



**Bureau of Transport Economics**

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**INFORMATION PAPER 43**

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**COASTAL FREIGHT IN AUSTRALIA,  
1996–97**

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Bureau of Transport Economics

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INFORMATION PAPER  
43

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COASTAL FREIGHT IN AUSTRALIA,  
1996–97

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## FOREWORD

This paper is the latest in a series of papers which provide information on coastal freight movements between Australian ports. The paper covers cargoes loaded and discharged in Australian ports for 1996–97. It does not include information about international cargo movements to and from Australian ports or from and to overseas ports.

The Bureau of Transport Economics (BTE) began production of this series in October 1997; prior to this the then Maritime Policy Division of the Department of Transport and Regional Development (DoTRD) produced the series. The previous paper in this series (produced by BTE in 1998) covers coastal freight movements for the 1995–96 financial year.

The compilation, checking and reconciliation of the data and the compilation of the tables was carried out by Mick O'Halloran and Stephen Wheatstone.

As the BTE intends to continue to produce annual updates of this publication to meet user demands, any constructive comments would be greatly appreciated.

Should you wish to know more about these statistics, or related publications, please phone 02 6274 6751 or write to:

Manager,  
Coastal Shipping Database,  
Bureau of Transport Economics,  
GPO Box 501  
Canberra ACT 2601

Neil Gentle  
Research Manager  
Sea, Air and Safety

Bureau of Transport Economics  
Canberra  
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Dampier Port Authority	Port Hedland Port Authority
Darwin Port Authority	Port Kembla Ports Corporation
Department of Marine and Harbours, Western Australia	Port of Brisbane Corporation
Department of Transport, Western Australia	Port of Devonport Authority
Derby-West Kimberley Shire Administration	Port of Launceston Pty Ltd
Esperance Port Authority	Port of Portland
Fremantle Port Authority	Ports Corporation of Stanley
Geelong Port Pty Ltd	Ports Corporation Queensland
Geraldton Port Authority	Ports Corporation South Australia
Gippsland Ports Committee of Management	Robe River Associates
Gladstone Port Authority	Rockhampton Port Authority
Hobart Ports Corporation	Sealink
	Sydney Ports Corporation
	TNT Westernport
	Townsville Port Authority
	West Australian Petroleum Pty Ltd

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## EXPLANATORY NOTES

### SCOPE/COVERAGE

This publication contains details of interstate and intrastate cargo loaded and discharged at Australian ports for the financial year 1996–97. 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.

### 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. Our main reference for distances was *The Ports of Australia*, 13<sup>th</sup> edition, 1993, published by the Australian Chamber of Shipping.

### DEFINITIONS

Freight: includes all cargo lifted, including empty containers, but excludes ship stores and bunkers.

Tonne: all figures are measured in mass tonnes.

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: is recorded for both inbound and outbound to the port of transshipment and assigned to Australian Transport Freight Commodity Code Classification (ATFCC), Division 93.

Australian Transport Freight Commodity Code Classification (ATFCC): was developed jointly by the former Commonwealth Department of Transport and the Australian Bureau of Statistics. It is a systematic classification of commodities transported by several transport modes including: sea, air, road, rail, and pipeline. It has been designed to facilitate standardised classification of goods carried by these modes to and from and within Australia. The ATFCC is

aligned with the Standard International Trade Classification (SITC) at divisional (2-digit)<sup>1</sup> level of classification.

## **CONSISTENCY OF STATISTICS**

Often the data received from the port authorities do not balance between loaded and discharged tonnages. The most common reasons are:

- Port authorities record cargo discharged in the month of arrival of a vessel, and cargo loaded in the month of departure of a vessel. Thus cargo arriving at a port in early July might have been sent at the end of June, and hence will not be recorded by each port in the same financial year. The effect of this may be offset at the end of the year when the reverse applies.
- A port authority's record of cargo loaded and discharged is based on information provided by the ship's agents. Often this information is incorrect since the agent summarises or doesn't know the cargo's true origin or destination and therefore lists the ship's last or next port of call. This is particularly true for liquid and dry bulk commodities, where the cargo originates from, or is destined for, a large number of ports.
- Similarly the commodity given by the agent is not the same at both ports, for many different reasons. Examples of this are gypsum loaded in South Australia, and discharged as fertiliser at NSW ports. Likewise petroleum products discharged in Cairns are listed there as kerosene.

The BTE has endeavoured to reconcile these problems but takes no responsibility as to the correctness or accuracy of this reconciliation. For many of the smaller shipments no reconciliation has occurred. An example of the problem of reconciliation can be seen by comparing the total for cargo reported to be discharged in Tasmanian ports by Tasmanian ports (Table 7) against the totals for cargo reported to be discharged in Tasmania by loading (origin) ports (Tables 8 and 9).

## **SYMBOLS AND OTHER USAGE**

Figures in all tables may not appear to add due to rounding.

nes            not elsewhere stated.

nmfd        not more finely designated.

State of origin or destination includes Northern Territory.

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<sup>1</sup> The ATFCC code consists of a 4-digit number. The number is made up of major group at 1-digit level, which is subdivided in divisions at 2-digit level, subdivisions at 3-digit level and is finally represented as a commodity group at the 4-digit level. For example, iron and steel wire (6794) at 4-digit level is a member of the iron and steel basic products nes (679) subdivision, 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).

Coastal Freight in Australia, 1996-97

TABLE 1 COASTAL FREIGHT SUMMARY FOR AUSTRALIA, 1992-93 TO 1996-97

Year	Loaded (kilotonnes)			Discharged (kilotonnes)		
	Interstate	Intrastate	Total	Interstate	Intrastate	Total
1992-93	29 342	14 890	44 232	29 072	15 853	44 925
1993-94	30 769	14 505	45 274	31 748	14 228	45 976
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

Source Australian port authorities, personal communications.

TABLE 2 COASTAL FREIGHT LOADED, AUSTRALIA, BY MAJOR COMMODITY 1992-93 TO 1996-97

ATFCC code	Commodity	1992-93	1993-94	1994-95	1995-96	1996-97
<i>Tonnes (millions)</i>						
281	Iron ore	7.0	8.1	8.4	9.0	8.3
282	Bauxite/alumina	9.9	9.6	10.2	9.6	10.1
331	Crude oil	7.1	6.1	7.2	7.6	8.3
33	Petroleum products <sup>a</sup>	5.7	5.8	6.3	6.5	6.9
	Other cargo	14.5	15.6	17.1	15.1	15.6
	Total	44.2	45.3	49.2	47.8	49.1
<i>Tonne-kilometres (billions)</i>						
281	Iron ore	31.5	37.3	38.7	40.4	38.1
282	Bauxite/alumina	22.3	21.5	22.5	21.1	22.2
331	Crude oil	14.6	10.7	13.2	16.3	18.8
33	Petroleum products <sup>a</sup>	9.1	9.2	10.3	9.7	12.9
	Other cargo	18.4	20.2	24.5	18.6	20.7
	Total	96.0	98.8	109.2	106.1	112.7

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

Source Australian port authorities, personal communications.

TABLE 3 TOTAL COASTAL FREIGHT FLOWS IN AUSTRALIA, 1996-97

State of origin	State of destination (kilotonnes)							TOTAL
	NSW	Vic	Qld	SA	WA	Tas	NT	
NSW	1 458	1 407	576	944	225	333	31	4 974
Vic	3 372	236	917	247	535	1 603	26	6 937
Qld	1 420	474	10 551	218	92	79	28	12 862
SA	2 058	1 056	923	1 819	305	276	0	6 437
WA	7 525	1 904	943	544	2 468	44	148	13 576
Tas	1 500	1 940	330	43	57	30	0	3 901
NT	63	0	1	0	3	392	0	458
Total	17 397	7 017	14 242	3 814	3 685	2 757	232	49 144

Source Australian port authorities, personal communications.

TABLE 4 COASTAL FREIGHT FLOWS BETWEEN PORTS IN AUSTRALIA, 1996–97

<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>	<i>Rest of SA</i>
Sydney	0	16	2	68	172	0	11	0
Rest of NSW	0	1 442	119	1 217	198	206	12	920
Melbourne	113	15	0	10	122	107	124	71
Rest of Vic	3 146	98	0	226	425	263	32	21
Brisbane	6	8	33	15	0	1 910	1	0
Rest of Qld	276	1 130	376	51	67	8 575	0	217
Adelaide	92	125	600	2	458	0	0	19
Rest of SA	298	1 543	455	0	248	217	1 698	102
Fremantle	2	13	179	735	819	0	3	0
Rest of WA	1 230	6 280	551	439	124	0	541	0
Hobart	0	0	111	0	0	0	0	0
Rest of Tas	334	1 166	1 820	9	281	49	3	40
Darwin	0	0	0	0	0	1	0	0
Rest of NT	0	62	0	0	0	0	0	0
Total	5 497	11 900	4 246	2 771	2 914	11 328	2 424	1 390

(Continued)

<i>Port of origin</i>	<i>Port of destination (kilotonnes)</i>							<i>Total</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	158	31	47	90	0	0	596	
Rest of NSW	1	34	21	176	13	18	4 377	
Melbourne	176	9	73	1 165	0	0	1 985	
Rest of Vic	27	323	3	363	26	0	4 951	
Brisbane	39	0	16	29	20	0	2 076	
Rest of Qld	50	4	0	34	8	0	10 786	
Adelaide	280	5	0	8	0	0	1 588	
Rest of SA	14	6	141	127	0	0	4 849	
Fremantle	0	643	0	44	147	0	2 585	
Rest of WA	1 800	25	0	0	1	0	10 991	
Hobart	0	0	0	0	0	0	111	
Rest of Tas	57	0	0	30	0	0	3 790	
Darwin	3	0	0	0	0	0	4	
Rest of NT	0	0	0	392	0	0	454	
Total	2 606	1 079	299	2 458	214	18	49 144	

Source Australian port authorities, personal communications.

*Coastal Freight in Australia, 1996-97*

TABLE 5 COASTAL FREIGHT LOADED, BY PORT, AND BY PACK TYPE IN AUSTRALIA, 1996-97

<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	31	486	65	15	596
Rest of NSW	3 042	106	19	1 211	4 377
Melbourne	0	726	1 236	23	1 985
Rest of Vic	139	4 641	6	166	4 951
Brisbane	15	2 034	23	3	2 076
Rest of Qld	10 660	70	26	30	10 786
Adelaide	849	736	3	0	1 588
Rest of SA	4 690	152	0	7	4 849
Fremantle	757	1 781	45	2	2 585
Rest of WA	6 372	4 606	3	10	10 991
Hobart	6	0	83	22	111
Rest of Tas	2 366	4	914	506	3 790
Darwin	1	2	0	0	4
Rest of NT	454	0	0	0	454
<b>Total</b>	<b>29 383</b>	<b>15 343</b>	<b>2 423</b>	<b>1 995</b>	<b>49 144</b>

*Source* Australian port authorities, personal communications.

TABLE 6 COASTAL FREIGHT DISCHARGED, BY PORT, AND BY PACK TYPE IN AUSTRALIA, 1996-97

<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	905	4 774	4	1	5 684
Rest of NSW	11 790	249	13	37	12 089
Melbourne	798	765	1 481	1 076	4 120
Rest of Vic	973	897	24	1 148	3 041
Brisbane	858	1 697	9	0	2 565
Rest of Qld	9 114	2 526	19	145	11 804
Adelaide	1 786	802	11	1	2 600
Rest of SA	1 292	92	0	2	1 386
Fremantle	405	2 071	244	2	2 721
Rest of WA	17	1 078	12	17	1 124
Hobart	2	0	60	8	70
Rest of Tas	1 019	411	1 044	119	2 593
Darwin	7	166	41	9	224
Rest of NT	0	0	0	14	14
<b>Total</b>	<b>28 966</b>	<b>15 528</b>	<b>2 963</b>	<b>2 578</b>	<b>50 035</b>

*Source* Australian port authorities, personal communications.

TABLE 7 TASMANIAN FREIGHT LOADED AND DISCHARGED BY COMMODITY, 1996–97

<i>ATFCC code</i>	<i>Description</i>	<i>Loaded in Tasmania (kilotonnes)</i>	<i>Discharged in Tasmania (kilotonnes)</i>
00	Food and live animals	27	2
01	Meat and meat preparations	26	3
02	Dairy products and birds eggs	22	0
03	Fish, crustaceans and molluscs	5	0
04	Cereals and cereal preparations	3	45
05	Vegetables and fruit	293	30
06	Sugars, sugar preparations and honey	1	1
08	Feeding stuff for animals	0	4
09	Miscellaneous edible products & preps	44	26
10	Beverages and tobacco	1	0
11	Beverages	13	25
21	Hides, skins and furskins, raw	5	0
24	Cork and wood	105	6
25	Pulp and waste paper	23	117
26	Textile fibres	19	0
27	Crude fertilizers and crude minerals	1	59
28	Metalliferous ores and metal scrap	1 450	750
29	Crude animal & vegetable materials, nes	7	0
32	Coal, coke and briquettes	0	131
33	Petroleum and petroleum products	3	407
34	Gases, natural and manufactured	0	4
41	Animal oils and fats	1	0
50	Chemicals and related materials, nes	0	6
52	Inorganic chemicals	2	13
56	Fertilizers, manufactured	10	40
59	Chemical materials & products, n.e.s.	0	11
60	Manufactured goods classified chiefly by material	0	1
63	Cork & wood manufactures (exc furniture)	10	8
64	Paper, paperboard & articles of paper	451	25
65	Textile yarn, fabrics, made-up articles	1	2
66	Non-metallic mineral manufactures, n.e.s.	951	53
67	Iron and steel	1	28
68	Non-ferrous metals	109	1
70	Machinery and transport materials	9	7
72	Machinery specialized particular indust.	3	2
78	Road vehicles	11	26
82	Furniture and parts thereof	7	6
93	Special transactions and commodities	220	782
99	Other commodities and transactions	65	41
<b>Total</b>		<b>3 901</b>	<b>2 663</b>

Nes Not elsewhere stated

Source Australian port authorities, personal communications.

TABLE 8 LOADED COASTAL FREIGHT FLOWS BY MAJOR COMMODITY GROUPS, 1996-97

State of origin	State of destination (kilotonnes)							Total
	NSW	Vic	Qld	SA	WA	Tas	NT	
<b>Food and live animals</b>								
NSW	35	12	0	0	31	35	0	114
Vic	33	0	8	0	36	71	0	147
Qld	142	310	23	0	50	0	3	529
SA	0	0	0	0	0	0	0	0
WA	0	0	11	0	8	5	3	27
Tas	0	408	0	1	5	7	0	421
NT	0	0	0	0	0	0	0	0
Sub total	210	731	42	1	130	119	6	1 239
<b>Beverages and tobacco</b>								
NSW	0	0	0	0	2	0	0	2
Vic	0	0	0	0	1	27	0	28
Qld	0	0	0	0	0	0	16	16
SA	0	0	0	0	0	0	0	0
WA	0	0	0	0	0	0	1	1
Tas	0	13	0	0	2	0	0	15
NT	0	0	0	0	0	0	0	0
Sub total	1	13	0	0	5	27	18	63
<b>Crude materials, inedible, except fuels</b>								
NSW	55	121	177	21	13	48	18	453
Vic	70	0	0	8	5	133	0	216
Qld	1 185	82	8 273	0	0	35	2	9 577
SA	1 785	332	250	1 800	0	226	0	4 394
WA	6 293	767	1	0	32	0	3	7 096
Tas	1 063	171	329	40	2	4	0	1 609
NT	62	0	0	0	0	392	0	454
Sub total	10 514	1 473	9 030	1 869	53	837	23	23 800
<b>Mineral fuels, lubricants and related materials</b>								
NSW	1 358	108	349	910	116	183	0	3 023
Vic	3 265	28	899	201	429	448	26	5 296
Qld	77	52	1 899	217	32	43	0	2 321
SA	160	724	222	19	18	49	0	1 192
WA	1 230	1 103	932	541	2 398	33	134	6 371
Tas	0	0	0	0	0	3	0	3
NT	0	0	0	0	2	0	0	2
Sub total	6 090	2 014	4 300	1 888	2 995	760	160	18 207

TABLE 8 LOADED COASTAL FREIGHT FLOWS BY MAJOR COMMODITY GROUPS,  
1996–97

(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	0	0	0	0	0	0	1
Vic	0	0	0	0	0	0	0	1
Qld	9	4	21	1	5	0	0	39
SA	0	0	0	0	0	0	0	0
WA	0	0	0	0	0	0	0	0
Tas	0	1	0	0	0	0	0	1
NT	0	0	0	0	0	0	0	0
Sub total	9	5	22	1	5	0	0	42
<b>Chemicals and related materials, nes</b>								
NSW	2	16	32	11	18	28	0	107
Vic	1	9	3	36	21	109	0	179
Qld	4	27	9	0	4	0	1	46
SA	54	0	0	0	14	1	0	69
WA	1	33	0	3	6	0	3	46
Tas	0	5	0	3	0	4	0	12
NT	0	0	1	0	0	0	0	1
Sub total	62	90	45	52	64	143	4	460
<b>Manufactured goods classified chiefly by material</b>								
NSW	5	1 148	12	0	30	39	10	1 243
Vic	1	13	1	1	27	130	0	172
Qld	0	0	315	0	0	0	0	315
SA	60	0	451	0	270	0	0	780
WA	0	0	0	0	7	2	2	11
Tas	437	1 041	0	0	46	0	0	1 524
NT	0	0	0	0	0	0	0	0
Sub total	503	2 202	778	1	380	171	12	4 046
<b>Machinery and transport materials</b>								
NSW	0	0	0	1	1	0	0	3
Vic	0	0	0	0	2	38	0	41
Qld	0	0	0	0	0	0	0	1
SA	0	0	0	0	0	0	0	0
WA	0	0	0	0	2	0	0	3
Tas	0	22	0	0	0	0	0	24
NT	0	0	0	0	0	0	0	0
Sub total	1	23	1	1	7	39	0	72



TABLE 8 LOADED COASTAL FREIGHT FLOWS BY MAJOR COMMODITY GROUPS,  
1996-97

(Continued)

State of origin	State of destination (kilotonnes)							Total
	NSW	Vic	Qld	SA	WA	Tas	NT	
<b>Miscellaneous manufactured articles</b>								
NSW	2	0	0	0	0	0	0	3
Vic	1	0	1	2	7	387	0	398
Qld	0	0	0	0	0	0	0	0
SA	0	0	0	0	0	0	0	0
WA	0	0	0	0	2	0	0	3
Tas	0	7	0	0	0	0	0	7
NT	0	0	0	0	0	0	0	0
Sub total	4	7	1	2	10	388	0	411
<b>Commodities and transactions nes</b>								
NSW	1	1	7	0	13	0	3	25
Vic	1	187	5	0	6	259	0	457
Qld	3	0	10	0	0	0	5	17
SA	0	0	0	0	2	0	0	2
WA	0	1	0	0	12	3	1	18
Tas	0	271	0	0	2	12	0	285
NT	0	0	0	0	0	0	0	0
Sub total	5	459	21	1	35	275	10	805
Total	17 397	7 017	14 242	3 814	3 685	2 757	232	49 144

Source Australian port authorities, personal communications.

TABLE 9 COASTAL FREIGHT LOADED, BY PACK TYPE, 1996–97

State of origin	State of destination (kilotonnes)							Total
	NSW	Vic	Qld	SA	WA	Tas	NT	
<b>Dry bulk</b>								
NSW	1 433	134	337	931	36	185	18	3 073
Vic	74	0	0	39	0	25	0	139
Qld	1 394	390	8 588	217	51	34	2	10 675
SA	1 928	332	918	1 800	292	269	0	5 539
WA	6 293	789	11	0	36	0	0	7 130
Tas	1 500	496	329	43	0	4	0	2 372
NT	62	0	1	0	0	392	0	455
Sub total	12 684	2 141	10 184	3 030	415	908	20	29 383
<b>Liquid bulk</b>								
NSW	14	124	219	11	116	108	0	591
Vic	3 265	95	902	204	433	442	26	5 367
Qld	24	72	1 928	1	37	43	0	2 104
SA	130	724	5	19	4	7	0	888
WA	1 230	1 112	932	544	2 402	33	133	6 386
Tas	0	1	0	0	0	3	0	4
NT	0	0	0	0	2	0	0	2
Sub total	4 662	2 128	3 985	779	2 994	636	159	15 343
<b>Container</b>								
NSW	0	2	7	0	59	2	13	83
Vic	9	0	15	3	98	1 117	0	1 242
Qld	3	12	3	0	4	1	26	50
WA	2	2	0	0	17	11	14	48
SA	0	0	0	0	3	0	0	3
Tas	0	934	1	1	55	7	0	997
NT	0	0	0	0	0	0	0	0
Sub total	14	950	27	4	237	1 138	53	2 423
<b>Non bulk</b>								
NSW	11	1 148	13	1	13	39	0	1 226
Vic	24	141	0	0	4	19	0	188
Qld	0	0	32	0	0	0	0	33
SA	0	0	0	0	7	0	0	7
WA	0	0	0	0	12	0	0	12
Tas	1	509	0	0	3	16	0	528
NT	0	0	0	0	0	0	0	0
Sub total	36	1 798	46	1	40	74	0	1 995
<b>Total</b>	<b>17 397</b>	<b>7 017</b>	<b>14 242</b>	<b>3 814</b>	<b>3 685</b>	<b>2 757</b>	<b>232</b>	<b>49 144</b>

Source Australian port authorities, personal communications.

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