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 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 of 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

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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 *Committee on Motor Vehicle Emissions;* 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 July 1969 ATAC established the Australian Motor Vehicle Certification Board to advise State and Territory registering authorities on compliance by new motor vehicles with Australian Design Rules (ADR's). The Board's principle function is to issue Compliance Plate Approvals, based on manufacturers' submissions, that a vehicle complies with those Rules applicable at its date of manufacture. Compliance with ADR's is a prerequisite to vehicle registration throughout Australia.

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, provides advice and comment to the Minister on policy issues as well as recommendations related to improving transport systems in Australia.

The 36 members 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 Working Committees. The Council is represented at pre-budget economic consultative meetings with the Prime Minister and Cabinet Ministers.

The Council was largely responsible for initiating the Transport Activity Indicator Project which provides quarterly statistical information on transport in Australia. Examples of topics currently under consideration by TIAC include the Australian rail systems; a uniform code for the safe transport of dangerous goods; future fuel and energy availability; container handling; identification of real transport costs; need for a national transport strategy.

The TIAC has a small Secretariat located in the Commonwealth Department of Transport.

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 (Chairman) and State and Territory Ministers whose portfolios include responsibility for ports and maritime services.

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 bi-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 ports matters. This Committee makes recommendations to Ministers on matters referred to them by Ministers or from within the Committee.

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 Transport 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 Transport (Chairman); Secretary to the Department of Transport; 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

This Bureau, which from June 1977 incorporated the functions of the former Commonwealth Bureau of Roads, undertakes research and analysis to assist the Commonwealth Government in the assessment, formulation and development of policy aimed at the efficient allocation of resources in the transport field. This work covers all transport activities and includes the analysis of funding for road investment as well as matters relating to the reduction of transport costs and the rational planning of future transport facilities. For administrative purposes the Bureau is attached to the Department of Transport, but it is responsible to the Minister for Transport for the conduct of its studies and investigations.

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 *Stevedoring Industry 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.

Navigation Act 1912 as Amended

One of the largest Commonwealth Acts, the Navigation Act, with forty-three sets of Regulations made under it, provides for various regulatory controls over ships and their crews, passengers and cargoes, mainly in connection with the ensuring of the safety of the ship and the preservation of life at sea. Substantial penalties are provided for serious offences. In particular, it gives effect to the important international conventions produced under the aegis of the Inter-Governmental Maritime Consultative Organization (IMCO) dealing with safety of life at sea, ships' load lines and prevention of collisions.

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 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 coastal trade provisions of the Navigation Act, the Australian coastal trade is reserved for licensed vessels, i.e. those which comply with Australian standards of manning, accommodation, and award conditions and wages. 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 these conditions and to operate in the Australian coastal trade subject to approval being given for the importation of the vessel where necessary. Provision exists for unlicensed vessels to operate in the coast 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.

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.

The last two amending Navigation Acts are not yet fully in force. The *Navigation Amendment Act 1979* (No. 98 of 1979) received Royal Assent on 22 October 1979 and the *Navigation Amendment Act 1980* (No. 87 of 1980) received Royal Assent on 29 May 1980. The two Acts deal with a wide range of matters and only amendments of a general or more formal nature are already in force. Important groups of sections of the Acts will be brought into operation at appropriate dates in the future: Regulations and Orders must first be made, Instruments of ratification of certain international conventions deposited and new procedures, etc. introduced.

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 1980 the Commission, operating as the Australian National Line, owned and/or operated a fleet of thirty-two vessels. The fleet included 13 vessels engaged in overseas trades comprising five vehicle deck cargo ships totalling 104,712 tonnes deadweight; three cellular container ships totalling 95,951 tonnes deadweight; four ore-bulk carriers totalling 524,187 tonnes deadweight; and one hybrid container vessel of 16,477 tonnes deadweight.

The fleet also included nineteen vessels engaged in coastal trades comprising one vehicle deck passenger ship, the *Empress of Australia* of 2,736 tonnes deadweight; seven vehicle deck cargo ships totalling 48,410 tonnes deadweight; one container bulkship of 12,140 tonnes deadweight in the Darwin trade; two bulk carriers in the over 100,000 tonnes deadweight class; two bulk carriers in the 50-100,000 tonnes deadweight class; six other bulk carriers each less than 50,000 tonnes deadweight totalling 120,898 tonnes deadweight.

The Line operated specialised terminals at Adelaide, Melbourne, Burnie, Devonport, Bell Bay, Sydney, Port Kembla, Brisbane, Mackay, Townsville, Cairns and Darwin.

The *Empress of Australia* carried 111,276 passengers between Melbourne and Devonport together with 29,580 vehicles during the year ending 30 June 1980.

Australian Shipbuilding Board

The Australian Shipbuilding Board has six members including representatives from each of the Departments of Defence (Navy Office), Transport and Industry and Commerce and the trade union movement and provides advice to the Minister for Industry and Commerce on matters relating to the shipbuilding industry. The Board advises the Minister on such matters as bounty prices and registration of shipyards within the terms of the Ship Construction Bounty Act, subsidy assistance under the provisions of the Australian Shipping Commission Act and other matters referred to the Board by the Minister.

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 the *Ship Construction Bounty Act* 1975, which applies to vessels for which public tenders closed on or before 30 June 1980, bounty is calculated on the basis of the lowest acceptable tender. At 30 June 1980, there were 74 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 the end of 1981.

Registration of yards was required under the Act. At 30 June 1980 there were 46 registered yards, although only 22 of these were actually building vessels. Vessels built at registered 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.

Under the *Bounty (Ships) Act* 1980, bounty will continue 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. Under this Act, which came into operation on 1 July 1980, bounty is paid on a "cost of construction" basis. The maximum rate of bounty is 29¼ per cent, phasing down to a long-term rate of 20 per cent to apply from 1 July 1986. A registration system still applies for administrative purposes.

In 1979–80 a total of 37 bountiable vessels were completed at Australian yards (as compared with 47 in 1978–79 and 23 in 1977–78). Construction of large ships in Australia ceased in 1978 and the increased activity in 1978–79 was partly due to more intensive construction of smaller vessels; and partly due to the effects of the Government's investment allowance. The allowance had been increased from 20 per cent to 40 per cent from 1 January 1976 and reverted to 20 per cent from 1 July 1978.

Bounty and subsidy payments in 1979–80 amounted to $13.4m, reversing the downward trend in such payments over the previous four years ($10.8m in 1978–79, $13.6m in 1977–78, $28.1m in 1976–77, and $43.7m in 1975–76). The contraction and final cessation of large shipbuilding in Australia, together with a reducing rate of bounty assistance, accounted for the downward trend. The increase in 1979–80 reflects increased activity in the Australian shipbuilding industry.

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.

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 for a three year period 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 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 1979–80 assistance provided under the Scheme for northbound cargoes totalled $25.7 million, and $1.9 million in respect of southbound cargoes. Since its inception assistance provided under the Scheme up to the end of 1979–80 totalled $89.6 million.

Responsibility for the administration of the Scheme lies within the Transport 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. The Scheme is currently being reviewed to ensure it continues to meet the Government's objectives.

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 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.

Amendment to Australia's Overseas Cargo Shipping Legislation

In April 1980 the Minister for Transport introduced into Parliament a Bill to amend Part X of the Trade Practices Act. The purpose of the Bill is to provide more effective safeguards for Australian shippers in the negotiation of the terms and conditions of outwards liner shipping. Representations have been received from industry on the Bill and the matter is now under further examination.

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.

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 tons and under.

Period covered by the statistics

Monthly shipping statistics relate to vessels arriving at and departing from each port in a calendar month. Annual statistics are published on a financial year basis.

Statistics of vessels

Statistics of vessels are compiled in terms of registered net tonnages. Net tonnage is expressed in units of 100 cubic feet (i.e. 100 cu ft equals 1 ton) and represents the volume of enclosed space which can be utilised for cargo or passengers.

Statistics of vessel movements

Returns show the last or next port of call of a vessel according to whether an arrival or departure at a port is being reported. Each vessel is classified to either the overseas or the coastal fleets serving Australia. This information, supplemented by the voyage of the vessel indicated by ports it visits to load or discharge cargo, is the basis on which each vessel movement is allocated to one of the following classifications: overseas direct; overseas via other States; or overseas via ports in the same State.

Cargo loaded or discharged

Returns for arrivals show cargo discharged, and for departures cargo loaded, in terms of tonnes or cubic metres, depending on the basis on which freight is charged.

Type of service

Overseas shipping cargo statistics are classified by type of service.

For overseas shipping, cargo shipped in liners is shown separately from cargo shipped in tramps, bulkships and tankers. A liner is a vessel which, on the voyage on which cargo is loaded or discharged at an Australian port, is operated to provide services on a specified route on a relatively regular basis.

Statistics of cargo shipped in liner services do not necessarily provide a measure of cargo carried by ships operating under shipping conference arrangements. For example, liner services may be provided by shipping companies which are not parties to conference agreements. Cargo may also be shipped under shipping conference conditions in vessels operating on a voyage charter basis for specific cargo and, in the statistics, such cargo is classified as cargo shipped in tramp vessels.

Country of loading or discharge of overseas cargo

In statistics of overseas shipping cargo, country of loading or discharge of 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.

Transhipments of cargo within Australia

The State of loading or discharge shown in the statistics is the State in which cargo is loaded onto or discharged from, reporting vessels. Cargo loaded in a given State can therefore include cargo previously shipped interstate, while cargo discharged can include cargo which would subsequently be shipped interstate.

Units of measurement

Deadweight tonnage. A measure of the total mass (weight) of cargo, fuel, potable water, boiler feed water, ballast, stores, crew and their gear, etc. It is equal to loaded displacement tonnage less light displacement tonnage.

Gross tonnage. A measure of the enclosed internal volume of a ship and its superstructure, with certain spaces exempted. It is also an indicator of the total volumetric size of a ship.

Net tonnage. A volumetric measure consisting of the gross tonnage less the volume of non-earning spaces, e.g. master's cabin, crew accommodation, wheelhouse, galley, etc., and an allowance for machinery spaces. Volumetric measurement of ships has not yet been converted to metric.

Overseas shipping

The following table shows the number of vessels entered and cleared direct from and to overseas countries, and the aggregate net tonnage involved, for the years 1973–74 to 1978–79.

OVERSEAS SHIPPING(a): VESSELS ENTERED AND CLEARED

		1973–74	1974–75	1975–76	1976–77	1977–78	1978–79
Entered	. . . . number	5,975	6,230	5,772	5,830	5,615	5,677
	'000 net tons	72,042	80,313	75,002	79,666	80,154	82,755
Cleared	. . . . number	5,909	6,254	5,824	5,824	5,668	5,655
	'000 net tons	71,462	80,305	75,399	79,503	80,443	82,509

(a) Excludes vessels of 200 net tons and under.

Particulars of the total overseas movement of shipping for each year from 1950–51 are shown in the Statistical Summary of this Year Book.

The following table shows, for each State and the Northern Territory, the number of vessels entered and cleared direct from and to overseas countries, and the aggregate net tonnage involved.

OVERSEAS SHIPPING(a): VESSELS ENTERED AND CLEARED, STATES, 1978–79

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entered	. . . . number	1,302	545	1,121	275	2,040	168	226	5,677
	'000 net tons	16,564	5,546	14,328	2,709	38,537	2,764	2,308	82,755
Cleared	. . . . number	1,046	447	1,306	387	2,104	157	208	5,655
	'000 net tons	14,120	4,417	16,803	3,236	39,029	2,668	2,236	82,509

(a) Excludes vessels of 200 net tons and under.

The following table shows particulars of overseas shipping which entered Australian ports according to country of registration of vessels.

OVERSEAS SHIPPING: VESSELS ENTERED DIRECT, BY COUNTRY OF REGISTRATION, AUSTRALIA(a)

('000 net tons)

Country of registration of vessels	1976–77	1977–78	1978–79	Country of registration of vessels	1976–77	1977–78	1978–79
Australia	1,514	2,086	2,476	Panama	4,138	4,234	5,303
China—excl. Taiwan Province . .	870	2,444	3,411	Singapore, Republic of	1,282	1,605	1,791
—Taiwan Province only . .	695	974	1,195	Sweden	875	838	402
Denmark	725	671	721	United Kingdom	8,823	7,401	7,217
Germany, Federal Republic of . .	1,836	1,584	1,152	United States of America	620	650	764
Greece	4,186	3,798	3,604	U.S.S.R.	1,114	816	865
Hong Kong	984	1,100	1,224	Other countries	4,039	4,601	5,885
India	2,285	995	825	All countries—			
Italy	629	341	536	In cargo	19,118	18,366	19,669
Japan	26,049	26,476	25,213	Proportion of total % . . .	24.0	22.9	23.8
Liberia	13,795	14,428	15,991	In ballast	60,548	61,788	63,086
Netherlands	540	494	399	Proportion of total % . . .	76.0	77.1	76.2
Norway	4,667	4,618	3,780	Grand Total	79,666	80,154	82,755

(a) Excludes vessels of 200 net tons and under.

Australian registered tonnage which entered Australian ports from overseas during the year 1978–79 represented 2.99 per cent of the total tonnage entered.

Overseas via States. The figures in the following table show the number and aggregate net tonnage of overseas vessels entered and cleared which, having arrived at an Australian port direct from an overseas port, continued their voyages from/to overseas countries via other Australian States.

INTERSTATE MOVEMENT: OVERSEAS VESSELS ENTERED AND CLEARED VIA OTHER AUSTRALIAN STATES, 1978–79(a)

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entered	. . . . number	925	896	604	458	343	211	33	3,470
	'000 net tons	7,025	7,286	5,488	3,033	2,815	1,530	346	27,523
Cleared	. . . . number	1,202	1,013	406	349	211	226	46	3,453
	'000 net tons	9,583	8,336	2,916	2,482	1,929	1,598	356	27,201

(a) Excludes vessels of 200 net tons and under.

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 1980.

AUSTRALIAN TRADING VESSELS OF 150 GROSS TONS OR MORE
30 JUNE 1980

(*Source:* Department of Transport)

Vessels	Number	DWT	Gross
Interstate—			
Australian owned, Australian registered	46	1,013,774	665,267
Australian owned, overseas registered	1	2,540	2,577
Overseas owned, Australian registered	5	102,063	67,823
Overseas owned, overseas registered	9	608,440	328,282
Interstate fleet	*61*	*1,726,817*	*1,063,949*
Intrastate—			
Australian owned, Australian registered	22	265,799	164,183
Overseas owned, Australian registered	1	58,077	36,088
Intrastate fleet	*23*	*323,876*	*200,271*
Coastal fleet	**84**	**2,050,693**	**1,264,220**
Overseas—			
Australian owned, Australian registered	12	397,377	288,223
Overseas owned, Australian registered	3	401,587	213,950
Overseas owned, overseas registered	5	143,031	89,986
	20	*941,995*	*592,159*
Total Australian fleet	**104**	**2,992,688**	**1,856,379**

Harbour boards and trusts

For detailed information *see* the individual State Year Books.

Shipping at principal ports

The following table shows the total volume of shipping—overseas and coastal—entering the principal ports of Australia.

TOTAL SHIPPING: VESSELS ENTERED AT PRINCIPAL PORTS(a)

	1976–77		1977–78		1978–79	
Port of entry	Num-ber	Net tons	Num-ber	Net tons	Num-ber	Net tons
		'000		'000		'000
New South Wales—						
Sydney	2,249	16,125	1,717	14,768	1,553	13,184
Botany Bay	279	3,891	91	1,240	91	1,149
Newcastle	869	8,512	605	7,149	566	7,393
Port Kembla	693	7,151	331	5,028	250	3,494
Victoria—						
Melbourne	2,517	13,410	1,082	7,758	1,137	9,077
Geelong	337	2,741	259	2,227	218	2,004
Westernport	435	5,437	98	1,172	112	1,751
Queensland—						
Brisbane	1,229	8,720	839	5,740	866	6,705
Bundaberg	97	658	49	336	28	156
Cairns	147	767	90	511	69	383
Gladstone	404	6,675	235	3,918	262	4,178
Hay Point	162	5,292	182	6,020	167	5,323
Mackay	252	1,144	133	736	84	501
Rockhampton	67	244	25	57	48	97
Townsville	353	2,122	258	1,587	283	1,724
Weipa	240	4,576	119	2,072	111	1,825
South Australia—						
Adelaide	942	3,628	532	3,067	520	3,406
Port Lincoln	118	525	56	422	66	601
Port Pirie	133	831	96	585	108	644
Port Stanvac	96	1,639	49	1,106	41	1,040
Thevenard	63	278	16	96	37	207
Whyalla	204	1,558	70	617	35	313
Western Australia—						
Fremantle(b)	1,313	11,007	1,128	9,662	1,032	9,263
Albany	126	779	104	731	89	588
Bunbury	171	1,637	165	1,740	147	1,631
Geraldton	141	975	122	1,014	126	1,060
Yampi Sound	102	954	65	841	50	845
Port Hedland	478	12,146	422	12,190	458	11,920
Dampier	492	13,218	435	10,528	478	12,250
Port Walcott	143	5,053	116	4,249	119	4,581
Tasmania—						
Hobart	383	1,333	187	803	146	1,055
Burnie	366	1,688	78	716	93	861
Devonport	405	1,312	21	72	12	52
Launceston	421	2,651	128	1,412	106	1,601
Port Latta	38	734	27	595	29	613
Northern Territory—						
Darwin	135	623	85	408	106	510
Groote Eylandt	96	731	55	535	64	594
Gove	106	1,608	96	1,800	92	1,582

(a) Excludes vessels of 200 net tons and under.   (b) Includes Kwinana.

Shipping cargo

The following table shows details of container and non-container cargo discharged and loaded at Australian ports during 1978–79.

OVERSEAS CONTAINER AND NON-CONTAINER CARGO DISCHARGED AND LOADED BY PORT, 1978–79

('000)

Port	Discharged Container Tonnes	Cubic metres	Non-container Tonnes	Cubic metres	Loaded Container Tonnes	Cubic metres	Non-container Tonnes	Cubic metres
New South Wales—								
Sydney	989	1,833	1,639	1,152	1,140	527	3,884	72
Botany Bay . . .	—	—	1,806	1	—	—	189	—
Newcastle . . .	23	10	1,095	3	34	—	12,723	3
Port Kembla . . .	—	—	651	—	21	—	6,389	—
Other	—	—	1	2	—	--	388	—
Total New South Wales . .	*1,012*	*1,844*	*5,192*	*1,159*	*1,194*	*527*	*23,573*	*75*
Victoria—								
Melbourne . . .	440	1,507	703	706	1,016	429	445	77
Geelong	1	24	1,428	2	9	38	1,795	27
Portland	---	—	247	—	—	—	532	8
Westernport . . .	—	—	153	—	—	—	2,170	—
Total Victoria	*441*	*1,530*	*2,531*	*708*	*1,025*	*466*	*4,942*	*112*
Queensland—								
Brisbane	84	278	704	351	476	81	1,631	16
Cairns	—	—	33	—	—	—	472	—
Gladstone . . .	--	—	669	47	—	—	8,948	—
Hay Point	—	—	—	—	—	—	12,344	—
Mackay	—	—	73	1	—	—	406	—
Townsville . . .	2	—	533	31	28	—	1,034	1
Weipa	—	—	136	1	—	—	4,397	—
Other	—	—	24	—	—	—	1,051	1
Total Queens-land . . .	*86*	*279*	*2,172*	*431*	*505*	*81*	*30,281*	*18*
South Australia—								
Port Adelaide . .	12	59	401	307	49	35	759	417
Ardrossan . . .	—	—	—	—	—	—	113	—
Port Lincoln . . .	—	—	144	—	—	—	516	3
Port Pirie	—	—	—	—	1	—	747	—
Port Stanvac . . .	—	—	2,047	—	—	—	144	—
Whyalla	—	—	141	—	2	—	687	—
Other	---	---	109	—	—	—	825	17
Total South Australia .	*12*	*59*	*2,842*	*307*	*51*	*35*	*3,793*	*437*
Western Australia—								
Fremantle . . .	140	208	4,794	135	254	51	4,911	169
Albany	—	—	128	—	1	—	536	—
Bunbury	—	—	176	1	—	—	2,336	18
Dampier	—	22	212	—	—	37	33,289	—
Geraldton . . .	—	—	71	—	—	—	1,144	21
Port Hedland . .	—	—	191	7	—	—	31,915	1
Port Walcott . . .	—	—	321	—	—	—	11,893	—
Yampi Sound . .	—	—	—	—	—	—	2,832	—
Other	—	2	144	1	1	1	1,787	82
Total Western Australia .	*140*	*232*	*6,036*	*144*	*255*	*88*	*90,641*	*292*
Tasmania—								
Hobart	3	—	173	20	1	—	624	7
Burnie	11	2	72	6	63	2	137	24
Devonport . . .	—	—	5	—	—	—	11	1
Launceston . . .	—	—	81	11	1	—	1,705	1
Port Latta . . .	—	—	16	—	—	—	1,994	—
Other	—	—	10	—	—	—	199	—
Total Tasmania	*15*	*2*	*357*	*37*	*65*	*2*	*4,670*	*33*
Northern Territory—								
Darwin	1	3	424	17	—	—	14	13
Groote Eylandt . .	—	—	23	—	—	31	1,032	—
Gove	—	—	599	—	—	—	3,052	—
Total Northern Territory .	*1*	*3*	*1,046*	*17*	*—*	*31*	*4,098*	*13*
Australia . .	**1,708**	**3,949**	**20,176**	**2,804**	**3,096**	**1,231**	**161,998**	**980**

The following table shows details of overseas cargo discharged and loaded at principal Australian ports during 1977–78 and 1978–79.

OVERSEAS CARGO DISCHARGED AND LOADED AT PRINCIPAL PORTS

('000)

| | 1977–78 | | | | 1978–79 | | | |
| | Discharged | | Loaded | | Discharged | | Loaded | |
Port	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres
New South Wales—								
Sydney	3,149	2,162	5,717	600	2,628	2,986	5,024	599
Botany Bay	1,786	1	85	—	1,806	1	189	—
Newcastle	1,130	24	11,791	17	1,118	14	12,757	3
Port Kembla	576	—	7,316	—	651	—	6,410	—
Other	8	4	732	—	1	2	388	—
Total New South Wales	*6,648*	*2,190*	*25,642*	*618*	*6,204*	*3,003*	*24,767*	*602*
Victoria—								
Melbourne	1,076	1,820	1,328	453	1,143	2,213	1,461	506
Geelong	1,390	14	2,974	40	1,429	26	1,803	65
Portland	195	—	488	4	247	—	532	8
Westernport	1	—	1,323	—	153	—	2,170	—
Total Victoria	*2,662*	*1,833*	*6,113*	*497*	*2,972*	*2,239*	*5,967*	*579*
Queensland—								
Brisbane	966	508	1,336	80	788	629	2,107	97
Cairns	46	—	410	—	33	—	472	—
Gladstone	647	—	7,952	6	669	47	8,948	—
Hay Point	—	—	14,220	—	—	—	12,344	—
Mackay	98	—	729	—	73	1	406	—
Townsville	496	25	1,215	4	535	32	1,062	1
Weipa	94	—	4,714	—	136	1	4,397	—
Other	8	—	1,331	—	23	—	1,050	1
Total Queensland	*2,354*	*533*	*31,907*	*89*	*2,259*	*710*	*30,786*	*99*
South Australia—								
Port Adelaide	432	315	558	581	413	366	808	453
Ardrossan	—	—	104	—	—	—	113	—
Port Lincoln	85	—	291	—	144	—	516	3
Port Pirie	—	—	626	—	—	—	748	—
Port Stanvac	2,006	—	184	—	2,047	—	144	—
Whyalla	104	—	871	—	141	—	689	—
Other	61	—	280	38	109	—	826	17
Total South Australia	*2,687*	*315*	*2,913*	*618*	*2,854*	*366*	*3,844*	*472*
Western Australia—								
Fremantle	4,779	348	6,101	216	4,934	343	5,164	220
Albany	140	—	869	34	128	—	536	—
Bunbury	160	1	2,428	35	176	1	2,336	18
Dampier	248	—	31,189	—	212	22	33,289	37
Geraldton	63	—	1,036	27	71	—	1,144	21
Port Hedland	191	6	31,599	1	191	7	31,915	1
Port Walcott	337	—	11,419	—	321	—	11,893	—
Yampi Sound	2	—	2,603	—	—	—	2,832	—
Other	128	—	2,001	72	143	2	1,788	83
Total Western Australia	*6,047*	*355*	*89,245*	*385*	*6,176*	*376*	*90,897*	*380*
Tasmania—								
Hobart	117	22	247	—	176	20	625	8
Burnie	46	9	189	1	83	9	199	26
Devonport	4	—	18	24	5	—	11	1
Launceston	81	7	1,407	4	81	11	1,707	1
Port Latta	—	—	1,887	—	16	—	1,994	—
Other	19	—	480	—	10	—	199	—
Total Tasmania	*266*	*38*	*4,229*	*29*	*371*	*40*	*4,735*	*34*
Northern Territory—								
Darwin	416	4	12	—	426	20	14	13
Groote Eylandt	15	—	870	—	23	—	1,032	31
Gove	617	—	3,535	—	599	—	3,052	—
Total Northern Territory	*1,048*	*4*	*4,416*	*—*	*1,047*	*20*	*4,098*	*44*
Australia	**21,712**	**5,269**	**164,464**	**2,236**	**21,884**	**6,753**	**165,094**	**2,210**

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 (i.e. liner or tramp, bulkship and tanker).

OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA: MAJOR TRADE AREAS BY TYPE OF SERVICE

('000)

Major trade areas	Liners(a)		Tramps, bulkships, tankers		All vessels	
	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres
1978-79—						
Overseas cargo loaded—						
North America	753	112	6,360	1	7,113	113
South America	33	9	627	–	660	9
Europe (excluding U.S.S.R.)	771	357	27,503	4	28,274	361
Africa	98	39	2,110	47	2,208	87
Asia (excluding U.S.S.R.)—						
Eastern Asia	1,137	239	113,877	103	115,014	342
Other Asia	943	350	7,488	609	8,432	958
Total Asia	2,080	589	121,366	712	123,446	1,300
U.S.S.R. (in Europe and Asia)	48	–	480	–	528	–
Papua New Guinea, New Zealand and Pacific Islands	975	291	1,882	30	2,857	322
Indian Ocean Islands and Antarctic Area	–	–	8	19	8	19
Overseas cargo discharged—						
North America	618	1,293	1,775	229	2,394	1,522
South America	9	15	5	–	14	15
Europe (excluding U.S.S.R.)	463	1,663	596	220	1,059	1,882
Africa	53	73	268	–	321	73
Asia (excluding U.S.S.R.)—						
Eastern Asia	413	1,236	2,156	1,204	2,569	2,440
Other Asia	195	481	12,365	131	12,561	611
Total Asia	608	1,717	14,522	1,334	15,130	3,051
U.S.S.R. (in Europe and Asia)	4	4	–	–	4	5
Papua New Guinea, New Zealand and Pacific Islands	534	106	1,731	90	2,265	196
Indian Ocean Islands and Antarctic Area	–	–	697	8	697	8
Total loaded—						
1976-77	4,663	1,691	160,236	528	164,899	2,219
1977-78	3,956	1,413	160,508	823	164,464	2,236
1978-79	4,759	1,398	160,335	813	165,094	2,210
Total discharged—						
1976-77	2,458	5,651	18,097	2,125	20,554	7,775
1977-78	2,090	3,645	19,621	1,624	21,712	5,269
1978-79	2,289	4,872	19,595	1,881	21,884	6,753

(a) Cargo and passenger liners.

Overseas cargo according to country of registration of vessels

The following table shows the total overseas cargo, discharged and loaded combined, according to the country in which the vessels were registered.

OVERSEAS CARGO DISCHARGED AND LOADED, BY COUNTRY OF REGISTRATION OF VESSELS: AUSTRALIA

('000)

Country of registration of vessels	1976–77 Tonnes	1976–77 Cubic metres	1977–78 Tonnes	1977–78 Cubic metres	1978–79 Tonnes	1978–79 Cubic metres
Australia	2,427	763	3,998	530	4,300	903
Belgium-Luxembourg	969	1	744	2	1,530	36
Canada	1,047	–	86	–	–	–
China—excl. Taiwan Province . .	1,912	–	5,909	–	7,220	58
—Taiwan Province only . .	1,256	48	1,808	15	2,369	16
Denmark	1,517	206	1,456	297	1,548	307
Germany, Federal Republic of . .	3,718	756	2,919	566	1,709	563
Greece	9,830	187	8,495	64	8,841	106
Hong Kong	1,850	163	2,150	196	2,143	427
India	5,060	62	2,154	61	1,738	46
Japan	74,506	1,544	74,317	1,393	68,693	1,193
Korea, Republic of	1,077	6	1,960	4	3,545	2
Liberia	31,903	519	34,110	294	36,981	416
Norway	11,188	420	11,087	198	8,578	338
Panama	7,802	456	8,543	471	11,436	698
Singapore, Republic of	1,928	510	2,315	422	2,864	525
Sweden	1,694	462	1,736	249	677	394
United Kingdom	16,272	2,481	13,224	1,357	12,440	1,327
U.S.S.R.	1,305	178	655	65	698	198
Other	8,196	1,232	8,508	1,319	9,664	1,407
Grand total	**185,453**	**9,994**	**186,175**	**7,503**	**186,976**	**8,961**

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 1980, 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 1980(a)

(Source: Department of Transport)

Year of construction	Overseas and interstate vessels No.	Overseas and interstate vessels Gross tons	Intrastate vessels No.	Intrastate vessels Gross tons	Built in Australian yards No.	Built in Australian yards Gross tons	Built overseas No.	Built overseas Gross tons	Total No.	Total Gross tons
1975 and earlier . .	43	584,108	21	194,628	46	566,783	18	211,953	64	778,736
1976	5	167,700	–	–	3	28,267	2	139,433	5	167,700
1977	7	244,028	1	2,851	3	46,991	5	199,888	8	246,879
1978	7	141,665	–	–	1	25,849	6	115,816	7	141,665
1979	4	97,762	–	–	–	–	4	97,762	4	97,762
1980	–	–	1	2,792	–	–	1	2,792	1	2,792
Registered in Australia	**66**	**1,235,263**	**23**	**200,271**	**53**	**667,890**	**36**	**767,644**	**89**	**1,435,534**

(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 1978–79 a total of 110.0 million tonnes of freight was carried, an increase of 129.0 per cent over the 48.0 million tonnes carried in 1958–59. However, in the same twenty-year period, the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 29.3 per cent from 485 million in 1958–59 to 375 million in 1978–79. The number of train-kilometres run during 1978–79 (148 million) was an increase of 1.4 per cent since 1958–59 (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 1979 there were 1,695 throughout Australia. Diesel-electric locomotives during 1978–79 hauled 97 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. The following table sets out the route-kilometres of government railways in each State and Territory from 1973 to 1978. Details prior to 1973 can be found in Year Book No. 61, page 381.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, 1973 TO 1978

(Kilometres)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1973 . . .	10,129	6,357	9,560	5,904	6,897	830	789	8	40,474
1974 . . .	10,130	6,329	9,472	5,905	6,922	851	789	8	40,406
1975 . . .	10,131	6,331	9,780	5,909	6,805	851	789	8	40,604
1976 . . .	10,130	6,325	9,844	5,915	6,893	849	789	8	40,753
1977 . . .	10,130	6,251	9,796	5,911	6,895	864	278	8	40,133
1978 . . .	10,138	6,036	9,787	6,383	6,494	864	..	8	39,710

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. The following table shows the route-kilometres open in each State and Territory at 30 June 1978 according to gauge.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY GAUGE, 30 JUNE 1978

(Kilometres)

Gauge	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
1600 mm	(a)328	5,711	. .	(b)2,537	. .	. .	. .	8,576
1435 mm	(c)9,810	(d)325	111	2,027	2,107	. .	8	14,388
1067 mm	. .	. .	9,676	1,819	(e)4,387	864	. .	16,746
762 mm	. .	. .	. .	. .	. .	. .	. .	. .
610mm	. .	. .	. .	. .	. .	. .	. .	. .
Total	10,138	6,036	9,787	6,383	6,494	864	8	39,710
Per 1,000 of population . . .	2.02	1.58	4.52	4.96	5.31	2.09	0.04	2.79
Per 1,000 square kilometre . .	12.64	26.47	5.67	6.49	2.57	12.71	4	5.17

(a) Part of the Victorian railway system. (b) Includes 142 kilometres of the Adelaide metropolitan railway system operated by the South Australian State Transport Authority. (c) Includes 47 kilometres of 1435 mm gauge line from Broken Hill to Cockburn operated by the Australian National Railways. (d) Includes 12 kilometres of 1435/1600mm dual gauge line which operates in the Melbourne metropolitan area. (e) Excludes 148 kilometres of 1067/1435 mm dual gauge line which is included in the figure shown for the 1435 mm gauge line.

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 Railways (VR), Western Australian Government Railways (WAGR), the State Transport Authority of South Australia (STA), and Australian National Railways (ANR).

As the Australian National Railways 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 (these are shown in the previous table). The route-kilometres of each system open for traffic, according to gauge, at 30 June 1978 is shown in the following table.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY GAUGE(a)
AND SYSTEM 30 JUNE 1978

(Kilometres)

System	Gauge			Total
	1600 mm	1435 mm	1067 mm	
New South Wales	. .	(b)9,763	. .	9,763
Victoria	(c)6,039	325	. .	6,364
Queensland	. .	(d)111	9,676	9,787
South Australia	(e)142	. .	. .	142
Western Australia	. .	1,377	(f)4,387	5,764
National	(e)2,395	2,812	2,683	7,890
Australia	8,576	14,388	16,746	39,710

(a) In October 1977 the Emerald Tourist Railway Board took over the operations of the narrow gauge (762 mm) rail service running between Belgrave and Lakeside in Victoria. The narrow gauge (610 mm) Innisfail and Mourilyan tramways in Queensland were sold to private enterprise in May 1977. (b) Includes 456 kilometres which are electrified. (c) Includes 328 kilometres of 1600 mm gauge line operating in New South Wales. Includes 447 route-kilometres which are electrified. (d) Operated by the Public Transport Commission of New South Wales which is reimbursed for the cost of operations. (e) See paragraphs 2 and 3, page 483. (f) Excludes 148 kilometres of 1435 mm/1067 mm dual gauge line which is included in the 1435 mm gauge line.

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. ANR operates the nonmetropolitan 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, Queanbeyan to Canberra, Port Augusta to Marree, and Tarcoola to Alice Springs. Services on the Darwin to Larrimah line (1067 mm gauge) ceased on 1 July 1976.

See also details in the annual publication *Rail, Bus and Air Transport, Australia* (9201.0), 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. 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 and replaces the existing flood-prone narrow gauge section of the Central Australia Railway between Marree and Alice Springs.

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, 1978–79

	N.S.W.	Vic.	Qld	S.A.	W.A.	National	Aust.
Train-kilometres ('000)(a)—							
Suburban passenger	20,715	13,386	3,693	3,957	2,201	–	43,952
Country passenger	9,704	6,650	3,939	..	1,118	3,171	24,582
Goods(b)	25,203	10,820	24,469	..	8,749	9,746	78,986
Total	**55,621**	**30,856**	**32,100**	**3,957**	**12,068**	**12,918**	**147,520**
Passenger journeys ('000)(c)—							
Suburban	179,079	89,258	25,850	(g)70,526	n.a.	..	n.a.
Country(d)	3,670	4,065	1,425	..	234	677	10,071
Total	**182,749**	**93,323**	**27,275**	**(g)70,526**	**n.a.**	**677**	**n.a.**
Passenger-kilometres ('000)(e)—							
Suburban	n.a.	1,458,932	n.a.	n.a.	n.a.	..	n.a.
Country	n.a.	432,045	n.a.	n.a.	98,329	296,203	n.a.
Total	**n.a.**	**1,890,977**	**n.a.**	**n.a.**	**n.a.**	**296,203**	**n.a.**
Freight— Tonnes carried ('000)(d)	33,482	11,190	36,542	..	19,288	10,623	111,125
Net tonne-kilometres (million)(f)	8,776.7	3,145.3	10,925.2	..	4,178.8	5,029.5	32,055.5

(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 paragraphs 2 and 3, page 483.

Rolling stock

GOVERNMENT RAILWAYS: ROLLING STOCK INCLUDED IN CAPITAL ACCOUNT

(Number)

	Locomotives				Coaching stock	Goods stock	Service stock
System and date	Diesel-electric	Electric	Other(a)	Total			
30 June 1979(b)							
New South Wales . . .	485	39	20	544	2,080	13,040	1,978
Victoria	266	35	41	342	1,517	12,645	1,181
Queensland	455	–	77	532	1,043	20,731	2,361
South Australia . . .	2	–	4	6	165	–	14
Western Australia . . .	194	–	21	215	137	10,356	482
National	293	–	40	333	113	10,391	1,176
Australia	**1,695**	**74**	**203**	**1,972**	**5,055**	**67,163**	**7,192**
30 June—							
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
1974	1,563	76	372	2,011	7,870	79,086	7,723

(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 1978–79

('000 kilometres)

	N.S.W.	Vic.	Qld	S.A.	W.A.	National	Aust.
Type of service—							
Passenger—suburban	20,715	13,386	3,693	3,957	2,201	–	43,952
Passenger—country	9,704	6,650	3,939	–	1,118	3,171	24,582
Goods(a)	25,203	10,820	24,469	–	8,749	9,746	78,986
Total	55,622	30,856	32,100	3,957	12,068	12,918	147,520
Type of motive power—							
Hauled by diesel-electric loco-motives	30,653	15,120	29,642	4	9,468	11,983	96,871
Hauled by electric and other locomotives(b)	2,539	1,350	226	2	1	–	4,117
Powered coaching stock . . .	22,430	14,386	2,233	3,950	2,599	934	46,532
Total	55,622	30,856	32,100	3,957	12,068	12,918	147,520

(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.
1973–74	58,255	33,345	28,542	10,313	12,617	2,154	5,966	151,192
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	3,982	12,596	. .	13,152	148,801
1978–79	55,622	30,856	32,100	3,957	12,068	. .	12,918	147,520

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.
1978-79—								
Grain	3,260	2,884	1,816	..	3,109	..	1,093	12,162
Other agricultural								
produce . . .	1,208	348	1,816	..	179	..	97	3,648
Coal, coke and								
briquettes . . .	17,913	783	24,121	..	1,399	..	1,692	45,908
Other minerals(b) .	2,939	745	3,949	..	10,680	..	1,653	19,966
Iron and steel . .	1,786	610	(c)	..	–	..	657	3,053
Fertilisers	271	672	122	..	479	..	484	2,028
Cement	425	774	139	..	68	..	464	1,870
Timber	94	180	113	..	210	..	821	1,418
Containers . . .	2,724	831	759	..	–	..	1,067	5,381
Livestock	160	162	1,212	..	17	..	310	1,861
All other commod-								
ities	2,702	3,202	2,494	..	3,148	..	2,285	13,831
Total . . .	**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
1973-74	32,651	11,370	25,401	6,607	14,839	1,828	4,270	96,966

(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 commodites".

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.
1978-79—								
Grain	1,231.3	829.8	(a)	..	939.7	..	188.1	(a)
Other agricultural								
produce . . .	627.3	111.3	(a)	..	74.6	..	57.7	(a)
Coal, coke and								
briquettes . . .	1,565.5	139.6	(a)	..	219.1	..	433.5	(a)
Other minerals(b) .	581.3	130.1	(a)	..	1,444.2	..	381.4	(a)
Iron and steel . .	1,221.7	197.4	(a)	..	–	..	603.6	(a)
Fertilisers	166.6	168.4	(a)	..	184.8	..	163.5	(a)
Cement	141.5	115.3	(a)	..	29.4	..	66.0	(a)
Timber	92.8	59.9	(a)	..	69.1	..	168.2	(a)
Containers . . .	1,522.0	342.4	(a)	..	–	..	845.8	(a)
Livestock	101.1	49.4	662.4	..	6.8	..	161.2	980.9
All other commodities	1,525.6	1,001.6	10,262.8	..	1,211.2	..	1,960.5	15,961.7
Total . . .	**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	..	4,273.1	..	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
1973-74	8,642.5	3,126.2	7,855.1	1,753.1	4,142.5	277.9	2,532.0	28,329.3

(a) Not available separately, included with 'All other commodities'. (b) Includes sand and gravel.

Finance

GOVERNMENT RAILWAYS: GROSS EARNINGS(a), SYSTEMS, 1978–79

($'000)

	N.S.W.	Vic.	Qld	S.A.(e)	W.A.	National	Aust.
Coaching—							
Suburban passenger	59,924	41,208	7,364	n.a.	n.a.	..	n.a.
Country passenger	25,992	16,012	6,444	..	3,617	10,078	62,143
Other	9,730	10,495	4,754	n.a.	2,377	1,960	n.a.
Total coaching	*95,646*	*67,715*	*18,562*	*n.a.*	*5,994*	*12,038*	*199,955*
Freight (goods and livestock)—							
Grain	(c)	26,649	20,650	..	34,096	7,397	n.a.
Other agricultural produce .	(c)	4,225	15,490	..	4,199	1,303	n.a.
Coal, coke and briquettes . .	(c)	5,746	120,608	..	9,243	4,592	n.a.
Other minerals(d)	(c)	3,368	28,206	..	28,753	9,847	n.a.
Iron and steel	(c)	4,831	–	..	–	7,450	n.a.
Fertilisers	(c)	4,070	2,695	..	4,989	3,081	n.a.
Cement	(c)	4,957	2,014	..	1,306	2,057	n.a.
Timber	(c)	2,371	1,813	..	3,161	4,011	n.a.
Containers	(c)	6,095	9,152	..	–	16,479	n.a.
Livestock	(c)	1,789	30,551	..	312	4,920	n.a.
All other commodities . . .	(c)	37,715	53,520	..	42,114	46,972	n.a.
Total freight	*252,300*	*101,815*	*284,699*	..	*128,172*	*108,109*	*875,095*
Miscellaneous	31,087	23,126	7,157	n.a.	20,431	11,682	93,483
Grand total	**379,033**	**192,656**	**310,418**	**24,550**	**154,597**	**131,829**	**1,193,083**(e)

(a) Excludes Government grants.   (b) See paragraphs 2 and 3, page 483.   (c) Not available separately.   (d) Includes sand and gravel.   (e) Includes South Australia.

GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1978–79

($'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	National	Aust.
Maintenance of way and works .	110,330	(b)	98,215	n.a.	(a)39,076	n.a.	n.a.
Motive power(c)	230,266	(b)	139,281	n.a.	(a)41,348	n.a.	n.a.
Traffic	163,340	299,839	95,805	n.a.	58,188	n.a.	n.a.
Other charges	176,064	47,963	31,769	n.a.	21,155	n.a.	n.a.
Total	**679,999**	**347,802**	**365,070**	(d)**71,043**	(a)**159,767**	**204,738**	**1,828,389**

(a) Includes provision of reserves for depreciation.   (b) Not available separately; included with traffic.   (c) Includes maintenance of rolling stock.   (d) See paragraphs 2 and 3, page 483.

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					
1973–74	.	.	.	.	.	262,691	115,613	149,844	39,531	78,480	7,674	37,217	691,050
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	(c)24,550	154,597	..	131,829	1,193,083
								WORKING EXPENSES					
									(a)	(a)			
1973–74	.	.	.	.	.	349,897	188,599	162,101	60,747	81,916	15,598	44,423	903,281
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	(c)71,043	159,737	..	204,738	1,828,389
								NET EARNINGS(b)					
1973–74	.	.	.	.	.	−87,206	−72,986	−12,257	−21,216	−3,436	−7,924	−7,206	−212,231
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	(c)−46,493	−5,141	..	−72,909	−635,308

(a) Includes provision of reserves for depreciation.   (b) Excess of gross earnings over working expenses as shown in this table.   (c) See paragraphs 2 and 3, page 483.

GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1979

($'000)

System	Net earnings —excess of gross earnings over working expenses	Plus grants and other earnings payable to railways				Less other expenses charged to railways					Surplus (+) or deficit (−)
		State Government grants	Road motor earnings	Other	Total	Interest and exchange	Sinking fund	Road motor expenses (a)	Other	Total	
New South Wales	. . −300,966	(b)9,349	..	..	9,349	64,915	13,185	..	(c)1,628	79,728	−371,345
Victoria	. . . . −155,147	(d)5	88	–	93	–	–	399	–	399	−155,453
Queensland	. . . −54,652	–	–	–	–	56,733	–	–	(e)1,300	58,033	−112,685
South Australia(f)	. . −46,493	44,200	–	(g)21	44,221	–	–	–	–	–	−2,272
Western Australia	. . −5,141	–	1,370	–	1,370	16,836	–	3,475	(h)59	20,370	−24,140
National	. . . . −72,909	63,767	–	494	64,261	4,112	–	–	–	4,112	−12,760
Australia	. . .−635,308	117,321	1,458	515	119,294	142,596	13,185	3,874	2,987	162,642	−678,656

(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) Loan management and loan flotation expenses.   (d) Kerang-Koondrook tramway recoup from Treasury.   (e) Demolished assets written off.   (f) See paragraphs 2 and 3, page 483.   (g) Commonwealth Government V.P.T.I. Grant.   (h) Australian currency revaluation adjustment.

Employment, salaries and wages

GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES (EXCLUDING CONSTRUCTION STAFF) AND SALARIES AND WAGES PAID(a), 1978–79

	N.S.W.	Vic.(b)	Qld	S.A.(c)	W.A.	National (d)	Aust.
Salaried staff	9,573	5,384	4,111	431	2,123	2,537	24,159
Wages staff	33,192	17,893	20,435	2,007	7,590	9,806	90,923
Total staff	42,765	23,277	24,546	2,438	9,713	12,343	115,082
Salaries and wages paid . . . . $'000	515,291	262,137	282,734	28,638	104,054	143,754	1,336,608

(a) Excludes salaries and wages paid to road motor staff. (b) Includes construction staff. (c) See paragraphs 2 and 3, page 483. (d) Includes staff made available to the South Australian State Transport Authority.

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 Bureau of Transport Economics by the various railway operators. All operators provided details of tonnes consigned and most provided details of tonne-kilometres performed. In a few cases the tonne-kilometre figures have been estimated by the Bureau of Transport Economics using the advised average length of haul.

TRAFFIC TASK PERFORMED BY AUSTRALIAN NON-GOVERNMENT RAILWAYS 1973–74 TO 1978–79

Year	Iron ore railways	Sugar tramways	Other non-government railways(a)	Total non-government railways(a)	Non-government as a percentage of total tonnes consigned/ tonne kilometres performed (per cent)
		TONNES CONSIGNED ('000)			
1973–74	84,867	16,442	19,970	121,279	54
1974–75	95,666	17,163	21,180	134,009	55
1975–76	83,837	18,844	17,847	120,528	53
1976–77	86,622	20,066	20,271	126,959	53
1977–78	85,898	20,268	17,859	124,025	53
1978–79	79,473	18,635	19,640	117,748	51
		TONNE-KILOMETRES (million)			
1973–74	25,890	264	336	26,490	48
1974–75	29,559	275	341	30,175	50
1975–76	25,748	302	298	26,348	46
1976–77	26,646	322	369	27,337	46
1977–78	27,723	325	324	28,372	47
1978–79	24,930	299	337	25,566	44

(a) Includes transfers to and from Government railways.

TRAM, BUS, AND FERRY SERVICES

Systems in operation

Trams and trolley-buses. At 30 June 1979 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, Public Transport Commission 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 and in the annual publication *Rail, Bus and Air Transport, Australia* (9201.0). 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, 1978–79

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-kilometres at 30 June—										
Tram(a)	kilometres	..	220	..	11	..	..	..	..	231
Bus	"	1,064	276	747	901	8,478	462	100	800	12,828
Vehicle-kilometres—										
Tram	'000	..	24,191	..	776	..	..	..	..	24,967
Bus	"	65,181	12,879	20,749	36,634	42,048	9,562	1,149	13,491	201,693
Rolling stock at 30 June—										
Tram	number	..	730	..	26	..	..	..	..	756
Bus	"	1,719	299	572	838	933	304	31	374	5,070
Passenger journeys—										
Tram	'000	..	101,070	..	(b)	..	..	..	..	(g)101,070
Bus	"	199,850	19,927	49,399	(b)	54,287	17,299	796	16,000	(g)357,559
Gross revenue(c)—										
Tram and bus . . .	$'000	44,101	36,100	16,775	(b)	17,384	4,186	402	4,793	(g)123,741
Working expenses(d)—										
Tram and bus . . .	$'000	114,211	62,672	24,416	(b)	33,745	10,373	619	12,608	(g)258,644
Net revenue—										
Tram and bus . . .	$'000	-70,111	-26,572	-7,641	(b)	-16,360	-6,187	-217	-7,814	(g)-134,902
Employees at 30 June—										
Tram and bus . . .	number	6,731	4,749	1,471	(b)	2,189	598	80	729	(g)16,547
Accidents—										
Tram and bus(e)—										
Persons killed . .	number	7	14	1	5	–	–	–	–	(g)27
Persons injured . .	"	n.a.	796	296	320	407	33	1	75	(f)(g)1,885

(a) Gauge 1435 mm throughout.　　(b) Not separately available. See paragraphs 2 and 3, page 483.　　(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 paragraph 2, page 483.　　Minus sign (-) denotes deficit.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL

		1973–74	1974–75	1975–76	1976–77	1977–78	1978–79
Route-kilometres at 30 June—							
Tram	kilometres	227	228	228	228	228	231
Bus	"	11,780	11,859	11,217	12,142	12,649	12,828
Vehicle kilometres—							
Tram	'000	24,555	24,516	24,945	24,940	24,955	24,967
Bus	"	179,702	188,062	190,131	192,003	197,660	201,693
Rolling stock at 30 June—							
Tram	number	734	729	765	765	774	756
Bus	"	4,761	4,914	4,995	4,897	5,050	5,070
Passenger journeys—							
Tram	'000	110,791	112,329	107,375	104,188	102,581	(f)101,070
Bus	"	417,513	(a)413,844	403,058	404,228	413,987	(f)357,558
Gross revenue(b)—							
Tram and bus	$'000	105,149	112,690	121,420	123,740	134,457	(f)123,741
Working expenses(c)—							
Tram and bus	$'000	146,655	187,787	208,241	239,107	267,281	(f)258,644
Net revenue—							
Tram and bus	$'000	–41,506	–75,098	–86,821	–115,366	–132,824	(f)–134,902
Employees at 30 June—							
Tram and bus	number	17,549	17,829	17,846	18,276	n.a.	(f)16,547
Accidents—							
Tram and bus(d)—							
Persons killed	number	10	14	22	25	22	(f)27
Persons injured	"	2,587	(e)1,245	(e)1,535	(e)1,609	(e)1,727	(f)1,885

(a) Excludes Northern Territory.   (b) Excludes government grants.   (c) Includes provision of reserve for depreciation, etc., where possible.   (d) Excludes accidents to employees.   (e) Excludes New South Wales.   (f) Excludes details of metropolitan tram and bus services in South Australia. See paragraphs 2 and 3, page 483.   Minus sign (–) denotes deficit.

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 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)

Type of vehicle	Laden business		Unladen business		Total business (a)		Paid to and from work		Unpaid to and from work		Private		Total	
	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	5,315.4	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 now been published in separate census publications for each State and Territory and for Australia, however these details were not complete as this edition of the Year Book went to print.

MOTOR VEHICLE CENSUS: 30 SEPTEMBER 1976 (FINAL)
('000)

State or Territory	Motor cars and station wagons	Utilities	Panel vans	Trucks Rigid	Trucks Articu- lated	Other truck type vehicles	Buses	Motor cycles	Total (a)
New South Wales	1,712.9	131.8	108.0	115.7	13.1	7.8	11.2	95.5	2,196.0
Victoria	1,456.2	104.5	47.0	117.8	9.8	4.9	7.3	51.9	1,799.4
Queensland	723.4	129.4	42.1	43.8	5.9	3.2	3.6	72.8	1,024.0
South Australia	509.2	41.4	19.6	36.3	5.2	4.1	3.2	31.8	650.7
Western Australia	442.6	55.5	34.2	43.8	3.4	3.8	3.3	28.5	615.2
Tasmania	158.7	17.0	8.3	10.4	1.2	1.1	1.7	6.5	204.8
Northern Territory	19.3	8.0	2.0	2.0	0.3	0.2	0.2	2.7	34.8
Australian Capital Territory .	79.9	4.6	4.7	2.5	0.1	0.1	0.9	3.7	96.6
Australia	5,102.2	492.3	265.9	372.2	39.0	25.1	31.4	293.4	6,621.5

(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
1974	4,604.0	1,090.1	5,694.1	258.6
1975	4,858.5	1,140.2	5,998.7	277.7
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

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.
1974	402.9	427.4	408.7	442.4	449.3	442.0	328.5	427.6	418.7
1975	419.8	447.2	413.1	467.1	470.7	461.8	334.5	433.7	435.6
1976	426.8	466.6	445.4	482.2	493.4	481.1	315.6	436.8	451.9
1977	435.1	470.1	463.9	498.7	523.7	494.9	328.0	456.3	463.4
1978	446.7	487.9	485.8	505.4	546.0	515.1	375.1	436.0	478.8
1979	457.2	498.2	504.1	509.8	557.5	531.0	371.9	465.9	490.2

(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 monthly bulletins, and by type and make of vehicle in quarterly 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 and year	Motor cars	Station wagons	Utilities	Panel vans	Trucks Rigid	Trucks Articulated	Other truck type vehicles	Buses	Total (excludes motor cycles)	Motor cycles
1979 80–										
New South Wales	129,247	33,442	11,940	13,132	12,554	1,557	502	1,018	203,392	20,279
Victoria	95,344	20,223	6,550	4,007	9,245	956	555	708	137,588	10,884
Queensland	57,343	15,028	15,146	5,358	3,012	675	181	502	97,245	10,350
South Australia	31,540	6,523	2,643	2,099	2,822	379	156	206	46,368	5,518
Western Australia	31,304	8,928	4,237	4,206	4,373	414	113	373	53,948	4,600
Tasmania	10,702	2,631	1,328	808	938	167	91	122	16,787	1,089
Northern Territory . . .	1,656	773	1,550	259	137	70	8	48	4,501	486
Australian Capital Territory	5,882	1,384	432	300	460	64	5	68	8,595	741
Australia	**363,018**	**88,932**	**43,826**	**30,169**	**33,541**	**4,282**	**1,611**	**3,045**	**568,424**	**53,947**
1978 79	381,366	82,087	41,591	32,068	33,756	4,496	1,891	3,171	580,426	37,278
1977 78	359,472	72,967	45,946	40,312	35,034	4,000	2,474	3,712	563,917	38,049
1976-77	365,624	81,478	(a)48,420	(a)39,532	(a)36,051	(a)4,752	(a)2,749	3,205	581,811	50,321
1975 76	380,713	73,924	43,500	38,296	39,574	4,139	474	3,743	584,363	60,017
1974 75	433,244	69,476	45,151	36,647	32,675	3,545	409	3,040	624,187	67,563

(a) Not directly comparable with previous figures.

Drivers' and riders' licences

At 30 June 1979, the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 2,886,503; Victoria, 2,072,172; South Australia, 741,388; Western Australia, 675,033; Tasmania, 222,217; Northern Territory, 56,990; Australian Capital Territory, 129,498. 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

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED, 1979

State or Territory	Number of accidents	Persons killed	Persons injured	Per 100,000 of mean population			Per 10,000 motor vehicles registered(b)		
				Number of accidents	Persons killed	Persons injured	Number of accidents	Persons killed	Persons injured
New South Wales	27,013	1,290	36,984	532	25	728	112	5	153
Victoria	13,898	847	19,690	361	22	511	70	4	100
Queensland	7,746	613	10,303	353	28	469	65	5	87
South Australia	8,359	309	11,338	646	24	876	121	4	164
Western Australia	7,025	279	9,342	565	22	751	98	4	130
Tasmania	1,507	93	2,114	361	22	506	67	4	93
Northern Territory	650	53	928	560	46	799	143	12	204
Australian Capital Territory	816	24	1,094	367	11	492	76	2	103
Australia	67,014	3,508	91,793	465	24	636	91	5	125

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Number of motor vehicles (excluding tractors, plant and equipment) on register at 30 June 1979.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED

Year	N.S.W	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total		
									Number	Per 100,000 of mean population	Per 10,000 motor vehicles registered
Accidents involving casualties—											
1974	29,853	12,542	8,086	9,469	4,742	1,393	575	813	67,473	496	(b)113
1975	28,217	12,514	8,241	8,793	5,104	1,496	554	869	65,788	478	(b)105
1976	27,393	12,680	7,814	8,090	5,287	1,603	582	833	64,282	462	(b)98
1977	27,943	14,803	7,696	7,922	6,224	1,603	634	868	67,693	481	(b)99
1978	29,451	14,957	8,094	8,160	7,513	1,641	716	802	71,334	501	(b)101
1979	27,013	13,898	7,746	8,359	7,025	1,507	650	816	67,014	465	(c)91
Persons killed—											
1974	1,275	806	589	382	334	111	44	31	3,572	26	(b)6
1975	1,288	910	635	339	304	122	64	32	3,694	27	(b)6
1976	1,264	938	569	307	308	108	51	38	3,583	26	(b)5
1977	1,268	954	572	306	290	112	47	29	3,578	25	(b)5
1978	1,384	869	612	291	345	106	68	30	3,705	26	(b)5
1979	1,290	847	613	309	279	93	53	24	3,508	24	(c)5
Persons injured—											
1974	40,429	17,539	10,627	12,725	6,277	1,911	788	1,042	91,338	672	(b)153
1975	38,141	17,437	11,019	12,020	6,832	2,137	789	1,124	89,499	650	(b)142
1976	37,327	17,653	10,405	11,082	7,059	2,323	814	1,145	87,808	631	(b)134
1977	38,407	19,874	10,002	10,781	8,353	2,343	882	1,176	91,818	652	(b)135
1978	40,875	20,377	10,850	11,209	10,069	2,274	980	1,051	97,685	686	(b)138
1979	36,984	19,690	10,303	11,338	9,342	2,114	928	1,094	91,793	636	(c)125

(a) See footnote (a) to previous table. (b) Average number of motor vehicles (excluding tractors, plant and equipment, etc.) on register. (c) At 30 June 1979.

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 1979. 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 1979

(Kilometres)

Class of road	N.S.W.	Vic.	Qld(a)	S.A.	W.A.	Tas.(a)	Total
State Highways	(b)10,595	7,310	10,354⎫		⎧ 7,716	1,960⎫	
Trunk roads	7,097⎫		{ 152 ⎬	13,575	⎨ ⎬7,582	– ⎬	108,905
Ordinary main roads . . .	18,300⎭	14,567	⎩ 8,558 ⎭		⎩	1,139⎭	
Total main roads . .	*35,992*	*21,877*	*19,064*	*13,575*	*15,298*	*3,099*	*108,905*
Secondary roads	(c)285	–	(d)13,029	–	8,733	290	22,337
Development roads . . .	3,461	–	8,028	–	–	157	11,646
Tourist roads	438	798	–	–	–	150	1,386
Other roads	2,610	(e)1,031	–	–	–	–	3,641
Total other roads .	*6,794*	*1,829*	*21,057*	–	*8,733*	*597*	*39,010*
Grand total . . .	**42,786**	**23,706**	**40,121**	**13,575**	**24,031**	**3,696**	**147,915**

(a) Figures as at 30 June 1978. Figures as at 30 June 1979 are not yet available.   (b) Includes 131 kilometres of freeways and tollways.   (c) Metropolitan only.   (d) Includes mining access roads, farmers' roads and tourist tracks.   (e) Forest tracks.

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 1979

(Kilometres)

Surface of roads	N.S.W.(a)(b)	Vic.(b)	Qld(b)	S.A.	W.A.	Tas.(b)	N.T.(b)	A.C.T.(b)	Total(a)
Bitumen or concrete .	70,277	58,691	44,121	18,088	32,593	7,381	4,975	1,788	237,914
Gravel, crushed stone or other improved surface	66,616	45,353	28,981	21,093	39,214	14,097	1,872	352	217,578
Formed only . . .	39,188	27,380	60,193	24,213	46,126⎫	⎫749	⎧6,143	42⎫	⎫356,637
Cleared only . . .	13,092	25,277	29,050	37,024	40,788⎭	⎭	⎩7,372	–⎭	⎭
Total . . .	**189,173**	**156,701**	**162,345**	**100,418**	**158,721**	**22,227**	**20,362**	**2,182**	**812,129**

(a) Excludes 15,397 kilometres of road dedicated but not trafficable.   (b) Figures as at 30 June 1978. Figures as at 30 June 1979 are not yet available.

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.

* Includes bridges.

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 Housing 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.

Road research is a continuing concern, and in 1959 the Association decided to set up and finance a separate national centre to conduct road research on behalf of its members. The Australian Road Research Board (ARRB) was duly established in 1960 as a company controlled by a Board consisting of the NAASRA members.

The Association regularly confers with the Commonwealth Department of Transport, 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 *Conference Proceedings*, symposium and workshop papers, a quarterly journal *Australian Road Research* and various reports and technical manuals arising out of its many research projects. ARRB also maintains a unique library of road literature and operates an expanding computer-based information service called Australian Road Index (ARI) which collects and collates all Australian road research findings. It also acts as the Australian member of the International Road Research Documentation (IRRD) system. Both ARI and IRRD information is available to members of AUSINET, the Australian Computer network for information exchange and retrieval. ARRB also maintains close contacts with international road research bodies.

AIR TRANSPORT

Department of Transport

Commonwealth control of air transport in Australia is exercised by the Department of Transport. The Department's jurisdiction covers Australia and areas of the Indian and Pacific Oceans. Details about air transport control and operations are given in the annual reports to the Commonwealth Parliament by the Minister for Transport.

International activity

International organisations. The International Civil Aviation Organization (ICAO) had a membership of 146 nations in June 1980. Australia has continued its position as a member of the Council, which it has held since ICAO was established in 1947.

International agreements. Australia had air service agreements in force with twenty-six countries at 30 June 1980. 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 1980.

International air services. At 30 June 1980, 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), Alitalia (Italy), British Airways Overseas Division (Britain), Canadian Pacific Air Lines (Canada), Cathay Pacific (Hong Kong), Continental Airlines (United States of America), Deutsche Lufthansa (Federal Republic of Germany), Garuda (Indonesia), Japan Air Lines (Japan), Yugoslovenski Aerotransport (Yugoslavia), KLM Royal Dutch Airlines (Netherlands), Singapore International Airlines (Singapore), Merpati Nusantara Airlines (Indonesia), Pan American World Airways (United States of America), Philippines Air Lines (Philippines), South African Airways (Republic of South Africa), Thai International (Thailand), Malaysian Airways (Malaysia), and Union de Transport Aeriens (France). Qantas, Australia's international airline, operates a fleet of aircraft of which one is a Hawker Siddeley 125, and nineteen are 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 1979–1980 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), 1979–80

Type of traffic	Number of flights	Passengers	Freight	Mail
Traffic to Australia—				
Qantas Airways Limited	3,530	919,075	26,560	929
Other airlines	6,722	1,140,375	43,054	5,141
All airlines	**10,252**	**2,059,450**	**69,614**	**6,070**
Traffic from Australia—				
Qantas Airways Limited	3,525	864,161	19,507	2,585
Other airlines	6,700	1,095,705	32,863	1,218
All airlines	**10,225**	**1,959,866**	**52,370**	**3,803**

(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

		1973–74	1974–75	1975–76	1976–77	1977–78	1978–79p
Hours flown	number	90,293	86,231	85,839	79,499	77,539	70,977
Kilometres flown	'000	69,062	65,045	65,221	61,586	65,625	61,959
Passengers—							
Embarkations	number	1,295,457	1,418,541	1,488,858	1,551,679	1,569,374	1,782,673
Passenger-kilometres . . .	'000	8,653,357	9,434,345	10,541,870	11,318,928	12,029,554	14,317,936
Freight—							
Tonnes uplifted	tonnes	27,328	29,974	33,417	34,380	39,986	49,409
Tonne-kilometres	'000	195,078	213,748	243,911	258,748	301,253	373,534
Mail—							
Tonnes uplifted	tonnes	2,912	2,950	2,997	3,205	2,971	3,238
Tonne-kilometres	'000	25,071	24,043	26,217	27,788	27,618	32,019

Regular air services within Australia

Interstate services. The majority of scheduled interstate services with passenger and all-freight aircraft are provided by two airlines only: the private enterprise airline Ansett Airlines of Australia (a division of Ansett Transport Industries (Operations) Pty Ltd, which is a subsidiary of Ansett Transport Industries Ltd); and the Commonwealth Government, Australian National Airlines Commission trading as Trans-Australia Airlines (TAA). All principal routes are competitive, with both airlines providing equal capacities in accordance with legislation passed by the Commonwealth Parliament. The two principal Acts which establish the legislative basis of this competition are the *Airlines Agreements Act* 1952 and the *Airlines Equipment Act* 1958. The Airlines Equipment Act established the machinery for the achievement and maintenance of comparable, but not necessarily identical, aircraft fleets between TAA and Ansett Airlines of Australia, and was designed to prevent the provision of excess aircraft capacity. The Airlines Agreement Act established the basis of control of the two-airline competitive system. In addition to purely interstate services, both Ansett Airlines of Australia and Trans-Australia Airlines operate intrastate routes, most of which are non-competitive.

At 30 June 1980, the Ansett Airlines of Australia fleet included eleven Boeing 727s, twelve DC-9s, eleven Friendships, three Electra freighters and three helicopters. At the same date, Trans-Australia Airlines operated a fleet of eleven Boeing 727s, twelve DC-9s, twelve Friendships and four Twin Otter DHC-6s.

Intrastate services. In addition to the intrastate services operated by Ansett Airlines of Australia and Trans-Australia Airlines there are a number of smaller regional airlines operating from Sydney (Ansett Airlines of New South Wales and East-West Airlines), Adelaide (Ansett Airlines of South Australia), Perth (MacRobertson Miller Airlines), and Darwin (Northern Airlines). With the exception of Northern Airlines, which provides regular service to outback homesteads and communities, all of these are concerned primarily with traffic moving to and from their respective capital cities. Except for the independently-owned East-West Airlines and Northern Airlines, all regional airlines are divisions of Ansett Transport Industries (Operations) Pty Ltd. The larger aircraft used by these regional airlines are F28 Fellowships and F27 Friendships.

Commuter services. These are regular public transport flights by charter firms with small single and twin-engined aircraft operating to fixed and published timetables. They are not airline services and primarily provide air links between towns and country areas which are not served by the major airlines. At 30 June 1980 forty-five charter operators were operating commuter services in Australia. 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)

		1973–74	*1974–75*	*1975–76*	*1976–77*	*1977–78*	*1978–79*
Hours flown	number	281,611	282,706	270,928	258,151	279,410	280,601
Kilometres flown	'000	131,829	135,455	130,100	122,933	134,720	135,532
Passengers—							
Embarkations	number	8,857,654	9,393,104	9,315,141	9,348,697	10,288,959	10,724,531
Passenger-kilometres . . .	'000	6,812,300	7,374,126	7,280,993	7,329,665	8,181,028	8,619,601
Freight—							
Tonnes uplifted	tonnes	112,654	107,813	106,061	108,108	120,890	127,530
Tonne-kilometres	'000	98,294	97,914	97,499	96,315	106,471	110,745
Mail—							
Tonnes uplifted	tonnes	9,916	9,613	9,708	9,636	11,307	13,126
Tonne-kilometres	'000	9,272	9,023	9,113	9,148	10,726	12,518

(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	1973–74	1974–75	1975–76	1976–77	1977–78	1978–79
Sydney	4,679,513	4,953,051	4,788,086	4,846,610	5,273,436	5,539,290
Melbourne	3,876,877	4,037,585	4,125,932	4,149,390	4,552,462	4,743,757
Brisbane	2,078,812	2,218,780	2,119,538	2,075,381	2,252,888	2,282,641
Adelaide	1,374,645	1,494,675	1,454,917	1,618,299	1,729,030	1,801,084
Canberra	934,069	981,815	901,837	881,668	966,388	949,882
Perth	646,699	696,527	629,530	704,041	792,873	830,273
Hobart	382,636	375,769	403,759	403,069	437,948	455,577
Townsville	315,782	320,153	329,831	322,498	353,522	363,285
Coolangatta	278,044	300,854	314,780	320,606	409,151	457,789
Launceston	294,694	287,741	304,784	309,341	353,596	387,456
Cairns	251,847	266,620	275,439	270,147	307,525	345,344
Mackay	196,951	213,972	249,196	244,025	254,954	253,229
Darwin	182,319	241,003	208,806	200,833	225,052	249,056

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 1979–80 were estimated at 1.72 million, approximately 5.9 per cent more than the previous year.

Aerodromes

The number of aerodromes throughout Australia and its external territories at 30 June 1980 was 435. Eighty-one were owned by the Commonwealth Government and 355 by local authorities and private interests. The number of licensed heliports throughout Australia and its territories is 5. Capital expenditure on aerodrome and building construction was $7.9 million in 1979–80. Maintenance expenditure on Commonwealth Government-owned aerodromes during 1979–80 was $6.7 million, and development and maintenance grants to licensed aerodromes participating in the Local Ownership Plan totalled $4.0 million.

Airway facilities

A total of 458 navigational aids were in service at 30 June 1980. The total includes 248 non-directional beacons (NDB) (includes 221 standard NDB's and 27 locators), 107 distance measuring equipment (DME), 11 international distance measuring equipment (DMEI), 2 visual-aural ranges (VAR), 72 VHF omni-directional ranges (VOR), 17 instrument landing systems (ILS) and one twin locator approach system.

One hundred and fifty-five aerodromes are now equipped with night landing facilities. Eighty-seven Australian-designed 'T' systems (T-VASIS) are operating. Seven long-range surveillance radars, two short range and seven secondary surveillance radars (seven civil, two military) are also in operation. There are twenty-eight fully-equipped Air Traffic Control Centres and forty-three flight service units in operation.

Air transport registrations, licences, etc., in force in Australia

At 30 June 1980 there were 6,292 aircraft registered in Australia. At the same time there were also 52,538 pilots' licences in force, of which 23,463 were private pilots' licences, 4,676 commercial pilots' licences, 1,383 senior commercial pilots' licences, 2,201 air transport pilots' licences, and 20,815 student pilots' licences. Flight radio-telephone operators' licences numbered 32,966.

Accidents and casualties

AIR TRANSPORT: ACCIDENTS INVOLVING CASUALTIES(a), AUSTRALIA(b)

	1974–75	1975–76	1976–77	1977–78	1978–79	1979–80
Number	24	32	33	47	43	49
Persons killed	25	54	39	58	42	52
Persons seriously injured	16	24	24	27	37	44

(a) Accidents involving civil aircraft which resulted in death or serious injury. Excludes parachutists killed on contact with earth after an uninterrupted fall. (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 Postal and Telecommunications Department are located in Canberra, Melbourne and Sydney.

Postal and Telecommunications Department

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. 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 undertakes, also, 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 Post and Telecommunications pursuant to the provisions of the Broadcasting and Television Act.

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 Post and Telecommunications is responsible.

Authorities responsible to the Minister for Post and Telecommunications 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 of Australia Post Courier services
- the introduction of reduced rate and discount mail services for bulk lodgements of mail
- the introduction of a concessional rate for domestic Christmas greeting cards
- the introduction of a new postal Money Order Service
- the revision of the Registered Publications Service
- the introduction of an overnight parcels service between all capital cities, and
- a new policy for rural and remote mail deliveries which provides for a minimum of twice weekly delivery wherever practicable.

In order to improve services further, the Commission has undertaken a program to decentralise the mail sorting and distribution network. The program involves the establishment of regional mail sorting centres in country and suburban areas and, to date, mail network plans have been approved for New South Wales, Victoria and Queensland. Decentralised mail handling centres are already operating in those States, and the implementation of the decentralised network in Victoria has been completed.

The following tables indicate Australia Post's financial results, services and operations for 1979-80. Selected tables also show figures for earlier periods.

AUSTRALIAN POSTAL COMMISSION: REVENUE AND EXPENDITURE, 1975 TO 1980

($'000)

Year ended 30 June—	1975(a)	1976	1977	1978	1979	1980
Revenue—						
Mail services	274,073	402,221	435,790	456,739	528,978	582,200
Money order, postal order services	5,653	7,481	6,881	6,242	5,434	6,350
Commission on agency services	13,207	85,892	101,739	95,636	93,171	82,189
Other revenue	9,055	10,044	17,186	20,110	18,907	19,442
Total	301,988	505,638	561,596	578,727	646,490	690,187
Expenditure—						
Operating and general	262,006	354,995	395,675	426,100	476,915	530,875
Transportation	42,214	46,723	50,168	55,343	44,842	52,744
Depreciation, superannuation, long-service						
leave, interest	62,364	72,258	86,854	95,217	102,144	94,876
Total	366,584	473,976	532,697	576,660	623,901	678,495

(a) Figures not comparable with years after 1975 due mainly to changes in accounting for work done at post offices for Telecom Australia.
NOTE: Prior to 1 July 1975, postal services were operated by the Postmaster-General's Department.

AUSTRALIAN POSTAL COMMISSION: STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 30 JUNE 1980

($'000)

Revenue—	
Mail services	582,200
Postal order and money order services	6,350
Commission on agency services	82,189
Other revenue	19,442
Total	690,181
Expenditure—	
Operating and general	530,875
Transportation	52,744
Depreciation	11,934
Superannuation	59,600
Long Service Leave	20,588
Interest	2,854
Total	678,595
Accumulated surplus available for appropriation—	
Operating surplus	11,686
Accumulated surplus brought forward	22,589
Total	34,275
Appropriation—	
For Capital Financing	22,589
Total	22,589
Accumulated surplus carried forward	**11,686**

AUSTRALIAN POSTAL COMMISSION: SUMMARY OF TRANSACTIONS AFFECTING FIXED ASSETS, 1979–1980

($)

Class of asset	Value at 1 July 1979	Additions in the year	Asset expenditure written out	Value at 30 June 1980 (a)
Land	24,267,263	7,088,570	1,097,642	30,258,191
Buildings	177,911,214	10,221,145	1,100,946	187,031,413
Motor vehicles	12,498,860	8,668,971	5,275,782	15,892,049
Plant	35,568,773	3,213,612	2,282,600	36,499,785
Equipment	18,292,310	3,173,271	628,718	20,836,863
Total value of fixed assets	268,538,420	32,365,569	10,385,688	290,518,301
Less depreciation				59,479,305
Net book value of fixed assets				231,038,996

(a) At cost.

AUSTRALIAN POSTAL COMMISSION: ANALYSIS OF TRANSACTIONS AFFECTING THE PROVISION FOR DEPRECIATION, 1979–80

($)

Class of asset	Balance of provision at 1 July 1979	Depreciation provided for in 1979–80	Asset expenditure written out	Balance of provision at 30 June 1980
Buildings	31,690,814	3,422,153	584,929	34,528,038
Motor vehicles	4,752,918	4,166,286	5,275,782	3,463,422
Plant	14,381,512	2,950,340	2,282,600	15,049,252
Equipment	5,672,476	1,394,835	628,718	6,438,593
Total value of provision	56,497,720	11,933,614	8,772,029	59,479,305

AUSTRALIAN POSTAL COMMISSION: PERSONS ENGAGED IN PROVIDING POSTAL SERVICES AT 30 JUNE 1979 AND 1980

	H.Q.	N.S.W. (Incl. A.C.T.)	Vic.	Qld	S.A. (Incl. N.T.)	W.A.	Tas.	Aust. 1980	Aust. 1979
Full time official staff (a)—									
Permanent	572	9,650	6,546	3,729	2,663	2,210	667	26,037	24,728
Temporary	11	3,155	2,043	428	182	188	122	6,129	6,807
Other staff(b)	–	3,157	1,817	1,628	923	703	407	8,635	9,018
Total	583	15,962	10,406	5,785	3,768	3,101	1,196	40,801	40,553

(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 1979 AND 1980

	N.S.W	Vic.	Qld	S.A.	W.A.	Tas.	Aust. 1980	Aust. 1979
Contract road services . . .	1,710	786	1,029	291	404	185	4,405	4,506
Households receiving mail . .	1,752,572	1,277,804	693,420	464,116	417,209	133,310	4,738,431	4,662,738
Businesses receiving mail . .	156,863	110,297	69,938	39,061	38,855	11,132	426,146	417,655
Post Offices—								
Official—								
At 1 July 1979	508	332	225	166	160	42	1,433	1,447
At 30 June 1980	508	330	222	164	161	42	1,427	1,433
Non-official—								
At 1 July 1979	1,241	970	597	535	365	207	3,915	4,124
At 30 June 1980	1,184	938	577	506	335	202	3,742	3,915
Total post offices . .	1,692	1,268	799	670	496	244	5,169	5,348

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
1975	2,284,954	90,842	140,176	2,515,972	495,725	6,430,717
1976	1,992,397	79,755	136,394	2,208,546	431,328	5,594,724
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	r2,504,631	661,352	8,590,967
1980	2,379,953	94,826	156,573	2,631,352	769,391	9,994,392

(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)

Year ended 30 June	Standard letters(b)				Non-standard articles(b)			
	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
1978	1,774,372	67,846	110,222	1,952,440	276,511	11,571	34,379	322,461
1979	(c)1,950,740	(c)73,332	108,923	(c)2,132,995	(c)293,926	11,966	35,547	(c)341,439
1980	2,033,092	79,414	112,093	2,224,599	320,803	12,769	39,847	373,419

STATES—YEAR ENDED 30 JUNE 1980

New South Wales . . .	804,074	31,260	53,968	889,302	137,469	5,761	16,370	159,600
Victoria	552,401	24,856	38,708	615,965	99,298	4,613	14,874	118,785
Queensland	288,307	7,042	6,252	301,601	34,178	1,123	4,703	40,004
South Australia	177,539	8,710	5,913	192,162	20,067	332	1,442	21,841
Western Australia . . .	157,217	7,198	7,252	171,667	18,861	908	2,458	22,227
Tasmania	53,554	348	. .	53,902	10,930	32	. .	10,962

(a) Includes Certified, Messenger Delivery and Priority Paid Mail.   (b) New categories of mail introduced from 1 October 1974.   (c) Estimating methods were refined in 1980 and volumes for 1979 have been reassessed on a comparable basis.

AUSTRALIAN POSTAL COMMISSION: REGISTERED ARTICLES(a) AND PARCELS
('000)

Year ended 30 June	Registered articles				Parcels			
	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
1975	6,256	2,113	2,797	11,166	20,419	1,002	1,939	23,360
1976	3,877	1,533	2,807	8,217	15,300	1,050	1,950	18,300
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

STATES—YEAR ENDED 30 JUNE 1980

New South Wales . . .	1,056	763	1,783	3,602	9,382	490	696	10,568
Victoria	778	474	806	2,058	6,374	426	701	7,501
Queensland	567	63	44	674	3,418	98	224	3,740
South Australia	324	67	26	417	1,812	78	90	1,980
Western Australia . . .	265	82	99	446	1,529	92	144	1,765
Tasmania	117	2	. .	119	436	8	20	464

(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(a)
1975	6,288	1,572	1,462
1976	5,424	1,129	1,386
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

STATES—YEAR ENDED 30 JUNE 1980

New South Wales	1,812	803	1,154
Victoria	1,652	191	550
Queensland	1,052	65	198
South Australia	516	54	233
Western Australia	509	50	135
Tasmania	239	6	80

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 three years of the Commission's operations.

AUSTRALIAN TELECOMMUNICATIONS COMMISSION: REVENUE
($'000)

Year ended 30 June—	1978	1979	1980
Telephone rentals	495,420	533,295	602,655
Telephone calls	1,078,830	1,211,057	1,355,373
Telephone connections and rearrangements	80,719	88,206	102,091
Telegrams	31,303	35,187	32,497
Telex rentals	18,655	21,495	25,644
Telex calls	26,081	24,890	28,936
Other earnings(a)	125,490	130,274	133,613
Total	**1,856,499**	**2,044,404**	**2,280,810**

(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—	1978	1979	1980
Maintenance of plant	386,723	424,736	576,760
Operating	288,573	307,994	399,873
General and administrative	105,160	137,001	178,739
Accommodation	74,705	85,917	99,382
Depreciation	366,514	410,412	447,383
Superannuation	106,669	118,887	—
Long service leave	25,949	30,849	—
Interest	317,288	338,090	367,127
Total	**1,671,580**	**1,853,884**	**2,069,264**

AUSTRALIAN TELECOMMUNICATIONS COMMISSION: FUNDS STATEMENT

($ million)

At 30 June—	1978	1979	1980
Source of funds—			
From the Commonwealth	65.0	—	—
From the public	200.3	177.6	268.6
From trading activities—			
Net trading result	184.9	190.5	211.5
Plus non-cash charges—			
Depreciation	372.3	416.4	454.5
Excess of liability over cash payment for—long service leave	10.3	15.4	16.4
superannuation	—	66.5	44.4
Total	*832.8*	*866.4*	*995.4*
Application of funds—			
Increase in fixed assets and stores holdings	949.5	936.1	998.3
Less non-cash charges capitalised—			
Depreciation	-10.9	-12.2	-13.6
Long service leave liability	-17.1	-16.6	-16.7
Superannuation	—	-61.4	-55.3
Increase in current assets over current liabilities	-108.3	7.1	76.9
Plus transfers from long term liabilities	19.6	13.4	5.8
Total	*832.8*	*866.4*	*995.4*

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 1980

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia
Type of service—							
Ordinary exchange services	1,597,853	1,228,142	568,854	407,632	342,182	114,227	4,258,890
Party line services	2,154	190	1,767	476	300	—	4,887
Private branch exchange	186,577	119,815	49,291	38,457	43,946	8,544	446,630
Public telephones	12,900	6,870	5,305	3,159	2,908	1,113	32,255
Connected to—							
Automatic exchanges	1,768,105	1,344,507	604,066	441,059	387,567	123,884	4,669,188
Manual exchanges	31,379	10,510	21,151	8,665	1,769	—	73,474
Located in—							
Metropolitan local service area	1,088,230	989,977	332,820	337,091	297,191	56,416	3,101,725
Country areas	711,254	365,040	292,397	112,633	92,145	67,468	1,640,937
Total	*1,799,484*	*1,355,017*	*625,217*	*449,724*	*389,336*	*123,884*	*4,742,662*

TELEPHONE INSTRUMENTS IN SERVICE

At 30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia
1978	2,537,345	1,749,733	735,262	531,475	472,788	154,713	6,181,316
1979	2,714,946	1,909,119	797,906	576,901	514,460	163,244	6,676,576
1980	2,885,117	2,053,799	861,909	621,592	566,831	173,742	7,152,990
Number per 100 population at 30 June	53.8	53.0	38.5	43.5	44.6	41.3	49.1

LOCAL AND TRUNK LINE TELEPHONE CALLS

Year ended 30 June—	1978	1979	1980
Effective paid local calls	4,186,000,000	4,483,000,000	4,786,559,000
Local calls per service	1,037	1,041	1,041
Trunk line calls	462,000,000	523,000,000	589,774,000
Trunk lines calls per service	114	121	129
Total calls	**4,648,000,000**	**5,006,000,000**	**5,376,333,000**

Subscriber Trunk Dialling (STD) facilities were introduced during the year 1961–62. For the year ended at 30 June 1979, 88.8 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—	1978	1979	1980
Ordinary	7,775,779	6,024,376	4,631,985
Urgent	164,497	184,934	153,718
Lettergrams	18,916	(a)6,688	—
Meteorological	635,598	534,482	349,445
Service	371,252	324,286	295,747
Total telegrams	**8,966,042**	**7,074,766**	**5,430,895**

(a) Lettergrams discontinued from 1 October 1978.

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
1978	22,724	32,177,000
1979	25,901	35,797,000
1980	29,731	37,415,000

Further detailed statistics are contained in the Commission's Annual Reports.

International consultation

The OTC participates in the Commonwealth Telecommunications Organisation, the International Telecommunication Union and the International Telecommunications Satellite Organisation (INTELSAT) which has established a global communications satellite system, and the International Maritime Satellite Organisation (INMARSAT), the organisation responsible for the provision of high-grade telephone, telex and data communications with ships at sea on a global basis, including distress and search and rescue communications.

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) and at Guam in the Mariana Islands; satellite earth stations at Carnarvon (W.A.), Ceduna (S.A.) and Moree (N.S.W.) which provide more than half of Australia's telecommunications links; international radio stations at Doonside and Bringelly (N.S.W.) and at Gnangara (W.A.); and fifteen coast radio stations at points around the Australian coast and at Norfolk Island for communicating with ships at sea.

Submarine cables

The 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); TAS-MAN, Sydney–Auckland (1976); A-PNG, Sydney–Port Moresby (1976); OLUHO, Okinawa (Japan)–Philippines–Hong Kong (1977) and ASEAN P-S, Philippines–Singapore (1978). The OTC will be a major participant in the construction of the ANZCAN Pacific cable (scheduled for service in 1983/84), Sydney-Norfolk Island-Fiji-Hawaii-Vancouver.

Satellites

OTC is a shareholder in INTELSAT which operates communication satellites over the Indian, Pacific and Atlantic Oceans, and in INMARSAT (see above).

1979–80 Statistics

As at March 1980, OTC staff totalled 2,203, revenue for the previous 12 months was approximately $176 million and profit after extraordinary items and tax was $31.5 million. Telephone revenue, which was available to 211 overseas destinations, together with telex, accounted for 84.5 per cent of total revenue. International Subscriber Dialling (ISD), by which the customer can dial his or her own overseas telephone calls, is now available to nearly 90 destinations. Over 99 per cent of overseas telex calls from Australia are now automatically subscriber connected.

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

The Commission again made reductions in charges for a number of its services in October 1980—and in the telephone services in December 1980. Some telegram tariffs and other minor charges were increased in October 1980.

Detailed information on OTC

The Commission reports on its operations to Parliament through its Minister about September 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 1979 and 1980.

INTERNATIONAL TELECOMMUNICATION SERVICES: YEARS ENDED 31 MARCH 1979 AND 1980

| | | *Transmissions* | | | | | |
| | | *From Australia* | | *To Australia* | | *Total* | |
Service		*1978–79*	*1979–80*	*1978–79*	*1979–80*	*1978–79*	*1979–80*
Telephone	'000 paid minutes	46,627	62,389	39,327	51,800	85,954	114,189
Telex	'000 paid minutes	13,825	16,795	14,319	16,950	28,144	33,745
Television programs . .	paid minutes	6,900	8,637	12,688	18,123	19,588	26,760
Telegraph services . . .	'000 words	56,223	54,801	41,554	38,695	97,777	93,496

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 1980 the coastal radio service handled 7,289,000 paid words to ships and 5,323,000 words from ships. Ship calls over the radiotelephone service extended over 350,000 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 510.

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 Post and Telecommunications. Federal bodies which are involved include the Postal and

Telecommunications Department, the Australian Broadcasting Commission (ABC), the Special Broadcasting Service, the Australian Broadcasting Tribunal, the Australian Telecommunications Commission 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 stations operated by companies under licence;
- public radio and television 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 Post and Telecommunications 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 Postal and Telecommunications. The stations obtain income from the broadcasting of advertisements. At 30 June 1980 there were 128 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 ninety 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 eleven limited coverage repeater stations in Australia operated by mining companies which transmit programs recorded on magnetic tape.

The Public Broadcasting and Television 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 1980, 26 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.

The Special Broadcasting Service

The Special Broadcasting Service (SBS) was established under the provisions of the *Broadcasting and Television Amendment Act* (1977) and began operation on 1 January 1978. The Service has responsibility for the ethnic radio stations in Sydney and Melbourne, 2EA and 3EA. It also provides subsidies for ethnic broadcasting on public broadcasting stations in capital cities and provincial centres other than Sydney and Melbourne. The SBS also conducts experimental ethnic television programs which are broadcast on the ABC.

The Special Broadcasting Service is empowered to undertake other special broadcasting programs as determind by the Government but at present has responsibility only for ethnic broadcasting. Currently the SBS obtains all revenue from public sources but it is empowered under the Act to fund its operations through sponsorship in a form approved by the Minister.

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 1980 the National Broadcasting Service comprised 117 transmitting stations, of which ninety-three were medium frequency, five frequency modulation and nineteen high frequency (six internal and thirteen Radio Australia).

The medium-frequency transmitters operate in the broadcast band 530 to 1,590 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 1980 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 1979–80 were as follows: entertainment 58.3 per cent; news 8.4 per cent; sporting 11.4 per cent; spoken word 9.0 per cent; drama and features 1.9 per cent; parliament 8.3 per cent; religious 1.4 per cent; rural 0.5 per cent; and presentation 0.7 per cent. By contrast, the ABC's Radio 2 station's programming was: classical music 5.3 per cent; light music 0.7 per cent; entertainment 3.3 per cent; drama and features 5.9 per cent; young people's programs 0.3 per cent; education 6.0 per cent; spoken word 13.3 per cent; religious 4.7 per cent; news 8.3 per cent; rural 3.3 per cent; and presentation 1.2 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-eighth Annual Report of the Australian Broadcasting Commission.

Overseas Broadcasting Service

There are nine 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 grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad (566,084 in 1979–80, compared with 412,478 in 1978–79), Radio Australia broadcasts in nine languages—English, Indonesian, Japanese, Neo-Melanesian, Thai, French, Standard Chinese, Cantonese and Vietnamese.

BROADCASTING STATIONS: 30 JUNE 1980

Type of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
National—									
Medium frequency	22	6	20	10	19	6	6	2	91
High frequency	1	2	2	–	1	–	–	–	6
Frequency modulation	2	1	1	1	1	2	–	1	9
Overseas—									
Short wave (Radio Australia)	–	11	–	–	2	–	–	–	13
Commercial—									
Medium frequency	42	22	28	9	16	8	2	2	129
Public broadcasting—									
Medium frequency	2	1	–	1	1	–	–	1	(a)6
Frequency modulation	8	4	3	2	2	2	–	–	21

(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 1980, 174 stations were operating, including eighty-nine 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 1980 were as follows: drama 18.4 per cent; public interest 13.0 per cent; sporting 17.2 per cent; news 6.8 per cent; variety and acts 5.9 per cent; education 28.0 per cent; musical performance 1.4 per cent; religious 1.1 per cent; special arts and aesthetics 0.9 per cent; cartoons 1.2 per cent; panel and quiz games 0.6 per cent; and presentation 5.5 per cent. The average weekly transmission time for the 174 national television transmitters was eighty-five hours during the year ended 30 June 1980.

During the year ended 30 June 1980, eight new national translator channels went into operation at Ashford and Quirindi in New South Wales; Nambour, Ravenshoe, Nebo, Moranbah/Goonyella and Dysart in Queensland, and a new UHF translator (the first for ABC-TV) was installed in the Adelaide Hills, South Australia.

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 1980

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	7	31	6	15	2	3	–	77
Translator	27	10	20	5	11	14	1	1	89
Total, National	*41*	*18*	*52*	*12*	*27*	*17*	*5*	*2*	*174*
Commercial—									
Metropolitan television	3	3	3	3	2	1	1	1	17
Country television	11	6	8	3	4	1	–	–	33
Translator	31	12	23	5	8	16	–	1	96
Total, Commercial	*45*	*21*	*34*	*11*	*14*	*18*	*1*	*2*	*146*

Related publications

More detailed figures and particulars for earlier years are included in the annual publications, *Rail, Bus and Air Transport, Australia* (9201.0), *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), *Motor Vehicle Registrations, Australia* (quarterly) (9303.0), one preliminary monthly publication *Registration of New Motor Vehicles, Australia* (9301.0), two quarterly publications *Road Traffic Accidents involving Casualties, Australia* (9403.0) and (9402.0), and the monthly publication, *Road Accident Fatalities, Australia* (9401.0).

Information additional to that contained in ABS publications is available in the annual reports and other statements of the Department of Transport, the various harbour boards and trusts, the several Government railway authorities, the Australian Postal Commission, the Australian Telecommunications Commission, and the Australian Broadcasting Commission.