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TRANSPORT AND COMMUNICATIONS

This chapter contains information on transport and communications and the government bodies concerned with these activities. More detailed figures and particulars for earlier years are included in the publications listed in the bibliography at the end of the chapter.

TRANSPORT ORGANISATIONS

The Australian Transport Advisory Council—ATAC

In April 1946, Commonwealth and State Governments agreed to establish a coordinating and advisory council at ministerial level with the principal function of reviewing 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 comprises Federal, State and Territory ministers responsible for transport, roads and marine matters. The New Zealand Minister of Transport is also represented on the Council as an observer.

At present, the Council meets annually and its primary role is to review and coordinate various aspects of transport policy, development and administration. The Council functions through initiating discussion and reports on any matter raised by Council members, and by providing advice on matters which will promote better coordination and development of transport to the benefit of Australia. The Council has one policy advisory group reporting directly to it, the Standing Committee on Transport (SCOT). The Committee comprises a representative of each ATAC minister, usually the heads of the relevant departments, and deals with overall issues of policy coordination and development. The Committee is supported by four groups of specialist advisers covering the interests of road, rail, road safety and marine and ports.

In addition, the following technical committees and subsidiary bodies report to the Marine and Ports Group and the Road Safety Group:

- Ship Standards Advisory Committee
- Marine Pollution Advisory Committee
- Road User Safety Advisory Committee
- Licensing and Traffic Codes Committee
- Advisory Committee on Transport of Dangerous Goods
- Vehicle Standards Advisory Committee
- Advisory Committee on Vehicle Emissions and Noise
- Advisory Panel on Recall and Unsafe Parts
- Australian Motor Vehicle Certification Board.

Australian Road Transport Advisory Committee—ARTAC

ARTAC comprises representatives of all sectors of the road freight industry and others with relevant specialist expertise. This Committee provides a specific channel of road freight industry advice to the Commonwealth Minister. Membership of the Committee is drawn from the Transport Industries Advisory Council.

Aviation Industry Advisory Council—AVIAC

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 and Communications on policies, plans and programs relating to the aviation industry within Australia, promotes the continuing development of a safe, efficient, economic aviation industry, 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 and Communications (Chairperson); Secretary to the Department of Transport and Communications; Chairperson of Qantas Airways Ltd; Chairperson of Australian Airlines Ltd; Chairperson of Regional Airlines Association of Australia Ltd; National Chairperson of the General Aviation Association; Joint Chairpersons of Ansett Transport Industries Ltd; and President of the Aircraft Owners and Pilots Association of Australia.

The Council has established a Committee of Advisers to assist in the analysis and preparation of matters to put to the Council for deliberation and decision.

Bureau Of Transport And Communications Economics—BTCE

The Bureau is a centre for applied economic research which is formally attached to the Department of Transport and Communications but has professional independence in the conduct and reporting of its research.

The Bureau undertakes studies and investigations that contribute to an improved understanding of the factors influencing the efficiency and growth of the transport and communications sector and the development of effective transport and communication policies.

As part of its research program the Bureau collects information such as: passenger and freight movements; fares and freight rates; road financing statistics and shipping costs. The information is available to the public.

The Bureau regularly publishes the result of its research work and its publications are available through the Commonwealth Government Bookshops in capital cities.

Civil Aviation Authority—CAA

The CAA was established under the *Civil Aviation Act 1988* and commenced operations on 1 July 1988.

The Authority is responsible for safety regulations of civil aviation in Australia and of Australian aircraft operating outside Australia. It also provides air route and airway facilities and associated services to the aviation industry, i.e. air traffic control, flight service, rescue and fire fighting, search and rescue and aeronautical information.

Costs of services are to be recovered through charges to the industry, but the major part of costs of safety regulation will continue to be funded through the Budget.

The Authority's 7,200 staff are employed under the Public Service Act.

The Authority represents Australia in the International Civil Aviation Organization, and is authorised to provide consultancy and management services to other countries.

Federal Airports Corporation—FAC

The Federal Airports Corporation is a Commonwealth Statutory Authority established by, and incorporated under, the *Federal Airports Corporation Act 1986*. The Act was passed by the Commonwealth Parliament on 14 February 1986, and proclaimed on 13 June 1986.

On 1 January, 1988 the FAC assumed ownership, management and development of Australia's major airports and for the commercial activities on the airports, including arrangements with airlines and other operators for the use of airports and for leasing of property and the letting of business concessions.

The Federal Airports Corporation has responsibility for the following airports:

- NSW—Sydney (Kingsford Smith) Airport, Bankstown, Hoxton Park and Camden
- Vic.—Melbourne, Essendon and Moorabbin
- Qld—Brisbane, Archerfield and Coolangatta
- SA—Adelaide and Parafield
- WA—Perth and Jandakot
- Tas.—Hobart, Launceston and Cambridge

The Corporation is a statutory transport business undertaking of the Commonwealth and is required to act in accordance with sound commercial practice. It is commercially flexible and responsive in order to make changes and act in a timely manner to meet the requirements of a dynamic market.

To allow it to do this, the Corporation is not bound by many of the constraints that apply to a Government Department.

Like any business, the Corporation is required to be financially self-supporting. It has been established with a capital base and debt/equity ratio determined by the Commonwealth Government in accordance with the FAC legislation.

Independent Air Fares Committee

The Independent Air Fares Committee was established by the *Independent Air Fares Committee Act 1981*, with the responsibility for approving all passenger fares charged on domestic air services by trunk route, regional and commuter operators. The Act, which is part of the 'two-airline policy' legislation, came into operation in January 1982. The Committee's role is that of a fare determining authority.

Operators may request the Committee to conduct a review to determine the economy air fares to be charged. The Committee approves discount air fares on application from operators where it is satisfied that a proposal meets criteria specified in the Act. Details of economy and discount fares approved by the Committee are notified in the *Commonwealth of Australia Gazette*.

At the request of the Minister for Transport and Communications, the Committee undertakes cost allocation reviews to determine how costs attributable to domestic passenger air services should be allocated between flagfall and distance components of air fares. Public hearings and submissions form part of a cost allocation review during which the principles of fare setting are examined.

The Committee's responsibilities will cease upon termination of the Airlines Agreement ('two-airline policy') on 30 October 1990.

Transport Industries Advisory Council—TIAC

The Council was formed following the March 1971 Australian Transportation Conference. The Council advises the Commonwealth Minister for Transport and Communications on national transport issues.

The members of TIAC are drawn from senior management of authorities representing all modes of transport, including user groups, government bodies and unions. The Minister appoints members on the basis of personal expertise and the contribution they may be able to make to Council affairs. The full Council, which meets four times a year, operates through an Executive Committee and subject-specific Project Committees. A report of TIAC activities is published annually in the Department of Transport and Communications Annual Report.

THE TRANSPORT INDUSTRY

Transport Industry Survey

This section contains statistics obtained from a survey of transport establishments conducted in respect of 1983–84 (referred to as the Transport Industry Survey). This survey was the first of its kind conducted in Australia and included establishments predominantly engaged in providing passenger or freight transport services for hire or reward by road, rail, water and air transport (collectively referred to as the modal transport industries) plus freight forwarding.

The survey was conducted as a component of the Australian Bureau of Statistics integrated economic statistics system and the results are comparable with economic censuses and surveys undertaken annually for the mining, manufacturing and gas industries and periodically for the wholesale, retail and selected service industries.

Summary of operations

The following table shows key items of data by industry mode for transport establishments in Australia, for the year 1983–84. The industries described are based on the 1983 edition of the Australian Standard Industrial Classification (ASIC).

**TRANSPORT ESTABLISHMENTS: SUMMARY OF OPERATIONS BY INDUSTRY
MODE, AUSTRALIA, 1983–84**

ASIC Code	Description	Establish- ments at 30 June 1984	Average employment over whole year (a)	Wages and salaries (b)	Stocks		Total purchases, transfers in and selected expenses	Fixed capital expenditure	
					Turnover	Opening		Value added	less disposals
		No.	No.	\$m	\$m	\$m	\$m	\$m	\$m
511	Road freight transport	32,943	99,606	902.5	5,187.3	47.4	49.8	2,921.8	2,267.8
512	Road passenger transport	10,615	45,841	571.2	1,528.6	34.0	37.4	593.5	938.5
5200	Rail transport	12	86,721	1,688.5	3,314.8	178.9	179.4	1,417.5	1,897.8
53	Water transport	165	8,978	212.7	1,238.9	14.9	14.7	814.5	424.3
54	Air transport	334	23,597	600.8	2,958.0	20.4	19.9	1,747.9	1,209.6
51–54	Total modal transport	44,069	264,743	3,975.7	14,227.6	295.6	301.2	7,495.2	6,738.0

(a) Includes working proprietors and partners. (b) Excludes the drawings of working proprietors and partners.

Business Vehicle Survey

Concurrent with the Transport Industry Survey (TIS), the Bureau conducted a Business Vehicle Survey (BVS) to obtain a more complete picture of road freight transport activity in Australia. This involved the collection of road freight transport information from a sample of private enterprises whose main activity was not road freight transport but who operated at least one truck with a gross vehicle mass of 2.7 tonnes or more and used that truck to carry freight on public roads.

Results from the TIS and BVS were combined to produce estimates of road freight activity as shown in the following table.

**ROAD FREIGHT ACTIVITY OF PRIVATE ENTERPRISES: SUMMARY OF
ACTIVITY BY INDUSTRY DIVISION, AUSTRALIA, 1983-84**

ASIC Code	Description	Enter- prises at 30 June 1984	Trucks operated at 30 June 1984			Truck drivers at 30 June 1984			Wages and salaries paid to truck drivers(a)	Freight carried on trucks (b)
			Artic- Rigid	ulated	Total	Working proprietors/ partners	Employees	Total		
A	Agriculture, forestry, fishing and hunting	85,796	105,446	8,163	113,609	11,727	3,416	15,143	35.3	58.5
B	Mining	557	2,151	424	2,575	62	1,810	1,872	37.6	17.3
C	Manufacturing	8,109	21,545	2,867	24,413	694	16,049	16,743	279.0	43.8
E	Construction	12,383	18,327	1,494	19,822	2,066	4,860	6,926	79.8	40.1
F	Wholesale and retail trade	19,333	34,222	3,544	37,766	4,070	16,885	20,955	297.9	55.8
511	Road freight transport	32,616	36,535	21,307	57,842	28,147	27,818	55,966	501.5	362.1
512- 580	Other transport and storage	742	1,237	251	1,488	157	684	841	13.0	5.2
G	Total transport and storage	33,358	37,772	21,558	59,330	28,305	28,502	56,807	514.5	367.3
I	Finance, property and business services	1,718	3,725	922	4,647	97	2,612	2,710	51.0	11.4
K	Community services	1,055	2,277	42	2,319	500	1,187	1,688	20.4	6.5
L	Recreation, personal and other services	1,773	2,523	159	2,682	247	677	924	10.0	6.2
	Total	164,081	227,988	39,174	267,161	47,769	75,999	123,768	1,325.5	606.9

(a) Excludes the drawings of working proprietors and partners. (b) Estimates of freight carried relate to freight uplifted by trucks and therefore, to the extent that transshipment occurs (i.e. the transfer of freight from one truck to another), estimates of freight carried will overstate the actual physical quantity of freight moved.

NOTE: Road freight activity data collected from road freight establishments included in the TIS has been tabulated against the industry to which the enterprise of the road freight transport establishment is classified, e.g. the figures for a road freight establishment of a manufacturing enterprise would be tabulated against ASIC Division C.

SHIPPING

Control of Shipping

Commonwealth Government navigation and shipping legislation

Commonwealth 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 *Protection of the Sea (Civil Liability) Act 1981*, the *Protection of the Sea (Powers of Intervention) Act 1981*, the *Protection of the Sea (Shipping Levy) Act 1981*, the *Protection of the Sea (Shipping Levy Collection) Act 1981*, the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, the *Navigation (Protection of the Sea) Amendment Act 1983*, the *Australian Coastal Shipping Commission Act 1956*, the *Environment Protection (Sea Dumping) Act 1981*, the *Submarine Cables and Pipelines Protection Act 1963*, the *Lighthouses Act 1911*, the *Explosives Act 1961*, the *King Island Shipping Service Agreement Act 1974*, the *Bass Strait Sea Passenger Service Agreement Act 1984*, the *Ship Construction Bounty Act 1975*, the *Bounty (Ships) Act 1980*,

the *Bounty (Ship Repair) Act 1986*, the *Australian Shipping Commission (Additional Capital) Act 1985*, the *Ships (Capital Grants) Act 1987*, the *Trade Practices Act 1974* Part X, the *Shipping Registration Act 1981*.

Navigation Act

The *Navigation Act 1912* (as amended), provides for various regulatory controls over ships and their crews, passengers and cargoes, mainly for the preservation of life and property at sea. Substantial penalties are provided for serious offences. The Act gives effect to a number of important international conventions produced under the aegis of the International Maritime Organisation (IMO).

There are 25 sets of Regulations under the Act, and a system of Marine Orders which give legislative effect to various safety and technical requirements in respect of ships, their cargoes and persons on board.

Taken in the order in which they appear in the Act, the main substantive matters dealt with are as outlined below.

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 inquiries 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 and manning disputes are often 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. While in Australia, all ships which trade interstate or overseas come under the survey provisions of the Navigation Act and require certificates issued by the Department of Transport and Communications, 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.

Offshore industry

These provisions deal with offshore industry vessels and offshore industry mobile units. Marine Orders giving effect to IMO resolutions on this sector of the marine industry were recently introduced.

Coasting trade

Under the coasting trade provisions of the Navigation Act, the Australian coastal trade is reserved for licensed vessels, i.e. those which employ seamen at Australian wage rates and are not subsidised by foreign governments. 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 permission being given for the importation of the vessel under the Customs (Prohibited Imports) Regulations where necessary. Provision exists for unlicensed vessels to carry interstate cargoes under single voyage permits in certain circumstances where licensed vessels are not available or are inadequate to meet the needs of the trade.

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.

Limitation and exclusion of shipowners' liability

These sections give effect to an international convention and make provision on the widest possible basis for the limitation of shipowners' liability in Australia.

Courts of Marine Inquiry

There are provisions for the holding of Courts of Marine Inquiry to investigate the circumstances attending any casualties to ships that come within Commonwealth legislative authority, usually following a preliminary investigation.

Shipping Registration Act

The *Shipping Registration Act 1981* received Royal Assent on 25 March 1981 and was proclaimed on 26 January 1982. This Act replaces Part I of the Merchant Shipping Act 1894 (UK) under which ships in Australia were registered as British ships. The Act provides for all ships on the British Register in Australia to be automatically transferred to the new Australian Register. The Act has two basic objectives, namely the conferring of Australian nationality on Australian-owned ships and the registration of ownership and encumbrances.

The Act was amended in 1985 to improve the general administration and the protection of registered and unregistered interests.

Taken in order in which they appear in the Act, the main substantive matters are as follows.

Registration of ships

This part deals with the obligation to register Australian-owned ships, the ships permitted to be registered, the application for registration, particulars to be entered in the Register, the issue of Registration Certificates, Provisional Registration Certificates and Temporary Passes, changes in ownership, marking and naming of the ship, nationality of ships, flags to be flown, assuming and concealing Australian nationality.

Transfers, transmissions and mortgages

This part deals with the transfer, transmission of ship and shares, the taking out, transfer, transmission and discharge of mortgages and the entry of this information into the Register. Caveats can be lodged to protect unregistered interests.

Administration

This part deals with the appointment of the Registrar, delegation of the powers of the Minister and Registrar, the establishment of the Shipping Registration Office and Branch Offices.

Register of ships

This part deals with the maintenance, rectification and inspection of the Register.

Miscellaneous

This part deals with liabilities of ships not registered, the appointment of registered agents, alterations to a registered ship, forfeiture and detention of ships, taking officers to sea, false statements, offences, evidentiary provisions, review, jurisdiction and appeals, preservation of State and Territory legislation and regulation making powers.

Transitional provisions

This part deals with the change over from the previous law to the new legislation. This includes the completion of transactions commenced under the previous law and the acceptability of documents prepared under the previous law. This part is now largely non-operative.

Ships (Capital Grants) Act

The *Ships (Capital Grants) Act 1987* provides shipowners with a taxable grant of 7 per cent of the purchase price of eligible new, or newly-acquired second-hand trading ships. The legislation defines the conditions and procedures under which a grant may be paid. Briefly, the Act requires that ships hold a category certificate and be crewed in accordance with crewing benchmarks specified for that category, be registered in Australia and crewed with Australian residents. If newly-acquired second-hand tonnage, the ship concerned must not have been registered in Australia before, and be no more than five years old. The grant scheme is applicable only to vessels ordered after 22 December 1986 and which commence operations between 1 July 1987 and 30 June 1992 for new ships, or 30 June 1990 for second-hand ships.

Australian Shipping Commission

The Australian Coastal Shipping Commission was established by the *Australian Coastal Shipping Commission Act 1956*. Its role has been to establish, maintain and operate interstate, overseas and territorial shipping services. In October 1974, the Commission's title was changed 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 the Commission's borrowing powers and give it greater flexibility in determining freight rates. Further amendments to the Act were introduced in 1983, giving the Commission greater control over its day-to-day operations and allowing it to operate more commercially.

As part of a package to reshape and improve the efficiency of its business enterprises, the Government announced in May 1988 that, as is appropriate for a fully commercial organisation, the Commission would be incorporated under companies legislation. Following substantial legislation changes, this is scheduled to take effect from 1 July 1989.

As at 30 June 1988 the Commission, trading as the Australian National Line (ANL), owned and operated a fleet of fourteen ships. The fleet included nine ships engaged in overseas trades comprising six liner ships totalling 157,000 deadweight tonnes, and three bulk carriers totalling 402,000 deadweight tonnes.

The fleet also included five ships engaged in coastal trade, two liner ships totalling 17,000 deadweight tonnes and three bulk carriers totalling 185,000 deadweight tonnes.

The Line operated specialised terminals at Melbourne, Burnie, Bell Bay, Sydney and Brisbane.

In recent times the Line has been affected by the general downturn experienced by the shipping industry, particularly in international trade. In 1984 it initiated a review of all its services. It instituted a major rationalisation and withdrew from unprofitable services which resulted in the disposal of obsolete vessels. In an effort to broaden its revenue base and provide a more integrated transport service, ANL has moved into shipping related activities, particularly container management, ship agency, customs agency and ship management services.

Shipbuilding assistance

The shipbuilding industry has been assisted by the government since the introduction of the shipbuilding subsidy scheme in 1947.

Ships built at major yards include small cargo ships, offshore supply ships, passenger ferries, fishing ships, dredges and barges. In addition, there are numerous smaller yards building non-bountiable ships such as pleasure craft, small fishing ships, and other small craft. Construction of large ships in Australia ceased in 1978.

Under the *Bounty (Ships) Act 1980*, bounty is accorded to the production in Australia of vessels over 150 gross construction tonnes, or over 21 metres in the case of fishing ships. Bounty is payable on a 'cost of construction basis' at a rate of either 15 or 20 per cent.

The report of the Task Force on the Australian Shipbuilding Industry submitted to the Government in January 1984 recommended action be taken to increase the through-put of Australian yards. In October 1984, a major new package designed to assist the Australian Shipbuilding Industry was announced by the Government. The package included the extension of the bounty to cover ships built for export; a proposed industrial agreement between industry and the ACTU; introduction of registration criteria for shipbuilders who want to claim bounty; and the establishment of a Shipbuilding Consultative Group to monitor progress in the industry and register shipbuilders.

In August 1986, the Government announced changes to the shipbuilding bounty arrangements, including the setting of an absolute limit of \$144 million on funds available for bountiable ships over the three years to the end of June 1989. The distinction between vessels built for domestic and export markets was ended for purposes of bounty eligibility. Builders of domestic vessels, like builders of export vessels, are required to reserve bounty funds from within the \$144 million. The rate of bounty for certain classes of vessels was reduced from 20 per cent to 15 per cent from 1 January 1988. The higher rate still applies to tugs, bulk carriers, rig servicing and fishing vessels and to all vessel modifications. A further significant change has been the application of orderly development criteria to all shipbuilders seeking access to bounty.

As at 31 March 1988, 22 shipbuilders were registered for bounty purposes. In 1986-87, 67 bountiable vessels were completed—the largest number constructed in any one year since the introduction of the *Bounty (Ships) Act 1980* and an increase of 8 per cent over 1985-86.

Total financial assistance to the Australian shipbuilding industry in 1987-88 amounted to \$37.2 million (compared with \$42.0 million in 1986-87 and \$38.7 million in 1985-86).

Total financial assistance to registered ship repairers in 1987-88 amounted to \$2.3 million (compared with \$0.2 million in 1986-87).

The Government is reviewing assistance arrangements for the shipbuilding industry for the period from 1 July 1989. Consultations with the industry are occurring on the basis of a report by the Industries Assistance Commission.

Ship repair

In October 1986, the Government announced a \$6 million ship repair assistance package aimed at strengthening the ship repair industry. Two major elements of the package are the bounty payable to registered ship repairers, and the extension of the Department of Transport and Communications' official ship safety inspection system to give effect to internationally accepted health and safety standards based on the International Labour Organisation (ILO) Convention 147. The bounty applies to international trading vessels of at least 6,000 deadweight tonnes whether Australian or foreign owned and is payable up to 30 per cent of the repair contract price. To be eligible for bounty, repairers must be registered under the *Bounty (Ship Repair) Act 1986*.

Importation of ships

Under the Customs (Prohibited Imports) Regulations all ships are prohibited imports unless the written permission of the Minister for Transport and Communications, or an authorized officer, is obtained. All new vessels, second-hand vessels exceeding 10,000 gross construction tonnes (gct) (or exceeding 2,000 gct in the case of dredgers and cargo trading ships) and all second-hand vessels of a type not available new from Australian shipyards, are eligible for permanent importation. In addition, other second-hand vessels between 70 gct and 10,000 gct may be temporarily imported for certain specific purposes provided a suitable vessel is not available locally. In July 1988, the Industries Assistance Commission (IAC) reported to the Treasurer on its inquiry into the Australian ship and boat building industry. The inquiry reviewed assistance measures to the industry, including the present ship import control arrangements. The IAC's report was released on 17 August 1988.

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 for 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 coordinating 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 has been established to provide a forum for discussion and liaison between governments, user interests and the operating sections of the industry. The Chairman is appointed by the Commonwealth Government.

The Statutory provisions relating to the industry are contained in the *Stevedoring Industry Finance Committee Act 1977*, the *Stevedoring Industry Levy Act 1977*, the *Stevedoring Industry Levy Collection Act 1977*, the *Port Statistics Act 1977* and Part III, Division 4 of the *Conciliation and Arbitration Act 1904*.

Waterfront Strategy

In December 1986, the Federal Government announced a comprehensive strategy to improve the efficiency, productivity, reliability and industrial relations record of Australia's waterfront and related industries. The Waterfront Strategy was developed following consideration of the Report of the Industry Task Force on Shore-Based Shipping Costs.

The strategy involves four industry based groups working under the umbrella of the Inter-State Commission. The four industry groups are: Stevedoring Industry Review Committee; Importer/Exporter Panel; Industry Committee; and Australian Transport Advisory Council's Standing Committee on Transport.

The Inter-State Commission provided a preliminary report to the Government in August 1988 reviewing the progress of the Strategy and outlining draft findings in relation to a structural reform package for the industry. A final report by the Commission was presented in November 1988 following public hearings and discussions.

Tasmanian Freight Equalisation Scheme

The Tasmanian Freight Equalisation Scheme was introduced from 1 July 1976 to provide assistance to the shippers of certain non-bulk goods between Tasmania and the mainland of Australia. The Scheme aims to alleviate the additional transport costs which have to be borne by Tasmanian shippers because of their separation from the mainland by sea. Responsibility for administration of the Scheme lies within the Transport portfolio.

The northbound component of the Scheme applies to specified goods produced in Tasmania which are shipped by sea to the mainland for use or sale. The southbound component covers certain raw materials, machinery and equipment used in Tasmania's manufacturing, mining and primary industries. In 1987-88, \$24.8 million in assistance was paid on northbound and \$3.1 million in assistance was paid for southbound cargoes.

Trade Practices Act

The Overseas Cargo Shipping provisions of the *Trade Practices Act 1974* (Part X—Overseas Cargo Shipping) are administered by the Transport and Communications 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.

Part X 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.

In November 1987 the Government announced details of its decision to reform Part X. The reform package, which was enacted late in 1988, represents a major reorientation of our regulatory approach to international shipping conferences.

In essence, Part X will be amended to create a more competitive liner shipping environment and to increase the visibility of conference arrangements. The new legislation will reduce the scope of the existing exemption from Part IV of the Trade Practices Act, require conference agreements to be public and to comply with minimum standards, and prohibit abuse of market power by conferences. Existing legislative provisions to prevent conferences from unreasonably hindering Australian flag participation in overseas trades will be retained and streamlined to make them more workable, in line with the Government's Commitment to the development of a competitive Australian shipping industry. Interested parties will be able to initiate complaints either through the Minister or direct with the Trade Practices Commission. Legitimate complaints concerning unfair pricing practices will be referred to the Trade Practice Tribunal for investigation and report to the Minister.

Sea Carriage of Goods Act

The *Sea Carriage of Goods Act 1924*, provides for regulation of carriers' responsibilities and liabilities in sea borne trades. The Act is based on an international convention, known as the Hague Rules, which came into effect in 1924.

The Hague Rules, and consequently the Act, have become technically deficient in a number of areas and in June 1988 the Government announced it would amend the Act to take into account international trends in marine cargo liability regulation. Australia will formally adopt and implement the Visby and SDR Protocols to the Hague Rules. This will bring Australian legislation into line with practices in the major European countries. The amended Act will also provide a mechanism for the future implementation of the Hamburg Rules, a United Nations Convention on the Carriage of Goods by Sea, when these Rules have gained wider international acceptance and represent a viable alternative for Australia.

Marine pollution

The *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, the *Navigation (Protection of the Sea) Amendemnt Act 1983*, the *Protection of the Sea (Powers of Intervention) Act 1981*, the *Protection of the Sea (Civil Liability) Act 1981*, the *Protection of the Sea (Shipping Levy) Act 1981* and the *Protection of the Sea (Shipping Levy Collection) Act 1981* currently provide the Commonwealth with the power to deal with matters relating to marine pollution.

The Acts respectively provide for the control of discharges at sea and provision of control equipment and procedures on ships; empower the Minister to intervene to take action to prevent or reduce pollution, make provision relating to limitation of liability of oil tankers for oil pollution damage; and provide for the collection of a levy to finance the National Plan to Combat Pollution of the Sea by Oil.

Collection and Presentation of Statistics

Statistics relating to shipping and cargo are compiled from information provided to the Australian Customs Services (ACS) by importers, exporters, shipping companies and their agents. This information is supplied to the Australian Bureau of Statistics by ACS on a regular basis and is used to produce transport oriented statistics via the following two collections:

- *Shipping and Cargo (B380)*. A direct collection from shipping companies of details of ship movements and cargo carried.
- *Shipping and Air Cargo Commodity Statistics (SACCS)*. A collection which combines information from import and export documents submitted to the ACS with transport and shipping information to provide a comprehensive picture of the transport base of Australia's foreign trade.

Shipping and Cargo Statistics

The scope of the statistics

The statistics relate to ships calling at or departing from Australian ports for the purpose of carrying cargo from or to overseas ports. Details are not required for:

- (i) naval ships;
- (ii) yachts and other craft used for pleasure;
- (iii) foreign fishing ships that neither load nor discharge cargo;
- (iv) Australian registered fishing ships operating from Australia ports;
- (v) geographical survey ships, seismic survey ships, oceanographic survey ships;
- (vi) offshore oil drilling rigs and ships servicing them;
- (vii) ships of 200 registered net tonnes and under.

Period covered by the statistics

Shipping and cargo statistics are compiled, on a financial year basis, according to the period during which ships actually arrived or departed Australian shores.

Ship characteristics

Ship recording

Ship movement statistics are recorded as 'Ship Number' and 'Ship Calls'. 'Ship Number' relates to the number of overseas direct arrivals to, or departures from Australia. 'Ship Calls' relates to the number of port visits that an overseas ship makes in Australia. For example, an overseas ship which arrives direct in Brisbane and makes a further call in Sydney before departing for an overseas port from Melbourne is counted as one under 'Ship Number' for both arrivals (Brisbane) and departures (Melbourne) and as one arrival call and one departure call for each of the three ports.

Ship type

All ships are classified from *Lloyd's Register of Shipping* according to one of 11 ship types which describe them in terms of their structure or design. These 11 ship types are amalgamated into four broad categories.

<i>Category</i>	<i>Ship types</i>
General cargo ships	Container ships Conventional cargo ships Roll on-Roll off ships Other cargo ships
Tankers	Gas carriers Liquid tankers
Bulk carriers	Dry bulk carriers Dry/wet bulk carriers
Other ships	Multi-purpose ships Passenger ships Other ships

Type of service

Ships are also classified according to the type of service they provide. The two types of service for which statistics are shown are:

- (a) *liner service*, (according to conference and non-conference) relates specifically to a ship which is operated by a carrier providing services on a specified route on a relatively regular basis;
- (b) *other service*, which refers to all ships operating in other than a liner service.

Conference ships—A 'conference' is an association of shipowners which regulates the freight rates and terms and conditions of carriage of goods in any particular trade. Conferences only operate liner services and not charter services. Conference arrangements normally include provisions for sharing the trade, rationalising sailing schedules and pooling arrangements for resources and revenue.

Country of registration

The country of registration or flag of the ship refers to the country in which the ship is registered according to *Lloyd's Register of Shipping*.

Units of quantity for cargo

Cargo statistics are recorded in terms of revenue tonnes and gross weight tonnes.

A *revenue tonne* is the unit of quantity predominantly used in the shipping industry. It is the basis on which freight is charged and may be measured by mass (tonnes) or volume (cubic metres). Revenue tonnes statistics are consequently a mix of mass and volume units and should be used with care.

Gross weight is the total weight in tonnes of cargo, excluding the weight of containers, irrespective of the basis on which freight is charged.

Container cargo

Statistics of container cargo refer only to cargo shipped in international containers (including flats but not pallets). To provide a standard measure, all statistics relating to containers are expressed in terms of twenty-foot units. A forty-foot container is therefore recorded as 2 twenty-foot equivalent units (or TEUs).

Country of loading or discharge of overseas cargo

In statistics of overseas shipping and cargo, the country of loading or discharge of overseas cargo is the country of location of the port where the cargo was loaded on to, or is to be discharged from, a reporting ship. The countries shown are not necessarily the countries of origin or ultimate destination of cargo because previous or subsequent trans-shipments of cargo are not taken into account. The statistics of cargo classified by the country in which it was loaded or discharged cannot therefore be compared directly with statistics of overseas trade classified by country of origin or consignment.

Trade area

Ports at which ships load or discharge cargo are allocated to their respective countries, which are in turn allocated to trade areas in accordance with the Classification of Trade Areas for Cargo Statistics.

It should be noted that a revised trade area classification became effective on 1 July 1984. Care should therefore be taken when comparing trade area statistics for earlier periods with those published using the revised trade area classification.

Units of measurement

Deadweight tonnage. A measure of the total mass (weight, in tonnes) of cargo, stores, fuel, passengers and crew carried by the ship when loaded to her maximum summer loadline.

Gross tonnage. A measure of the enclosed internal volume of a ship and its superstructure, with certain spaces exempt, in units of 1 ton per 2.83 cubic metres.

Shipping and Air Cargo Commodity Statistics—SACCS

The scope of the statistics

Inward cargo statistics relate to cargo loaded overseas which is discharged from ships and aircraft at Australian ports and in respect of which Customs import documents have been received. Similarly, outward cargo statistics relate to cargo loaded on ships and aircraft at Australian ports for discharge at overseas ports and in respect of which Customs export documents have been received. Details are not included for:

- (i) goods imported and exported by parcel post;
- (ii) direct transit trade, i.e., goods being transshipped or moved through Australia for purposes of transport only;
- (iii) migrants' and passengers' effects for which Customs documents are not required;
- (iv) certain materials under inter-governmental agreements for defence and similar projects for which Customs documents are not required;
- (v) ships and aircraft entering and departing Australia under their own power;

- (vi) to the extent that they can be identified, ships and aircraft purchased for use on overseas routes and any subsequent sales made of such vessels and aircraft;
- (vii) fish and other sea products landed in Australia and abroad directly from the high seas by Australian ships (such products landed in Australia directly from the high seas by foreign ships are included);
- (viii) ships and aircraft stores;
- (ix) export consignments where the value of the goods in each transaction was less than \$250 for entries lodged prior to 1 July 1986, and less than \$500 for entries lodged from that date, and import entries lodged on informal clearance documents for values not exceeding \$250.

Period covered by the statistics

Although both foreign trade statistics and SACCS are compiled from the same source, imports and exports are recorded statistically in the month in which relevant documents are lodged with ACS, whereas SACCS are compiled according to the period during which goods were actually loaded and discharged in Australia.

Commodity classification

Commodities are classified according to the Australian Transport Freight Commodity Classification (ATFCC). The ATFCC is the Australian standard for classifying goods transported by any of the transport modes: sea, rail, road, air or pipeline. It is a four level classification defining commodities in terms of one or more categories of the Standard International Trade Classification (SITC) or the dissection of the SITC categories embodied in the Australian Import and Export Commodity Classification. At the lowest (the fourth) level of classification the ATFCC has 312 items.

Valuation

The recorded value of inward cargo is the free on board (f.o.b.) equivalent of the price when the sale of such cargo is conducted under open market conditions. This is in accordance with the provisions of the General Agreement on Tariffs and Trade (GATT) relating to Customs valuation. The recorded value also includes the value of the outside package, other than international containers used for containerised cargo. As additional factors are also considered in arriving at the transaction value of goods for Customs purposes, the f.o.b. value may not always be the same as the Customs value.

For outward cargo, goods actually sold to overseas buyers prior to shipment are valued at the f.o.b. equivalent of the actual price paid to the exporter. Goods shipped on consignment are valued at the f.o.b. equivalent of the price that would have been paid to the exporter had the goods actually been sold to an importer in the country of final destination. As for inward cargo, the recorded value also includes the value of the outside package, other than international containers used for containerised cargo.

Units of quantity

Gross weight is the total weight in tonnes of cargo, excluding the weight of containers, irrespective of the basis on which freight is charged. Gross weight is not available by commodity for inward cargo.

Australian Trading Ships

The following table shows particulars of all Australian trading ships of 150 gross tonnes or more engaged in the regular overseas, interstate or intrastate services at 30 June 1988.

SUMMARY OF THE AUSTRALIAN TRADING FLEET OF SHIPS 150 GROSS TONNES OR MORE, 30 JUNE 1988

(Source: Department of Transport and Communications)

<i>Ships</i>	<i>Number</i>	<i>DWT</i>	<i>Gross tonnes</i>
Coastal—			
Intrastate fleet—			
Australian owned and registered	23	352,392	241,840
Overseas owned and registered	1	9,332	6,298
Intrastate fleet	24	361,724	248,138
Interstate—			
Australian owned and registered	31	833,106	548,597
Overseas owned, Australian registered	5	68,213	50,219
Overseas owned and registered	3	49,900	29,322
Interstate fleet	39	951,219	628,138
Coastal fleet	63	1,312,943	876,276
Overseas—			
Australian owned and registered	20	1,615,863	917,263
Australian owned, overseas registered	1	41,151	29,223
Overseas owned, Australian registered	7	497,250	313,063
Overseas owned and registered	2	54,569	33,638
Overseas fleet	30	2,208,833	1,293,187
Total Australian fleet	93	3,521,776	2,169,463

Ships registered in Australia

The following table shows the number of ships registered in Australia at 30 June 1988.

SHIPS REGISTERED IN AUSTRALIA AT 30 JUNE 1988

(Source: Department of Transport and Communications)

<i>Location</i>	<i>Nature of registration</i>					<i>Total</i>
	<i>Demise chartered (a)</i>	<i>Other (b)</i>	<i>Government</i>	<i>Fishing</i>	<i>Pleasure</i>	
New South Wales	9	212	3	263	1,243	1,730
Victoria	3	103	6	164	409	685
Queensland	5	237	28	561	788	1,619
Western Australia	4	125	3	363	376	871
South Australia	2	41	5	238	189	475
Tasmania	—	56	4	205	152	417
Northern Territory	1	16	1	71	138	227
Total	24	790	50	1,865	3,295	6,024

(a) A demise chartered ship is a foreign owned ship chartered by way of a charter party to an Australian based operator, who is an Australian national and who under the charter party has whole possession and control of the ship, including the right to appoint the master and crew of the ship. (b) Relates to vessels used for commercial purposes.

The following table shows the number and gross tonnage of trading ships of 150 tonnes or more registered in Australia at 30 June 1988, classified according to year of construction, type of trade in which the ships were engaged, and place of manufacture.

**AUSTRALIAN TRADING SHIPS OF 150 GROSS TONNES OR MORE BY AREA OF
OPERATION, PLACE OF MANUFACTURE AND YEAR OF CONSTRUCTION
30 JUNE 1988**

(Source: Department of Transport and Communications)

Year of construction	Area of operation				Place of manufacture					
	Overseas and interstate ships		Intrastate ships		Ships built in Australian yards		Ships built overseas		Total ships	
	No.	Gross tonnes	No.	Gross tonnes	No.	Gross tonnes	No.	Gross tonnes	No.	Gross tonnes
1976 and earlier	24	362,381	10	4,206	20	151,403	14	215,184	34	366,587
1977	8	254,649	1	2,851	3	50,333	6	207,167	9	257,500
1978	4	53,097	2	18,375	1	25,849	5	45,623	6	71,472
1979	6	156,160	—	—	—	—	6	156,160	6	156,160
1980	—	—	1	2,792	—	—	1	2,792	1	2,792
1981	6	221,251	1	1,155	—	—	7	222,406	7	222,406
1982	2	109,761	3	57,600	2	6,565	3	160,796	5	167,361
1983	3	126,227	3	151,423	—	—	6	277,650	6	277,650
1984	3	119,628	—	—	—	—	3	119,628	3	119,628
1985	2	97,317	2	483	2	483	2	97,317	4	97,800
1986	7	372,653	1	5,717	1	4,226	7	374,144	8	378,370
1987	1	23,547	1	3,536	1	3,536	1	23,547	2	27,083
1988	2	24,654	—	—	—	—	2	24,654	2	24,654
Total Australian fleet	68	1,921,325	25	248,138	30	242,395	63	1,927,068	932	1,169,463

Harbour Boards and Trusts

For detailed information see the individual State Year Books.

Overseas Shipping

Ship movements into and out of Australia

The following table shows the movement of ships and cargo to and from overseas countries, for the years 1981-82 to 1986-87

OVERSEAS SHIPPING: SHIP AND CARGO MOVEMENTS

	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87
Arrivals—						
<i>ship details</i>						
ship number	5,839	5,516	6,131	6,904	6,824	6,707
DWT ('000 tonnes)	232,370	223,817	263,614	310,228	307,406	300,348
<i>cargo discharged</i>						
revenue tonnes ('000)	31,300	27,904	28,516	29,778	27,600	26,825
gross weight ('000 tonnes)	25,741	23,028	22,859	23,582	22,055	23,418
Departures—						
<i>ship details</i>						
ship number	5,798	5,706	6,025	6,760	6,622	6,507
DWT ('000 tonnes)	235,635	230,396	267,264	309,152	304,839	296,952
<i>cargo loaded</i>						
revenue tonnes ('000)	176,449	170,429	198,406	225,119	237,446	234,796
gross weight ('000 tonnes)	175,634	169,483	197,041	224,182	234,688	233,747

The following table shows particulars of overseas shipping which arrived at or departed from Australian ports according to the country of registration of ships.

OVERSEAS SHIPPING: SHIP DEPARTURES AND ARRIVALS BY COUNTRY OF REGISTRATION, 1986-87

Country of registration	Departures		Arrivals	
	Ship number	DWT ('000 tonnes)	Ship number	DWT ('000 tonnes)
Australia	244	12,710	251	12,506
China, People's Republic of	340	13,877	340	13,725
Denmark	77	1,275	81	1,329
Germany, Federal Republic of	164	3,057	182	3,141
Greece	278	12,438	291	13,185
Hong Kong	232	12,338	243	12,147
India	90	3,388	89	3,418
Japan	1,206	96,461	1,244	97,196
Korea, Republic of	228	15,880	224	15,776
Liberia	468	21,358	477	21,996
Malaysia	96	2,270	95	2,225
Netherlands	116	1,537	108	1,475
New Zealand	98	1,600	138	2,246
Norway	78	3,593	82	3,667
Panama	1,037	30,066	1,047	29,855
Philippines	340	13,321	335	13,036
Singapore, Republic of	199	8,203	180	7,319
Sweden	13	384	15	440
Taiwan	149	12,396	154	12,574
United Kingdom	247	9,341	257	9,498
United States of America	13	335	10	244
USSR	156	2,935	161	2,916
Other countries	638	18,188	703	20,431
Total all countries	6,507	296,952	6,707	300,348
<i>With cargo</i>	<i>5,887</i>	<i>279,889</i>	<i>2,466</i>	<i>55,805</i>
<i>In ballast</i>	<i>620</i>	<i>17,063</i>	<i>4,241</i>	<i>244,542</i>

Overseas cargo according to country of registration of ships

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

OVERSEAS CARGO LOADED AND DISCHARGED BY COUNTRY OF REGISTRATION OF SHIPS (^{'000} revenue tonnes)

<i>Country of registration</i>	<i>1984-85</i>		<i>1985-86</i>		<i>1986-87</i>	
	<i>Loaded</i>	<i>Discharged</i>	<i>Loaded</i>	<i>Discharged</i>	<i>Loaded</i>	<i>Discharged</i>
Australia	6,875	2,310	7,993	2,177	10,148	1,708
China, People's Republic of	8,267	376	10,511	373	10,439	349
Denmark	835	355	947	396	743	561
Germany, Federal Republic of	1,584	1,343	1,206	1,040	1,377	1,191
Greece	12,282	1,253	10,318	1,288	9,688	1,410
Hong Kong	7,059	873	9,513	628	9,494	727
India	868	114	1,744	50	2,689	20
Japan	83,926	3,761	88,694	4,042	86,182	3,220
Korea, Republic of	12,312	330	15,773	747	13,977	384
Liberia	24,155	4,300	17,721	2,671	14,530	3,869
Malaysia	1,864	376	1,942	381	1,576	449
Netherlands	1,223	294	784	294	800	420
New Zealand	530	849	780	1,112	675	701
Norway	5,768	1,294	3,939	888	2,030	906
Panama	18,356	2,720	20,819	3,245	23,286	2,897
Philippines	5,647	789	8,753	811	11,126	1,026
Singapore, Republic of	4,701	847	5,534	1,242	6,059	1,958
Sweden	606	353	240	229	162	237
Taiwan	7,352	108	10,000	183	11,107	93
United Kingdom	7,237	4,130	6,264	3,873	4,251	2,517
United States of America	51	—	100	14	115	5
USSR	1,797	409	2,359	412	1,782	366
Other countries	11,823	2,593	11,513	1,504	12,562	1,812
Total all ships	225,119	29,778	237,446	27,600	234,796	26,825

Shipping at principal ports

The following two tables show the movement of overseas shipping and cargo at Australian ports during 1986-87. The first provides details of the ships calling at Australian ports and the gross weight of cargo loaded and discharged. The second classifies cargo loaded and discharged in terms of whether or not it was transported in ISO containers.

OVERSEAS SHIP AND CARGO MOVEMENTS AT AUSTRALIAN PORTS, 1986-87

<i>Australian port</i>	<i>Departures</i>		<i>Cargo loaded</i>	<i>Arrivals</i>		<i>Cargo discharged</i>
	<i>Ship details</i>		<i>Gross weight ('000 tonnes)</i>	<i>Ship details</i>		<i>Gross weight ('000 tonnes)</i>
	<i>Ship calls</i>	<i>DWT ('000 tonnes)</i>		<i>Ship calls</i>	<i>DWT ('000 tonnes)</i>	
<i>New South Wales—</i>						
Sydney	1,192	28,529	6,352	1,185	27,901	3,028
Botany Bay	504	11,951	443	552	13,340	2,084
Newcastle	765	41,297	31,877	760	40,428	1,334
Port Kembla	244	15,450	9,906	254	16,099	720
Other	51	1,123	895	54	1,186	6
<i>Total</i>	<i>2,756</i>	<i>98,349</i>	<i>49,473</i>	<i>2,805</i>	<i>98,954</i>	<i>7,171</i>
<i>Victoria—</i>						
Melbourne	1,479	28,857	2,776	1,452	28,382	3,181
Geelong	304	9,583	2,923	307	9,615	1,985
Westernport	124	7,193	4,942	124	7,129	23
Other	130	4,289	1,322	130	4,289	207
<i>Total</i>	<i>2,037</i>	<i>49,922</i>	<i>11,963</i>	<i>2,013</i>	<i>49,415</i>	<i>5,395</i>
<i>Queensland—</i>						
Brisbane	965	19,851	4,726	996	20,412	1,293
Gladstone	355	22,716	16,605	353	22,539	912
Hay Point	429	35,272	29,633	430	35,040	—
Townsville	256	4,275	1,556	262	4,335	266
Weipa	87	3,403	2,365	87	3,342	49
Other	422	11,505	8,632	430	11,661	196
<i>Total</i>	<i>2,514</i>	<i>97,021</i>	<i>63,517</i>	<i>2,558</i>	<i>97,329</i>	<i>2,715</i>
<i>South Australia—</i>						
Port Adelaide	405	8,564	1,192	397	8,269	403
Port Lincoln	97	2,725	1,145	99	2,661	102
Port Pirie	74	1,733	729	72	1,658	37
Port Stanvac	46	1,939	443	51	2,307	1,044
Thevenard	51	1,061	693	52	1,008	—
Whyalla	45	1,097	523	47	1,152	223
Other	81	2,997	1,502	82	3,030	29
<i>Total</i>	<i>799</i>	<i>20,115</i>	<i>6,227</i>	<i>800</i>	<i>20,086</i>	<i>1,839</i>
<i>Western Australia—</i>						
Fremantle	1,057	25,445	7,097	1,069	25,549	3,287
Bunbury	172	5,752	3,825	174	5,812	497
Dampier	442	37,521	32,099	451	38,274	245
Geraldton	137	3,868	1,703	131	3,766	75
Port Hedland	408	38,510	32,299	403	37,783	129
Port Walcott	91	12,926	11,314	91	12,722	20
Yampi Sound	37	3,154	2,358	38	3,295	1
Other	227	5,544	2,611	223	5,374	226
<i>Total</i>	<i>2,571</i>	<i>132,720</i>	<i>93,308</i>	<i>2,580</i>	<i>132,574</i>	<i>4,479</i>
<i>Tasmania—</i>						
Hobart	178	3,797	598	181	3,870	231
Launceston	170	5,080	2,321	176	5,124	161
Port Latta	21	1,754	1,408	20	1,647	34
Other	156	3,551	762	153	3,462	84
<i>Total</i>	<i>525</i>	<i>14,182</i>	<i>5,089</i>	<i>530</i>	<i>14,102</i>	<i>509</i>
<i>Northern Territory—</i>						
Darwin	164	2,693	445	151	2,348	543
Other	158	5,471	3,724	159	5,398	766
<i>Total</i>	<i>322</i>	<i>8,164</i>	<i>4,169</i>	<i>310</i>	<i>7,746</i>	<i>1,309</i>
<i>Total all ports</i>	<i>11,524</i>	<i>420,473</i>	<i>233,747</i>	<i>11,596</i>	<i>420,206</i>	<i>23,418</i>

**OVERSEAS CONTAINER AND NON-CONTAINER CARGO LOADED AND DISCHARGED
AT AUSTRALIAN PORTS, 1986-87**
(^{'000} revenue tonnes)

<i>Australian port</i>	<i>Loaded</i>			<i>Discharged</i>		
	<i>Container cargo</i>	<i>Other cargo</i>	<i>Total</i>	<i>Container cargo</i>	<i>Other cargo</i>	<i>Total</i>
New South Wales—						
Sydney	783	5,775	6,558	1,340	2,594	3,934
Botany Bay	390	128	518	1,101	1,489	2,590
Newcastle	385	31,542	31,927	4	1,330	1,334
Port Kembla	13	9,913	9,926	2	726	728
Other	—	895	895	1	6	7
<i>Total</i>	<i>1,571</i>	<i>48,253</i>	<i>49,824</i>	<i>2,449</i>	<i>6,144</i>	<i>8,594</i>
Victoria—						
Melbourne	2,289	794	3,083	2,573	1,637	4,210
Geelong	39	2,888	2,927	10	1,978	1,987
Westernport	—	4,942	4,942	—	23	23
Other	—	1,322	1,322	1	207	207
<i>Total</i>	<i>2,328</i>	<i>9,946</i>	<i>12,274</i>	<i>2,583</i>	<i>3,844</i>	<i>6,427</i>
Queensland—						
Brisbane	860	4,029	4,889	425	1,197	1,622
Gladstone	—	16,605	16,605	1	911	912
Hay Point	—	29,633	29,633	—	—	—
Townsville	34	1,526	1,560	8	285	293
Weipa	—	2,365	2,365	—	49	49
Other	24	8,628	8,652	1	195	196
<i>Total</i>	<i>917</i>	<i>62,786</i>	<i>63,703</i>	<i>434</i>	<i>2,638</i>	<i>3,072</i>
South Australia—						
Port Adelaide	255	1,001	1,257	96	486	583
Port Lincoln	—	1,145	1,145	—	102	102
Port Pirie	—	729	729	—	37	37
Port Stanvac	—	443	443	—	1,044	1,044
Thevenard	—	693	693	—	—	—
Whyalla	—	525	525	—	223	223
Other	—	1,502	1,502	—	29	29
<i>Total</i>	<i>255</i>	<i>6,039</i>	<i>6,294</i>	<i>96</i>	<i>1,922</i>	<i>2,018</i>
Western Australia—						
Fremantle	654	6,543	7,197	571	3,065	3,637
Bunbury	3	3,846	3,848	—	500	500
Dampier	—	32,099	32,099	16	243	258
Geraldton	—	1,703	1,703	—	75	75
Port Hedland	—	32,299	32,299	2	131	133
Port Walcott	1	11,314	11,315	—	20	20
Yampi Sound	—	2,358	2,358	—	1	1
Other	5	2,606	2,611	1	226	226
<i>Total</i>	<i>662</i>	<i>92,769</i>	<i>93,430</i>	<i>589</i>	<i>4,260</i>	<i>4,849</i>
Tasmania—						
Hobart	80	522	602	2	236	239
Launceston	41	2,281	2,322	9	158	167
Port Latta	—	1,408	1,408	—	34	34
Other	99	666	765	20	69	89
<i>Total</i>	<i>219</i>	<i>4,877</i>	<i>5,097</i>	<i>32</i>	<i>497</i>	<i>529</i>
Northern Territory—						
Darwin	9	440	449	9	561	570
Other	—	3,724	3,724	—	766	766
<i>Total</i>	<i>9</i>	<i>4,164</i>	<i>4,173</i>	<i>9</i>	<i>1,327</i>	<i>1,336</i>
Total all ports	5,962	228,834	234,796	6,192	20,632	26,825

Overseas cargo according to trade area and ship type

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas, classified according to the various trade areas of the world and by ship type.

**OVERSEAS CARGO BY TRADE AREA OF PORT OF DISCHARGE/LOADING
BY SHIP TYPE, 1986-87
(^{'000} revenue tonnes)**

<i>Trade area</i>	<i>General cargo ships</i>	<i>Tankers</i>	<i>Bulk carriers</i>	<i>Other ships</i>	<i>All ships</i>
OUTWARD CARGO					
Europe	1,328	93	45,501	20	46,941
East Asia	1,276	335	27,832	35	29,478
Japan and North Asia	2,410	2,188	111,081	41	115,720
North America—East Coast	299	1,185	3,225	230	4,940
North America—West Coast	352	1,572	3,731	96	5,752
Central America and Caribbean	21	—	8	—	29
South America—East Coast	16	36	1,955	—	2,007
South America—West Coast	51	16	424	—	490
Africa—Mediterranean	5	9	2,377	—	2,392
West Africa	19	—	224	—	243
South and East Africa	58	21	276	1	356
Red Sea and Mediterranean Middle East	173	43	2,955	—	3,170
Middle East Gulf	206	2	4,307	—	4,515
West India	91	37	3,022	—	3,150
East India	56	12	765	—	833
South-East Asia	1,346	1,276	3,818	49	6,489
New Zealand	666	341	872	2	1,882
Papua New Guinea and Solomon Islands	409	508	800	5	1,723
Pacific Islands and other countries	223	655	86	—	964
Trade area not available for publication	29	—	3,696	—	3,724
Total outward overseas cargo	9,036	8,328	216,954	478	234,796
INWARD CARGO					
Europe	1,932	505	148	96	2,682
East Asia	1,176	96	246	—	1,518
Japan and North Asia	1,261	334	2,847	8	4,450
North America—East Coast	619	711	760	5	2,096
North America—West Coast	932	484	1,456	8	2,879
Central America and Caribbean	1	1	20	—	22
South America—East Coast	74	15	25	—	115
South America—West Coast	12	—	9	—	22
Africa—Mediterranean	—	—	12	—	12
West Africa	—	15	66	—	81
South and East Africa	105	15	7	1	128
Red Sea and Mediterranean Middle East	58	625	142	—	824
Middle East Gulf	56	4,785	480	—	5,320
West India	22	143	59	64	288
East India	3	—	—	—	3
South-East Asia	762	2,789	612	97	4,261
New Zealand	717	275	169	1	1,162
Papua New Guinea and Solomon Islands	71	6	3	1	82
Pacific Islands and other countries	23	16	837	6	882
Trade area not available for publication	—	—	—	—	—
Total inward overseas cargo	7,824	10,814	7,898	289	26,825

Overseas cargo according to trade area 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 various trade areas of the world and by type of shipping service.

OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA BY TRADE AREA OF PORT OF DISCHARGE/LOADING BY TYPE OF SERVICE, 1986-87 ('000 revenue tonnes)

Trade area	Outward overseas cargo			Inward overseas cargo		
	Liner service			Liner service		
	Conference	Non-conference	Other ships	Conference	Non-conference	Other ships
Europe	703	365	45,873	1,259	478	945
East Asia	386	482	28,610	336	645	537
Japan and North Asia	900	420	114,400	487	187	3,775
North America—East Coast	219	249	4,472	382	88	1,626
North America—West Coast	219	267	5,266	423	515	1,942
Central America and Caribbean	17	2	10	1	1	21
South America—East Coast	1	26	1,981	3	13	99
South America—West Coast	—	—	490	1	8	13
Africa—Mediterranean	—	1	2,392	—	—	12
West Africa	—	1	243	—	—	81
South and East Africa	1	31	324	—	56	73
Red Sea and Mediterranean Middle East	81	49	3,040	3	53	769
Middle East Gulf	58	119	4,338	11	1	5,308
West India	47	68	3,035	12	6	269
East India	17	37	779	2	—	1
South-East Asia	698	158	5,633	524	125	3,612
New Zealand	144	459	1,279	131	559	472
Papua New Guinea and Solomon Islands	198	77	1,448	20	11	51
Pacific Islands and other countries	135	37	792	4	13	865
Trade area not available for publication	—	14	3,710	—	—	—
Total overseas cargo	3,821	2,859	228,116	3,598	2,758	20,469

Overseas cargo commodity details

The following three tables classify inward and outward overseas cargo according to the Australian Transport Freight Commodity Classification (ATFCC). The second and third tables also provide details of the type of shipping service by which cargo was transported.

**INWARD AND OUTWARD OVERSEAS SEA CARGO: BY SELECTED
COMMODITIES, 1985-86
(\$'000)**

<i>ATFCC Division</i>	<i>Title</i>	<i>Inward cargo</i>	<i>Outward cargo</i>
00	Live animals	51	300,762
01	Meat and meat preparations	14,281	2,156,225
02	Dairy products and eggs	80,296	457,281
03	Fish, crustaceans and molluscs and preparations thereof	403,338	489,767
04	Cereals and cereal preparations (a)	72,067	2,673,878
05	Fruit and vegetables; sugar cane (b)	264,795	498,866
06	Sugar, sugar preparations and honey	27,943	51,696
09	Coffee, tea, cocoa, spices, margarine and miscellaneous edible products and preparations (a) (b)	415,896	105,258
11	Beverages, tobacco and manufactures (a)	323,455	104,085
21	Hides, skins and furskins, raw (a)	1,993	428,324
24	Wood, timber and cork (a)	294,103	16,157
25	Pulp and waste paper	164,437	27,644
26	Textile fibres (not wool tops) and wastes (not manufactured into yarn or fabric)	150,168	3,889,010
27	Crude fertilizers and minerals (excluding coal, petroleum and precious stones) (a) (b)	214,683	88,679
28	Metalliferous ores and metal scrap (a)	39,664	2,953,827
32	Coal, coke and briquettes (a)	2,802	5,346,861
33	Petroleum, petroleum products and related materials (b)	1,715,347	1,330,670
51	Organic and inorganic chemicals (a) (b)	934,480	72,282
53	Dyeing, tanning and colouring materials (a)	176,581	32,799
54	Medicinal and pharmaceutical products (a)	263,962	43,975
55	Essential oils, perfume materials, toilet, polishing and cleaning preparations (b)	182,304	48,832
56	Fertilizers, manufactured	138,089	5,332
58	Plastic materials, artificial resins and cellulose esters and ethers (a) (b)	579,969	71,638
59	Explosives and other chemical materials and products (a) (b)	366,916	83,973
62	Rubber manufactures, n.e.s.	430,898	39,639
63	Cork and wood manufactures (excluding furniture) (a) (b)	158,765	7,009
64	Paper, paperboard and articles of paper pulp, of paper or of paperboard (b)	980,767	98,462
65	Textile yarns, fabrics, made-up articles, n.e.s. and related products (a) (b)	1,658,328	60,196
66	Non-metallic mineral manufactures, n.e.s. (a) (b)	557,517	67,113
67	Iron and steel (a) (b)	573,166	538,144
68	Non-ferrous metals (a) (b)	129,311	1,378,774
69	Manufactures of metal, n.e.s.(b)	863,019	203,894
71	Machinery, equipment, apparatus and appliances (a) (b)	7,306,964	836,924
78	Road vehicles and other transport equipment	2,725,493	456,980
82	Furniture and parts thereof	223,310	27,632
84	Articles of apparel and clothing accessories and footwear	705,406	11,817
87	Professional, scientific and controlling apparatus, n.e.s.; photographic apparatus, equipment and supplies; optical goods, n.e.s.; watches and clocks (b)	733,854	116,567
89	Printed matter, plastic wares, toys and other miscellaneous manufactured articles (a) (b)	1,746,780	127,737
93	Special transactions and commodities not classified by kind	1,294,229	247,494
99	Coins, n.e.s. temporary ships/structures (c)	1,082,082	5,254,441
	Other	415,562	397,542
Total all commodities		28,413,071	31,148,189

(a) Excludes export commodities regarded as confidential. These items are included in Division 99. (b) Excludes import commodities regarded as confidential. These items are included in Division 99. (c) Includes commodities regarded as confidential.

INWARD OVERSEAS SEA CARGO BY COMMODITY BY TYPE OF SERVICE
(\$'000)

ATFCC Section and title	Year ended 30 June	Liner Service		Other	Total
		Conference	Non-conference		
0 Food and live animals (a)	1986	752,781	310,869	126,050	1,189,700
	1987	850,058	360,330	122,315	1,332,703
1 Beverages and tobacco (a)	1986	162,016	90,991	36,880	289,887
	1987	175,541	119,722	28,192	323,455
2 Crude materials, inedible, except fuels (a)	1986	337,118	305,606	345,192	987,915
	1987	401,049	337,512	295,218	1,033,779
3 Mineral fuels, lubricants and related materials (a)	1986	22,125	16,816	1,707,105	1,746,047
	1987	35,526	31,394	1,655,349	1,722,268
4 Animal and vegetables oils, fats and waxes (a)	1986	31,399	8,686	50,656	90,741
	1987	34,551	11,773	43,174	89,498
5 Chemical and related products, n.e.s. (a)	1986	1,130,930	628,311	629,621	2,388,863
	1987	1,352,053	724,936	565,312	2,642,300
6 Manufactured goods classified chiefly by material (a)	1986	2,755,513	1,354,252	850,254	4,960,019
	1987	3,113,412	1,674,311	651,388	5,439,111
7 Machinery and transport equipment (a)	1986	5,526,850	1,861,316	3,486,775	10,874,942
	1987	5,410,942	2,098,204	2,523,311	10,032,457
8 Miscellaneous manufactured articles (a)	1986	1,872,010	961,890	251,369	3,085,268
	1987	2,134,161	1,114,768	160,421	3,409,350
9 Commodities and transactions, n.e.s. (b)	1986	1,045,398	349,806	672,150	2,067,354
	1987	1,351,350	451,529	585,271	2,388,149
Total all commodities	1986	13,636,141	5,888,544	8,156,052	27,680,737
	1987	14,858,643	6,924,478	6,629,951	28,413,071

(a) Excludes commodities regarded as confidential. These items are included in Section 9. (b) Includes commodities regarded as confidential.

OUTWARD OVERSEAS SEA CARGO BY COMMODITY BY TYPE OF SERVICE
(\$'000)

ATFCC Section and title	Year ended 30 June	Liner service		Other	Total
		Conference	Non-conference		
0 Food and live animals (a)	1986	2,265,578	494,878	4,279,532	7,039,988
	1987	2,938,248	776,497	3,192,197	6,906,942
1 Beverages and tobacco (a)	1986	27,073	11,665	4,908	43,646
	1987	53,159	35,158	15,769	104,085
2 Crude materials, inedible, except fuels (a)	1986	2,488,206	1,135,051	3,118,662	6,741,919
	1987	3,191,835	1,492,751	2,840,459	7,525,045
3 Mineral fuels, lubricants and related materials (a)	1986	28,779	11,375	6,956,182	6,996,336
	1987	41,170	19,961	6,616,423	6,677,555
4 Animal and vegetables oils, fats and waxes (a)	1986	18,516	13,364	46,900	78,779
	1987	13,851	11,095	23,168	48,114
5 Chemical and related products, n.e.s. (a)	1986	132,293	100,904	50,103	283,299
	1987	187,205	127,762	43,864	358,831
6 Manufactured goods classified chiefly by material (a)	1986	514,531	435,512	671,719	1,621,762
	1987	791,655	599,080	1,050,392	2,441,126
7 Machinery and transport equipment (a)	1986	520,913	241,784	94,202	856,899
	1987	741,291	376,468	176,144	1,293,903
8 Miscellaneous manufactured articles (a)	1986	155,503	70,400	23,543	249,446
	1987	171,412	94,219	18,124	283,754
9 Commodities and transactions, n.e.s. (b)	1986	976,024	487,526	3,899,133	5,362,682
	1987	1,042,328	623,014	3,843,491	5,508,834
Total all commodities	1986	7,127,414	3,002,458	19,144,884	29,274,757
	1987	9,172,154	4,156,003	17,820,032	31,148,189

(a) Excludes commodities regarded as confidential. These items are included in Section 9. (b) Includes commodities regarded as confidential.

Coastal Shipping Cargo

The following table shows the gross weight of cargo loaded at an Australian port for discharge at another Australian port. Both inter- and intrastate cargo movements are included. Cargo loaded at, or to be discharged at, an overseas port is excluded.

COASTAL CARGO LOADED AND DISCHARGED AT AUSTRALIAN PORTS, 1986-87 (^{'000 gross weight tonnes})

(Source: Department of Transport and Communications)

<i>Australian port</i>	<i>Loaded</i>			<i>Discharged</i>		
	<i>Interstate</i>	<i>Intrastate</i>	<i>Total</i>	<i>Interstate</i>	<i>Intrastate</i>	<i>Total</i>
New South Wales—						
Port Jackson	96	2	98	2,994	883	3,877
Botany Bay	628	364	992	3,987	—	3,987
Newcastle	562	100	662	3,790	888	4,678
Port Kembla	1,433	203	1,636	5,481	44	5,525
Other	—	1,444	1,444	56	226	282
<i>Total</i>	<i>2,719</i>	<i>2,113</i>	<i>4,832</i>	<i>16,308</i>	<i>2,041</i>	<i>18,349</i>
Victoria—						
Melbourne	1,121	—	1,121	1,741	—	1,741
Geelong	945	168	1,113	806	—	806
Westport	8,382	—	8,382	481	—	481
Other	3	158	161	151	164	315
<i>Total</i>	<i>10,451</i>	<i>326</i>	<i>10,777</i>	<i>3,179</i>	<i>164</i>	<i>3,343</i>
Queensland—						
Brisbane	1,091	1,275	2,366	4,532	503	5,035
Gladstone	1,017	458	1,475	79	6,996	7,075
Mackay	166	4	170	84	274	358
Townsville	23	3	26	151	298	449
Weipa	—	6,654	6,654	—	18	18
Other	551	54	605	14	575	589
<i>Total</i>	<i>2,848</i>	<i>8,448</i>	<i>11,296</i>	<i>4,860</i>	<i>8,664</i>	<i>13,524</i>
South Australia—						
Adelaide	460	63	523	711	1,161	1,872
Port Pirie	104	—	104	66	31	97
Port Stanvac	363	15	378	687	618	1,305
Whyalla	562	—	562	1,184	186	1,370
Other	2,171	2,100	4,271	136	119	255
<i>Total</i>	<i>3,660</i>	<i>2,178</i>	<i>5,838</i>	<i>2,784</i>	<i>2,115</i>	<i>4,899</i>
Western Australia—						
Fremantle	609	728	1,337	1,978	469	2,447
Bunbury	74	10	84	1	113	114
Port Hedland	4,736	11	4,747	—	144	144
Yampi Sound	1,387	2	1,389	—	24	24
Other	632	241	873	17	469	486
<i>Total</i>	<i>7,438</i>	<i>992</i>	<i>8,430</i>	<i>1,996</i>	<i>1,219</i>	<i>3,215</i>
Tasmania—						
Hobart	502	60	562	797	130	927
Burnie	452	131	583	444	72	516
Devonport	439	—	439	402	2	404
Launceston	521	18	539	1,533	20	1,553
Other	639	13	652	32	32	64
<i>Total</i>	<i>2,553</i>	<i>222</i>	<i>2,775</i>	<i>3,208</i>	<i>256</i>	<i>3,464</i>
Northern Territory—						
Darwin	14	6	20	78	5	83
Other	471	6	477	8	6	14
<i>Total</i>	<i>485</i>	<i>12</i>	<i>497</i>	<i>86</i>	<i>11</i>	<i>97</i>
Total all ports	30,154	14,291	44,445	32,421	14,470	46,891

RAILWAYS

Government Railways

The six government owned railway systems are operated by the State Rail Authority of New South Wales (SRA), 'V/Line' operated by the State Transport Authority of Victoria, Queensland Government Railways (QR), Western Australian Government Railways Commission (WAGRC), the State Transport Authority of South Australia (STA), and the Australian National Railways Commission (ANRC).

Data contained in the following tables have been compiled from a number of sources. These sources include annual reports of the various rail authorities; data supplied by the Rail Industry Council; and data collected directly by the Australian Bureau of Statistics.

As the Australian National 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.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY SYSTEM
(kilometres)

<i>30 June</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Australian National</i>	<i>Total</i>
1982	9,773	5,812	9,970	141	5,609	7,638	38,943
1983	9,883	5,815	9,979	152	5,610	7,647	39,086
1984	9,884	5,783	10,231	152	5,623	7,450	39,123
1985	9,908	5,748	10,231	153	5,563	7,465	39,068
1986	9,909	5,372	10,244	153	5,553	7,333	38,544
1987	9,909	5,257	10,210	149	5,553	7,315	38,393

Summary of Operations

Particulars of train-kilometres, passenger journeys, freight-tonnes carried, and freight tonne-kilometres included in this section refer only to operations for which revenue is received.

GOVERNMENT RAILWAYS: SUMMARY OF OPERATION, SYSTEMS, 1986-87

	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Australian National</i>	<i>Aust.</i>
Train-kilometres ('000) (a) (b)—							
Suburban passenger	26,666	13,600	5,659	n.a.	2,177	—	n.a.
Country passenger	10,416	7,507	3,653	—	915	2,385	24,876
Goods (b)	25,155	7,292	25,740	—	6,344	8,196	72,727
Total	62,237	28,399	35,051	n.a.	9,436	10,581	n.a.
Passenger journeys ('000) (c)—							
Suburban	220,705	92,600	43,002	11,798	9,831	—	377,942
Country (d)	3,595	5,222	1,332	—	214	329	10,692
Total	224,300	97,822	44,334	11,798	10,051	329	388,634
Freight—							
Tonnes carried ('000) (d)	54,600	10,597	75,169	—	21,264	12,900	174,530
Net tonne-kilometres (million) (e)	13,540	3,531	20,871	—	4,062	6,873	48,877

(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 tonne carried one kilometre.

GOVERNMENT RAILWAYS: TRAIN-KILOMETRES (a)
(^{'000 kilometres})

<i>Year</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Australian National</i>	<i>Aust.</i>
1981-82	59,960	31,136	32,696	3,921	10,681	12,089	150,482
1982-83	61,507	30,166	30,885	3,894	10,560	10,795	147,806
1983-84	61,659	30,702	33,303	3,697	10,333	10,238	149,932
1984-85	66,025	30,794	34,293	n.a.	11,098	11,306	n.a.
1985-86	72,011	29,809	35,116	n.a.	10,364	10,513	n.a.
1986-87	n.a.	28,399	35,051	n.a.	9,436	10,581	n.a.

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one kilometre for revenue purpose.

**GOVERNMENT RAILWAYS: FREIGHT CARRIED, NET TONNE-KILOMETRES, AND
FREIGHT EARNINGS, SYSTEMS**

<i>Year</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>WA</i>	<i>Australian National</i>	<i>Aust.</i>
FREIGHT CARRIED (^{'000 tonnes})						
1981-82	40,393	11,623	43,659	19,776	11,882	127,333
1982-83	41,350	8,570	43,706	19,791	10,676	124,093
1983-84	46,594	10,486	53,150	19,870	12,083	142,183
1984-85	47,800	11,892	65,452	22,085	12,870	160,099
1985-86	53,800	10,516	73,599	20,877	13,049	171,841
1986-87	54,600	10,597	75,169	21,264	12,900	174,530
NET TONNE-KILOMETRES (million)						
1981-82	10,705	3,427	13,079	4,390	5,731	37,332
1982-83	9,117	2,468	13,177	4,384	5,348	34,494
1983-84	11,131	3,111	15,391	3,903	5,912	39,448
1984-85	12,393	3,543	18,438	4,328	6,270	44,972
1985-86	13,740	3,094	20,450	4,005	7,081	48,370
1986-87	13,540	3,531	20,871	4,062	6,873	48,877
FREIGHT EARNINGS (\$^{'000})						
1981-82	431,157	137,676	481,193	175,054	165,214	1,390,294
1982-83	452,626	108,803	508,223	183,632	161,480	1,414,764
1983-84	559,876	160,841	669,362	180,439	192,223	1,762,741
1984-85	641,100	182,259	828,926	209,627	213,698	2,075,610
1985-86	736,795	168,641	905,494	200,974	237,345	2,249,249
1986-87	739,250	174,700	960,950	200,731	238,097	2,313,728

GOVERNMENT RAILWAYS: GROSS EARNINGS, SYSTEMS
(\$ million)

<i>Year</i>	<i>NSW</i>	<i>Vic. (a)</i>	<i>Qld</i>	<i>SA (b)</i>	<i>WA</i>	<i>Australian National (c)</i>	<i>Aust.</i>
1981-82	663.2	260.2	520.3	5.7	216.3	195.3	1,861.0
1982-83	694.8	248.1	549.9	6.3	229.4	193.9	1,922.4
1983-84	823.1	301.7	718.0	8.1	233.0	227.1	2,311.0
1984-85	938.6	351.5	882.5	10.7	263.6	252.5	2,699.4
1985-86	1,082.4	335.0	966.0	14.6	262.0	283.3	2,943.3
1986-87	1,121.2	481.3	1,028.9	14.4	258.2	283.3	3,187.3

(a) Includes Metrail for years 1983-84 to 1986-87. (b) Includes urban rail operations only. (c) Includes Tasmania.

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 and Communications Economics (BTCE) by the various railway operators. All operators provided details of tonnes carried and most provided details of tonne-kilometres performed. In a few cases, the tonne-kilometre figures have been estimated by the BTCE using the advised average length of haul.

TRAFFIC TASK PERFORMED BY AUSTRALIAN NON-GOVERNMENT RAILWAYS

<i>Year</i>	<i>Iron ore railways</i>	<i>Sugar tramways</i>	<i>Coal railways (a)</i>	<i>Other non-government railways</i>	<i>Total (a)</i>
TONNES CARRIED (million)					
1981-82	83.0	21.6	8.7	12.2	125.6
1982-83	78.2	20.9	7.1	8.0	114.1
1983-84	71.5	21.6	7.0	10.9	111.0
1984-85	86.9	24.0	7.9	11.1	129.9
1985-86	86.8	21.6	8.1	10.3	126.8
1986-87	89.9	23.1	7.8	11.1	131.9
TONNE-KILOMETRES (million)					
1981-82	26,669	367	104	244	27,384
1982-83	24,432	355	86	171	25,045
1983-84	22,646	366	85	226	23,324
1984-85	27,649	408	98	223	28,378
1985-86	28,517	368	116	201	29,202
1986-87	29,339	393	116	220	30,068

(a) Includes transfers to and from government railways.

TRAM, BUS, AND FERRY SERVICES

Trams

At 30 June 1988, tram services were in operation in Melbourne and in Adelaide. 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 during 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 which are located in all capital cities and Newcastle, New South Wales; Rockhampton, Queensland; Launceston and Burnie, Tasmania; and for country road services operated by the Victorian Railways, the State Rail Authority of New South Wales, the Western Australian Government Railways, and the Australian National Railways.

Ferries

Ferry passenger services are operated in the following States: New South Wales, at Sydney, Newcastle and various other waterways; Western Australia, on the Swan River at Perth; Tasmania, on the Mersey River at Devonport and on the Derwent River at Hobart; and Queensland, on the Brisbane River at Brisbane. Control is exercised by both government authorities and private operators.

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, 1986-87

	NSW	Vic.	Qld	SA	WA (a)	Tas.	NT	ACT	Aust.
Route-kilometres at 30 June									
Tram (kilometres)	..	332	..	11	..	..	..	..	343
Bus (kilometres)	1,213	n.a.	820	1,022	7,609	486	468	1,524	n.a.
Vehicle-kilometres									
Tram ('000)	..	24,000	..	863	..	..	..	..	24,863
Bus ('000)	67,292	57,000	26,071	39,562	48,340	9,775	2,284	16,192	266,516
Rolling stock at 30 June									
Tram (number)	..	627	..	21	..	..	..	..	648
Bus (number)	1,699	1,289	593	736	910	266	46	400	5,939
Passenger journeys									
Tram ('000)	..	113,300	..	2,458	..	..	..	..	115,758
Bus ('000)	195,980	86,100	42,118	46,694	52,541	14,245	1,840	24,152	463,670
Gross revenue (b)									
Tram and bus (\$'000)	162,745	n.a.	33,691	45,421	58,572	7,806	1,722	17,201	n.a.
Working expenses (c)									
Tram and bus (\$'000)	244,118	n.a.	63,808	115,579	89,291	21,387	5,272	34,528	n.a.
Net revenue									
Tram and bus (\$'000)	-81,373	n.a.	-30,116	-70,158	-30,719	-13,581	-3,550	-7,327	n.a.
Employees at 30 June									
Tram and bus (number)	6,319	n.a.	1,541	(d)1,566	2,250	561	114	844	n.a.

(a) Excludes operations of Eastern Goldfields Transport Board. (b) Excludes government grants. (c) Includes provision of reserves for depreciation, etc. where possible. Minus sign (-) denotes deficit. (d) Bus and tram crew only.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL

	1981-82	1982-83	1983-84	1984-85(a)	1985-86	1986-87
Route-kilometres at 30 June						
Tram (kilometres)	231	232	n.a.	340	340	343
Bus (kilometres)	13,445	13,553	n.a.	n.a.	n.a.	n.a.
Vehicle kilometres						
Tram ('000)	24,836	24,958	n.a.	24,747	24,778	24,863
Bus ('000)	209,104	212,423	n.a.	252,038	255,753	266,516
Rolling stock at 30 June						
Tram (number)	724	713	n.a.	683	663	648
Bus (number)	4,973	5,018	n.a.	5,942	5,918	5,939
Passenger journeys						
Tram ('000)	(b)103,479	n.a.	n.a.	112,071	115,111	115,758
Bus ('000)	(b)343,216	(b)(c)325,649	n.a.	454,460	460,281	463,670

(a) Excludes operations of Eastern Goldfields Transport Board in Western Australia. (b) Excludes details of metropolitan tram and bus services in South Australia. (c) Exclude details of metropolitan tram and bus services in Victoria.

MOTOR VEHICLES

Tables in this section include vehicles owned by private individuals, local government authorities, State governments, and the Commonwealth Government (excluding those belonging to the defence services).

Survey of Motor Vehicle Usage

The triennial Survey of Motor Vehicle Usage (SMVU) is undertaken by the ABS in response to a wide range of users' needs to monitor the details for motor vehicle usage within Australia. Details obtained are mainly used to determine the total distance travelled by vehicles, classified according to area and purpose of travel. Information is also obtained on average load carried, vehicle usage (i.e. for hire and reward, ancillary or other), fuel consumption, occupant-kilometres, driver characteristics and other important variables.

The statistics are used for many decisions regarding the monitoring, planning and policy issues that affect all Australian motorists.

The 1988 SMVU is currently underway and consists of some 67,000 vehicles (including for the first time since 1979 details pertaining to buses) selected from State/Territory motor registry files. Preliminary results from this survey are due to be released in April 1989 and final results in October 1989.

The following table, taken from the most recent SMVU publication (1985), shows that motor vehicles in Australia travelled a total of 140,427 million kilometres. Cars and station wagons travelled 106,574 million kilometres. Of this 22 per cent was for business purposes, a further 23 per cent for travel to and from work and 55 per cent for private purposes. Rigid trucks travelled a total of 7,627 million kilometres, while articulated trucks travelled 3,588 million kilometres in total.

The relative standard errors (Rel. SE %) indicate the extent to which the estimates can vary by chance because only a sample and not the total vehicle population was enumerated.

**TOTAL ANNUAL KILOMETRES BY VEHICLE TYPE AND PURPOSE OF TRAVEL
AUSTRALIA, TWELVE MONTHS ENDED 30 SEPTEMBER 1985**

Type of vehicle	Laden business		Unladen business		Total business (a)		To and from work paid and unpaid		Private		Total	
	Million kilo- metres	Rel. SE (%)	Million kilo- metres	Rel. SE (%)	Million kilo- metres	Rel. SE (%)	Million kilo- metres	Rel. SE (%)	Million kilo- metres	Rel. SE (%)	Million kilo- metres	Rel. SE (%)
Cars and station wagons	..	..	..	..	22,985.5	2.5	25,035.6	1.7	58,522.4	1.1	106,573.5	0.8
Motor cycles	..	..	..	..	203.0	9.6	857.9	4.4	1,215.4	4.7	2,276.2	3.2
Utilities and panel vans	7,403.0	3.4	3,099.7	5.0	10,978.3	2.8	3,659.9	3.8	5,483.2	3.5	20,121.3	1.8
Rigid trucks	4,986.0	1.9	2,029.8	2.3	7,015.7	1.7	316.1	6.8	295.2	7.8	7,627.0	1.6
Articulated trucks	2,638.6	1.2	917.4	1.5	3,555.9	1.0	26.9	8.0	4.9	13.5	3,587.7	1.0
Other truck type vehicles	..	..	..	..	227.6	6.0	3.8	35.1	10.3	72.5	241.6	6.6
Total	15,027.6	1.8	6,046.8	2.7	44,966.0	1.5	29,900.1	1.5	65,561.3	1.0	140,427.4	0.7

(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

Censuses of motor vehicles have been conducted in respect of 31 December 1955 and 1962, and 30 September 1971, 1976, 1979, 1982 and 1985. The 1988 census is presently being conducted and results are expected to be released in July 1989. At these census

dates considerably more information concerning the particulars shown in the tables following is available. Summary details of motor vehicles on the register are compiled as at 30 June each year from information made available by the various motor vehicle registration authorities in the States and Territories. Figures from the censuses differ from the corresponding year's figures compiled for the annual vehicles on register series. These inconsistencies result from different dates of recording and because, for some States and Territories, the annual figures include vehicles where the registration has lapsed but the details have not been removed from the register, whereas the census excludes such vehicles.

MOTOR VEHICLE CENSUS: 30 SEPTEMBER 1985
(^{'000})

State or Territory	Motor cars and station wagons		Panel vans	Trucks		Other truck type vehicles	Buses	Motor cycles	Total (a)
		Utilities		Rigid	Articulated				
New South Wales	2,169.7	170.8	204.8	165.5	16.7	13.9	43.2	115.8	2,900.5
Victoria	1,887.5	134.9	55.7	181.0	12.4	12.6	13.3	78.8	2,376.3
Queensland	1,041.0	201.9	82.3	56.7	8.6	4.5	10.2	74.1	1,479.4
South Australia	657.0	50.9	36.3	48.0	5.1	6.8	3.6	41.0	848.7
Western Australia	631.0	64.3	68.9	67.6	4.9	7.7	6.2	37.0	887.6
Tasmania	200.4	25.6	14.3	16.1	1.5	2.8	1.7	6.4	268.7
Northern Territory	40.6	13.9	5.1	5.3	0.9	0.3	0.7	4.3	71.1
Australian Capital Territory	107.0	6.1	4.7	3.5	0.2	0.7	1.1	4.3	127.6
Australia	6,734.2	668.4	472.1	543.7	50.2	49.4	80.1	361.6	8,959.7

(a) Excludes tractors, plant and equipment, caravans and trailers.

MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE, AUSTRALIA
(^{'000})

30 June	Motor cars and station wagons	Utilities, trucks, panel vans, other truck type vehicles and buses	Total (excludes motor cycles)	Motor cycles
1983	6,469.6	1,718.3	8,187.8	402.0
1984	6,636.2	1,798.2	8,434.4	398.4
1985	6,842.5	1,886.6	8,729.1	389.2
1986	6,985.4	1,930.7	8,916.0	374.5
1987	7,072.8	1,949.8	9,022.7	351.0
1988	7,243.6	1,977.6	9,221.1	323.3

MOTOR VEHICLES (a) ON REGISTER PER 1,000 OF POPULATION
STATES AND TERRITORIES

30 June	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
1983	503.7	539.5	565.2	541.1	566.8	562.9	433.9	471.7	532.4
1984	509.3	554.1	574.2	555.8	574.0	571.1	453.9	486.1	542.2
1985	520.7	571.1	573.7	572.0	589.4	588.0	467.4	488.8	553.9
1986	526.0	575.1	574.3	582.5	590.7	596.8	478.1	483.2	558.2
1987	522.3	581.0	562.6	575.5	582.0	598.1	459.7	497.3	555.3
1988	523.8	589.8	568.0	580.3	587.4	607.2	440.5	498.5	559.9

(a) Excludes motor cycles, tractors, plant and equipment, caravans and trailers.

Drivers' and riders' licences

At 30 June 1988, the numbers of licences in force to drive or ride motor vehicles were: New South Wales—3,839,904; Victoria—2,696,706; Queensland—1,580,548 (est.); Western Australia—918,290; South Australia—863,796; Tasmania—274,248; Northern Territory—93,136; Australian Capital Territory—168,501.

Registrations of new motor vehicles

Particulars of registrations of new motor vehicles are shown by type of vehicle in preliminary monthly publications, and by type and make of vehicle in monthly and annual publications of motor vehicle registrations.

In these statistics 'registrations' means registrations processed by the motor vehicle registration authorities in the States and Territories during the period.

REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

State or Territory	Motor cars and station wagons	Utilities	Panel vans	Trucks		Other truck type vehicles (a)	Buses	Total (excludes motor cycles)	Motor cycles
				Rigid	Articu- lated				
1987-88—									
NSW	6,761	8,750	10,948	8,804	816	499	3,115	169,693	5,855
Vic.	103,907	4,724	1,008	10,620	818	425	659	122,161	3,847
Qld	59,355	8,584	2,292	2,238	515	260	620	73,864	3,841
SA	29,915	2,214	1,223	1,630	279	221	208	35,690	1,890
WA	36,040	3,358	2,045	4,298	191	113	612	46,657	2,215
Tas.	8,597	917	362	591	101	60	75	10,703	279
NT	2,660	932	139	101	80	13	91	4,016	420
ACT	6,968	342	275	314	11	11	115	8,036	185
Aust.	384,203	29,821	18,292	28,596	2,811	1,602	5,495	470,820	18,532
1986-87	376,080	32,485	20,143	28,693	3,149	1,664	6,587	468,801	23,199
1985-86	476,488	46,499	33,138	39,033	4,029	2,159	10,868	612,214	35,906
1984-85	510,893	54,507	45,582	44,422	3,627	1,952	13,847	674,830	45,879
1983-84	461,018	46,140 (b)	46,779	33,397	2,581	1,630 (b)	12,169	603,714	46,684
1982-83	453,523	43,682	52,364	31,514	2,426	1,834	4,680	590,023	61,061
1981-82	471,255	52,035	48,009	40,062	3,665	2,218	4,998	622,242	71,691

(a) Non-freight carrying vehicles. (b) From August 1983 in NSW, the body-type classification applied by the registration authority for small bus-type vehicles changed from panel vans to buses.

Road Traffic Accidents

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES (a) (ADMISSIONS TO HOSPITALS): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED, 1986

State or Territory				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	Number of accidents	Persons killed	Persons injured
NSW	8,043	1,029	9,042	145.4	18.6	163.4	26.4	3.4	29.7
Vic.	7,348	668	8,866	176.6	16.1	213.1	29.7	2.7	35.8
Qld	3,585	481	4,029	136.6	18.5	153.6	22.9	3.1	25.7
SA	2,569	288	2,968	185.8	20.8	214.7	30.7	3.4	35.5
WA	2,352	228	2,720	161.3	15.6	186.6	26.5	2.6	30.7
Tas.	641	91	759	143.6	20.4	170.0	23.5	3.3	27.8
NT	482	71	551	312.0	46.0	356.6	64.0	9.4	73.2
ACT	240	32	244	92.7	12.4	94.3	18.3	2.4	18.6
Aust.	25,260	2,888	29,179	157.7	18.0	182.2	27.2	3.1	31.4

(a) Accidents reported to the police or other relevant authority which occurred in public thoroughfares and which resulted in death within thirty days or personal injury to the extent that the injured person was admitted to hospital. (b) Number of motor vehicles (excluding tractors, plant and equipment) on register at 30 June 1986.

ROAD TRAFFIC ACCIDENTS INVOLVING FATALITIES

Year	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Accidents involving fatalities—									
1982	1,115	631	522	239	203	84	52	26	2,872
1983	877	610	437	235	191	63	45	27	2,485
1984	910	584	448	205	203	77	45	35	2,507
1985	954	605	452	239	219	69	59	30	2,627
1986	908	610	421	259	208	78	63	30	2,577
1987p	856	626	400	229	193	67	80	33	2,484
Persons killed—									
1982	1,253	709	602	270	236	96	60	26	3,252
1983	966	664	510	265	203	70	49	28	2,755
1984	1,037	657	505	232	220	83	50	37	2,821
1985	1,067	683	502	268	243	78	67	33	2,941
1986	1,029	668	481	288	228	91	71	32	2,888
1987p	958	705	442	256	213	77	84	36	2,771

ROADS

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 1987. The central road authority in each State assumes responsibility under the Act for the whole or a proportion of the cost of construction and 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, labour 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 1987
(kilometres)

<i>Class of road</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>Aust.</i>
State highways and freeways	10,263	7,584	10,420	—	7,936	1,925	38,128
Trunk roads	25,380	—	227	12,483	—	—	38,090
Ordinary main roads	—	14,771	8,183	—	7,460	1,259	31,673
<i>Total main roads</i>	<i>35,643</i>	<i>22,355</i>	<i>18,830</i>	<i>12,483</i>	<i>15,396</i>	<i>3,183</i>	<i>107,890</i>
Secondary roads	(a)298	—	13,212	—	8,645	297	22,452
Development roads	—	—	8,716	—	—	45	8,761
Tourist roads	428	845	—	—	—	171	1,444
Other roads	2,677	(b)1,003	—	—	—	—	3,680
<i>Total other roads</i>	<i>3,403</i>	<i>1,848</i>	<i>21,928</i>	<i>—</i>	<i>8,645</i>	<i>514</i>	<i>36,338</i>
Total	39,046	24,203	40,758	12,483	24,041	3,697	144,228

(a) Metropolitan only. (b) Forest roads.

Total roads

The following table represents an attempt to classify all the roads open for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

ALL ROADS OPEN FOR GENERAL TRAFFIC LENGTHS, STATES AND TERRITORIES
30 JUNE 1987
(kilometres)

<i>Surface of roads</i>	<i>NSW(a)(b)</i>	<i>Vic.(c)</i>	<i>Qld</i>	<i>SA</i>	<i>WA(d)</i>	<i>Tas.</i>	<i>NT(e)</i>	<i>ACT</i>	<i>Aust.</i>
Bitumen or concrete	76,355	67,038	55,581	23,117	40,463	8,905	5,597	2,445	279,501
Gravel, crushed stone or other improved surface	64,363	47,281	43,739	—	37,912	8,148	5,446	170	207,059
Formed only	34,288	23,750	52,441	73,010	41,476	323	4,788	—	230,076
Cleared only	19,999	21,307	16,673	—	21,214	5,339	4,229	—	88,761
Total	195,005	159,376	168,434	96,127	141,065	22,715	20,060	2,615	805,397

(a) Excludes roads designated but not trafficable. Excludes Lord Howe Island and the unincorporated area of the Western Division. (b) Figures as at 31 December 1986. (c) Excludes roads coming under the responsibility of the State Electricity Commission and Forests Commission (d) Excludes Forests Department roads. (e) Excludes roads in towns and Local Government Areas.

National Association of Australian State Road Authorities—NAASRA

The National Association of Australian State Road Authorities was established in 1934. The present member authorities are: Department of Main Roads, New South Wales; Road Construction Authority, Victoria; Main Roads Department, Queensland; Main Roads

Department, Western Australia; Highways Department, South Australia; Department of Main Roads, Tasmania; Northern Territory Department of Transport and Works; Australian Capital Territory Administration, Office of City Management; Commonwealth Department of Transport and Communications.

The Association's mission is to promote cooperation between NAASRA members towards the effective management and development of the national road system.

NAASRA has an obligation to the people and governments of Australia to maintain a duty of care over the national roads and transport infrastructure; contribute to national economic strategies; respond to reasonable community expectations; develop and utilise appropriate expertise and skills; share information and promote efficiency and effectiveness.

The Association provides a forum which enables a national approach to the effective development and management of the Australian road system. This has resulted in the coordination of road research, preparation of road and bridge design standards, improvements in operating practices and reporting on the current status of the road network.

The NAASRA Secretariat arranges publication of the policies and standards which are widely used by road authorities, local government and universities; cooperates with the Standards Association of Australia on the preparation of national codes of practice; and acts as an Australian centre for contact with overseas road bodies and for the circulation of standards published by them.

The Association is a member of the Permanent International Association of Road Congress (PIARC) and of the Road Engineering Association of Asia and Australasia (REAAA).

Australian Road Research Board—ARRB

The Australian Road Research Board is a non-profit-making company founded in 1960 by NAASRA, and is located at Vermont in Victoria. It is financed mainly 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 Director's 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.

The ARRB disseminates road research information through its major biennial conferences and regular symposia, seminars and workshops and through its publications which include the ARRB Conference Proceedings, a quarterly journal *Australian Road Research*, the *Source Book for Australian Roads*, symposium and workshop papers and various reports and technical manuals arising out of its many research projects. ARRB also maintains a unique library of road literature and operates a computer-based information service which abstracts and indexes road-related literature and research in progress. In 1987 the Information on Roads (INROADS) data base was made publically accessible on CSIRO's AUSTRALIS system. The INROADS data base lists all ARRB publications from 1960, significant Australian road-related literature from 1977, publications catalogued for the ARRB Library, including some retrospective conversion of a card catalogue from 1984, and an annual update of current research in progress. INROADS supersedes the ARRD and ROAD data bases.

The ARRB acts as the Australian member of the Organisation for Economic Co-operation and Development's International Road Research Documentation (IRRD) system, contributing information on Australian literature and projects. IRRD information from all member countries is available to Australians through ARRB's computer search services. ARRB also maintains close contacts with road research organisations in other countries.

AIR TRANSPORT

The Commonwealth imposes safety and operational controls on the Australian aviation industry under the *Civil Aviation Act 1988* and the Civil Aviation Regulations. Under this legislation, a central Commonwealth agency, the Civil Aviation Authority, was established with effect from 1 July 1988 and vested with sole responsibility for the administration and enforcement of aviation safety within Australia. The Bureau of Air Safety Investigation, which is directly responsible to the Minister and performs a safety audit function, will remain in the Department of Transport and Communications.

In addition, the Commonwealth imposes a range of economic regulatory controls administered by the Department of Transport and Communications. These controls cover such matters as the import and export of aircraft, the negotiation of international air transport agreements, the approval of international fares and freight rates, and the operation of scheduled passenger air services across State or Territory boundaries. Fares charged for the carriage of passengers on domestic scheduled air services are required to be approved by a Commonwealth statutory body, the Independent Air Fares Committee.

International activity

International organisations

Australia is one of the 159 (as at 30 June 1988) members of the International Civil Aviation Organisation (ICAO). Australia has continued its membership of the (governing) Council since ICAO was established in 1947. Australia is also represented on the 15 member Air Navigation Commission which is responsible for drawing up international standards and procedures for the safety, regularity and efficiency of air navigation. In addition, Australia participates in the Commonwealth Air Transport Council, the South Pacific Regional Civil Aviation Council and the Airport Operators Council International.

International agreements

Australia as at 30 June 1988 had air service agreements with 26 countries. These agreements have full treaty status. Australia also had seven air service arrangements, with less than treaty status, as of 30 June 1988. Under these agreements or arrangements Qantas, Australia's designated airline, and the foreign carriers of Australia's bilateral partners are entitled to operate services to and/or through each others territories. A commercial agreement exists between Qantas and Air Zimbabwe for services between Australian and Zimbabwe. Qantas and the Government of Bahrain have an arrangement to enable services to operate between Australia and Bahrain.

International scheduled services

At 30 July 1988, 32 international airlines were operating regular scheduled air services to Australia. The carriers (and contracting states) were: Air Caledonie International (France), Air India (India), Air Nauru (Nauru), Air New Zealand (New Zealand), Air Niugini (Papua New Guinea), Air Pacific (Fiji), Alitalia (Italy), All Nippon Airways (Japan), British Airways (UK), CAAC (Peoples Republic of China), Canadian Airlines International (Canada), Cathay Pacific Airways (UK), Continental Airlines Inc. (USA), Flying Tiger Line Inc. (USA), Garuda Indonesian Airways (Indonesia), Hawaiian Airlines (USA), Japan Airlines (Japan), JAT (Yugoslavia), KLM-Royal Dutch Airlines (Netherlands), Lauda Air (Austria), Lufthansa German Airlines (Federal Republic of Germany), Malaysian Airline System (Malaysia), Merpati Nusantara Airlines (Indonesia), Olympic Airways (Greece), Philippine Airlines (Philippines), Polynesian Airlines Ltd (Western Samoa), Royal Brunei Airlines (Brunei), Singapore Airlines Ltd (Singapore), Thai Airways International (Thailand), United Airlines (USA) and Union de Transports Aeriens (France). Polynesian Airlines Ltd also operates services on behalf of Cook Islands International (Cook Islands) and Air Pacific operates services on behalf of Solomon Islands Airlines (Solomon Islands).

Qantas, Australia's international airline, operated a fleet of 25 Boeing 747 and 7 Boeing 767 jet aircraft. All shares in Qantas Airways Limited are owned by the Commonwealth Government.

International non-scheduled services

Australia's passenger and freight charter policies encourage in-bound tourism and freight carriage particularly over routes not served by the scheduled carriers.

International traffic

The table following shows particulars of scheduled international airline traffic during 1986-87 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: SCHEDULED INTERNATIONAL AIRLINE TRAFFIC TO AND FROM AUSTRALIA (a) 1986-87

Type of traffic	Number of flights (b)(c)	Passengers	Freight tonnes	Mail tonnes
Traffic to Australia—				
Qantas Airways Limited	6,390	1,319,922	41,817	1,002
Other airlines	8,465	1,811,708	67,895	6,394
All airlines	14,855	3,131,630	109,712	7,396
Traffic from Australia—				
Qantas Airways Limited	6,385	1,262,985	55,361	4,038
Other airlines	8,386	1,746,841	98,916	1,512
All airlines	14,771	3,009,826	154,277	5,550

(a) Australia and Norfolk Island. (b) Includes Qantas flights using aircraft leased from other airlines. (c) Difference between in/out numbers arises because some outward flights are operated as non-scheduled, and thus not counted in above tables.

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 SCHEDULED OVERSEAS SERVICES

		1981-82	1982-83	1983-84	1984-85	1985-86	1986-87
Hours flown	number	77,910	82,409	83,551	89,952	100,653	117,383
Kilometres flown	'000	61,052	64,898	65,670	71,046	79,050	91,874
Passengers—							
Embarkations	number	2,020,107	2,101,788	2,189,669	2,449,596	2,671,486	3,052,411
Passenger-kilometres	'000	14,818,491	14,477,756	15,247,801	16,858,595	18,233,088	21,258,519
Freight—							
Tonnes uplifted	tonnes	66,036	75,375	84,844	90,357	91,961	110,389
Tonne-kilometres	'000	479,996	485,549	563,268	637,590	691,352	811,627
Mail—							
Tonnes uplifted	tonnes	4,344	4,219	4,410	4,744	4,869	5,327
Tonne-kilometres	'000	39,244	40,058	40,324	43,231	45,370	51,819

The air cargo statistics set out in the following table have been compiled from information contained in import and export documents submitted by importers and exporters, or their agents to the Australian Customs Service as required by the *Customs Act 1901*.

AIR CARGO BY TRADE AREA, INWARD AND OUTWARD OVERSEAS, 1986-87

Trade area	Inward cargo		Outward cargo	
	Gross weight	Value	Gross weight	Value
	tonnes	\$'000	tonnes	\$'000
Europe	28,347	2,569,358	7,227	1,053,645
East Asia	9,224	350,016	17,620	767,140
Japan and North Asia	7,617	752,369	15,274	944,632
North America—East Coast	15,034	1,549,266	2,621	273,096
North America—West Coast	11,120	1,393,284	13,054	525,425
Central America and Caribbean	60	9,990	89	3,322
South America—East Coast	633	54,483	30	4,153
South America—West Coast	48	3,298	41	1,817
Africa—Mediterranean	—	8	5	521
West Africa	44	8,447	36	423
South and East Africa	483	317,398	459	17,828
Red Sea and Mediterranean				
Middle East	175	32,689	985	11,811
Middle East Gulf	22	13,118	17,855	62,409
West India	797	39,902	539	9,787
East India	1,384	37,968	176	31,359
South-East Asia	4,506	306,146	30,101	396,067
New Zealand	21,942	460,271	29,721	645,072
Papua New Guinea and				
Solomon Islands	264	124,854	2,868	85,118
Pacific Islands and other countries	952	29,276	5,210	62,579
Trade area not specified	16	2,762	8,421	203,882
Total	102,673	8,054,995	152,336	5,100,705

Domestic activity

State Governments exercise controls over intrastate domestic aviation by virtue of their respective powers under the Constitution. The States of New South Wales, Queensland, Western Australia and Tasmania, and the Northern Territory, license air services within their borders, having regard to public interest and other considerations. In some cases approval of intrastate air fares is also required. Victoria and South Australia choose not to regulate air services and, within these States, only Commonwealth requirements must be satisfied to conduct air services. (The Commonwealth alone regulates interstate aviation.)

Economic regulation and deregulation

The Commonwealth regulates domestic air transport on economic grounds in Australia through arrangements commonly known as the 'two-airline policy' which have existed in various forms for more than thirty-five years. Under the policy the operation of regular passenger air services over the main domestic or 'trunk' routes is restricted generally to the Commonwealth-owned Australian Airlines Ltd (formerly Trans Australia Airlines) and the privately owned Ansett Airlines of Australia (a division of Ansett Transport Industries (Operations) Pty Ltd, a wholly owned subsidiary of Ansett Transport Industries Ltd).

The Commonwealth maintains the policy essentially by using the Customs (Prohibited Imports) Regulations to restrict other operators' access to aircraft which could be used to compete with Australian Airlines and Ansett over the trunk routes. The policy in its presents form is based on legislation passed by Parliament in 1981—namely the *Airlines Agreement Act 1981*, the associated *Airlines Equipment Amendment Act 1981* and the *Independent Air Fares Committee Act 1981*.

In October 1987 the Australian Government announced its decision to deregulate interstate domestic aviation in Australia and open the nation's interstate air services to free competition. The 1981 Airlines Agreement will cease on 30 October 1990. In essence, the Government will withdraw from detailed economic regulation of domestic air fare setting, aircraft imports, capacity controls and route entry. State controls however will remain unchanged.

Major airlines

The major airlines providing domestic air services in Australia are the Ansett group, comprising Ansett Airlines of Australia, Air NSW, Ansett WA and Ansett NT; East-West Airlines; Australian Airlines; and IPEC Pty Ltd, a cargo operator. TNT and News Ltd jointly own both the Ansett group and East-West.

At 30 June 1988 the Ansett group's fleet consisted of 5 Boeing 767s, 13 B727-200s, 12 B737-300s, 7 Fokker F28-1000s, 2 Fokker F28-4000s, 9 Fokker F27s, 9 Fokker F50s, 2 BAe146s and 1 F28-3000.

Australian Airlines operated a fleet of 11 Boeing 727s, 12 Boeing 737s, 3 Airbus A300s, 5 McDonnell-Douglas DC9s, 2 Fokker F27s, and 5 De Havilland Twin Otters.

East-West Airlines operated a fleet of 4 F28-4000s, 1 F28-3000 and 7 F27-500s.

The Interstate Parcel Express Company (Australia) Pty Ltd, trading as IPEC Aviation, operates cargo airlines services using three Argosy aircraft and a DC9 aircraft.

Commuter services

Some 45 commuter operators provided regular public transport air services to over 200 ports in Australia at 30 June 1988.

The aircraft types currently used by commuter operators are predominantly in the 6-9 seat category, such as the Piper PA31 and Cessna 310, 402 and 404 series. Larger types used include Metroliner, Embraer Bandeirante, British Aerospace Jetstream 31 and Shorts 330 and 360. During 1987 commuter operators carried an estimated 1.2 million passengers.

General aviation

In addition to scheduled services, there is a wide range of other activities undertaken by the aviation industry. Charter operations involve the use of aircraft in operations for the carriage of passengers and cargo for hire or reward which are not scheduled or available to the public. Approximately 650 operators in Australia hold charter licences.

Aerial work and private operation do not involve the commercial transport of passengers and cargo for hire or reward. Aerial work involves the use of aircraft in operations such as aerial survey, aerial agriculture, advertising and flying training. Private operations include the use of aircraft for the personal transportation of the owner and the carriage of persons or goods without a charge being made for the carriage. Hours flown by general aviation during 1986-87 were estimated at 1.7 million.

Scheduled domestic airline services

Statistics of all regular domestic airline services are set out in the following table.

**AIR TRANSPORT: OPERATIONS OF SCHEDULED DOMESTIC AIRLINE SERVICES
AUSTRALIA (a)**

		1982-83	1983-84	1984-85	1985-86	1986-87	1987-88p
Hours flown	number	245,567	242,075	247,158	262,007	276,861	288,341
Kilometres flown	'000	127,952	126,087	132,087	n.a.	n.a.	n.a.
Passengers—							
Passenger uplifts	number	10,332,934	10,597,651	11,329,708	12,049,700	12,508,800	13,704,500
Passenger-kilometres	'000	9,327,206	9,684,589	10,397,723	11,272,068	12,043,310	13,277,819
Freight—							
Tonnes uplifted	tonnes	141,853	149,879	151,226	150,385	137,627	147,939
Tonne-kilometres	'000	124,796	137,819	135,590	138,606	129,554	140,812
Mail—							
Tonnes uplifted	tonnes	16,767	17,571	18,411	17,999	18,761	20,915
Tonne-kilometres	'000	17,167	17,621	18,575	18,127	19,102	20,907

(a) Includes flights of all domestic airlines, between airports located within Australia and includes flights by East-West Airlines and Airlines of New South Wales between Australia and Norfolk Island.

Airport activity—domestic passengers

The statistics set out in the next table have been compiled by aggregating all domestic 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.

**SCHEDULED DOMESTIC AIRLINES PASSENGER UPLIFTS AND DISCHARGES AT
PRINCIPAL AUSTRALIAN AIRPORTS**

	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
Sydney	5,338,944	5,501,492	5,900,743	6,334,313	6,668,942	7,398,716
Melbourne	4,500,234	4,550,568	4,851,880	5,127,843	5,309,767	5,857,382
Brisbane	2,518,841	2,554,622	2,684,608	2,800,387	2,974,189	3,299,887
Adelaide	1,635,544	1,684,281	1,762,845	1,825,412	1,704,871	1,843,761
Perth	995,987	1,049,567	1,127,184	1,230,846	1,352,111	1,435,752
Canberra	786,449	838,175	931,673	990,222	1,006,652	1,091,477
Coolangatta	553,886	567,623	630,474	731,103	852,957	1,000,347
Cairns	387,895	404,168	426,206	494,217	627,713	775,206
Hobart	433,910	448,549	481,612	493,794	474,425	513,260
Townsville	377,186	388,752	404,463	409,478	415,870	404,215
Launceston	356,261	352,494	390,867	361,795	351,432	353,017
Darwin	266,268	281,032	302,590	334,321	341,835	369,127

Aerodromes

The number of aerodromes throughout Australia and its external territories at 30 June 1988 was 430. Sixty-seven were owned by the Commonwealth Government and 363 by local authorities and private interests. The number of licensed helipads throughout Australia and its Territories is 9. Capital expenditure on aerodrome and building construction was \$42.5 million in 1987-88. Maintenance expenditure on Commonwealth Government-owned aerodromes during 1987-88 was \$18.9 million. Expenditure on development and maintenance grants to licensed aerodromes participating in the Local Ownership Plan totalled \$10.9 million.

Airway facilities

A total of 550 navigational aids were in service at 30 June 1988. The total includes the following CAA facilities: 250 non-directional beacons (NDB) and Locators, 108 domestic distance measuring equipment (DME(D)), 24 international distance measuring equipment (DME(I)), 83 VHF omni-directional range equipment (VOR), 18 instrument landing systems (ILS). It also includes 67 privately owned navigational aids which consist of: 1 DME(D), 2 DME(I)s, 2 VORs, 1 ILS and 59 NDBs. In addition there are 11 NDBs operated by the Department of Defence and 11 NDBs operated by the Department of Transport and Communications.

There are approximately 200 aerodromes now equipped with night landing facilities and 126 Australian-designed 'T' systems (T-VASIS) are operating. Seven long-range and 2 short-range radar systems are in operation: each system consists of primary surveillance radar equipment and secondary surveillance radar equipment.

There are 32 Air Traffic Control Centres, 45 Flight Service Units and 28 Rescue and Fire Fighting Units in operation throughout Australia.

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

At 31 December 1987 there were 7,435 aircraft registered in Australia. At the same time 52,747 current aeroplane pilot licences, of which 29,779 were private pilot, 5,728 commercial pilot, 2,323 senior commercial pilot, 2,299 air transport pilot and 12,618 student pilot licences. In addition, there were 2,284 current helicopter pilot licences of which 317 were private pilot, 970 commercial pilot, 114 senior commercial pilot and 883 student pilot. There were also 13 gyroplane, 57 commercial balloon, 760 flight engineer and 11 navigator licences in force.

Accidents and casualties

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

	1982	1983	1984	1985	1986	1987
Number	51	44	40	31	40	44
Persons killed	53	47	45	43	44	33
Persons seriously injured	35	29	25	27	31	42

(a) Accidents involving civil aircraft (including registered gliders) which resulted in death or serious injury. Excludes parachutists and casualties involving non-registered aircraft. (b) Excludes accidents outside Australia involving aircraft on the Australian register, includes all accidents to overseas registered aircraft that occur in Australia.

POSTAL, TELECOMMUNICATIONS AND RADIOCOMMUNICATIONS 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.

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.

Under the *Postal Services Act*, the Australian Postal Commission is required to operate Australia's postal services in such a manner as will best meet the social, industrial and commercial needs of the Australian people. In performing its functions, the Commission is required to have regard for the special needs for postal services of Australian people who reside or carry out business outside the cities. It is also required to raise sufficient revenue to cover operating expenditure and to fund at least half of its capital expenditure.

Australia Post provides surface and airmail services within Australia and to and from other countries. Special services provided include express courier, electronic mail, priority paid mail, business reply post, cash-on-delivery, certified mail, freepost, messenger delivery, a security mail service and a number of reduced rate services.

Australia Post operates a money transfer service, sells postal products such as padded post bags, postal stationery and philatelic items, and act as agent on behalf of Commonwealth, State and local government departments and authorities and for private sector principals.

Australia Post is the authority for the issue of postage stamps throughout the Commonwealth of Australia and its external territories.

The following tables give details of Australia Post's financial results, services and operation.

AUSTRALIAN POSTAL COMMISSION: PROFIT AND LOSS
(\\$'000)

<i>Year ended 30 June</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>
Revenue—						
Mail services	870,719	971,676	1,080,539	1,186,422	1,370,930	1,501,487
Commission on agency services	90,113	90,449	94,547	87,291	83,328	89,803
Postal money order service	10,544	11,632	11,940	11,846	12,384	13,242
Other revenue	28,058	21,993	24,269	39,832	38,440	51,847
Total	999,434	1,095,750	1,211,295	1,325,391	1,505,082	1,656,379
Expenditure—						
Labour and related expenditure	774,662	831,600	911,776	973,294	1,049,186	1,131,190
Carriage of mail by contractors	83,665	92,984	103,551	109,418	121,183	132,832
Depreciation and interest	15,056	15,299	17,159	22,294	27,744	38,454
Other expenditure	117,257	131,716	154,301	189,530	252,079	298,955
Total	990,640	1,071,599	1,186,787	1,294,536	1,450,192	1,601,431

AUSTRALIAN POSTAL COMMISSION: PROFIT AND LOSS STATEMENT
FOR THE YEAR ENDED 30 JUNE 1988
(\\$'000)

Revenue—	
Mail services	1,501,487
Commission on agency services	89,803
Postal money order service	13,242
Other revenue	51,847
Total	1,656,379
Expenditure—	
Labour and related expenditure	1,131,190
Carriage of mail by contractors	132,832
Accommodation	79,137
Stores and supplies	94,106
Depreciation	32,417
Interest	6,037
Other operations expenditure	125,712
Total	1,601,431
Operating Profit	54,948
Appropriations—	
Accumulated profit brought forward	61,636
Operating profit for the year	54,948
Adjustments to provision	—
Accumulated profit carried forward	116,584

AUSTRALIAN POSTAL COMMISSION: PERSONS ENGAGED IN PROVIDING POSTAL SERVICES AT 30 JUNE 1987 AND 1988

	<i>HQ</i>	<i>NSW (incl. ACT)</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA (incl. NT)</i>	<i>WA</i>	<i>Tas.</i>	<i>Aust. 1988</i>	<i>Aust. 1987</i>
Official staff (a)—									
Full-time permanent	646	12,843	8,940	4,196	2,618	2,412	647	32,302	32,381
Full-time temporary	16	1,370	827	267	169	274	58	2,981	3,165
Part-time	—	1,274	678	358	352	378	90	3,130	2,973
Other staff (b)	—	2,734	1,844	1,621	779	713	386	8,077	7,959
Total	662	18,221	12,289	6,442	3,918	3,777	1,181	46,490	46,478

(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 engaged 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 1987 AND 1988**

	<i>NSW (incl. ACT)</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA (incl. NT)</i>	<i>WA</i>	<i>Tas.</i>	<i>Aust. 1988</i>	<i>Aust. 1987</i>
Households receiving 'mail	2,147,340	1,522,303	998,991	577,722	537,554	159,214	5,943,124	5,842,668
Business receiving mail	226,196	151,578	103,043	56,477	54,326	15,557	607,177	592,435
Post offices—								
At 1 July 1987	500	338	216	145	152	41	..	1,392
At 30 June 1988	496	333	218	143	153	40	1,383	..
Agencies—								
At 1 July 1987	945	845	523	399	248	185	..	3,238
At 30 June 1988	925	840	521	390	247	183	3,106	..
Total post offices and agencies	1,421	1,173	739	533	400	223	4,489	4,537

**AUSTRALIAN POSTAL COMMISSION: TOTAL POSTAL ARTICLES HANDLED
(*000)**

<i>Year ended 30 June</i>	<i>Posted for delivery within Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total postal articles handled</i>
1983	2,669,363	111,050	163,575	2,943,988
1984	2,764,113	106,585	164,362	3,035,060
1985	2,877,476	107,783	163,074	3,148,333
1986	2,970,353	115,688	166,444	3,252,485
1987	3,143,251	125,995	169,306	3,438,552
1988	3,342,321	142,280	177,417	3,662,018

**AUSTRALIAN POSTAL COMMISSION: ORDINARY POSTAL ARTICLES (a)
(*000)**

<i>Standard articles</i>				
<i>Year ended 30 June</i>	<i>Posted for delivery within Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total articles</i>
1986	2,543,792	100,857	121,022	2,765,671
1987	2,689,440	108,228	122,379	2,920,047
1988	2,862,775	122,613	128,407	3,113,775

STATES—YEAR ENDED 30 JUNE 1988

New South Wales (incl. ACT)	1,137,009	47,213	67,139	1,251,361
Victoria	792,127	35,024	37,283	864,434
Queensland	406,758	18,481	8,563	433,802
South Australia (incl. NT)	231,622	9,167	4,863	245,652
Western Australia	236,806	12,728	10,366	259,900
Tasmania	58,433	—	193	58,626

(a) Includes certified, messenger delivery and priority paid mail.

Telecommunications Services Within Australia

The Australian Telecommunications Commission was established on 1 July 1975 under the provisions of the *Telecommunications Act 1975* and operates under the trading name Telecom Australia.

Functions

Under section 7 of the Telecommunications Act the Minister may, after consultation with the Commission, give to the Commission, in writing such directions with respect to the performance of its functions and the exercise of its powers, as appear to the Minister to be necessary in the public interest. No such formal directions were given during the year ended 30 June 1988. The functions of the Commission are to:

- plan, establish, maintain and operate telecommunications services within Australia;
- operate such other services as the Commission is authorised by the Telecommunications Act to operate;
- 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;
- do anything incidental or conducive to the performance of any of the preceding functions.

The Commission is required to perform its function in such a manner as will best meet the social, industrial and commercial needs of the Australian people for telecommunications services and, so far as it is, in its opinion, reasonably practicable to do so, to make its telecommunications services available throughout Australia for all people who reasonably require those services.

Subsidiary and associated companies

The Commission may also, with the approval of the Minister, form, or participate with other persons in the formation of, a company that would carry on a business relating to telecommunications.

As at 30 June 1988 Telecom subsidiary and associated companies were:

- Telecom Australia (International) Ltd—100 per cent owned;
- QPSX Communications Pty Ltd—60 per cent owned;
- AUSSAT Pty Ltd—25 per cent owned;
- Telecom Technologies Pty Ltd—50 per cent owned;
- National Registries Pty Ltd—50 per cent owned;
- Telecom—Hewlett Packard Pty Ltd—50 per cent owned;
- Advanced Network Management Pty Ltd—60 per cent owned;
- Nat Soft Communications Pty Ltd—50 per cent owned.

Telecom also participates in a company, the National Protocol Support Centre Ltd. This company is limited by guarantee and has no share capital.

Statistics

The following table shows selected statistics relating to the latest three years of the Commission's operations.

AUSTRALIAN TELECOMMUNICATIONS COMMISSION: SUMMARY OF SELECTED STATISTICS

<i>Year ended 30 June</i>		<i>1986</i>	<i>1987</i>	<i>1988</i>
FINANCIAL				
Revenue	\$ million	5,471.7	6,047.5	7,199.5
Expenses	"	5,007.7	5,604.2	6,423.3
Operating profit	"	464.0	443.3	776.6
Rate of return	%	10.8	10.6	12.0
Internal funding	%	71	71	78
Addition to fixed assets	\$ million	1,980.9	2,403.1	2,236.1
Net value of fixed assets	"	11,276.6	12,759.4	12,073.1
TRAFFIC (million)				
Telephone calls				
Local		7,195.2	7,538.9	8,074.7
Trunk		1,172.1	1,328.1	1,488.5
To overseas		34.6	47.8	65.9
<i>Total</i>		<i>8,401.9</i>	<i>8,867.0</i>	<i>9,629.1</i>
Cellular mobile telephone calls		n.a.	n.a.	27.9
Calls to recorded information services		120.0	129.7	137.2
NETWORK AND OPERATIONS				
Telephone				
Demand for new services		616,908	610,267	650,809
Connection of new services		614,018	617,806	643,834
Services in operation		6,501,468	6,816,301	7,091,549
Data services				
Datel service—data		n.a.	n.a.	31,622
Modems in operation		102,367	103,726	103,962
Digital data service—network terminating units		22,753	35,210	52,489
AUSTPAC service—number of outstations		2,104	3,924	6,015
STAFF				
Average full-time staff		94,420	93,857	89,659
Total payroll	\$ million	2,186.1	2,300.5	2,393.0

Australia's National Satellite System—AUSSAT

AUSSAT Pty Ltd

AUSSAT Pty Ltd was established by the Federal Government in November 1981 as a commercial company to own, operate and manage Australia's National Satellite System.

AUSSAT's Memorandum and Articles of Association and the *Satellite Communications Act 1984* require the company to:

- provide a telecommunications system for Australia by using space satellites and make available the facilities for use in telecommunications systems in neighbouring regions;
- provide service on a non-discriminatory basis and to set fair and equitable charges;
- operate as a commercial taxpaying enterprise paying reasonable dividends to the shareholders.

The company currently has a paid up equity capital of \$100 million. Seventy-five per cent of its shareholding is held by the Australian Government with the remaining 25 per cent being held by Telecom Australia.

AUSSAT has a board of nine directors and employs a staff of some 270 people, the majority of whom are highly qualified engineers, technicians and scientists.

The Australian National Satellite System

AUSSAT's first generation satellite system comprises three Hughes Aircraft Company HS 376 spin stabilised satellites. Geostationary orbit locations are: AUSSAT 1—160°E longitude, AUSSAT 2—156°E longitude with AUSSAT 3 at 164°E longitude, some 36,000 kilometres above the earth, directly over the equator.

Each satellite has a minimum design life of seven years. The first two satellites, launched by the Space Shuttle in August and November 1985 respectively, are expected to achieve a seven and a half-year life. It is expected that AUSSAT 3, launched in September 1987 by the European ARIANE rocket, will achieve an on-orbit life of some ten years.

Each satellite carries four high powered (30 watt) transponders and eleven standard power (12 watt) transponders, providing a total of 12x30 watt transponders and 33x12 watt transponders on the three satellite first generation system. The satellites operate in the 12–14 GHz KU Band, on a dual polarised basis to provide for re-use of band width.

The three dish antenna system used on the Australian satellites is a unique and distinguishing feature. The antenna array enables each satellite to provide national beam coverage of the entire Australian continent and its offshore regions and four spot beams covering:

- North-East (Queensland)
- Central Australia (Northern Territory and South Australia)
- West (Western Australia)
- South-East (New South Wales, Victoria and Tasmania)

The satellites also have the capability of providing a switched beam to cover Papua New Guinea, and AUSSAT 3 has a switched beam capability covering the south-west Pacific region and New Zealand.

AUSSAT also operates two telemetry, tracking command and monitoring ground stations. The main centre is located in the Sydney suburb of Belrose, and it is from this station that final positioning and maintenance of the satellites in the geostationary orbit is monitored and controlled. A backup to the Belrose Satellite Control Centre is located in the Perth suburb of Lockridge.

Ground segment

AUSSAT owns and operates a network of eight Major City Earth Stations (MCES) located in Melbourne, Hobart, Adelaide, Perth, Darwin, Brisbane, Sydney and Canberra.

These facilities are designed to provide 'gateway' access to the satellites for AUSSAT customers whose requirements for services do not warrant the purchase of their own satellite earth stations. Microwave or land line connection from each station to customer premises is available.

Applications

The first AUSSAT satellite was commissioned for service on 1 October 1985 with the second satellite coming on-line on 1 January 1986 and AUSSAT 3 in November 1987.

Since commencing operation, the satellite system has proven to be an outstanding success with demand for capacity being far greater than originally projected. More than 80 per cent of available capacity on the first two satellites has been contracted and is now in service.

The design of the satellite communications payload and beam configuration provides multi-purpose capabilities for the system. It allows for the provision of broadcast services for television and radio, as well as program distribution and interchange and for a full range of telecommunication services such as voice, video, telex and data.

Summary of current AUSSAT applications

Broadcasting direct-to-home

The single largest application at the present time is the provision of broadcasting services for television and radio directly into homes in remote outback regions of Australia. This service, known as the Homestead and Community Broadcasting Satellite Service (HACBSS) is being provided, initially, by the Australian Broadcasting Corporation (ABC). The HACBSS service provided by the ABC comprises television programming, two AM radio services and a stereo FM radio service.

With the launch and commissioning of AUSSAT 3, the service provided by the ABC is being supplemented by a similar commercial service known as the Regional Commercial Television Service.

Major network television

Australia's three major television networks are also large users. Each network has leased a standard power (12 watt) transponder and is using the satellite system for program distribution, news gathering and itinerant special program events, such as sporting fixtures.

Aviation

The Department of Transport and Communications has contracted for a total of four standard power transponders which will be used to establish a fully duplicated network of reliable voice and data links between 46 staffed air traffic control facilities and 55 unstaffed remote VHF air-to-ground facilities throughout Australia.

Commercial applications

Apart from the applications detailed above, AUSSAT has contracted with a number of government agencies and commercial organisations for the provision of a wide variety of services. Uses range from the provision of private network voice, video and data services to exciting applications in entertainment distribution, remote and long distance education, emergency services, health and medical services, including the use of slow scan television for diagnostic purposes.

The next generation

AUSSAT has contracted for the manufacture and in-orbit delivery of its second generation satellite system planned for launch in 1991-92.

The system, to be built by Hughes Communications International of Los Angeles, United States, will comprise two much larger satellites providing increased capacity and higher power.

Apart from ensuring continuity of established services the second generation satellites will carry L Band transponders to enable the establishment of a domestic mobile satellite service. This service will be operational by 1992 and could potentially be the first such domestic service in the world.

Overseas Telecommunications Services

The Overseas Telecommunications Commission Australia (OTC) was formed by an Act of Parliament in 1946. OTC's principal responsibility is to provide, at the lowest possible rates, all of Australia's communications links with other countries and ships at sea. Services provided include telephone, text, data, graphics and maritime communications.

These services, for the business, social, public and private use of all Australians, are provided through OTC's investment in international cable, satellite and radio networks. OTC is a government-owned business enterprise and, as such, operates under the auspices of the Department of Transport and Communications.

In 1987-88 OTC achieved a record turnover of \$1,167.1 million, an increase of 16 per cent. Operating profit increased 52 per cent to \$190.4 million and after tax profit by 29 per cent to \$103.6 million. With a staff of 2,000 and assets totalling \$916 million, OTC was placed amongst the more efficient of the government business enterprises. More detailed statistics are contained in OTC's 1988 Annual Report.

Communications networks

OTC has developed a sophisticated international telecommunications network using modern technology to provide direct connections to almost 200 countries, with onward connections to nearly 300.

All of Australia's worldwide communications are directed via OTC's three international gateways at Paddington and Broadway in Sydney and Scoresby in Melbourne, to the international satellite and submarine cable networks.

Through OTC's shareholding in INTELSAT, Australia is part-owner and sixth-largest user of the global communications satellite system, which has satellites in orbit above the Atlantic, Indian and Pacific Ocean regions.

OTC's earth stations are strategically placed to access communications satellites above the Indian and Pacific Oceans. There are OTC satellite earth stations located at Oxford Falls in Sydney, Perth, Western Australia, Ceduna, South Australia and Healesville near Melbourne. There are two earth stations at each location.

OTC is the world's third-largest owner of submarine communications systems. Before the end of the century, it is estimated that OTC will need to provide more than 50 times its current international communications capacity. To meet this demand, OTC will invest more than \$2 billion over the next ten years in the world's largest optical fibre cable network spanning the Pacific Ocean.

Wherever submarine cables come ashore, a cable station is located, linking international communications, through OTC's international telecommunications centres, to Australia's national communications network. OTC-owned cable stations and junction points are located at Cairns, Perth, Sydney and Norfolk Island.

OTC is also responsible for all communications between Australia and ships at sea, and operates a network of maritime communications stations strategically located around Australia's coastline. OTC is a foundation member of the international maritime satellite organisation, INMARSAT, which provides high-quality voice, text and data communications for suitably equipped vessels.

Services

OTC provides voice, data, video and text communications services that link Australians to the world. These services include OTC International Direct Dial, allowing Australians to dial direct to almost 200 countries—the world's largest direct dial network; OTC Telex, which allows users to contact 1.6 million subscribers in more than 200 countries; and OTC Data Access, a service that provides access to international databases and computer-based information sharing. Other services include international facsimile, electronic mail, private networks and video-conferencing.

Radiocommunication Stations

At 30 June 1988 there were 844,100 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 414,690 were associated with land mobile services, 40,754 were fixed services, 66,633 were for marine services, 264,997 were citizens band (CB) stations and 17,852 were amateur stations. Particulars of broadcasting stations are shown in the following section.

BROADCASTING AND TELEVISION

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and, pursuant to the *Broadcasting Act 1942* (including amendments Nos 1,2,3 and 4 of 1987) and the *Broadcasting Ownership and Control Acts Nos 1 and 2 1987*, is one of the responsibilities of the Minister for Transport and Communications. Federal bodies which are involved include the Australian Telecommunications Commission, the Australian Broadcasting Corporation (ABC), the Special Broadcasting Service, the Australian Broadcasting Tribunal, the Department of Transport and Communications, the Overseas Telecommunications Commission and AUSSAT Pty Ltd.

Basically, the Australian broadcasting system comprises the following types of stations:

- national radio and television stations broadcasting programs produced by the Australian Broadcasting Corporation;
- commercial radio and television stations operated by companies under licence;
- public radio stations operated by corporations under licence on a non-profit basis;
- stations operated under the auspices of the Special Broadcasting Service.

As from 1 January 1977, the Minister for Transport and Communications assumed 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 Transport and Communications. The stations obtain income from broadcasting advertisements. At 30 June 1988 there were 140 commercial radio services in operation in Australia. Call signs for radio services 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 services in operation in Australia. Many of these services have one or more radiocommunications transmitters to enable the service from the principal transmitter to be provided to the entire service area.

There are also in operation a number of commercial radio and television translator stations, shortly to be known as rebroadcasting services. These have low power and are designed to receive and rebroadcast the signals of the service in whose area they are located. The licences are not held by the licensees of the service which is being rebroadcast but are held by a community group or a company in the area, a local council or some other government authority.

At 30 June 1988, there were three remote commercial television services licensed, transmitting their programs via satellite to remote localities in the Western Zone (Western Australia), Central Zone (Northern Territory and South Australia) and North-East Zone (Queensland).

There is one limited coverage repeater station in Australia operated by a community group, in a town in the Northern Territory. Eight of the nine repeater stations licensed as of 30 June 1987 have either closed down or are rebroadcasting the remote commercial television service.

The public broadcasting service

The Broadcasting Act also makes provision for the granting of licences for the operation of public radio and television stations. At 30 June 1988, 72 public radio stations were broadcasting programs ranging from fine music to ethnic languages and programs produced by and directed towards specific communities. Some public radio stations are associated with tertiary educational institutions. There are no public television services permanently operating in Australia.

The Special Broadcasting Service

The Special Broadcasting Service (SBS) was established by the Commonwealth Government on 1 January 1978 to provide multilingual radio services and, if authorised by regulations, to provide multilingual television services. A regulation authorising the provision of multilingual television services was gazetted in August 1978. The service is also empowered by the *Broadcasting Act 1942* to provide broadcasting and television services for such special purposes as are prescribed by the government.

In carrying out its functions, the SBS provides multilingual radio services to the Melbourne metropolitan area and Geelong through radio station 3EA which broadcasts in 55 languages for 126 hours per week; the Sydney metropolitan area through radio station 2EA which broadcasts in 59 languages for 126 hours per week; the provincial centres of Newcastle and Wollongong in NSW through 2EA translator services; plus on relay to a small number of public broadcasting stations throughout Australia.

It also provides Australia's sole national UHF-only television network. Since inception in October 1980, SBS-TV has grown from servicing Melbourne and Sydney only, to providing a television transmission in all capital cities (except Darwin) plus several major regional centres.

Transmitting solely on Ultra High Frequency (UHF), SBS-TV is seen Sydney, Melbourne/Geelong, Canberra, Adelaide, Brisbane, Perth and Hobart on UHF 28; North Wollongong on UHF 32; Adelaide's foothills on UHF 43; Newcastle on UHF 45; Upwey (Vic.) on UHF 51; Wollongong on UHF 53; Cooma (NSW), Gosford (NSW), Goulburn (NSW), Tuggeranong (ACT), Warburton (Vic.), Marysville (Vic.) and Sydney's eastern suburbs on UHF 58; the Gold Coast on UHF 61; Ferntree Gully (Vic.) on UHF 68; and Belgrave (Vic.) on UHF 69. SBS-TV operates to most of these centres via AUSSAT. SBS television and radio stations (2EA and 3EA) are also able to be received throughout New South Wales, Victoria and Tasmania by audiences with private AUSSAT satellite dishes.

Broadcasting Services

The Australian Broadcasting Tribunal

The Australian Broadcasting Tribunal came into being on 1 January 1977. It is an independent statutory authority established by the *Broadcasting Act 1942* to regulate some aspects of commercial and public radio and commercial television in Australia. The Tribunal is empowered to grant, renew, suspend or revoke licences, to determine program and advertising standards applicable to licensed stations, to authorise changes to the ownership and control of licences, and to collect and make available information about broadcasting in Australia. 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 inquiries into the renewal of licences, the setting of standards of broadcasting practices, alleged breaches of licence conditions and other matters.

The National Broadcasting Service

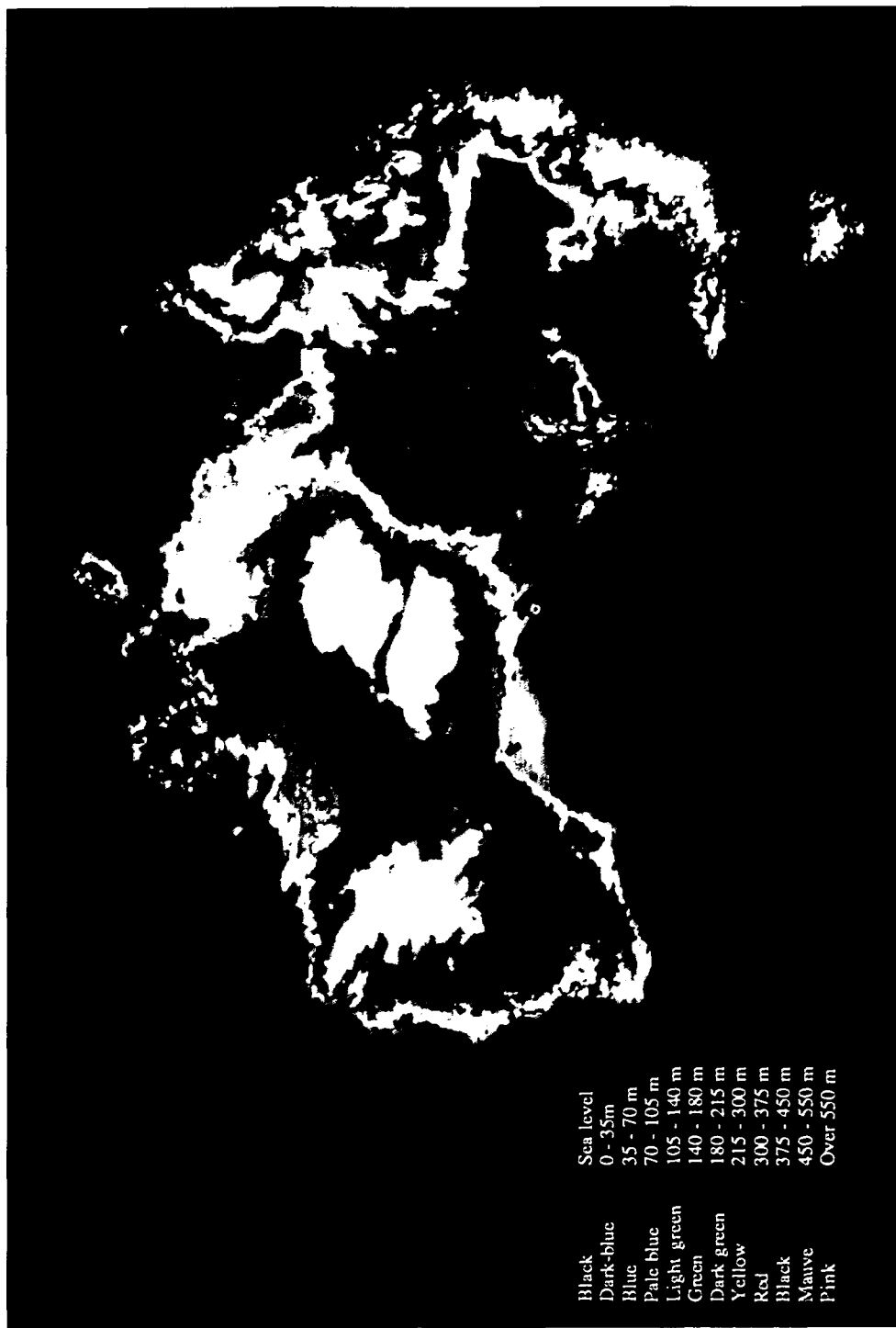
In sound broadcasting, the programs of the National Broadcasting Service are provided by the Australian Broadcasting Corporation through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Transport and Communications.

Technical facilities

At 30 June 1988 the National Broadcasting Service comprised 247 transmitting stations, of which 100 were medium frequency, 141 frequency modulation and 6 high frequency (excluding Radio Australia).

The medium-frequency transmitters operate in the broadcast band 526.5 to 1,606.5 kilohertz. The high-frequency stations, using frequencies within the band of three to thirty megahertz, provide services to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland.

TOPOGRAPHIC ELEVATION OF AUSTRALIA AS DISPLAYED BY A COMPUTER-BASED IMAGE PROCESSING SYSTEM



Source: Bureau of Mineral Resources, Geology and Geophysics.



North Rankin field on the North-West shelf.

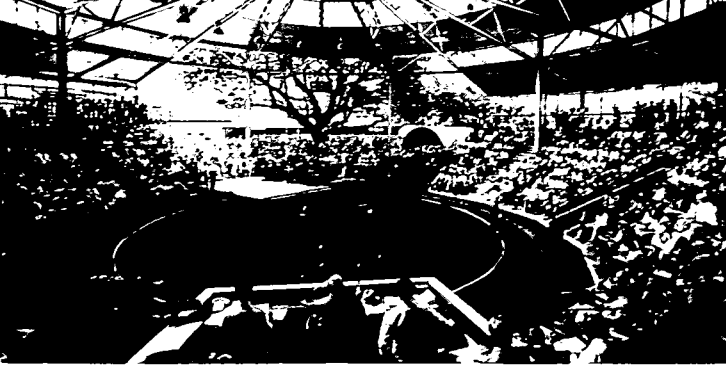


Gladstone aluminium refinery.

AUSTRALIAN INDUSTRY

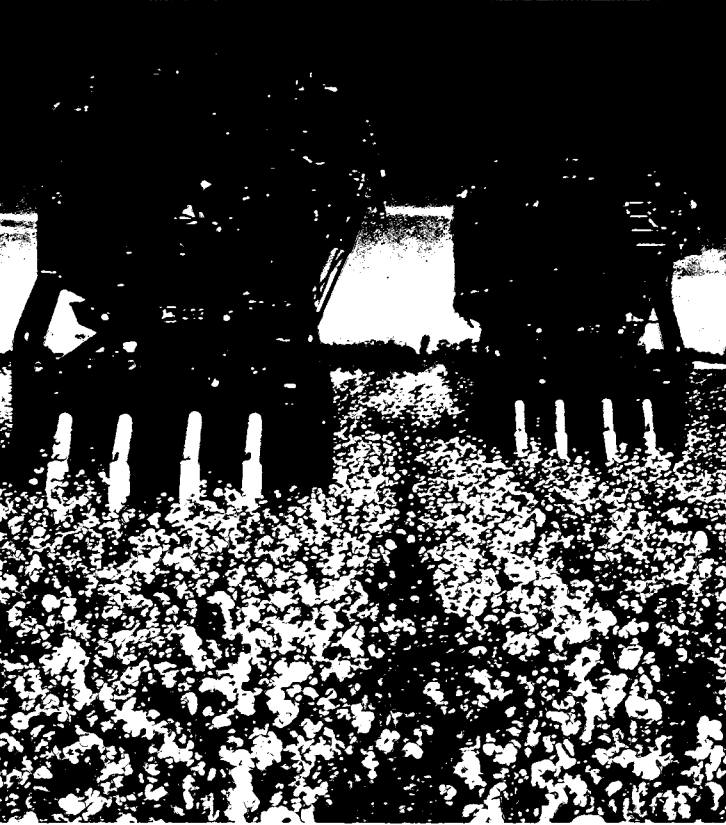


Felling jarrah. Dwelling, Western Australia.



Newmarket horse sales.

Cotton at Wee Waa.



Albany woollen mills Western Australia, making carpet wool.



Macadamia plantations near Lismore.





Border collie at work.

AUSTRALIANS AT WORK

Loading grapes, Hunter Valley.



Dairy farm. Bega, New South Wales.





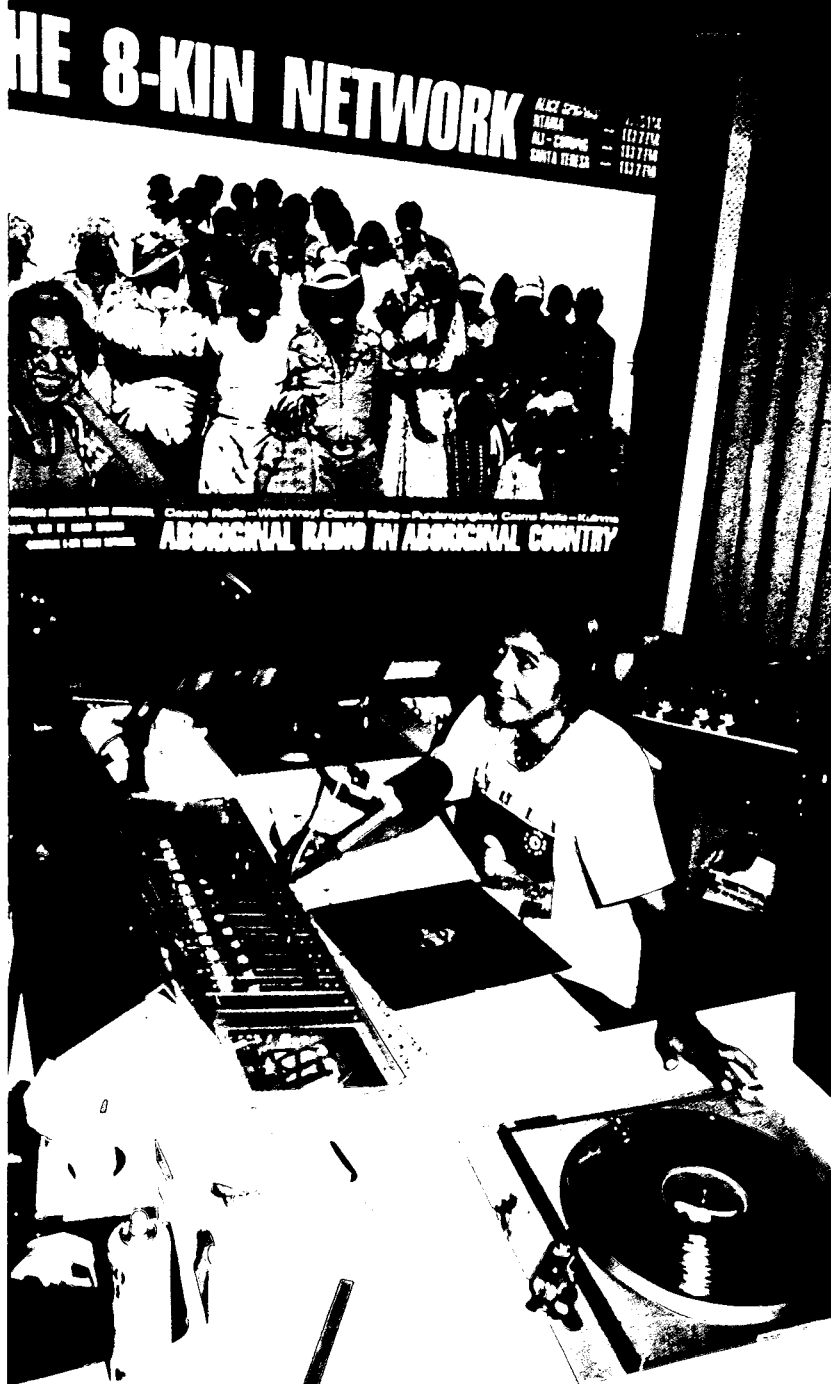
Computer-aided design at Australian National Industries.



Silk screen printed material, Bathurst Island.



House under construction, Canberra.



Aboriginal radio station, Alice Springs.



Camel chuck-wagon and Dick Munn. William Creek, South Australia.

Standly Chasm, Northern Territory.





Mudginberri Buffalo Project, Northern Territory.

Feeding the dolphins at Monkey Mia, Western Australia.

Mount Olga, Northern Territory.



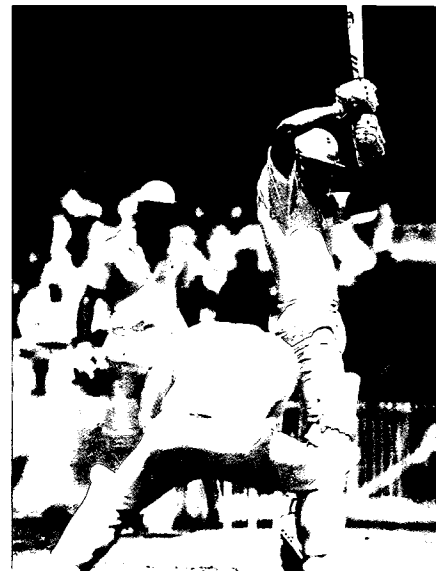
Australian Open 1988. Flinders Park National Tennis Centre, Melbourne.



Golden Slipper at Rosehill.

SPORTING AUSTRALIANS

Imran Khan in the fourth test,
Australia versus Pakistan.



Aboriginal Netball Carnival.
Southwell Park, Canberra.



Sailboarding on the Swan River, Perth

Under 19 Australian ice hockey team at practice.





AUSSIE KIDS

AUSTRALIANS





AUSTRALIANS



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 1988, 88 of the ABC's medium-frequency stations were situated outside the six State capital cities.

Program facilities

The programs of the ABC cover a wide range of activities. The proportions of broadcasting time allocated on metropolitan stations to the various types of program during 1985-86 were as follows: entertainment, 51.2 per cent; news, 9.3 per cent; sporting, 15.6 per cent; spoken word, 10.0 per cent; parliament, 11.4 per cent; religious, 1.2 per cent; rural, 0.6 per cent; and presentation, 0.5 per cent. By contrast, the ABC's radio national programming was: classical music, 41.1 per cent; light music, 0.8 per cent; entertainment, 5.4 per cent; drama and features, 6.3 per cent; education, 5.4 per cent; spoken word, 24.7 per cent; religious, 3.2 per cent; news, 8.1 per cent; rural, 3.4 per cent; and presentation, 1.2 per cent. Regional stations feature a higher proportion of news and rural programs. Further particulars of the operations of the ABC in respect of music, drama and features, youth education, talks, rural broadcasts, news and other activities are shown in the Corporation's Annual Report.

International Broadcasting Service

There are seven high-frequency stations at Shepparton, Victoria, three at Darwin, Northern Territory and three at Carnarvon, Western Australia which provide the international short wave service known as Radio Australia. As in the case of the National Broadcasting Service, these transmitters are maintained and operated by Telecom Australia, while programs are arranged and presented by Radio Australia. The programs provide entertainment, news and information about Australia presented with objectivity. They are directed to most parts of the world but with special emphasis on the Pacific and Asia. They include 49 news bulletins a day. The audience has been quite substantial in recent years, as evidenced by a large number of letters from listeners abroad (178,231 in 1986-87 and 207,001 in 1987-88). Radio Australia broadcasts in nine languages—English, Indonesian, Japanese, Tok Pisin, Thai, French, Standard Chinese, Cantonese and Vietnamese.

BROADCASTING STATIONS, 30 JUNE 1988

Type of station	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
National—									
Medium frequency (AM)	22	8	22	10	24	6	6	2	100
High frequency (HF)	—	—	2	—	1	—	3	—	6
Frequency modulation (FM)	13	8	53	11	41	6	8	1	141
International—									
Short wave (Radio Australia)	—	7	—	—	3	—	3	—	13
Commercial—									
Medium frequency (AM)	42	22	28	10	19	8	2	2	133
Frequency modulation (FM)	2	2	1	1	1	—	—	2	9
Public broadcasting—									
Medium frequency (AM)	4	1	1	1	1	—	—	1	(a)9
Frequency modulation (FM)	28	11	6	7	5	5	3	1	66

(a) Includes the Special Broadcasting Service.

Television Services

The National Television Service

The National Television Service is provided by the ABC through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Transport and Communications. The first national station (ABN Sydney) commenced regular transmission on 5 November 1956.

The television programs provided by the ABC cover a wide range of activities. The proportions of television time allocated among the ABC's various departments during 1987-88 were as follows: drama, 16.4 per cent; children, 23.9 per cent; current affairs, 6.1 per cent; sporting, 6.8 per cent; news, 3.0 per cent; light entertainment, 2.8 per cent; education, 12.7 per cent; popular and video music, 12.8 per cent; religious, 1.1 per cent; arts, 2.2 per cent; and presentation, 0.1 per cent.

During 1987-88, twenty-one new television translator services went into operation—four in New South Wales, four in Victoria, one in Queensland, eleven in Western Australia, and one in South Australia. Two existing television translator services ceased operation during 1987-88—one in Queensland and one in South Australia.

Colour television

Colour television (PAL) was introduced in Australia late in 1974 and services became fully effective in March 1975.

TELEVISION TRANSMITTER STATIONS, 30 JUNE 1988

<i>Type of station and location</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Aust.</i>
National—									
Metropolitan television	6	12	4	4	2	2	1	6	37
Country television	64	26	108	20	69	21	21	—	329
<i>Total, National</i>	<i>70</i>	<i>38</i>	<i>112</i>	<i>24</i>	<i>71</i>	<i>23</i>	<i>22</i>	<i>6</i>	<i>366</i>
Commercial—									
Metropolitan television	10	21	11	6	3	2	1	2	56
Country television	56	23	57	13	58	18	7	—	232
<i>Total, Commercial</i>	<i>66</i>	<i>44</i>	<i>68</i>	<i>19</i>	<i>61</i>	<i>20</i>	<i>8</i>	<i>2</i>	<i>288</i>

BIBLIOGRAPHY

ABS Publications

- Monthly Summary of Statistics, Australia* (1304.0)
Digest of Current Economics Statistics, Australia (1305.0)
Commonwealth Government Finance (5502.0)
Transport Establishments: Summary of Operations by Industry Class, Australia and States, 1983–84 (9103.0)
Transport Establishments: Details of Operations by Industry Class, Australia, 1983–84 (9104.0)
Transport Establishments: Selected Items of Data Classified by Industry and Size Group, 1983–84 (9105.0)
Road Freight Activity of Private Enterprises by Industry Division, Australia and States, 1983–84 (9107.0)
Shipping and Air Cargo Commodity Statistics, Australia (9206.0)
Survey of Motor Vehicle Use, twelve months ended 30 September 1985 (9208.0)
Interstate Freight Movement, Australia (9212.0)
Rail Transport, Australia (9213.0)
Interstate Freight Movement, Australia (9214.0)
Motor Vehicle Registrations, Australia (9303.0)
Motor Vehicle Registrations, Australia (9304.0)
Motor Vehicle Census, Australia (9309.0)
Road Traffic Accidents Involving Fatalities, Australia (9401.0)
Road Traffic Accidents Involving Casualties (Admission to Hospitals), Australia (9405.0)

Other Publications

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

THE AUSTRALIAN CINEMA —AN OVERVIEW

(This special article has been contributed by the Australian Film Commission)

Film: an ambassador

Australian film and television has been an excellent ambassador for Australia by promoting international awareness of, and interest in, our country. Local film and television programs have stimulated tourism and made a significant contribution to Australia's export earnings. Many Australian films have achieved international acclaim at film festivals around the world, winning prestigious awards and representing Australia at important cultural forums. In the financial year 1987–88, a total of 255 Australian films were successfully submitted to 59 international film festivals, a number of which received awards, including feature films such as *Travelling North*, *High Tide*, *The Tale of Ruby Rose* and *The Umbrella Woman* (also known as *The Good Wife*).

In 1987, 23 Australian-made feature films secured a theatrical release in Australia, while 10 and 8 features were released in the United States and the United Kingdom respectively. The major theatrical success of both 1986 and 1987 was *Crocodile Dundee*, which surpassed all other films at the box office both nationally and internationally. *Crocodile Dundee* was the most successful film ever released in Australia and it ranks as one of the most successful films in world-wide cinema history. *Crocodile Dundee II*, released in 1988, enjoyed one of the largest-attended cinema openings ever recorded in the United States, while creating an opening-day record in the United Kingdom.

In Australia, the film's release surpassed all previous Australian box office openers—including the forerunner *Crocodile Dundee* and other success stories such as *Star Wars* and *ET*.

Crocodile Dundee and *Crocodile Dundee II* have not been the only Australian films to achieve critical and financial success both at home and overseas. *Rikki and Pete*, *High Tide*, *The Man from Snowy River II* and *The Lighthorsemen* have secured theatrical releases and acclaim around the world. In addition to success on the mainstream feature film circuit, several Australian documentary films received impressive theatrical release in 1988—in particular *Cane Toads: An Unnatural History*, *South of the Border* and *Cannibal Tours*.

Australian films made for television, notably mini-series and drama serials, are in high demand overseas. Television channels in the United Kingdom, for example, regularly screen the television serials *Home and Away*, *The Flying Doctors*, *Richmond Hill* and *Neighbours*. *Neighbours* has become one of the top rating shows on United Kingdom television, rating consistently as one of the Top 10 programs. In all, 15 Australian feature films and 12 mini-series were screened on United Kingdom television in 1987. In 1988 viewers saw the telemovie *The First Kangaroos* (an Anglo-Australian co-production), and mini-series *My Brother Tom*, *Land of Hope* and *Winners*.

British cable and satellite services also screened a wide range of programs, including 18 Australian feature films broadcast as special programs in 1988. Meanwhile European satellite services are also broadening the reach of Australian film and television programs. Drama series and serials are especially popular in Europe. For example, the series *Sons and Daughters* has been broadcast across Europe and in the Bahamas, Egypt, Trinidad and Ireland.

On United States cable television an average of 2 Australian feature films are broadcast weekly. There is a preferred demand for feature films and telemovies for television broadcasting, however the mini-series *The Last Frontier* rated impressively when shown

and the documentary *Suzi's Story* was extremely well received. In 1988 an 18 week special series of Australian telemovies called *Australian Movie This Week* screened on WYNC to good reviews, as well as the *Mother and Son* comedy series.

Early days

The first decades of the twentieth century saw a flourishing period of feature film production in Australia. Film makers were involved as early as 1886 in making documentaries of daily life, producing combination film and slide shows, and creating background films for stage plays. The highlight of this period was *The Story of the Kelly Gang* made in 1906 and believed to be the first feature-length film to be made in the world.

The 'Silent Era' of the Australian film industry, circa 1907–1928, produced well over 150 feature films. By 1929 a combination of forces—the introduction of sound films from overseas, an increasing stranglehold on the local market by American and British distributors, and the economic devastation caused by the Depression—signalled a serious downturn in Australian film production from which it would take decades to recover.

The transition to sound motion picture technology in the early 1930s was costly and difficult. However, a few directors adapted to the new technology and produced commercially successful films dealing with Australian subjects, often located in the Australian bush.

During the war years, feature film production dropped off as film makers became preoccupied with producing newsreels and documentaries which screened in the large number of cinemas. Whilst film production was down, attendances reached an all time peak in 1944–45, with 151 million admissions that year.

Local feature film production in the post-war period was marked by an influx of British and American film companies attracted to Australia by its exotic locations, resulting in productions such as the Ealing Studio's *The Overlanders*, Stanley Kramer's *On the Beach* and Fred Zinnemann's *The Sundowners*.

But there were few indigenous films being made, with the notable exception of Charles Chauvel's feature film *Jedda*, which was the first Australian-made colour feature film. *Jedda's* theme was also uniquely Australian—it explored the issue of Aboriginal and white relations.

With theatrical production and distribution dominated by foreign companies, a whole generation of Australians were growing up and going to the movies but possibly never seeing an Australian film.

A renaissance

Then in the late 1960s and early 1970s, a period characterised by social change, political protest and cultural re-examination, an underground film culture began to develop, based primarily in Melbourne and Sydney. This time of questioning and change created an environment conducive to lobbying the government to stimulate a national film industry and provide the requested financial support. Australia's cultural heritage was under question and a film industry was promoted as an essential vehicle for a necessary cultural and national exploration of that heritage.

The government accepted the cultural arguments and, with its assistance, the film 'renaissance' began.

At first, films that emerged were primarily engaged in exploring facets of Australian humour, resulting in such films as *Stork*, *The Adventures of Barry Mackenzie*, and *Alvin Purple*. These films were financially successful both in Australia and overseas for there was a familiarity about the 'ocker' character which audiences found endearing. However, some audiences found this essential rawness embarrassing and wanted a more refined and sophisticated Australia to be reflected in its cinema.

Films such as *Sunday Too Far Away* and *Picnic at Hanging Rock* met with those requirements for a quality cinema rooted in the intrinsic 'Australian' experience and local literary traditions. The unique Australian landscape, good quality film production values and a stylised narrative simplicity became symbols of the Australian cinema, combining to capture the imagination of local and international audiences alike and generating pride in these filmic explorations of the Australian identity.

Documentary film making also attracted similar attention in the late 1970s as film makers expanded their range of subject matter toward more socio-politically oriented films covering such issues as Aborigines, feminism, the environment, Asian, Pacific and Latin American politics, and communism.

Government assistance

Towards the end of the decade, escalating production costs and the film industry's desire to consolidate the economic bases for production were prime factors in the Federal Government's introduction of a tax incentive scheme aimed at enhancing private investment in film. This scheme, known as Division 10BA of the *Income Tax Assessment Act 1936* was introduced in June 1981 to encourage private investment (via a tax deduction incentive) in feature films, documentaries, telemovies and television mini-series.

Investors could write off up to 150 per cent of capital expenditure on an acceptable project and be tax exempt for up to 50 per cent of net earnings from that investment.

The films produced in the first few years of the tax incentive scheme introduced the work of some of Australia's most respected film makers to the world, such as Bruce Beresford (*Puberty Blues*), Gillian Armstrong (*Starstruck*), George Miller (*Mad Max*) and Peter Weir (*The Year of Living Dangerously*).

Whilst historical-drama and literary adaptations remained popular film themes, film makers began to tackle more contemporary issues such as adolescence in *Puberty Blues*, new wave music in *Starstruck*, Asian politics in *Far East* and *The Year of Living Dangerously*, environmental issues in *Heatwave* and *The Killing of Angel Street*, socio-ethnic problems in *Moving Out* and the drug culture in *Monkey Grip* and *Winter of our Dreams*.

The films of the early 1980s continued the success stories of the 1970s and were acclaimed overseas by becoming box office hits. Films from this period include *Breaker Morant*, *Mad Max 2*, *Gallipoli*, *The Man from Snowy River* and *Phar Lap*.

At this time film makers began to explore the dramatic possibilities of television mini-series. The national and international success of the mini-series *A Town Like Alice* in 1980 stimulated television network demand, and in the next two years, no less than ten mini-series were produced.

Initially, historical themes predominated, ranging from the portrayal of life in the penal colonies in *For the Term of His Natural Life*, *Sara Dane* and *Under Capricorn*, bushranging in *The Last Outlaw*, the pioneering spirit in *All the Rivers Run*, the rise of nationalism in *Eureka Stockade*, treatment of Aborigines in *Women of the Sun*, and industrial unrest in the 1920s in *The Waterfront*.

Funding for short drama, documentaries and experimental works, provided primarily through the Australian Film Commission, also created opportunities for upcoming directors to explore innovative ideas and techniques in film and to acquire practical film making skills. Many resulting films were adventurous and inventive, drawing upon European and American film models for their cinematic modes, then remodelling to reflect Australian cultural and social moods and trends. Some of today's best-known feature film directors, such as Peter Weir and Gillian Armstrong, made documentaries and short dramas during this period.

However, it became evident in 1983 that Australian film production was facing some serious problems as well as substantial cost increases which threatened the underlying

economics of film production despite the generous film tax incentive scheme. Australian cinema, originally stimulated by the desire for cultural and social exploration through film, was becoming an industry predominantly predicated upon business concerns.

That year the government, responsive to these problems, and concerned with the overall quality of production and the influx of speculative promoters, introduced legislative amendments which reduced the allowable tax deduction under 10BA from 150 per cent to 130 per cent with a corresponding 33 per cent tax exemption on net returns from the investment. In addition a special fund of \$5,000,000 was allocated to the Australian Film Commission. The fund, called 'The Special Production Fund', was designed to encourage production of high quality film and television drama and documentaries which carried the potential for commercial success.

The international market

By 1983, the nature of the Australian film industry had begun to change. The heavy reliance by producers on direct government investment was being replaced by private investors who were seeking viable investment properties, for the financial market had started to drive production. Investors were interested in recouping their investment and fulfilling the film's potential for profit.

Producers were obliged to guarantee investors some revenue and in order to do that they had to sell distribution rights prior to the film or television project being made. In order to attract the sort of money required, producers had to look toward the United States and Europe for distribution deals.

As a result of this, in 1984 and 1985, there emerged an increasing reliance on a number of international distributors who were able to pay up-front advances for a program. These advances comprised the bulk of the film's overall budget.

With such a dependence on the international market, there was an inherent tension between the objectives of developing an Australian cinema and the need to meet the supply needs of distributors.

For many producers this posed a challenge: how to make films which had an Australian character and flavour, but which also appealed to an international audience, beyond the historical-drama genre which had already proved so popular.

Film makers rose to this challenge by developing diverse styles and narratives as they explored different genres of film making and new presentations of the Australian character, landscape and mythologies. This diversity was reflected in such films as *Australian Dream*, *Emoh Ruo*—comedies, *A Street to Die*, *Fran*, *A Test of Love*—quasi-documentaries, *Empty Beach*, *Fair Game*, *Mad Max*; *Beyond Thunderdome*—action dramas, *Cactus* and *The More Things Change*—human relationship films.

With this increasing pressure to work primarily within a business context, to make largely entertaining and commercially successful films, some critics felt that a certain integrity and commitment to the art of film making had been lost. Film makers were being asked to be up-front businessmen and women, to divert energies away from the creative process into the entrepreneurial and to make creative compromises in order to satisfy purely commercial demands.

In a creative context, this was undoubtedly true. On the other hand, Australia could not afford to sustain its film and television output from domestic box office receipts and television sales alone.

Revenue had to be obtained from overseas, and it was clear that in the business context, Australian programs were capable of obtaining wide international distribution.

In November 1985 a co-production scheme was introduced to assist local producers in collaborating with foreign partners on officially approved co-ventures while still receiving

the benefits of the 10BA tax incentive scheme. Administered by the Australian Film Commission, arrangements have been made with CNC in France, the BBC and Channel Four in the United Kingdom, the New Zealand Film Commission, and the Corporation for Public Broadcasting in the United States.

Government organisations

By mid 1985 it had again become clear that the tax incentive scheme was pushing producers to obtain extremely high pre-sales and that the costs associated with attracting film investment were rising significantly. There was an increasing uncertainty about the level of available finance when the 10BA tax deduction/exemption was further reduced to 120/20 per cent. The industry's financial base was shaky.

It was at this time that the Australian Film Commission proposed the creation of an independent Australian Film Finance Corporation to replace the 10BA tax concessions. The proposed Corporation would operate like a bank and loans would be secured against the rights of the program or against sales agreements already in place. In 1988, the Federal Government established the Australian Film Finance Corporation with a first year funding of \$70 million, while further reducing 10BA tax concession to a 100 per cent deduction with all returns from the investment being treated as taxable income.

In addition to the Film Finance Corporation, other Commonwealth and State funded government organisations play an important role in providing financial assistance for the development of an indigenous film culture.

The Australian Film Commission is the Commonwealth statutory film authority established in 1975. The Australian Film Commission's principal functions are to provide development funding and equity investment for film and television, encourage innovative and experimental film making, provide support and advice to developing film makers, assist in the marketing, distribution, exhibition and broadcasting of Australian programs, provide a central information resource, advise government on film matters and monitor developments in the industry.

Independent film bodies also operate in New South Wales, Queensland, South Australia, Victoria and Western Australia and are funded by the respective State governments. These bodies contribute toward encouraging local film making by providing marketing and production expertise and liaising with government on film policy.

With the establishment of the Australian Film Finance Corporation there is now a new financial climate for production in Australia, with an optimism and invigorated energy in the industry.

Australia can enter the 1990s with the knowledge that audiences the world over have a window into the country that reveals a sophisticated and culturally mature society—something that is possible in large part because of the vision, creative energy and expertise of the Australian film and television industry.