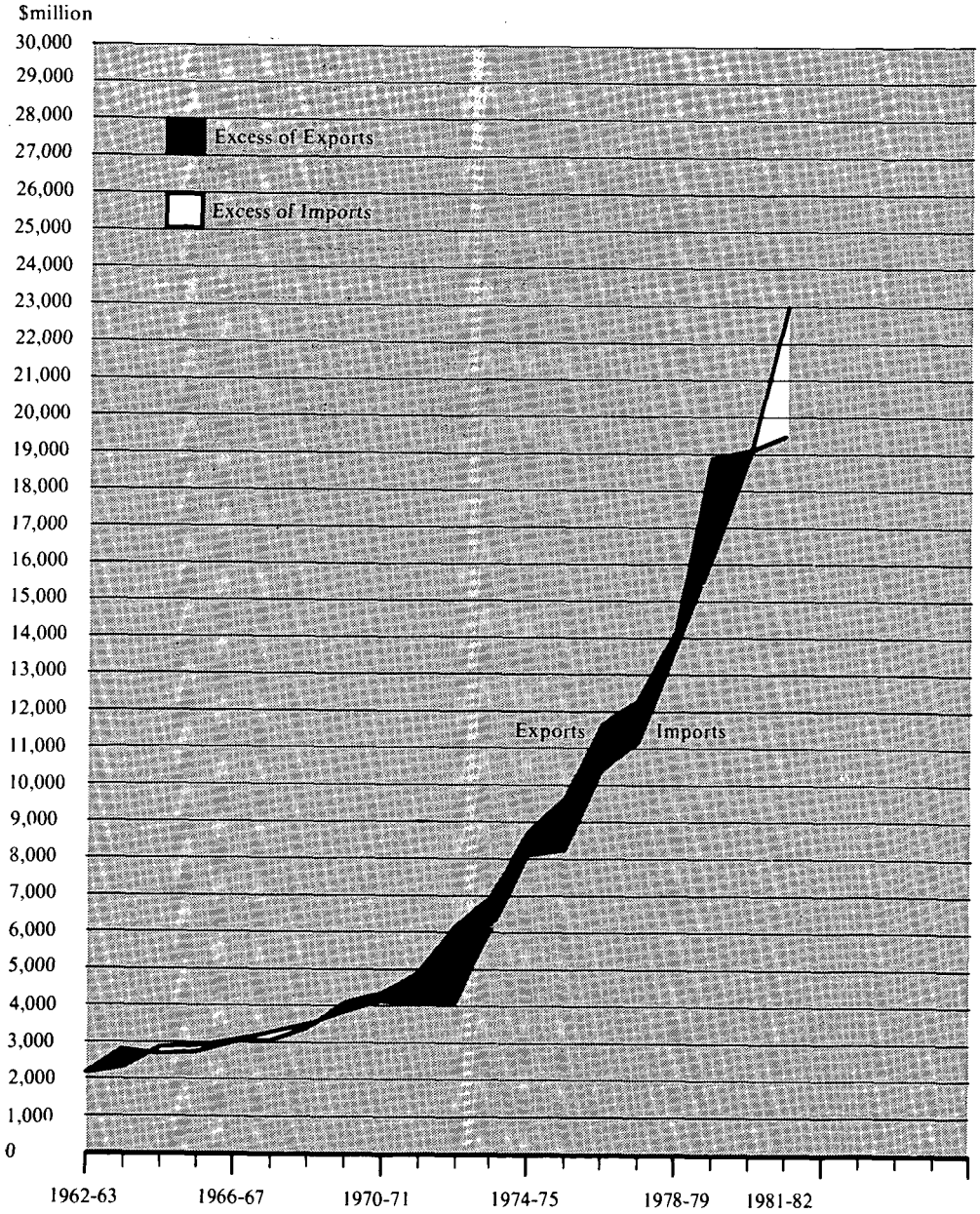


PLATE 46

The following table shows particulars of merchandise and non-merchandise trade for recent years.

MERCHANDISE AND NON-MERCHANDISE TRADE

($m)

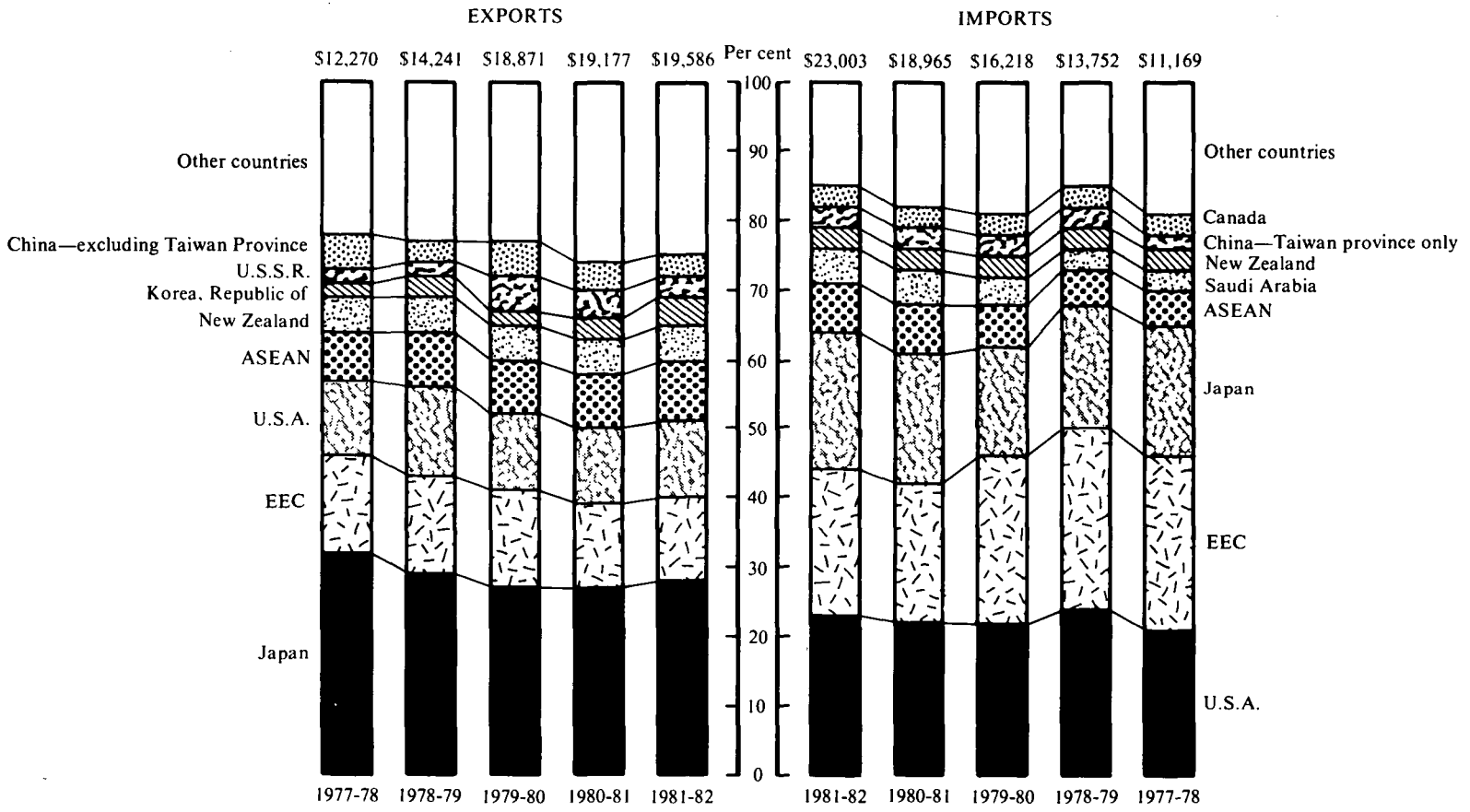
EXPORTS

Year	*Merchandise*	*Non-merchandise*	*Total*
1976–77	11,489.0	162.5	11,651.6
1977–78	12,049.6	220.1	12,269.7
1978–79	14,071.2	169.7	14,240.9
1979–80	18,605.8	265.1	18,870.9
1980–81	18,949.4	227.5	19,177.0
1981–82	19,306.3	279.6	19,585.9

IMPORTS

Year	*Merchandise*	*Non-merchandise*	*Total*
1976–77	10,330.2	80.4	10,410.6
1977–78	11,082.3	86.6	11,168.9
1978–79	13,650.9	100.6	13,751.5
1979–80	16,044.8	172.7	16,217.5
1980–81	18,790.3	174.3	18,964.6
1981–82	22,767.5	235.8	23.003.3

VALUE OF EXPORTS AND IMPORTS, AUSTRALIA, PROPORTIONS BY COUNTRY 1977-78 TO 1981-82



Classified summary of Australian overseas trade

The following table shows exports and imports according to divisions of the *Australian Export and Import Commodity Classifications* (based on the *Standard International Trade Classification* Revision 2).

EXPORTS AND IMPORTS: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS

($'000)

Division No.	Description	Exports 1979–80	Exports 1980–81	Exports 1981–82	Imports 1979–80	Imports 1980–81	Imports 1981–82
00	Live animals chiefly for food	198,493	220,656	227,627	25,496	23,427	33,308
01	Meat and meat preparations	1,728,885	1,594,151	1,381,044	9,076	9,838	10,148
02	Dairy products and birds' eggs	264,013	270,659	300,464	32,967	39,248	45,500
03	Fish and fish preparations	242,148	231,912	308,348	154,294	190,319	213,232
04	Cereals and cereal preparations	2,893,254	2,326,180	2,503,703	16,515	19,591	31,157
05	Fruit and vegetables	210,843	235,718	205,852	114,503	116,217	147,537
06	Sugar, preparations, honey	700,423	1,168,931	793,725	9,631	11,070	14,169
07	Coffee, tea, cocoa and spices	22,444	29,303	31,379	243,034	194,317	187,114
08	Feeding stuff for animals	25,742	37,697	40,539	26,491	27,101	21,646
09	Miscellaneous food preparations	14,177	14,415	13,736	23,196	23,691	28,232
11	Beverages	28,070	35,625	39,458	74,173	91,288	103,545
12	Tobacco and tobacco manufactures	13,299	11,452	10,635	67,628	77,818	69,447
21	Hides, skins and furskins, raw	377,436	210,335	217,474	2,602	2,504	2,979
22	Oil seeds, oil nuts and oil kernels	35,584	7,763	14,870	7,264	16,905	13,552
23	Crude rubber (including synthetic and reclaimed)	2,904	1,652	2,136	77,560	70,330	56,773
24	Wood, timber and cork	170,582	208,152	184,304	194,972	189,465	206,916
25	Pulp and waste paper	1,420	2,129	1,437	92,409	108,549	97,520
26	Textile fibres and their waste	1,606,534	1,873,501	1,888,884	89,790	84,917	90,427
27	Crude fertilisers and minerals (except coal, petroleum and precious stones)	82,270	89,330	84,464	161,778	213,327	223,519
28	Metaliferous ores and metal scrap	3,244,713	3,306,273	(*a*)3,372,126	32,411	37,020	33,810
29	Crude animal and vegetable materials n.e.s.	47,845	62,254	56,098	40,819	40,710	44,733
32	Coal, coke and briquettes	1,685,308	1,981,203	2,295,015	3,062	6,211	2,011
33	Petroleum and petroleum products	426,602	516,573	557,387	2,094,832	2,719,006	2,993,020
34	Petroleum gases and other gaseous hydrocarbons	(*b*)	(*b*)	316,719	274	262	653
41	Animal oils and fats	91,342	80,433	82,095	553	714	482
42	Fixed vegetable oils and fats	1,483	4,250	7,550	62,933	43,760	53,477
43	Animal and vegetable oils, fats and waxes, processed	6,890	7,117	5,736	17,725	18,947	26,007
50	Combined confidential items from 513 and 582	–	(*c*)	(*c*)	–	5,771	–
51	Chemical elements and compounds	46,124	49,902	44,283	486,751	437,330	(*d*)495,095
52	Mineral tar and crude chemicals from coal, petroleum and natural gas	74,093	55,794	(*e*)44,957	152,312	204,825	260,440
53	Dyeing, tanning and colouring materials	21,649	17,274	(*f*)18,798	83,768	77,058	88,589
54	Medicinal and pharmaceutical products	70,195	81,728	88,469	152,371	141,044	155,242
55	Essential oils and perfume materials; toilet and cleansing preparations	28,788	31,608	30,803	83,489	86,090	102,011
56	Fertilisers, manufactured	5,536	5,228	4,522	32,711	49,003	60,586
57	Explosives and pyrotechnic products	5,865	6,212	7,837	10,619	9,202	13,038
58	Plastic materials, regenerated cellulose and artificial resins	59,195	72,133	90,757	371,900	357,187	(*g*)430,404
59	Chemical materials, n.e.s.	68,284	76,584	73,366	204,869	220,616	221,790
60	Combined confidential items from 661,694 and 695	–	(*c*)	(*c*)	–	5,425	–
61	Leather, leather manufactures, n.e.s. and dressed furskins	42,827	31,508	34,195	42,547	38,291	43,770
62	Rubber manufactures, n.e.s.	11,812	12,085	10,954	200,062	241,700	287,232
63	Wood and cork manufactures (excluding furniture)	7,424	8,528	6,838	78,565	92,658	106,207
64	Paper, paperboard and manufactures	50,581	56,433	51,082	420,028	458,137	556,812
65	Textile yarn, fabrics, made-up articles	109,471	123,054	138,941	953,295	980,887	1,095,527
66	Non-metallic mineral manufactures n.e.s.	124,395	121,296	114,461	336,644	396,065	(*h*)409,216
67	Iron and steel	609,001	533,459	440,866	337,410	458,231	577,717
68	Non-ferrous metals	1,258,694	984,129	994,618	95,587	109,535	136,689
69	Manufactures of metal, n.e.s.	159,362	166,332	193,842	436,064	487,915	(*i*)641,940
71	Machinery, other than electric	39,037	40,656	98,371	504,033	558,380	747,473
72	Electrical machinery and apparatus	156,346	195,490	170,205	889,806	1,216,150	(*j*)1,481,441
73	Transport equipment	20,445	26,993	23,502	128,622	219,431	227,285
74	General industrial machinery and equipment, n.e.s. and machine parts, n.e.s.	126,609	154,425	154,968	784,540	988,012	(*k*)1,212,917
75	Office machines and automatic data processing equipment	46,355	50,705	71,453	499,748	641,016	733,346
76	Telecommunications and sound recording and reproducing apparatus and equipment	27,168	35,735	39,838	416,971	553,123	710,668

For footnotes *see* end of table.

EXPORTS AND IMPORTS: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS—*continued*

($'000)

Division No.	Description	Exports 1979–80	Exports 1980–81	Exports 1981–82	Imports 1979–80	Imports 1980–81	Imports 1981–82
77	Electrical machinery, apparatus and appliances, n.e.s. and electrical parts thereof	84,880	98,948	111,396	708,564	819,447	(*l*)996,035
78	Road vehicles (including air cushion vehicles)	159,841	183,776	196,705	1,409,138	1,703,592	1,969,047
79	Other transport equipment	196,011	290,865	236,190	314,334	334,156	1,277,674
81	Sanitary, plumbing, heating and lighting fixtures and fittings	4,849	5,184	5,249	37,753	37,857	41,938
82	Furniture	7,759	9,632	13,715	78,311	92,991	128,973
83	Travel goods, handbags, etc.	1,090	658	834	50,639	62,727	78,684
84	Clothing and accessories; articles of knitted or crocheted fabric	22,532	17,599	13,355	290,405	306,223	392,354
85	Footwear	3,867	4,544	3,742	106,050	115,362	143,595
87	Professional, scientific and controlling instruments and apparatus, n.e.s.	75,789	84,549	110,310	290,292	374,687	437,855
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks	83,070	95,063	103,527	311,716	347,024	(*m*)391,078
89	Miscellaneous manufactured articles	109,127	125,789	151,273	839,762	926,722	1,066,483
9A	Commodities and transactions not classified according to kind	(*n*)565,034	(*n*)567,835	(*o*)469,296	229,138	259,871	(*q*)297,418
	Total merchandise(s)	*18,605,809*	*18,949,410*	*19,306,326*	*16,044,800*	*18,790,295*	*22,767,477*
9B	Non-merchandise(*t*)	265,108	227,544	279,572	172,727	174,309	235,806
	Total	**18,870,917**	**19,176,955**	**19,585,898**	**16,217,527**	**18,964,604**	**23,003,283**

(*a*) Excludes AECC items 287.31.00, 287.70.01, 287.93.07 and 287. 99.09. (*b*) Included in Division 9A. (*c*) Imports only. (*d*) Excludes AICC items 513.79.13 and 513.90.17. (*e*) Excludes AECC item 522.49.00. (*f*) Excludes AECC item 533.10.00. (*g*) Excludes AICC items 582.70.04 and 582.70.06. (*h*) Excludes AICC item 661.20.01. (*i*) Excludes AICC items 694.01.02 and 695.39.37. (*j*) Excludes AICC item 723.30.01. (*k*) Excludes AICC items 749.10.46 and 749.10.56. (*l*) Excludes AICC item 775.86.01. (*m*) Excludes AICC 881.11.45. (*n*) Includes Division 34 (Exports only). (*o*) Includes AECC items 287.31.00, 287.70.01, 287.93.07 and 287.99.09. (*q*) Includes AICC items 513.79.13, 513.90.17, 582.70.04, 582.70.06, 661.20.01, 694.01.02, 695.39.37, 723.30.01, 749.10.46, 749.10.56, 775.86.01 and 881.11.45. (*s*) The sum of Divisions 00 to 9A. (*t*) A complete description of non-merchandise items is contained in the *Australian Export Commodity Classification* (1203.0) and the *Australian Import Commodity Classification* (1204.0).

EXPORTS OF MAJOR COMMODITIES

Commodity	Unit of quantity	Quantity 1979–80	Quantity 1980–81	Quantity 1981–82	Value ($'000) 1979–80	Value ($'000) 1980–81	Value ($'000) 1981–82
Aluminium and alloys, unworked	tonnes	57,201	41,984	144,351	70,832	55,619	165,911
Aluminium oxide and hydroxide	"	7,235,994	6,371,263	6,130,922	970,865	988,192	1,092,193
Barley	"	2,962,437	1,598,422	1,560,524	353,535	242,716	243,722
Butter	"	23,125	14,988	6,734	38,602	29,961	19,185
Cars, passenger motor, assembled and unassembled		–	–	–	71,273	67,000	69,315
Cheese	tonnes	61,134	54,091	57,505	94,390	103,749	122,866
Coal (anthracite, bituminous and sub-bituminous) (except briquettes)	"	42,479,969	47,248,424	46,121,434	1,672,564	1,967,707	2,289,055
Copper, ore and concentrates	"	157,481	146,149	136,652	88,560	75,930	54,926
Copper, refined, unworked	"	47,953	60,368	38,779	93,821	98,736	55,516
Crustaceans and molluscs (except canned or bottled)		–	–	–	216,319	200,581	269,279
Flour (wheaten) plain white	tonnes	49,827	61,301	54,917	11,613	15,452	13,982
Fruit, fresh and nuts, fresh or dried	"	176,688	169,374	148,796	117,513	135,308	108,116
Fruit, preserved and fruit preparations		–	–	–	70,496	73,685	67,016
Hides, bovine and equine (except calf and kip skins)	tonnes	131,547	113,250	125,267	181,202	89,337	108,913
Iron and steel ingots and other primary forms	"	679,330	554,546	602,059	141,374	120,926	117,748
Iron ore and concentrates (except roasted iron pyrites)	"	78,967,089	74,952,689	74,602,052	1,076,395	1,116,965	1,252,795
Iron, pig and cast	"	618,816	349,542	47,910	76,196	41,905	5,088
Lead and lead alloys (including silver-lead) unworked	"	355,806	287,216	326,871	548,337	321,067	263,570
Meat, fresh, chilled or frozen, beef—boneless	"	555,481	496,619	488,719	1,261,279	1,070,202	944,830
Meat, fresh, chilled or frozen—bovine animals, other	"	24,963	18,065	53,879	55,246	39,091	88,356
Meat, fresh, chilled or frozen—edible offals	"	51,568	51,636	45,506	77,465	64,316	51,419
Meat, fresh, chilled or frozen—sheep, lambs and goats	"	189,986	247,084	146,997	239,430	322,962	207,526
Milk and cream	"	122,386	89,643	100,816	118,008	119,110	143,774
Nickel and nickel alloys, unworked		n.p.	n.p.	n.p.	125,362	115,882	116,938
Nickel matte and speiss		n.p.	n.p.	n.p.	291,666	304,006	258,485
Petroleum products		–	–	–	426,602	516,573	557,387
Rice	tonnes	457,295	281,387	596,515	129,928	99,923	194,465
Skins, sheep and lamb, with wool on	"	77,164	71,371	66,468	149,280	89,909	76,649
Sorghum, unmilled	"	580,411	462,680	1,297,995	59,769	57,485	155,788
Sugar—from cane (except icing sugar)	"	2,201,007	2,557,537	2,497,363	666,786	1,145,878	764,325
Titanium and zirconium ore and concentrates (except beneficiated ilmenite)	"	1,974,551	1,635,712	1,514,020	145,215	125,091	123,637
Wheat (including spelt) and maslin, unmilled	"	14,883,511	10,551,501	10,912,459	2,178,640	1,729,374	1,719,954
Wood chips	"	4,359,624	4,595,223	4,005,711	129,435	181,526	168,670
Wool, carbonised—shorn and skin	"	12,000	13,750	626,386	48,021	64,817	1,840,722
Wool, carded or combed (tops and other)	"	12,495	13,201	13,517	63,935	72,571	78,350
Wool, greasy	"	505,337	531,728	497,815	1,287,789	1,463,416	1,471,034
Wool, washed and scoured—shorn, skin and boiled	"	49,470	55,631	52,268	189,052	240,748	236,778
Zinc, ore and concentrates	"	459,994	458,535	536,513	77,856	81,472	115,284
Zinc and zinc alloys, unworked	"	198,903	195,115	398,389	135,073	132,211	167,400
Total major commodities		–	–	–	*13,749,724*	*13,781,399*	*15,800,967*
Total Exports		–	–	–	**18,870,917**	**19,176,955**	**19,585,898**

ASIC industry of origin

Export and import statistics classified by Subdivisions of the *Australian Standard Industrial Classification* (ASIC) have been introduced from July 1980. These statistics are compiled by allocating statistical items of the AECC and AICC to the ASIC industry of origin with whose main economic activities the commodities are primarily associated. A full description of ASIC Classes is contained in the publication *Australian Standard Industrial Classification, Vol. 1—The Classification* (1201.0). For exports, these statistics replace those for Industrial Groups, published previously in this publication. Exports by Industrial Groups ceased to be compiled from 1 July 1980.

EXPORTS BY AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION

($'000)

ASIC Divisions/Subdivisions	*1979–80*	*1980–81*	*1981–82*
Agriculture, forestry, fishing and hunting—			
Agriculture	4,324,897	3,941,443	4,024,904
Forestry and logging	1,785	2,630	4,240
Fishing and hunting	25,588	21,910	16,908
Total	*4,352,270*	*3,965,982*	*4,046,052*
Mining—			
Metallic	1,863,498	1,915,690	1,940,518
Coal	1,677,775	1,975,199	2,290,998
Oil and gas	(*a*)	(*a*)	316,719
Construction materials	277	225	321
Other non-metallic minerals	99,927	101,681	94,403
Total	*3,641,476*	*3,992,796*	*4,642,960*
Manufacturing—			
Food, beverages and tobacco	3,851,727	4,072,061	3,687,498
Textiles	423,298	526,295	549,887
Clothing and footwear	27,578	21,612	18,217
Wood, wood products and furniture	187,062	227,331	204,735
Paper, paperboard, printing and publishing	83,794	100,615	94,328
Chemical, petroleum and petroleum products	769,770	853,136	910,375
Non-metallic mineral products	39,871	46,486	46,459
Basic metal products	3,253,056	2,862,379	2,886,034
Fabricated metal products	151,419	143,297	174,816
Transport equipment	357,291	473,852	499,035
Other machinery and equipment	677,960	817,390	859,597
Miscellaneous manufacturing	201,211	200,456	215,315
Total	*10,024,035*	*10,344,910*	*10,146,295*
Other industries—			
Wholesale and retail trade, business services	31,508	32,306	25,375
Waste and scrap n.e.s., secondhand goods	(*b*)556,518	(*b*)613,416	445,644
Total	*588,028*	*645,722*	*471,019*
Total merchandise	*18,605,809*	*18,949,410*	*19,306,326*
Non-merchandise	265,108	227,544	279,572
Total	**18,870,917**	**19,176,955**	**19,585,898**

(*a*) Excludes oil and gas. (*b*) Includes oil and gas.

IMPORTS BY AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION

($'000)

ASIC Divisions/Subdivisions	*1979–80*	*1980–81*	*1981–82*
Agriculture, forestry, fishing and hunting—			
Agriculture	330,508	304,267	293,504
Forestry and logging	2,477	1,925	2,358
Fishing and hunting	4,405	4,213	4,812
Total	*337,390*	*310,405*	*300,675*
Mining—			
Metallic	9,020	24,839	24,212
Coal	532	548	240
Oil and gas	1,182,298	1,500,077	1,809,217
Construction materials	5,354	6,764	9,145
Other non-metallic minerals	152,453	204,202	208,955
Total	*1,349,658*	*1,736,428*	*2,051,769*
Manufacturing—			
Confidential items falling within SITC Section 5	5,518	5,771	–
Food, beverages and tobacco	603,121	646,908	773,581
Textiles	927,478	965,173	1,094,151
Clothing and footwear	441,881	470,707	578,703
Wood, wood products and furniture	359,655	378,128	443,781
Paper, paperboard, printing and publishing	788,208	851,910	960,869
Chemical, petroleum and petroleum products	2,335,164	2,638,200	2,820,195
Non-metallic mineral products	283,592	347,057	373,048
Basic metal products	492,937	639,241	766,671
Confidential items falling within ASIC classes 3141 to 3487 incl.	–	–	1,463
Confidential items falling within SITC Sections 6 and 7	6,801	6,419	–
Fabricated metal products	463,529	513,595	685,697
Transport equipment	1,943,579	2,219,981	3,495,193
Other machinery and equipment	4,363,524	5,598,860	6,790,641
Miscellaneous manufacturing	1,013,115	1,094,508	1,264,600
Total	*14,028,100*	*16,376,459*	*20,048,592*
Other industries—			
Wholesale and retail trade, business services	111,010	127,869	89,660
Waste and scrap n.e.s., secondhand goods	218,641	239,133	276,780
Total	*329,652*	*367,002*	*366,440*
Total merchandise	*17,044,800*	*18,790,295*	*22,767,477*
Non-merchandise	172,727	174,309	235,806
Total	**16,217,527**	**18,964,604**	**23,003,283**

Exports and imports by broad economic categories, 1980–81 and 1981–82

The following table shows exports and imports of merchandise classified according to the nineteen categories of the United Nations' Classification, Broad Economic Categories (BEC). The BEC attempts to classify external trade statistics for the purposes of general economic analysis according to the main end use of the commodities traded.

	Exports				*Imports*			
	1980–81		*1981–82*		*1980–81*		*1981–82*	
Broad Economic Category	*$million*	*Proportion to total*	*$million*	*Proportion to total*	*$million*	*Proportion to total*	*$million*	*Proportion to total*
FOOD AND BEVERAGES	6,108.7	31.9	5,610.8	28.6	779.4	4.1	850.4	3.7
Primary	2,637.3	13.8	2,675.5	13.7	274.0	1.4	244.9	1.1
Mainly for industry	2,262.3	11.8	2,253.6	11.5	151.5	0.8	113.0	0.5
Mainly for household consumption	375.0	2.0	421.9	2.2	122.5	0.6	131.9	0.6
Processed	3,471.4	18.1	2,935.2	15.0	505.4	2.7	605.5	2.6
Mainly for industry	1,306.5	6.8	949.1	4.8	80.7	0.4	97.6	0.4
Mainly for household consumption	2,164.9	11.3	1,986.2	10.1	424.7	2.2	507.9	2.2
INDUSTRIAL SUPPLIES n.e.s.	8,148.3	42.5	8,395.8	42.9	5,209.3	27.5	5,966.3	25.9
Primary	4,318.5	22.5	4,482.2	22.9	446.2	2.4	433.5	1.9
Processed	3,829.8	20.0	3,913.6	20.0	4,763.1	25.1	5,532.8	24.1
FUELS AND LUBRICANTS	2,478.0	12.9	3,140.6	16.0	2,682.7	14.1	2,930.2	12.7
Primary	1,971.5	10.3	2,289.6	11.7	1,500.5	7.9	1,808.9	7.9
Processed	506.5	2.6	851.0	4.3	1,182.3	6.2	1,121.3	4.9
Motor spirit	77.3	0.4	108.7	0.6	115.1	0.6	101.1	0.4
Other	429.3	2.2	742.2	3.8	1,067.2	5.6	1,020.2	4.4
CAPITAL GOODS (except transport equipment), and parts and accessories thereof	662.3	3.5	909.3	4.6	4,683.7	24.7	6,012.0	26.1
Capital goods (except transport equipment)	391.4	2.0	621.7	3.2	3,307.7	17.4	4,367.2	19.0
Parts and accessories	270.9	1.4	287.6	1.5	1,376.1	7.3	1,644.8	7.2
TRANSPORT EQUIPMENT and parts and accessories thereof	508.9	2.7	501.5	2.6	2,481.7	13.1	3,530.8	15.3
Passenger motor cars(*a*)	20.0	0.1	13.7	0.1	390.5	2.1	422.3	1.8
Other	241.0	1.3	176.2	0.9	773.3	4.1	1,549.9	6.7
Industrial(*a*)	221.9	1.2	158.7	0.8	600.9	3.2	1,368.0	5.9
Non-industrial	19.1	0.1	17.5	0.1	172.4	0.9	181.9	0.8
Parts and accessories	247.8	1.3	311.6	1.6	1,317.8	6.9	1,558.6	6.8
CONSUMER GOODS n.e.s	344.9	1.8	376.1	1.9	2,717.8	14.3	3,191.8	13.9
Durable	93.1	0.5	108.7	0.6	938.6	4.9	1,083.1	4.7
Semi-durable	72.8	0.4	76.2	0.4	1,067.4	5.6	1,325.6	5.8
Non-durable	179.0	0.9	191.2	1.0	711.8	3.8	783.1	3.4
GOODS n.e.s.(*b*)	698.4	3.6	372.4	1.9	235.2	1.2	286.1	1.2
Total merchandise	*18,949.4*	*98.8*	*19,306.3*	*98.6*	*18,790.3*	*99.1*	*22,767.5*	*99.0*
Non-merchandise	227.5	1.2	279.6	1.4	174.3	0.9	235.8	1.0
Total	**19,177.0**	**100.0**	**19,585.9**	**100.0**	**18,964.6**	**100.0**	**23,003.3**	**100.0**

(*a*) Unassembled road motor vehicles are included with parts and accessories of transport equipment. (*b*) For exports, includes petroleum gases.

Direction of Overseas Trade

Exports and imports, by country of consignment or of origin

The following table shows the value and percentage of Australian exports and imports according to principal country of consignment or origin. The proportions of Australian exports and imports by country of origin or consignment are shown graphically on Plate 47 on page 676.

AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OR COUNTRY GROUP OF CONSIGNMENT OR ORIGIN

($'000)

	Exports			*Imports*		
Country	*1979–80*	*1980–81*	*1981–82*	*1979–80*	*1980–81*	*1981–82*
Argentina	91,399	55,342	70,513	6,853	6,145	11,988
Association of South-East Asian Nations—						
Indonesia	293,810	358,575	416,986	241,779	416,947	515,885
Malaysia	427,716	442,190	438,234	185,848	168,725	187,718
Philippines	160,979	169,999	163,184	82,565	91,827	88,092
Singapore, Republic of	393,845	513,024	515,394	442,631	507,209	652,293
Thailand	141,221	128,944	134,124	53,453	64,852	72,242
Total ASEAN	*1,417,571*	*1,612,734*	*1,667,922*	*1,006,276*	*1,249,559*	*1,516,229*
Austria	3,996	2,032	2,046	43,694	42,579	52,071
Bahrain	58,730	56,176	68,062	135,481	109,848	76,774
Bangladesh	109,421	61,582	41,794	25,102	19,126	17,060
Brazil	24,963	39,240	20,126	82,175	107,241	136,298
Canada	338,673	434,120	366,621	446,079	500,192	584,925
China—excl. Taiwan Province	845,709	671,201	606,205	199,653	269,789	284,767
—Taiwan Province only	320,045	395,138	442,691	440,559	508,607	631,927
Egypt, Arab Republic of	326,913	409,942	294,794	79	172	152,519
European Economic Community—						
Belgium-Luxembourg	201,708	171,516	128,968	120,975	119,300	135,247
Denmark	19,779	16,270	14,131	58,944	61,356	82,781
France	349,915	366,305	400,033	306,332	305,229	628,031
Germany, Federal Republic of	495,327	473,718	465,319	1,021,207	1,079,379	1,355,778
Greece	18,923	21,789	15,549	14,696	17,410	18,264
Ireland	6,237	9,604	1,987	44,101	49,833	71,894
Italy	427,008	393,976	391,877	420,498	427,656	506,879
Netherlands	236,989	208,044	210,646	190,449	198,988	357,799
United Kingdom	949,425	715,308	725,811	1,647,850	1,584,479	1,649,183
Total EEC	*2,705,313*	*2,376,530*	*2,354,321*	*3,825,053*	*3,843,629*	4,805,811
Fiji	147,835	169,566	159,840	18,433	16,240	20,494
Finland	6,900	6,497	10,654	109,191	113,286	135,689
Hong Kong	281,069	309,330	431,526	380,386	394,754	500,422
India	174,574	176,859	311,822	119,226	108,682	123,559
Iran	247,179	196,471	145,078	83,688	33,418	58,738
Iraq	226,042	59,265	179,592	150,612	95,738	3,026
Japan	5,083,382	5,227,622	5,385,802	2,526,973	3,629,296	4,527,083
Korea, Republic of	398,985	537,849	684,929	138,484	203,640	300,629
Kuwait	95,415	182,529	117,028	311,065	350,768	263,062
New Zealand	863,609	915,534	1,039,517	546,580	636,237	726,204
Norway	51,341	61,168	11,428	41,153	36,415	57,873
Pakistan, Islamic Republic of	71,547	36,558	58,000	17,019	14,334	40,788
Papua New Guinea	369,034	433,217	420,557	86,412	73,339	70,538
Poland	108,637	82,454	71,744	16,239	14,404	15,229
Romania	29,600	39,396	26,617	6,559	28,339	17,588
Saudi Arabia	219,042	276,471	362,868	625,607	1,032,219	1,193,137
South Africa, Republic of	93,395	132,611	145,580	105,835	110,643	90,701
Spain	56,717	66,379	82,569	54,034	63,666	71,596
Sri Lanka	34,889	53,061	34,426	15,930	11,153	12,217
Sweden	71,994	56,775	57,408	307,895	294,776	213,441
Switzerland	14,035	17,147	20,887	160,648	177,538	231,441
United Arab Emirates	85,148	103,405	137,955	117,212	195,245	263,609
United States of America	2,044,105	2,147,045	2,154,507	3,577,306	4,169,025	5,249,356
U.S.S.R.	978,283	831,758	669,159	66,406	8,974	8,637
Yugoslavia	63,620	57,137	51,209	10,952	10,571	16,447
Other countries	735,241	807,572	787,209	407,886	476,882	426,920
'For Orders' and Country of origin or destination unknown	76,566	79,242	92,894	4,792	8,135	4,724
Total	**18,870,917**	**19,176,955**	**19,585,898**	**16,217,527**	**18,964,604**	**23,003,283**

Exports and Imports, by country of consignment and origin, and by description

The following table shows details of exports to and imports from principal countries, classified according to divisions of the Australian Export and Import Commodity Classifications.

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1981–82

($'000)

Division No.	Description	ASEAN Exports	ASEAN Imports	Belgium-Luxembourg Exports	Belgium-Luxembourg Imports	Canada Exports	Canada Imports
00	Live animals chiefly for food	32,708	–	–	–	20	2,795
01	Meat and meat preparations	52,534	42	2,455	4	45,745	394
02	Dairy products and birds' eggs	70,245	–	–	96	205	–
03	Fish and fish preparations	4,217	32,588	761	9	188	24,103
04	Cereal grains and cereal preparations	224,123	1,351	3,590	116	156	503
05	Fruit and vegetables	35,207	10,595	1,642	390	21,605	9,461
06	Sugar and sugar preparations and honey	133,027	187	84	34	104,069	198
07	Coffee, tea, cocoa, spices and manufactures thereof	13,164	18,310	–	201	27	13
08	Feeding-stuff for animals (except unmilled cereals)	9,203	13,090	408	242	–	1
09	Miscellaneous preparations chiefly for food	4,003	2,864	–	103	11	733
11	Beverages	3,444	94	28	32	1,834	242
12	Tobacco and tobacco manufactures	210	1,548	–	3	–	652
21	Hides, skins and furskins, raw	4,126	–	878	–	40	67
22	Oil-seeds, oil nuts and oil kernels	282	529	75	–	23	1,048
23	Crude rubber (including synthetic and reclaimed)	210	32,444	–	2,289	–	354
24	Wood, timber and cork	148	55,026	3,078	15	14	58,853
25	Pulp and waste paper	38	12	–	–	–	23,782
26	Textile fibres and their waste	24,367	982	26,920	152	1,664	6,846
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones)	17,063	618	953	380	324	49,812
28	Metalliferous ores and metal scrap	89,800	1,457	34,853	21	61,622	3,894
29	Crude animal and vegetable materials, n.e.s.	3,182	3,923	566	23	2,063	649
32	Coal, coke and briquettes	1,054	–	14,044	–	–	94
33	Petroleum and petroleum products	174,475	874,036	–	1,099	7,279	4,077
34	Petroleum gases and other gaseous hydrocarbons	–	47	–	–	–	–
41	Animal oils and fats	3,957	–	140	3	28	–
42	Fixed vegetable oils and fats	37	13,942	–	–	–	7,385
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin	2,097	17,203	28	23	41	–
51	Chemical elements and compounds	5,430	3,397	94	6,696	–	5,527
52	Mineral tar and crude chemicals from coal, petroleum and natural gas	15,838	2,562	–	1,677	76	4,600
53	Dyeing, tanning and colouring materials	8,087	61	–	1,591	96	1,555
54	Medicinal and pharmaceutical products	13,080	1,457	36	2,240	1,352	1,126
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations	8,562	770	1	771	35	739
56	Fertilisers, manufactured	83	27	–	667	–	21,784
57	Explosives and pyrotechnic products	–	12	–	–	–	266
58	Plastic materials, regenerated cellulose and artificial resins	8,043	7,485	74	6,010	120	19,818
59	Chemical materials and products, n.e.s.	9,006	1,257	5	2,642	–	1,943
61	Leather, leather manufactures, n.e.s., and dressed furskins	1,771	696	51	244	519	325
62	Rubber manufactures, n.e.s.	1,503	7,340	47	2,463	61	2,938
63	Wood and cork manufactures (except furniture)	571	20,753	–	168	16	2,333
64	Paper, paperboard and manufactures thereof	11,831	2,576	–	3,565	59	54,652
65	Textile yarn, fabrics, made-up articles and related products	5,106	42,231	37	8,042	854	23,204
66	Non-metallic mineral manufactures, n.e.s.	28,587	12,182	841	11,412	2,132	4,320
67	Iron and steel	92,226	11,875	6,747	3,346	15,255	4,499
68	Non-ferrous metals	125,653	2,430	16,231	701	202	20,331
69	Manufactures of metals, n.e.s.	44,190	13,065	2,725	3,096	3,760	16,562
71	Machinery (except electric)	2,611	1,768	3,951	2,070	3,133	9,845
72	Electric machinery, apparatus and appliances	32,496	5,436	686	17,132	4,644	73,886
73	Transport equipment	8,617	1,440	20	598	83	1,513
74	General industrial machinery and equipment, n.e.s. and machine parts, n.e.s.	35,081	25,904	442	14,610	1,979	18,266
75	Office machines and automatic data processing equipment	6,283	2,027	295	1,821	470	17,531
76	Telecommunications and sound recording and reproducing apparatus and equipment	8,188	23,088	32	5,522	222	3,067
77	Electrical machinery, apparatus and appliances, n.e.s. and electrical parts thereof	14,767	24,360	269	9,845	367	11,412
78	Road vehicles (including air cushion vehicles)	14,274	3,490	195	2,952	1,664	13,440
79	Other transport equipment	64,410	70,347	–	2,237	635	4,019
81	Sanitary, plumbing, heating and lighting fixtures and fittings	784	1,548	–	136	–	1,336
82	Furniture	1,932	17,380	34	114	358	2,913
83	Travel goods, handbags and similar articles	53	5,865	–	6	19	231
84	Clothing and clothing accessories; articles of knitted or crocheted fabric	1,506	29,852	–	246	43	1,064

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1981-82—*continued*

($'000)

Division No.	Description	ASEAN		Belgium-Luxembourg		Canada	
		Exports	Imports	Exports	Imports	Exports	Imports
85	Footwear	186	10,180	-	-	3	366
87	Professional, scientific and controlling instruments and apparatus, n.e.s.	10,676	4,889	513	754	1,560	6,179
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks	30,340	5,068	185	11,489	531	3,315
89	Miscellaneous manufactured articles	18,354	41,399	782	3,241	1,776	16,314
9A	Commodities and transactions of merchandise trade, not elsewhere classified	118,809	28,531	4,039	1,278	75,773	13,487
	Total merchandise	*1,651,857*	*1,513,635*	*128,832*	*134,615*	*364,757*	*580,660*
9B	Commodities and transactions not included in merchandise trade	16,065	2,594	136	631	1,864	4,265
	Grand total	**1,667,922**	**1,516,229**	**128,968**	**135,246**	**366,621**	**584,925**

Div. No.	China-excl. Taiwan Province		China-Taiwan Province only		EEC		France		Germany, Federal Republic of	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	-	-	417	-	312	9,263	-	-	-	-
01	79	38	39,014	4	68,038	1,060	6,761	105	7,967	57
02	17	-	34,938	25	6,527	22,470	-	1,930	586	4,188
03	-	10,954	951	2,458	17,984	12,468	7,214	203	491	1,732
04	230,838	969	65,244	262	35,451	14,889	1,169	1,004	4,165	1,443
05	2	8,246	2,372	12,463	52,994	15,579	3,022	609	18,017	1,353
06	97,410	132	-	365	10,245	5,814	-	164	1,421	834
07	-	134	49	21	238	16,084	-	567	1	3,139
08	5	12	4,357	231	1,725	3,231	-	82	612	956
09	90	665	66	1,070	246	5,770	-	631	166	828
11	19	150	37	16	2,591	76,250	19	18,182	721	5,642
12	-	-	-	-	665	17,213	-	172	-	117
21	2,245	376	5,624	1	111,542	690	50,146	187	14,481	3
22	49	1,628	1,151	15	9,002	83	4,984	-	166	2
23	-	21	42	40	2	6,553	-	1,542	-	561
24	-	32	79	112	9,927	1,004	1,255	65	290	77
25	-	-	-	-	-	2	-	-	-	2
26	115,611	276	71,324	2,912	492,744	9,827	128,575	248	94,548	1,591
27	127	1,815	6,420	26	3,319	7,140	1	105	112	789
28	33,379	157	36,640	-	374,022	893	70689	93	99,739	233
29	1,125	2,701	1,288	1,179	21,777	8,409	562	1,591	4,259	1,048
32	-	-	72,778	-	315,434	879	64,007	-	21,766	828
33	-	28,029	52	6	11,345	38,909	11,327	579	6	2,960
34	-	-	-	-	-	252	-	53	-	-
41	11,311	-	2,744	-	4,353	49	626	6	357	8
42	200	535	9	175	1,215	5,304	-	96	-	2,294
43	-	-	360	-	1,128	6,296	150	5	136	1,613
51	-	5,184	2,959	2,512	1,491	172,060	174	14,213	6	50,653
52	176	5,181	3,283	3,382	397	40,289	-	2,841	275	16,028
53	58	310	133	179	1,441	41,346	4	2,504	880	17,446
54	108	2,107	931	506	13,180	79,798	137	3,897	1,534	22,248
55	18	685	149	929	396	38,967	41	17,318	96	7,631
56	-	26	-	-	-	3,110	-	52	-	1,065
57	-	1,646	-	140	18	6,171	-	453	-	218
58	10	893	330	15,393	575	151,727	21	8,599	143	41,424
59	3	5,471	661	331	233	87,983	22	3,910	39	13,612
61	3,988	250	489	2,361	8,315	12,888	53	949	183	2,941
62	13	128	97	8,278	1,408	71,402	54	15,195	227	16,215
63	-	1,043	-	28,960	62	5,938	4	1,041	5	1,508
64	5,588	1,422	168	1,699	310	82,129	19	5,269	31	19,293
65	46	88,403	1,121	67,187	5,743	148,376	2,071	13,907	847	30,863
66	52	4,699	409	13,346	7,305	163,674	470	17,521	2,601	24,909
67	15,451	736	16,331	4,368	8,941	64,839	13	11,580	82	19,379
68	14,904	3,300	23,515	563	246,456	30,578	14,000	1,523	13,781	10,904
69	295	6,312	671	47,671	11,766	134,799	748	8,589	1,593	43,580
71	-	1,027	43	17,574	55,120	229,439	562	30,784	20,816	79,475
72	548	78	1,305	6,637	13,169	398,996	350	33,188	1,688	179,292
73	8	1,835	276	18,443	998	61,312	24	3,855	260	30,552
74	1,809	800	691	14,476	9,470	352,355	681	21,821	2,499	125,730
75	141	48	48	1,363	6,002	128,118	222	3,238	907	21,338
76	8	694	5	37,823	5,171	80,371	348	11,817	375	35,311
77	19	2,049	508	19,373	8,742	262,701	707	21,655	1,233	97,489
78	370	46	151	27,537	5,445	301,820	206	19,462	1,295	159,814

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1981–82—*continued*

($'000)

Div. No.	China-excl. Taiwan Province		China-Taiwan Province only		EEC		France		Germany, Federal Republic of	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
79	3,594	16	2,622	6,775	11,235	506,367	721	255,954	158	58,767
81	–	227	4	4,522	206	13,834	2	751	50	3,476
82	45	4,244	3	18,950	630	36,795	38	387	44	4,979
83	–	1,631	2	24,517	130	7,128	6	330	17	397
84	4	51,667	52	82,630	741	29,956	188	4,511	140	3,295
85	–	14,299	31	47,695	349	22,291	3	3,115	3	1,167
87	275	206	579	3,107	33,330	118,403	7,297	12,662	2,071	42,981
88	63	821	5,625	6,326	3,871	95,184	390	10,592	973	33,942
89	401	12,889	216	67,809	16,296	295,282	1,129	14,191	2,759	39,409
9A	12,708	6,856	33,293	7,076	305,863	174,026	18,169	20,523	135,931	54,169
Total	*553,212*	*284,101*	*442,657*	*631,819*	*2,337,628*	*4,736,836*	*399,382*	*626,418*	*463,550*	*1,343,800*
9B	52,994	666	34	109	16,693	68,975	651	1,612	1,769	11,978
Total	**606,205**	**284,767**	**442,691**	**631,927**	**2,354,321**	**4,805,811**	**400,033**	**628,031**	**465,319**	**1,355,778**

Division No.	Description	Hong Kong		Indonesia		Iran	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals chiefly for food	1,455	–	19,517	–	6,613	–
01	Meat and meat preparations	16,372	11	2,174	–	30,204	–
02	Dairy products and birds' eggs	18,472	–	11,414	–	–	–
03	Fish and fish preparations	15,164	3,917	187	186	–	–
04	Cereal grains and cereal preparations	32,485	828	80,974	71	83,832	–
05	Fruit and vegetables	7,169	1,402	2,912	197	–	118
06	Sugar and sugar preparations and honey	520	220	711	–	–	–
07	Coffee, tea, cocoa, spices and manufactures thereof	2,241	46	293	14,003	–	–
08	Feeding-stuff for animals (except unmilled cereals)	652	1	1,610	–	–	–
09	Miscellaneous preparations chiefly for food	2,068	2,583	1,624	48	–	–
11	Beverages	2,957	97	835	–	–	–
12	Tobacco and tobacco manufactures	118	–	161	84	–	–
21	Hides, skins and furskins, raw	4,222	2	71	–	–	–
22	Oil-seeds, oil nuts and oil kernels	1	155	251	22	–	–
23	Crude rubber (including synthetic and reclaimed)	11	–	16	11,573	–	–
24	Wood, timber and cork	–	666	70	3,234	–	–
25	Pulp and waste paper	–	–	–	–	–	–
26	Textile fibres and their waste	7,909	135	3,969	–	3,271	–
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones)	236	1	3,335	146	–	–
28	Metalliferous ores and metal scrap	3,961	427	2,695	3	11	–
29	Crude animal and vegetable materials, n.e.s.	1,108	442	102	182	52	77
32	Coal, coke and briquettes	8,998	–	4	–	–	–
33	Petroleum and petroleum products	14,120	408	82,560	458,851	–	51,967
34	Petroleum gases and other gaseous hydrocarbons	–	–	–	–	–	–
41	Animal oils and fats	758	–	191	–	1,973	–
42	Fixed vegetable oils and fats	2	311	14	–	–	–
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin	319	2	597	–	–	–
51	Chemical elements and compounds	375	467	989	1,025	–	–
52	Mineral tar and crude chemicals from coal, petroleum and natural gas	229	62	10,720	18	–	–
53	Dyeing, tanning and colouring materials	776	128	1,503	2	–	6
54	Medicinal and pharmaceutical products	8,128	90	1,414	374	310	–
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations	4,198	1,754	919	311	–	3
56	Fertilisers, manufactured	19	–	18	–	–	–
57	Explosives and pyrotechnic products	27	21	–	–	–	–
58	Plastic materials, regenerated cellulose and artificial resins	2,238	546	2,396	–	–	–
59	Chemical materials and products, n.e.s.	870	536	2,974	26	–	–
61	Leather, leather manufactures, n.e.s., and dressed furskins	1,971	715	60	1	–	–
62	Rubber manufactures, n.e.s.	274	456	590	32	–	–
63	Wood and cork manufactures (except furniture)	104	527	28	440	–	–
64	Paper, paperboard and manufactures thereof	3,157	1,969	1,369	–	–	–
65	Textile yarn, fabrics, made-up articles and related products	1,951	100,699	1,008	1,588	5	6,007
66	Non-metallic mineral manufactures, n.e.s.	14,017	3,724	2,157	239	13	–
67	Iron and steel	28,608	109	20,307	–	11	–

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1981-82—*continued*

($'000)

Division No.	Description	Hong Kong Exports	Hong Kong Imports	Indonesia Exports	Indonesia Imports	Iran Exports	Iran Imports
68	Non-ferrous metals	19,127	1,228	57,507	-	7,460	-
69	Manufactures of metal, n.e.s.	10,243	25,696	13,117	39	238	13
71	Machinery (except electric)	338	904	293	2	-	-
72	Electric machinery, apparatus and appliances	2,775	835	8,379	-	2,748	-
73	Transport equipment	653	180	1,694	-	-	-
74	General industrial machinery and equipment, n.e.s. and machine parts, n.e.s.	3,468	7,923	7,445	1	5	-
75	Office machines and automatic data processing equipment	2,023	3,688	166	-	-	-
76	Telecommunications and sound recording and reproducing apparatus and equipment	2,443	30,616	304	6	-	-
77	Electrical machinery, apparatus and appliances, n.e.s. and electrical parts thereof	4,236	43,153	1,640	122	21	-
78	Road vehicles (including air cushion vehicles)	617	1,116	4,359	-	-	-
79	Other transport equipment	342	2,245	13,141	4	-	-
81	Sanitary, plumbing, heating and lighting fixtures and fittings	172	4,996	30	9	-	-
82	Furniture	1,228	5,183	56	380	-	-
83	Travel goods, handbags and similar articles	294	22,601	8	96	-	-
84	Clothing and clothing accessories; articles of knitted or crocheted fabric	770	93,415	171	7,449	-	-
85	Footwear, gaiters, and similar articles and parts therefor	29	4,586	27	2,372	-	-
87	Professional, scientific and controlling instruments and apparatus, n.e.s.	1,701	1,400	1,569	-	113	-
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s. watches and clocks	23,455	28,256	218	21	79	1
89	Miscellaneous manufactured articles, n.e.s.	20,705	96,862	464	1,166	-	14
9A	Commodities and transactions of merchandise trade, not elsewhere classified	114,501	1,198	41,070	11,420	8,099	-
	Total merchandise	*417,381*	*499,538*	*414,395*	*515,745*	*145,057*	*58,206*
9B	Commodities and transactions not included in merchandise trade	14,145	884	2,590	140	21	532
	Grand total	**431,526**	**500,422**	**416,986**	**515,885**	**145,078**	**58,738**

Division No.	Italy Exports	Italy Imports	Japan Exports	Japan Imports	Korea, Republic of Exports	Korea, Republic of Imports	Kuwait Exports	Kuwait Imports	Malaysia Exports	Malaysia Imports
00	-	-	3,485	-	5,158	-	44,675	-	8,602	-
01	1,535	163	323,359	42	69,830	-	6,438	-	14,096	-
02	-	3,096	53,519	-	2,208	-	4,255	-	21,649	-
03	8,242	812	158,077	26,561	124	5,589	76	-	420	16,867
04	23,046	3,224	342,767	1,043	41,132	53	48,185	-	51,368	59
05	242	5,249	13,123	1,160	3	576	2,124	-	9,205	435
06	111	395	141,101	169	65,545	117	329	-	94,840	25
07	-	1,012	9,475	918	154	2	130	-	9,775	1,265
08	-	107	15,013	226	-	4	2,509	-	1,147	347
09	15	505	172	2,218	15	171	87	-	863	346
11	5	5,870	621	518	26	3	26	-	963	25
12	-	11	-	8	-	2,644	-	-	49	-
21	32,492	11	31,885	7	7,042	-	-	-	411	-
22	23	2	1,569	16	-	1	-	-	-	33
23	-	10	279	2,515	2	-	-	-	125	16,885
24	-	3	41	65	-	-	34	-	3	36,350
25	-	-	1	1,515	-	-	-	-	-	-
26	167,300	249	506,461	14,008	106,394	141	-	-	20,142	386
27	47	1,668	42,298	10,272	6,881	63	5	-	2,726	-
28	31,586	-	1,113,519	1,605	106,894	-	486	-	81,830	77
29	1,472	829	6,716	1,375	617	220	104	-	1,314	469
32	65,888	-	1,563,529	494	183,312	-	-	-	27	-
33	-	9,260	19,491	3,062	-	11,534	-	255,291	3,740	8,667
34	-	22	-	13	-	-	-	-	-	-
41	115	-	1,174	3	5,846	-	6	-	182	-
42	-	1,274	1,596	130	-	10	8	-	5	9,896
43	21	-	103	159	-	175	66	-	196	17,088
51	6	9,310	19,766	77,478	818	3,727	-	109	371	831
52	2	1,408	3,412	26,784	244	551	1	-	837	8
53	18	1,006	305	5,214	5	889	9	-	459	5
54	75	6,176	5,149	5,711	229	829	40	-	3,362	596
55	42	1,562	1,912	2,354	74	801	51	1	1,580	40
56	-	-	-	637	-	-	-	-	5	-

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1981-82—*continued*

($'000)

Division No.	Italy		Japan		Korea, Republic of		Kuwait		Malaysia	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
57	-	16	-	102	-	-	-	-	-	12
58	30	7,969	406	65,194	366	2,266	943	-	625	1,152
59	-	1,119	8,759	10,938	486	41	19	1	1,620	199
61	6,519	2,231	648	1,687	920	385	7	-	194	10
62	154	10,288	41	99,627	-	22,715	2	-	180	4,429
63	11	977	27	956	14	670	9	-	189	9,370
64	10	21,631	1,802	59,565	1	2,573	16	-	5,759	29
65	1,430	32,830	2,110	197,960	1,437	56,414	12	2	1,444	17,465
66	199	55,289	8,956	72,891	67	6,665	10	1	1,771	959
67	-	5,232	3,461	339,041	23,321	49,357	2,147	-	15,552	257
68	12,590	685	57,234	25,101	3,686	524	228	-	23,472	964
69	633	14,576	5,903	155,917	792	18,161	692	4	7,155	3,143
71	79	10,430	405	172,116	36	509	31	-	931	31
72	2,295	55,858	2,793	210,929	402	193	331	-	5,904	583
73	5	9,231	88	72,788	16	1,019	566	-	1,463	7
74	674	38,909	1,929	240,258	439	4,776	842	1	4,955	14,760
75	211	15,338	1,789	167,629	21	198	6	-	1,316	2
76	187	3,885	535	410,086	1	12,985	33	-	3,198	2,095
77	177	19,502	1,139	268,700	18	3,737	199	8	3,715	2,356
78	40	30,044	2,900	1,258,852	3,415	1,543	671	-	4,555	565
79	53	3,142	32,594	136,702	1	869	11	7,637	1,468	42
81	11	4,843	1	3,768	-	227	9	-	120	120
82	2	23,113	128	4,987	3	954	191	-	257	1,549
83	2	5,070	9	2,276	7	6,556	-	-	1	64
84	75	13,345	1,291	6,825	12	32,667	54	5	221	4,195
85	24	16,037	29	643	16	13,760	-	-	11	2,977
87	1,406	4,715	3,059	46,614	604	1,109	22	-	1,424	594
88	166	5,957	1,831	113,162	84	1,937	7	-	377	129
89	394	33,421	2,345	137,357	574	26,938	135	1	3,515	1,974
9A	31,488	4,649	858,196	41,054	45,342	2,755	156	-	14,624	6,528
Total	*391,148*	*503,567*	*5,380,329*	*4,510,001*	*684,634*	*300,605*	*116,990*	*263,062*	*436,309*	*187,262*
9B	729	3,312	5,473	17,082	295	24	38	-	1,925	456
Total	**391,877**	**506,879**	**5,385,802**	**4,527,083**	**684,929**	**300,629**	**117,028**	**263,062**	**438,234**	**187,718**

Division No.	Description	Netherlands		New Zealand		Papua New Guinea	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals chiefly for food	-	-	6,727	20,287	563	-
01	Meat and meat preparations	7,236	3	874	4,529	30,814	-
02	Dairy products and birds' eggs	325	4,214	434	13,640	5,925	-
03	Fish and fish preparations	480	1,258	3,324	35,736	357	918
04	Cereal grains and cereal preparations	448	1,333	12,567	4,267	49,130	-
05	Fruit and vegetables	3,224	1,418	16,772	19,147	3,641	15
06	Sugar and sugar preparations and honey	4,376	821	22,802	3,971	10,066	-
07	Coffee, tea, cocoa, spices and manufactures thereof	23	9,428	599	777	1,431	33,278
08	Feeding-stuff for animals (except unmilled cereals)	76	3	673	617	1,633	-
09	Miscellaneous preparations chiefly for food	33	960	922	2,577	2,831	-
11	Beverages	814	559	3,127	4,302	2,788	-
12	Tobacco and tobacco manufactures	577	10,932	247	90	5,701	1,409
21	Hides, skins and furskins, raw	3,264	2	2,271	18	1	-
22	Oil-seeds, oil nuts and oil kernels	126	2	1,173	138	133	-
23	Crude rubber (including synthetic and reclaimed)	-	732	1,503	27	13	2,569
24	Wood, timber and cork	979	27	3,877	35,089	65	3,105
25	Pulp and waste paper	-	-	274	48,111	27	-
26	Textile fibres and their waste	34,442	1,514	1,618	28,852	2,721	-
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones)	559	148	2,995	577	759	-
28	Metalliferous ores and metal scrap	24,942	13	1,621	4,168	6	6,747
29	Crude animal and vegetable materials, n.e.s.	5,387	867	2,960	6,270	309	13
32	Coal, coke and briquettes	47,114	21	228	168	5	-
33	Petroleum and petroleum products	-	18,819	170,739	128	42,361	629
34	Petroleum gases and other gaseous hydrocarbons	-	176	-	-	-	-
41	Animal oils and fats	2,608	8	316	72	2,556	-
42	Fixed vegetable oils and fats	1,201	482	316	26	670	8
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin	213	3,615	526	46	829	-
51	Chemical elements and compounds	624	11,834	9,614	716	1,206	-

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1981-82—*continued*

($'000)

Division No.	Description	*Netherlands* Exports	*Netherlands* Imports	*New Zealand* Exports	*New Zealand* Imports	*Papua New Guinea* Exports	*Papua New Guinea* Imports
52	Mineral tar and crude chemicals from coal, petroleum and natural gas	3	1,151	11,869	573	907	4
53	Dyeing, tanning and colouring materials	53	1,884	3,859	2,503	1,644	3
54	Medicinal and pharmaceutical products	1,205	2,065	31,474	5,657	2,320	-
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations	12	935	5,107	9,819	5,759	-
56	Fertilisers, manufactured	-	832	3,402	1	310	-
57	Explosives and pyrotechnic products	18	-	29	4	7	-
58	Plastic materials, regenerated cellulose and artificial resins	88	14,237	18,060	10,899	3,284	1
59	Chemical materials and products, n.e.s.	-	12,808	7,667	2,027	2,685	-
61	Leather, leather manufactures, n.e.s., and dressed furskins	146	775	2,352	8,479	82	-
62	Rubber manufactures, n.e.s.	-	1,832	2,284	8,278	1,482	11
63	Wood and cork manufactures (except furniture)	1	194	2,397	22,398	334	3,775
64	Paper, paperboard and manufactures thereof	3	4,956	14,453	82,282	8,644	-
65	Textile yarn, fabrics, made-up articles and related products	51	7,009	29,511	66,421	2,269	-
66	Non-metallic mineral manufactures, n.e.s.	388	3,150	12,409	10,938	6,590	11
67	Iron and steel	39	1,552	66,724	11,417	14,729	5
68	Non-ferrous metals	4,013	509	53,006	6,631	1,870	-
69	Manufactures of metal, n.e.s.	1,007	3,659	35,972	38,187	24,495	13
71	Machinery (except electric)	296	2,626	9,948	1,250	6,321	2
72	Electric machinery, apparatus and appliances	867	10,456	25,120	17,728	16,108	15
73	Transport equipment	17	422	3,965	1,177	2,088	-
74	General industrial machinery and equipment, n.e.s. and machine parts, n.e.s.	120	7,914	35,581	25,004	17,524	6
75	Office machines and automatic data processing equipment	407	12,802	18,130	579	9,887	39
76	Telecommunications and sound recording and reproducing apparatus and equipment	914	1,790	3,315	4,307	6,289	23
77	Electrical machinery, apparatus and appliances, n.e.s. and electrical parts thereof	913	17,275	33,410	33,937	13,370	2
78	Road vehicles (including air cushion vehicles)	61	721	102,170	12,606	10,740	2
79	Other transport equipment	7,542	142,846	10,781	6,807	9,718	96
81	Sanitary, plumbing, heating and lighting fixtures and fittings	5	369	753	1,291	2,346	-
82	Furniture	27	541	3,270	15,759	1,811	10
83	Travel goods, handbags and similar articles	1	27	51	1,780	79	-
84	Clothing and clothing accessories; articles of knitted or crocheted fabric	29	58	1,519	20,683	2,316	15
85	Footwear, gaiters, and similar articles and parts therefor	-	10	1,272	3,863	1,381	-
87	Professional, scientific and controlling instruments and apparatus, n.e.s.	940	3,132	16,297	4,851	5,610	23
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks	29	5,068	17,998	1,254	2,638	6
89	Miscellaneous manufactured articles, n.e.s.	330	8,277	41,604	37,121	7,976	98
9A	Commodities and transactions of merchandise trade, not elsewhere classified	51,226	13,694	123,031	11,672	54,011	17,405
	Total merchandise	*209,822*	*354,763*	*1,017,888*	*722,534*	*414,163*	*70,259*
9B	Commodities and transactions not included in merchandise trade	824	3,037	21,629	3,670	6,394	279
	Grand total	**210,646**	**357,799**	**1,039,517**	**726,204**	**420,557**	**70,538**

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1981-82—*continued*

($'000)

Div. No.	Saudi Arabia		Singapore Republic of		United Kingdom		United States of America		U.S.S.R.	
	Exports	Imports	Exports	Imports	Export	Imports	Exports	Imports	Exports	Imports
00	73,244	-	2,735	-	302	9,113	660	963	-	-
01	57,582	-	26,760	14	37,687	733	503,659	21	11,900	-
02	36,318	-	12,475	-	5,496	792	9,237	1,530	-	-
03	576	-	3,013	4,304	484	6,357	96,117	22,939	-	816
04	148,563	-	61,542	568	2,665	6,475	121	4,766	404,280	-
05	3,854	-	22,271	338	25,013	3,108	6,696	28,928	-	11
06	163	-	37,073	50	4,199	2,099	189,434	1,563	4,500	-
07	361	-	3,062	1,837	187	1,601	1,194	847	-	-
08	1,105	32	2,301	49	629	150	558	2,463	-	-
09	334	-	1,150	1,452	26	1,845	91	6,569	-	-
11	8	-	1,357	24	936	38,632	2,821	8,235	13	48
12	1	-	-	1	88	3,708	5	31,871	-	-
21	15	-	15	-	5,501	373	899	1,227	-	58
22	-	-	5	304	3,625	24	605	7,294	-	-
23	-	-	3	3,779	2	1,418	36	11,864	-	-
24	-	-	72	6,180	4,266	367	524	49,284	-	345
25	-	-	38	-	-	-	-	12,348	-	-
26	14	-	24	7	39,546	6,072	62,022	17,861	228,272	-
27	83	-	3,935	34	1,102	1,885	1,111	18,277	-	-
28	-	-	3,825	712	111,939	534	110,847	1,442	6,472	25
29	288	-	574	1,977	7,665	2,555	2,999	12,242	-	16
32	1	-	4	-	95,781	17	876	292	-	-
33	29	1,186,577	75,725	406,518	12	6,188	29,808	90,319	-	-
34	-	185	-	-	-	1	-	134	-	-
41	2	-	1,879	-	503	23	351	34	3,830	-
42	60	-	12	334	-	32	-	14,247	-	-
43	12	-	77	114	579	264	16	1,608	-	-
51	-	-	745	395	585	60,324	128	148,530	-	9
52	3	-	3,097	220	116	17,015	1,806	31,364	-	1,045
53	17	-	4,424	53	486	16,581	800	24,412	-	-
54	310	-	2,657	157	9,821	32,517	4,907	35,788	-	19
55	658	-	3,620	305	200	10,405	397	37,489	-	7
56	-	-	9	27	-	494	-	28,432	-	732
57	-	-	-	-	-	5,484	80	4,174	-	-
58	4	-	4,404	5,073	207	71,533	277	141,595	-	-
59	80	-	2,672	500	134	53,076	17,208	102,238	-	-
61	1	-	819	26	1,271	5,495	2,573	2,763	-	-
62	-	-	573	1,546	927	24,014	1,122	52,244	-	44
63	182	-	306	4,790	42	1,583	371	3,729	-	48
64	8	-	2,788	2,371	239	27,148	615	116,311	-	-
65	16	25	1,479	9,249	974	51,579	2,626	150,819	-	648
66	532	-	7,667	2,037	2,684	48,949	9,401	50,342	229	4
67	5,936	-	21,601	6,267	137	23,690	46,208	33,796	-	-
68	17,887	-	15,089	1,460	185,025	16,232	40,020	22,277	41	285
69	1,940	-	17,532	4,760	4,796	57,474	18,444	130,719	-	73
71	151	-	892	1,633	29,370	102,496	6,984	271,643	-	125
72	1,154	13	7,658	4,464	6,920	97,636	14,970	665,749	-	1,088
73	913	-	4,025	1,431	611	15,919	923	38,384	20	1,375
74	1,874	7	12,634	10,219	4,420	132,285	14,286	441,004	-	190
75	4	1	4,154	1,973	3,807	55,140	20,076	364,204	-	-
76	368	-	3,394	20,871	3,212	19,968	3,732	83,517	-	12
77	427	-	7,652	16,508	5,237	92,225	7,111	234,912	-	53
78	287	-	3,643	1,344	3,496	88,710	10,541	280,359	1	129
79	249	-	46,743	70,238	2,749	25,384	79,550	497,583	-	22
81	5	-	615	976	118	4,002	51	5,077	-	-
82	1,769	-	1,568	8,313	463	6,683	498	12,021	-	104
83	-	-	29	1,049	104	982	76	1,857	-	-
84	38	-	1,031	2,694	240	8,329	2,583	10,907	-	-
85	-	-	139	1,435	317	1,739	196	1,701	-	-
87	203	-	4,960	4,246	20,419	46,831	21,252	221,250	237	80
88	104	-	17,861	2,146	1,876	22,500	7,104	114,531	10	217
89	615	-	11,776	25,101	10,589	186,810	14,606	287,344	4	647
9A	4,354	4	28,026	8,246	63,913	75,818	741,832	204,990	9,325	270
Total	*362,699*	*1,186,844*	*506,215*	*650,720*	*713,740*	*1,601,417*	*2,114,040*	*5,203,224*	*669,133*	*8,544*
9B	168	6,293	9,180	1,573	12,064	47,681	40,468	46,106	26	94
Total	**362,868**	**1,193,137**	**515,394**	**652,293**	**725,804**	**1,649,098**	**2,154,507**	**5,249,330**	**669,159**	**8,637**

Overseas trade by State

The following table shows the value of exports and imports for each State and Territory.

EXPORTS AND IMPORTS BY STATE, 1981–82
($'000)

State(a)	*Exports*	*Imports*
New South Wales	4,604,012	9,232,245
Victoria	4,179,936	7,169,661
Queensland	4,415,598	2,179,774
South Australia	1,281,956	1,337,311
Western Australia	3,988,892	2,535,102
Tasmania	647,070	166,032
Northern Territory	386,257	373,895
Australian Capital Territory	2,710	9,262
State not available	79,466	—
Grand Total	**19,585,898**	**23,003,283**

(*a*) For imports: State in which entry was lodged. The State of lodgement is not necessarily the State in which the goods were discharged or consumed. For exports: State is State of origin of Australian produce and State of final shipment of re-exported goods. State of origin is defined as the State in which the final stage of production or manufacture occurs. Because of this change in the basis on which statistics by State are derived, figures from 1 July 1978 are not directly comparable with those for previous periods, *see* page 671.

Total import clearances, dutiable clearances, and customs duties collected

The following table shows the value of total import clearances, total dutiable clearances, and the customs duties collected, together with the ratio of total dutiable clearances to total clearances.

TOTAL IMPORT CLEARANCES, DUTIABLE CLEARANCES, AND CUSTOMS DUTIES

		1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Total import clearances	$'000	10,304,756	11,122,041	13,662,602	16,066,215	18,790,400	22,852,897
Total dutiable clearances	"	4,022,198	3,978,180	4,488,894	9,843,055	11,604,282	13,790,404
Total customs duties collected	"	1,172,424	1,145,181	1,378,923	1,576,233	1,826,087	2,101,904
Ratio of dutiable clearances to total clearance	per cent	39.0	35.8	32.5	61.3	61.8	60.3
Ratio of duties collected to dutiable clearances	"	29.1	28.8	31.1	16.0	15.7	15.2

Excise

Although excise goods have no immediate bearing on overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Bureau of Customs, 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 22, Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc. on which excise duty was paid in Australia.

QUANTITIES OF PRINCIPAL EXCISABLE GOODS ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA

Article	*1979–80*	*1980–81*	*1981–82*
	'000 litre	'000 litre	'000 litre
Beer	1,931,262	1,913,961	1,934,358
	'000 l al	'000 l al	'000 l al
Spirits—			
Brandy	2,194	2,449	2,344
Gin	470	519	482
Whisky	311	343	308
Rum	1,541	1,900	2,381
Liqueurs	200	189	197
Vodka	594	656	716
Flavoured spirituous liquors	217	258	288
Other	10	6	7
Total spirits (potable)	*5,537*	*6,321*	*6,723*
	'000 kg	'000 kg	'000 kg
Tobacco	1,824	1,691	1,575
Cigars	73	72	68
Cigarettes—machine-made	27,487	27,695	28,503

Article	*1979–80*	*1980–81*	*1981–82*
	'000 litre	'000 litre	'000 litre
Petrol—			
Aviation gasoline (by-law)(*a*)	97,215	100,747	114,948
Aviation gasoline—Other(*a*)	–	11	–
Gasoline—commercial motor spirit/ethanol blends	–	107	409
Gasoline	14,607,133	14,748,722	15,071,068
Total petrol	*14,704,348*	*14,849,587*	*15,186,425*
Aviation turbine kerosene(*a*)	1,103,390	1,148,884	1,195,417
Other kerosene	–	24	–
Diesel fuel (as defined by by-law)	2,090,071	2,266,122	2,536,305
	doz. packs '000	doz. packs '000	doz. packs '000
Playing cards	116	57	86
	'000	'000	'000
Cigarette papers and tubes	3,269,055	2,441,711	2,876,805
	matches '000	matches '000	matches '000
Matches	22,519,837	17,890,865	18,193,796
	'000 litre	'000 litre	'000 litre
Crude petroleum oil, liquid petroleum and liquefied petroleum gas	24,738,467	25,741,412	25,055,119
	'000 tonnes	'000 tonnes	'000 tonnes
Coal	71,780	77,751	86,790
	'000 doz containers	'000 doz containers	'000 doz containers
Canned fruit	3,857	–	–

(*a*) Includes supplies to Commonwealth Government on which excise was paid.

FOREIGN INVESTMENT

Surveys of foreign investment have been conducted since 1947–48 to obtain particulars of certain types of capital flows to and from Australia. The surveys, when supplemented by other information, provide statistics of foreign investment in enterprises in Australia and in Australian public authority securities, as well as statistics of Australian investment in enterprises abroad and in foreign government securities. Particulars of investment income from most of those classes of investment are also obtained from the surveys.

Certain types of foreign investment are not included in the statistics which follow. Investment in real estate (except when made through companies or, in other identified cases, when relevant information is available) and loans between Australian individuals and non-resident individuals are not covered. Non-resident deposits in, and foreign borrowings by, Australian trading banks are excluded from foreign investment statistics and are included instead in the non-official monetary item in the balance of payments capital account. Short-term trade credit owing to unrelated enterprises abroad is also excluded, but is included in the trade credit item of the balance of payments capital account.

In the tables which classify investment in Australia according to country of origin, the investment is shown as an inflow from the country of domicile of the foreign investor to whom the enterprises in Australia have the immediate liability. Income payable on foreign investment is classified on the same basis. Country classifications used in relation to Australian investment abroad, and income receivable thereon, attempt to reflect the country in which the investment was made.

Generally, the statistical unit used in foreign investment statistics is the group of enterprises related in terms of Section 6 of the Companies Act. This unit is classified by industry on the basis of the major activity of the group as a whole. It should be noted that, because of the broad range of activities of

many of the groups covered by these statistics, the classification of foreign investment by industry should be interpreted with some caution. In particular, the classification does not necessarily reflect the industry in which the funds are ultimately employed.

The following are explanatory notes relating to some of the terms used in the tables:

Borrowings: corporate securities (other than corporate equities), loans, advances, deposits, debentures, notes, bank overdrafts drawn, mortgages, trade credit owing to unrelated foreign enterprises for imports with a contractual maturity of over six months.

Branches. Offices in Australia of enterprises incorporated abroad *or* offices in separate foreign countries of enterprises incorporated in Australia. For the purposes of the survey, branches are included if the value of net liabilities to head office exceeds $A20,000 or if the annual net profit or loss exceeds $A20,000. Australian branches of foreign enterprises *include* other Australian offices of foreign enterprises where a branch register is maintained in Australia, but *exclude* enterprises in Australia which are incorporated abroad but which have no business operations in Australia other than an account with a bank in Australia. Foreign branches of enterprises in Australia *exclude* foreign enterprises which are incorporated in Australia but which have no business operations abroad other than an account with a foreign bank. However, the short-term assets represented by the bank accounts abroad are included as Australian portfolio investment abroad for those companies included in the surveys of foreign investment.

Corporate equities: ordinary shares or voting stock.

Direct investment. All investment in branches and subsidiaries by direct investors i.e. head offices of branches, direct shareholders in subsidiaries and other related enterprises.

Enterprises. Incorporated and unincorporated businesses and other organisations including public enterprises, but *excluding* enterprises which have no business operations in a country other than an account with a bank in that country.

Foreign residents. Any individual, enterprise or other organisation domiciled in a country other than Australia. Includes Norfolk Island and other external territories of Australia. Foreign branches and subsidiaries of enterprises in Australia are also regarded as being foreign residents.

Portfolio investment and institutional loans. Investment in enterprises other than direct investment, i.e. investment other than investment by related enterprises in branches and subsidiaries. Includes both corporate equities and borrowings.

Subsidiaries. An *Australian subsidiary* of a foreign enterprise is an enterprise in Australia, other than a branch, in which:

(*a*) a single foreign resident (individual or enterprise) or a group of related enterprises in one foreign country holds 25 per cent or more of the equity, or, if this condition does not apply,

(*b*) residents of one foreign country combined hold 50 per cent or more of the equity,

together with other enterprises in Australia in which the Australian subsidiary holds, directly or indirectly, more than 50 per cent of the equity.

A *foreign subsidiary* of an enterprise in Australia is a foreign enterprise other than a branch, in which an enterprise in Australia holds 25 per cent or more of the equity. In principle, foreign enterprises in which the combined Australian shareholding is 50 per cent or more would also be included, but it is not practicable to ascertain the total investment by Australian shareholders in individual foreign enterprises.

Undistributed profits of subsidiaries. Equity of direct investors in the net earnings of an enterprise during the year, less tax payable on those earnings and less dividends declared during the year whether relating to earnings of the same year or not. Net earnings are, in general, based on income for taxation purposes. However, certain deductions allowable for taxation purposes (e.g. mining and petroleum exploration expenditure, Export Market Development Allowance, Investment Allowance for Manufacturing Plant, previous year's losses, etc.) are not deducted in calculating net earnings. Undistributed profits of Australian subsidiaries also include undistributed income accruing to the subsidiary from related enterprises in Australia.

Unremitted profits of branches. Net earnings (after tax) during the year, less remittances of earnings to the head office during the year, irrespective of the year to which the earnings relate. Net earnings of branches are, in general, calculated in a similar way to those for subsidiaries. Also included is undistributed income accruing to the branch from other enterprises related to the branch.

More details on foreign investment in Australia and Australian investment abroad are contained in the annual publication *Foreign Investment, Australia* (5305.0).

Foreign investment in enterprises in Australia

The level of foreign investment in enterprises in Australia in recent years is shown in the first table. The two following tables show the inflow of foreign investment each year and the income payable to foreign residents respectively.

LEVEL OF FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY TYPE OF INVESTMENT ($ million)

	Direct investment		*Portfolio investment and institutional loans*		*Totals*	
At 30 June	*Corporate equities (a)*	*Other(b)*	*Corporate equities (a)*	*Borrowings*	*Corporate equities (a)*	*Other*
1976	3 206	4 263	725	2 500	3 930	6 762
1977	3 511	4 631	734	3 254	4 245	7 886
1978	3 933	4 940	765	3 609	4 698	8 549
1979	4 405	5 754	832	4 284	5 237	10 038
1980	4 750	6 446	1 043	5 012	5 794	11 458
1981	5 989	7 489	1 483	7 226	7 472	14 714

(*a*) Paid up value only. (*b*) Includes branch liabilities to head office, intercompany indebtedness, and borrowings.

INFLOW OF FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY TYPE OF INVESTMENT ($ million)

	Direct investment				*Portfolio investment and institutional loans*			
Year	*Undistributed income*	*Corporate equities*	*Other(a)*	*Total*	*Corporate equities*	*Borrowings*	*Total*	*Total*
1975–76 . . .	612	129	–163	578	18	264	283	861
1976–77 . . .	655	27	387	1 069	–60	535	475	1 544
1977–78 . . .	663	157	230	1 051	–22	306	284	1 335
1978–79 . . .	830	–83	702	1 448	128	483	611	2 059
1979–80 . . .	1 061	34	542	1 636	698	760	1 457	3 094
1980–81 . . .	788	568	865	2 221	1 212	2 359	3 570	5 791

(*a*) Includes branch liabilities to head office, intercompany indebtedness, and borrowings. Minus sign (–) denotes withdrawal of investment.

INCOME PAYABLE ON FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY TYPE OF INCOME, ($ million)

	Income payable abroad on direct investment					*Income payable abroad on portfolio investment and institutional loans*			
		Distributed income							
Year	*Undistributed income*	*Remitted profits of branches*	*Dividends payable*	*Interest payable*	*Total*	*Dividends payable*	*Interest payable*	*Total*	*Total*
1975–76 . .	612	157	248	129	1 146	72	181	253	1 398
1976–77 . .	655	290	249	123	1 317	77	192	269	1 586
1977–78 . .	663	314	295	114	1 386	79	237	316	1 701
1978–79 . .	830	294	288	131	1 543	87	307	394	1 937
1979–80 . .	1 061	387	391	175	2 014	98	392	491	2 504
1980–81 . .	788	361	445	178	1 772	186	506	692	2 464

In the following table, foreign investment in enterprises in Australia, and associated income flows, are classified by country

FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY COUNTRY
($ million)

Year	EEC: United Kingdom	EEC: Other (a)	U.S.A.	Canada	Japan	Switzerland	Other Countries	Total
LEVELS OF FOREIGN INVESTMENT								
Corporate equities (b)								
At 30 June—								
1976	1 491	273	1 235	135	183	151	461	3 930
1977	1 679	237	1 312	134	223	150	510	4 245
1978	1 803	298	1 502	129	271	148	546	4 698
1979	2 110	321	1 590	121	341	182	572	5 237
1980	2 255	431	1 639	152	434	227	655	5 794
1981	2 883	610	2 102	185	566	383	743	7 472
Other								
At 30 June—								
1976	2 119	747	2 320	168	289	184	936	6 762
1977	2 071	1 116	2 827	209	362	242	1 059	7 886
1978	2 106	1 156	3 137	216	529	308	1 097	8 549
1979	2 476	1 298	3 573	247	715	422	1 309	10 038
1980	2 725	1 477	4 260	293	888	439	1 376	11 458
1981	3 575	1 702	5 394	407	1 284	423	1 930	14 714
INFLOW OF FOREIGN INVESTMENT								
1975-76	328	19	378	14	98	−4	28	861
1976-77	384	271	613	72	138	44	23	1 544
1977-78	408	65	627	−13	197	54	−3	1 335
1978-79	836	92	818	−9	276	60	−13	2 059
1979-80	1 056	404	796	55	400	107	275	3 094
1980-81	1 987	539	1 258	101	759	282	866	5 791
INCOME PAYABLE ON FOREIGN INVESTMENT								
1975-76	490	55	650	47	43	13	101	1 398
1976-77	548	56	752	36	77	21	96	1 586
1977-78	636	60	823	−4	33	40	114	1 701
1978-79	784	83	864	11	60	41	94	1 937
1979-80	872	89	1 248	−16	121	53	138	2 504
1980-81	777	93	1 173	66	142	58	156	2 464

(a) Includes, Belgium, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands. (b) Paid up value only. Minus sign (−) denotes withdrawal of investment.

In the following table, foreign investment in enterprises in Australia, and associated income flows, are classified by industry

FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY INDUSTRY
($ million)

Year	ASIC Division: Mining (Div B)	Manufacturing (Div C)	Electricity Gas & Water (Div D)	Wholesale and retail trade (Div F)	Finance, Property & business services (Div I)	Other Industries	Unallocated(a)	Total
LEVELS OF FOREIGN INVESTMENT								
Corporate equities (b)								
At 30 June—								
1976	679	1 857	–	644	556	195	–	3 930
1977	644	1 953	–	745	678	226	–	4 245
1978	648	2 143	–	819	797	291	–	4 698
1979	717	2 315	–	1 069	834	301	–	5 237
1980	840	2 431	1	1 151	1 044	327	–	5 794
1981	1 279	2 881	3	1 565	1 371	373	–	7 472
Other								
At 30 June—								
1976	1 729	1 975	27	1 015	1 632	384	–	6 762
1977	1 906	2 272	41	1 361	1 692	613	–	7 886
1978	2 068	2 209	108	1 570	1 771	824	–	8 549
1979	2 376	2 404	381	1 962	1 893	1 022	–	10 038
1980	2 779	2 319	676	2 329	2 107	1 248	–	11 458
1981	3 544	2 917	913	2 803	2 973	1 564	–	14 714
INFLOW OF FOREIGN INVESTMENT								
1975–76	92	388	8	236	94	44	–	861
1976–77	−17	579	12	539	204	227	–	1 544
1977–78	102	283	66	443	216	225	–	1 335
1978–79	183	591	231	736	91	226	–	2 059
1979–80	599	465	298	914	509	308	–	3 094
1980–81	1 090	1 535	294	1 323	1 131	419	–	5 791
INCOME PAYABLE ON FOREIGN INVESTMENT (a)								
1975–76	320	408	–	236	146	36	253	1 398
1976–77	371	522	–	286	113	25	269	1 586
1977–78	396	428	–	310	213	38	316	1 701
1978–79	354	588	–	421	132	47	394	1 937
1979–80	543	596	–	635	177	63	491	2 504
1980–81	422	629	–	515	140	66	692	2 464

(a) Income payable on portfolio investment and institutional loans is not available by industry and is included in the unallocated column. (b) Paid-up value only.

Australian investment in enterprises abroad

The following tables show the levels and outflow of Australian investment in enterprises abroad in recent years, and associated income flows.

LEVEL OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY TYPE OF INVESTMENT
($ million)

	Direct investment		*Portfolio investment and institutional loans*		*Totals*	
At 30 June	*Corporate equities(a)*	*Other(b)*	*Corporate equities(a)*	*Borrowings*	*Corporate equities(a)*	*Other*
1976	448	564	69	53	517	617
1977	539	667	72	82	611	750
1978	570	774	75	113	645	887
1979	632	828	72	104	705	933
1980	838	1,012	100	208	938	1,220
1981	934	1,114	135	93	1,069	1,207

(*a*) Paid-up value only. (*b*) Includes branch liabilities to head office, intercompany indebtedness and borrowings.

OUTFLOW OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY TYPE OF INVESTMENT
($ million)

	Direct investment				*Portfolio investment and institutional loans*	
Year	*Undistributed income*	*Corporate equities*	*Other(a)*	*Total*		*Total*
1975–76	64	(*b*)	(*c*)103	167	23	190
1976–77	100	(*b*)	(*c*)156	255	11	266
1977–78	92	–	104	195	18	213
1978–79	160	52	28	241	32	273
1979–80	224	56	134	414	113	527
1980–81	163	156	115	434	−5	429

(*a*) Includes branch liabilities to head office, intercompany indebtedness and borrowings. (*b*) Separate details of corporate equities not available prior to 1977–78. (*c*) Includes corporate equities. Minus sign (−) denotes repatriation of investment.

INCOME RECEIVABLE ON AUSTRALIAN DIRECT INVESTMENT IN FOREIGN ENTERPRISES, BY TYPE OF INCOME(*a*)
($ million)

		Distributed income				
Year	*Undistributed income*	*Remitted profits of branches*	*Dividends of subsidiaries*	*Interest*	*Total*	*Total*
1975–76	64	22	46	5	73	137
1976–77	100	25	59	7	91	191
1977–78	92	36	113	3	153	245
1978–79	160	43	88	7	138	298
1979–80	224	52	123	8	183	407
1980–81	163	51	144	5	200	362

(*a*) Direct investment only. Minus sign (−) denotes repatriation.

In the following table, Australian investment in foreign enterprises, and associated income flows, are classified by country.

AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY COUNTRY
($ million)

Year	E.E.C. United Kingdom	E.E.C. Other	New Zealand	U.S.A. and Canada	Papua New Guinea	A.S.E.A.N. (a)	Other Countries	Total
LEVELS OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES								
Corporate equities(b)								
At 30 June—								
1976	47	15	127	55	120	58	94	517
1977	48	18	156	69	130	72	118	611
1978	55	22	160	62	153	74	120	645
1979	61	22	152	67	166	95	141	705
1980	92	25	158	106	290	99	166	938
1981	110	28	186	133	288	107	219	1,069
Other								
1976	61	51	103	92	137	61	111	617
1977	69	(c)	129	138	146	65	(d)202	750
1978	125	55	166	155	151	63	174	887
1979	107	66	160	192	138	78	191	933
1980	220	90	162	277	146	108	218	1,220
1981	178	75	179	294	145	131	205	1,207
OUTFLOW OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES								
1975-76	28	8	11	44	50	9	40	190
1976-77	31	9	73	60	26	17	51	266
1977-78	69	−1	48	4	30	22	41	213
1978-79	27	13	22	77	16	43	76	273
1979-80	187	23	37	105	56	38	80	527
1980-81	2	19	119	183	−32	80	59	429
INCOME RECEIVABLE ON AUSTRALIAN DIRECT INVESTMENT IN FOREIGN ENTERPRISES(e)								
1975-76	24	2	35	7	(c)	9	(f)61	137
1976-77	34	−3	55	8	39	17	42	191
1977-78	30	−3	60	4	63	20	71	245
1978-79	38	(c)	66	8	63	37	(d)85	298
1979-80	55	13	77	13	120	43	86	407
1980-81	72	21	84	9	29	66	81	362

(a) Indonesia, Malaysia, Philippines, Singapore and Thailand. (b) Paid-up value only. (c) Not available; included in 'Other countries'. (d) Includes 'Other E.E.C.' (e) Details of income receivable are not available on portfolio investment and institutional loans. (f) Includes Papua New Guinea. Minus sign (−) denotes repatriation of investment.

BALANCE OF PAYMENTS

Broadly speaking, the Australian balance of payments is a statistical statement designed to provide a systematic record of Australia's economic transactions with the rest of the world. It may be described as a system of consolidated accounts in which the accounting entity is the Australian economy and the entries refer to all economic transactions between residents of Australia and residents of the rest of the world (non-residents). Such a record is essential to the examination of influences which external factors have on the domestic economy. Balance of payments estimates have always assumed a particular importance in Australia due to the importance of these influences on the Australian economy.

Official estimates of Australia's balance of payments for the period 1928-29 were included in Year Book No. 24, page 755. Except for the war years 1939 to 1945, estimates have since been published at least annually.

Detailed estimates and descriptions of concepts, structure and the various items included are provided in the annual publication *Balance of Payments, Australia* (5303.0). More timely though less detailed estimates are provided in a quarterly publication *Balance of Payments, Australia* (5302.0) approximately five and a half weeks after the end of each quarter. A monthly publication *Balance of Payments, Australia* (5301.0), showing the major aggregates, is published about eight to nine working days after the end of each month. A comprehensive description of concepts, structure, data sources and methods used to compile published statistics are contained in the publication *Balance of Payments, Australia: Concepts, Sources and Methods* (5331.0). Changes to concepts, sources and methods since that publication are described in the annual publication *Balance of Payments, Australia* (5303.0) for 1979–80 and 1980–81.

Balance of payments statements cover a wide range of economic transactions which may be broadly divided into three categories. The first category comprises transactions in goods, services and income between residents of Australia and non-residents. The second category relates to financial transactions involving claims on and liabilities to the rest of the world. Because the statement is constructed on a double entry recording basis, a third category described as unrequited transfers is required to provide offsetting entries for one sided balance of payments transactions, such as gifts in cash and kind which have no 'quid pro quo'. Two changes not arising from transactions—specifically changes in Australia's official reserve assets arising from the allocation (or cancellation) of Special Drawing Rights (SDRs) by the International Monetary Fund (IMF) and the monetisation (or demonetisation) of gold—are included by convention, to make the accounts more analytically useful. The first and third of the above categories are combined in what is described as the current account and the second category together with the two changes not arising from transactions are shown separately in what is described as the capital account.

Under the internationally accepted conventions of the double entry system, credit entries are used to record exports of goods and services, income receivable and financial transactions involving either a reduction in the country's foreign financial assets or an increase in its foreign liabilities. Conversely, debit entries are used to record imports of goods and services, income payable and financial transactions involving either an increase in foreign financial assets or a decrease in foreign liabilities. Transactions in a double entry accounting system are reflected in pairs of equal credit and debit entries. Any entries that are not automatically paired are matched by special offsetting entries. Such offsetting entries are required for the category of unrequited transfers and the other changes not arising from transactions referred to in the previous paragraph.

It follows that, in principle, the net sum of all credit and debit entries is zero. In practice, some transactions are not measured accurately (errors), while others are not measured at all (omissions). Equality between the sum of the credit and debit entries is brought about by the inclusion of a balancing item which reflects net errors and omissions.

In principle, transactions and other changes should be valued in the balance of payments at market prices. However, in practice, transactions are generally valued in the statistics at transactions prices because this basis provides the closest practical approximation to the market price principle. The transactions price is the price at which a transaction is recorded in the accounts of the transactors.

Transactions and other changes recorded in the balance of payments should, in principle, be recorded at the time of change of ownership (either actual or imputed). For the current account this is conceived as the time when ownership of goods changes, services are rendered, when undistributed income of direct investment enterprises is earned, and when interest and dividends become due for payment. In the case of unrequited transfers, those which are imposed by one party on another, such as taxes and fines, should ideally be recorded at the time they become due for payment without penalty; whereas others should be recorded when the goods, services etc. to which they are offsets change ownership. For capital account transactions the time of change of ownership is, by convention, normally taken to be the time at which transactions are entered in the books of the transactors. Entries for loan drawings should be based on actual disbursements and not on commitments or authorisations. Entries for loan repayments should be recorded at the time they become due rather than on the actual payment date.

In practice, the nature of the available data sources is such that the time of recording of transactions will often differ from the time of change of ownership. This is particularly true in the case of transactions in goods which are, in the main, recorded at the time that administrative records relating to the movement of the goods across the customs frontier are processed. Where practical timing adjustments are made for transactions in certain goods to ensure that they are recorded in the time period in which change of ownership occurs.

In the first table that follows, the global balance of payments is presented in the conventional two column credit and debit accounting format. In the regional table, however, minus signs are used to

denote current account debits and capital account debits (i.e. increases in assets or decreases in liabilities) while the absences of sign are used to denote current account credits and capital account credits (i.e. decreases in assets or increases in liabilities).

For current account transactions, entries for exports of goods and entries for imports of goods are recorded as credits and debits respectively. Likewise entries for transportation credits are recorded seperately from entries for transportation debits and for most other invisible transactions the credit entries are similarly recorded separately from the debit entries. Current account transactions, in this context, are described as being recorded gross. This treatment is in contrast to the recording of transactions and other changes in the capital account which is on a net basis. This means that, for each capital account item shown in the following table, credit entries are combined with debit entries to arrive at a single net result (either a credit or a debit) for the item concerned.

In principle, the items included in visible trade should include all movable goods, with a few exceptions, the ownership of which changes from residents to non-residents (exports) and from non-residents to residents (imports). Items 3 to 10 which are grouped together under the heading 'invisibles' include services, income and unrequited transfers. Invisible credits comprise the value of services rendered by residents to non-residents, the income earned by Australian residents from the ownership of foreign financial assets (e.g. dividends and interest) and from the use of copyrights, licences, etc., by non-residents (e.g. royalties), and the offset entries to the value of cash and kind transferred by non-residents to residents without a quid pro quo (unrequited transfers). Invisible debits are composed of similar transactions, but with the roles of resident and non-resident interchanged.

For capital account transactions, the entries for government capital (items 11 to 13) broadly refer to the capital account transactions of the general government sector (i.e. Commonwealth, State and local government authorities and statutory bodies except for government-owned or controlled (public) trading and financial enterprises). However, it includes the trade credit transactions and some other minor transactions of certain public enterprises which are included in this grouping under other government transactions (item 13). Items 14 to 17, which comprise private capital, broadly refer to the capital account transactions of resident individuals, privately owned trading and non-bank financial enterprises and government owned or controlled (public) trading and non-bank financial enterprises.

The transactions of non-official monetary institutions (item 18) broadly cover the capital account transactions of the privately and government owned trading banks mainly in the form of borrowings (from and by non-residents) and balances (foreign currency held overseas and Australian currency held by non-residents), while item 19, official monetary institutions, covers all capital account transactions with the IMF, all capital account transactions of the Reserve Bank, with foreign central monetary authorities including the Bank for International Settlements; and transactions and all changes (other than those resulting from revaluation) in the holdings of monetary gold and foreign currency assets owned and controlled by the resident central authorities which are available for meeting balance of payments needs.

BALANCE OF PAYMENTS
($ million)

	1978–79		1979–80		1980–81	
	Credit	*Debit*	*Credit*	*Debit*	*Credit*	*Debit*
CURRENT ACCOUNT						
Goods—						
1 Exports f.o.b.(*a*)	14,073	–	18,579	–	18,816	–
2 Imports f.o.b.(*a*)	–	13,490	–	15,828	–	19,188
Balance of trade	*583*	–	*2,751*	–	–	*372*
Invisibles—						
4 Transportation—						
4.1 Freight on imports	–	1,245	–	1,521	–	1,717
4.2 Expenditure of non-resident transport operators	895	–	1,087	–	1,121	–
4.3 Other transportation	664	1,252	800	1,502	892	1,631
5 Travel	526	1,299	762	1,479	949	1,561
6 Government—						
6.1 Australian government—						
6.11 Defence expenditure	–	72	–	102	–	108
6.12 Other expenditure	–	147	–	162	–	179
6.13 Services to non-residents	24	–	36	–	30	–
6.2 Foreign governments' expenditure	77	–	87	–	96	–
7 Miscellaneous—						
7.1 Business expenses	82	146	116	169	105	170
7.2 Other	162	237	105	155	143	208
8 Property income—						
8.1 Direct investment—						
8.11 Undistributed	160	830	224	1,061	163	788
8.12 Distributed	138	713	183	953	200	984
8.2 Interest on government loans	–	307	–	386	–	372
8.3 Royalties and copyrights	15	93	11	93	32	126
8.4 Other	141	441	187	549	240	742
9 Government transfers—						
9.1 Papua New Guinea	–	247	–	250	–	259
9.2 Other foreign aid	–	228	–	270	–	315
9.3 Social security cash benefits	–	40	–	45	–	52
10 Private transfers—						
10.1 Migrants' funds	140	85	160	64	204	73
10.2 Social security cash benefits	11	–	17	–	20	–
10.3 Other	261	313	410	283	487	367
Balance on current account	–	**3,817**	–	**2,107**	–	**5,344**

BALANCE OF PAYMENTS—*continued*
($ million)

	1978–79		*1979–80*		*1980–81*	
	Credit	*Debit*	*Credit*	*Debit*	*Credit*	*Debit*
CAPITAL ACCOUNT (NET)						
Non-monetary—						
Government—						
11 Securities—						
11.1 Domiciled overseas	1,349	–	187	–	–	98
11.2 Domiciled in Australia	10	–	–	15	20	–
12 International development financing institutions	–	27	–	31	–	48
13 Other government transactions	25	–	–	221	59	–
Private—						
14 Foreign investment in enterprises in Australia—						
14.1 Direct investment—						
14.11 Undistributed income	830	–	1,061	–	788	–
14.12 Other	618	–	575	–	1,433	–
14.2 Portfolio investment and institutional loans—						
14.21 Public enterprise borrowings	246	–	509	–	409	–
14.22 Other	365	–	949	–	3,162	–
15 Australian investment abroad—						
15.1 Direct investment—						
15.11 Undistributed income	–	160	–	224	–	163
15.12 Other	–	81	–	190	–	271
15.2 Portfolio investment and institutional loans	–	33	–	115	10	–
16 Net remittances abroad by life insurance enterprises	1	–	2	–	9	–
17 Trade credit n.e.i.—						
17.1 Marketing authorities	34	–	–	379	93	–
17.2 Other	–	13	–	379	–	134
Monetary—						
18 Non-official monetary institutions—						
18.1 Changes in liabilities—						
18.11 Borrowing overseas	–	24	–	14	45	–
18.12 Other liabilities	108	–	164	–	40	–
18.2 Changes in assets—						
18.21 Advances to non-residents	–	23	–	33	14	–
18.22 Foreign currency balances	–	2	26	–	–	133
19 Official monetary institutions—						
19.1 Changes in liabilities—						
19.11 Use of IMF credit	–	–	–	144	–	128
19.12 Other liabilities	–	136	5	–	–	13
19.2 Changes in official reserve assets	167	–	348	–	–	1,101
19.3 Allocation of SDRs	94	–	98	–	86	–
19.4 Other transactions	–	–	–	6	8	–
Balancing item	470	–	–	67	1,259	–
Balance on capital account	**3,817**	**–**	**2,107**	**–**	**5,344**	**–**

(*a*) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation.

BALANCE OF PAYMENTS BY REGIONS

($ million)

	1978–79	*1979–80*	*1980–81*
CURRENT ACCOUNT(*a*)			
Exports f.o.b.(*b*)—			
United States of America	1,774	1,989	2,091
Canada	272	339	436
United Kingdom	552	943	696
Germany, Federal Republic	433	503	462
Other European Economic Community(*c*)	1,042	1,269	1,153
Japan	4,137	5,016	5,225
New Zealand	728	836	881
Other OECD(*d*)	205	252	246
Total OECD	9,144	11,145	11,189
ASEAN	1,039	1,363	1,585
Papua New Guinea	286	347	412
Centrally Planned Economies(*e*)	905	2,048	1,723
Other countries	2,700	3,676	3,907
Total exports	*14,073*	*18,579*	*18,816*
Imports f.o.b.(*b*)—			
United States of America	−3,233	−3,609	−4,573
Canada	−377	−439	−494
United Kingdom	−1,464	−1,615	−1,560
Germany, Federal Republic	−991	−990	−1,058
Other European Economic Community(*c*)	−973	−1,131	−1,198
Japan	−2,405	−2,416	−3,669
New Zealand	−435	−538	−629
Other OECD(*d*)	−621	−719	−736
Total OECD	−10,500	−11,457	−13,918
ASEAN	−611	−990	−1,256
Papua New Guinea	−68	−85	−73
Centrally Planned Economies(*e*)	−201	−267	−316
Other countries	−2,111	−3,030	−3,626
Total imports	*−13,490*	*−15,828*	*−19,188*
Invisibles (net)—			
United States of America	−1,273	−1,639	−1,601
Canada	−26	8	−68
United Kingdom	−1,301	−1,254	−1,023
Germany, Federal Republic	−154	−168	−136
Other European Economic Community(*c*)	−295	−341	−349
Japan	−132	−182	−305
New Zealand	−84	−6	38
Other OECD(*d*)	−219	−231	−230
Total OECD	−3,482	−3,812	−3,674
ASEAN	−279	−374	−451
Papua New Guinea	−120	−34	−131
Centrally Planned Economies(*e*)	−6	−13	−12
Other countries	−512	−625	−702
Total invisibles (net)	*−4,400*	*−4,857*	*−4,971*
Balance on current account—			
United States of America	−2,732	−3,259	−4,083
Canada	−131	−92	−126
United Kingdom	−2,213	−1,926	−1,887
Germany, Federal Republic	−711	−656	−733
Other European Economic Community(*c*)	−226	−203	−395
Japan	1,600	2,418	1,251
New Zealand	209	292	290
Other OECD (*d*)	−635	−698	−719
Total OECD	−4,838	−4,124	−6,403
ASEAN	150	−1	−122
Papua New Guinea	98	228	208
Centrally Planned Economies(*e*)	698	1,769	1,396
Other countries	77	22	−422
Balance on current account	**−3,817**	**−2,107**	**−5,344**

For footnotes *see* end of table.

BALANCE OF PAYMENTS BY REGIONS—*continued*

($ million)

	1978–79	*1979–80*	*1980–81*
CAPITAL ACCOUNT (NET)(*a*)			
Non-monetary sector—			
Government capital movements—			
United States of America	−21	−305	13
Canada	−2	−	−6
United Kingdom	−51	7	−32
Germany, Federal Republic	89	162	−42
Other European Economic Community(*c*)	256	−58	−21
Japan	612	254	72
New Zealand	−	−	−
Other OECD(*d*)	506	−92	−2
Total OECD	1,389	−32	−18
ASEAN	−	−	−
Papua New Guinea	3	4	4
Centrally Planned Economies (*e*)	−	−	−
Other countries	−35	−52	−54
Total government capital movements	*1,357*	*−80*	*−67*
Foreign investment in enterprises in Australia—			
United States of America	818	796	1,258
Canada	−9	55	101
United Kingdom	836	1,056	1,987
Germany, Federal Republic	109	91	122
Other European Economic Community(*c*)	−17	313	417
Japan	276	400	758
New Zealand	−13	17	32
Other OECD(*d*)	78	157	281
Total OECD	2,077	2,884	4,955
ASEAN	56	154	338
Papua New Guinea	−3	−2	−1
Centrally Planned Economies(*e*)	7	6	17
Other countries	−78	51	482
Total foreign investment in enterprises in Australia	*2,059*	*3,094*	*5,791*
Other private capital movements—			
United States of America	−49	−172	−252
Canada	−3	−27	7
United Kingdom	5	−245	14
Germany, Federal Republic	8	−81	10
Other European Economic Community(*c*)	−10	−15	−47
Japan	−13	−64	17
New Zealand	−17	−22	−100
Other OECD(*d*)	8	−37	21
Total OECD	−70	−662	−331
ASEAN	−74	−41	−134
Papua New Guinea	−25	−78	42
Centrally Planned Economies(*e*)	70	−254	154
Other countries	−153	−251	−187
Total other private capital movements	*−252*	*−1,285*	*−456*
Total non-monetary sector transactions—			
United States of America	748	319	1,020
Canada	−14	28	101
United Kingdom	790	818	1,968
Germany, Federal Republic	206	172	89
Other European Economic Community(*c*)	230	241	349
Japan	875	590	848
New Zealand	−30	−6	−69
Other OECD(*d*)	592	28	301
Total OECD	3,397	2,190	4,607
ASEAN	−18	113	204
Papua New Guinea	−26	−76	45
Centrally Planned Economies(*e*)	77	−247	171
Other countries	−266	−251	241
Total non-monetary sector transactions	*3,164*	*1,729*	*5,268*

For footnotes *see* end of table.

BALANCE OF PAYMENTS BY REGIONS—*continued*

($ million)

	1978–79	*1979–80*	*1980–81*
Monetary sector transactions—			
Net official monetary movements(*f*)	124	301	−1,149
Non-official monetary sector transactions(*f*)	59	143	−34
Balancing item(*f*)	470	−67	1,259
Balance on capital account(*f*)	**3,817**	**2,107**	**5,344**

(*a*) For current account entries minus sign(−) denotes a debit, for capital account items minus sign(−) denotes an increase in foreign financial assets or a decrease in foreign liabilities. (*b*) The amounts shown represent recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation. (*c*) Belgium, Luxembourg, Denmark, France, Ireland, Italy, Netherlands, Greece. (*d*) Spain, Turkey, Austria, Finland, Iceland, Norway, Portugal, Sweden, Switzerland. (*e*) Albania, Bulgaria, China, Czechoslovakia, Democratic Peoples' Republic of Korea, German Democratic Republic, Hungary, Mongolia, Poland, Romania, the Socialist Republic of Vietnam, and the Union of Soviet Socialist Replublics. (*f*) No regional split is available for these items.

International reserves

The following table shows Australia's official reserve assets as at 30 June for recent years.

OFFICIAL RESERVE ASSETS(*a*)

(*Source:* Reserve Bank of Australia)

($ million)

	30 June		
	1980	*1981*	*1982*
Official reserve assets—			
Foreign exchange—			
United States dollars	644	1,636	3,395
Others	711	587	670
Special Drawing Rights	30	46	8
Reserve position in IMF	179	256	—
Gold	4,117	3,184	2,444
Total	**5,681**	**5,709**	**6,517**

(*a*) SDRs, and Australia's reserve position in the IMF are based on the IMF basket valuation for the SDR, which is published in terms of US dollars crossed with the representative rate for the Australian dollar in terms of the US dollar. Gold is valued at the average London gold price for the month, converted to Australian dollars at the market rate of exchange applying on the last day of the month. The foreign currency value of all other overseas assets has been based, where applicable, on market quotations. Accrued interest is normally taken into account. Conversion to Australian dollar equivalent is based on market rates of exchange.

FOREIGN CONTROL

A program of studies of foreign control of key industries and economic activities in Australia has been undertaken. Studies have been completed for manufacturing, mining, mineral exploration other than for petroleum, petroleum exploration, registered financial corporations other than retailers, finance companies, general insurance, life insurance, tourist accommodation, accredited advertising agencies and research and experimental development (R and D). This program of foreign control studies was terminated in 1978, as part of the measures necessary to bring ABS activities within the resources available to it.

Brief explanatory notes and a summary of the main results of these studies are given in Year Book Australia No. 65, 1981.

Further information

For detailed information *see* the Annual Bulletin of *Foreign Investment, Australia* (5305.0) also the other annual publications *Overseas Trade, Australia* (issued in two parts) (5409.0 and 5410.0), *Australian Exports, Country by Commodity* (5411.0), *Australian Imports, Country by Commodity* (5414.0), *Imports Cleared for Home Consumption, Australia* (Microfiche only) (5412.0), *Exports, Australia: Annual Summary Tables* (5424.0), *Exports of Major Commodities and Their Principal Markets, Australia* (5423.0), *Imports, Australia: Annual Summary Tables* (5426.0), *Customs and Excise Revenue, Australia* (5427.0) and *Balance of Payments, Australia* (5303.0). Preliminary information is available in summary form in the statements *Balance of Payments, Australia* (quarterly) (5302.0), *Foreign Investment, Australia (Preliminary)* (annual) (5304.0), *Exports and Imports, Australia (Preliminary)* (monthly) (5401.0), *Exports by Commodity Divisions, Australia (Preliminary)* (monthly) (5402.0), and *Imports by Commodity Divisions, Australia (Preliminary)* (monthly) (5405.0). Current information is included in the *Monthly Summary of Statistics, Australia* (1304.0), the *Digest of Current Economic Statistics, Australia* (1305.0), and in more detail in *Exports, Australia* (monthly) (5404.0), *Imports, Australia* (monthly) (5406.0) and *Customs and Excise Revenue, Australia* (monthly) (5425.0). There are also the following additional publications: *Exports of Major Commodities and Their Principal Markets, Australia* (monthly) (5403.0), *Imports of Assembled New Passenger Motor Cars, Australia (Preliminary)* (monthly) (5416.0) and *Exports by Mode of Transport, Australia* (quarterly) (5415.0) and *Exports and Imports, Australia: Trade with Selected Countries and Major Country Groups* (quarterly) (5422.0). Additional unpublished details of exports and imports can be supplied on request.

A subscription service is available from this Bureau to provide for the detailed requirements of individual users of overseas trade statistics. These special periodical statements are obtainable monthly or quarterly and show trade according to items of the Australian Export and Import Commodity Classifications or statistical key code dissections of Australian Customs Tariff items. An appropriate charge is made which varies depending on the amount of detail required.

More detailed statistics and explanatory notes on individual foreign participation studies are contained in the following publications:

Foreign Ownership and Control in Manufacturing Industry, 1972–73 (5322.0), *Foreign Control in Manufacturing Industry, Study of Large Enterprise Groups*, 1975–76 (5315.0), *Foreign Control in the Mining Industry*, 1976–77 (5329.0), *Foreign Control in Mineral Exploration*, 1975–76 (5323.0), *Foreign Control of Registered Financial Corporations*, 1976 (5328.0), *Foreign Control of Finance Companies*, 1976 (5324.0), *Foreign Control of General Insurance Business*, 1975–76 (5326.0), *Foreign Control of Life Insurance Business*, 1976 (5325.0), *Foreign Ownership and Control of Tourist Accommodation Establishments*, 1973–74 (5319.0), *Foreign Ownership and Control of Accredited Advertising Agencies* 1974–75 (5318.0) and *Foreign Control in Research and Experimental Development—Private Enterprises*, 1976–77 (5330.0).

CHAPTER 25

SCIENCE AND TECHNOLOGY

Overview

Much of the early history of Australian science was based largely on the individual achievements of a few outstanding scientists.

During and after World War I, governments in various parts of the world took initiatives aimed at encouraging scientific research and applying it to economic growth and national development; Australia was no exception. In 1926 the Council for Scientific and Industrial Research (CSIR) was established by the Commonwealth Government. Initially, it concentrated its efforts on the primary industries, typifying the trend of research in Australia at that time, when most major research initiatives were taken by Government and aimed at the primary industries. The level of research in the universities and industries remained much as before.

With the approach of World War II, however, moves were made to extend scientific support for secondary industry. In the CSIR, Divisions created in the period 1937–40 were to play an important part in the rapid development of Australian industry that occurred under the stimulus of war-time needs.

Expansion of scientific research in general, and industrial research in particular, continued after the war. This expansion extended beyond government into the universities and industry.

Though even today agricultural research absorbs a significant proportion of Australia's research effort, industrial, medical and defence research are now of major importance also. The volume of research in the social sciences and humanities remains small, although in Australia, as elsewhere in recent years, there has been increasing support for the view that adequate weight must be given in governmental policy-making to the social aspects of national proposals.

In 1978–79, the most recent year for which data are available, total expenditure on research and experimental development (R & D) was estimated at $1,054 million, approximately 1 per cent of Gross Domestic Product. This was about the same percentage as for 1976–77.

Governments provided approximately 76 per cent of the funds devoted to R & D and undertook in their own agencies about 45 per cent (in terms of expenditure) of the overall national R & D effort in 1978–79.

Whilst these data serve to illustrate the dominant position occupied by governments in Australian scientific and technological R & D activities, they do not provide a complete picture since comprehensive information is not available on resources devoted to other scientific and technological activities in Australia.

Advice and co-ordination

Australia does not have a single central body with overall policy and funding responsibilities for science and technology. In order to achieve at the national level integration of advice, relative assessment of priorities and the development of criteria and broad strategies for future directions, several national advisory bodies, in addition to government departments such as the Department of Science and Technology and the Department of National Development and Energy have been established:

- The Australian Science and Technology Council (ASTEC), which is responsible to the Prime Minister and advises on science and technology matters including research, development and the application of new and existing knowledge.
- The National Energy Advisory Committee (NEAC), which advises the Minister for National Development and Energy on matters relating to national energy policy.
- The National Energy Research, Development and Demonstration Council (NERDDC) which advises the Minister for National Development and Energy on the co-ordination of the national energy research, development and demonstration effort. The Council also advises the Minister on the disbursement of funds for energy research.
- The Australian Manufacturing Council (AMC), which advises the Minister for Industry and Commerce on matters of industry policy.

Australian Science and Technology Council (ASTEC)

ASTEC was established as a statutory authority in February 1979 under the *Australian Science and Technology Council Act* 1978. The Council reports to the Prime Minister and is the Government's principal source of independent advice on science and technology matters. As part of this role, it maintains a broad overview of the science and technology activities of Commonwealth Government departments and agencies, universities and private enterprise.

The functions of the Council are to investigate, and to furnish information and advice to the Commonwealth Government in respect of matters relating to science and technology including the following:

- the advancement of scientific knowledge;
- the development and application of science and technology in relation to the furtherance of the national well-being;
- the adequacy, effectiveness and overall balance of scientific and technological activities in Australia;
- the identification and support of new ideas in science and technology likely to be of national importance;
- the practical development and application of scientific discoveries;
- the fostering of scientific and technological innovation in industry; and
- the means of improving efficiency in the use of resources by the application of science and technology.

To discharge these functions, the Council is provided with appropriate powers under its Act. The Council is able to form committees, engage consultants, conduct inquiries and collect information on any matter within its functions arising either from its own initiative or at the direction of the Prime Minister. The Council's reports to the Government are made public.

In addition to its overview report *Science and Technology in Australia 1977–78*, ASTEC has provided reports to Government on industrial research and development, the interaction between industry, higher education and government laboratories, basic research, marine sciences and technologies, micro-electronics, medical research, the Office of the Supervising Scientist, earth resources satellites, new telescopes for Australian astronomy, and science and technology in international co-operation and development assistance. The Council also provides comment at the request of the Government on reports prepared by specialist groups and advises the government on new proposals related to science and technology.

Following a recommendation of the Committee of Inquiry into Technological Change in Australia, the Technological Change Committee (TCC) was established in May 1981 as a standing committee of ASTEC. Its functions are to review the processes and trends in technological change in Australia and elsewhere and to evaluate and report on the direct and indirect effects of technological change at the national level. A report on robotics has been sent to the Government and reports are in preparation on information technology and on technological change and employment.

ASTEC also maintains a continuous program of development of its 'strategic' role of matching Australia's science and technology effort to its resources, problems and goals. This involves studies of policy developments in Australia and overseas, reviews of the relevance of existing Australian science and technology programs, and assessments of methods used overseas in areas such as identifying priority areas for research and development.

National Energy Advisory Committee (NEAC)

For information on NEAC *see* Chapter 18, Energy.

National Energy Research, Development and Demonstration Council (NERDDC)

For information on NERDDC *see* Chapter 18, Energy.

Department of Science and Technology

The Department of Science and Technology has general responsibility for science and technology while other Commonwealth Departments including National Development and Energy, Defence Support, Transport and Construction, Health, Primary Industry and Education have lead roles in providing policy advice and funding or in carrying out research in support of their specific objectives.

In addition to the provision of policy advice on science and technology, the Department of Science and Technology provides information about science for the use of decision makers and to the public. Its role enables it to provide a scientific and technological perspective at the interdepartmental level. The Department's responsibilities includes the fostering of closer working relationships and consultation among government agencies, tertiary institutions, scientific associations, the private sector and the community.

The Department's administrative functions in relation to certain scientific services and research activities (such as the Bureau of Meteorology, the Australian Government Analytical Laboratories, the Antarctic Division, the Australian Research Grants Scheme and Australia's science agreements with other countries), help to ensure that its policy advice is tempered with an awareness of practical problems in science and technology.

Committee of Inquiry into Technological Change in Australia (CITCA)

For information on CITCA *see* Year Book No. 65 pp. 661, 666 and 667.

Other Organisations

Advice to government on scientific and technological issues comes also from various learned and professional bodies. Such counsel may be offered on the initiative of the organisation itself or in response to an official request. For example, the Australian Academy of Science maintains a number of national and standing committees which specialise in selected broad fields of science; ad hoc advisory committees are appointed by the Academy from time to time to examine and report on specific matters. In addition, the Academy has maintained since 1967 a Science and Industry Forum which brings together leading scientists and industrialists to discuss topics of national significance, and a complementary Science and Society Forum was inaugurated in 1973. Communication between government and the technology area of the science-technology spectrum is facilitated by the Australian Academy of Technological Sciences.

The most broadly based of the learned and professional bodies is the Australian and New Zealand Association for the Advancement of Science (ANZAAS). The Association has established a Science Policy Commission for giving increased attention to policy issues.

In recent years, matters of scientific and technological policy have received much discussion among such learned and professional organisations as well as in academic circles. Increasingly, other professional bodies with more specific charters are giving attention to matters of science and technology policy. Such bodies include the Royal Australian Chemical Institute (RACI), the Institution of Engineers, Australia, the Australian Institute of Physics, and the Federation of Australian University Staff Associations (FAUSA) which concentrates on issues specifically affecting the university sector.

There are a number of groups within the industry sector—e.g. the Australian Industrial Research Group (AIRG) and some specialist panels (Industry Advisory Councils) of the Australian Manufacturing Council (AMC)—which, from time to time, provide advice to government on industrial research and development.

Intergovernmental co-ordination is affected through bodies established for the purpose. While certain of these are concerned with promoting research and scientific and technical services, these are secondary objectives pursued in tandem with economic, social or environmental goals. Typical of these bodies are the Australian Agricultural Council, the Australian Minerals and Energy Council, the Australian Water Resources Council, and the Australian Environment Council.

The intergovernmental ministerial councils are assisted by standing committees of officials. Frequently, expert working groups and sub-committees are established to consider particular specialised aspects of a Council's broad field of interest and to advise the council through the relevant standing committee.

Councils do not directly undertake research or the provision of services, although such activities are commonly pursued within agencies coming under the control of individual ministerial members. In some instances, councils have control of research funds and provide grants or arrange for projects to be undertaken in particular fields of interest.

In some scientific and technical fields not coming directly within the purview of the Ministerial councils, there are standing arrangements at agency level for consultation and promotion of co-operation (the Electricity Supply Association of Australia is an example).

In addition to intergovernmental agencies, official advisory bodies have been established to deal with activities, interests and responsibilities of the Commonwealth Government and its agencies, and to advise on Government support of higher education and of industry. Amongst these bodies are the Australian Research Grants Committee (ARGC); the National Health and Medical Research Council (NHMRC); the Australian Industrial Research and Development Incentives Board (AIRDIB); the CSIRO Advisory Council and its State Committees; the Rural Industry Research Fund Advisory Committees; the Commonwealth Tertiary Education Commission and its Councils; and the National Energy Research Development and Demonstration Council.

The Prime Minister announced the establishment of the Antarctic Research Policy Advisory Committee in February 1979 to advise the Government, through the Minister for Science and Technology, on the development of an effective and balanced program of scientific and exploration

activity in the Antarctic and sub-Antarctic region. In particular, the Committee advises priorities for scientific and technological research in areas such as mineral and living resources, and on the potential environmental effects of exploitation of resources.

It also advises on the scientific merit and adequacy of Australian Antarctic research programs, on the organisational arrangements for implementation of programs, and on the role of the Antarctic Division of the Department of Science and Technology in this effort. From time to time, it will undertake reviews of existing programs and provide advice on new programs, taking into account current government policy in these areas.

Development of a marine sciences and technologies program has been identified by the Commonwealth Government as a high priority task. Accordingly the Australian Marine Sciences and Technologies Advisory Committee (AMSTAC) was established in February 1979 and advises the Government, through the Minister for Science and Technology, on all aspects of Marine Sciences and Technologies (MST). With the publication of its major report, *Towards a Marine Sciences and Technologies Program for the 1980s*, AMSTAC has essentially completed its initial review of MST in Australia. AMSTAC is now investigating particular priority issues and formulating recommendations to the Government on specific actions to ensure the balanced development of MST. AMSTAC is trying to stimulate community participation in the development of Government policy by obtaining views of MST at public meetings in regional centres.

The Queen's Fellowships and Marine Research Allocations Advisory Committee advises the Minister for Science and Technology on the allocation of grants under the Marine Sciences and Technologies Grants Scheme and on the award of Queen's Fellowships in Marine Science. An amount of $2.5 million was allocated to these schemes in 1982–83.

The Australian Industrial Research and Development Incentives Advisory Committee is a statutory body established as a source of advice on matters relating to the operation of the *Industrial Research and Development Incentives Act 1976* including, in particular, matters relating to the Act's public-interest provisions. These provisions enable the contracting out to industry of industrial research projects aimed at the commercial development of major research breakthroughs achieved in the public sector and non-profit research institutions.

At its initial meeting, in August 1982, the Committee recommended that the Government support a detailed feasibility study of STARLAB, a joint Australian-Canadian-American proposal to place a one-metre-diameter telescope in earth orbit, using the NASA Space Shuttle. Subsequently the Government allocated $3.3 million for such a feasibility study.

In October 1981 the Government established the Recombinant DNA Monitoring Committee, with a Scientific Sub-committee, following advice from the Australian Academy of Science. The Academy had operated a voluntary monitoring system for DNA research work from 1975 to 1981 in the wake of concern, in the international scientific community, about the possibilities of moral biological hazards associated with genetic manipulations using the newly developed recombinant DNA technique. When it became apparent that industry would soon be using this technology the Academy recommended that the Government take over the monitoring function. The Recombinant DNA Monitoring Committee will assess the potential hazards associated with the technique and accordingly establish voluntary guidelines for the conduct of this work.

The Building Research and Development Advisory Committee is the main link between private industry and the principal Commonwealth research groups, the CSIRO Division of Building Research, the Department of Transport and Construction, and the Physical Working Environment Branch of the Department of Employment and Industrial Relations.

The Committee advises the Commonwealth Government organisations concerned in building research and development on the technical problems of industry and where research, investigation, development work or technical liaison activity is required. It also assists in the dissemination of knowledge of the activities of organisations undertaking research and development work, and investigates the nature and extent of both government and privately funded research in the Australian building industry and advises all parties concerned of any overlapping or duplication of research effort.

The Technology Transfer Council (TTC) was established initially for a three-year pilot period in 1979 to provide a technical referral program aimed at utilising the technological expertise resident in academic, government and private research institutions and to assist in the effective use of existing technology in Australian industry. A network of eight centres in the five major mainland capitals is operating initially in the metals manufacturing industry. The prime focus is on small-to-medium-size firms which usually do not have the in-house technical expertise to devote to problem solving and which lack awareness of technologies available. With continuing Commonwealth support over the next three years, the TTC is expanding its operations from the pilot stage towards a viable long-term program.

Activities include a range of practical courses and workshops, company visits and provision of process and product development packages which identify new products and processes suitable for the individual company to assist in business improvement and diversification.

TTC officers are a direct link between companies and the vast amount of technical information available from local and overseas experts and data bases.

The National Information Technology Week Committee was established in 1979 as an initiative of the Department of Science and Technology in conjunction with the Australian Computer Society Inc. The Committee conducts an annual Information Technology Week throughout Australia, designed to focus public attention on the present and future uses of information-handling equipment and systems including communications, computers, videotex, word processors and micrographics.

For some years the Government has given recognised research associations grants which match industry research contributions within certain criteria. Research associations arrange scientific or industrial research and technology transfer for the benefit of member companies in the industry sector. There are currently five associations (Australian Welding Research Association, Bread Research Institute of Australia, Brick Development Research Institute, Radiata Pine Research Institute and Sugar Research Institute) receiving grants which totalled $1.2 million in 1981-82. The program is jointly administered by the Department of Science and Technology and the CSIRO.

Established in 1963, the Australian Water Resources Council (AWRC) is a Commonwealth and State Ministers' forum for dealing with water resources matters of mutual interest. Commonwealth and State collaboration through the AWRC initially concentrated on resources assessment and research, but more recently the Council's functions have been expanded to include management and planning. The AWRC and its committees have provided an important contribution to the development of Commonwealth water policies and programs and, in many cases, provide the means of implementing them.

As part of its Secretariat role, the Department of National Development and Energy publishes reports and documents, and also arranges seminars and workshops on behalf of the AWRC.

The Commonwealth established the Water Research Fund in 1968 to provide support for a research program developed through the AWRC. The fund is administered by the Department of National Development and Energy. Funds have been committed on a triennial basis, currently running at $600,000 annually.

The program covers basic and applied research into all aspects of water resources with the aim of providing a better basis for the assessment, planning, development and management of Australia's water resources. It complements research work carried out by government agencies, universities and other organisations and, in general, is used to stimulate new work not handled within existing programs.

The program for the current triennium beginning in 1980–81 is based on a series of priority areas identified by the AWRC; including flood plain management, water storage management, non-point sources of pollution, salinity, waste-water disposal and reuse, drinking water quality, aquatic biology, groundwater, evapotranspiration, and instruments and techniques.

The Commonwealth Government has now decided to establish a National Water Research Council to advise the Minister for National Development and Energy on national research goals, needs and priorities. It will recommend programs and projects as well as appropriate levels of funding. The membership of the Council is now being formulated, and the program recommended by the Council will replace the Australian Water Resources Council's research program as projects being funded in the current triennium are completed.

Expenditure and manpower

Project SCORE

Project SCORE (Survey and Comparisons of Research Expenditures) provides details of Australian expenditure on research and experimental development activities. It should be noted, however, that it does not provide comprehensive data on all resources devoted to scientific and technological activities in Australia. Programs not covered by Project SCORE, some of which involve large expenditures, are those which have no research and development component; such programs include many of those aimed at providing scientific or technological services.

Coverage and Methodology. The first comprehensive survey of expenditure on research and experimental development (R & D) was carried out for the 1968–69 financial year. This survey, known as Project SCORE, covered R & D expenditure and manpower in the natural and social sciences in all sectors of the Australian economy. The Project was carried out principally by means of

questionnaires and, in order to provide direct comparison with other OECD countries, followed (with some exceptions) guidelines laid down by the OECD. In addition to a summary report dealing with the overall national situation, separate Project SCORE reports cover the following sectors: Commonwealth Government, Private Enterprise, State Government, Higher Education, and Private Non-profit. A summary of the results for 1968–69 is given in Year Book No. 60 pp. 995–1005.

The results of the second survey, for the 1973–74 financial year (1974 calendar year for the Higher Education sector), were published in two volumes: Volume 1 contains the reports for the Commonwealth Government, State Government, and Private Non-profit sectors, while Volume 2 presents an all-sector summary together with the reports for the Private Enterprise and Higher Education sectors. A summary of the results is given in Year Book No. 61 pp. 989–998.

The results of the third survey, for the 1976–77 financial year (1976 calendar year for the Higher Education sector), were published with reports for all-sectors presented in the one volume. A summary of the results is given in Year Book No. 64 pp. 703–713. A fourth survey was conducted in respect of the 1978–79 financial year (1978 calendar year for the Higher education sector), and comprehensive results are contained in the ABS publications: *Research and Experimental Development, Business Enterprises, Australia, 1978–79* (8104.0); *Research and Experimental Development, General Government Organisations, Australia, 1978–79* (8109.0); *Research and Experimental Development Higher Education Organisations, Australia, 1978* (8111.0); *Research and Experimental Development, All Sector Summary, Australia, 1978–79* (8112.0).

In April 1981, the Commonwealth Government decided that, as a result of the Review of Commonwealth Functions future Project SCORE surveys would be conducted triennially instead of biennially. The current Project SCORE surveys are being held in respect of 1981–82.

For the purposes of the surveys, *research* was defined as original investigation directed towards increasing the general body of knowledge about, or understanding of, the subject studied. Within this category, *basic research* was taken to be original investigation of which the primary aim was more complete knowledge or understanding of the subject under study, while *applied research* was taken to be original investigation of which the primary aim was the solution of a recognised practical problem. Work was defined as *experimental development* where it involved the systematic use or adaptation of research results directed towards the production of new or improved products, processes, systems or methods. The physical, chemical, biological, earth, engineering and applied, agricultural and medical sciences were included in the natural sciences, which together with the social sciences, were covered in all the surveys. R & D in the humanities, which was excluded in 1968–69, has been included in each subsequent survey.

The estimate of Gross Expenditure on Research and Experimental Development (GERD) carried out in Australia during 1978–79 was $1,054m at current prices. This represents a 21 per cent increase in expenditure compared with 1976–77. At *constant (average 1974–75)* prices there was no change in GERD between those two years.

Of the $1,054m *current* price estimate of 1978–79 GERD, business enterprises accounted for $246m (23 per cent), general government organisations $470m (45 per cent), higher education organisations $326m (31 per cent), and private non-profit organisations $13m (1 per cent). General government sources funded $806m (76 per cent), business enterprises sources funded $217m (21 per cent), and other Australian and overseas sources funded $30m (3 per cent).

The total manpower effort devoted to R&D carried out in Australia during 1978–79 was 40,684 man-years. This represents a decrease of 4 per cent compared with 1976–77. Of the total manpower effort, business enterprises accounted for 8,626 man-years (21 per cent), general government organisations 15,462 man-years (38 per cent), higher education organisations 16,050 man-years (39 per cent) and private non-profit organisations 546 man-years (1 per cent).

A summary of the data incorporated in *Research and Experimental Development, All Sector Summary, Australia, 1978–79* (8112.0) is shown below.

GROSS EXPENDITURE ON RESEARCH AND EXPERIMENTAL DEVELOPMENT (GERD) CARRIED OUT IN AUSTRALIA, 1976–77 AND 1978–79
GERD BY SECTOR AT CURRENT AND CONSTANT (AVERAGE 1974–75) PRICES
($m)

Sector	*1976–77*	*1978–79*
AT CURRENT PRICES		
Business enterprises	202.8	245.8
General government—		
Commonwealth	289.5	321.2
State	126.3	148.7
Higher education	244.1	325.5
Private non-profit	10.7	12.6
Total	**873.4**	**1,053.8**
AT CONSTANT (AVERAGE 1974–75) PRICES		
Business enterprises	157.5	157.3
General government—		
Commonwealth	228.1	217.3
State	99.8	92.8
Higher education	213.7	229.5
Private non-profit	8.4	8.4
Total	**707.5**	**705.3**

GROSS EXPENDITURE ON RESEARCH AND EXPERIMENTAL DEVELOPMENT (GERD) CARRIED OUT IN AUSTRALIA, 1976-77 AND 1978-79
GERD BY SECTOR BY TYPE OF EXPENDITURE
($'000)

	1976-77					*1978-79*				
Sector	*Land and buildings*	*Other capital expen-diture*	*Wages and salaries*	*Other current expen-diture*	*Total*	*Land and buildings*	*Other capital expen-diture*	*Wages and salaries*	*Other current expen-diture*	*Total*
Business enterprises	6,411	12,809	134,632	48,962	202,815	4,731	21,353	153,246	66,510	245,841
General government—										
Commonwealth	12,364	19,054	194,896	63,174	289,488	31,821	17,638	200,122	71,605	321,187
State	6,979	5,990	88,820	24,540	126,329	3,720	7,937	107,764	29,282	148,703
Higher education	8,500	10,007	184,190	41,358	244,053	8,064	24,177	239,917	53,356	325,514
Private non-profit	104	844	7,098	2,667	10,712	260	837	8,044	3,424	12,566
Total	**34,358**	**48,704**	**609,636**	**180,701**	**873,397**	**48,596**	**71,942**	**709,093**	**224,177**	**1,053,811**

RESEARCH AND EXPERIMENTAL DEVELOPMENT (R&D) MANPOWER EFFORT IN AUSTRALIA, 1976-77 AND 1978-79
R&D MANPOWER BY SECTOR BY TYPE OF MANPOWER
(man-years)

	1976-77				*1978-79*			
Sector	*Researchers*	*Technicians*	*Other supporting staff*	*Total*	*Researchers*	*Technicians*	*Other supporting staff*	*Total*
Business enterprises	4,080	3,677	1,586	9,343	3,649	3,171	1,806	8,626
General government—								
Commonwealth	4,284	3,632	2,508	10,423	4,054	3,315	1,960	9,329
State	2,662	1,963	1,980	6,605	2,401	1,941	1,790	6,133
Higher education	11,285	3,189	815	15,290	11,894	3,132	1,024	16,050
Private non-profit	260	160	158	579	265	148	133	546
Total	**22,571**	**12,621**	**7,047**	**42,240**	**22,263**	**11,707**	**6,713**	**40,684**

GROSS EXPENDITURE ON RESEARCH AND EXPERIMENTAL DEVELOPMENT (GERD) CARRIED OUT IN AUSTRALIA, 1978-79
GERD BY SECTOR BY SOURCE OF FUNDS
($'000)

Sector	Source of funds: Commonwealth government	State government	Business enterprise	Higher education	Private non-profit	Other Australian sources and overseas	Total
Business enterprises	25,308	1,368	209,486	26	459	9,193	245,841
General government —							
Commonwealth	316,166	362	2,263	54	64	2,278	321,187
State	10,456	132,946	2,468	66	1,040	1,726	148,703
Higher education	309,412	3,879	2,865	–	7,574	1,784	325,514
Private non-profit	4,644	1,551	389	234	3,945	1,803	12,566
Total	**665,986**	**140,106**	**217,471**	**380**	**13,082**	**16,784**	**1,053,811**

GROSS EXPENDITURE ON RESEARCH AND EXPERIMENTAL DEVELOPMENT (GERD) CARRIED OUT IN AUSTRALIA, 1978-79
GERD BY SECTOR BY TYPE OF ACTIVITY
($'000)

Sector	Type of activity: Pure basic research	Strategic basic research	Applied research	Experimental development	Total
Business enterprises	3,781	7,005	81,364	153,692	245,841
General government —					
Commonwealth	15,651	83,027	169,776	52,733	321,187
State	4,237	8,152	122,035	14,279	148,703
Higher education	165,239	59,354	80,566	20,355	325,514
Private non-profit	3,482	1,773	7,262	48	12,566
Total	**192,390**	**159,311**	**461,003**	**241,107**	**1,053,811**

GROSS EXPENDITURE ON RESEARCH AND EXPERIMENTAL DEVELOPMENT (GERD) CARRIED OUT IN AUSTRALIA
1978-79
GERD BY SECTOR BY STATE
($'000)

Sector	State: N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Overseas	Total
Business enterprises	90,644	106,257	20,690	15,527	5,851	3,752	2,670	449	–	245,841
General government—										
Commonwealth	82,184	104,678	22,981	45,484	9,743	2,451	883	50,241	2,542	321,187
State	46,514	28,191	34,708	10,473	23,774	5,011	–	9	23	148,703
Higher education	101,291	69,766	35,723	30,562	21,672	6,536	–	59,964	–	325,514
Private non-profit	4,047	8,350	57	30	19	16	5	34	8	12,566
Total	**324,680**	**317,242**	**114,159**	**102,076**	**61,059**	**17,766**	**3,558**	**110,697**	**2,573**	**1,053,811**

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT IN AUSTRALIA, 1978-79
RESEARCH EFFORT BY STATE
(man-years)

Sector	State: N.S.W	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Overseas	Total
Business enterprises	1,269	1,636	345	244	70	61	1	9	14	3,649
General government—										
Commonwealth	981	1,327	208	588	115	25	9	782	20	4,054
State	679	504	576	233	307	102	–	–	–	2,401
Higher education	3,617	3,358	1,339	1,129	871	247	–	1,332	–	11,894
Private non-profit	86	173	2	2	1	1	–	1	–	265
Total	**6,632**	**6,998**	**2,470**	**2,196**	**1,364**	**436**	**10**	**2,124**	**34**	**22,263**

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT IN AUSTRALIA(a), 1978-79
R&D EXPENDITURE AND R&D MANPOWER BY SOCIO-ECONOMIC OBJECTIVE BY SECTOR

	Expenditure ($'000)					*Manpower (man-years)*				
	General government					*General government*				
Socio-economic objective	*Common-wealth*	*State*	*Higher education*	*Private non-profit*	*Total*	*Common-wealth*	*State*	*Higher education*	*Private non-profit*	*Total*
National security (defence)	*89,166*	-	*270*	-	*89,436*	*3,826*	-	*10*	-	*3,836*
Economic development—										
Agriculture	50,971	102,268	25,837	30	179,106	1,193	4,129	1,384	1	6,707
Forestry and fisheries	11,315	13,834	1,982	75	27,206	254	659	114	1	1,028
Mining (prospecting)—										
energy sources	1,866	447	325	-	2,638	58	12	17	-	87
other	10,047	25	1,059	-	11,131	269	1	61	-	331
Mining (extraction)—										
energy sources	827	-	317	-	1,144	24	-	18	-	42
other	5,548	144	1,787	-	7,479	134	6	94	-	234
Manufacturing	47,038	1,133	11,177	-	59,348	1,029	42	657	-	1,728
Construction	6,498	36	1,979	-	8,513	204	2	97	-	303
Energy	19,667	319	8,981	10	28,977	462	9	411	1	883
Transport	1,580	5,648	2,301	68	9,597	29	172	131	3	335
Communications	360	-	2,223	-	2,583	15	-	125	-	140
Economic services n.e.c.	11,152	890	12,177	169	24,388	321	50	612	6	989
Total economic development	*166,870*	*124,743*	*70,146*	*352*	*362,111*	*3,991*	*5,082*	*3,721*	*13*	*12,807*
Community welfare—										
Urban and regional planning	1,153	200	2,519	35	3,907	30	10	152	4	196
Environment	28,405	6,651	4,681	9	39,746	616	242	230	-	1,088
Health	10,364	5,864	56,894	9,979	83,101	334	299	2,284	448	3,365
Education	212	1,619	11,411	1,554	14,796	7	65	585	65	722
Welfare	877	284	3,262	61	4,484	42	15	157	4	218
Community services n.e.c.	1,081	957	8,084	2	10,124	38	45	365	1	449
Total community welfare	*42,092*	*15,576*	*86,851*	*11,641*	*156,160*	*1,067*	*675*	*3,773*	*522*	*6,037*
Advancement of knowledge—										
Earth, ocean and atmosphere n.e.c.	3,597	4,358	17,587	150	25,692	132	213	996	3	1,344
General advancement of knowledge	19,462	4,027	150,658	422	174,569	313	163	7,551	9	8,036
Total advancement of knowledge	*23,059*	*8,385*	*168,245*	*572*	*200,261*	*445*	*376*	*8,547*	*12*	*9,380*
Total	**321,187**	**148,703**	**325,514**	**12,566**	**807,970**	**9,329**	**6,133**	**16,050**	**546**	**32,058**

(a) Excludes business enterprises.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT IN AUSTRALIA (a), 1978-79
R&D EXPENDITURE AND R&D MANPOWER BY FIELD OF SCIENCE BY SECTOR

	Expenditure ($'000)					*Manpower (man-years)*				
	General government					*General government*				
Field of Science	*Commonwealth*	*State*	*Higher education*	*Private non-profit*	*Total*	*Commonwealth*	*State*	*Higher education*	*Private non-profit*	*Total*
Natural sciences—										
Physical sciences	34,754	1,131	34,437	105	70,427	819	48	1,496	2	2,365
Chemical sciences	19,921	1,429	23,919	112	45,381	484	48	1,202	2	1,736
Biological sciences	30,424	13,137	56,485	2,277	102,323	664	568	2,771	83	4,086
Earth sciences	36,451	4,901	13,585	21	54,958	887	220	741	–	1,848
Engineering and applied sciences	134,885	7,192	36,161	187	178,425	4,756	229	2,007	6	6,998
Agricultural sciences	52,323	111,118	24,706	36	188,183	1,225	4,554	1,274	2	7,055
Medical sciences	4,458	4,895	45,217	7,898	62,468	180	240	1,649	370	2,439
Total natural sciences	*313,217*	*143,803*	*234,511*	*10,636*	*702,167*	*9,013*	*5,905*	*11,140*	*465*	*26,523*
Social sciences and humanities—										
Economics	2,343	659	12,122	134	15,258	120	37	469	3	629
Education	464	1,661	10,989	1,557	14,671	18	64	777	65	924
Management	1,409	262	1,034	–	2,705	42	11	52	–	105
Political science	–	68	4,775	–	4,843	–	3	236	–	239
Sociology	925	474	4,660	91	6,150	29	23	264	8	324
Information science	1,152	398	57,421	9	62,173	47	20	3,112	1	3,312
Other social sciences and humanities	1,677	1,378		138		59	68		5	
Total social sciences and humanities	*7,970*	*4,900*	*91,003*	*1,930*	*105,803*	*316*	*227*	*4,910*	*81*	*5,534*
Total	**321,187**	**148,703**	**325,514**	**12,566**	**807,970**	**9,329**	**6,133**	**16,050**	**546**	**32,058**

(a) Excludes business enterprises.

PAYMENTS AND RECEIPTS FOR TECHNICAL KNOW-HOW, AUSTRALIA, 1978-79
PAYMENTS AND RECEIPTS BY SECTOR BY TYPE OF TECHNICAL KNOW-HOW
($'000)

	Payments for technical know-how			*Receipts for technical know-how*		
Sector	*Patent licence fees and royalties*	*Other technical know-how*	*Total*	*Patent licence fees and royalties*	*Other technical know-how*	*Total*
Business enterprises	71,008	59,170	130,178	5,322	10,078	15,399
General government—						
Commonwealth	251	–	251	174	9	183
State	1	–	1	10	–	10
Higher education(*a*)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Private non-profit	–	28	28	–	15	15
Total	**71,260**	**59,198**	**130,458**	**5,506**	**10,102**	**15,607**

(*a*) Not collected.

PATENT ACTIVITY, AUSTRALIA, JULY 1977 TO JUNE 1979
PATENT APPLICATIONS LODGED AND PATENTS GRANTED BY SECTOR

Sector	*Patent applications lodged in Australia*	*Patents granted in Australia*	*Patent applications lodged abroad*	*Patents granted abroad*
Business enterprises	985	497	2,536	1,220
General government—				
Commonwealth	108	60	373	159
State	3	2	7	1
Higher education(*a*)	n.a.	n.a.	n.a.	n.a.
Private non-profit	–	–	–	–
Total	**1,096**	**559**	**2,916**	**1,380**

(*a*) Not collected.

Energy Research and Experimental Development Statistics. For information on these statistics *see* Chapter 18, Energy.

Resources and services

Although power to regulate the development and utilisation of Australia's natural resources rests largely with the States, the Commonwealth Government, in part because of its jurisdiction in the control of Australia's overseas trade, also plays an important role. Extensive machinery exists for consultation and collaboration between the Commonwealth and State governments in relation to the development and management of natural resources.

Several important resources and services are dealt with elsewhere in this Year Book and are thus not included in this chapter. These include health (Chapter 10), agricultural industries (Chapter 13), forestry and fisheries (Chapter 14), water resources (Chapter 15), mineral industry (Chapter 16), transport and communications (Chapter 20) and environment (Chapter 26).

Soil resources

A Standing Committee on Soil Conservation was established in 1946. It comprises the heads of soil conservation bodies in the States and representatives of relevant Commonwealth agencies. The Committee co-ordinates activities of interest to its member bodies such as the survey of erosion throughout Australia which was carried out in the late 1960s, and the development of co-operative arrangements for in-service training of technical personnel.

Meteorology

The Bureau of Meteorology, which is a Division of the Department of Science and Technology, is the national authority for providing weather forecasting and warning services, and general meteorological information and consultative advice. Users of these services include the general public, defence forces, civil aviation and marine authorities, and specialist groups in primary and secondary industries.

Programs of research are carried out in support of these services, often in co-operation with other institutions concerned with meteorological science including universities and the CSIRO. The Australian Numerical Meteorology Research Centre, which specialises in the development of numerical model techniques for predicting atmospheric behaviour, is operated jointly by the Department of Science and Technology and CSIRO.

Total expenditure by the Bureau in 1981-82 was approximately $53 million.

Ionospheric Prediction Service

The Ionospheric Prediction Service (IPS) Branch of the Department of Science and Technology exists to assist users of radio communications to achieve the most effective and efficient use of radio communication influenced by or dependent on the ionosphere. The Branch operates ionospheric and solar observatories in Australia and Papua New Guinea, produces radio propagation predictions and warnings of ionospheric and magnetic disturbances.

Research into physical phenomena affecting the ionosphere and into radio wave propagation forms part of the regular activity of the IPS.

Satellite remote sensing

In 1978 the Commonwealth Government decided to establish facilities for receiving and processing information from the U.S. National Aeronautics and Space Administration's series of Landsat satellites. The Department of Science and Technology manages the project. A data acquisition station has been established at Alice Springs and a data processing facility has been installed in Canberra. Additional information on Landsat stations is provided at pages 722–4 of Year Book No. 64.

Scientific and Technological Information Services

Scientific literature and technical information for scientists and technologists is provided through library and information services provided by the Commonwealth of Australia, State instrumentalities, tertiary institutions and industrial organisations. The more important scientific libraries and information services within the Commonwealth sector are the National Library of Australia, the CSIRO Library network and information services, the library and information services maintained by the Department of Health and that of the Australian Atomic Energy Commission.

Several Commonwealth Agencies including the Australian Atomic Energy Commission, the CSIRO, the Department of Science and Technology and the National Library of Australia are now offering Australian users access to overseas bibliographic and factual data bases and to the Australian Information Network (AUSINET). The National Library of Australia and the Department of Health operate a national health information network, the Australian Medline Network. The Overseas Telecommunications Commission is operating an international data transmission service known as MIDAS (Multi-mode International Data Acquisition Service) which has facilitated low-cost access to international data stores in North America and Europe.

Another overseas trend now arousing interest amongst Australian scientists is the development of numerical data bases which provide quick access to factual data. The CSIRO is currently operating Thermodata, a metallurgical thermodynamic data base and other similar data bases for crystallography and mass spectra data. Similar numeric and factual data bases are at present being evaluated by other Commonwealth agencies.

A number of Australian scientific and technological indexes and directories now exist or are in the course of production by Commonwealth Government departments and agencies. Recent initiatives are:

- a machine based register of Australian energy research, development and demonstration projects providing a technical description of each project. Initiated by the Department of National Development and Energy as part of a National Energy Information System (NEIS) the register is now being operated by CSIRO;
- a national directory of current Australian marine research. Entitled the *Directory of Australian Marine Research in Progress*, it is a joint publication by the Department of Science and Technology, the Victorian Institute of Marine Sciences and the Great Barrier Reef Marine Park Authority. The Directory identifies individuals and organisations undertaking marine research and provides details of their objectives, methodology, publications, current status, funding, etc;
- a computerised bibliographic data base, STREAMLINE, providing references to published and unpublished documents and current research projects on all facets of water and wastewater in Australia, has been established by the Department of National Development and Energy;
- an Australian Bibliographic Network (ABN), launched by the National Library of Australia late in 1981, is a national, shared cataloguing system which provides access to a data base of more than 2.5 million records for books, periodicals and other materials such as films, pictures and manuscripts, etc., covering the whole field of knowledge including science and technology. ABN, potentially available for use by any library in Australia, covers publications produced in the last decade, increasingly is covering earlier publications and provides information retrieval and document location facilities.

Units and Standards of Physical Measurement

The National Standards Commission advises on weights and measures, particularly on units and standards of physical measurement and the suitability of measuring instruments for use in trade.

Currently, additional legal units of measurement are being prescribed, and the hierarchy of Australian standards is under review. Electronics, particularly load-cell technology in weighing, so increases the versatility of trade-measuring instruments that they now function in manners not previously possible. Development of trade-measuring instrumentation is so rapid that models are being superseded in four to five years, whereas the older mechanical instruments were a once-in-a-lifetime purchase.

The Commission is involved with the rate of change and the technology which is being introduced.

Major government research agencies

Expenditure on research and experimental development carried out by general government organisations in 1978-79 was estimated to be $470 million at current prices. This represents a 13 per cent increase in expenditure compared with 1976-77. For additional information *see* Project SCORE paragraphs in this chapter.

Commonwealth Scientific and Industrial Research Organization (CSIRO)

The CSIRO is the largest scientific research organization in Australia. It has a total staff of some 7,500 people located in more than 100 laboratories and field stations throughout Australia. About one-third of the staff are scientists.

It is a statutory body established by the *Science and Industry Research Act 1949*. Under the Act, CSIRO replaced the former Council for Scientific and Industrial Research, established in 1926. The Organization was restructured by amendments to the Act in 1978.

Briefly, the functions of CSIRO are:

- conduct of scientific research and application of the results;
- research training and funding;
- maintenance of measurement standards;
- publication and dissemination of scientific information.

When the Organization was first set up, its research centred on solving the problems then facing agriculture and industry. Today, its research extends not only to those areas but into others affecting every Australian—the environment, human nutrition, conservation, urban planning.

CSIRO to governed by an Executive comprising three full-time members, including the Chairman, and five part-time Members. An Advisory Council together with committees in each State and the Northern Territory, with members appointed to represent the range of interests in the Australian community, provide independent advice to the Executive.

The CSIRO's research is carried out in some forty-one divisions and seven smaller units. The divisions and units are grouped into the following five Institutes:

Institute of Animal and Food Sciences: Divisions of Animal Health, Animal Production, Fisheries Research, Food Research, Human Nutrition, Tropical Animal Science Project for Animal Research and Development, Molecular and Cellular Biology Unit, Wheat Research Unit.

Institute of Biological Resources: Divisions of Entomology, Forest Research, Horticultural Research, Centre for Irrigation Research, Water and Land Resources, Plant Industry, Soils, Tropical Crops and Pastures, Wildlife Research, Rangelands Research Unit.

Institute of Energy and Earth Resources: Divisions of Applied Geomechanics, Energy Chemistry, Energy Technology, Fossil Fuels, Ground Water Research, Mineral Chemistry, Mineral Engineering, Mineral Physics, Mineralogy, Physical Technology Unit.

Institute of Industrial Technology: Divisions of Applied Organic Chemistry, Building Research, Chemical Technology, Manufacturing Technology, Protein Chemistry, Textile Industry, Textile Physics.

Institute of Physical Sciences: Divisions of Applied Physics, Atmospheric Physics, Chemical Physics, Cloud Physics, Computing Research, Environmental Mechanics, Materials Science, Mathematics and Statistics, Oceanography, Radiophysics, Australian Numerical Meteorology Research Centre.

A Bureau of Scientific Services is responsible for facilitating and promoting the transfer and utilization of technology and scientific and technical information for the benefit of Australian science, industry and the community at large, and undertaking development assistance projects with other nations.

The main role of CSIRO is to plan and execute a comprehensive program of general scientific research on behalf of the Commonwealth, except in the areas of defence, nuclear energy and clinical medicine. With these main exceptions, however, the research work of CSIRO includes all fields of the physical and biological sciences, and their applications.

The types of research undertaken range from fundamental studies through to experimental development, with the main concentration being on strategic research undertaken in the national interest.

Areas of research designated as having high priority for expansion in the 1980s are:

- Biotechnology;
- Water and soils;
- Oceanography;
- Energy;
- Plant pathology;
- Manufacturing industry.

The CSIRO budget for 1982–83 is an estimated $359 million, most of which is provided directly by the Commonwealth Government. Of this, $56 million is appropriated to Commonwealth departments (e.g. Transport and Construction) on behalf of CSIRO for capital expenditure. Some $31 million is contributed by trust funds concerned with the wool, meat, wheat, dairying, fishing and dried fruit industries, by individual companies, by Australian and overseas government instrumentalities, and by private foundations. The trust funds constitute about half of these contributory funds and are derived mainly from industry levies but there is also a Commonwealth Government component.

The Australian Atomic Energy Commission (AAEC)

For information on AAEC *see* Chapter 18, Energy.

Antarctic Division, Department of Science and Technology

Australia has been active in research and exploration in the Antarctic region since early in the present century, but the overall effort has expanded appreciably since the 1940s when the Government established the Australian National Antarctic Research Expeditions (ANARE) operated by the Antarctic Division.

The Antarctic Division of the Department of Science and Technology administers, organises and provides logistic support for Australian activities in Antarctica, including the maintenance of three Antarctic stations (Mawson, Casey and Davis) and one sub-Antarctic station on Macquarie Island.

The Australian Antarctic scientific program encompasses research in the fields of marine and terrestrial biology, oceanography, earth sciences, glaciology, cosmic ray and upper atmosphere physics,

meteorology, bathymetry, medical research, surveying and mapping. Each year, the Antarctic Division, universities and private and public research organisations are invited to submit research proposals to the Antarctic Research Policy Advisory Committee.

Australia is a signatory to the Antarctic Treaty, and many of its scientific activities in Antarctica are undertaken in collaboration with other signatory countries.

Productivity Development Division, Department of Science and Technology

The Productivity Development Division of the Department of Science and Technology administers a range of programs which:

- encourage the development of a national technological capability and the commercial exploitation thereof;
- promote the application of technology in industry to enhance industrial capability, competitiveness and productivity;
- ensure the transfer of existing local and overseas technological knowledge to industry and the community;
- facilitate community awareness of technology developments of critical importance.

In April 1982 the Government accepted the recommendation of the Committee to Review Productivity and Innovation Programs which set down criteria and guidelines for future involvement in industry matters. Consequently a number of programs, undertaken by the Department, are to be transferred or terminated, with a redirection of effort in others.

The National Materials Handling Bureau (which is a part of the Division) provides research and development assistance on materials handling, physical distribution and packaging. The transfer of the Bureau's functions to the private sector is under negotiation.

Australian Institute of Marine Science (AIMS)

The AIMS has been established on a 190 hectare site within a national park at Cape Ferguson, 50 kilometres south of Townsville in North Queensland. Comprehensive headquarters facilities were opened in September 1977 and include laboratories, lecture theatre, library, computer centre, administrative and other support services. A harbour for the Institute's vessels was completed in April 1976. A 24.4 metre ocean-going research vessel constructed specifically for the Institute was delivered during October 1978.

The Institute's main function is to undertake research; in this regard its activities focus on contributing to an understanding of the tropical marine environment and its associated living communities. Attention is currently concentrated on coral reef and mangrove ecosystems. A multidisciplinary approach is taken to investigate the character of these systems and the manner in which their productivity, diversity, stability and other essential attributes are affected by environment and by the adaptation and interactions of component elements of the biota. A significant proportion of the Institute's investigations is undertaken by external collaboration, with an active visiting investigator program an important means of achieving that objective. The interests of the research staff are necessarily diverse and include physical oceanography, marine chemistry and various aspects of biology, from biochemistry to trophodynamic ecology.

Defence Science and Technology Organisation

The Defence Science and Technology Organisation, Department of Defence Support, conducts a significant amount of research and development, mainly in engineering and the physical sciences. Current expenditure is about $140 million per year.

Further details on the work of the organisation, and its ten research and testing establishments are found in Chapter 4, Defence.

Engineering Division, Department of Transport and Construction

To support its operations as the major design and construction authority for the Commonwealth, the Department of Transport and Construction carries out applied research and laboratory testing and provides a comprehensive range of technical services. In many cases, these services directly or indirectly benefit the needs of private industry and the public generally.

Research and special testing is conducted mainly by the Engineering Division at establishments such as the Experimental Building Station in Sydney, which specialises in building and building components, and the Central Investigation and Research Laboratory in Melbourne, which specialises in engineering materials and products.

Telecom Australia Research Laboratories

Telecom Australia maintains significant facilities and a staff of approximately 500 for the performance of research and development in telecommunications science and technology.

The primary objective of Telecom's research and development is to evaluate world advances in telecommunications services and systems so that it can select those best suited to the Australian environment. It also applies its research and development facilities to the solution of technical problems arising in the operation of the Australian telecommunications network. It also co-ordinates its research and development with that of industry and academia in telecommunications and supports their efforts with research and development contracts and grants made through the Australian Computer Research Board and the Radio Research Board.

Research by business enterprises

Expenditure on research and experimental development carried out by business enterprises in 1978–79 was estimated to be $246 million at current prices. This represents a 21 per cent increase in expenditure compared with 1976–77.

The Government provides funding to encourage industrial research and development (IR and D) under the provisions of the *Industrial Research and Development Incentives Act* 1976. Two types of grants are payable under the Act: commencement grants to encourage companies to develop a basic R & D capability; and grants designed to give on-going support for companies with established IR and D facilities to undertake specific IR and D projects showing technical and commercial promise. Commencement grants are paid at the rate of 50 per cent of eligible expenditure up to a ceiling of $40,000, and project grants at 50 per cent of eligible expenditure up to a ceiling of $750,000. In addition the Minister for Science and Technology is empowered under the Act to approve full funding of projects considered to be in the 'public interest'. $49.1 million was appropriated in the 1982–83 Budget for the Industrial Research and Development Incentives Scheme and other associated industry technology programs. The Government intends that a greater proportion of its own research will be contracted out to industry. In addition, support for new and existing research associations will be increased.

Payments and Receipts for Patent Licence Fees and other Technical Know-How

Australian enterprises have significantly supplemented their R & D efforts by either purchasing or licensing foreign technology. This activity is largely associated with trans-national firms. The ABS has estimated that Australian enterprises paid $130 million in 1978–79 for patent licences and other technical know-how, of which $128 million was remitted overseas.

In 1978–79 Australia enterprises received $15 million from the sale of patent licences and other technical know-how, of which $12 million was received from overseas.

More detailed statistics in respect of these data are shown in *Research and Experimental Development, Business Enterprises Australia, 1978–79* (8104.0), a summary of which is given in Year Book No. 66 page 683.

The adoption by industry of new technology also attracts financial support from the Commonwealth through the *Industrial Design Council of Australia* and the *Standards Association of Australia* which receive subsidies from the Commonwealth Government.

The Australian Patent Information Service (APIS)

APIS exists to encourage and assist industry to extract technological information from the major industrialised nations' patent specifications. APIS Information Officers based in Canberra, Melbourne and Sydney can assist industry by conducting technology searches, providing information on the activities in specialist fields, providing general overviews of particular technology areas, etc.

Recent initiatives have included enhancement of public-search files in Patent Sub-Offices, in particular US and UK patent files and Australian design files; and a solar-energy evaluation of patent literature conducted by the Technological Evaluation Unit.

APIS provides its information on a fee for service basis and quotations will be provided prior to the commencement of a technology search or competitor watch service.

Research in universities and colleges

Expenditure on research and experimental development carried out by Universities and Colleges of Advanced Education in 1978 was estimated to be $326 million at current prices. This represents a 33 per cent increase in expenditure compared with 1976. For further information *see* Project SCORE paragraphs in this chapter.

General financial support for higher education is provided primarily by the Commonwealth Government through the Councils of the Commonwealth Tertiary Education Commission (the Universities Council; and Technical and Further Education Council; and the Advanced Education Council).

In addition, the Government funds research undertaken in the universities and elsewhere through a number of granting schemes. In some cases, Commonwealth Government funds are supplemented by State governments or by levies imposed on or by specific industries (e.g. the wool, wheat and beef industries) for that purpose.

The two principal granting schemes through which supplementary funds are made available for research in universities are the Australian Research Grants Scheme (ARGS), administered by the Queen Elizabeth II Fellowships and the Australian Research Grants Committee, and the scheme administered by the National Health and Medical Research Council (NHMRC). For both schemes the principal criterion for awards is the scientific excellence of the research project. Applications are judged by expert advisory committees composed of practising scientists, and recommendations are made to the Minister for Science and Technology and the Minister for Health for the ARGS and NHMRC awards respectively.

The Commonwealth Department of Health administers the Health Service Research and Development Grant program which provides grants to researchers in educational and health institutions and to independent researchers. The Department receives advice from the Health Services Research and Development Grants Advisory Committee.

Fellowships such as the Queen Elizabeth II Fellowships and the like, while providing some additional funds, are significant more for the prestige they carry than for their contribution to overall funding levels. They are, however, more readily available to the young scientists than are the ARGS awards.

Colleges of Advanced Education do not maintain expensive research facilities or programs akin to those of the universities; nevertheless, staff are encouraged to undertake research to the extent that this is possible. Research of an applied nature, and associated consultancy services to industry and commerce, are expected to become increasingly prominent within the colleges.

Research organisations associated with education institutions

Several of the tertiary education institutions have established independent, commercial companies to promote and manage research and consultancy services to industry, commerce, government and the community. Examples are: Unisearch Ltd, associated with the University of New South Wales; Wait-Aid Ltd, associated with the Western Australian Institute of Technology; Technisearch Ltd, associated with the Royal Melbourne Institute of Technology; SARD, associated with the Swinburne College of Technology; Techsearch Inc., associated with the South Australian Institute of Technology; and the University of Newcastle Research Association.

These organisations play an important role in promoting communication between the Higher Education and other sectors. They undertake investigational and research projects, mainly in the fields of engineering and science. However, activities in other fields such as management, marketing and the social sciences are increasing. Testing work, performed generally by full-time employees, is undertaken in some instances. Results of work are confidential to the client and are not published unless authorised by that client.

Social science and humanities research

Research in the social sciences and humanities is undertaken primarily in universities ($89 million out of $106 million for 1978–79). Support for this research comes both from general funds, provided to the universities and from specific granting schemes such as ARGS.

The bulk of social science and humanities research carried out within Commonwealth Government agencies is performed as part of the general activities of various departments. In addition several other Commonwealth Government agencies have an active interest in either sponsoring or undertaking such research. These include the Australian Institute of Aboriginal Studies, the Australian Institute of Criminology, the Bureau of Industry Economics, the Bureau of Agricultural Economics, the Bureau of Transport Economics and the Bureau of Labor Market Research.

Agencies of the various State governments undertake research relevant to their own activities. A number of research organisations in the transport spheres are funded from both Commonwealth and State sources. The Australian Railway Research Board and the Australian Railway Research and Development Organisation are active in social science research.

Exchange of ideas and information on the social sciences is promoted through a number of professional and learned bodies, of which the Australian and New Zealand Association for the Advancement of Science and the Academy of the Social Sciences in Australia are the most broadly based. In addition to encouraging the advancement of the social sciences, the Academy sponsors and organises research, subsidises publications and acts as a consultant and advisor on the social sciences.

Non-government bodies which undertake or promote research in specific fields of the social sciences include the Australian Institute of International Affairs, the Australian Institute of Urban Studies, and the Australian Institute of Political Science.

International activities

International Organisations

Australia participates in a range of programs and projects of United Nations and other organisations (UNEP, UNESCO, WMO, OECD and (IAEA)) and in the activities of both governmental and non-governmental scientific organisations. To facilitate scientific liaison and representation, the Commonwealth Government has scientific representation at overseas posts (Tokyo, Vienna (IAEA), Paris (OECD)). Australia also participates in regional collaborative programs organised by ESCAP, the Association for Science Co-operation in Asia, the Commonwealth Science Council and the Pacific Science Association. Technical assistance is also provided for countries in the region under both multilateral and bilateral arrangements.

Participation in international non-governmental scientific bodies is arranged through learned and professional bodies. For example, the Australian Academy of Science provides representation to the International Council of Scientific Unions (ICSU) and a number of its affiliated bodies.

Antarctic Treaty

In 1957, as part of the International Geophysical Year (IGY), twelve nations co-operated in research programs covering a broad range of scientific pursuits. The outstanding co-operation between nations in the Antarctic during the IGY gave rise to discussions which resulted in the Antarctic Treaty. On 1 December 1959 the Antarctic Treaty was signed by the nations that had been active in Antarctica during the IGY, including all of those with territorial claims. The original signatories were Argentina, Australia, Belgium, U.K., Chile, France, Japan, New Zealand, Norway, South Africa, the U.S.S.R., and U.S.A. The Treaty entered into force for Australia on 23 June 1961. The Treaty, *inter alia*, reserves the Antarctic area south of 60°S latitude for peaceful purposes, provides for international co-operation in scientific investigations and research, and preserves for the duration of the Treaty the *status quo* with regard to territorial sovereignty, rights and claims.

The Treaty makes provision for other states to accede to it. Since 1959, twelve nations have acceded: Brazil, Poland, German Democratic Republic, Czechoslovakia, Romania, Denmark, the Netherlands, the Federal Republic of Germany, Papua New Guinea, Peru, Italy and Uruguay. The Treaty also makes provision in Article IX (2) for acceding nations to become Consultative Parties " . . . during such times as the Contracting Party demonstrates its interest in Antarctica by conducting substantial research activity there, such as the establishment of a scientific station, or the despatch of a scientific expedition". In July 1977, Poland was acknowledged by the Consultative Parties to have fulfilled the requirements established in Article IX (2) of the Antarctic Treaty and, as a consequence, to have the right to appoint representatives to participate in the Consultative Meetings. Poland subsequently attended the Ninth Antarctic Treaty Consultative Meeting. Similarly, the Federal Republic of Germany was accepted as a Consultative Party at the preparatory meeting to the Eleventh Antarctic Treaty Consultative Meeting and attended the Eleventh Treaty Meeting held in Buenos Aires in June/July 1981.

Conservation of Antarctic Marine Living Resources

At a diplomatic conference in Canberra in May 1980, Treaty Partners adopted the Convention for the Conservation of Antarctic Marine Living Resources. This Convention establishes the basis of a conservation regime for the entire ecosystem of the Southern Ocean. Australia is the depository Government for the Convention. The headquarters of the International Commission, formed under the Convention, have been established in Hobart. It is the first international body to be based in Australia. Australians have been elected as the first Chairman and the first Secretary of the Commission.

Studentships and Fellowships

Australia has assisted other countries, principally in the Asian and Pacific regions, by training their nationals. Large numbers of such students, mainly seeking first qualifications at tertiary level, have been accommodated under schemes such as the Colombo Plan. There are also arrangements under which established scientists from overseas are assisted to undertake study and research in Australia.

Bilateral arrangements

Various bilateral arrangements at both government and non-government levels have contributed to the development and maintenance of co-operation in science and technology between Australian institutions and scientists and those in other countries. Formal bilateral agreements, administered by the Department of Science and Technology, solely devoted to scientific and technological co-operation have been entered into with the USA (1968), India (1975), the USSR (1975; since suspended), the Federal Republic of Germany (1976), Japan (1980), the Peoples Republic of China (1980) and

Mexico (1981). Support is provided for both individual visits and specialist seminars over the whole range of civil science. Where opportunities exist, other co-operative projects which depend on special facilities are supported.

A scientific exchange program between the Australian Academy of Science and the Academia Sinica of Peking was initiated in 1976–77. Scientific fields considered most promising are plant physiology, entomology and earth science.

Visits to Japan and China by Australian scientists can alternatively be supported by the Australia/Japan Foundation and the Australia/China Council.

Meteorology

Australia is a Member of the World Meteorological Organisation (WMO), with the Director of Meteorology being Australia's Permanent Representative on WMO.

Astronomy

In the field of optical astronomy, the Anglo-Australian Telescope Board, established under the provisions of an international agreement between Australia and the United Kingdom and drawing its funds in equal shares from each country, operates the 3.9 metre Anglo-Australian Telescope at Siding Spring Mountain near Coonabarabran in New South Wales. The Telescope, among the largest in the world, came into full scientific operation during 1975. Its technical excellence and the scientific work which it has made possible have brought it to be widely recognised as one of the world's foremost optical telescopes.

Space

An agreement was signed in 1960 and has been renewed at ten-year intervals by the Governments of Australia and the United States of America to co-operate in the establishment and operation in Australia of space vehicle tracking stations. The agencies for the Australian and American Governments are the Department of Science and Technology and the National Aeronautics and Space Administration (NASA) respectively.

As part of the world-wide network supporting NASA's space program, the stations track spacecraft in their orbits around the earth or on their journeys into space, receive telemetred data from the spacecraft, and relay radio commands controlling the spacecraft.

The Department of Science and Technology is responsible for managing, staffing and operating the tracking stations on behalf of NASA. The stations are located at Orroral Valley and Tidbinbilla in the Australian Capital Territory. A communications system links them with control centres in the United States of America.

Expenditure by NASA on its tracking station operations in Australia in 1981–82 was approximately $12.5 million.

An agreement has been signed between the Commonwealth Government and the European Space Agency (ESA) for the establishment and operation of a space vehicle tracking facility in Australia in support of ESA programs. The facility is located at the site of the Overseas Telecommunications Commission (Aust) earth station at Carnarvon, W.A. Arrangements are being made with ESA for CSIRO's Parkes radio telescope to be used to support ESA's Giotto spacecraft which will try to intercept Halley's Comet in March 1986.

Scientific Ballooning

A service to scientists conducting experiments based on balloon-borne platforms was previously provided under a joint venture between the Department of Science and Technology and the US National Science Foundation. Arrangements have now been made for the continuation of the service through the University of Melbourne.

Seismology

A comprehensive seismic station at Alice Springs (Joint Geological and Geophysical Research Station) is operated jointly under an agreement between the Governments of Australia and the United States of America. The agencies for the Governments are, respectively, the Department of Science and Technology and the United States Air Force.

The station provides continuous seismic records to assist the United States Government in the identification of underground nuclear explosions and, through the Department of Science and Technology provides seismic records to the Bureau of Mineral Resources, Geology and Geophysics. Records are also available, through the Department of Science and Technology, to Australian scientists for research in earth physics.

Defence

In the field of defence science, Australia collaborates with other countries through a variety of arrangements at intergovernmental level. Further information including defence science technology multilateral and bilateral arrangements is given in Chapter 4, Defence.

Transport

Australia is represented at Federal and State levels on a number of transport research-orientated international organisations through a variety of arrangements at intergovernmental level. Further information is given in Chapter 20, Transport and Communication.

Other

At the non-governmental level, formal arrangements for scientific co-operation with counterpart institutions in other countries have been concluded by a number of Australian bodies. For example, an arrangement covering co-operation in astronomy exists between the University of Sydney and Cornell University (USA), while over a broader area the Australian National University has an arrangement with the University of Moscow which includes exchanges in the scientific fields.

Additional information

Additional information on topics presented in this chapter may be found in the annual reports of the organisations mentioned, particularly the Department of Science and Technology, the CSIRO and its divisions, the Australian Atomic Energy Commission and the Department of Defence Support. Statistical information for the years 1968–69, 1973–74 and 1976–77 may be found in the reports published by the Department of Science and Technology on Project SCORE. Statistical information relating to 1978–79 may be obtained from the Australian Bureau of Statistics (ABS). See Project SCORE paragraphs in this chapter for details of ABS publications.

Recent information on manufacturing industry research and development is contained in ASTEC's report on *Industrial Research and Development: Proposals for Additional Incentives*, June 1980 and the report of the Industries Assistance Commission, *Inquiry into Certain Budgetary Assistance to Industry*, March 1982. In addition information is contained in the annual reports of the Australian Industrial Research and Development Incentives Board. For reports published prior to 1980 see previous editions of the Year Book.

CHAPTER 26

NATIONAL ESTATE, CULTURE, RECREATION AND TRAVEL

This chapter is divided into four major sections:

- The national estate section consists of items relating to the Australian Heritage Commission, Australian National Trusts, Historical Memorials Committee and various groups in the field of environment and conservation.
- The cultural activities section consists mainly of a description of cultural organisations and some statistical information concerning financial assistance for the arts.
- The recreation section comprises descriptive information provided by the Department of Home Affairs and Environment on major aspects of leisure: community recreation, fitness, sport development and information on youth affairs provided by the Department of Employment and Youth Affairs. Information on tourism is provided by the Department of Industry and Commerce. This section also includes the results of quarterly accommodation surveys conducted by the Australian Bureau of Statistics.
- The travel section consists mainly of statistics concerning overseas visitors to Australia and Australian residents departing overseas. There is also a short note about travel within Australia.

THE NATIONAL ESTATE

The Australian Heritage Commission

The Australian Heritage Commission, established under the *Australian Heritage Commission Act* 1975, consists of a part-time independent Chairman and six part-time Commissioners with various skills and interests in the natural and cultural environment. Research and secretariat services for the Commission are provided by a staff of professional and clerical officers permanently located in Canberra.

The Commission's responsibilities are to advise the Minister for Home Affairs and Environment on all matters related to the National Estate; to prepare and maintain a Register of National Estate places; to develop policies and programs for education, research, professional training and public interest and understanding in fields related to the National Estate; and to administer any gifts and bequests made to the Commission. On 29 April 1982, the Commission's report *The National Estate in 1981* was tabled in Federal Parliament. It is a review of the National Estate since 1974 and provides an outline for future conservation action.

To date approximately 7,100 places have been entered in the Register of the National Estate. They are places with National Estate significance, relating to the natural environment and to Aboriginal or European culture. The first 6,600 sites listed are described in the major publication *The Heritage of Australia—The Illustrated Register of the National Estate*, published in conjunction with Macmillan Company of Australia in September 1981.

Australian National Trusts

The Australian National Trusts were founded to further the conservation of lands, buildings, works and articles which are of national importance because of educational, aesthetic, historic, architectural, artistic, scientific, cultural or other special interest.

The first National Trust, the National Trust of Australia (New South Wales), was formed in 1945. Since then, National Trusts have been formed in each of the other States, the Northern Territory and the Australian Capital Territory.

Membership of the National Trusts is open to all individuals and organisations. Total membership throughout Australia is approximately 80,000. The Trusts are financed by members' subscriptions and donations from individuals and commercial and industrial organisations; the proceeds of charges for entry to Trust properties; and the fund-raising activities of members, including inspections of historic buildings and towns, archaeological sites and places of natural beauty. Each State National Trust receives financial support from the Commonwealth Government in the form of an administrative grant-in-aid and from State Governments.

The Australian Council of National Trusts was incorporated in 1965 to co-ordinate the activities of the State National Trusts and represent them at federal and international level. Donations to the Council and Trusts are tax deductible and the Commonwealth Government further supports the Council through an annual grant for administrative purposes.

Since 1973, the National Trusts have received Commonwealth grants under the National Estates program for capital projects, mainly for the restoration of buildings and conservation studies. They have also supervised projects of other organisations financed under the program.

The number of properties owned or controlled by the Trusts approaches 300. These include houses, nature reserves, gardens, two paddle steamers and an iron barque, an historic hamlet, and buildings which were formerly a telegraph station, a stock exchange, a powder magazine, a market, an inn, a police station, a court house, a gaol and a joss house.

The Trusts have established registers of more than 18,000 places including buildings, urban areas, landscapes and industrial sites which they consider should be conserved as part of the national estate.

Historic Memorials Committee

The Historic Memorials Committee was established in 1911 for the purposes of securing portraits of distinguished Australians who had taken an active part in Federation. Later the Committee decided to obtain portraits or other representations of all Governors-General, Prime Ministers, Presidents of the Senate, Speakers of the House of Representatives, Chief Justices of the High Court of Australia and other distinguished Australians. In addition, the Committee has commissioned paintings or other representations recording special events connected with the Commonwealth Parliament and, more recently, the High Court of Australia.

The Committee comprises the Prime Minister (Chairman), the President of the Senate, the Speaker of the House of Representatives, the Vice President of the Executive Council, the Leader of the Opposition in the House of Representatives, and the Leader of the Opposition in the Senate. The Committee is advised on commissioning of portraits by the Visual Arts Board of the Australia Council. The Secretary to the Committee is provided by the Department of Home Affairs and Environment, Canberra.

Environment

In Commonwealth legislation environment is defined as including 'all aspects of the surroundings of man, whether affecting him as an individual or in his social groupings'. Thus the environmental responsibilities of the Government relate to a broad range of activities including control of air and water pollution, soil conservation, wildlife protection, establishment of national parks, recycling and energy conservation. These responsibilities are shared among many agencies of government, however a special focus is provided by the Ministry of Home Affairs and Environment.

The Commonwealth is responsible for the environment of the Territories and in Commonwealth places, for the environmental impacts of its agencies operating in the States and for contributing to international environmental activities, including the application of international conventions to which Australia is a signatory. The Commonwealth also plays a major role in environmental research and information exchange, and generally endeavours to co-ordinate environment protection and conservation activities to achieve maximum benefit for the nation.

The main avenue for national collaboration on environmental matters is through two Ministerial Councils: the Australian Environment Council and the Council of Nature Conservation Ministers and their expert committees. Other Councils, such as those concerned with minerals and energy, agriculture, water resources and transport, also facilitate national co-ordination of activities which relate to the environment.

The Commonwealth and each State has formal procedures for assessing the environmental implications of development proposals which could have significant environmental effects, and for taking these effects into account in the actions and decisions of the respective government. The procedures generally include provisions for the preparation of environmental impact statements by proponents, public comment on the statements and assessment by government.

A National Conservation Strategy is currently being developed by the Commonwealth in collaboration with the States, non-government conservation groups, industry and the community. The objective is to achieve a balance between sustainable development and conservation of Australian living resources and supporting ecosystems. The Strategy is considering the status of living resources, threats to these resources and actions which may be necessary to achieve their long-term sustainable use.

A National Tree Program, which commenced in mid-1982, aims to conserve, regenerate and establish trees, and generally to promote understanding of the value of trees. Tree loss has reached critical proportions in many areas of Australia, and it is often associated with problems of land degradation.

The Australian Biological Resources Study (ABRS) was established in 1973 to stimulate taxonomic and ecological studies of Australian flora and fauna. ABRS responsibilities include advice on national taxonomic collections and establishment and maintenance of a national taxonomic data bank. Much of the work of the study is done in State museums, botanic gardens and herbaria which were established during the last century. CSIRO also carries out important research relating to flora and fauna.

Current major projects of ABRS include preparation of a 50 volume *Flora of Australia*, compilation of the *Zoological Catalogue of Australia* and establishment of data base exchange systems for museums and herbaria.

The Australian National Parks and Wildlife Service has responsibility at Commonwealth level for management of national parks and wildlife, conduct of ecological studies and assessment of wildlife populations, with particular reference to endangered species. Each State has an agency which establishes and manages national parks and nature reserves, and manages wildlife populations within the State.

Special arrangements have been made for minimising the environmental impact of uranium developments in the Northern Territory. The Commonwealth has appointed a Supervising Scientist who has overall responsibility for protection and restoration of the environment in the Alligator Rivers Region from the effects of uranium mining.

Special measures have been taken to protect the Great Barrier Reef which has been entered on the world Heritage List. The Great Barrier Reef Marine Park Act provides for the establishment, control, care and development of a marine park in the Region and for the establishment of the Great Barrier Reef Marine Park Authority to carry out these functions. The Marine Park is being progressively expanded through the successive proclamation of areas of the Reef. It is the policy of both the Commonwealth and Queensland Governments to prohibit any drilling on the reef, or drilling or mining which would damage the reef.

The Australian Ionising Radiation Advisory Council advises and makes recommendations to the Government on the various actual and potential sources of ionising radiation exposure on the Australian population and environment.

Other environment protection and conservation activities with which the Commonwealth is substantially involved, generally in association with the States, include control of imports and exports of flora and fauna, protection of cetacea, the notification and assessment of environmentally hazardous chemicals, development of codes of practice for radioactive materials, assessment of the quality of the marine environment, control of oil spills and dumping of wastes at sea, studies of the economics of pollution control, studies of environment energy interactions, assembly of environmental statistics, state of the environment reporting, and development of long-term strategies for the control of air pollution.

CULTURAL ACTIVITIES

Cultural organisations and financial assistance for the arts

In Australia the arts are given financial support on several levels. The main sources of subsidy are the Commonwealth and State governments, but support has been increasing recently from local governments and universities. Support from private sources is still limited, but inclusion of the arts in the benefits of private foundations and sponsoring of awards and scholarships is gradually increasing. While support is received indirectly through government educational, cultural and other public service instrumentalities, three organisations have played a significant role in serving and financing the arts: the Australian Council, the Arts Council of Australia, and the Australian Elizabethan Theatre Trust.

The Australia Council

The Australia Council is the Commonwealth Government's chief funding and policy making body for the arts. Established as a statutory authority in 1975, its responsibilities are detailed in the Australia Council Act. Broadly speaking the Council's brief is to formulate and carry out policies to help raise the standards of the arts in Australia, to enable and encourage more Australians to become involved in the arts and to make Australians and people in other countries morely closely aware of Australia's cultural heritage and achievements. Artists and arts organisations are assisted financially by the council under policies developed through its specialist art form Boards in Aboriginal Arts, Community Arts,

Crafts, Literature, Music, Theatre and Visual Arts. Each of the Council's specialist Boards has a membership between six and eight part-time members (except the Aboriginal Arts Board which has between eight and ten) who are required to be practising artists in that specific art form or closely involved with the arts. Reports on the activities of these Boards appear in the relevant sections following.

The Australia Council consists of a full-time Chairman, appointed in 1981, and thirteen part-time members including artist members, members from the community, two Government members (currently representing the Department of Home Affairs and Environment and the Department of Foreign Affairs), and not less than two Board Chairmen. Membership of the Council is intended to represent a broad cross-section of the arts community as well as to ensure access to knowledge and experience relevant to the work of the organisation.

COMMONWEALTH GOVERNMENT FUNDS ALLOCATIONS TO THE AUSTRALIA COUNCIL
($ million)

Year	*1980–81*	*1981–82*	*1982–83*
Budget	28.10	30.30	33.60

ALLOCATION OF FUNDS FOR PROGRAMS, BOARDS AND ADMINISTRATION OF THE AUSTRALIA COUNCIL, 1982–83
($'000)

The Australian Ballet Foundation	1,772
The Australian Opera	3,692
The Australian Elizabethan Theatre Trust Orchestras	3,032
Council Programs	1,767
Aboriginal Arts Board	1,744
Community Arts Board	2,323
Crafts Board	1,341
Literature Board	1,942
Music Board	1,749
Theatre Board	7,597
Visual Arts Board	1,554
Administration	5,087
Total	**33,600**

The Arts Council of Australia

The Arts Council of Australia is an independent, non-government, incorporated body funded by State Government Arts Authorities and the Commonwealth Government through the Community Arts Board of the Australia Council. The Central Secretariat of the Council is in Sydney.

1981 saw major changes in the nature of the Arts Council's activities. The historical role of providing quality artistic experiences to country areas by way of centrally-organised tours had been diminishing over the last few years. In 1981 this change was deliberate and substantial. Due to a need to ensure that the current philosophy and policy of the Arts Council is relevant to the perceived needs of the communities which it serves, activities moved towards locally-initiated projects and the development of branches as autonomous organisations. The development of programmes such as Arts Access, Arts Roundabout, Country BLiPS and Access provided greater access to and participation in a much wider range of arts experiences—from traditional tours by State theatre, opera and ballet companies, to local festivals and workshops and from theatre-in-education teams to resident drama directors and community murallists.

Australian Elizabethan Theatre Trust

The Australian Elizabethan Theatre Trust, which was established in the mid 1950s, was originally formed to present drama, opera, ballet and puppetry throughout Australia. Full autonomy has now been accorded to most of the performing companies established by the Trust. The Trust's major functions now are to administer the Elizabethan Trust Orchestras; to act as entrepreneur in the touring of theatre features from overseas and Australian sources; and to provide general services, including tax deductibility for donations, for theatre organisations. In July 1982 the Trust presented the Australian Aboriginal Theatre Company's production *The Cake Man* at the World Theatre Festival in Denver, Colorado.

The Trust receives annual grants from the Commonwealth Government through the Australia Council and from State and local governments. Its revenue is supplemented by subscriptions, donations and its own activities.

The performing arts

Festivals

The number of festivals devoted solely or partly to the arts now total about 400 a year. The two biggest are Adelaide's biennial and Perth's annual festivals, both of which last several weeks and present overseas artists as well as leading Australian companies. Victoria's large popular festival, 'Moomba', has a substantial arts program.

Many country centres now have arts festivals which attract performers and artists from a wide area. Purely amateur and competitive performances are being infused with increased professionalism. Seminars, arts workshops and community participation programs are increasingly popular.

Theatre

The aim of the Theatre Board of the Australia Council is to improve the quality of the content, performance and production of dance, drama, puppetry, mime and youth theatre and to ensure maximum public access to them. The Board provides opportunities for professional theatre people to develop their skills, encourages growth in theatre attendance and promotes community involvement in live theatre. It provides continuing support for some sixty six drama, dance, puppetry, mime and youth companies which attract audiences running into millions annually. General grants which constitute the Board's major outlay are given to professional organisations offering the highest standards of performance, training and production for a period of up to one year. The Board's objective is to support a sufficient number of properly subsidised non-commercial theatre companies offering a range of productions in the classic and contemporary repertoire. It regards of equal importance the funding of other professional companies especially those concentrating on the development and presentation of new theatrical styles, new writers and new choreographers.

Commercial theatre organisations and entrepreneurs present musicals and plays and arrange visits by overseas companies.

Opera

The Australian Opera (formerly the Elizabethan Trust Opera) is the largest performing arts organisation in Australia employing over 200 permanent staff including 40 principal singers and a chorus of 50. In addition, it employs over 500 casuals each year, including a number of celebrated international singers. The projected outlay for 1982 for the Australian Opera, excluding the cost of orchestras, was $11,600,000 which would be financed partly by Commonwealth Government (through the Australia Council) and State Government subsidies ($4,300,000) and donations from individuals or industry ($900,000) with the balance from box office receipts and other earned income. The Opera, headquartered at the Sydney Opera House, has regularly toured Victoria, Queensland and the ACT but the extent of such touring is declining for economic reasons. Television, radio and other electronic media are being increasingly utilized by the Company to provide access to Australians in all parts of the country.

Ballet

The Australian Ballet Foundation, established as a national ballet company gave its first performance on 2 November 1962. The 1981 operating and other expenses of the Australian Ballet, excluding the services of the Elizabethan Trust Orchestras which perform for the ballet, were $5,987,000. This was financed in part by Commonwealth Government subsidy (through the Australia Council) ($1,344,000) and State, Territory and local Government grants ($336,000).

Music

The Music Board encourages and supports the development of music in Australia and the promotion of Australian music and musicians overseas. It works to extend opportunities for musicians, to stimulate composition and to encourage diversity in music training. It helps to meet community music needs and fosters the exchange of information and resources between groups, both within Australia and internationally. The Board also provides subsidies for major performing and entrepreneurial organisations, such as The Australian Opera, the Australian Elizabethan Theatre Trust orchestras which support The Australian Opera and the Australian Ballet, and Musica Viva Australia. Financial assistance is provided by the Board for a range of musical activities grouped under four main headings; Composition, Performance, Education and Documentation.

Australia has eight fully professional orchestras. Six symphony orchestras have been established—one in each State capital. They are managed by the Australian Broadcasting Commission (ABC). Two Elizabethan Theatre Trust orchestras are predominantly engaged in work with the Australian Opera and Ballet.

The ABC organises about 750 concerts—both symphony and recital—each year.

Musica Viva Australia, a non-profit society receiving financial support from the Music Board of the Australia Council and several State Governments, seeks to increase the performance, knowledge and appreciation of chamber music through subscription concerts, festivals, workshops and education activities. Musica Viva presents concerts by distinguished overseas ensembles and by groups of leading Australian musicians and organises overseas commercial tours for Australia's leading ensembles. The Society manages approximately 800 concerts within Australia and overseas each year.

Film

Australian Film Commission

The Australian Film Commission (AFC) is an independent statutory authority established by Act of Parliament in 1975.

The AFC's functions are to encourage the production, distribution and exhibition of Australian films, and to produce films of national interest and for the Government's departmental needs.

Financial assistance is provided for script and project development and film and television production through the Project Development Branch and the Creative Development Branch (including the branch-administered Women's Film Fund). The Marketing Branch offers advice on marketing, loans for distribution and exhibition, representation at international festivals, and maintains offices in London and Los Angeles. The AFC's film production branch, Film Australia, produces 76 films per year (in over 26 foreign versions) for client government departments, and on issues of national interest for distribution in Australia.

Recent amendments to the income tax legislation have attracted private sector involvement in film production, with total annual expenditure at approximately $50 million. As a result of these incentives, the AFC shifted its support into the areas of script and project development—expenditure not eligible for tax concessions. Where AFC production investment represented up to 50% of total production expenditure, this involvement is now curtailed to between two and three per cent.

The past 18 months have been highly successful for the industry, with 52 feature films completed, international success consolidated with films such as *Mad Max II* and the television series *A Town Like Alice*, and Australian films taking 20% of the Australian cinema box office—a dramatic improvement on the two to three per cent obtained in the past.

Australian Film and Television School

The Australian Film and Television School established as an independent statutory authority by Act of Parliament in 1973 is governed by a fifteen-member Council. It is responsible for advanced film, television, radio and audio-visual communications training throughout Australia.

The School has three principal training branches:

Full-time program—a three year full-time course providing practical and professional training for creative positions in the film and television industry. Graduates are awarded a Diploma of Arts, Film and Television.

—a full-time workshop course in screenwriting of up to one year for writers of proven ability.

Open program—provides, on an Australia-wide basis, training courses of shorter duration including workshops, seminars, lectures and refresher courses for people involved in various film and television crafts, to teachers and educational institutions for people requiring education and practical training in communication fields and to those in other areas who use or intend to use audio-visual media in their professional work as tools for education, information, documentation or research;

—operates an advisory service, through the Writers Centre, for scriptwriters at all levels of experience and throughout Australia.

—produces and distributes training films, video and audio tapes and publications.

National Graduate Diploma in Media—a one year (or part-time equivalent) Graduate Diploma in Media. This is intended to equip teachers with the knowledge and skills needed to design and implement media curricula and to increase expertise in the use of audio-visual teaching resources. The Scheme presently operates in Queensland, New South Wales, Victoria, South Australia and Western Australia;

In addition, the School undertakes, co-ordinates and disseminates research on the communications media and assesses training needs and employment opportunities in the industry, and maintains an extensive collection of film, television, radio and other audio-visual reference materials.

Film Censorship

The Commonwealth Government's film censorship powers under the Customs Act extend only to imported films and imported advertising matter. Under that Act the Customs (Cinematograph Films) Regulations provide for the appointment of a nine-member Film Censorship Board whose function is to register films and approve advertising matter unless they fall into certain defined categories. Importers may appeal against decisions of the Film Censorship Board to the Films Board of Review.

The Attorney-General's Department is responsible for film censorship and all States have agreed that the Commonwealth Boards should be the censorship authorities for the purpose of the State Acts.

Thirty-five mm feature films: In 1981, 784 feature films (including 29 Australian films) were examined. Thirty four feature films were rejected and 31 were cut. There were 18 appeals, of which 6 were upheld, and 12 dismissed. Of the 784 features, 66 were classified For General Exhibition ('G'), 160 Not recommended for Children ('NRC'), 248 For Mature Audiences ('M') and 165 For Restricted Exhibition ('R'). One hundred and eleven were registered subject to special conditions.

The principal suppliers were the United States of America (232 films), Hong Kong (192 films), United Kingdom (53 films), France (37 films) and Italy (36 films).

While the 'M', 'N.R.C.' and 'G' classifications are advisory, persons between the ages of 2 and 18 are excluded by law from seeing 'R' rating films.

Sixteen mm feature films: Excluding those imported for television use, 199 feature films (including 9 Australian films) were examined. Twenty nine were rejected.

Television films: In 1981, 10,200 items for use on television were examined. These consisted of 3,111 sixteen mm films and 7,089 videotapes. The principal suppliers were the United States (5,469 items) and the United Kingdom (2,123). Of the total imports, 146 items were cut and 52 were classified as unsuitable for television.

Videotapes: The increase in the number of non-television videotapes noted in 1980 continued in 1981. Those examined comprised 98 cinema titles and 5,048 non-cinema titles.

Eight mm films: 422 films were examined during 1981.

Advertising matter: 6,952 items intended for use in the promotion of theatrical motion pictures were examined.

Art

The Visual Arts Board

The Visual Arts Board aims to help the individual artist develop the highest levels of creative achievement and to foster a greater awareness of contemporary Australian artists and their work through the dissemination of ideas, advocacy, scholarship, art criticism and information. The Board provides assistance to individuals and organisations working across a wide spectrum of the visual arts in Australia, from painting and sculpture to museology. Its programs include grants to individuals, the commissioning and placing of works of art in public places, research and writing on the visual arts, support for artists in residence and the acquisition, exhibition and conservation of works of art.

The Aboriginal Arts Board

The aims of the Aboriginal Arts board are based on the right of the indigenous people of Australia to determine the future of their own cultural heritage. The Board's responsibility is to provide support to promote and develop activities which give expression to this basic right. This involves traditional cultural practices and their resultant art forms, the representation and preservation of Aboriginal culture generally and the generation of new forms of artistic expression among Aboriginal people in urban and country areas. All members of the Board are Aboriginals, selected from nominations made mainly by Aboriginal community organisations and are generally involved in arts and cultural programs in their own communities.

The Australian National Gallery

The Australian National Gallery contains the National Collection of Australian Art and representative collections of the arts of other cultures and times. These collections include:

- International art before 1850;
- International art from 1850;
- International prints and illustrated books;
- Photography;
- African, Oceanic and Pre-Columbian art; and
- Arts of Asia and South-East Asia.

In 1981-82 the Gallery moved from its temporary premises into the newly completed building. The gallery was ceremonially opened by Her Majesty Queen Elizabeth II on 12 October 1982 and opened to the public the following day. The Gallery building is 23,000 square metres in area. This includes eleven exhibition galleries taking up 30 per cent of the floor space. The remainder accommodates a theatre and associated education facilities, a library, a conservation laboratory, administrative and workshop areas and collection storage. Full-time staff number 250.

Commonwealth Government funding for 1982-83 increased to $15.4 million, of which $4 million was provided for acquisitions of works of art and $1.7 million for final display fitout and loose furniture.

The Gallery continued to make use of Melville Hall at the Australian National University as a gallery for contemporary art and mounted two exhibitions there: *How Formal Should I Go* and *Australian Art Of The Last Ten Years—The Philip Morris Arts Grant.*

Other Galleries

Other important art collections are housed in the Australian War Memorial and in public galleries in all State capitals and many of the larger country centres. As well as these galleries there are many municipal and private trust institutions, and university and private collections.

Community Arts and Crafts

Community Arts Board

The Community Arts Board's main responsibility is fostering the development of a wider participation in the arts. This responsibility also includes activities involving more than one art form such as arts centres, workshops and festivals. Support is also provided for organisations which serve the needs and interests of particular community groups, for example ethnic communities, outer suburban groups or people in disadvantaged and remote areas.

Crafts Board

The aims of the Crafts Board are to encourage continuing improvement in the quality of crafts practised in Australia, to provide greater opportunities for craftspeople to further their professional development and to earn a living from their crafts, to foster wider community access to the crafts and to create an awareness of Australian crafts overseas and of work of other countries in Australia. The Board emphasises the improvement of education and training in the crafts, giving priority to professional training and workshop experience and to the development of resource materials to meet educational needs at all levels.

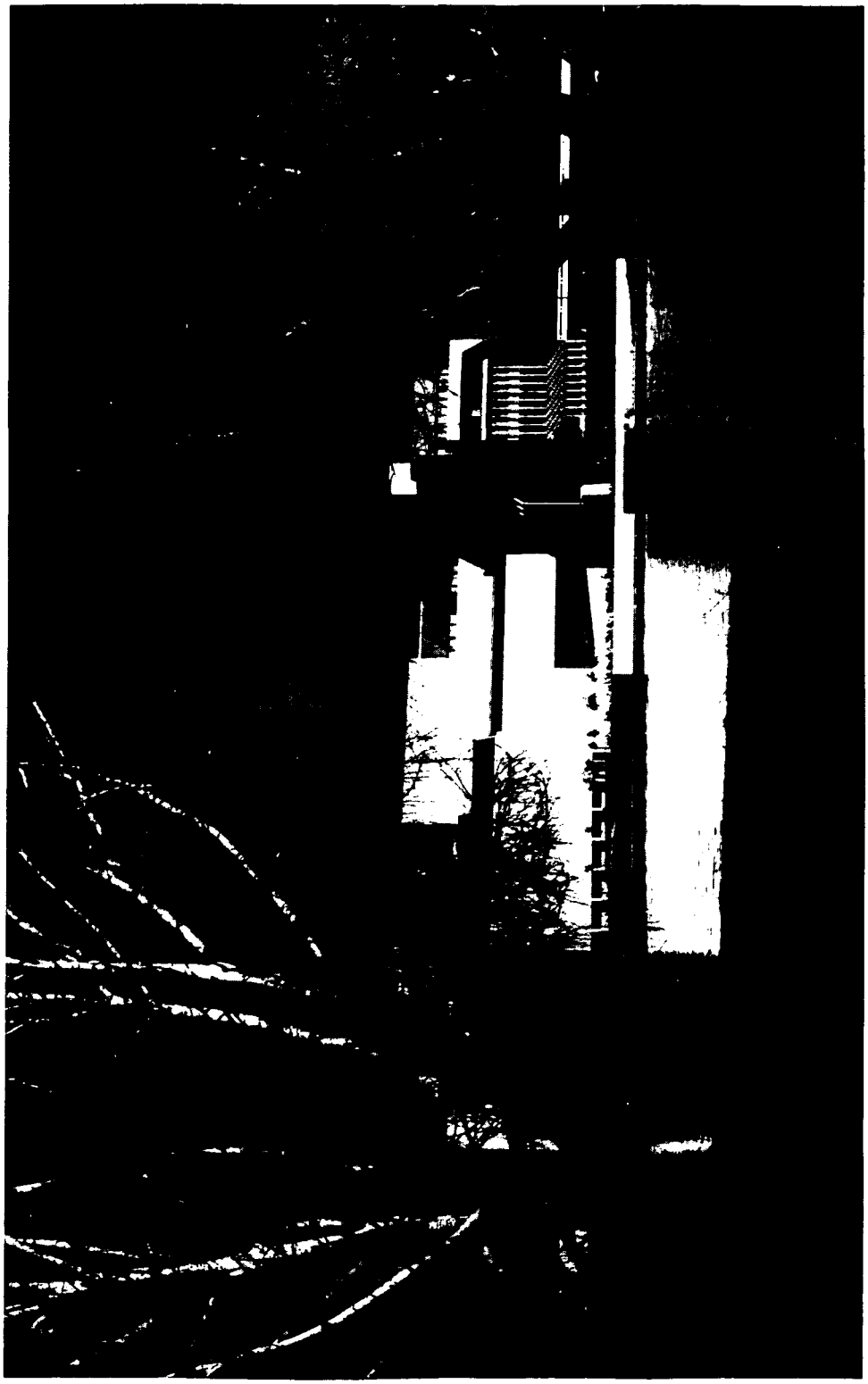
Museums

In each State there is at least one major State-run museum. There are also many smaller museums owned by municipal councils, district and historical societies, private trusts and private individuals. The two major national museums in the Australian Capital Territory are the Australian War Memorial and the Australian Institute of Anatomy.

The Australian War Memorial

The Australian War Memorial commemorates Australian Servicemen and women who died as a result of wars or warlike operations, from the Sudan (1885) to Vietnam. The commemorative area includes the magnificent glass-mosaic Hall of Memory, Cloisters containing the bronze panels of the Roll of Honour bearing 102,000 names, and the Courtyard in which there is the Pool of Reflection and a water cascade symbolising eternal life. The names of the 30 main theatres of war in which Australian forces served are inscribed around the Courtyard. The national Anzac Day and Remembrance Day services attended by the Governor-General are held at the Stone of Remembrance in front of the building. Other wreath-laying ceremonies are also conducted at the Commemoration Stone in the Courtyard.

As well as the nation's Memorial, it is also a significant museum and art gallery, containing some 40,000 war relics ranging from aircraft to commemorative badges, and 12,000 works of art by leading Australian artists, including Nolan, Dobell, Streeton and Lambert. The Memorial's 28 Victoria Crosses are the largest such single collection in the world. The spacious galleries also display mosaics and antiquities dating from around the fifth century, sculptures, dioramas, photographs and documents. In addition, the Memorial contains an extensive documentary and audio-visual records centre (detailed on page 737), and operates an Education Service providing study units for visiting student groups and information for teachers and students.



National Gallery of Australia, viewed from the opposite shore of Lake Burley Griffin, Canberra.

PLATE 48

The Memorial is a major tourist attraction, receiving about three-quarters of a million visitors each year, including foreign Heads of State, political and Service leaders. Free screenings of historic wartime films are given every weekend and during school holidays and Voluntary Guides are available to provide free conducted tours on weekdays, including special tours for the blind and visually-impaired.

The *Australian War Memorial Act* 1980 extended the Memorial's educative role, and upgraded the administration. The Memorial is administered by a Director and Council of up to 13 members and is now responsible directly to the Minister for Home Affairs and Environment.

The Memorial building, opened in 1941 and extended in 1971, is being further extended and the galleries upgraded. A conservation and storage annex was opened in 1979. The Memorial has begun a program of major renovations to the galleries with the creation of an Introductory Gallery which provides an overview of Australian military history since 1788. The War Memorial and its surrounds were entered in the Register of the National Estate in October 1981.

Museum of Australia

The Museum was established under the *Museum of Australia Act* 1980. The planning for the museum is being undertaken by an Interim Council appointed in December 1980.

The Museum will be Australia's first national museum of history, and will have three major themes: Aboriginal history, non-Aboriginal history, and the interaction between man and his environment.

Literature

Literature Board

The aim of the Literature Board is to encourage all forms of Australian creative writing through direct grants to writers and the subsidising and promotion of the resultant works. More than one half of the Board's annual expenditure goes in grants to writers, in the form of fellowships, general writing grants, special purpose grants to assist writers to meet travel, research and other expenses in connection with particular projects and emeritus fellowships (formerly literary pensions). The Board also assists a number of national literary organisations, festivals and seminars and encourages the overseas promotion of Australian literature. It also has a program to subsidise writers and playwrights-in-residence in conjunction with tertiary institutions and theatre companies.

Libraries

Australian Government libraries

National Library of Australia, Canberra. The National Library was formally established under the *National Library Act* 1960, which came into effect in March 1961. It was previously part of the Commonwealth Parliamentary Library. The National Library maintains and develops a national collection of library material in all subject fields and from all countries. It is also responsible for assembling a comprehensive collection of library material relating to Australia and the Australian people. In fulfilling its functions, the Library seeks to preserve books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving picture films, music scores, sound recordings and other material. Under the deposit requirements of the *Copyright Act* 1968, a copy of all printed material published in Australia is delivered to the National Library (1,987 books, pamphlets, etc., were received in 1981). The library has also been enriched by the acquisition of such notable collections as the Petherick collection of Australiana in 1911, the Cook manuscripts in 1923, the Mathews ornithological collection in 1940, the Rex Nan Kivell collection of Australian and Pacific interest in 1959, and the Ferguson collection of Australiana in 1970. The Library maintains a permanent exhibition of paintings, prints and other historical material selected from its various collections.

The National Library's collection of Australian and overseas material contains more than 3 million volumes, including microfilms, 33,800 paintings, drawings and prints; 324,000 photographs; 4,560 shelf metres of manuscripts; 272,000 maps; 500,000 aerial photographs; 55,000 music scores, 400,000 sound recordings and tapes; and 8,000 oral history tapes. These materials may be used in the Library's reading rooms and in some cases are also available through the national inter-library loan system, in which the Library is a major participant. The Library is functionally oriented, with three main Divisions—Reference, Technical Services, and Co-ordination and Management, together with a Secretariat. Information about the activities of the Library's Divisions, including its publication program, may be found in the Library's Annual Reports.

The provision of central cataloguing services by the National Library achieves cataloguing economies on a national scale. The Australian Bibliographic Network, a national on-lined shared cataloguing

system, was launched by the Library in November 1981. Bibliographic records for Australia and overseas books are available from the Library, both as catalogue cards and in machine-readable form. Under its Cataloguing-in-Publication program, the Library supplied cataloguing data to Australian publishers in advance of publication so that they may be printed in their books.

Co-operative bibliographical activity includes recording, in a series of union catalogues, the holdings of the major Australian libraries. Among these are the national union catalogue of monographs (published on microfilm), *Serials in Australian Libraries, Social Sciences and Humanities* (which compliments another catalogue, *Scientific Serials in Australian Libraries*, published by the Commonwealth Scientific and Industrial Research Organization), catalogues of manuscripts, newspapers, music and oriental language material and special library material for the handicapped. These are described in the *Guide to the National Union Catalogue of Australia.*

Other aspects of the National Library's role in the user community and as a research centre include its involvement in a project to microfilm records relating to Australia and held in Great Britain and elsewhere, its rapidly developing archives of films, sound recordings and oral history, its provision of the Australian MEDLINE Network and the use of overseas data bases in its reference services, and its special section on library services to the handicapped.

A particularly important contribution to the National Library's role in the library community is its support of two national consultative bodies. The Australian Advisory Council on Bibliographical Services is a co-operative association of libraries and other information agencies which seeks to encourage the development of their resources and services. The National Library provides the national secretariat and meets the administrative costs of the Council's standing committee. The National Library also provides the secretariat for the Australian Libraries and Information Council which advises Commonwealth and State Ministers on the nation-wide co-ordination of library and related information services.

Patent Office Library. The library of the Australian Patent, Trademarks and Designs Office in Canberra contains approximately 12,000 books and a wide variety of periodicals and other literature relating to science, technology, industrial property (patents, trademarks and designs), law and practice. Patent specifications of inventions are received from the principal countries of the world and held in the Documentation Centre. Present holdings are over 15,000,000 with an estimated 600,000 patent specifications received annually. The Australian Patent Information Service works in co-operation with the Library. Its major function is to make Australian industry aware of the wealth of technological information held in the world collection of patent literature and assist them in accessing this information. Australian specifications and related material are also available at Sub-Offices in Brisbane, Sydney, Melbourne, Adelaide, Perth and Hobart.

Commonwealth Scientific and Industrial Research Organization (CSIRO). The Central Information, Library and Editorial Section (CILES) was formed at the end of 1973. Its objectives are to provide information, library, translation, editorial, publishing and archival services in all fields of science and technology other than clinical medicine.

The Central Information Service complements the information programs of the 40 or so CSIRO Divisions and, in addition, produces numbers of data bases such as *CSIRO Index, Australian Science Index* and directories such as *Scientific and Technical Research Centres in Australia.* It also provides computer-based search services and a question-and-answer service. The Central Library is the co-ordinating centre for the CSIRO Library Network of some 70 libraries and book-holding centres providing acquisitions, bibliographic, reference and document support for the entire system. The Central Library maintains a union catalogue of the holdings of all CSIRO libraries, and maintains the constantly updated *Scientific Serials in Australian Libraries* as well as extensive collections of scientific and technical publications. The Editorial and Publications Service produces publications on behalf of the Divisions and, with the Australian Academy of Science, is responsible for publishing the Australian Journals of Scientific Research. The activities of the Section are fully reported in the regularly issued *CILES' Report.*

The Australian War Memorial Documentary and Audio-visual Records Centre, Canberra. The Centre preserves the documentary and pictorial records of Australia's participation in armed conflicts. Printed material includes over 80,000 volumes (books and bound periodicals); thousands of unbound periodicals; leaflets; souvenir and microfilm items; a large collection of military maps; newscuttings and newspapers; sound recordings; war posters; postage stamps; and currency. Official records and personal papers occupy almost 2,000 metres of shelving. Official war photographs covering the 1914–18, 1939–45, Korean and Vietnam wars number over 670,000, and there are about 1.5 million metres of cinefilm. Facilities exist for reference and research.

The Commonwealth Parliamentary Library. The Library is 'an intellectual research centre' providing information and research services to the Commonwealth Parliament through the Legislative Research Service and the Library, Reference and Information Service. The Research Service comprises groups staffed by subject specialists who prepare analyses and interpretations of specific issues with which the Parliament is or may be concerned. The Library, Reference and Information Service answers questions and provides information from printed sources. The library collection is concentrated on topical material, supported by a wide collection of standard references; it totals some 100,000 titles, including 9,000 serial titles. The library publishes the Commonwealth Parliamentary handbook, which is a standard reference work, occasional annotated reading lists, background papers, digests of bills and, in alternate fortnights, Index to Current Information and Select Lists of Acquisitions.

Other Commonwealth Government libraries. Current and retrospective information is available in Australia's special libraries. For a detailed listing of the libraries see the *Directory of Special Libraries in Australia.*

Library services in the Territories. The Northern Territory Library Service operates three public libraries in Darwin, and one each in Alice Springs, Katherine and Tennant Creek, and in co-operation with the Department of Education operates a community library in Nhulunby and Bamyili. At 15 September 1982, book stocks totalled 220,000 volumes, and 2,147 films were available in the film library. A country borrower programme is operated to service isolated areas.

The National Library conducts the Canberra Public Library Service to residents of the Australian Capital Territory.

State libraries

Most municipal councils in the States have libraries funded largely by State governments. A detailed description of State libraries is given in Year Book No. 59, pages 685–690 and in each State Year Book.

Children's libraries and school libraries

Children's libraries exist in all States, usually as branches or extensions of State or municipal libraries. Further details of children's libraries and school libraries are given in Year Book No. 59, pages 689 and 690.

University and college libraries

The Commonwealth Government has since 1957 supported the development of university and college of advanced education libraries.

Archives

Australian Archives

The Australian Archives, whose history dates from 1943 with the establishment of the War Archives Committee, functions as a central agency for the administration of Commonwealth Government records which are no longer required in the day-to-day business of government. Its headquarters are in Canberra, and it has regional offices in all State capitals and in Darwin and Townsville. In relation to the Government's records management programme, its responsibilities are:

(i) to ensure the preservation of Commonwealth records of permanent value;
(ii) to promote efficient and economic management of current Commonwealth records, including authorisation of destruction;
(iii) to facilitate use of Commonwealth records by members of the public; and
(iv) to administer official policy on access to Commonwealth records, most of which are available for consultation when they are thirty years old.

At 30 June 1982, its holdings throughout Australia totalled 339,821 shelf metres of records, including 135,680 metres of permanent value material. During 1981–82, 1,697 official reference inquiries were received and 419,398 items were lent or returned by departments. Some 3,046 public reference inquiries were also received, and 27,353 items were consulted in the Search Rooms, and 360,947 items were consulted in the repositories.

The Australian Archives maintains liaison with similar organisations overseas, and is a national member of the International Council on Archives, established under the auspices of the United Nations Educational, Scientific and Cultural Organisation (UNESCO).

State government archives

State government archives, dating from the beginning of European settlement in 1788, are held, in the case of New South Wales, Tasmania and Victoria, by archives offices established in 1961, 1965 and 1973 respectively and in other States by the archives sections of State libraries.

Business and Labour Archives

The main collecting centres for business and labour records are the Archives of the Australian National University, the University of Melbourne, and the University of New England. The Australian National University and University of Melbourne archives in particular have strong collections covering a wide range of business activity. Each is notable for its collections in particular fields; the Australian National University for its holdings of records of pastoral companies; the University of Melbourne for its holdings of mining companies' records. Both hold large collections of records of trade unions. The University of New England archives concentrates on records of rural industries. The Universities of Wollongong and Newcastle Archives also collect business and labour records, mainly in respect of their regions.

Other archives

The Mitchell Library has been acquiring manuscript material since the early years of this century. More recently, the National Library, State libraries, some archives offices, a few public libraries and historical societies, the Australian Academy of Science, and the Australian War Memorial (which is also responsible for the custody and preservation of operational records of the armed services) have assembled important collections of private papers. Ecclesiastical archives have been set up by some of the churches and some firms have established their own archives services. State and local historical societies help to preserve regional, local and private historical material.

Botanical and zoological gardens

In addition to the State botanical and zoological gardens there are numerous privately-owned zoos and sanctuaries, many of them at tourist resorts, which maintain collections of Australian flora and fauna. There are also various national parks, forests, reserves, etc. dedicated for public use which are preserved largely in their natural condition. Detailed information is given in each State Year Book.

The following is a summary of botanical gardens and major reserves in the Northern Territory, Australian Capital Territory and the Commonwealth Territory of Jervis Bay.

Northern Territory: The Darwin Botanical Gardens occupy 30 hectares and feature 12 hectares of tropical plants of both native and overseas origin. Two hectares are used for an amphitheatre and contain a number of native and exotic plants. The Gardens are controlled by the Corporation of the City of Darwin. A $600,000 redevelopment program has recently commenced, which will include a rain forest, a typical top-end lagoon and a coastal salt-water development.

Australian Capital Territory: The National Botanic Gardens occupy a 44 hectare site on the lower slopes of Black Mountain in Canberra. It was officially opened in 1970 and comprises the largest living collection of Australian native plants with over 5,000 species in cultivation. The associated herbarium houses over 100,000 specimens. An annexe of approximately 78 hectares was established at Jervis Bay in 1951 to cultivate frost tender plants under more favourable conditions than those prevailing in Canberra, and to establish a collection of native plants representative of the flora of the Jervis Bay region. Education and horticultural research into native plants are important aspects of the Gardens activities.

During 1980-81, approval was given to extend the Gardens by 40.5 hectares adjacent to the present site. This extension which will enable a larger number of species to be cultivated, will be developed progressively over the next 10 years. A special garden and activity centre for disabled people interested in horticulture was completed as a major Commonwealth Government initiative for the International Year of Disabled Persons. The facility is known as the Banksia Centre.

The Tidbinbilla Nature Reserve (5,515 ha) is located 43 km south-west of Canberra. The Reserve includes much of the Tidbinbilla Valley which ranges from 762 metres above sea level to 1,325 metres at Tidbinbilla Peak, the highest peak of the Tidbinbilla Range which forms the western boundary of the Reserve. As a consequence of the valley topography many habitats are represented and plant and animal wildlife is diverse. A system of wildlife enclosures and waterfowl ponds, 56 kilometres of nature trails and a comprehensive information service is provided for approximately 180,000 visitors per annum.

The Gudgenby Nature Reserve (51,000 ha) occupies about 20% of the A.C.T. and contains an extensive tract of the wild highlands of south-eastern Australia. It covers the catchments of the Naas and Gudgenby Rivers and shares a common boundary with the Cotter River catchment (47,000 ha) in the A.C.T., and the magnificent Kosciusko National Park (520,000 ha) in neighbouring N.S.W.

The topography and landscapes of the Reserve, and consequently plant and animal communities, are extremely varied. Habitat ranges from grassland of the valley floors through woodland and mountain forest to sphagnum bogs, heath swamps and alpine woodland. Several high peaks rise to between 1,700 metres and 1,800 metres above sea level. Other features of importance include a series of Aboriginal rock paintings, the only ones known in the A.C.T.

The Jervis Bay Nature Reserve occupies two thirds (4,470 ha) of the Commonwealth Territory of Jervis Bay which lies on the south-east coast of Australia. The Reserve is characterised by a substantially natural landscape and outstanding coastal scenery, high cliffs, ocean and bay beaches, sand dunes, woodland, forest and heath. A small island and part of the unspoilt marine environment of Jervis Bay and its foreshores are managed in sympathy with the Nature Reserve. Camping facilities are provided and are designed to complement the natural values of the area which attracts in the order of 400,000 visitors annually.

The Black Mountain Reserve (521 ha) adjacent to Lake Burley Griffin, is a significant focal point in the Canberra landscape and an essential component of the 'mountain and lake' concept of the Canberra scene. Black Mountain Reserve is unique in its setting within the inner boundary of a National Capital. In addition to broad scale scenic attributes, the Reserve has a varied complex of flora and fauna and is used extensively for recreation and nature study.

Management aims for all nature reserves in the A.C.T. and Territory of Jervis Bay are to:

- maintain natural ecosystems and landscapes and protect sites of prehistoric and historic significance;
- provide opportunities for recreational, scientific and educational use of these resources consistent with their protection.

RECREATION

The Department of Home Affairs and Environment has responsibility in the national sphere for recreation, fitness and sports development.

All State governments have also established agencies with special responsibilities for recreation and sport. Increasing numbers of local government authorities are employing recreation workers who are responsible for planning the use of recreation facilities, and for devising recreation programs.

Sports development and assistance

The Sports Development Program administered by the Department of Home Affairs and Environment, is the Commonwealth Government's major contribution to national sporting activities and national sporting bodies. In 1982–83, the Government provided $3.2 million under this program. Grants under this program are allocated to national sporting organisations for a range of purposes including the employment of administrative and coaching personnel, assistance for national coaching projects, travel expenses for Australian teams competing overseas and assistance towards conducting international sporting events in Australia.

Advice on the allocation of grants and other sports matters generally is provided by the Sports Advisory Council. In 1982–83 the Commonwealth Government provided $200,000 to assist and encourage disabled people to participate in sport and recreation.

National Coaching Accreditation Scheme

The Australian Coaching Council (ACC), which is a national body representing sport through the Confederation of Australian Sport, the Australian Olympic Federation, and Commonwealth and State Governments, was established in July 1979 to co-ordinate the establishment of the Scheme which aims to increase the standard of coaching expertise in Australia and the performance levels of Australian athletes.

In 1981–82 the Commonwealth Government provided $35,000 from the Sports Development Program to assist with the development of the Scheme.

The Australian Coaching Council is serviced by the Department of Home Affairs and Environment, while the Council's Technical Committee is serviced by the Confederation of Australian Sports Coaches Assembly. The Council meets four times a year and the Committee, which examines applications for accreditation of national coaching schemes, meets as the work-load requires. Fifty one national coaching schemes have received ACC approval, and a further 6 schemes are under consideration by the Council.

Australian Institute of Sport

The Australian Institute of Sport has been established to give Australians the opportunity to pursue their sporting interests, without necessarily sacrificing their education and careers. The aims of the Institute are to:

- provide specialist coaching/training for elite athletes while offering them complementary education and career training opportunities;
- support these athletes with world class facilities, and sports science and medicine back-up.

The Institute is located in Canberra, and has access to a wide range of facilities at the National Sports Centre. Top level coaches supervise the Institute's programs, and facilities are available for research and technical work required in modern sports development.

Persons granted admission to the Institute are encouraged to undertake some course of study by enrolling at schools or colleges, or by admission to general courses at tertiary level. A number of people training at the Institute are also undertaking a bachelor degree course in Sport Studies, which has been introduced at the Canberra College of Advanced Education.

The Institute, which registered its first students early in 1981, offers training in eight sports—basketball, gymnastics, netball, soccer, swimming, tennis, track and field athletics and weightlifting.

International Standard Sports Facilities

In September 1980, the Prime Minister announced that over the next three years the Commonwealth Government would provide $25 million, on a dollar for dollar basis with States and Territories, for the development of international standard sporting facilities. The aim of this program is to encourage the States and Territories to construct a range of sporting facilities to give Australian athletes the opportunity to train and compete on a similar basis to their overseas counterparts and enable Australia to be more successful in attracting international competition.

Funds available under this program are for capital expenditure for those facilities which have been accorded the highest priority in the various States and Territories. To September 1982 the Government had agreed to provide funds to New South Wales for the development of an indoor sports centre; to Victoria for the development of facilities for hockey, equestrian sports, and the upgrading of Olympic Park; to Queensland for the upgrading of Belmont Rifle Range and the QE II Stadium and for the installation of lighting of the Chandler Velodromes; to South Australia for the construction of an indoor aquatic centre; to Western Australia for a baseball centre and to the Northern Territory for the construction of an indoor sports centre. Some States are preparing additional proposals for consideration.

1982 Commonwealth Games

The XII Commonwealth Games, held in Brisbane from 30 September to 9 October 1982, was the most significant sporting event held in Australia for twenty years. Participants from 55 Commonwealth countries competed in the sports of archery, athletics, badminton, bowls, boxing, cycling, shooting, swimming, weightlifting and wrestling.

Responsibility for the Australian team's preparation for the Games rested with the Australian Commonwealth Games Association, while the organisation and conduct of the event was entrusted to the XII Commonwealth Games Australia (1982) Foundation Ltd.

The costs of staging the Games were met by the three tiers of government, i.e. Local, State and Commonwealth and from corporate funding obtained through the Games Foundation's marketing program. The Commonwealth's contribution to the Games was approximately $40 million, provided towards facility development, host Broadcaster services, essential Games operations and team preparation.

Youth affairs

The Office of Youth Affairs, a Branch of the Department of Employment and Industrial Relations, advises the Minister on youth policy.

The primary functions of the Office are:

- to seek greater co-ordination and consultation between Commonwealth Departments, State and Local Governments and non-government agencies in relation to policies and programs affecting young people;
- to undertake research and information programs;
- to advise on youth needs and aspirations; and
- to develop channels for better communication between young people and government.

The Office acts as secretariat to the National Youth Advisory Group and convenes meetings with State government youth agencies and peak organisations of national voluntary youth organisations.

A register of young people who wish to serve on Government advisory and consultative bodies is kept by the Office and applicants up to 30 years of age may submit their personal details for inclusion in the register. To date young people have been appointed to a number of such bodies, including the Bureau of Labour Market Research Advisory Committee, the National Training Council, the Community Youth Support Scheme State Advisory Committees, the Sports Advisory Council, the Australian Ethnic Affairs Advisory Council and the Theatre Board of the Australia Council.

To facilitate the development of activities for the United Nations International Youth Year—1985—a Secretariat has been established to co-ordinate plans and ideas for the Year and consult with relevant agencies on how activities for the Year might best be co-ordinated and organised.

The Program of Assistance to Youth Organisations provides grants to national youth organisations to enable them to extend their services to more young people, and to broaden the direct involvement of young people in management and organisational decision making. A total of $640,000 was allocated to the Program during 1982–83 from which grants were made to 32 national youth organisations.

The International Youth Exchange Program was introduced in September 1980 and consists of:

- a Government to Government sponsored program of international youth exchanges in the Asian/Pacific region; and
- assistance to Australian-based voluntary agencies in promoting and negotiating exchanges.

Tourism

The Department of Industry and Commerce is involved in a range of policy, administrative and consultative activities designed to encourage the efficient development of tourism in Australia in co-operation with the industry and with Commonwealth and State government departments. Major functions of the department include: formulation of policy proposals, transmission of advice to the Minister on industry problems, administration of the *Australian Tourist Commission Act*, conducting of research into the tourist and travel industries, provision of secretariat support to the Tourist Ministers' Council, the Australian Standing Committee on Tourism and the Travel and Tourist Industry Advisory Council and liaison with international tourism organisations.

Australia has been a full member of the World Tourism Organisation (WTO) since September 1979. The WTO, an executing agency of the United Nations Development Program (UNDP), covers all sectors of tourism on a world wide basis. Australia is vice-chairman of the Organisation's Regional Commission for East Asia and the Pacific (CAP).

Australian Tourist Commission

The Australian Tourist Commission was established in 1967. It is a statutory body whose purpose is to encourage travel to and within Australia. It has ten commissioners including representatives of the Commonwealth, State and Territory governments and the tourist industry. Its 1982–83 budget is $9.7 million.

The Commission engages in a wide variety of marketing activities including consumer and trade advertising, industry seminars and familiarisation visits for travel agents, journalists and photographers. The Commission has its head office in Melbourne and branch offices in Sydney, Auckland, London, Frankfurt, New York, Los Angeles, Tokyo and Singapore.

Tourist Accommodation

Census of Retail Establishments and Selected Service Establishments. Data relating to accommodation establishments have been collected as part of the 1979–80 census. For detailed statistics *see Census of Retail Establishments and Selected Service Establishments, Details of Operations by Industry Class, Australia, 1979–80* (8622.0). (*See* also Chapter 17, Manufacturing and Internal Trade).

Surveys of Tourist Accommodation Establishments. Quarterly accommodation surveys were commenced in the September Quarter 1975 and data published from these surveys include room occupancy, bed occupancy and takings from accommodation.

The main purpose of the surveys of tourist accommodation establishments is to measure the utilisation of available tourist accommodation. For detailed statistics from the survey *see Tourist Accommodation, Australia* (8635.0).

TOURIST ACCOMMODATION (*a*)

		March quarter 1981	*June quarter 1981*	*September quarter 1981*	*December quarter 1981*	*March quarter 1982*	*June quarter 1982*
LICENSED HOTELS WITH FACILITIES(*b*)							
Establishments	Number	959	952	999	1,007	1,027	1,037
Guest rooms	"	25,900	25,884	27,002	27,282	27,741	27,853
Bed spaces	"	60,455	60,515	63,522	65,256	65,407	65,878
Room occupancy rates	%	55.9	54.9	56.8	54.3	53.8	51.6
Bed occupancy rates	%	36.9	35.5	37.4	34.6	36.3	33.2
Gross takings from accommodation	$'000	47,340	47,650	54,043	52,504	54,757	53,500
MOTELS, ETC.(*b*)							
Establishments	Number	2,290	2,320	2,409	2,462	2,499	2,521
Guest rooms	"	58,239	59,263	60,426	62,426	63,729	64,534
Bed spaces	"	169,150	171,689	176,849	182,054	186,525	188,906
Room occupancy rates	%	62.0	60.2	62.9	57.7	60.2	57.4
Bed occupancy rates	%	39.8	37.4	39.3	35.1	38.5	35.3
Gross takings from accommodation	$'000	98,497	100,075	113,037	107,633	117,461	115,835
TOTAL							
Establishments	Number	3,249	3,272	3,408	3,469	3,526	3,558
Guest rooms	"	84,139	85,147	87,852	89,708	91,470	92,387
Bed spaces	"	229,605	232,204	240,071	246,310	251,932	254,784
Room occupancy rates	%	60.1	58.6	61.0	56.7	58.3	55.7
Bed occupancy rates	%	39.0	36.9	38.8	34.9	37.7	34.8
Gross takings from accommodation	$'000	145,836	147,724	167,082	160,135	172,218	169,334
CARAVAN PARKS(*b*)							
Establishments	Number	1,818	1,803	1,883	1,852	1,855	1,912
Powered sites	"	131,481	130,362	136,239	135,263	135,629	139,626
Unpowered sites	"	59,022	59,124	59,452	58,537	58,572	60,072
Cabins, flats, etc.	"	3,520	3,598	3,543	3,629	3,639	3,676
Total capacity	"	*194,023*	*193,084*	*199,234*	*197,429*	*197,840*	*203,374*
Site occupancy rates	%	31.3	22.5	22.0	24.6	32.4	23.8
Gross takings from accommodation	$'000	27,623	20,741	22,861	26,921	32,295	25,828

(*a*) For the purposes of this survey, a tourist accomodation establishment is defined as an establishment which predominantly provides short term accommodation (i.e. for periods of less than two months) available to the general public. (*b*) For definitions *see Tourist Accommodation, Australia* (8635.0).

TRAVEL

The following pages contain statistics of internal travel and travel to and from Australia, together with some descriptive matter.

Holidays

At the Census of Population and Housing, 30 June 1976, a question on holidays was asked of each person. The question was: 'Has the person been away from home ON A HOLIDAY for a week or more since 30 June 1975?'

Almost half of the people who answered this question ticked the 'Yes' box.

The following table shows the results for Australia of the Census of Population and Housing, 30 June 1976.

	Persons	%
Yes (had a holiday)	6,383,119	47.1
No (did not have a holiday)	6,742,726	49.8
Not stated	422,603	3.1
Total	**13,548,448**	**100.0**

Internal travel

National Travel Survey

In 1977–78, the Bureau of Transport Economics (BTE) in Canberra conducted a survey of non-urban travel known as the National Travel Survey (NTS) details are available on request from the BTE.

National Monitor on Domestic Tourism (DTM)

A survey on the travel behaviour of Australian tourists was commissioned by the Australian Travel Research Council for the year 1973–74. The survey obtained details for trips between one night and three month's duration, to a destination at least 40 km from home. Details sought included income, education level, occupation, ownership of boat, type of accommodation and expenditure.

In 1977 the Australian Standing Committee on Tourism (ASCOT), which is a joint State, Territory and Commonwealth body with responsibility for advising Commonwealth and State/Territory Tourism Ministers, commissioned the Roy Morgan Research Centre to conduct a survey of domestic tourism similar to the Australian Travel Survey. The survey, known as the Domestic Tourism Monitor, began in April 1978 and is in its fifth year. State and Territory tourism authorities also provide details relating to their areas.

Approximately 1,100 householders throughout Australia are being interviewed each weekend. For all domestic trips taken by Australian households of at least one night to destinations at least 40 km from the respondent's place of residence, details are recorded of the purpose of the trip, mode of transport, type of accommodation, length of stay and main destination.

This type of information is cross-classified according to various characteristics such as age, sex, occupation, place of residence and income. Data are also available on the characteristics of non-travellers.

Overseas travel

Statistics about travellers to and from Australia are classified in the first instance by the actual or intended length of stay in Australia or abroad; this classification distinguishes between long-term and short-term movement.

Statistics of permanent and long-term movement are shown in Chapter 6, Demography.

Statistics of short-term arrivals and departures which are in the nature of travel statistics are given below.

Short-term movement is defined as comprising visitors arriving and Australian residents departing temporarily with the intention of staying in Australia or abroad for less than twelve months, together with the departure of visitors and the return of Australian residents who have stayed in Australia or abroad for less than twelve months.

Short-term movement excludes persons who arrive in and depart from Australia on the same ship's voyage or on the same flight (variously called direct transit or 'through' passengers) or who change flights without leaving the airport's transit area; passengers on pleasure cruises commencing and finishing in Australia; and all crew. However, it includes persons who pass through the Customs Barrier and declare the purpose of their visit to Australia to be 'in transit'. Short-term visitors are more numerous than long-term visitors and have come to be regarded as 'tourists' by many users of the statistics.

SUMMARY OF SHORT-TERM TRAVELLER STATISTICS

	Overseas visitors		*Australian residents*	
	Arriving in Australia	*Departing from Australia*	*Departing from Australia*	*Arriving in Australia*
Annual average—				
1966-70	297,275	308,321	258,824	259,700
1971-75	475,925	479,015	647,608	631,446
1976-80	684,718	655,413	1,077,331	1,062,097
Year—				
1976	531,813	512,467	973,799	968,224
1977	563,282	540,943	971,253	973,677
1978	630,594	597,123	1,062,234	1,029,482
1979	793,345	752,440	1,175,768	1,144,334
1980	904,558	874,090	1,203,603	1,194,768
1981	936,727	900,376	1,217,299	1,181,387

In addition to the basic classification of travellers shown above, certain other characteristics are ascertained. These characteristics are: sex, age, marital status, country of citizenship, country of birth, occupation, intended or actual length of stay, purpose of journey, mode of transport, country of residence or where most time was or will be spent, country of embarkation or disembarkation, State of residence or where most time was or will be spent, and State of embarkation or disembarkation.

The categories shown in the previous table are cross-classified by various characteristics listed above and resulting statistics are shown in considerable detail in quarterly and annual publications. Certain unpublished information is available on request. Selected traveller statistics are shown in the following tables.

Short-term travel is subject to marked seasonal variation, December being the peak month for the arrival of overseas visitors and the departure of Australian residents.

OVERSEAS VISITORS AND AUSTRALIAN RESIDENTS: SHORT-TERM ARRIVALS AND DEPARTURES BY MONTH OF ARRIVAL OR DEPARTURE, AUSTRALIA, 1981

(Persons)

	Overseas visitors		*Australian residents*	
Month	*Arriving*	*Departing*	*Departing*	*Returning*
January	69,566	105,006	88,936	143,403
February	78,701	75,118	77,148	84,177
March	84,300	88,095	109,014	90,105
April	67,803	75,032	103,973	86,786
May	63,119	72,212	113,049	98,220
June	72,592	57,060	99,061	97,233
July	81,198	69,023	104,455	93,372
August	74,985	78,293	109,416	96,102
September	62,782	67,150	92,937	113,606
October	80,276	71,390	88,653	111,638
November	88,346	78,285	90,467	97,412
December	113,059	63,714	140,191	69,312
Total	**936,727**	**900,376**	**1,217,299**	**1,181,387**
Sea travellers as a percentage of Total	0.49	0.33	0.58	0.48

AUSTRALIAN RESIDENTS DEPARTING—SHORT-TERM MOVEMENT: STATED PURPOSE OF JOURNEY AND INTENDED LENGTH OF STAY, 1981 (a)

(Persons)

	Stated purpose of journey								
Intended length of stay	*Convention*	*Business*	*Accompanying business traveller*	*Visiting relatives*	*Holiday*	*Employment*	*Education*	*Other and not stated*	*Total*
Under 1 week	2,093	24,294	1,464	3,181	12,620	1,805	212	3,362	49,031
1 week and under 2 weeks	10,163	34,036	3,388	14,168	167,539	1,319	2,026	8,522	241,160
2 weeks and under 3 weeks	5,317	26,140	3,171	20,367	198,811	1,743	1,427	7,864	264,840
3 weeks and under 1 month	2,968	16,618	1,928	24,505	87,286	839	1,031	4,457	139,633
1 month and under 2 months	3,535	23,674	3,545	65,749	109,737	2,689	1,577	7,752	218,259
2 months and under 3 months	922	7,910	1,431	38,682	52,288	1,190	944	3,970	107,337
3 months and under 6 months	534	4,942	1,374	35,567	46,497	2,645	1,217	4,297	97,072
6 months and under 9 months	*	2,570	1,789	13,993	19,637	2,313	745	3,113	44,242
9 months and under 12 months	*	2,089	2,527	6,870	11,802	4,753	1,913	4,027	34,000
Not definite, not stated	390	1,321	806	3,010	8,736	497	361	6,603	21,726
Total	**26,022**	**143,593**	**21,423**	**226,090**	**714,955**	**19,794**	**11,452**	**53,970**	**1,217,299**

(a) Asterisk (*) denotes that figures are subject to sampling variability too high for most practical purposes.

OVERSEAS VISITORS ARRIVING—SHORT-TERM MOVEMENT: STATED PURPOSE OF JOURNEY AND INTENDED LENGTH OF STAY, 1981 (a)

(Persons)

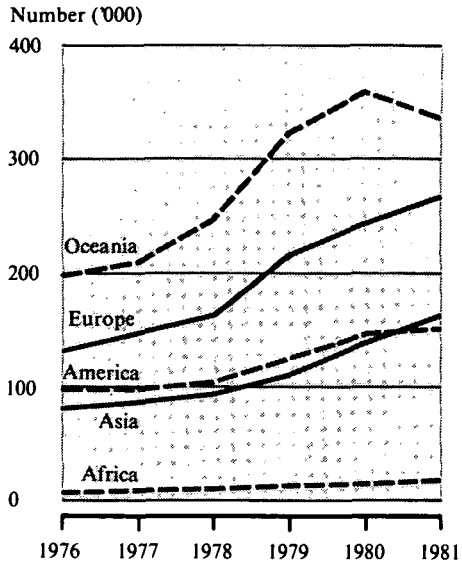
	Stated purpose of journey									
Intended length of stay	*In transit*	*Convention*	*Business*	*Accompanying business traveller*	*Visiting relatives*	*Holiday*	*Employment*	*Education*	*Other and not stated*	*Total*
Under 1 week	62,598	2,650	36,191	1,986	8,231	59,356	963	436	7,271	179,682
1 week and under 2 weeks	*	6,525	38,659	2,909	23,851	90,305	493	1,061	7,702	171,584
2 weeks and under 3 weeks	*	3,387	20,282	1,954	35,475	72,702	571	856	5,972	141,216
3 weeks and under 1 month	*	837	5,836	479	35,290	39,954	226	246	2,971	85,858
1 month and under 2 months	*	1,045	11,092	919	82,389	56,409	612	1,232	6,334	160,053
2 months and under 3 months	*	174	2,862	519	31,250	18,277	576	1,495	2,589	57,754
3 months and under 6 months	*	131	3,060	1,287	34,254	20,213	2,556	3,789	3,444	68,741
6 months and under 9 months	*	*	1,339	623	13,292	9,745	3,211	1,440	2,267	31,944
9 months and under 12 months	*	*	1,380	953	3,961	6,421	7,110	4,279	2,708	26,829
Not definite, not stated	*	344	1,540	352	3,435	3,896	622	386	2,488	13,063
Total	**62,772**	**15,117**	**122,241**	**11,983**	**271,430**	**377,278**	**16,938**	**15,221**	**43,746**	**936,727**

(a) Asterisk (*) denotes that figures are subject to sampling variability too high for most practical purposes.

The average intended length of stay abroad of Australian residents departing in 1981 for short-term visits abroad was 54 days. The average intended length of stay in Australia by short-term visitors from overseas was 49 days. Of course, statistics for Australian residents refer to their total time away from Australia; for overseas visitors they refer only to the Australian portions of their trips.

In the case of both Australian residents departing and overseas visitors arriving, the most common reason for visit was 'holiday', followed by 'visiting relatives' and 'business' as the second and third most common reasons.

VISITOR ARRIVALS, SHORT TERM, BY USUAL RESIDENCE, 1976 TO 1981



RESIDENT DEPARTURES, SHORT TERM, BY REGION OF INTENDED STAY, 1976 TO 1981

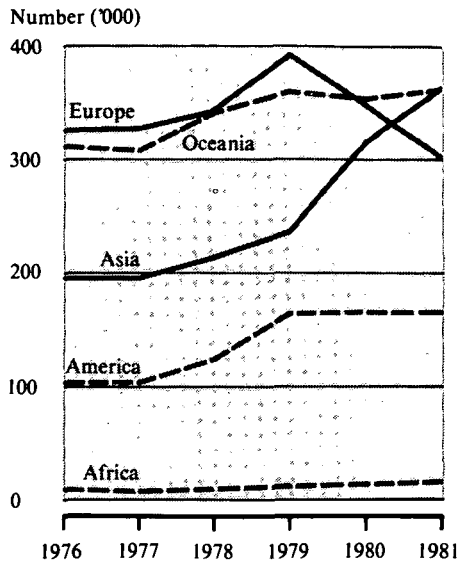


PLATE 49

OVERSEAS VISITORS ARRIVING BY COUNTRY OF RESIDENCE AND INTENDED LENGTH OF STAY, AND AUSTRALIAN RESIDENTS DEPARTING BY COUNTRY OF INTENDED STAY AND INTENDED LENGTH OF STAY, AUSTRALIA, 1981 (b)

	Overseas visitors arriving—intended length of stay						*Australian residents departing—intended length of stay*					
Country of residence (visitors) and country of intended stay (residents)	*Under 1 week*	*1 week and under 1 month*	*1 month and under 3 months*	*3 months and under 12 months*	*Not definite, not stated, etc.*	*Total*	*Under 1 week*	*1 week and under 1 month*	*1 month and under 3 months*	*3 months and under 12 months*	*Not definite, not stated, etc.*	*Total*
Africa -												
South Africa	2,336	3,719	4,176	1,528	140	11,897	*	2,176	4,025	1,555	*	7,871
Other	1,102	1,779	2,340	1,010	156	6,390	190	2,847	3,329	2,140	151	8,656
Total, Africa	*3,438*	*5,498*	*6,516*	*2,538*	*296*	*18,287*	*240*	*5,023*	*7,354*	*3,695*	*216*	*16,527*
America-												
Canada	3,404	13,215	8,783	5,167	379	30,948	*	3,744	6,914	3,021	172	13,902
U.S. America	28,388	53,899	20,646	9,422	1,609	113,964	2,205	72,930	51,052	15,626	1,641	143,454
Other	1,881	2,003	1,306	1,435	363	6,987	*	1,202	3,717	3,041	220	8,189
Total, America	*33,673*	*69,117*	*30,735*	*16,024*	*2,351*	*151,899*	*2,265*	*77,876*	*61,683*	*21,688*	*2,033*	*165,545*
Asia												
Hong Kong	2,501	9,269	3,632	1,502	193	17,095	4,159	50,703	6,739	3,056	743	65,401
India	1,298	1,366	1,247	794	104	4,810	*	3,075	5,516	2,270	181	11,123
Indonesia	4,862	6,549	2,230	1,128	304	15,074	2,124	69,530	7,595	2,960	874	83,083
Israel	156	365	853	504	*	1,906	*	640	2,605	1,173	*	4,509
Japan	29,475	18,747	2,085	2,520	872	53,699	999	13,138	3,621	1,129	325	19,211
Malaysia	2,749	7,954	5,189	3,904	244	20,040	1,094	21,832	8,790	3,513	522	35,749
Philippines	1,738	2,357	1,548	1,105	232	6,980	781	18,073	6,501	1,358	299	27,013
Singapore	3,559	10,524	3,773	1,535	231	19,621	6,596	51,026	7,795	2,755	1,048	69,220
Thailand	1,002	2,467	1,230	697	136	5,531	290	9,321	2,312	900	210	13,033
Other and unspecified	4,083	5,767	3,839	3,138	476	17,306	382	13,112	9,422	10,679	406	34,001
Total, Asia	*51,423*	*65,365*	*25,626*	*16,827*	*2,820*	*162,062*	*16,506*	*250,450*	*60,896*	*29,793*	*4,698*	*362,343*
Europe -												
Austria	457	726	1,266	650	132	3,230	*	730	1,984	872	*	3,718
France	1,627	2,749	2,364	1,545	*	8,376	*	2,244	4,959	1,797	101	9,173
Germany(a)	5,916	9,377	16,175	7,008	580	39,055	*	3,614	9,836	4,389	219	18,129
Greece	498	540	1,094	2,680	196	5,007	*	1,841	7,465	17,160	591	27,127
Italy	1,198	2,622	4,128	3,821	387	12,154	100	3,374	16,260	13,040	770	33,545
Netherlands	1,655	4,173	8,728	3,295	160	18,010	*	1,598	6,544	2,958	100	11,221
Switzerland	1,410	2,355	2,979	2,271	108	9,121	*	1,134	2,403	1,133	*	4,762
U.K. and Ireland	12,130	37,788	61,378	33,302	1,360	145,957	632	20,138	57,051	45,810	2,067	155,697
U.S.S.R.	130	*	142	181	*	569	*	291	451	112	*	874
Yugoslavia	271	423	1,728	2,839	116	5,376	*	560	6,027	7,833	280	14,730
Other and unspecified	3,345	5,073	5,055	5,358	418	19,260	*	2,066	10,554	9,675	372	22,729
Total, Europe	*28,637*	*65,922*	*105,037*	*62,950*	*3,569*	*266,115*	*1,152*	*37,590*	*153,534*	*104,779*	*4,650*	*301,705*
Oceania												
Fiji	3,424	3,115	2,798	1,105	192	10,633	1,917	68,292	2,527	1,105	1,098	74,940
New Caledonia	1,614	2,891	2,845	621	261	8,231	896	19,306	508	220	466	21,395
Papua New Guinea	6,514	7,610	7,017	3,175	341	24,657	3,171	11,625	4,032	5,447	516	24,792
New Zealand	48,166	176,427	34,743	22,198	2,837	284,372	19,918	151,604	31,082	6,753	3,013	212,371
Norfolk Island	342	516	256	*	*	1,160	1,558	8,621	415	*	140	10,822
Vanuatu	250	248	170	177	*	857	236	3,900	169	104	100	4,510
Other	1,748	1,191	1,466	1,196	152	5,755	742	8,456	1,904	1,039	202	12,340
Total, Oceania	*62,058*	*191,998*	*49,295*	*28,517*	*3,795*	*335,665*	*28,438*	*271,804*	*40,637*	*14,756*	*5,535*	*361,170*
Other	453	757	598	658	233	2,699	430	2,889	1,492	604	4,594	10,009
Total	**179,682**	**398,658**	**217,807**	**127,514**	**13,063**	**936,727**	**49,031**	**645,633**	**325,596**	**175,314**	**21,726**	**1,217,299**

(*a*) Comprises the German Democratic Republic and the Federal Republic of Germany. (*b*) Asterisk (*) denotes that figures are subject to sampling variability too high for most practical purposes.

CHAPTER 27

THE TERRITORIES OF AUSTRALIA

The internal Territories of Australia are the Northern Territory and the Australian Capital Territory. External Territories under the control of Australia are: Norfolk Island; the Territory of Heard and McDonald Islands; the Australian Antarctic Territory; the Territory of Cocos (Keeling) Islands; the Territory of Christmas Island; and the Territory of Ashmore and Cartier Islands.

Information on all Territories except Ashmore and Cartier Islands is contained in the following pages, and details of the acquisition of all the Territories can be found in Chapter 1 of previous Year Books. More detailed statistics and additional descriptive matter are to be found in the Annual Reports of the Administrations of the various Territories and in the *Northern Territory Statistical Summary* (1306.7) and the *Australian Capital Territory Statistical Summary* (1307.0) issued by the ABS. Statistics for the Northern Territory and the Australian Capital Territory are also included in chapters dealing with particular subjects.

THE NORTHERN TERRITORY

General description

The total area of the Northern Territory is 1,346,200 square kilometres.

The Northern Territory seat of Government is Darwin on the North Coast. The estimated resident population of the Greater Darwin Area at 30 June 1981 was 57,212.

Northern Territory Self-Government

The Northern Territory was established as a self-governing territory by the *Northern Territory (Self-Government) Act* 1978 of the Commonwealth. Under that Act, the Commonwealth transferred most of its powers to the Government of the Northern Territory.

In all fields of transferred power, the Government is similar to that of the Australian States, with some differences in titles, for example there is an Administrator instead of a Governor and a Chief Minister instead of a Premier.

The Administrator, appointed by the Governor-General, has responsibility for administering the Government of the Northern Territory. The Administrator is advised by an Executive Council comprised of all Northern Territory Ministers, led by the Chief Minister. The Administrator acts with the advice of the Executive Council on all matters transferred to the Northern Territory. He acts with Commonwealth advice on matters not transferred.

The Legislative Assembly of the Northern Territory is the Northern Territory's Parliament. It has 19 Members, which are elected for a period of four years. A Speaker is elected by, and Ministers are appointed from, the Members of the Legislative Assembly. A Ministry of six is responsible for the administration of all transferred powers and acts through a number of departments and authorities, most of which are staffed by the Northern Territory Public Service.

Local Government was established in Darwin in 1957 and afterwards in regional centres. Municipal councils are elected by universal adult franchise, with elections at intervals of not more than three years. Provision has been made for a limited form of local government by smaller communities. There has been considerable interest in this provision, particularly in Aboriginal communities.

Development of Administration

Upon the extension of New South Wales westwards to the 129th east meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 it was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1 January 1911.

From 1911 until 30 June 1978, the Commonwealth administered the Northern Territory under the provisions of the *Northern Territory (Administration) Act* 1910, as amended. The Act provided for an Administrator, appointed by the Governor-General, to administer the Northern Territory on behalf of the Commonwealth Government.

By amendment of the Act in 1947, a Legislative Council comprising seven official and six elected members, with the Administrator as President, was created to make laws for the peace, order and good government of the Northern Territory. Composition of the Legislative Council was changed by further amendment in 1959 to provide for six official members, three nominated non-official members and eight elected members, and for an Administrator's Council to advise the Administrator. The Act was further amended in 1974 to provide for a Legislative Assembly of 19 elected Members and for a Speaker to be one of those Members, elected by the Members.

Laws passed by the Assembly were presented to the Administrator for assent. The Administrator was required to reserve laws on specific subjects for the pleasure of the Governor-General who was empowered to assent, withhold his assent or refuse his assent in part to such laws, or to return them to the Assembly with recommended amendments.

On 1 January 1977, the Commonwealth Government began a program of transferring executive powers to the Legislative Assembly by amendment of the Northern Territory (Administration) Act. A separate Northern Territory Public Service was created and administrative powers were transferred. Positions of Executive Member were created under the Act. These Members exercised ministerial-type powers in respect of transferred matters such as policy, fire brigade, local government and correctional services. An Executive Council replaced the Administrator's Council.

On 1 July 1978, the Northern Territory (Self-Government) Act came into force and established the Northern Territory as a body politic under the Crown. This Act also provided for the appointment of an Administrator by the Governor-General. It created offices of Ministers of the Northern Territory who, together with the Administrator, comprise the Executive Council of the Northern Territory. A Northern Territory Government, comprised of Ministers of the Northern Territory, was established with full responsibility for a range of state-type transferred powers administered through a Northern Territory Public Service and a Treasury. A Northern Territory flag was raised for the first time on 1 July 1978, the date upon which the Northern Territory became self-governing.

Major matters not transferred on 1 July 1978 were the mining of uranium and other prescribed substances, Aboriginal land matters, health, education and the Supreme Court. Powers in respect of health, education and the Supreme Court were progressively transferred from the Commonwealth to the Northern Territory Government during 1979.

At the end of 1979, the only major powers retained by the Commonwealth in the Northern Territory were those relating to rights in respect of Aboriginal land and the mining of uranium and other prescribed substances. Since the end of 1979, the Northern Territory, although remaining a Territory of the Commonwealth and still subject to Commonwealth laws made under Section 122 of the Constitution, is in most respects a self-governing Territory.

The Northern Territory is represented in the Parliaments of the Commonwealth by one Member in the House of Representatives and two Senators, whose terms of office coincide with that of the Member in the House of Representatives.

Physical geography

The Territory is within the torrid zone, with the exception of a strip about 300 kilometres wide which lies south of the Tropic of Capricorn.

The low flat coastline seldom reaches a height of 30 metres. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite form the occasional cliffy headlands. The coastline of 6,200 kilometres is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries. The only practicable deep-water port for general use, however, is Darwin.

Inland, the country generally is devoid of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the seventeenth or eighteenth parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply for the interior system. 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 west trend.

Climate, fauna and flora

There are two main climatic divisions: the wet season, November to April; and the dry season, May to October. The changes of weather are uniform and regular. Nearly all the rainfall occurs in the summer months.

The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of fresh-water fish and littoral Mollusca. Butterflies and beetles are strongly represented. The termite is a pest which is capable of serious

damage to wooden buildings unless special preventive measures are taken. Mosquitoes and sandflies are very troublesome in the 'top end', particularly in the wet season. Buffaloes exist in large herds on the northern coastal plains. Most types of native fauna are protected.

The vegetation is north Australian in type, but a number of forms belong to the Malayan and Oceanic regions. The climate and generally poor soils associated with it give rise to tropical savannah vegetation, with the size and volume of woody material present being closely related to rainfall and the quality of the forests decreasing strikingly as one proceeds inland from the northern coastline. In the north, cypress pine (which is termite resistant), ironwood, bloodwood and paperbark timbers are cut and milled for local building purposes. Further inland, particularly on the Barkly Tablelands and parts of the Victoria River district, there are better grazing grasses and some shrubs, while the wide belt of sandy plain between the Barkly Tableland and the ranges in the Alice Springs area carries mainly spinifex grass and low scrub. The plains of the Alice Springs district carry chiefly an acacia scrub known as mulga, spinifex and other sparse grasses. The principal families represented in the interior are *Gramineae, Chenopodiaceae, Compositae* and *Mimosaceae.*

Population

See also Chapter 6, Demography.

The estimated population of the Northern Territory at 30 June 1982, was 127,400 persons.

Aboriginal Affairs

Policy

The Government is committed to policies of Aboriginal self-management at all levels. Involvement of Aboriginals in delivery and planning programs, and in all stages of the development and implementation of policy is paramount.

The basis of the Government's approach is to secure for Aboriginals access to government services equal to that accorded other Australian citizens, together with additional services appropriate to Aboriginals' state of extreme disadvantage, and, in recognition of a community obligation deriving from Aboriginals' past dispossession and dispersal.

Legal status

As Australian citizens, Aboriginals are entitled to equality before the law. For the purpose of administering various programs designed to benefit Aboriginals, the Department of Aboriginal Affairs and other Commonwealth Government departments and agencies define an 'Aboriginal' or 'Torres Strait Islander' as a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives.

Land and land rights

The *Aboriginal Land Rights (Northern Territory) Act* 1976 gives traditional Aboriginals inalienable freehold title to former Aboriginal reserves and some other land, amounting to approximately 19 per cent of the Northern Territory, and provides a procedure for them to claim title to other areas of unalienated Crown land.

Aboriginals who are able to prove strong traditional links with unalienated Crown land may make a claim before the Aboriginal Land Commissioner, a judge of the Northern Territory Supreme Court. The Aboriginal Land Rights Act requires the Land Commissioner, in hearing a claim, to consider a number of matters in addition to traditional ownership before making a recommendation to the Minister for Aboriginal Affairs. The Minister can then accept or reject the Aboriginal Land Commissioner's recommendations.

By 31 October 1982, 8 claims had been finalised, resulting in 106,263 square kilometres being granted to Aboriginal Land Trusts, bringing the total of Aboriginal freehold land in the Northern Territory to 362,930 square kilometres, or approximately 27 per cent of the Territory.

Several claims have been heard and are awaiting the decision of the Minister for Aboriginal Affairs, while a number of other claims are waiting to be heard. Freehold titles to Aboriginal land are held by Aboriginal Land Trusts and the land is administered by Aboriginal Land Councils.

Minerals on Aboriginal land remain the property of the Crown. The Aboriginal Land Rights Act provides, however, that mineral exploration can only proceed with the approval of the appropriate land council which in turn must abide by the wishes of the traditional Aboriginal owners of the area concerned. This veto power can be overruled if the Governor-General, by Proclamation, declares that the national interest requires the grant of a mining interest, and neither House of Parliament disallows that Proclamation. Pre-existing mining interests were exempt from the requirement for Aboriginal

consent. In all cases however, agreement must be reached on terms and conditions of mining and the Minister for Aboriginal Affairs is able to appoint an arbitrator in cases where Aboriginal consent is not required but a land council is unable or unwilling to reach agreement with a mining company.

Royalties from mining on Aboriginal land are paid into an Aboriginal Benefits Trust Account and are distributed to pay administrative expenses of land councils, to communities affected by mineral developments and, on the recommendation of an advisory committee, to Aboriginal communities of the Northern Territory generally. Control of uranium mining has been reserved by the Commonwealth and special arrangements have been made between the Commonwealth and the Northern Territory Governments in relation to payments in lieu of royalties.

Aboriginal communities are also being assisted to purchase land on the open market. An Aboriginal Land Fund Commission was established in 1974 for this purpose. This function was taken over on 1 July 1980 by the Aboriginal Development Commission which assists Aboriginal and Torres Strait Islander communities, groups and individuals to acquire land for a variety of purposes, engage in business enterprises, obtain finance for housing and other personal needs, and to receive training where necessary.

Community services and affairs

Government policy in the administration of Aboriginal affairs is to encourage State and Commonwealth departments and instrumentalities to provide services to Aboriginals as to other Australian citizens and to take special measures to ensure that these services are appropriate, accessible and reflect the variety of Aboriginal life styles. In line with the transfer of other functions to the Northern Territory Government on 1 July 1978, the Northern Territory Government has assumed responsibility for the provision of major services to Aboriginal communities including essential services such as water and power supply, health, education and support for local government. Subsequently, the Commonwealth has provided annual grants to the Northern Territory Government and to the Aboriginal Development Commission for housing programs for Aboriginals.

Special programs for Aboriginals

Attention is being given to changing the institutional character of Aboriginal communities in the Northern Territory. Support is designed to encourage and strengthen the capacity of Aboriginals to manage their own affairs, to increase their economic independence, and to reduce social handicaps facing them.

Government policy is to provide Aboriginal primary school children in Aboriginal communities with education in their own language as far as practicable. Bilingual education programs initiated in Northern Territory Aboriginal communities in 1973 have been expanded and are operating in several schools.

Aboriginal Legal Services operated by Aboriginals and supported by the Department of Aboriginal Affairs have been established on the initiative of Aboriginal groups in all States and the Northern Territory to ensure that Aboriginals have access to legal advice and are competently represented in the courts.

Production

See also the chapters dealing with particular subjects.

Land tenure

On 30 June 1981, 19,682,293 hectares were held under freehold title; 77,169,774 hectares under leasehold; 27,717 hectares under various licences; 13,247,036 hectares reserved for public purposes and for the benefit of Aboriginals; 82,334 hectares set aside for Government use; and 24,410,846 hectares unalienated. Land rent collected for the year 1980–81 amounted to $358,298.

Following the report of the Aboriginal Land Rights Commissioner in April 1974, the Commonwealth Government introduced the *Aboriginal Land Rights (N.T.) Act* 1976. This Act which commenced on Australia Day, 26 January 1977 provides for the granting to Aboriginals of a title in fee simple, of traditional Aboriginal land in the Northern Territory.

Existing reserves for the use and benefit of Aboriginals will be subject to fee simple title pursuant to the provisions of the Act, while title to other areas of land over which traditional rights are claimed are subject to hearings by the Aboriginal Land Commissioner, who must be a judge of the Supreme Court of the Northern Territory.

With the commencement of the Crown Lands Amendment Act (No. 3) 1980 most existing leases in the Territory were automatically converted to freehold tenure making it the rule rather than the exception. Most Pastoral Leases and all Special Purposes Leases were excluded from automatic freeholding.

The various forms of lease or licence of lands are as follows:

Pastoral leases	—granted for periods not exceeding 50 years.
Crown leases (Term)	—granted for a term of years, and in majority of cases can be converted to freehold when developed.
Crown leases (Perpetual)	—granted in perpetuity.
Special purposes leases	—granted for a term of years or in perpetuity for purposes other than pastoral, agricultural or mining, or for private residential purposes within a town.
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 five years.
Miscellaneous licences	—granted for periods not exceeding one year.

Pastoral and agricultural industries

Beef cattle production is the major rural industry in the Northern Territory. The beef industry has been characterised throughout its history by a slow rate of expansion due to the poor quality of native pastures in the Top End and unsatisfactory market outlets. Developments in pasture improvement and the use of adapted Zebu cross-cattle in the northern areas, the opening in 1963 of the export abattoirs in Katherine and Darwin, some improvement in disease control coupled with better management techniques, and various incentives and research programs introduced by the Government to encourage development of the pastoral industry have resulted in an increase in turnoff figures and value of production.

In the mid 1970's industry development suffered a major set-back due to a prolonged period of low export meat prices despite the upgraded export status given to Point Stuart Meatworks as well as the development of the live cattle export market in Malaysia. Over that period cattle numbers increased by approximately 400,000 head to 1.8 million, reflecting the high cost of mustering and cartage, which, together with the low returns resulted in non-profitability of cattle sold to market.

Between 1978 and 1980 the industry saw a dramatic upturn in prices by more than 300 per cent. Additional export abattoirs opened at Alice Springs and Tennant Creek. During 1981 beef cattle prices retreated from their historic high of 1980 and buffalo prices, due mainly to adverse exchange rate movement fell by up to 30 per cent.

Animal production has continued to be augmented by the buffalo meat industry. Development in the domestication of buffaloes continues on the sub-coastal plains properties, the 1981 estimated population being 6,300 out of an estimated feral buffalo population of 150,000. Buffalo meat exports of 2,200 tonnes during 1980 increased by one-third over the 1979 figure of 1,500 tonnes, the market changing quite radically. The American and Far East Markets of Hong Kong, Malaysia and Taiwan Province declined in favour of European markets, especially the Federal Republic of Germany and Scandinavia. Both the pig and poultry industries, unaffected by overseas marketing, have continued to expand.

In 1980 the Agricultural Development and Marketing Authority (ADMA) was established to encourage crop growing, diversification within the pastoral and agricultural industries, economies of scale and market development. ADMA has commenced development of three farms for cropping in the Daly Basin, 250 kilometres from Darwin, and is managing a program of co-ordinated farm development on a commercial scale for the production of maize, sorghum, soya beans, peanuts and pastures for seed production, hay or grazing. A grain handling facility and a seed and fertilizer store in Katherine have been established and horticultural marketing in the Darwin region is being promoted.

Continuing private investment in rural development is leading to greater pressures upon the Government for extension services and research. The work of CSIRO and the Dept. of Primary Production research stations and experimental farms is providing the basis for continuing rural development. As new knowledge is being gathered it will be followed by testing on farm scale.

The research institutions in existence in the Northern Territory are as follows:

Arid Zone Research Institute—Alice Springs. This institute zones research in the 'Centre' and studies the need to conserve valuable pastoral lands while achieving maximum productivity. Fields of work at the Institute include animal health, agriculture, horticulture, soil conservation, botany, animal production and range management.

Coastal Plains Research Station. The Station has 3 main roles: one as a regional station examining suitable pasture and animal production systems in the Coastal Plains/Darwin area; the second as the major centre for rice research and a third as a centre researching into buffalo production. Its efforts have been devoted to the animal breeding investigations, with some attention being paid

to the development of improved pasture systems including establishment, maintenance and the reaction to various grazing rates. Breeding trials are being conducted with Brahmans and Africander cross-breeds, and Shorthorns. A small herd of cross-bred cattle (Shorthorn cows artificially inseminated from Bantang (Bali) Purebred Semen) has now been developed and the group transferred to private enterprise.

Victoria River Research Station. This is the only Government Experiment Station in the range-lands of the Northern Territory. Work is being undertaken on: cattle production management systems; evaluation of improved pastures; supplements; virus antibody survey; and range management studies.

Tortilla Flats Research Farm. The Research Farm is mainly concerned with rice production as it is representative of the Adelaide River plains land system which extends over 10,000 square kilometres. Work is being undertaken on testing new varieties, fertilizer trials, sowing techniques and weed control in rice bays.

Berrimah Research Farm. The work of this Farm has been mainly restricted to pasture and crop investigations; plant introduction; fruit, vegetable and weed control trials; and intensive animal studies.

Douglas-Daly Research Farm. With the advent of the Agricultural Development and Marketing Authority (ADMA), cropping investigation under irrigation will be resumed. The crops experimented with will include soy beans, peanuts, maize and mungbeans.

Katherine Experiment Farm. This farm is concerned with cattle studies and trial crop production. Katherine Rural Education Centre makes considerable use of the Farm's facilities for practical and work experience.

NORTHERN TERRITORY: NUMBER, AREA AND LAND UTILISATION OF AGRICULTURAL ESTABLISHMENTS

	Number of agricultural establishments	*Area used for crops (a)*	*Area under sown pastures and grasses*	*Balance of area (b)*	*Total*	
					Area	*Percentage of N.T. land area (134,620,000 hectares)*
				'000 hectares		
1976-77	289	2.4	112.8	75,263.3	75,378.5	55.9
1977-78	297	0.8	112.3	75,410.0	75,523.1	56.0
1978-79	301	1.6	90.4	76,099.9	76,191.9	56.6
1979-80	346	1.8	99.0	78,066.8	78,167.7	58.1
1980-81	336	1.4	87.1	77,500.4	77,588.7	57.7
1981-82p	300	2.0	56.0	77,078.0	77,136.0	57.3

(*a*) Excludes duplication on account of area double cropped. (*b*) Used for grazing, lying idle, fallow, etc.

NORTHERN TERRITORY: AGRICULTURAL STATISTICS

	Unit	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82p
Livestock numbers—							
Cattle	'000	1,663.7	1,674.1	1,784.6	1,727.2	1,675.4	1,622.4
Domesticated buffaloes	'000	3.7	4.2	3.6	2.4	6.3	2.5
Poultry	'000	175.0	183.5	200.3	180.1	169.9	206.4
Pigs	'000	7.4	3.2	3.1	2.3	3.2	2.5
Gross value of livestock slaughterings and other disposals—							
Cattle and calves	$'000	22,834	29,291	106,890	121,494	56,852	49,620
Poultry	$'000	534	633	633	880	1,314	945
Pigs	$'000	602	687	390	488	523	722
Gross value of livestock products—							
Dairy products	$'000	142	72	72	86	n.a.(a)	n.a.(a)
Eggs	$'000	898	1,300	1,292	1,395	1,757	2,500
Crops, Area—							
Sorghum (grain and feed)	Hectares	1,705	144	764	653	592	508
Hay	Hectares	195	66	251	367	258	n.y.a.
Tree fruit	Hectares	26	15	15	16	15	17
Bananas	Hectares	11	14	12	13	13	19
Vegetables	Hectares	97	108	119	145	110	98
Pastures and grasses (hay, seed, green feed)	Hectares	2,175	1,591	2,123	1,717	2,974	n.y.a.
Total area used for crops (incl. pastures and grasses)	Hectares	4,566	2,407	3,697	3,549	4,410	n.y.a.
Crops, Production—							
Sorghum for grain	Tonnes	1,335	41	331	1,011	496	818
Hay	Tonnes	1,457	200	1,956	1,396	4	32
Bananas	Tonnes	70	89	124	101	60	87
Pastures and grasses (hay, seed)	Tonnes	7,056	5,083	5,583	3,920	7,328	12,457
Gross value of crops—							
Sorghum for grain	$'000	117	4	6	104	69	115
Fruit	$'000	36	60	220	85	75	495
Vegetables	$'000	132	421	588	332	297	230
Pastures and grasses	$'000	152	231	164	330	426	810
Total crops (incl. pastures and grasses)	$'000	545	1,194	1,125	1,083	1,908	1,786
Gross value of agriculture	$'000	25,555	33,177	110,402	125,426	62,355	55,573

(a) Not available for publication. Excluded from totals.

Mining

The value of mineral output continued its rapid rise of recent years from $249.8 million in 1978–79, to $369.6 million in 1979–80 and $437.0 million in the 1980 calendar year. Major factors in the increasing values of production have been the generally higher metal prices, combined with increasing outputs of copper, manganese, bauxite, construction materials such as crushed rock, sand and gravel and commencement of yellowcake production from Nabarlek. The principal mining areas are the Gove Peninsula, where bauxite is produced; Groote Eylandt for manganese; Tennant Creek for copper and gold; and the Alligator Rivers region for uranium.

NORTHERN TERRITORY: MINING ESTABLISHMENTS

		1978–79	1979–80	1980–81
Establishments operating end of June	No.	11	13	15
Average employment over whole year—persons (a)	No.	1,251	1,488	1,907
Wages and salaries	$m	19.5	28.1	39.7
Turnover	$m	143.5	189.6	305.5
Opening stocks at 30 June	$m	20.2	19.7	42.0
Closing stocks at 30 June	$m	19.7	38.7	81.7
Purchases, transfers in and selected expenses	$m	36.2	55.0	118.6
Value added (b)	$m	106.8	153.6	226.6
Fixed capital expenditure (c)	$m	28.2	186.1	194.3

(a) Includes working proprietors. (b) Turnover plus increase (or less decrease) in the value of stocks less purchases, transfers in and selected expenses. Commencing with 1978–79, 'rent, leasing and hiring revenue' and 'rent, leasing and hiring expenses' have been included in the calculation of value added and its components 'turnover' and 'purchases, transfers in and selected expenses'. (c) Outlay on fixed tangible assets less disposals.

Petroleum and natural gas

During 1980–81 eight new offshore permits were granted. At 30 June 1981, 22 offshore permits had been issued covering 5,586 blocks and 8 onshore permits totalling 140,703 square kilometres. There are 24 onshore oil permits and 3 oil leases under application.

Forestry

Forestry activities in the Northern Territory commenced in 1959 under the Forestry and Timber Bureau; later a State-type service was developed under the Department of the Northern Territory.

In July 1978, with the granting of self-government, forestry became the responsibility of the Territory Parks and Wildlife Commission, now the Conservation Commission of the Northern Territory.

Present activities fall into four main areas: Urban Forestry, Plantation Forestry, Native Forest Management and Conservation.

The Urban Forestry section is aimed at improving the urban environment throughout the Northern Territory through programs of park and street beautification and arid area species testing.

The Plantation Forestry section is predominantly based on plantation establishment on more favourable sites on Melville Island. The program which at this time is totally research oriented with limited plantings, is ultimately aimed at import replacement. The major species in use is *Pinus caribaea*, though early plantings were largely Cypress pine. A small pressure treatment plant providing treated round timber is operated by the Aborigines on nearby Bathurst Island.

Management of native forest is currently confined to the Murganella area of Arnhem Land where a policy of protection from fire has resulted in extensive regeneration of Cypress pine and native hardwoods, *Eucalyptus tetrodonta* and *E. nesophila*. Current research in this area is aimed at development of sound management prescriptions for treatment of this regeneration.

In its conservation role, the Conservation Commission has given emphasis to fire and ecological studies throughout the Territory together with seed collection, testing and propagation, and gene pool conservation of rare or unique species.

Fishing

The Northern Territory fishing industry has increased in importance over the last decade following development of prawn resources. Prawn trawling is now the major fishery, contributing over 80 per cent of total value. Barramundi is second, with the remainder mainly threadfin salmon, spanish mackerel, mud crabs, reef fish and bay lobsters. Prawn and barramundi are heavily fished and measures have been introduced to prevent over-exploitation. The Territory Government is encouraging development of under-utilised demersal and pelagic species (mainly fished by foreign vessels), and reef fish, crabs, scallops and squid. Foreign fishing ventures have involved the issue of Commonwealth licences to 150 Taiwanese vessels and one Japanese feasibility vessel. The Government is encouraging Australians to participate in fisheries not utilised by them and in those exploited by foreign vessels.

NORTHERN TERRITORY: PRINCIPAL FISHERIES

		1975–76	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*
Prawns—							
Estimated gross weight of prawn catch	tonnes	3,191	2,882	2,165	3,749	3,147	4,259
Gross value of prawns	$'000	4,222	8,647	8,100	17,100	14,900	17,067
Fish—							
Estimated live weight of fish catch	tonnes	978	1,483	1,451	1,576	1,352	1,634
Gross value of fish	$'000	969	1,664	1,900	2,334	1,791	2,267

Secondary industries

The types of secondary industries that have developed in the Northern Territory have been largely service industries based on demand from local markets, together with the processing of primary production for export including the processing of mined ores, prawns and beef. The isolation of the Northern Territory from the major population areas of Australia and the resultant high transportation costs make other than local market expansion difficult.

The extent of importation of commodities into the Northern Territory, significant underdeveloped raw resources and a growing population would suggest that potential exists for industrial expansion. Some see the proximity of South East Asian markets to Darwin as providing considerable future potential for export-orientated secondary industry development.

The following table shows results of the Manufacturing Censuses taken in respect of the years 1978–79 to 1980–81.

NORTHERN TERRITORY: MANUFACTURING ESTABLISHMENTS

		1978–79	*1979–80*	*1980–81*
Establishments at 30 June	No.	·87	101	98
Persons employed (*a*)	No.	2,068	2,512	2,651
Wages and salaries	$m	28.3	32.9	46.1
Turnover	$m	186.3	251.2	292.3
Opening stocks at 30 June	$m	37.6	45.2	48.8
Closing stocks at 30 June	$m	41.8	50.4	83.5
Purchases, transfers in and selected expenses (*b*)	$m	117.5	179.4	230.6
Value added (*b*)	$m	73.0	77.0	96.3

(*a*) Average over whole year. Includes working proprietors. (*b*) Data in this table have been revised to comply with changes in the ABS definition of *value added*. 'Rent, leasing and hiring expenses' and 'Rent, leasing and hiring revenue', previously excluded from the *value added* calculations, are now included.

Tourism

Tourism is one of the Territory's major industries with direct earnings for 1979–80 estimated at almost $100 million. Visitors increased from 112,800 in 1971 to 330,000 in 1979–80 (about 15 per cent of these being from overseas). A visitor growth rate of 12 per cent continues to encourage investment in tourist facilities which includes casinos in Darwin and Alice Springs and the Yulara Tourist Village at Ayers Rock—Mt Olga National Park. Ayers Rock (which provides the most reliable visitors figures) showed increases from 5,000 in 1961 to 38,000 in 1971, and 79,219 in 1980–81.

The Northern Territory Tourist Commission has an Alice Springs Head Office, a Darwin Office, a Bureau in Adelaide, Melbourne, Sydney, Perth and Brisbane and a budget for 1981–82 of $3.2 million.

National parks and reserves

There are 45 parks and reserves, covering about 48,000 square kilometres, under the care, control and management of the Conservation Commission of the Northern Territory. The Commission's functions include the preservation and protection of natural and historical features and the encouragement of public use and enjoyment of land set aside in the lands under its control.

Transport and communication

Railways

Passenger and freight train services commenced in December 1980 over the new 831 kilometre standard gauge (1,435 millimetres) Tarcoola—Alice Springs railway, construction of which commenced at Tarcoola, on the Trans-Australian Railway, in April 1975. It replaces a light pioneer narrow gauge (1,067 millimetres) line from Marree to Alice Springs, completed in 1929, and subject to frequent flooding and washaways. The Marree-Alice Springs line will be removed by 1983. Train services on the North Australia Railway, from Darwin to Birdum, ceased on 30 June 1976, by direction of the Commonwealth Government. Australian National Railways is currently carrying out survey work for a proposed new railway between Alice Springs and Darwin.

Roads

The Stuart Highway is the principal north-south axis route for the Northern Territory connecting Alice Springs, Katherine, Tennant Creek and Darwin to Adelaide. The section Darwin—Alice Springs is 1,491 kilometres long and sealed over its full length. The section south of Alice Springs is sealed to the South Australian border, a distance of 293 kilometres.

The Barkly Highway is the principal route to and from Queensland via Mount Isa. It is 648 kilometres long and is sealed. Running approximately east-west, it connects to the Stuart Highway some 26 kilometres north of Tennant Creek.

The Victoria Highway, the principal access route to and from Western Australia via Kununurra, is 467 kilometres long and is sealed.

These highways are used to carry a variety of freight, including cattle, particularly between the railheads at Mount Isa and Alice Springs. They provide access to meatworks at Wyndham (Western Australia), Cloncurry (Queensland) and Katherine. In addition, they play a particularly important part in the Northern Territory economy through their association with the tourist industry.

The first program for upgrading the Stuart and Barkly Highways is complete, while the second program is nearing completion. Future works will be an ongoing program to bring these roads to National Highway Standards.

Water

The Northern Territory Government provides water and wastewater facilities in main centres including Darwin, Alice Springs, Tennant Creek, Katherine, Adelaide River, Batchelor, Pine Creek and many Aboriginal communities. Piped water is available in a number of small settlements including Mataranka, Larrimah, Daly Waters, Elliott, Ti Tree and Finke.

Darwin is served by the Darwin River Dam some 70 kilometres from the city. The earth rockfill dam was completed in 1972. It is 30 metres high with a crest length of 564 metres, has an active storage of 230 million cubic metres and a safe draft of 90 megalitres per day. A supplementary source, McMinn's borefield, is supplying up to 15 megalitres per day. Studies are also being carried out to identify future sources to meet the growing needs of the Darwin region. A first stage project will be the diversion of flow from the Finniss River to Darwin River storage.

Alice Springs has twenty-five bores at Roe Creek, Tennant Creek has ten at Kelly Well and three at Cabbage Gum. Other communities are also supplied from groundwater sources. Katherine is to be supplied with treated water from the Katherine River in place of the hard water from the Tindall limestone aquifer.

Feasibility studies are in progress to assess the economic viability of multi-purpose dams at Warrai on the Adelaide River.

Soil conservation

The Conservation Commission of the Northern Territory administers soil conservation and control legislation, undertakes resource inventories to assess land capabilities and conducts soil erosion works on behalf of the Government and the private sectors.

Shipping

Shipping services to Darwin are provided from the eastern states by the Australian National Line container/bulk ore vessel, the MV Darwin Trader on a six weekly service, and from Western Australia by Western Australian State Shipping Service using two unit load vessels providing a fortnightly service. Tankers from Australian and overseas ports deliver oil products to Darwin. General cargo vessels from overseas ports also visit Darwin. The prawning and fishing industry accounts for a significant portion of the shipping entries into the port.

A regular shipping service operates from Brisbane to the Gulf of Carpentaria ports which serves Aboriginal communities as well as the mining centres of Melville Bay (Gove) and Milner Bay (Groote Eylandt), and bulk carriers load ore and other mining products for delivery to ports in Australia and overseas.

Two Darwin-based companies operate landing craft to Aboriginal communities and ports along the coast, and provide one vessel on regular service to Singapore.

Air services

At 1 September 1981 there were 100 licensed aerodromes plus 4 Commonwealth controlled airports in the Territory. Qantas operates a weekly international service from Darwin to Singapore whilst Garuda Indonesian Airways provides a twice weekly service to Den Pasar (Bali). Regular services to Darwin with intermediate stops at some Territory centres are operated by Trans Australian Airlines and Ansett Airlines of Australia from mainland capital cities and by Airlines of Western Australia from Western Australia. Airlines of Northern Australia commenced operations in 1981 and provide a network to all major Territory centres. The Northern Territory Aerial Medical Service has aircraft based at Darwin and Gove while the Royal Flying Doctor Service operates from Alice Springs. Regular commuter services operate from Darwin, Katherine and Alice Springs to outlying centres. Charter services are available at Darwin, Alice Springs, Gove, Groote Eylandt, Katherine, Tennant Creek and Jabiru. Responsibility for the economic licensing of domestic operations passed from the Commonwealth to the Northern Territory Government on 1 June 1980. The Commonwealth Government retains responsibility for safety and operational aspects and works closely with Territory authorities in the licensing of commercial operations within the Territory.

Several organisations provide helicopter services particularly for cattle mustering and aerial survey. In 1981 heavy helicopter activity from Darwin increased in support of offshore drilling rigs involved in oil and gas exploration.

Civil aircraft under contracts to the Department of Transport, Australia, operate on extensive coastal surveillance operation from Darwin.

Post, telegraph, telephone, radio and television

Postal communication is maintained by daily air transport between major Northern Territory centres and the capital cities of Australia. Large centres receive surface mails by two major road mail services operating from Queensland and South Australia. More remote centres are served by aerial services. Direct mail despatches are exchanged between Darwin and several overseas countries.

Trunk telephone links to Darwin extend from Townsville via a broadband microwave radio relay system, and from Adelaide via systems operated over leased circuits on the NAR Tarcoola-Alice Springs microwave link. These systems also carry telegraph and data traffic and serve towns along the routes. Subscriber trunk dialling facilities were introduced to Darwin, Nhulunbuy (Gove Peninsula) in 1974 and to Katherine in 1975. ISD (International Subscriber Dialling) was introduced to telephone exchanges in the Darwin area and to Katherine and Nhulunbuy in December 1976. Tennant Creek and Elliott telephone services were connected to automatic with subscriber trunk dialling facilities during 1979.

Completion of Australia's first solar-powered broad-band microwave relay system between Tennant Creek and Alice Springs in October 1979 brought subscriber trunk dialling and ISD facilities to Alice Springs. It also provides live television programs to the National Television Service transmitter at Alice Springs.

All small towns in the Northern Territory had been converted to automatic telephone service with STD facilities in a program extending over the last several years. The most recent of these was Adelaide River, Mataranka, Millingimbi and Bathurst/Melville Islands (Tiwi Exchange). An automatic exchange equipped to 600 lines was provided in November 1980 to service the newly created uranium mining town of Jabiru.

High frequency radio telephone exchanges at Katherine and Alice Springs provide connections to the telephone network for some of the remote properties in the Northern Territory. The majority of homesteads on pastoral leases are equipped with radio transceivers operating through the Royal Flying Doctor base at Alice Springs or the Telecom Australia Outpost Radio base in Darwin which provide a message passing and emergency communications service. A number of homesteads and settlements adjacent to the Darwin-Isa and Tennant Creek-Alice Springs microwave corridors are provided with VHF radio telephone giving 24 hour service with STD facilities.

Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek, Katherine and Gove and there are commercial broadcasting stations located at Darwin and Alice Springs. Two television stations, ABD Channel 6 of the national broadcasting system and NTD Channel 8, a commercial station, operate in Darwin. The Darwin ABD 6 national program is also broadcast in Katherine (ABKN 7) and Tennant Creek (ABTD 9) with a translator (ABTD 9—10) to give coverage of the mining residential area at Warrego. A national television station, ABAD Channel 7, operates in Alice Springs. Remote area television provided via satellite to earth stations at Elcho Island, Nhulunbuy, Groote Eylandt, Jabiru, Daly River and Boroloola in early 1983.

Education

See also Chapter 12, Education.

Responsibility for education in the Northern Territory was transferred from the Commonwealth Department of Education to the Northern Territory Government on 1 July 1979.

Since that date education services have been provided by the Northern Territory Department of Education.

Details of the responsibilities are outlined in the *Northern Territory of Australia Education Act* 1979. Under the Act, the Minister for Education is responsible for the general administration and control of education services. The Act states that the Minister may take all measures which, in his opinion, are necessary or desirable to assist parents of children in the Territory in fulfilling the responsibility to educate their children according to the individual needs and abilities of those children; to make education services, provided by him, available to all people in the Territory; and to assist all people of the Territory with their own education. The Act also provides for the establishment of Advisory Councils.

Schools in the Northern Territory

At 31 July 1981 there were 143 schools in the Northern Territory with a total school population of 30,889. Of that number 3,203 attended 7 private schools and 1,120 attended 6 mission schools. Approximately 9,715 students were of Aboriginal descent. In addition to primary and pre-schools, there are eight government high schools, one secondary correspondence school and one private high school. There are three area schools offering secondary courses and two residential colleges for Aboriginal students.

There are also 22 government schools in Aboriginal communities that offer post-primary courses and six mission schools with post-primary programs.

Teaching staff are provided by the Northern Territory Teaching Service and qualified applicants are recruited from all parts of Australia.

With the exception of matriculation level, where students sit for examinations offered by the South Australian Public Examinations Board, all aspects of curriculum, course accreditation and student assessment are the responsibility of the Northern Territory Curriculum Advisory Committees, with subject area committees, in Language Arts, Mathematics, Science, Social and Cultural Education, Physical and Health Education, The Arts, and Life/Work Skills. With the exception of Life/Work Skills, which is concerned with secondary education only, all committees span primary and secondary education from Transition to Year 12.

Subject area committees recommend the curricula to be followed in Northern Territory schools, determine the core of essential understandings and processes which students are expected to master in those curricula and assess the students' mastery of the core. Guidelines for all those functions are determined by the Curriculum Advisory Committee which also accredits non-matriculation courses offered to the senior school (post Year 10) students. Core Curriculum was introduced into primary schools in 1981, Year 8 in 1982, and will be introduced into Year 9 in 1983 and Year 10 in 1984. The nature and format of certificates for secondary students is currently under review.

The work of curriculum committees including the development and implementation of curricula, is supported by educational advisers and a range of educational services.

The two Schools of the Air in the Northern Territory, one at Katherine and one at Alice Springs, have developed individual programs and provide correspondence and radio lessons for students in the years One to Seven. One correspondence school caters for isolated secondary students. Aerial and road patrols are carried out regularly to provide teacher/student and parent contact.

Special schools are located in Alice Springs and Darwin for handicapped children. However, where appropriate, students with special needs are integrated into primary and secondary schools. Guidance and Special Education Advisory services operate from the two Regional Offices in Alice Springs and Darwin.

A program of exchange between Bali (Indonesia) and the Northern Territory is continuing in which two teachers from each country are exchanged for a school year, and four senior students spend up to six months in the other country. The Northern Territory have also sponsored a group of junior high school students and teachers from Bali on a two-week educational visit to the Territory each year.

Aboriginal education

Most Northern Territory Aboriginals live away from town centres and their education is provided in various settings including mission schools, government schools on or near Settlements or Aboriginal townships, on pastoral properties and outstations or homeland centres.

There has been an increasing number of requests from outstations for the Department of Education to provide assistance. A small group of teachers is currently working in this field and developing special methods and modified courses to help overcome the difficulties faced by isolated outstation groups in their quest for education.

Government schools for Aboriginal children in out-of-town centres provide tuition at pre-school and primary school level with a number of them providing post primary (secondary age) classes as well.

For Aboriginal children who wish to proceed to secondary schools there are now two residential colleges: Yirara and Kormilda. These colleges are regionally based but situated near urban centres, Yirara at Alice Springs and Kormilda in Darwin. They provide secondary age students from outlying centres with the opportunity to undertake a range of courses internally or to attend an urban high school.

Bilingual education programs in Northern Territory schools in Aboriginal communities have attracted wide interest from within Australia and overseas. There are 14 schools offering bilingual programs and 3 schools preparing resources for programmes to be introduced in the future. Many other schools include Aboriginal language and culture in the curriculum. Twelve languages are now being used in the program and research is continuing into another two. Most school children are acquiring initial literacy skills in their own language. Although a large proportion of the curriculum is devoted to instruction in an Aboriginal language, a structured English course forms an integral part of the bilingual program. Other aspects of Aboriginal education are covered in the TAFE section.

Darwin Community College

The College was opened in 1974 and is an autonomous, multipurpose institution. It has Schools of Business and Administration, General Studies, Creative and Applied Arts, Technology and Science, Trades and Linguistics. As well as courses at Advanced Education and TAFE levels leading to awards, the College provides a wide range of non-award recreational classes. It provides lecture and tutorial assistance in a limited range of subjects to external students enrolled at the University of Queensland and at the Adelaide College of Arts and Education. The College has an annex at Nhulunbuy and the School of Australian Linguistics located at Batchelor. By August 1981 the College had recorded 6,341 enrolments for the year in the various courses offered.

Industrial Training

The Northern Territory Industries Training Commission commenced, under the provisions of the Industries Training Act (1979), on 6 June 1980. Commission members represent government, education, employers and employees. Functions include research, special needs, co-ordination, standards, promotion, accreditation, financial assistance and advice in all matters relating to post-school training and manpower matters in the Territory.

Technical and Further Education

Aboriginal Adult Education. Most large Aboriginal communities have an Adult Educator who relates to adults in the community and arranges non-formal programs which he or local part-time instructors and visiting lecturers teach.

Communities are developing more confidence in the management of their own affairs through implementation of policies such as the Chief Minister Five-year plan to improve Aboriginal Communities in the Territory. There is thus a growing demand for Adult Education requiring a co-ordinated effort on the part of all agencies offering Adult Education services.

Community College of Central Australia. Prior to 1 July 1979 was a campus of Darwin Community College. It offers electrical and aircraft engineering licences, apprenticeship, business, secretarial, tourism, hospitality, Aboriginal development, technology, art, matriculation and preparatory studies, non-credit refresher, recreational and general education courses and a tutorial program for degrees, diplomas and certificates from Warrnambool Institute of Advanced Education, Darwin Community College and the South Australian Open College of Further Education.

Katherine Rural Education Centre began teaching in 1979 and is residential. It offers a one year full-time Certificate in Rural Studies and short courses such as power saw maintenance, water conservation and use, helicopter mustering and horse shoeing.

Batchelor College is a residential TAFE institution providing programs for Aboriginal people leading to teacher education qualifications.

Adult Migrant Education Centre supersedes Adult Migrant Education Service courses and provides courses for on-arrival migrants and adult migrants preparing to enter the work force.

Finance

The following table gives details of government receipts and outlays that have been identified as relating specifically to the performance of local or State-type functions in the Northern Territory for 1978–79, 1979–80 and 1980–81. Receipts collected in the Northern Territory from Australia-wide sources (e.g. income taxes, customs duties, etc.) and outlays in the Northern Territory on items of a national character (e.g. defence, civil aviation and cash benefits paid to Northern Territory residents as part of national programs) are *not* included.

In addition to transactions relating to the Northern Territory in the Consolidated Revenue Fund and certain trust funds the transactions of the following public corporations are included: Northern Territory Port Authority, Northern Territory Housing Commission, Northern Territory Electricity Commission, Jabiru Town Development Authority, Corporation of the City of Darwin, Corporation of the Municipality of Alice Springs, Corporation of the Municipality of Katherine and Corporation of the Municipality of Tennant Creek.

On 1 July 1978 the Northern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximating those of a State. As a consequence, statistics for 1978–79 onwards show the receipts and outlays of the Northern Territory Government and its subsidiary bodies as a distinct level of government separate from the Commonwealth.

NORTHERN TERRITORY: OUTLAY AND RECEIPTS

($'000)

	1978–79		1979–80	1980–81
	Commonwealth Government	Northern Territory Government	Northern Territory Government	Northern Territory Government
OUTLAY				
Final consumption expenditure—				
Law, order and public safety	1,053	25,134	33,909	39,940
Education	62,317	—	71,285	85,894
Health	24,325	29,764	59,547	72,449
Social security and welfare	18,492	11,597	12,749	26,040
Other	4,292	75,194	106,458	140,962
Gross fixed capital expenditure on new assets and stocks—				
Education	19,427	—	13,377	11,478
Roads	—	33,848	50,178	53,741
Housing and regional development	365	28,891	22,467	33,838
Health	10,163	10,582	9,892	2,893
Social security and welfare	57	566	195	532
Electricity, gas and water	—	34,327	47,624	19,545
Other	588	25,133	40,538	49,952
Net purchase of existing assets	—	450	—10,243	16,806
Interest paid	—	11,380	15,099	22,159
Cash benefits	269	—	451	629
Subsidies	—	1,758	55	299
Net advances to the private sector—				
Housing and community amenities	—	10,191	26,144	48,518
Other	—	1,356	—1,069	—589
Grants for private capital purposes	8,612	1,221	696	570
Advances to public financial enterprises	—	—	—	—
Total outlay	**149,960**	**301,392**	**499,352**	**625,656**
RECEIPTS				
Taxation—				
Payroll tax	—	10,381	15,209	17,169
Rates on land	—	4,515	5,622	6,353
Stamp duties	—	1,919	3,064	4,304
Motor registration	—	2,460	3,098	3,057
Other taxes, fees, fines, etc.	226	4,137	4,799	7,041
Interest, rent, etc.	—	9,540	13,859	22,353
Income from public enterprises	593	—16,607	—21,186	—38,876
Net sale of local authority and public corporation securities	—	4,319	25,878	59,966
Other receipts	—1,060	—5,556	3,819	—9,881
Net charge to Commonwealth Government budget	150,201	286,284	445,190	554,170
Total receipts	**149,960**	**301,392**	**499,352**	**625,656**

THE AUSTRALIAN CAPITAL TERRITORY

General description

The Constitution provides that the Seat of Government of the Commonwealth of Australia shall be in the State of New South Wales but distant not less than 160 kilometres from Sydney. After a number of alternative sites were considered, an area of 2,395 square kilometres lying approximately 320 kilometres south-west of Sydney was transferred to the Commonwealth as from 1 January 1911. A further 73 square kilometres at Jervis Bay were transferred as from 4 September 1915 to serve as a port for the Territory.

The primary responsibility for administering the Australian Capital Territory lies with the Department of the Capital Territory, whose functions include housing, public transport and municipal

services. Education, public health and justice are the responsibilities of the Departments of Education, Health and the Attorney-General respectively. The National Capital Development Commission has the responsibility for the planning and development of the Canberra city area.

In 1974, the A.C.T. Advisory Council, which had been in existence since 1930, was replaced by the A.C.T. Legislative Assembly. The first Assembly was elected on 28 September 1974 and held its first meeting on 28 October 1974.

During 1979, the name of the A.C.T. Legislative Assembly was changed to the A.C.T. House of Assembly. The first election for the House of Assembly was held on 2 June 1979 and first meeting of the House of Assembly was held on 29 June. The Assembly is constituted under the (*Legislative Assembly Ordinance*) Section 10 of which defines its role as follows:

'The Assembly may advise the Minister (for the Capital Territory) in relation to any matter affecting the Territory including the making of new Ordinances or the repeal or amendment of existing Ordinances.'

The Assembly consists of 18 Members (9 from each of the electoral divisions of Canberra and Fraser) and its procedure is modelled on that of the House of Representatives. Its Members serve on a part-time basis.

The Assembly normally considers (and sometimes introduces) Ordinances which are proposed for the Territory. It also passes resolutions on matters affecting the Territory. It is represented on a number of boards, authorities and committees such as the Canberra Commercial Development Authority, the A.C.T. Electricity Authority, the A.C.T. Schools Authority, the Gaming and Liquor Authority, the Consumer Affairs Council and the Australian Constitutional Convention.

At 30 June 1982, the population of the Australian Capital Territory was 230,500. *See also* Chapter 6, Demography.

National Capital Development Commission

The *National Capital Development Commission Act* 1957 provides for a Commission to undertake and carry out the planning, development and construction of the City of Canberra as the National Capital of the Commonwealth. The year 1981-82 was the twenty-fifth year of the Commission's operations. Construction work was carried out by means of agency operations with the Department of Housing and Construction and by private consultants. Expenditure in recent years is as follows: 1978-79, $157.1 million; 1979-80, $136.2 million; 1980-81, $112.4 million. Total expenditure in 1981-1982 was $81.2 million comprising: land development and services $5.5 million; water, sewerage and stormwater services and headworks $1.8 million; housing, flats and other accommodation $7.0 million; educational facilities $5.1 million; roads, public transport and traffic control $6.9 million; city works and associated facilities $4.8 million; Commonwealth Government offices $16.7 million; national works $16.5 million; health and welfare facilities $2.1 million; others $14.8 million.

Works and services

Housing

Until the period following the 1939-45 War, most houses and flats in the Australian Capital Territory were built and rented by the then Department of the Interior. More recently, an increasing number of houses and flats have been built by private enterprise and, as a result, the proportion of houses and flats in the Australian Capital Territory occupied by tenants of the Department of the Capital Territory (formerly the Department of the Interior) has fallen from 79.7 per cent of total occupied houses and flats in 1954 to 58.3 per cent in 1961, 38.8 per cent in 1966, 28.1 per cent in 1971 and 13.3 per cent in 1981. Although the bulk of rented accommodation is provided by public authorities (and this situation will continue in the foreseeable future), there has been a considerable increase in the proportion of home ownership in the Australian Capital Territory since 1954. The proportion of houses and flats owned or being purchased by instalments has risen from 19.5 per cent in 1954 to 29.0 per cent in 1961, 45.6 per cent in 1966 and 51.8 per cent in 1971 and approximately 67.2 per cent in 1981. Home building activity in Woden Valley, Weston Creek, Tuggeranong (south-west of the former city area) and Belconnen (north-west of the former city area) has continued to expand. At December 1982 there were 19,262 occupied dwellings in the Woden Valley and Weston Creek area, 22,710 occupied dwellings in the Belconnen area and 10,104 occupied dwellings in the Tuggeranong area. *See also* Chapter 19, Housing and Construction.

Municipal services

Since its establishment, Canberra has been developed as a garden city. City Parks Administration of the Department of the Capital Territory manages all established urban parklands and sportsgrounds within the city area which amounted to approximately 7,790 hectares in 1981–82, an increase of approximately 300 ha on the 1980–81 total.

The Yarralumla Nursery, established in 1913, propagates trees and shrubs for use in development projects and as replacements in the course of maintenance. During 1981–82 approximately 260,000 plants were produced, a significant drop from 1980–81 (500,000 plants), caused by the reduction in landscape development in Canberra and the elimination of free issue of plants to new householders.

The National Botanic Gardens and the Horticultural Research Centre at Weston are also part of the City Parks Administration.

The water supply, sewerage and drainage systems in the Australian Capital Territory are operated by the Department of Transport and Construction on behalf of the Department of the Capital Territory.

At 30 June 1982, 68,937 metered services were connected to the city water supply. The city draws water from three storages on the Cotter River with a total capacity of 91,000 megalitres and a storage of 125,000 megalitres on the Queanbeyan River at Googong. Distribution is via 41 reservoir installations of which 4 are twin tanks.

In 1981–82, 55,395 megalitres of water were consumed in Canberra whose population was 227,800. An additional 3,693 megalitres were supplied to Queanbeyan, N.S.W. whose population was 20,100.

Canberra's sewerage is disposed of through the Lower Molonglo Water Quality Control Centre.

As at 30 June 1982, 1,790 kilometres of sewers, 14 kilometres of rising sewer mains, 1,987 kilometres of stormwater drains and a total length of 1,804 kilometres of water line were laid.

Production

See also the chapter dealing with particular subjects.

Lands

Reference has been made in earlier issues of the Year Book to the general conditions of land tenure in the Australian Capital Territory and to the area of alienated and leased land. The Agricultural Industry chapter in this Year Book contains statistical information on these subjects.

With minor exceptions the freehold estate of land in the Australian Capital Territory has been acquired by, and is vested in the Crown. The *Seat of Government (Administration) Act* 1910 prevents the sale or disposal of such Crown land for any estate in freehold except in the case of a contract that preceded the Act. Progressively the remaining areas of freehold land are being acquired.

Leases of land for residential, commercial and other purposes in the city area are usually granted under the *City Area Leases Ordinance* 1936. Some special leases for other purposes (such as diplomatic sites or churches) are granted under the *Leases (Special Purposes) Ordinance* 1925 or the *Church Lands Leases Ordinance* 1924. Some areas outside the city area not immediately required for the development of the City or for other public purposes or where there is no intention of development are leased for agriculture or grazing under the *Leases Ordinance* 1918.

The Commonwealth Territory at Jervis Bay, comprising about 73 square kilometres, was acquired from New South Wales for the possible provision of port facilities in connection with the Australian Capital Territory. A portion of the area is occupied by the Royal Australian Naval College (*H.M.A.S. Creswell*) and a Royal Australian Navy airfield. Several blocks fronting Sussex Inlet plus an area on Bowen Island have been leased for guest houses and holiday camps, etc., under the *Leases Ordinance* 1918, and an area of land in the Murray's Beach area has been set aside for possible use as an atomic power station under the control of the Australian Atomic Energy Commission. Apart from picnic and camping areas, experimental planting, afforestation and soil conservation activities, the remainder of the area is being maintained in its natural state.

Forestry

Forestry field operations in the Australian Capital Territory began in 1915 with the planting of pines on the denuded slopes of Mount Stromlo to arrest soil erosion and improve visual quality of the landscape. In 1926, a program for development of commercial forests was approved following a comprehensive review of the Territory's potential for forest development. Major reviews of this program were made in 1932, 1954 and 1967, always, however, retaining the basic policy of systematic conservation and development. All of the better native forest has been placed under management. Forestry operations including fire protection treatment have been extended to some 44,500 hectares of

natural forest in the Cotter catchment and adjacent areas. The more productive stands in these areas were harvested extensively to provide timber for Canberra's post-war expansion and were subsequently treated to promote regeneration and protect the quality of water harvested.

The policy of forest management in the Australian Capital Territory has been formulated to cater not only for commercial timber production but also to provide recreation facilities and an attractive visual environment for the national capital and to protect the water supply. These policies can be broadly summarised as follows:

(a) to manage and develop plantations and hardwood forest area in the Australian Capital Territory and Jervis Bay for production of timber and arrange sales of all forest produce;
(b) to initiate and maintain a variety of growth and environmental experiments to produce information for management decisions; and
(c) to develop and implement viable multiple use policies for forest areas with particular emphasis on recreation potential and facilities, quality of water harvest in catchments and conservation of the environment.

The forest authority is charged with the management of some 74,000 hectares of land in the Australian Capital Territory. Of this, some 48,000 hectares carry native forest or woodland. As at 30 June 1981, the total area of coniferous plantations in the Australian Capital Territory and Jervis Bay was 14,119 hectares nett. Of 217 hectares at Jervis Bay, the majority consisted of *Pinus radiata* (Monterey Pine) and *Pinus elliottii* (Slash Pine). The plantations in the Australian Capital Territory consisted mainly of *Pinus radiata* and *Pinus ponderosa* (Yellow Pine). Total area of *Pinus radiata* was 13,254 hectares.

In 1980–81 there was no commercial production of hardwood timber from the Australian Capital Territory and Jervis Bay. The volume of softwood cut was 211,000 cubic metres. The total value of this unprocessed timber unloaded at the mill (milldoor value) was $5.2 million.

Agricultural and secondary industries

In the eight years since 1974–75 the number of agricultural establishments in the Australian Capital Territory has fallen from 142 to 113. The more important items produced in 1981–82 were: wheat for grain 516 tonnes; oats 420 tonnes; meat (carcass weight) 13,535 tonnes. Livestock numbers at 31 March 1982 included 13,598 cattle and 110,147 sheep.

Secondary industries established in the Australian Capital Territory are largely the service industries associated with the growth of the Territory.

AUSTRALIAN CAPITAL TERRITORY: MANUFACTURING ESTABLISHMENTS—1978–79 to 1980–81

		1978–79	*1979–80*	*1980–81*
Establishments operating during year	No.	117	112	117
Persons employed (*a*)	No.	3,073	3,132	3,316
Wages and salaries	$m	33.7	37.2	44.9
Turnover	$m	118.8	127.2	162.9
Opening stocks at 30 June	$m	12.2	11.4	13.5
Closing stocks at 30 June	$m	11.4	12.6	16.7
Purchases, transfers in and selected expenses (*b*)	$m	57.4	64.0	89.3
Value added (*b*)	$m	60.6	64.4	76.8

(*a*) Average over whole year. Includes working proprietors. (*b*) Data in this table have been revised to comply with changes in the ABS definition of *value added*. 'Rent, leasing and hiring expenses' and 'Rent, leasing and hiring revenue', previously excluded from the *value added* calculation, are now included.

Commercial practices

There is growing awareness of consumer rights as evidenced by the increasing number of enquiries received by the A.C.T. Consumer Affairs Bureau and the wide range of consumer oriented legislation.

The Bureau receives and investigates complaints from consumers, conducts research into matters affecting consumer interests and provides information of benefit to consumers.

Control over weights and measures standards traditionally has been, and remains, a prerequisite for fair commercial transactions. The Weights and Measures Office periodically examines the scales and measures used for trade. The office monitors the weight or measure of all packaged goods sold in retail premises.

In the A.C.T., licensing is used as a means of regulating some commercial practices by establishing minimum standards of qualifications and/or experience for entry into certain occupations. These include motor vehicle dealers, stock and station and real estate agents, and pawnbrokers and secondhand dealers.

The *Co-operative Societies Ordinance* 1939 provides for the incorporation of building societies, housing and service societies and credit unions. The Registrar is responsible for the incorporation of new societies, the registration of documents, inspections and inquiries into the working and financial situation of societies and the hearing and determination of certain disputes between a society and a member.

In Canberra there are two retail fruit and vegetable markets. These have been established, operated and controlled by the Canberra Retail Markets Trust.

Transport and communication

Canberra is connected with the railway system of New South Wales at Queanbeyan by a line 8 kilometres long. This line was opened for goods traffic on 25 May 1914 and for passenger traffic on 15 October 1923. Direct or linking services operate between Canberra and Sydney, and Canberra and Melbourne. The two major domestic airlines provide many services daily each way on the Sydney-Canberra-Melbourne route, while three smaller carriers operate services to provincial centres. Regular motor coach services link Canberra with towns in New South Wales, and mainland state capitals. The total length of roads in the Territory at 31 December 1982 was: municipal, 1,250 kilometres; territorial, 670 kilometres; national, 270 kilometres; total, 2,190 kilometres. At 31 December 1982 there were also 100 kilometres of trunk cycle paths connecting suburbs with Canberra's major business centres. The Department of the Capital Territory is responsible for the regulation of transport and traffic under an A.C.T. Ordinance. ACTION, the Australian Capital Territory Internal Omnibus Network, is also operated by the Department of the Capital Territory. It operated 352 buses in 1981–82, over 89 routes covering 1,012.0 kilometres. A total of 12,689,000 kilometres was travelled and an estimated 17,547,000 passenger journeys made.

There are six radio broadcasting stations in the Territory: 2CY, 2CN and ABC-FM of the national broadcasting system; two commercial stations, 2CA and 2CC; and one community station, 2XX. There are two television stations, ABC Channel 3 of the national broadcasting system and Australian Capital Television Pty Ltd (Capital 7), a commercial station.

Social

See also Chapter 12, Education; Chapter 10, Health; and Chapter 11, Law and Order.

Schools

The *Education Ordinance* 1937 provides for the compulsory attendance at school of children between the ages of six and fifteen years. Government schools are administered by the A.C.T. Schools Authority, which became a Statutory body in January 1977. The Authority is representative of teachers, parents and the community. The A.C.T. Schools Accrediting Agency within the Authority system accredits courses and administers student assessment procedures for Years 11 and 12. These procedures replaced the New South Wales Higher School Certificate examination at the end of 1976.

In July 1982 there were seventeen government high schools in the Australian Capital Territory, and eight secondary colleges. High schools cater for Years 7 to 10 and secondary colleges for Years 11 and 12. Secondary students enrolled numbered 14,790.

Sixty-three schools provide courses at primary levels, three of these being in rural districts and one in the Jervis Bay area. The number of pupils enrolled in primary grades of government schools at July 1982 was 23,575.

There are seven government special schools in the A.C.T. with a total enrolment of 370 students. These schools cater for pre-school, primary and secondary school aged students who are physically or intellectually handicapped. Mildly intellectually handicapped children are served by learning centres attached to eight primary schools and three high schools.

Special units for deaf children are available to three schools, while blind children receive specialised support at six other Schools. Children below school age with learning or sight problems receive assistance from specially-trained staff at pre-schools and in their homes.

Eleven primary schools cater for children of junior primary age who are unable to adjust to a normal class situation. One of these classes specialises in the care of children with language and communication disorders. Educational guidance services are provided by the Education Clinic and through counselling staff attached to schools.

Special English classes for migrant children are available at forty-four primary schools, ten high schools and four secondary colleges. The Introductory English Centre is for secondary school migrant children with little or no English. They attend for up to six months and then return to their neighbourhood school or college.

The seventy-three pre-schools provide facilities for 4,996 children between the ages of three and five years. Provision is made at all pre-schools for the additional enrolment of children who have minimal problems such as speech, behavioural and family problems.

In July 1982 there were twenty-three non-government primary schools in Canberra, seven schools offering both primary and secondary schooling and four schools with secondary grades only. At the same time, 10,093 pupils were in primary grades of non-government schools and 7,683 in the secondary grades of these schools.

A.C.T. Further Education

The Office of A.C.T. Further Education which operates within the structure of the Department of Education is responsible for the Technical and Further Education Colleges, the Canberra School of Art and the Canberra School of Music. The Office is also responsible for the A.C.T. Apprenticeship Board and Adult Migrant Education.

There are presently three TAFE Colleges in the A.C.T.; Canberra, Bruce and Woden. These Colleges provide trade, post trade, certificate, associate diploma, craft and leisure type courses at their main campuses and at several annexes. In the year ended 31 December 1981 there were 19,078 enrolments in A.C.T. TAFE Colleges.

The Canberra School of Art offers a Diploma of Arts (Visual), three years full-time study (or part-time equivalent), an Associate Diploma of Arts (Visual), two years full-time study (or part-time equivalent) and a Post-graduate Diploma, one year full-time study. It also provides art courses for students from the Canberra College of Advanced Education as well as non-vocational classes for the community in general. In the year ended 31 December there were 969 enrolments.

The Canberra School of Music offers a Bachelor of Music, four years full-time study and a Diploma of Music, three years full-time study. Courses for Canberra College of Advanced Education students and single study classes for part-time students are also offered. In the year ended 31 December 1981 there were 609 enrolments.

It should be noted that enrolment figures shown here are course enrolments and are not adjusted for those students enrolled in more than one course at any time during 1981, as they were for the figures given in the 1982 Year Book, and so these are not comparable.

Other Tertiary Educational Institutions

The Canberra College of Advanced Education is administered by a Governing Council constituted under an Act of Parliament and offers courses in six schools—Administrative Studies, Applied Science, Liberal Studies, Education, Information Sciences and Environmental Design. Courses have a professional or vocational orientation and lead to master and bachelor degrees, and associate and graduate diplomas. There were 5,232 students enrolled as at April 1982.

The Australian National University was established by an Act of Parliament and is administered by its governing Council. The Institute of Advanced Studies within the University is a centre for research and training in research. It includes the John Curtin School of Medical Research and Research Schools of Physical Sciences, Social Sciences, Pacific Studies, Chemistry, Biological Sciences and Earth Sciences. The faculties carry out both undergraduate and post-graduate training and research and are composed of the faculties of Arts, Asian Studies, Economics, Law and Science. The total student enrolment as at April 1982 was 5,851.

The University has established the following centres: Centre for Resource and Environmental Studies; Humanities Research Centre; North Australia Research Unit (based in Darwin); Centre for Continuing Education; Computer Services Centre; Office for Research in Academic Methods; and the National Health and Medical Research Council Social Psychiatry Research Unit.

Continuing education

The Centre for Continuing Education, which is run by the Australian National University, is intended to foster 'the learning society' by enriching the contacts between the university and the community to their mutual advantage. The Centre offers a wide range of courses in the natural and social sciences and the humanities.

Evening classes in the A.C.T. are provided at two high schools and four secondary colleges as a continuing education service of the A.C.T. Schools Authority. Enrolments in evening classes in July 1982 numbered 3,106, of which 1,692 were enrolled in recreational classes. Evening classes offer courses leading to the award of a certificate of entry to post-secondary and tertiary institutions as well as a variety of craft and cultural courses.

Apprenticeship training

At 30 June 1982, 1,391 indentured apprentices were in training in the 53 declared apprenticeship trades in the Australian Capital Territory. Apprentices were employed by about 800 approved employers. During 1981–82 there were 1,201 applications for apprenticeships. New indentures totalling 531 were registered, representing an increase of 4.5 per cent in new indentures on 1980–81 totals. In this period 342 apprentiships were completed and 165 cancelled. Trade courses at the TAFE colleges are supplemented, where required, by remedial classes in Mathematics and English.

Adult migrant education

The Office of A.C.T. Further Education, on behalf of the Department of Immigration and Ethnic Affairs, is responsible for the Adult Migrant Education Program in the A.C.T.

All classes are free and they are open to migrants who are permanent residents of Australia.

The language program is organised in two strands, an on-going strand for migrants who have been in Australia for some time and an on-arrival strand for newly arrived migrants. As part of the on-going program part-time classes are offered at different levels and at various times in the day and evening. A more intensive part-time course, aimed primarily at unemployed migrants whose lack of proficiency in the English language is prejudicing their employment prospects, is available as is a full-time accelerated English course lasting ten weeks.

As well, English classes are provided in the work place either partly or wholly within working hours. Migrants who are unable to attend classes may undertake a correspondence course, or have a tutor visit them in their own homes.

The on-arrival strand of the program caters for migrants who have arrived in Australia within the previous six months. The full-time courses offered provide an introduction to Australian society and way of life as well as a basic English language instruction. On completion, students are encouraged to enrol in part-time classes.

All migrants attending full-time courses are eligible to receive a living allowance.

Tourism

Tourism has quickly become a major factor in the A.C.T. economy and in the planning and development of the Capital. A large-scale, Government-commissioned study conducted in 1975–76 estimated 2.5 million visitors for the year, spending $72 million in the A.C.T. and Queanbeyan. Continuing surveys based on the study findings indicate between 3.3 and 3.9 million visitors per annum to the area by 1986. Tourism, a labour-intensive industry, will grow in economic significance to the A.C.T.; for 1982–83, visitor spending is expected to exceed $170 million.

The official tourist servicing and promotional operation in the A.C.T. is provided by the Department of the Capital Territory through the Canberra Tourist Bureau. Planning and development of physical facilities remain the responsibility of the National Capital Development Commission.

The Bureau operates a highway reception and information centre on the northern (main) gateway to the city, and branch offices in Sydney and Melbourne. Total operational costs, including salaries and overtime, will approximate $1,802,000 in 1982–83.

Most patronised tourist features in the A.C.T. are the Australian War Memorial, the Black Mountain Telecommunication Tower, the High Court of Australia, Parliament House, the National Library, the Australian National Gallery, the Royal Australian Mint, and the mountain lookouts and reserves. The most important new attraction under construction is the new and permanent Parliament House.

Finance

In the following table, identifiable receipts and outlay relating to the Australian Capital Territory have been classified in a National Accounts form. The table covers transactions of the Commonwealth Government in respect of the Australian Capital Territory in the Consolidated Revenue Fund and the following trust funds: Australian Capital Territory Forestry, Australian Capital Territory Housing, Australian Capital Territory Transport and Australian Capital Territory Suspense. In addition, details of the financial transactions of the following public corporations are also covered: Australian Capital Territory Electricity Authority, Commonwealth Brickworks (to September 1979), Canberra Retail Market Trust, National Capital Development Commission, the Canberra Theatre Trust, the Canberra College of Advanced Education, A.C.T. Poker Machine Licensing Board, Canberra Commercial Development Authority, A.C.T. Totalisator Agency Board and the Capital Territory Health Commission including the Canberra and Woden Valley Hospitals. Not included are revenue derived by the Commonwealth Government from income taxes, sales tax, etc., levied in the Australian Capital Territory; outlay on items of a national character such as defence, civil aviation, railways, etc.; and payments to residents from the National Welfare Fund.

AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND OUTLAY

($'000)

	1975–76	1976–77	1977–78	1978–79	1979–80	1980–81
RECEIPTS						
Taxation—						
Rates on land	10,464	12,098	13,634	15,011	16,540	19,249
Liquor	984	1,260	1,325	2,395	2,136	2,968
Motor registration and licences	4,322	4,954	7,127	7,859	7,793	7,789
Payroll tax	10,761	11,296	11,945	13,142	12,373	14,584
Stamp duties	4,162	4,455	5,003	5,573	6,904	8,382
Other taxes, fees, fines, etc.	1,413	1,635	2,839	4,223	5,135	4,690
Interest, rent, etc.	16,920	21,899	26,214	26,124	25,978	31,692
Income from public enterprises	3,541	4,566	4,301	5,432	6,395	6,280
Net sale of public corporation securities	3,605	(a) 27,903	(a) 15,492	6,798	7,031	—12,226
Other receipts	475	(a)—9,778	18,649	13,429	—3,529	10,923
Net charge to Commonwealth Government budget	313,283	316,292	329,207	294,662	297,898	287,241
Total receipts	**369,930**	**396,580**	**435,736**	**394,648**	**384,654**	**381,572**
OUTLAY						
Final consumption expenditure—						
Law, order and public safety	10,156	13,808	16,109	19,215	21,099	22,473
Education	65,233	79,089	91,140	100,552	112,048	129,789
Health, social security and welfare	35,144	44,711	52,855	58,919	69,081	80,466
Other	48,769	49,949	47,400	43,452	50,756	67,321
Expenditure on new fixed assets and stocks—						
Education	34,139	31,186	26,367	20,676	20,728	16,653
Health, social security and welfare	11,322	7,406	8,493	8,941	5,775	5,505
Housing	7,749	—1,777	—5,263	—4,751	—7,016	—9,734
Community and regional development	36,467	35,235	32,984	16,000	10,211	12,567
Protection of the environment	27,424	24,277	13,212	8,366	5,024	1,660
Recreation and related cultural services	7,088	10,371	11,751	13,999	17,356	26,470
Electricity, gas and water	12,170	28,817	25,495	16,465	6,935	10,783
Roads	11,607	11,937	30,819	31,882	25,763	15,667
Other	43,876	49,535	63,828	57,036	48,823	37,802
Net purchase of existing assets	—21,084	—19,426	—13,604	—17,423	—15,687	—43,272
Interest paid	665	853	3,213	5,974	6,882	6,275
Cash benefits	13	8	..	..	..	127
Subsidies	143	167	207	191	376	451
Net advances for housing	29,450	19,480	21,490	7,566	1,502	—3,326
Grants for private capital purposes	9,599	10,954	9,240	7,588	4,998	3,895
Total outlay	**369,930**	**396,580**	**435,736**	**394,648**	**384,654**	**381,572**

(a) Includes financing transactions of the Canberra Commercial Development Authority.

NORFOLK ISLAND

General description

Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29°02'S, longitude 167°57'E approximately. Its total area is approximately 3,455 hectares, the island being about 8 kilometres long and 5 kilometres wide. It is 1,676 kilometres from Sydney and 1,063 kilometres from Auckland. The coastline, which is 32 kilometres long, consists of almost inaccessible cliffs rising from the waters edge, except at Kingston in the south and the landing place at Cascade on the northern side. The climate is equable, the average daily maximum temperature varying between 16°C and 28°C, and the average annual rainfall is 1,350 millimetres. The resident population is about 1,800.

The island served as a penal station from 1788 to 1813 and from 1825 to 1855. In 1856, 194 descendants of the *Bounty* mutineers were transferred there from Pitcairn Island.

Administration

In 1856, the Island was created a distinct and separate settlement under the jurisdiction of the Governor of New South Wales. In 1897 it was made a dependency under the Governor of that Colony, and finally, by the passage of the *Norfolk Island Act* 1913, became a Territory of Australia. It is controlled by the Minister for Home Affairs and Environment through an Administrator.

In May 1978 the Government announced that it should try to develop for Norfolk Island a form of Government involving the Island's own elected representatives under which the necessary revenue could be raised by its own system of law.

The *Norfolk Island Act* 1979, which was assented to on 30 May, established the framework for this objective. The passage of this Act followed a series of detailed discussions between the Minister for Home Affairs and Environment and the Norfolk Island Council, the Island's advisory body.

In broad terms, the Act equips Norfolk Island with responsible legislative and executive government to enable it to run its own affairs to the greatest practicable extent.

Wide powers are exercised by the Norfolk Island Legislative Assembly and by an Executive Council, comprising the executive members of the Legislative Assembly who have ministerial-type responsibilities.

The Act preserves the Commonwealth's responsibility for Norfolk Island as a Territory under its authority, and indicates the Parliament's intention that consideration will be given to an extension of the powers of the Legislative Assembly and the political and administrative institutions of Norfolk Island within five years.

The island's Supreme Court sits as required and a Court of Petty Sessions exercises both civil and criminal jurisdiction.

The Office of the Administrator is financed from Commonwealth expenditure which amounted to $230,000 in 1981–82. A further $286,000 was provided by the Commonwealth during the year for the restoration and maintenance of historic structures.

Economic activity

The major economic activity of the island is tourism. Primary production is not fully adequate for local needs and foodstuffs are imported from New Zealand and Australia, mainly for the tourist trade.

Primary industries. The soil on the island is particularly fertile, the climate equable and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation presents trading difficulties, and there is only very limited production of export crops.

Fish abound off the island. In the past a number of ventures have been formed to exploit this resource, but they have been short-lived, mainly because of the lack of sheltered harbour. A modern whaling station was started on the island in 1955, and production commenced during the second half of 1956. Owing to a marked scarcity of whales after 1961, however, the station was closed down.

An active forestry program is being carried out to increase the resources of Norfolk Island Pine and to introduce suitable types of eucalypts.

Tourists. Regular sea and air services to the island are available for those who seek a quiet holiday in surroundings of beauty and historic interest. At present, accommodation consists of flats and hotels as well as licensed and unlicensed guest houses.

Employment. A large proportion of the population derives its income from various aspects of the tourist industry including the operation of hotels and duty-free stores. The Commonwealth Government provides service through staff from the Departments of Transport and Science and Technology (Bureau of Meteorology) and teachers are seconded by the N.S.W. State Education Department. A number of clerical and other positions are available to islanders in the Norfolk Island Administration. Very few people rely for their income entirely on agricultural pursuits.

Trade, transport and communication

Imports to Norfolk Island since the 1939–45 War have risen from $65,000 in 1945–46 to over $12 million in 1981–82. The major proportion came from Australia and New Zealand. Exports in 1981–82 amounted to $1.2 million to Australia and New Zealand, the principal markets. No duties are chargeable on goods imported into Australia from Norfolk Island if (i) the goods are produced or manufactured in Norfolk Island and shipped direct to Australia, and (ii) not goods which, if manufactured or produced in Australia, would be subject to excise duty.

One shipping company operates a service to Norfolk Island at approximately monthly intervals, linking the Island with Australia, New Zealand and other islands in the South Pacific area.

A passenger and air freight service between Sydney and Norfolk Island is operated by East-West Airlines Ltd. 4-6 times a week, and more frequently in peak periods. Air New Zealand Limited provides a service 3-4 times a week to the Island from Auckland. A light aircraft charter service operates daily between the island and Brisbane.

There are approximately 80 kilometres of motor roads on the island. A substantial section of the population possesses private motor cars. Hire cars, taxis and scooters are available.

The island has an automatic telephone service and radio telephone link with Sydney. A local broadcasting service is operated by the Administration.

Education

Education is free and compulsory between the ages of 6 and 15 years. The school, which is conducted for the Administration by the New South Wales Department of Education, conforms to the Australian standard of public education, ranging from Kindergarten to the School Certificate (Year 10) level. The number of students enrolled at 30 June 1981 was 299.

Some bursaries, subject to a means test, are available for pupils who wish to attend a mainland school either to continue their studies beyond the School Certificate level or to undertake high school courses not available on the Island. A limited number of trainee scholarships are available for pupils who have left school and wish to undertake apprenticeships or similar training away from the Island.

Judiciary

The judicial system of Norfolk Island consists of a Supreme Court and a Court of Petty Sessions. The Supreme Court is the highest judicial authority in the Territory and is a superior court of record with original criminal and civil jurisdiction. The jurisdiction of the court is exercised by one judge sitting in court or, to the extent that in the cases provided by or under ordinance, sitting in chambers. The jurisdiction of the Court of Petty Sessions is exercised by the Chief Magistrate or any three magistrates other than the Chief Magistrate.

Finance

Until 1979 Norfolk Island revenue was supplemented by annual grants from the Commonwealth Government. Under present constitutional arrangements the cost of maintaining the island, other than the Administrator and his staff, is met as far as practicable from Island sources.

NORFOLK ISLAND: REVENUE AND EXPENDITURE

($'000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
REVENUE						
Government grant	126	126	144	—	—	—
Customs duty	403	472	566	680	995	785
Liquor profit	207	233	285	332	339	287
Company fees	208	237	187	137	121	103
Sale of stamps	425	550	613	856	1,075	1,351
Vehicle registration and licence fees	52	73	77	77	81	57
All other	258	330	412	427	677	830
Total revenue	**1,679**	**2,021**	**2,284**	**2,509**	**3,288**	**3,413**
EXPENDITURE						
Administration	645	704	786	736	903	1,334
Education services	245	291	322	122	425	722
Health and welfare services	164	250	275	312	363	452
Repairs and maintenance	227	251	302	389	378	470
Capital works and services	170	124	252	252	353	317
Miscellaneous services	133	162	172	242	155	277
Legislative Assembly	n.a.	n.a.	n.a.	92	234	110
Total expenditure	**1,584**	**1,782**	**2,109**	**2,145**	**2,811**	**3,682**

HEARD ISLAND AND McDONALD ISLANDS

These islands, about 4,100 kilometres south-west of Fremantle, were transferred from the United Kingdom to Australia as from 26 December 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard Island and McDonald Islands by the *Heard and McDonald Islands Act* 1953. In 1968, the responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science.

In December 1947, an Australian scientific station was established on Heard Island. Meteorological investigations were conducted until the station was closed in March 1955 following the establishment of Mawson station on the Antarctic mainland. Australian expeditions have since visited the Island from time to time. Heard Island is about 43 kilometres long and 20 kilometres wide. The McDonald Islands are 43 kilometres to the west of Heard Island. They are small, rocky and precipitous. The first known landing on McDonald Island, the largest of the group of the same name, took place on 27 January 1971 when two members of the Australian National Antarctic Research Expeditions (ANARE) paid a short visit on their way to the Heard Island station.

AUSTRALIAN ANTARCTIC TERRITORY

An Imperial Order in Council of 7 February 1933 placed under Australian authority all the islands and territories other than Terre Adelie situated south of 60°S latitude and lying between 160°E longitude and 45°E longitude. The Order came into force with a Proclamation issued by the Governor-General on 24 August 1936 after the passage of the *Australian Antarctic Territory Acceptance Act* 1933. The boundaries of Terre Adelie were definitively fixed by a French Decree of 1 April 1938 as the islands and territories south of 60°S latitude lying between 136°E longitude and 142°E longitude. The *Australian Antarctic Territory Act* 1954 declared that the laws in force in the Australian Capital Territory are, so far as they are applicable and are not inconsistent with any ordinance made under the Act, in force in the Australian Antarctic Territory. In 1968 responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science.

On 13 February 1954 the Australian National Antarctic Research Expeditions (ANARE) established a station on MacRobertson Land at latitude 67° 36′S and longitude 62° 53′E. The station was named Mawson in honour of the late Sir Douglas Mawson and was the first permanent Australian station to be set up on the Antarctic continent. Scientific research (including meteorology, cosmic ray physics and glaciology) is conducted at Mawson, which is also a centre for coastal and inland survey expeditions.

A second Australian scientific research station was established on the coast of Princess Elizabeth Land on 13 January 1957 at latitude 68° 35′S and longitude 77° 58′E. The station was named in honour of the late Captain John King Davis, second-in-command of two of Mawson's expeditions and master of several famous Antarctic ships. The station was temporarily closed on 25 January 1965 and re-opened on 15 February 1969. On 4 February 1959 the Commonwealth Government accepted from the United States Government custody of Wilkes station, which was established by the United States on 16 January 1957 on Vincennes Bay at latitude 66° 15′S and longitude 110° 32′E. The station was named in honour of Lieutenant Charles Wilkes who commanded the 1838–42 United States expedition to the area. The station was closed on 19 February 1969 when activities were transferred to Casey station built about 2 kilometres south of Wilkes. Casey station, which was opened on 19 February 1969, was named in honour of Baron Casey, former Governor-General of Australia, in recognition of this long association with Australia's Antarctic effort.

COCOS (KEELING) ISLANDS

General description

The Territory of the Cocos (Keeling) Islands comprises a group of 27 small coral islands in two separate atolls in the Indian Ocean, 2,768 kilometres north-west of Perth.

West Island, about 10 kilometres long, is the largest. The Territory's administrative community, airport and animal quarantine station are located there. The Cocos Malay community lives on Home Island.

The main atoll is low-lying, flat, and thickly covered by coconut palms, and surrounds a lagoon which has an anchorage in the northern part but which is extremely difficult for navigation.

The climate is equable and pleasant, usually being under the influence of the south-east trade winds for about nine months of the year. However, the winds vary at times, and meteorological reports from the Territory are particularly valuable for those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 21°C and 32°C, and the average yearly rainfall is 1,998 millimetres. There are occasional violent storms.

History and administration

The islands were discovered in 1609 by Captain William Keeling of the East India Company, but were uninhabited until Alexander Hare and John Clunies-Ross established small settlements at different points on the main atoll in 1826 and 1827 respectively. Clunies-Ross secured sole possession in 1831 and the islands were declared part of the British Dominions in 1857. In 1878 responsibility for the supervision of the islands was transferred to the Government of Ceylon and eight years later, to the Government of the Straits Settlements.

In 1903 the islands were incorporated in the Settlement of Singapore but were attached again to Ceylon during the 1939–45 war while Singapore was under Japanese occupation.

By mutual agreement between the British and Australian Governments, and confirmed by complementary legislation, the islands became and Australian territory in 1955. The Australian Government purchased the Clunies-Ross interests in the Territory in 1978, except for the family home and grounds.

The Cocos (Keeling) Islands Act 1955 is the basis of the Territory's administrative, legislative and judicial systems.

An Administrator, appointed by the Governor-General and responsible to the Minister for Home Affairs and Environment, is the senior Government representative in the Territory.

A representative form of local government was established on 25 July 1979 when the Cocos (Keeling) Islands Council was elected by members of the Home Island community. The Council which has responsibility for a wide range of functions in the Home Island village area, advises the Administrator on local affairs, and is also empowered to make representations on ordinances proposed for the Territory.

The Cocos islands Co-operative Society Limited, also established in 1979, conducts the business enterprises of the Cocos people. The Co-operative undertakes copra production, building maintenance and construction, and stevedoring and lighterage services.

The Territory's own postal service, including a philatelic bureau, was opened in 1979. The service, run by the Administration, provides local employment and its profits are directed to the Cocos (Keeling) Islands Council for use on community projects.

The population of the Cocos (Keeling) Islands at June 1982 was 546, distributed between Home Island (320) and West Island (226).

Transport and communication

There is an airport of international standard at West Island, controlled by the Administrator under licence from the Department of Transport. There is a regular Perth-Cocos (Keeling) Islands-Christmas Island-Perth charter service every 2 weeks. A shipping service operates to the Territory at intervals of several weeks. A radio telephone service between West Island and Perth is maintained by the Administration. There are local postal and telephone services, and a non-commercial broadcasting station.

CHRISTMAS ISLAND

Christmas Island is an isolated peak situated in the Indian Ocean in latitude 10°25'S, longitude 105°40'E. It is approximately 360 kilometres south from Java Head at the south entrance to Sunda Strait, 1,300 kilometres from Singapore and 2,600 kilometres from Perth. Christmas Island covers an area of about 135 square kilometres. It consists of a central plateau about 150 to 250 metres above sea level with several prominent rises up to 360 metres high. The plateau descends to the sea in a series of steep slopes alternating with terraces. Sea cliffs over 200 metres high run along a considerable portion of the coastline except in a few places, the chief of which is Flying Fish Cove where the principal settlement is located and which is also the only anchorage.

The climate is pleasant, with prevailing winds coming from the south-east to east-south-east from May to December, and occasionally shifting round to between north and west from December to April (the wet season). The average yearly rainfall is about 2,673 mm with a marked summer incidence. The porous nature of the ground prevents the formation of pools of water, but there are several good springs which maintain an adequate supply of fresh water for the small population and the installations. The mean average temperature is about 27°C, and does not vary greatly throughout the year.

Economy

The economy of the Territory is based almost entirely on the mining and extraction of phosphate. During the year ended 30 June 1982, 1,526,282 tonnes of phosphate rock, 133,851 tonnes of phosphate dust and 2,000 tonnes of citraphos/calciphos were exported. From July, mining operations on Christmas island have been conducted by the Phosphate Mining Company of Christmas Island, Ltd (PMCI) a company wholly owned by the Australian Government as agents for the Christmas Island Phosphate Commission. To minimise the impact on the environment of mining a program of land reclamation has been adopted and a nursery is maintained for reafforstation.

Population

Some 3,018 people (2,026 males and 992 females) were residents of the island at 30 June 1982. There is no indigenous population and many of the 2,666 Asian residents were either born in the Territory or have arrived over the past thirty years. Under the provisions of the Christmas Island Act and the Citizenship Act, most are Australian citizens, or permanent residents.

Education

The education system is based on an Australian curriculum. The Christmas Island Area School provides pre-school, primary and secondary education. The Christmas Island Technical School conducts trades and commercial courses, and provides adult education classes and supervision of correspondence courses from the Western Australian Education Department's Technical Extension Service. Some 600 students are enrolled in the Area School.

History and administration

Summarised particulars of the history of Christmas Island up to its administration by the United Kingdom as a separate Crown Colony (from 1 January 1958, pending transfer to Australia) are given in Year Book No. 51, page 141, and in earlier issues. On 1 October 1958 the island was transferred to Australia by the *Christmas Island Act* 1958. The Territory is administered by an Administrator appointed by the Governor-General. Responsibility for the administration and government of the Territory rests with the Minister for Home Affairs and Environment and the Administrator administers the Territory in accordance with instructions given to him by the Minister. The laws which were in force on the island at 30 September 1958 were continued as the laws of the Territory after its transfer to Australia. They may be amended or repealed by Commonwealth Statutes.

Transport and communication

Sea transport to and from the Island is maintained by vessels operated under charter by the phosphate manufacturers and the PMCI.

An air charter arranged by the Department of Home Affairs and Environment provides a fortnightly service to and from the island out of Perth via the Cocos Islands. The PMCI operates a fortnightly air charter between Singapore or Kuala Lumpur and the island.

The Territory has its own radio broadcasting station, police force, postal service and philatelic bureau. A radio-telephone and teleprinter service operates between the island and the mainland, and links with Singapore and ships at sea.

CORAL SEA ISLANDS

The Coral Sea Islands Territory comprises scattered reefs and islands, often little more than sandbanks, spread over a sea area of 1,035,995 square kilometres with only a few square kilometres of land area. The territory lies between the Great Barrier Reef and longitude 157°10′E and between latitude 12° and 24°S. Some of the better known islands in the Territory are Cato Island, Chilcott Islet in the Coringa Group and the islands of the Willis Group.

The islands, or cays, are formed largely of coral and sand and some have a cover of grassy or scrub-type vegetation. Large populations of sea birds nest and breed in the area.

History

About one hundred years ago guano workers camped on a number of the islands collecting manure deposited by the sea birds. But isolation, a lack of permanent fresh water and the limited size of the cays discouraged subsequent permanent occupation.

The Commonwealth Government based its claim to the Coral Sea Islands on numerous acts of sovereignty since early this century and asserted its sovereignty by enacting the *Coral Sea Islands Act* 1969 (which declared the Coral Sea Islands to be a Territory of Australia).

Installations

A lighthouse has been erected on Bougainville Reef and beacons operate on the Frederick and Lihou Reefs. A three-man meteorological station has provided a service on Willis Island since 1921 and there are eight automatic weather stations scattered throughout the Territory.

Most of the islands have been surveyed and the area is visited regularly both by Royal Australian Navy vessels and maintenance vessels of the Bureau of Meteorology.

Administration

By ordinance the laws of the Australian Capital Territory apply in the Coral Sea Islands Territory. The Minister for Home Affairs and Environment is responsible for matters affecting the Territory.

APPENDIX

CHAPTER 3, GENERAL GOVERNMENT

Some recent information which has come to hand since this chapter was sent to press is given below in summary form:

Governors of the States, page 68

Victoria—His Excellency REAR ADMIRAL SIR BRIAN STEWART MURRAY, K.C.M.G., A.O., K. St. J.

Queensland—His Excellency COMMODORE SIR JAMES MAXWELL RAMSAY, K.C.M.G., K.C.V.O., C.B.E., D.S.C.

COMMONWEALTH GOVERNMENT MINISTRIES, page 69

Amendments to April 1983:

(xlvi) FRASER MINISTRY, 3 November 1980 to 11 March 1983

(xlvii) HAWKE MINISTRY, 11 March 1983

COMMONWEALTH AND STATE LEADERS OF THE GOVERNMENT, page 70

Amendments to April 1983:

Commonwealth—The Hon. R. J. L. Hawke, A.O., M.P. (Vic.) (A.L.P.)

South Australia—The Hon. J. C. Bannon, M.P. (A.L.P.)

Western Australia—The Hon. B. T. Burke, M.L.A. (A.L.P.)

THE FIRST HAWKE MINISTRY—AT APRIL 1983

(Replacing THE FOURTH FRASER MINISTRY, page 70)

(The State in which each Minister's electorate is situated is shown in parentheses. All Ministers are members of the Australian Labor Party).

* indicates Minister in the Cabinet.

* *Prime Minister*—
THE HON R. J. L. HAWKE, A.O., M.P. (Vic.)

* *Deputy Prime Minister, Minister for Trade and Minister Assisting the Prime Minister for Commonwealth–State Relations*—
THE HON. L. F. BOWEN, M.P. (N.S.W.)

* *Leader of the Government in the Senate, Minister for Industry and Commerce and Minister Assisting the Minister for Communications*—
SENATOR THE HON. J. N. BUTTON (Vic.)

* *Deputy Leader of the Government in the Senate and Minister for Social Security*—
SENATOR THE HON. D. J. GRIMES (Tas.)

* *Minister for Employment and Industrial Relations and Minister Assisting the Prime Minister for Public Service Matters*—
THE HON. R. WILLIS, M.P. (Vic.)

* *Treasurer*—
THE HON. P. J. KEATING, M.P. (N.S.W.)

* *Special Minister of State, Vice-President of the Executive Council and Leader of the House*—
THE HON. M. J. YOUNG, M.P. (S.A.)

* *Minister for Immigration and Ethnic Affairs*—
THE HON. S. J. WEST, M.P. (N.S.W.)

* *Minister for Resources and Energy*—
SENATOR THE HON. P. A. WALSH (W.A.)

* *Minister for Foreign Affairs*—
THE HON. W. G. HAYDEN, M.P. (Qld)

* *Minister for Education and Youth Affairs and Minister Assisting the Prime Minister for Women's Affairs*—
SENATOR THE HON. S. M. RYAN (A.C.T.)

* *Attorney-General*—
SENATOR THE HON. G. J. EVANS (Vic.)

* *Minister for Defence*—
THE HON. G. G. D. SCHOLES, M.P. (Vic.)

Minister for Transport—
THE HON. P. F. MORRIS, M.P. (N.S.W.)

Minister for Primary Industry—
THE HON. J. C. KERIN, M.P. (N.S.W.)

Minister for Aviation and Minister Assisting the Minister for Defence—
THE HON. K. C. BEAZLEY, M.P. (W.A.)

Minister for Housing and Construction and Minister Assisting the Minister for Industry and Commerce—
THE HON. C. J. HURFORD, M.P. (S.A.)

Minister for Sport, Recreation and Tourism and Minister for Administrative Services—
THE HON. J. J. BROWN, M.P. (N.S.W.)

Minister for Finance—
THE HON. J. S. DAWKINS, M.P. (W.A.)

Minister for Health—
THE HON. DR N. BLEWETT, M.P. (S.A.)

Minister for Science and Technology—
THE HON. B. O. JONES, M.P. (Vic.)

Minister for Communications—
THE HON. M. J. DUFFY, M.P. (Vic.)

Minister for Home Affairs and Environment—
THE HON. B. COHEN, M.P. (N.S.W.)

Minister for Aboriginal Affairs—
THE HON. A. C. HOLDING, M.P. (Vic.)

Minister for Veterans' Affairs—
SENATOR THE HON. A. T. GIETZELT (N.S.W.)

Minister for Territories and Local Government and Minister Assisting the Prime Minister for Community Development and Regional Affairs—
THE HON. T. UREN, M.P. (N.S.W.)

Minister for Defence Support—
THE HON. B. L. HOWE, M.P. (Vic.)

COMMONWEALTH AND STATE LEADERS OF THE OPPOSITION, page 71

Amendments to April 1983:

Commonwealth—The Hon. A. S. Peacock, M.P. (L.P.)

New South Wales—N. F. Greiner, M.P. (L.P.)

Victoria—The Hon. J. G. Kennett, M.P. (L.P.)

Queensland—K. W. Wright, M.L.A. (A.L.P.)

South Australia—J. W. Olsen, M.P. (L.P.)

Western Australia—R. J. O'Connor, M.L.A. (L.P.)

COMMONWEALTH PARLIAMENTS, page 73

Thirty-second . . . 25 November 1980 . . . 4 February 1983

GENERAL INDEX

The illustrations contained in this issue are listed under the various chapters in the Contents (pages v-x).