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## EXPERIMENTAL ESTIMATES OF FREIGHT MOVEMENTS, AUSTRALIA, SEPTEMBER QUARTER 1995

### INTRODUCTION

This publication provides estimates from the Freight Movements Survey of Australia. For more details on the background and development of the survey, refer to *Information Paper — Freight Movements, Australia* (9218.0) which is available on request. The Freight Movements Survey replaces the Interstate Freight Movement Survey which ceased in the June quarter 1994.

The statistics are compiled from data provided by transport operators and other private and government-owned organisations involved in moving freight in Australia. Respondents were asked to supply information on type and quantity of goods or materials moved and to specify the origin and destination of those goods and materials. Information was obtained on whether the commodity was moved in bulk, was dangerous, containerised or refrigerated.

The ABS is very interested in feedback from users of these statistics. Users are invited to provide comments to the ABS on any aspects of this release, including particular estimates contained within it.

### CAUTIONARY NOTES

The ABS has been conducting the quarterly survey of freight movements since the June quarter 1994. The estimates presented in this release are regarded as experimental at this stage, especially for road freight, and should be used with caution. Particular care should be taken when comparing September quarter 1995 and September quarter 1994 data. ABS procedures have been refined, respondents have become more familiar with the survey since its introduction and operators who have ceased operations between the two quarters have not been replaced. Consequently the data for the September quarter 1994 may not be directly comparable with September quarter 1995 data.

For more information, refer to the comments below and the section, Reliability of estimates, on page 5.

As the ABS collected information on individual movements rather than consignments, freight movements which involved more than one operator or mode could have been counted more than once (see Scope of the survey, on page 3).

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### INQUIRIES

- *for further information about statistics in this publication and the availability of related unpublished statistics, contact Sharyn Marken on (07) 3222 6190 or any ABS office.*
  - *for information about other ABS statistics and services, refer to the back of this publication.*
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At this stage, estimates have not been weighted to provide an indication of tonnes moved by distance. Data on a tonne-kilometre basis will be presented in future issues.

Care should be used in interpreting quarterly changes as freight movements can be influenced by seasonal fluctuations. As this is a new survey, the extent of seasonality in the series is unknown.

Users should also be cautious when comparing data for the different transport modes as scope and coverage differences affect the estimates for each mode. In particular, road freight information collected was limited to freight carried by vehicles over 3.5 tonnes gross vehicle mass and excluded freight moved within urban areas or over distances of less than 25 kilometres in rural areas. The road freight movements excluded are thought to represent a large portion of all road freight moved in Australia. Urban movements were also excluded for rail but, in contrast to road freight, are expected to constitute a relatively small proportion of the freight moved by that mode (see the paragraph under Road in the section, Scope of the survey).

Road operators with relatively simple information systems were asked to provide information for a specified two-week period in the middle of the quarter. That information was then expanded to produce quarterly estimates. In other situations, respondents with large numbers of movements were asked to provide information relating to a sample of those movements and the results were also expanded. Where sophisticated information systems existed, total freight movement information was often provided for the whole quarter.

Where sub-quarterly data were provided by respondents, error could have arisen due to:

- the sub-quarterly reporting period used not being representative of the whole quarter; and
- the sampling of records by those respondents who were asked to report in respect of a specified sub-sample of their movement records, not being representative of the whole quarter.

Further error could have resulted from:

- any inaccuracies in the sample framework affecting road freight movement estimates (see Road in the section, Coverage of the survey);
- non-response affecting the estimates for road freight movements (see Reliability of estimates); and,
- respondent errors and omissions; for instance, where incomplete information was provided, the ABS estimated for missing data using previous information and/or conversion factors (see Reliability of estimates).

The estimates are also subject to sampling error. Where the sampling error associated with a particular estimate is large, this is indicated by an asterisk beside the figure (see Reliability of estimates for a full explanation).

It is expected that total error will reduce as procedures and frameworks improve, respondents become more familiar with the survey and response rates increase.

The ABS is currently undertaking a methodological review of the survey to improve the quality of freight movement information. This review is scheduled for completion during 1996.

The estimates in this release may be revised as results from future surveys become available for analysis.

## SURVEY FINDINGS

It is estimated that 160.7 million tonnes of freight was moved in Australia during the September quarter 1995. This was an increase of 5.4% compared with the June quarter 1995. Two-thirds (66.3%) was moved by rail, 26.2% by road, 7.4% by sea and less than 0.1% by air.

Major commodities moved by rail in the September quarter 1995 were metalliferous ores 43.6 million tonnes; coal, coke and briquettes 35.2 million tonnes and vegetables and fruit (mainly sugar cane) 16.1 million tonnes.

Stone, sand and gravel at 4.3 million tonnes was the major identifiable commodity moved by road in the September quarter. Cork and wood, coal, coke and briquettes and other foodstuffs were also significant in the September quarter. General freight (unspecified) and other freight (miscellaneous materials and manufactured goods) comprised a large proportion of total freight moved by road.

For sea, the two major commodities moved in September quarter 1995 were metalliferous ores and metal scrap (5.2 million tonnes) and petroleum oil, motor spirit and other light oils (2.9 million tonnes).

Of the total measured freight moved in Australia by rail, intrastate movements accounted for 97.6% in the September quarter 1995. For road, intrastate movements accounted for 82.9% of the total in the September quarter. This compares with 97.1% and 82.0% for intrastate movements by rail and road, respectively, in the June quarter 1995.

## SCOPE OF THE SURVEY

The statistics in this publication relate to freight movements by all industries and sectors of the Australian economy whether they are carried by transport (hire and reward) operators or moved by ancillary operators (i.e. manufacturers, retailers, wholesalers, etc. moving goods on their own account). Freight moved by vehicles belonging to the defence forces and by pipeline were excluded from the survey.

Movements made under prime contract or own account arrangements were reported. In order to avoid double counting, freight moved under subcontract arrangements was excluded as it was covered under a prime contract.

Movements involving more than one mode of transportation were recorded as separate movements. For example, freight moved from Sydney to Hobart by road and sea was recorded as 'road' from Sydney to Melbourne, 'sea' from Melbourne to Devonport and 'road' from Devonport to Hobart. Freight moved interstate by rail which involved two rail authorities was recorded as two separate movements. For example, a consignment moved from Melbourne to Townsville was recorded as one movement from Melbourne to Brisbane and a separate movement from Brisbane to Townsville.

- Road The survey covers the prime contract freight movements undertaken by businesses which are the registered owners of:
- commercial rigid and articulated trucks, with gross vehicle/combination mass of 3.5 tonnes or more; or
  - trailers forming part of an articulated truck combination.

All movements within urban areas or those of less than 25 kilometres in rural areas, except those that cross State or urban boundaries, were excluded from the survey. Freight movements involving tools of trade were also excluded.

As a minimum requirement, respondents were asked to provide information on the movements of freight for a specified two-week period in the middle of the quarter. Information for longer periods up to three months was obtained from some operators. Additionally, some respondents were asked to provide information for a sample of movements within the reporting period. Where necessary, the data were expanded to represent freight movements for the quarter.

- Rail, sea and air Apart from freight carried solely within urban areas, all rail, sea and air movements within Australia and its Territories by public and private organisations were included. International freight moving in or out of Australia or in transit was excluded.

#### COVERAGE OF THE SURVEY

- Road The registers of motor vehicle registration authorities at 30 June 1993 were used to identify the registered owners of commercial rigid and articulated trucks or trailers forming part of an articulated truck combination.

The resulting population (approximately 340,000 organisations) was divided into four strata depending on how many trucks/trailers were registered to that organisation: 1 to 2 trucks/trailers = Stratum 1; 3 to 9 trucks/trailers = Stratum 2; 10 to 19 trucks/trailers = Stratum 3; 20 or more trucks/trailers = Stratum 4. For the survey, a simple random sample of organisations was selected from each of strata 1 to 3, while all organisations in Stratum 4 were approached. A total of 4,400 organisations were included in the data collection phase of the survey.

The sample used in the survey has not been changed since the June quarter 1994 with a result that ceased operators have not been replaced by new operators. This tends to cause a decline in the estimates produced from the survey. Users should exercise caution when making comparisons over time.

- Rail, sea and air For rail, sea and air, all public authority and private business operators were included.

#### DEFINITIONS

A *prime contract* is an agreement to move freight, made between the original consignor of the freight and the transporter.

*Own account* freight is that owned and transported by the same legal entity.

*Freight* includes all goods and materials transported except tools of trade and freight moved by vehicles of the defence forces and by pipeline.

*Bulk* goods are those moved in an unpackaged or loose form, e.g. stone, sand, gravel, petroleum.

*Containerised* goods are those transported in a shipping container, e.g. a 20-foot equivalent unit (TEU).

*Dangerous* goods are those classified as dangerous or hazardous according to the *Australian Code for the Transport of Dangerous Goods by Road and Rail* (fifth edition).

*Refrigerated* goods are those requiring insulation, chilling or freezing during transportation.

*Commodities* are classified according to the 1 to 3-digit level codes of the Australian Transport Freight Commodity Classification (ATFCC) and Australian Pack Classification (APC). Information is aggregated and available for 32 broad commodity descriptions. See table 2 for the commodity descriptions. For air freight, only broad commodity descriptions are available.

*Origin* and *destination* represent the points at which the goods were picked up and to which they were delivered in accordance with the prime contract. This information was coded to the statistical subdivision level. In this publication only the statistical division level is shown.

*Quantity*. The unit of measurement is tonnes. Appropriate conversions are applied to data that are supplied as litres, cubic metres, etc.

*Mode* identifies whether the movement was by road, rail, sea or air.

#### RELIABILITY OF ESTIMATES

As with any new survey, some data collection problems were encountered, particularly in the road freight area. Below is a brief account of some of the issues that arose and the solutions adopted:

- Some companies recorded freight movements on the basis of regional zones and could not identify specific origins and destinations. In cases of large movements of a specific commodity, the company was usually able to supply sufficient information to code the relevant origin and destination. Where parcel or general freight was involved, the movement was split between the major statistical subdivisions based on population distribution or other relevant information provided by the company.
- Some companies provided only the dollar value of goods transported as no measure of weight was available from their information systems. Average prices of these goods were used to estimate the weight in tonnes.
- Some companies made many deliveries along a route and could not provide all the relevant details of the tonnage involved, drop-off points, etc. Discussions with respondents usually elicited sufficient information to estimate these movements. Where this was not satisfactory, an average weight of the freight was recorded between the origin and final destination.
- As names and addresses of survey respondents were obtained from the State/Territory motor vehicle registration authorities in 1993, company closures, takeovers and postal address changes, etc. led to difficulties in contacting some organisations. This contributed to the non-response rate and had an effect on the survey estimates. Where no previous information was available on which to base estimates for these companies, estimated values were not included for these units.

Since the estimates for road freight are based on data obtained from a sample rather than a complete enumeration, the data are subject to sampling variability. That is, they may differ from the figures that would have been obtained if all units had been included. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample of units was included. There are about 2 chances in 3 that a sample estimate will differ by less than one standard error from the figure that would have

been obtained if all units had been included, and about 19 chances in 20 that the difference will be less than two standard errors.

Another measure of sampling variability is the relative standard error which is obtained by expressing the standard error as a percentage of the estimate to which it refers. The relative standard error is a useful measure in that it provides an indication of the percentage errors likely to have occurred due to sampling. The accuracy of the estimates of different magnitude can be readily compared using the relative standard error.

As an example of the above, in table 1 the estimate of total road freight in the June quarter 1994 is 68,192 thousand tonnes. The RSE for this estimate is 5.9%, i.e. 4,023 thousand tonnes. This means there are about 2 chances in 3 that the value which would have been obtained from a complete enumeration would have been a figure in the range 64,169 thousand tonnes to 72,215 thousand tonnes and about 19 chances in 20 that it would have been in the range 60,145 thousand tonnes to 76,239 thousand tonnes.

In this publication, only estimates with relative standard errors of less than 25% are considered sufficiently reliable for most purposes. Data items with a relative standard error from 25% to 49.9% are preceded by a single asterisk (\*) while those with a relative standard error of 50% or more are replaced with two asterisks (\*\*). Relative standard errors for estimates contained in the tables are available from the ABS.

Sampling error is not the only type of inaccuracy which affects the quality of the data. Other types of error, referred to as non-sampling error, can be present in any type of collection, whether it be a complete enumeration or a sample survey. For example, non-sampling error can occur because of the inability to identify all freight movers in Australia, non-response to the survey, imperfections in reporting by respondents, definition or classification difficulties, or errors in transcribing and processing the data. While the effects of non-sampling error are not quantifiable, every effort is made to minimise the effect through the design and testing of questionnaires and the use of efficient operating procedures.

As the size of standard errors associated with some estimates is very large and the effect of non-sampling error on all estimates is unknown, it is important for users to consider whether the estimates from the survey are reliable enough for their purposes. Users should contact the ABS if they have any queries on the reliability of estimates for particular purposes.

#### AUSTRALIAN STANDARD GEOGRAPHICAL CLASSIFICATION

Statistics from the survey are classified according to the Australian Standard Geographical Classification (ASGC), Edition 2.4. This classification incorporates a number of hierarchical structures of geographic areas. The appropriate spatial units of the main structure of the ASGC used in the survey are defined as follows:

*Statistical Subdivisions* (SSDs) consist of one or more legal local government areas (LGAs) or suburbs in certain urban LGAs. They form intermediate size spatial units for the presentation of regional data.

*Statistical Divisions* (SDs), which consist of one or more SSDs, are designed to be relatively homogeneous regions characterised by identifiable social and economic units within a region, under the unifying influence of one or more major towns or cities.

A listing of statistical divisions and subdivisions appears on pages 16 and 17. For maps showing the boundaries of statistical areas, contact your nearest ABS office.

#### UNPUBLISHED STATISTICS

Unpublished data are available. Inquiries should be made to the contact shown at the front of this publication.

SYMBOLS AND OTHER  
USAGES

n.a.	not available
n.e.s	not elsewhere specified
n.p.	not available for publication but included in totals where applicable
n.s.	number suppressed — sample is too small to provide a reliable estimate
r	figure or series revised since previous issue
*	relative standard error between 25% and 49.9%
**	relative standard error of 50% or more
..	not applicable
—	nil or rounded to zero (including null cells)

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

W. McLennan  
Australian Statistician

# 1 FREIGHT MOVEMENTS<sup>1</sup> BY MODE

	<i>Rail</i>	<i>Road</i>	<i>Sea</i>	<i>Air</i>	<i>Total</i>
<i>Period</i>	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes
<b>1994-95</b>	r384 760	r221 429	r49 616	205	r656 010
<b>1994</b>					
June quarter	81 248	68 192	11 349	43	160 833
September quarter	108 831	57 107	12 546	53	178 537
December quarter	102 282	61 782	13 160	55	177 280
<b>1995</b>					
March quarter	84 324	51 322	12 015	50	147 712
June quarter	r89 324	r51 216	r11 895	47	r152 482
September quarter	106 622	42 117	11 956	52	160 747

<sup>1</sup>Freight movements which involve more than one operator or mode may be counted more than once.



Commodity	Rail	Road	Sea	Air	Total
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes
<b>Food and live animals</b>					
Live animals	103	2 208	4	n.a.	2 315
Meat and meat preparations	46	*333	6	n.a.	384
Cereal grains	2 248	1 520	178	n.a.	3 946
Vegetables and fruit	16 102	1 320	25	n.a.	17 448
Sugar, sugar preparations and honey	1 472	495	125	n.a.	2 093
Other foodstuffs	133	2 663	23	n.a.	2 820
<b>Beverages (alcoholic and non-alcoholic)</b>	2	482	12	n.a.	495
<b>Crude materials, inedible, except fuels</b>					
Cork and wood	395	3 619	32	n.a.	4 046
Textile fibres	106	**	2	n.a.	n.p.
Fertilizers (crude and manufactured)	45	*1 184	13	n.a.	1 242
Stone, sand and gravel	614	4 324	—	n.a.	4 938
Metalliferous ores and metal scrap	43 565	*1 208	5 176	n.a.	49 949
<b>Mineral fuels, lubricants and related materials</b>					
Coal, coke and briquettes	35 172	3 341	561	n.a.	39 074
Petroleum oil, motor spirit and other light oils	308	1 532	2 945	n.a.	4 784
Other petroleum oils and products	166	1 332	431	n.a.	1 930
Gases (natural and manufactured)	4	**	128	n.a.	n.p.
<b>Chemicals and related products, n.e.s.</b>	368	732	123	n.a.	1 223
<b>Manufactured goods (classified chiefly by material)</b>					
Paper and paper products	18	548	135	n.a.	700
Cement and cement clinker	558	614	473	n.a.	1 645
Clay products (bricks, tiles, pipes, etc.)	10	**	—	n.a.	n.p.
Other building materials	47	941	7	n.a.	996
Iron and steel	608	529	309	n.a.	1 446
Non-ferrous metals	92	97	25	n.a.	213
<b>Machinery and transport equipment</b>					
Machinery and equipment	23	*696	6	n.a.	724
Motor vehicles	1	*795	15	n.a.	810
Motor vehicle parts and accessories	—	n.p.	1	n.a.	n.p.
Other road vehicles/transport equipment	5	**	3	n.a.	n.p.
<b>Miscellaneous manufactured articles</b>					
Furniture	—	*116	2	n.a.	119
<b>Commodities and transactions, n.e.s.</b>					
Mail and postal packages	—	107	2	11	120
General freight <sup>2</sup>	1 765	4 043	126	41	5 975
Empty used containers and packaging	37	134	39	n.a.	210
<b>Other freight<sup>3</sup></b>	2 610	*5 391	1 028	n.a.	9 029
<b>Total</b>	<b>106 622</b>	<b>42 117</b>	<b>11 956</b>	<b>52</b>	<b>160 747</b>

<sup>1</sup> Freight movements which involve more than one operator or mode may be counted more than once.

<sup>2</sup> Commodities not classified by type, including personal effects and furniture, not for sale.

<sup>3</sup> All other commodities not elsewhere specified including animal feed, crude rubber, slag, ships and boats.

State/Territory Statistical division	Rail '000 tonnes	Road '000 tonnes	Sea '000 tonnes	Air '000 tonnes	Total '000 tonnes
<b>New South Wales and Australian Capital Territory</b>	<b>18 471</b>	<b>11 809</b>	<b>1 226</b>	<b>15</b>	<b>31 521</b>
Sydney	979	3 748	226	14	4 966
Hunter	11 804	2 512	444	—	14 760
Illawarra	2 089	1 501	555	—	4 145
Richmond-Tweed	28	*270	—	—	298
Mid North Coast	240	*526	1	—	767
Northern	276	*605	—	—	881
North Western	187	*559	—	—	745
Central West	2 003	266	—	—	2 270
South Eastern	61	**	—	—	n.p.
Murrumbidgee	140	*928	—	—	1 068
Murray	116	316	—	—	432
Far West	—	n.p.	—	—	n.p.
Australian Capital Territory <sup>2</sup>	—	37	—	1	38
<b>Victoria</b>	<b>11 347</b>	<b>9 488</b>	<b>1 714</b>	<b>16</b>	<b>12 545</b>
Melbourne	465	3 850	1 450	16	5 780
Barwon	172	895	223	—	1 290
Western District	23	991	—	—	1 014
Central Highlands	15	333	—	—	348
Wimmera	225	**	—	—	n.p.
Mallee	35	n.p.	—	—	n.p.
Loddon-Campaspe	68	*412	—	—	480
Goulburn	100	682	—	—	782
Ovens-Murray	49	262	—	—	311
East Gippsland	—	395	—	—	395
Gippsland	61	728	34	—	823
Off-shore areas	—	—	7	—	7
<b>Queensland</b>	<b>41 584</b>	<b>9 892</b>	<b>2 938</b>	<b>9</b>	<b>54 422</b>
Brisbane	845	2 849	452	7	4 153
Moreton	798	*1 112	—	—	1 910
Wide Bay-Burnett	2 408	*794	47	—	3 249
Darling Downs	209	*2 008	—	—	2 216
South-West	28	*189	—	—	217
Fitzroy	10 763	443	406	—	11 612
Central-West	19	*96	—	—	115
Mackay	10 791	**	75	—	n.p.
Northern	9 054	*651	7	1	9 713
Far North	6 454	*1 123	1 942	1	9 520
North-West	216	n.p.	6	—	n.p.
Off-shore areas	—	—	2	—	2
<b>South Australia</b>	<b>12 705</b>	<b>3 303</b>	<b>1 664</b>	<b>3</b>	<b>7 675</b>
Adelaide	495	897	362	3	1 757
Outer Adelaide	120	343	—	—	463
Yorke and Lower North	—	**	589	—	n.p.
Murray Lands	32	**	—	—	n.p.
South-East	1	*994	—	—	996
Eyre	260	*103	220	—	583
Northern	1 609	*313	494	—	2 416
<b>Western Australia</b>	<b>41 850</b>	<b>5 865</b>	<b>3 171</b>	<b>5</b>	<b>50 892</b>
Perth	2 107	1 700	224	4	4 035
South-West	429	*1 527	187	—	2 143
Lower Great Southern	45	**	10	—	n.p.
Upper Great Southern	1 146	*135	—	—	1 280
Midlands	1 031	706	—	—	1 737
South Eastern	305	606	—	—	911
Central	3 868	232	—	1	4 100
Pilbara	32 918	*141	2 563	1	35 623
Kimberley	—	**	1	—	n.p.
Off-shore areas	—	—	186	—	186

## 3

FREIGHT MOVEMENTS: ORIGIN OF FREIGHT BY MODE, SEPTEMBER QUARTER 1995 — *continued*

State/Territory Statistical division	Rail '000 tonnes	Road '000 tonnes	Sea '000 tonnes	Air '000 tonnes	Total '000 tonnes
<b>Tasmania</b>	<b>637</b>	<b>1 466</b>	<b>971</b>	<b>3</b>	<b>3 076</b>
Greater Hobart	37	*195	82	1	316
Southern	6	n.p.	—	—	n.p.
Northern	161	n.p.	87	1	n.p.
Mersey-Lyell	432	495	802	—	1 729
<b>Northern Territory</b>	<b>29</b>	<b>314</b>	<b>272</b>	<b>1</b>	<b>616</b>
Darwin	—	62	27	1	90
Northern Territory — Balance	29	252	241	—	523
Off-shore areas	—	—	3	—	3
<b>Total</b>	<b>106 622</b>	<b>42 117</b>	<b>11 956</b>	<b>52</b>	<b>160 747</b>

<sup>1</sup> Including rail movements for which no origin at statistical division level was supplied.

<sup>2</sup> Canberra and Australian Capital Territory — Balance Statistical Divisions.

## 4

## FREIGHT MOVEMENTS: DESTINATION OF FREIGHT BY MODE, SEPTEMBER QUARTER 1995

State/Territory Statistical division	Rail '000 tonnes	Road '000 tonnes	Sea '000 tonnes	Air '000 tonnes	Total '000 tonnes
<b>New South Wales and Australian Capital Territory</b>	<b>17 922</b>	<b>11 731</b>	<b>4 783</b>	<b>13</b>	<b>34 449</b>
Sydney	1 197	4 082	1 369	12	6 661
Hunter	12 310	1 658	882	—	14 851
Illawarra	3 744	1 130	2 494	—	7 368
Richmond-Tweed	16	*265	—	—	281
Mid North Coast	75	559	1	—	634
Northern	169	*588	—	—	757
North Western	62	*459	—	—	521
Central West	105	1 196	—	—	1 301
South Eastern	33	248	37	—	318
Murrumbidgee	34	*807	—	—	841
Murray	37	335	—	—	372
Far West	9	n.s.	—	—	n.p.
Australian Capital Territory <sup>2</sup>	57	**	—	1	n.p.
<b>Victoria</b>	<b>11 512</b>	<b>9 218</b>	<b>1 412</b>	<b>12</b>	<b>12 154</b>
Melbourne	920	3 014	970	12	4 916
Barwon	87	758	190	—	1 035
Western District	18	1 266	210	—	1 495
Central Highlands	24	*412	—	—	436
Wimmera	39	*457	—	—	496
Mallee	33	*465	—	—	499
Loddon-Campaspe	77	607	—	—	685
Goulburn	22	606	—	—	629
Ovens-Murray	73	*536	—	—	609
East Gippsland	1	287	—	—	289
Gippsland	5	808	8	—	821
Off-shore areas	—	—	34	—	34

## 4

FREIGHT MOVEMENTS: DESTINATION OF FREIGHT BY MODE, SEPTEMBER QUARTER 1995 — *continued*

	Rail	Road	Sea	Air	Total
State/Territory Statistical division	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes
<b>Queensland</b>	<b>41 842</b>	<b>10 136</b>	<b>3 350</b>	<b>11</b>	<b>55 338</b>
Brisbane	1 466	3 090	752	8	5 315
Moreton	346	*1 249	—	—	1 595
Wide Bay-Burnett	2 360	*650	—	—	3 010
Darling Downs	141	*1 888	60	—	2 089
South-West	42	*283	—	—	324
Fitzroy	7 916	457	2 140	—	10 512
Central-West	10	*66	—	—	77
Mackay	13 642	*617	131	—	14 391
Northern	9 201	*548	158	1	9 907
Far North	6 481	*1 173	108	1	7 763
North-West	237	115	—	—	353
Off-shore areas	—	—	1	—	1
<b>South Australia</b>	<b>12 451</b>	<b>3 206</b>	<b>885</b>	<b>4</b>	<b>6 547</b>
Adelaide	615	1 617	604	4	2 840
Outer Adelaide	—	191	—	—	191
Yorke and Lower North	—	*51	13	—	64
Murray Lands	1	186	—	—	187
South-East	—	*784	—	—	784
Eyre	260	*113	43	—	416
Northern	1 564	*264	225	—	2 054
<b>Western Australia</b>	<b>142 170</b>	<b>5 941</b>	<b>612</b>	<b>7</b>	<b>48 730</b>
Perth	3 271	*1 689	407	5	5 372
South-West	916	*1 428	—	—	2 343
Lower Great Southern	263	*600	—	—	863
Upper Great Southern	251	n.p.	—	—	n.p.
Midlands	104	605	—	—	709
South Eastern	802	822	60	—	1 684
Central	369	368	51	1	789
Pilbara	36 177	*221	58	1	36 457
Kimberley	—	**	6	—	n.p.
Off-shore areas	—	—	31	—	31
<b>Tasmania</b>	<b>637</b>	<b>1 466</b>	<b>845</b>	<b>3</b>	<b>2 951</b>
Greater Hobart	98	304	214	1	617
Southern	—	*173	—	—	173
Northern	57	*566	298	2	923
Mersey-Lyell	482	424	333	—	1 238
<b>Northern Territory</b>	<b>88</b>	<b>420</b>	<b>67</b>	<b>1</b>	<b>578</b>
Darwin	—	252	41	1	294
Northern Territory — Balance	88	168	19	1	276
Off-shore areas	—	—	7	—	7
<b>Total</b>	<b>106 622</b>	<b>42 117</b>	<b>11 956</b>	<b>52</b>	<b>160 747</b>

\* Including rail movements for which no destination at statistical division level was supplied.

\*\* Canberra and Australian Capital Territory — Balance Statistical Divisions.

## 5

## FREIGHT MOVEMENTS: ORIGIN AND DESTINATION BY STATE AND MODE, SEPTEMBER QUARTER 1995

Origin	Destination						
	New South Wales and Australian Capital Territory	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes
RAIL							
New South Wales and Australian Capital Territory	17 510	349	292	180	130	..	10
Victoria	152	791	124	137	140	..	4
Queensland	137	52	41 358	12	24	..	—
South Australia	120	270	47	2 047	146	..	75
Western Australia	2	49	20	50	41 729	..	—
Tasmania	..	..	..	..	..	637	..
Northern Territory	1	1	—	26	1	..	—
ROAD							
New South Wales and Australian Capital Territory	9 479	1 062	916	234	n.p.	..	n.s.
Victoria	1 178	7 092	402	678	n.p.	..	n.s.
Queensland	830	212	8 725	56	*33	..	*37
South Australia	184	*762	52	2 207	*37	..	60
Western Australia	n.p.	n.p.	n.p.	n.p.	5 654	..	n.s.
Tasmania	..	..	..	..	..	1 466	..
Northern Territory	n.s.	n.s.	n.s.	n.s.	n.s.	..	275
SEA							
New South Wales and Australian Capital Territory	359	338	112	200	44	173	—
Victoria	775	56	469	19	105	270	22
Queensland	426	117	2 392	—	—	—	2
South Australia	675	264	238	370	13	103	—
Western Australia	2 064	322	57	279	441	2	6
Tasmania	464	314	81	18	9	85	—
Northern Territory	20	1	—	—	—	213	38
AIR							
New South Wales and Australian Capital Territory	1	6	4	2	2	—	—
Victoria	6	—	2	2	3	3	—
Queensland	3	1	3	—	—	—	—
South Australia	1	1	—	—	1	—	—
Western Australia	1	2	—	—	2	—	—
Tasmania	—	2	—	—	—	—	—
Northern Territory	—	—	—	—	—	—	—

## 6

FREIGHT MOVEMENTS BY SELECTED METHOD OF TRANSPORT<sup>1</sup>

	<i>Bulk</i>	<i>Dangerous</i>	<i>Refrigerated</i>	<i>Containerised</i>
<i>Period</i>	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes
<b>1994-95</b>	r513 880	r35 112	r11 862	r15 934
<b>1994</b>				
June quarter	107 591	9 436	1 797	3 610
September quarter	144 333	11 357	2 386	3 791
December quarter	136 997	9 187	3 738	4 217
<b>1995</b>				
March quarter	114 237	7 128	2 840	3 933
June quarter	r118 313	r7 440	r2 898	r3 992
September quarter	134 574	7 134	1 724	3 763

<sup>1</sup>Excluding freight not transported by any of the methods shown. A single freight movement can appear under more than one method of transport, e.g. chemicals and related products, n.e.s. can appear under both *Bulk* and *Dangerous*.

Commodity	Bulk	Dangerous	Refrigerated	Containerised
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes
<b>Food and live animals</b>				
Live animals	..	..	..	..
Meat and meat preparations	..	..	*316	88
Cereal grains	3 703	..	..	135
Vegetables and fruit	16 548	..	469	*217
Sugar, sugar preparations and honey	2 072	..	..	4
Other foodstuffs	1 520	..	894	71
<b>Beverages (alcoholic and non-alcoholic)</b>	*69	..	n.p.	*22
<b>Crude materials, inedible, except fuels</b>				
Cork and wood	1 958	..	..	71
Textile fibres	**	..	..	116
Fertilizers (crude and manufactured)	*1 048	*68	..	**
Stone, sand and gravel	4 595	..	..	n.p.
Metalliferous ores and metal scrap	49 704	..	..	n.p.
<b>Mineral fuels, lubricants and related materials</b>				
Coal, coke and briquettes	39 049	..	..	n.p.
Petroleum oil, motor spirit and other light oils	4 311	4 784	..	—
Other petroleum oils and products	1 329	598	..	n.p.
Gases (natural and manufactured)	**	**	..	n.p.
<b>Chemicals and related products, n.e.s.</b>	715	864	n.p.	166
<b>Manufactured goods (classified chiefly by material)</b>				
Paper and paper products	n.p.	..	..	65
Cement and cement clinker	1 288	..	..	n.p.
Clay products (bricks, tiles, pipes, etc.)	—	..	..	n.p.
Other building materials	327	—	..	2
Iron and steel	—	..	..	n.p.
Non-ferrous metals	—	..	..	14
<b>Machinery and transport equipment</b>				
Machinery and equipment	..	..	..	n.p.
Motor vehicles	..	..	..	—
Motor vehicle parts and accessories	..	..	..	—
Other road vehicles/transport equipment	..	..	..	**
<b>Miscellaneous manufactured articles</b>				
Furniture	..	..	..	2
<b>Commodities and transactions, n.e.s.</b>				
Mail and postal packages	..	..	..	n.p.
General freight <sup>2</sup>	..	..	..	1 676
Empty used containers and packaging	..	..	..	20
<b>Other freight<sup>3</sup></b>	5 600	n.p.	—	847

<sup>1</sup> Excluding freight not transported by any of the methods shown. A single freight movement can appear under more than one method of transport, e.g. chemicals and related products, n.e.s. can appear under both *Bulk* and *Dangerous*.

<sup>2</sup> Commodities not classified by type, including personal effects and furniture, not for sale.

<sup>3</sup> All other commodities not elsewhere specified including animal feed, crude rubber, slag, ships and boats.

## LISTING OF SUBDIVISIONS IN STATISTICAL DIVISIONS

### New South Wales

Sydney  
 Inner Sydney  
 Eastern Suburbs  
 St George-Sutherland  
 Canterbury-Bankstown  
 Fairfield-Liverpool  
 Outer South Western Sydney  
 Inner Western Sydney  
 Central Western Sydney  
 Outer Western Sydney  
 Blacktown-Baulkham Hills  
 Lower Northern Sydney  
 Hornsby-Ku-ring-gai  
 Northern Beaches  
 Gosford-Wyong

Hunter  
 Newcastle  
 Hunter SD Bal.

Illawarra  
 Wollongong  
 Illawarra SD Bal.

Richmond-Tweed  
 Tweed Heads  
 Richmond-Tweed SD Bal.

Mid-North Coast  
 Clarence  
 Hastings

Northern  
 Northern Slopes  
 Northern Tablelands  
 North Central Plain

North Western  
 Central Macquarie  
 Macquarie-Barwon  
 Upper Darling

Central West  
 Bathurst-Orange  
 Central Tablelands (excl.  
 Bathurst-Orange)  
 Lachlan

South Eastern  
 Queanbeyan  
 Southern Tablelands (excl.  
 Queanbeyan)  
 Lower South Coast  
 Snowy

Murrumbidgee  
 Central Murrumbidgee  
 Lower Murrumbidgee

### New South Wales — continued

Murray  
 Albury  
 Upper Murray (excl. Albury)  
 Central Murray  
 Murray-Darling

Far West

Off-Shore Areas & Migratory

**Victoria**

Melbourne  
 Central Melbourne  
 Western Inner Melbourne  
 Western Outer Melbourne  
 Western Fringe Melbourne  
 Northern Inner Melbourne  
 Northern Middle Melbourne  
 Northern Fringe Melbourne  
 Northern Outer Melbourne  
 Eastern Inner Melbourne  
 Eastern Middle Melbourne  
 Eastern Outer Melbourne  
 Eastern Fringe Melbourne  
 Southern Inner Melbourne  
 Southern Outer Melbourne  
 South Eastern Inner  
 Melbourne  
 South Eastern Outer  
 Melbourne  
 Mornington Peninsula Inner  
 Mornington Peninsula Outer

Barwon  
 Greater Geelong City Part A  
 East Barwon  
 West Barwon

Western District  
 Hopkins  
 Glenelg

Central Highlands  
 Ballarat City  
 East Central Highlands  
 West Central Highlands

Wimmera  
 South Wimmera  
 North Wimmera

Mallee  
 Mildura  
 West Mallee  
 East Mallee

### Victoria — continued

Loddon-Campaspe  
 Greater Bendigo City Part A  
 Northern Loddon-Campaspe  
 Central Loddon-Campaspe  
 South Loddon-Campaspe

Goulburn  
 Shepparton-Mooroopna  
 North Goulburn  
 South Goulburn  
 South West Goulburn

Ovens-Murray  
 Wodonga  
 North Ovens-Murray  
 South Ovens-Murray

East Gippsland  
 Gippsland Lakes  
 Mitchell-Snowy  
 Macalister-Avon

Gippsland  
 Latrobe Valley  
 West Gippsland  
 Strzelecki  
 South Gippsland

Off-Shore Areas & Migratory

**Queensland**

Brisbane  
 Brisbane City  
 Albert Shire Part A  
 Baudestert Shire Part A  
 Caboolture Shire Part A  
 Ipswich - Moreton Shire Part A  
 Logan City  
 Pine Rivers Shire  
 Redcliffe City  
 Redland Shire

Moreton  
 Gold Coast City  
 Albert Shire Part B  
 Sunshine Coast  
 Moreton SD Bal.

Wide Bay-Burnett  
 Bundaberg  
 Wide Bay-Burnett SD Bal.

Darling Downs

South-West



**LISTING OF SUBDIVISIONS IN STATISTICAL DIVISIONS — *continued***

**Queensland — *continued***

Fitzroy  
 Rockhampton  
 Gladstone  
 Fitzroy SD Bal.

Central-West

Mackay  
 Mackay City Part A  
 Mackay SD Bal.

Northern  
 Townsville City Part A  
 Thuringowa City Part A  
 Northern SD Bal.

Far North  
 Cairns  
 Far North SD Bal.

North-West

Off-Shore Areas & Migratory

**South Australia**

Adelaide  
 Northern  
 Western  
 Eastern  
 Southern

Outer Adelaide  
 Barossa  
 Kangaroo Island  
 Onkaparinga  
 Fleurieu

Yorke and Lower North  
 Yorke  
 Lower-North

Murray Lands  
 Riverlands  
 Murray Mallee

South-East  
 Upper South-East  
 Lower South-East

Eyre  
 Lincoln  
 West Coast

**South Australia — *continued***

Northern  
 Whyalla  
 Pirie  
 Flinders Ranges  
 Far-North

Off-Shore Areas & Migratory

**Western Australia**

Perth  
 Central Metropolitan  
 East Metropolitan  
 North Metropolitan  
 South-West Metropolitan  
 South-East Metropolitan

South West  
 Dale  
 Preston  
 Vasse  
 Blackwood

Lower Great Southern  
 Pallinup  
 King

Upper Great Southern  
 Hotham  
 Lakes

Midlands  
 Moore  
 Avon  
 Campion

South Eastern  
 Lefroy  
 Johnstone

Central  
 Gascoyne  
 Carnegie  
 Greenough River

Pilbara  
 De Grey  
 Fortescue

Kimberley  
 Ord  
 Fitzroy

Off-Shore Areas & Migratory

**Tasmania**

Greater Hobart

Southern

Northern  
 Greater Launceston  
 Central North  
 North Eastern

Mersey-Lyell  
 Burnie-Devonport  
 North Western Rural  
 Lyell

Off-Shore Areas & Migratory

**Northern Territory**

Darwin  
 Darwin City  
 Palmerston-East Arm

Northern Territory - Bal.  
 Darwin Rural Areas  
 Bathurst-Melville  
 Alligator  
 Daly  
 East Arnhem  
 Lower Top End NT  
 Barkly  
 Central NT

Off-Shore Areas & Migratory

**Australian Capital Territory**

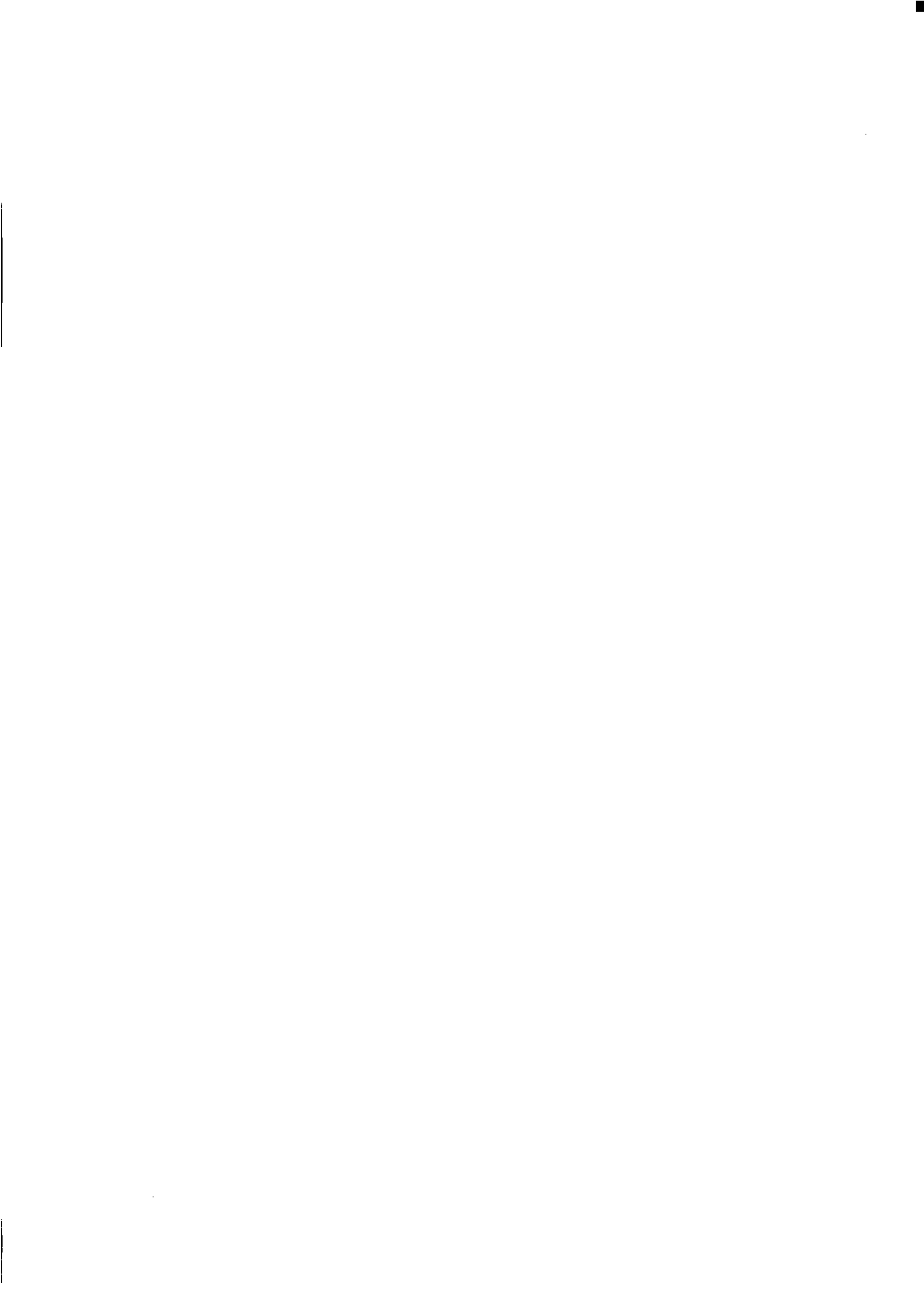
Canberra  
 Central Canberra  
 Belconnen  
 Woden Valley  
 Weston Creek  
 Tuggeranong  
 Outer Canberra

Australian Capital Territory - Bal.

**Other Territories**

Other Territories





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