



Bureau of Transport Economics

## Information Paper 46



# COASTAL FREIGHT IN AUSTRALIA, 1998—99



The Bureau of Transport Economics undertakes applied economic research relevant to the portfolio of Transport and Regional Services. This research contributes to an improved understanding of the factors influencing the efficiency and growth of these sectors and the development of effective policies.

A list of recent publications appears on the inside back cover of this publication.

Bureau of Transport Economics

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INFORMATION PAPER  
46

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COASTAL FREIGHT IN AUSTRALIA,  
1998-99

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## **FOREWORD**

This is the latest in a series of papers that provide information on coastal freight movements between Australian ports. The paper covers cargoes loaded and discharged at Australian ports during 1998–99. It does not include information about international cargo movements to and from Australian or overseas ports. The previous papers in this series are available at <http://www.dotrs.gov.au/bte/publist4.htm>, listed under Maritime Information Papers.

In addition to coastal freight movements, this paper covers the Australian trading fleet for the year ended 30 June 1999.

The data and tables were compiled by Lara Smigielski under the supervision of Stephen Wheatstone.

As the BTE intends to continue to produce annual updates of this publication to meet the needs of users, comments would be greatly appreciated. A feedback form is enclosed for your comments.

Should you wish to know more about these statistics, or related publications, please phone (02) 6274 6751, e-mail [data.team@dotrs.gov.au](mailto:data.team@dotrs.gov.au) or write to:

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June 2000

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Australian Maritime Safety Authority (AMSA)	Perkins Shipping Pty Ltd
Bunbury Port Authority	Port Hedland Port Authority
Bundaberg Port Authority	Port Kembla Port Corporation
Burnie Port Corporation	Port of Brisbane Corporation
Cairns Port Authority	Port of Broome
Chevron Australia Pty Ltd	Port of Devonport Corporation
Coal Operations Australia Ltd	Port of Launceston Pty Ltd
CRDC Wyndham Port	Port of Melbourne
Dampier Port Authority	Port of Newcastle
Darwin Port Authority	Port of Portland Pty Ltd
Derby-West Kimberley Shire Administration	Ports Corporation of Stanley
Esperance Port Authority	Ports Corporation Queensland
Flinders Island Ports Company	Ports Corporation South Australia
Fremantle Port	Robe River Associates
Geelong Port Pty Ltd	Rockhampton Port Authority
Geraldton Port Authority	Samancor Gemco
Gippsland Ports	Sealink
Gladstone Port Authority	Southern Shipping
Hobart Ports Corporation	Sydney Ports
King Island Ports Corporation Pty Ltd	TOLL Westernport
	Townsville Port Authority
	Waterways Authority (NSW)

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## EXPLANATORY NOTES

### SCOPE AND COVERAGE

This edition of *Coastal Freight in Australia* has been expanded to cover information on the Australian Trading Fleet. The paper is now set out in two parts.

The first part of this publication contains details of interstate and intrastate cargo loaded and discharged at Australian ports for the financial year 1998–99. It excludes trade from small craft at isolated locations in northern and western regions of Australia. Cargo loaded or discharged at Christmas Island, the Cocos (Keeling) Islands and Norfolk Island is also excluded.

The second part of this publication—tables 10 and 11 and figure 3—contains details of the Australian trading fleet as at 30 June 1999. This information was previously contained in the series *Australian Shipping*, produced by the then Maritime Transport Group of the Department of Workplace Relations and Small Business. The last such publication was *Australian Shipping 1997*<sup>1</sup>.

### SOURCES

Tonnage figures and pack details have been derived from data supplied by port authorities.

To obtain tonne-kilometre figures, a port-to-port distance figure (including pilotage) was applied to individual port tonnages. Where optional routes within Australia could reasonably be used, the shorter distance has been used. The main reference for distances was *The Ports of Australia*, 13<sup>th</sup> edition, 1993, published by the Australian Chamber of Shipping.

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<sup>1</sup> Users of *Australian Shipping* can now find the coastal shipping permit information in the BTE's publication *Waterline* (see BTE, 1999<sup>2</sup>). Other information covered by *Australian Shipping* can be found in publications including the *Australasian Shipping Directory*, (Baird Publications); *Lloyds Maritime Directory 1998 Vol 1*; *Lloyds List Publications 1998*; and *Fairplay World Shipping Directory, 1999-2000*, (Fairplay Publications 1999).

<sup>2</sup> Waterline 21, Table 2, available at <http://www.dotrs.gov.au/bte/wline.htm>



The vessel details for the Australian trading fleet have been derived using Lloyd's Maritime Services (unpublished), from data supplied by shipping companies and from knowledge of the industry.

## DEFINITIONS AND ABBREVIATIONS

**Australian trading fleet** Cargo vessels operated by Australian companies to and from Australia with Australian crews, vessels licensed to operate on the Australian coast (meaning they can trade between States and the Northern Territory) and vessels operating intra-state. The fleet includes vessels that carry cargo and passengers, but does not include vessels that carry passengers only.

### **Australian Transport Freight Commodity Code Classification (ATFCC)**

A systematic classification of commodities transported by sea, air, road, rail and pipeline, developed jointly by the former Commonwealth Department of Transport and the Australian Bureau of Statistics. It has been designed to facilitate standardised classification of goods carried by these modes to, from and within Australia. The ATFCC is aligned with the Standard International Trade Classification (SITC) at divisional (2-digit)<sup>2</sup> level of classification.

**DWT (Deadweight Tonnage)** The measure of weight that a vessel can carry, including cargo, bunkers, water and stores. Expressed in tonnes, it is the difference between the displacement of the vessel loaded to its summer loadline and the light displacement, or the total weight of the vessel.

**Freight** Includes all cargo lifted, including empty containers, but excludes ship stores and bunkers.

**GRT (Gross Tonnage)** The measure of the internal capacity of a ship that is available within the hull and enclosed spaces above deck for cargo, stores, passengers and crew (with certain exceptions). It is expressed as the volume in cubic metres divided by 2.83.

**Major Trading Fleet** Vessels of 2000 DWT or more.

**Minor Trading Fleet** Vessels of 150 GRT but less than 2000 DWT.

**nes** not elsewhere stated.

**State of origin or destination** Includes Northern Territory.

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<sup>2</sup> The ATFCC is a four-tiered classification. At the most detailed level there are about 300 commodity categories each identified by a four-digit item code. At the next level there are about 160 categories each identified by a three-digit group code. The commodity groups are assembled into 67 commodity divisions at the two-digit level of the classification, which, in turn, are aggregated to 10 sections at the broadest level of the ATFCC. Sections of the ATFCC are identified by a one-digit code.

For example, iron and steel wire (6794) at 4-digit level is a member of the iron and steel basic products subdivision (679), which is a member of iron and steel division (67), which in turn is a member of the manufactured goods classified chiefly by materials (6).

**tonne** All figures are measured in mass tonnes (1000 kilograms) unless otherwise stated.

**tonne-kilometres** The product of tonnes of freight carried between two ports and the sea route distance, including pilotage, between the two ports.

**Transhipped cargo** Recorded for both inbound and outbound to the port of transshipment and assigned to Australian Transport Freight Commodity Code Classification (ATFCC), Division 93.

## **STATISTICAL ISSUES**

Statistics provided by port authorities on tonnages loaded and discharged do not always balance. The most common reasons for this lack of consistency are:

- Port authorities record cargo as having been discharged during the month the vessel arrives in port. Similarly, cargo loaded is recorded against the month of the vessel's departure. Consequently, cargo loaded at the end of June and discharged in early July will not be recorded in the same financial year by the two ports. The effect of this may be offset to some degree at the end of the financial year, when the reverse applies.
- A port authority's record of cargo loaded and discharged is based on information provided by the ships' agents. This information could be incorrect because the agent may provide only summary statistics for different types of cargo. The agent may also not know the true origin or destination of particular consignments, and may therefore record the last or next port of call respectively. This particularly applies to liquid and dry bulk commodities, where the cargo originates from, or is destined for, several ports.
- The commodity recorded by the agent may not be classified in the same way at the ports of loading and discharge. For example, gypsum loaded in South Australia is classified as fertiliser at NSW ports, and petroleum products are classified as kerosene in Cairns.

The BTE has endeavoured to reconcile some of these data problems as far as possible, but takes no responsibility for correctness or accuracy. Reconciliation was not attempted for many of the smaller shipments.

Figures in tables may not add to totals due to rounding.

TABLE 1 AUSTRALIAN COASTAL FREIGHT SUMMARY, 1994—95 TO 1998—99

Year	Loaded (kilotonnes)			Discharged (kilotonnes)		
	Interstate	Intrastate	Total	Interstate	Intrastate	Total
1994—95	33 692	15 498	49 190	34 180	16 286	50 466
1995—96	31 982	15 815	47 798	31 808	16 229	48 037
1996—97	32 581	16 562	49 144	32 505	17 530	50 035
1997—98	34 322	18 200	52 522	34 741	18 968	53 710
1998—99	31 934	16 454	48 388	31 047	17 053	48 100

Note: Reasons for discrepancies between loaded and discharged tonnages in this and other tables are listed in the section Statistical Issues on page 2.

Source: Australian port authorities personal communications.

TABLE 2 COASTAL FREIGHT LOADED BY MAJOR COMMODITY, 1994—95 TO 1998—99

ATFCC code	Commodity	1994—95	1995—96	1996—97	1997—98	1998—99
<i>tonnes (millions)</i>						
281	Iron ore	8.4	9	8.3	8.2	8.6 <sup>b</sup>
282	Bauxite/alumina	10.2	9.6	10.1	10.3	9.9
331	Crude oil	7.2	7.6	8.3	8.9	6.0
33	Petroleum products <sup>a</sup>	6.3	6.5	6.9	7.2	6.9
	Other cargo	17.1	15.1	15.6	18.0	17.0
	Total	49.2	47.8	49.1	52.5	48.4
<i>tonne-kilometres (billions)</i>						
281	Iron ore	38.7	40.4	38.1	40.9	40.3 <sup>b</sup>
282	Bauxite/alumina	22.5	21.1	22.2	22.4	21.8
331	Crude oil	13.2	16.3	18.8	13.5	15.2
33	Petroleum products <sup>a</sup>	10.3	9.7	12.9	10.3	10.7
	Other cargo	24.5	18.6	20.7	19.6	20.9
	Total	109.2	106.1	112.7	106.7	108.9

a. Excludes crude oil (AFTCC code 331) in row above.

b. Adjusted to more closely balance with discharged input/output tables for all the iron ore ports.

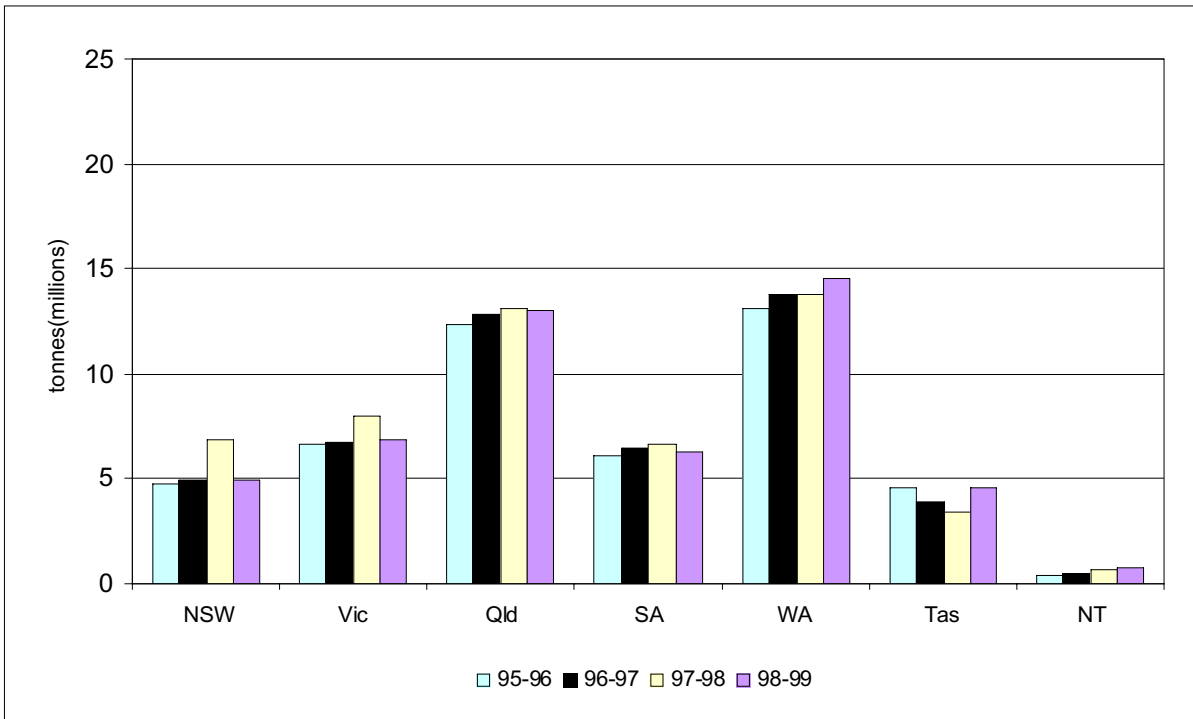
Source: Australian port authorities personal communications.

TABLE 3 TOTAL COASTAL FREIGHT FLOWS, 1998—99

State of origin	State of destination (kilotonnes)							
	NSW	Vic	Qld	SA	WA	Tas	NT	TOTAL
NSW	1 651	1 407	540	1 134	48	122	8	4 910
Vic	2 793	411	993	502	274	1 800	56	6 829
Qld	1 397	651	10 534	94	86	230	74	13 066
SA	2 597	1 063	757	1 440	125	298	0	6 280
WA	6 832	1 861	374	613	1 945	53	339	12 016
Tas	1 677	2 260	26	128	110	330	2	4 533
NT	125	0	0	0	4	480	145	754
Total	17 072	7 653	13 223	3 910	2 594	3 313	623	48 388

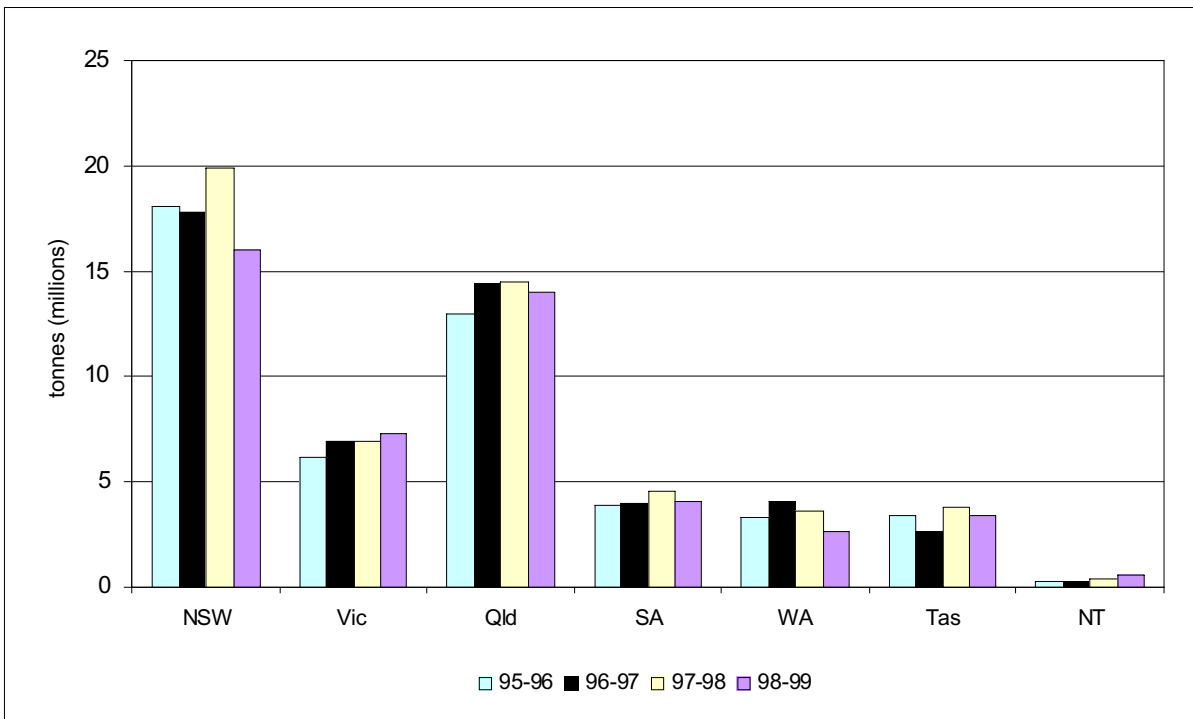
Source: Australian port authorities personal communications.

FIGURE 1 COASTAL FREIGHT LOADED BY STATE, 1995-96 TO 1998-99



Source: BTE Coastal Freight Database, unpublished.

FIGURE 2 COASTAL FREIGHT DISCHARGED BY STATE, 1995-96 TO 1998-99



Source: BTE Coastal Freight Database, unpublished.

TABLE 4 COASTAL FREIGHT FLOWS BETWEEN AUSTRALIAN PORTS, 1998—99

<i>Port of origin</i>	<i>Port of destination (kilotonnes)</i>						
	<i>Sydney</i>	<i>Rest of NSW</i>	<i>Melbourne</i>	<i>Rest of Vic</i>	<i>Brisbane</i>	<i>Rest of Qld</i>	<i>Adelaide</i>
Sydney	0	7	20	29	89	159	3
Rest of NSW	11	1 632	221	1 137	131	161	6
Melbourne	276	20	0	63	42	10	343
Rest of Vic	2 468	29	0	347	627	314	100
Brisbane	70	4	198	52	121	1 583	48
Rest of Qld	187	1 136	342	59	600	8 230	0
Adelaide	166	76	439	45	427	60	14
Rest of SA	551	1 804	486	93	248	22	1 371
Fremantle	32	0	67	540	271	17	37
Rest of WA	280	6 520	588	666	86	0	566
Hobart	0	35	47	190	5	9	42
Rest of Tas	473	1 169	2 018	5	1	11	0
Darwin	0	1	0	0	0	0	0
Rest of NT	0	124	0	0	0	0	0
<b>Total</b>	<b>4 514</b>	<b>12 558</b>	<b>4 426</b>	<b>3 227</b>	<b>2 646</b>	<b>10 577</b>	<b>2 529</b>

TABLE 4 COASTAL FREIGHT FLOWS BETWEEN AUSTRALIAN PORTS, 1998—99

(Continued)

<i>Port of origin</i>	<i>Port of destination (kilotonnes)</i>							<i>Total</i>
	<i>Rest of SA</i>	<i>Fremantle</i>	<i>Rest of WA</i>	<i>Hobart</i>	<i>Rest of Tas</i>	<i>Darwin</i>	<i>Rest of NT</i>	
Sydney	0	0	0	0	15	0	0	322
Rest of NSW	1 125	12	36	14	94	8	0	4 588
Melbourne	56	155	0	12	1 341	32	0	2 350
Rest of Vic	3	23	96	286	161	24	0	4 479
Brisbane	0	43	0	4	16	11	6	2 157
Rest of Qld	45	37	6	15	196	53	4	10 909
Adelaide	21	113	0	10	0	0	0	1 370
Rest of SA	35	12	0	134	154	0	0	4 910
Fremantle	0	20	797	7	11	338	0	2 137
Rest of WA	10	1 128	0	28	6	1	0	9 879
Hobart	73	10	0	0	9	0	0	420
Rest of Tas	13	100	0	296	25	2	0	4 113
Darwin	0	4	1	0	0	1	81	88
Rest of NT	0	0	0	0	480	62	0	666
<b>Total</b>	<b>1 381</b>	<b>1 657</b>	<b>937</b>	<b>806</b>	<b>2 507</b>	<b>532</b>	<b>92</b>	<b>48 388</b>

Source: Australian port authorities personal communications.

TABLE 5 COASTAL FREIGHT LOADED BY PORT AND PACK TYPE, 1998—99

<i>Port of origin</i>	<i>Bulk (kilotonnes)</i>		<i>Non bulk (kilotonnes)</i>		<i>Total (kilotonnes)</i>
	<i>Dry bulk</i>	<i>Liquid bulk</i>	<i>Container</i>	<i>Other</i>	
Sydney	1	266	54	0	322
Rest of NSW	3 095	176	50	1 267	4 588
Melbourne	0	1 044	1 306	0	2 350
Rest of Vic	160	4 054	3	262	4 479
Brisbane	36	2 072	46	4	2 157
Rest of Qld	10 590	77	63	179	10 909
Adelaide	625	739	7	0	1 370
Rest of SA	4 395	515	0	0	4 910
Fremantle	556	1 485	66	30	2 137
Rest of WA	7 015	2 851	12	1	9 879
Hobart	144	261	15	0	420
Rest of Tas	2 543	5	1 407	159	4 113
Darwin	0	1	6	81	88
Rest of NT	618	0	8	40	666
<b>Total</b>	<b>29 778</b>	<b>13 545</b>	<b>3 043</b>	<b>2 023</b>	<b>48 388</b>

*Source:* Australian port authorities personal communications.

TABLE 6 COASTAL FREIGHT DISCHARGED BY PORT AND PACK TYPE, 1998—99

<i>Port of destination</i>	<i>Bulk (kilotonnes)</i>		<i>Non bulk (kilotonnes)</i>		<i>Total (kilotonnes)</i>
	<i>Dry bulk</i>	<i>Liquid bulk</i>	<i>Container</i>	<i>Other</i>	
Sydney	845	2 831	3	0	3 679
Rest of NSW	12 117	181	27	16	12 341
Melbourne	1 296	1 398	1 435	0	4 130
Rest of Vic	1 121	854	0	1 218	3 194
Brisbane	1 295	1 324	51	0	2 670
Rest of Qld	8 846	2 382	61	72	11 361
Adelaide	1 425	1 221	20	0	2 667
Rest of SA	1 290	102	0	0	1 393
Fremantle	183	1 157	379	7	1 726
Rest of WA	48	866	25	0	939
Hobart	346	319	10	0	675
Rest of Tas	1 088	470	1 059	161	2 779
Darwin	68	316	33	40	457
Rest of NT	0	0	0	90	90
<b>Total</b>	<b>29 971</b>	<b>13 422</b>	<b>3 103</b>	<b>1 604</b>	<b>48 100</b>

*Source:* Australian port authorities personal communications.

TABLE 7 TASMANIAN FREIGHT LOADED AND DISCHARGED BY COMMODITY, 1998—99

ATFCC code	Description	Loaded in Tasmania (kilotonnes)	Discharged in Tasmania (kilotonnes)
00	Food and live animals	22	5
01	Meat and meat preparations	25	1
02	Dairy products and birds eggs	31	4
03	Fish crustaceans and molluscs	4	3
04	Cereals and cereal preparations	0	63
05	Vegetables and fruit	303	27
06	Sugars sugar preparations and honey	32	18
08	Feeding stuff for animals	0	3
09	Miscellaneous edible products and preparations	44	103
10	Beverages and tobacco	1	0
11	Beverages	35	27
21	Hides skins and furskins raw	5	0
24	Cork and wood	109	1
25	Pulp and waste paper	17	90
26	Textile fibres	17	0
27	Crude fertilisers and crude minerals	83	80
28	Metalliferous ores and metal scrap	1 348	1 155
29	Crude animal and vegetable materials nes	10	0
32	Coal, coke and briquettes	0	77
33	Petroleum and petroleum products	0	730
34	Gases, natural and manufactured	0	34
41	Animal oils and fats	1	0
50	Chemicals and related materials nes	1	10
51	Organic chemicals	3	0
52	Inorganic chemicals	276	18
56	Fertilisers manufactured	40	42
59	Chemical materials and products nes	0	21
60	Manufactured goods classified by material	0	1
63	Cork and wood manufactures (excluding furniture)	16	6
64	Paper, paperboard and articles of paper	462	29
65	Textiles: yarn, fabrics and made-up articles	3	0
66	Non-metallic mineral manufactures nes	1 157	47
67	Iron and steel	9	35
68	Non-ferrous metals	67	0
72	Machinery for specialised particular industry	3	1
74	General industrial machinery and equipment nes	5	5
78	Road vehicles	15	35
82	Furniture and parts thereof	8	9
89	Miscellaneous manufactured articles nes	10	73
93	Special transactions and commodities	265	652
99	Other commodities and transactions	104	48
Total		4 533	3 454

nes Not elsewhere stated.

Source: Australian port authorities personal communications.

TABLE 8 COASTAL FREIGHT LOADED BY MAJOR COMMODITY GROUPS, 1998–99

<i>State of origin</i>	<i>State of destination (kilotonnes)</i>							<i>Total</i>
	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas</i>	<i>NT</i>	
<b>Food and live animals</b>								
NSW	37	30	3	0	9	31	0	109
Vic	9	0	4	0	48	223	0	284
Qld	193	259	35	0	47	0	1	534
SA	0	0	25	0	0	6	0	32
WA	0	1	7	10	37	18	4	77
Tas	0	432	0	1	25	2	0	461
NT	0	0	0	0	0	0	0	0
Sub total	239	721	75	12	165	281	5	1 498
<b>Beverages and tobacco</b>								
NSW	0	0	2	0	0	0	0	2
Vic	0	0	0	0	1	25	0	27
Qld	0	18	1	0	1	0	10	30
SA	0	0	0	0	0	0	0	0
WA	0	0	0	0	0	0	2	2
Tas	0	34	0	0	2	0	0	36
NT	0	0	0	0	0	0	0	0
Sub total	0	52	4	0	4	26	12	97
<b>Crude materials inedible except fuels</b>								
NSW	10	130	94	0	36	38	0	307
Vic	15	0	11	0	11	124	0	162
Qld	1 089	123	7 693	45	5	211	6	9 173
SA	2 078	354	253	1 386	1	247	0	4 318
WA	6 520	956	0	8	16	30	2	7 533
Tas	1 014	171	11	86	7	300	0	1 589
NT	124	0	0	0	0	480	1	605
Sub total	10 850	1 735	8 063	1 526	76	1 429	10	23 688
<b>Mineral fuels lubricants and related materials</b>								
NSW	1 513	94	332	1 077	0	40	0	3 056
Vic	2 751	122	959	439	131	655	56	5 112
Qld	99	221	1 668	48	0	10	0	2 045
SA	443	677	65	54	12	35	0	1 287
WA	307	892	345	591	1 873	0	317	4 326
Tas	0	0	0	0	0	0	0	0
NT	0	0	0	0	1	0	0	1
Sub total	5 114	2 006	3 369	2 208	2 017	740	373	15 826



TABLE 8 COASTAL FREIGHT LOADED BY MAJOR COMMODITY GROUPS, 1998—99

(Continued)

State of origin	State of destination (kilotonnes)							Total
	NSW	Vic	Qld	SA	WA	Tas	NT	
<b>Animal and vegetable oils fats and waxes</b>								
NSW	0	2	1	0	0	0	0	4
Vic	0	0	0	1	0	1	0	3
Qld	12	7	46	0	12	9	0	86
SA	0	0	0	0	0	0	0	0
WA	0	0	0	0	0	0	0	0
Tas	1	1	0	0	0	0	0	1
NT	0	0	0	0	0	0	0	0
Sub total	13	10	47	1	13	10	0	94
<b>Chemicals and related materials nes</b>								
NSW	3	18	24	9	0	5	0	59
Vic	14	13	10	57	21	102	0	217
Qld	0	21	2	0	13	0	0	36
SA	76	32	0	0	0	9	0	117
WA	0	9	18	0	8	0	4	40
Tas	35	228	14	37	0	7	0	321
NT	0	0	0	0	0	0	0	0
Sub total	128	321	69	103	42	124	4	791
<b>Manufactured goods classified chiefly by material</b>								
NSW	86	1 132	53	49	2	4	5	1 330
Vic	0	29	2	1	33	131	0	195
Qld	0	0	873	0	7	1	56	938
SA	0	0	414	0	108	0	0	522
WA	3	0	2	2	8	3	7	25
Tas	628	1 010	0	2	72	0	2	1 713
NT	1	0	0	0	1	0	69	71
Sub total	717	2 171	1 343	53	232	139	139	4 794
<b>Machinery and transport materials</b>								
NSW	0	0	3	0	0	0	0	4
Vic	1	0	1	0	5	44	0	50
Qld	1	1	1	0	2	0	0	5
SA	0	0	0	0	1	0	0	1
WA	0	1	1	0	0	0	1	4
Tas	0	22	0	0	0	0	0	23
NT	0	0	0	0	1	0	0	1
Sub total	3	25	6	1	9	45	1	88

TABLE 8 COASTAL FREIGHT LOADED BY MAJOR COMMODITY GROUPS, 1998—99

(Continued)

State of origin	State of destination (kilotonnes)							Total
	NSW	Vic	Qld	SA	WA	Tas	NT	
<b>Miscellaneous manufactured articles</b>								
NSW	2	0	3	0	0	0	0	5
Vic	1	0	1	1	19	453	0	475
Qld	0	0	0	0	0	0	0	0
SA	0	0	0	0	0	0	0	0
WA	0	0	0	0	0	0	0	1
Tas	0	18	0	0	0	0	0	19
NT	0	0	0	0	0	0	0	0
Sub total	3	18	4	1	20	453	0	500
<b>Commodities and transactions nes</b>								
NSW	0	0	24	0	2	4	3	33
Vic	2	248	5	4	5	42	0	305
Qld	3	1	213	0	0	0	0	218
SA	0	0	0	0	2	0	0	3
WA	1	1	1	1	3	1	1	9
Tas	0	344	0	1	3	20	0	369
NT	0	0	0	0	1	0	74	75
Sub total	6	594	244	6	17	67	78	1 012
Total	17 072	7 653	13 223	3 910	2 594	3 313	623	48 388

Source: Australian port authorities personal communications.

TABLE 9 COASTAL FREIGHT LOADED BY PACK TYPE, 1998—99

<i>State of origin</i>	<i>State of destination (kilotonnes)</i>							<i>Total</i>
	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas</i>	<i>NT</i>	
<b>Dry bulk</b>								
NSW	1 508	138	210	1 083	46	106	5	3 096
Vic	35	29	9	57	0	31	0	160
Qld	1 317	381	8 566	45	43	211	62	10 626
SA	2 170	365	691	1 386	119	288	0	5 020
WA	6 517	956	0	18	46	35	0	7 572
Tas	1 639	634	8	94	0	312	0	2 687
NT	124	0	0	0	0	480	14	618
Sub total	13 310	2 502	9 484	2 684	254	1 462	81	29 778
<b>Liquid bulk</b>								
NSW	54	109	274	3	0	2	0	442
Vic	2 751	122	959	440	129	641	56	5 098
Qld	73	250	1 747	48	12	19	0	2 149
SA	427	699	65	54	0	9	0	1 254
WA	307	900	345	591	1 874	0	318	4 336
Tas	35	185	14	29	1	0	2	266
NT	0	0	0	0	1	0	0	1
Sub total	3 647	2 264	3 405	1 164	2 017	671	376	13 545
<b>Container</b>								
NSW	0	28	55	3	2	13	3	105
Vic	6	0	25	6	145	1 127	0	1 309
Qld	3	20	44	0	30	1	12	109
WA	0	0	0	0	6	0	0	7
SA	8	3	11	3	21	18	13	78
Tas	3	1 284	4	5	109	17	0	1 422
NT	1	0	0	0	4	0	9	14
Sub total	22	1 335	140	17	316	1 176	37	3 043
<b>Non bulk</b>								
NSW	88	1 132	0	46	0	2	0	1 267
Vic	0	260	0	0	0	1	0	262
Qld	4	1	176	0	1	0	0	183
SA	0	0	0	0	0	0	0	0
WA	0	2	17	0	4	0	7	31
Tas	0	158	0	0	0	1	0	159
NT	0	0	0	0	0	0	122	122
Sub total	92	1 553	193	46	6	4	129	2 023
<b>Total</b>	<b>17 072</b>	<b>7 653</b>	<b>13 223</b>	<b>3 910</b>	<b>2 594</b>	<b>3 313</b>	<b>623</b>	<b>48 388</b>

Source: Australian port authorities personal communications.

TABLE 10 SUMMARY OF THE AUSTRALIAN TRADING FLEET, AS AT 30 JUNE 1999

Trade	No. of vessels	Deadweight tonnes	Gross tonnage (tonnes)
<i>Major Trading Fleet (&gt;2000 dwt)</i>			
Coastal			
Australian registered	41	1 562 588	1 025 399
Overseas registered	2	1 02 850	60 684
Total Coastal	43	1 665 438	1 086 083
Overseas			
Australian registered	10	673 467	676 311
Overseas registered	2	153 345	90 937
Total Overseas	12	826 812	767 248
Total major trading fleet	55	2 492 250	1 853 331
<i>Other (minor) Trading ships (&gt;150grt &lt; 2000 dwt)</i>			
Australian registered	19	11 257	9 963
Overseas registered	3	1 862	1 682
Total other trading ships	22	13 119	11 645
<b>Total Australian trading fleet</b>	<b>77</b>	<b>2 505 369</b>	<b>1 864 976</b>

Sources: Department of Transport and Regional Services personal communications; Lloyds Maritime Information Services, unpublished, Baird Publications (2000); Lloyd s Maritime Directory (1998); Shipping companies (various) personal communications.

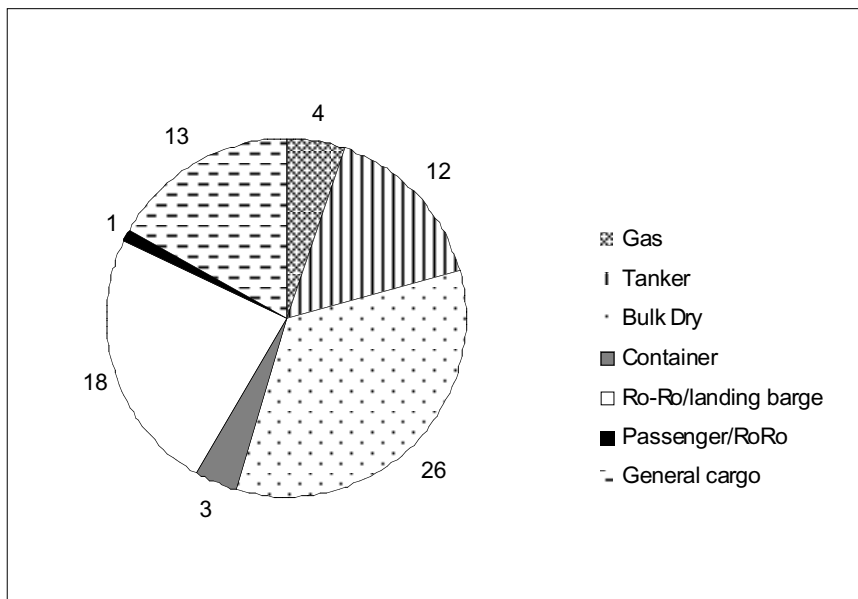


FIGURE 3 NUMBER OF SHIPS BY SHIP TYPE, AS AT 30 JUNE 1999.

Sources: Prepared by BTE using: Shipping companies (various) personal communications, Lloyd s maritime information services, unpublished; Lloyd s Maritime Directory (1998); Department of Transport and Regional Services personal communications, Australian Maritime Safety Association personal communications.

TABLE 11 SHIPS IN THE MAJOR TRADING FLEET OVERSEAS TRADES

<i>Name</i>	<i>Trade</i>	<i>Products</i>	<i>Ports called at</i>
<b>Tankers</b>			
Dampier Spirit	o	Crude oil storage	Apache Field
Flinders	o	Crude oil	Tramp world wide
Nivosa	o	Crude oil	Sydney, Geelong, Whangarei, Singapore, gulf ports, Indonesia, Vietnam
Northwest Sanderling	o	LNG	Dampier, Japan
Northwest Sandpiper	o	LNG	Dampier, Japan
Northwest Snipe	o	LNG	Dampier, Japan
Northwest Stormpetrel	o	LNG	Dampier, Japan
<b>Bulk carriers</b>			
Alltrans	o (c)	Alumina	Brisbane, Gladstone, Launceston, Gove, Bluff
Iron Kembla	o	Iron ore, coal	Newcastle, Port Kembla, Port Hedland, Gladstone, Korea
Iron Newcastle	o (c)	Iron ore, coal	Newcastle, Port Kembla, Port Hedland, Japan, Korea, China, Singapore
Sandra Marie	o (c)	Soda ash, Fertiliser, grain, concentrates	Australian East Coast, New Zealand
<b>General Cargo</b>			
Arktis Atlantic	o	General cargo	Darwin, Gove, Singapore, Indonesia, Malaysia
Australian Advance	o	Containers	Taiwan, Hong Kong, Botany Bay, Melbourne, Brisbane
Australian Endeavour	o	Containers	Brisbane, Botany Bay, Melbourne, Adelaide, Japan, Korea
Australian Enterprise	o	Containers	Singapore, Port Kelang, Fremantle, Adelaide, Melbourne, Botany Bay, Brisbane, Hobart
Iron Flinders	o	Steel, Timber, Containers	Melbourne, Sydney, Adelaide, Geelong, Auckland, Lyttelton, Napier, Tauranga
Tasman Chief	o	Containers	Sydney, Melbourne, Launceston, Auckland, Tauranga, Napier, Lyttelton

Notes: c Coastal. o Overseas

(o) Also undertakes occasional overseas voyages. (c) Also undertakes occasional coastal voyages.

Sources: Prepared by BTE using Lloyd's Maritime Services, unpublished; Shipping companies (various) personal communications.

TABLE 12 SHIPS IN THE MAJOR TRADING FLEET COASTAL TRADES

<i>Name</i>	<i>Trade</i>	<i>Products</i>	<i>Ports called at</i>
<b>Tankers</b>			
Australian Pride	c (o)	Petroleum products	Fremantle, Geraldton, Port Hedland, Dampier, Broome, Wyndham, Darwin, Gove, Albany, Esperance, Adelaide, Bell Bay, Burnie, New Zealand, Papua New Guinea, Fiji
Barrington	c	Petroleum products	Brisbane, Botany Bay, Port Stanvac, Townsville, Mackay, Gladstone, Cairns, Melbourne, Bundaberg
Broadwater	c (o)	Crude oil	Hastings, Port Bonython, Kumul terminal (PNG), Cossack Pioneer, Botany Bay, Brisbane, Geelong, New Plymouth (NZ)
Helix	c (o)	Petroleum products	Botany Bay, Geelong, Fremantle, Brisbane, Townsville, Hobart, Devonport, Sydney, Adelaide, Esperance, New Zealand
Palmerston	c (o)	Petroleum products	Botany Bay, Brisbane, Melbourne to Townsville, Mackay, Cairns, Gladstone, Bundaberg, Wellington (NZ)
Samar Spirit	c (o)	Crude oil	Hastings, Port Bonython, Dampier, Kumul Terminal (PNG), Indonesia, New Zealand, Vietnam to Brisbane, Sydney, Botany Bay
Seakap	c (o)	Pitch	Whyalla, Newcastle, Port Kembla, Gladstone, Launceston, Portland, Taiwan
Stolt Australia	c (o)	Caustic soda, sulphuric acid, molasses, ethanol, petroleum products	Interstate chemical trades and New Caledonia
Tasman	c	Petroleum products	Melbourne, Port Stanvac, Botany Bay, Geelong, Launceston, Burnie, Twofold Bay, Port Lincoln, Brisbane

TABLE 12 SHIPS IN THE MAJOR TRADING FLEET COASTAL TRADES (continued)

<i>Name</i>	<i>Trade</i>	<i>Products</i>	<i>Ports called at</i>
<b>Bulk Carriers</b>			
Accolade II	c	Limestone	Adelaide, Klein Point
Aburri	c	Metal concentrates	Bing Bong wharf to terminal
Cementco	c (o)	Cement Clinker, gypsum	Brisbane, Port Kembla, Gladstone, New Caledonia
Endeavour River	c	Bauxite, alumina, silica sand	Gladstone, Weipa (occasionally Newcastle, Cape Flattery)
Enterprise	c (o)	Fertiliser, coal, grain, soda ash, alumina, wheat	Bunbury, Geelong, Devonport, Port Kembla, Newcastle, Sydney, Brisbane, Portland, Adelaide, Auckland, Launceston, Hobart
Fitzroy River	c	Bauxite, alumina, silica sand	Gladstone, Weipa (occasionally Newcastle, Cape Flattery)
Goliath	c	Cement	Devonport, Melbourne, Sydney, Newcastle
Iron Carpentaria	c (o)	Coal, iron ore, alumina, manganese, dolomite	Port Latta, Port Kembla, Newcastle, Bell Bay, Gladstone, Groote Eylandt, Ardrossan, Hay Point, China
Iron Chieftain	c	Coal, iron ore, gypsum	Port Kembla, Whyalla, Newcastle, Ardrossan
Iron Curtis	c	Coal, iron ore, dolomite, manganese	Port Kembla, Port Latta, Ardrossan, Newcastle, Groote Eylandt, Hay Point
Iron Prince	c	Gypsum, dolomite, urea, coal, magnetite, wheat, sugar, iron ore, coke	Whyalla, Hay Point, Newcastle, Ardrossan, Thevenard, Tauranga, Port Latta, Fremantle, Mackay, Launceston, Picton
Iron Spencer	c (o)	Iron ore, coal	Newcastle, Port Kembla (occasionally Japan, Singapore)
Iron Sturt	c	Zinc concentrate, zinc ingots, sulphuric acid	Hobart, Newcastle, Burnie, Bell Bay, Portland, Geelong, Melbourne, Adelaide, Port Pirie
Iron Whyalla	c (o)	Iron ore, coal	Port Hedland, Port Kembla (occasionally SE Asia, Taiwan, Japan)
Iron Yandi	c (o)	Iron ore, coal	Newcastle, Port Kembla, Port Hedland, Japan
Kowulka	c	Sugar, gypsum, alumina	Melbourne, Thevenard, Newcastle, Gladstone, Mackay, Sydney, Brisbane, Fremantle, Devonport, Bunbury, Portland

TABLE 12 SHIPS IN THE MAJOR TRADING FLEET COASTAL TRADES (continued)

<i>Name</i>	<i>Trade</i>	<i>Products</i>	<i>Ports called at</i>
<b>Bulk Carriers (continued)</b>			
Lindesay Clark	c	Alumina, Gypsum, Iron ore, Cement clinker	Fremantle, Bunbury, Geelong, Adelaide, Portland, Whyalla, Port Kembla, Ardrossan, Newcastle
MRS Pioneer	c (o)	Sugar	Mackay, Sydney, Kaohsiung, Colombo, Singapore
Ormiston	c	Sugar, Gypsum	Melbourne, Thevenard, Sydney, Mackay
Portland	c	Alumina, concentrate	Portland, Geelong, Fremantle, Bunbury, Burnie, Hobart
River Boyne	c	Bauxite, alumina, silica sand	Gladstone, Weipa (occasionally Newcastle, Cape Flattery)
River Embley	c	Bauxite, alumina	Gladstone, Weipa (occasionally Newcastle)
River Torrens	c (o)	Cement, salt, wheat, coal, gypsum, fly ash, sugar, alumina, concentrates	Port Alma, Sydney, Thevenard, Port Kembla, Gladstone, Geelong, Fremantle, Melbourne, Newcastle, Townsville, Adelaide, Auckland, Lyttelton, Tauranga, Whangarie
River Yarra	c (o)	Cement, salt, wheat, coal, fly ash	Fremantle, Adelaide, Port Kembla, Newcastle, Melbourne, Brisbane, Hobart, Geelong, Whyalla, Launceston, New Zealand, Port Pirie
Wallarrah	c	Coal	Catherine Hill Bay, Newcastle
Warden Point	c	Cement Clinker, Fly ash and slag	Gladstone, Townsville
Iron Monarch	c	Steel slabs	Port Kembla, Hastings



TABLE 12 SHIPS IN THE MAJOR TRADING FLEET COASTAL TRADES (continued)

<i>Name</i>	<i>Trade</i>	<i>Products</i>	<i>Ports called at</i>
<b>General Cargo</b>			
City of Port Melbourne	c	Containers	Melbourne, Burnie
City of Burnie	c	Containers	Melbourne, Burnie
Sina	c	General cargo	Darwin, Fremantle, Port Hedland, Dampier, Broom, Wyndham, Melbourne
Searoad Mersey	c	General cargo	Melbourne, Devonport, Grassy
Searoad Tamar	c	General cargo	Melbourne, Devonport, Hobart
Tasmanian Achiever	c	Containers	Melbourne, Burnie
Victorian Reliance	c	Containers	Melbourne, Burnie
Frances Bay	c	General Cargo	Darwin, Elingoola, Gove, Groote Eylandt
Trinity Bay	c	General Cargo	Cairns and North Australia
Spirit of Tasmania	c	General cargo, passengers	Melbourne, Devonport

*Notes:*

c Coastal.

o Overseas

(o) Also undertakes occasional overseas voyages.

(c) Also undertakes occasional coastal voyages.

*Sources:* Prepared by BTE using Lloyd's Maritime Services, unpublished; Shipping companies (various) personal communications.