



Australian Government

Department of Transport and Regional Services

Bureau of Transport and Regional Economics

# Australian sea freight, 2002–2003

btre information paper 53







**Australian Government**

**Department of Transport and Regional Services**

**Bureau of Transport and Regional Economics**

**BUREAU OF TRANSPORT AND REGIONAL ECONOMICS**

---

australian sea freight,

2002–2003

---

**INFORMATION PAPER**

---

53

© Commonwealth of Australia 2005

ISSN 1440-9585

ISBN 1-877081-76-0

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without prior written permission. Requests and enquiries concerning reproduction rights should be addressed to the Production Manager, Bureau of Transport and Regional Economics, GPO Box 501, Canberra, ACT 2601.

This publication is available free of charge from the Bureau of Transport and Regional Economics, GPO Box 501, Canberra, ACT 2601, or phone (02) 6274 7210, fax (02) 6274 6816 or email: [btre@dotars.gov.au](mailto:btre@dotars.gov.au), or by downloading it from our website: <http://www.btre.gov.au>

#### Disclaimers

The BTRE seeks to publish its work to the highest professional standards. However, it cannot accept responsibility for any consequences arising from the use of information herein. Readers should rely on their own skill and judgement in applying any information or analysis to particular issues or circumstances.

Cover images courtesy of Darwin Port Corporation.

Printed by the Bureau of Transport and Regional Economics

## FOREWORD

This is the latest in a series of Bureau of Transport and Regional Economics (BTRE) papers that provide information on Australian sea freight movements between, to and from Australian ports. This paper covers all sea freight activity around Australia during 2002–2003. Previous Information Papers in this series are available at <http://www.btre.gov.au/index.aspx> under Publications, Information Papers .

Mark Cregan, David Holford, Brenda Pawelski and Stephen Wheatstone compiled the data and tables in this publication, under the supervision of Desiree Campbell.

As the BTRE intends to continue to produce annual updates of this publication to meet the needs of users, comments would be greatly appreciated.

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

Manager  
Information Services  
Bureau of Transport and Regional Economics  
GPO Box 501  
Canberra ACT 2601

Bureau of Transport and Regional Economics  
Canberra  
March 2005



## ACKNOWLEDGEMENTS

BTRE gratefully acknowledge and thank the assistance given by staff of the various port authorities and companies in the production of this paper. In particular, we would like to thank the following organisations:

Albany Port Authority	Lord Howe Island Maritime
Australian Association of Ports and Marine Authorities (AAPMA)	Mackay Port Authority
Australian Maritime Safety Authority (AMSA)	Maritime Property & Assets Division, NSW Waterways Authority
Broome Port Authority	Melbourne Port Corporation
Bunbury Port Authority	Mount Isa Mines Ltd
Bundaberg Port Authority	Newcastle Port Corporation
Burnie Port Corporation	Northern Forest Products
Cairns Port Authority	Ord River District Cooperative - Wyndham
Central Queensland Ports Authority	Queensland Transport
Chevron Australia Pty Ltd	Perkins Shipping Pty Ltd
Christmas & Cocos (Keeling) Islands Port Authority	Port Hedland Port Authority
Dampier Port Authority	Port Kembla Port Corporation
Darwin Port Corporation	Port of Brisbane Corporation
Department of Transport, Western Australia	Port of Devonport Corporation
Derby-West Kimberley Shire Administration	Port of Launceston Pty Ltd
Esperance Port Authority	Port of Portland Pty Ltd
Flinders Island Ports Company Pty Ltd	Ports Corporation of Stanley
Fremantle Port Authority	Ports Corporation of Queensland
Geraldton Port Authority	Ports Corporation South Australia
Gippsland Ports Committee of Management	Samancor Gemco
Hobart Ports Corporation Pty Ltd	Sea Swift
King Island Ports Corporation Pty Ltd	Southern Shipping
Kangaroo Island Sealink	Sydney Ports Corporation
	TOLL Westernport
	Townsville Port Authority
	Waterways Authority (NSW)





# CONTENTS

<b>FOREWORD</b>	<b>III</b>
<b>ACKNOWLEDGEMENTS</b>	<b>V</b>
<b>CONTENTS</b>	<b>VII</b>
Tables	ix
Figures	xi
<b>SCOPE AND COVERAGE</b>	<b>XIII</b>
<b>CHAPTER 1: OVERVIEW</b>	<b>1</b>
International Freight	1
Coastal freight	1
Australian port activity	2
Australian fleet	4
<b>CHAPTER 2: INTERNATIONAL SEA FREIGHT</b>	<b>5</b>
Australian ports	5
International trading partners by region	7
Commodities	11
International trading partners by country	14
Liner trade	15
Non–Liner	17
<b>CHAPTER 3: COASTAL FREIGHT</b>	<b>21</b>
Major commodities	21
Cargo flows	22
Pack type	25
Commodity groups	29
Tasmanian trade	31
<b>CHAPTER 4: COASTAL VOYAGE PERMITS</b>	<b>35</b>
<b>CHAPTER 5: AUSTRALIAN PORT ACTIVITY</b>	<b>39</b>
<b>CHAPTER 6: AUSTRALIAN MERCHANT FLEET</b>	<b>47</b>

<b>EXPLANATORY NOTES</b>	<b>53</b>
Sources	53
Definitions and abbreviations	53
Statistical issues	54
<b>REFERENCES</b>	<b>56</b>

## TABLES

TABLE 1.1:	INTERNATIONAL SEA FREIGHT, 1994–1995 TO 2002–2003	1
TABLE 1.2:	AUSTRALIAN COASTAL FREIGHT SUMMARY, 1994–95 TO 2002–2003	2
TABLE 1.3:	SUMMARY OF VOYAGE PERMITS USED 2002–2003	2
TABLE 1.4:	SUMMARY OF AUSTRALIAN PORT VISITS <sup>a</sup> 1996–1997 TO 2002–2003	3
TABLE 1.5:	AUSTRALIAN TRADING SUMMARY 1994 TO 2003	4
TABLE 2.1:	INTERNATIONAL SEA FREIGHT BY AUSTRALIAN STATE OF ORIGIN / FINAL DESTINATION, 2002–2003	5
TABLE 2.2:	INTERNATIONAL SEA FREIGHT LOADED AND DISCHARGED BY AUSTRALIAN PORTS, 2002–2003	6
TABLE 2.3:	INTERNATIONAL FREIGHT BY REGION OF LOADING / UNLOADING, 2002–2003	8
TABLE 2.4:	INTERNATIONAL FREIGHT BY REGION OF ORIGIN / FINAL DESTINATION, 2002–2003	11
TABLE 2.5:	INTERNATIONAL FREIGHT BY COMMODITY, 2002–2003	12
TABLE 2.6:	TOP TWENTY TRADING PARTNERS BY SEA, 2002–2003	15
TABLE 2.7:	INTERNATIONAL LINER TRADE BY REGION, 2002–2003	16
TABLE 2.8:	INTERNATIONAL NON-LINER TRADE BY REGION, 2002–2003	18
TABLE 3.1:	COASTAL FREIGHT LOADED BY MAJOR COMMODITY, 1997–98 TO 2002–2003	21
TABLE 3.2:	TOTAL COASTAL FREIGHT FLOWS, 2002–2003	22
TABLE 3.3:	COASTAL FREIGHT FLOWS BETWEEN AUSTRALIAN PORTS, 2002–2003	24
TABLE 3.4:	COASTAL FREIGHT LOADED BY PORT AND PACK TYPE, 2002–2003	26
TABLE 3.5:	COASTAL FREIGHT DISCHARGED BY PORT AND PACK TYPE, 2002–2003	27
TABLE 3.6:	COASTAL FREIGHT LOADED BY PACK TYPE, 2002–2003	28

<b>TABLE 3.7:</b>	<b>COASTAL FREIGHT LOADED BY MAJOR COMMODITY GROUPS, 2002–2003</b>	<b>29</b>
<b>TABLE 3.8:</b>	<b>TASMANIAN FREIGHT LOADED AND DISCHARGED BY COMMODITY, 2002–2003</b>	<b>32</b>
<b>TABLE 4.1:</b>	<b>VOYAGE PERMITS BY COMMODITY TYPE, 2002–2003</b>	<b>36</b>
<b>TABLE 4.2:</b>	<b>TONNES CARRIED UNDER VOYAGE PERMITS BY PACK TYPE</b>	<b>36</b>
<b>TABLE 4.3:</b>	<b>IMPACT OF VOYAGE PERMITS ON COASTAL TRADE, 2002–2003</b>	<b>37</b>
<b>TABLE 5.1:</b>	<b>PORT CALLS AT AUSTRALIAN PORTS, 2002–2003</b>	<b>39</b>
<b>TABLE 5.2:</b>	<b>CARGO LOADED AND DISCHARGED BY AUSTRALIAN PORTS, 2002–2003</b>	<b>43</b>
<b>TABLE 6.1:</b>	<b>SUMMARY OF THE AUSTRALIAN TRADING FLEET, AS AT 30 JUNE 2003</b>	<b>47</b>
<b>TABLE 6.2:</b>	<b>SHIPS IN THE MAJOR TRADING FLEET — OVERSEAS TRADES</b>	<b>49</b>
<b>TABLE 6.3:</b>	<b>SHIPS IN THE MAJOR TRADING FLEET — COASTAL TRADES</b>	<b>50</b>

## FIGURES

<b>FIGURE 2.1:</b>	<b>INTERNATIONAL FREIGHT BY REGION OF LOADING / UNLOADING, 2002–2003, (\$billion)</b>	<b>9</b>
<b>FIGURE 2.2:</b>	<b>INTERNATIONAL FREIGHT BY REGION OF ORIGIN / FINAL DESTINATION, 2002–2003, (\$billion)</b>	<b>10</b>
<b>FIGURE 2.3:</b>	<b>INTERNATIONAL LINER FREIGHT EXPORTS AND IMPORTS BY REGION OF FINAL DESTINATION, 2002–2003, (\$billion)</b>	<b>17</b>
<b>FIGURE 2.4:</b>	<b>INTERNATIONAL NON-LINER FREIGHT EXPORTS AND IMPORTS BY REGION OF FINAL DESTINATION, 2002–2003, (tonnes million)</b>	<b>19</b>
<b>FIGURE 3.1:</b>	<b>COASTAL FREIGHT LOADED BY STATE, 1995–96 TO 2002–2003</b>	<b>23</b>
<b>FIGURE 3.2:</b>	<b>COASTAL FREIGHT DISCHARGED BY STATE, 1995–96 TO 2002–2003</b>	<b>23</b>
<b>FIGURE 6.1:</b>	<b>NUMBER OF SHIPS BY SHIP TYPE, AS AT 30 JUNE 2003</b>	<b>48</b>



## SCOPE AND COVERAGE

This edition of *Australian Sea Freight, 2002–2003* is an update of *Australian Sea Freight, 2001–2002* (Information paper 50). The paper is set out in six chapters.

- Chapter 1 is a summary chapter.
- Chapter 2 covers international sea freight into and out of Australia.
- Chapter 3 contains details of interstate and intrastate cargo loaded and discharged at Australian ports for the financial year *2002–2003*. It excludes some 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.
- Chapter 4 covers single and continuing voyage permits.
- Chapter 5 covers information about ship and cargo movements through Australian ports.
- Chapter 6 covers details of the Australian trading fleet as at 30 June 2003.





## CHAPTER 1: OVERVIEW

In 2002–2003, 712.0 million tonnes of cargo moved across Australian wharves. This represented a 6.2 per cent increase over 2001–2002. 76.1 per cent of this cargo was international exports, 8.9 per cent international imports, and 7.5 per cent each for coastal cargo loaded and discharged.

### INTERNATIONAL FREIGHT

In 2002–2003, 591.6 million tonnes of international cargo moved across Australian wharves (Table 1.1). This represents a 5.4 per cent increase in exports and a 7.1 per cent increase in imports by weight. However, in terms of value there was a 6.5 per cent decrease in exports, and a 10.2 per cent increase in imports.

**TABLE 1.1: INTERNATIONAL SEA FREIGHT, 1994–1995 TO 2002–2003**

Year	Weight (tonnes)			Value (\$billion)		
	Exports	Imports	Total	Exports	Imports	Total
1994–1995	362.4	45.9	408.3	53.0	54.5	107.6
1995–1996	372.9	47.1	420.0	60.0	55.8	115.8
1996–1997	404.0	49.8	453.8	63.4	56.9	120.4
1997–1998	427.1	51.9	479.0	69.6	64.1	133.7
1998–1999	431.8	56.3	488.1	68.2	68.5	136.7
1999–2000	462.0	56.7	518.7	78.2	76.5	154.6
2000–2001	495.0	55.0	550.0	99.4	83.0	182.3
2001–2002	501.0	57.8	558.7	99.5	85.2	184.7
2002–2003	529.4	62.2	591.6	93.4	94.9	188.4

Note Weight figures have been revised from those appearing in BTRE 2004, IP50.

Source: ABS, International Cargo Statistics, unpublished

### COASTAL FREIGHT

In 2002–2003, 106.3 million tonnes of coastal cargo was handled through Australian ports. This made up 15.0 per cent of all cargo moved across Australian wharves. Of this amount, 52.8 million tonnes of coastal cargo was loaded and 53.5 million tonnes was discharged, as illustrated in Table 1.2.

Coastal cargo tonnages are up by nearly 1.0 per cent overall or 0.7 per cent for loaded cargo and 1.3 per cent for discharged cargo. In terms of task performed, based on cargo loaded, the Australian coastal fleet performed 114.8 billion tonne kilometres, which is up 3.9 per cent on the previous year.

**TABLE 1.2: AUSTRALIAN COASTAL FREIGHT SUMMARY, 1994–95 TO 2002–2003**

Year	Loaded (kilotonnes)			Discharged (kilotonnes)		
	Interstate	Intrastate	Total	Interstate	Intrastate	Total
1994–1995	33 692	15 498	49 190	34 180	16 286	50 466
1995–1996	31 982	15 815	47 797	31 808	16 229	48 037
1996–1997	32 581	16 562	49 143	32 505	17 530	50 035
1997–1998	34 322	18 200	52 522	34 741	18 968	53 709
1998–1999	31 934	16 454	48 388	31 047	17 053	48 100
1999–2000	32 743	18 582	51 325	32 359	18 369	50 728
2000–2001	33 216	18 786	52 003	32 783	18 692	51 475
2001–2002	32 484	19 949	52 432	33 183	19 652	52 835
2002–2003	34 274	18 551	52 825	34 993	18 507	53 501

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

Source: Australian port authorities—personal communications

In 2002–2003, 1 252 voyages carried coastal cargo using single voyage permits (SVPs) and continuing voyage permits (CVPs). A total 12.3 million tonnes of freight was estimated to have moved around the Australian coast (Table 1.3) using SVPs and CVPs, up from 10.3 million tonnes in 2001–2002. This represents 23.3 per cent of the loaded coastal task.

Note that information provided in this paper on voyage permits is different from that appearing in the BTRE's *Waterline* series. Figures in *Waterline* report tonnes as specified on the permits when issued, while in this paper the figures reported are in actual tonnes and TEUs, as notified by the permit holders after they have used the permit. In addition, *Waterline* reports on numbers of permits issued within a given period, whereas this paper reports on cargo carried subject to the actual CVP or SVP sail date where it falls within that period.

**TABLE 1.3: SUMMARY OF VOYAGE PERMITS USED 2002–2003**

Permit type	No of voyages	Tonnes carried	TEUs Carried
SVP	798	10 573 004	12 161
CVP	454	1 729 244	37 619
Total	1 252	12 302 249	49 780

Source: Department of Transport and Regional Services (DOTARS), SVP and CVP Registers, unpublished

## AUSTRALIAN PORT ACTIVITY

In 2002–2003 there was an increase in the number of international trading ships entering Australia, the number of international voyages trading ships made to Australia and the number of ports they visited (Table 1.4).

**TABLE 1.4: SUMMARY OF AUSTRALIAN PORT VISITS <sup>a</sup>  
1996–1997 TO 2002–2003**

<i>Year</i>	<i>Number of ships entering Australia from overseas <sup>b</sup></i>	<i>Number of voyages into Australia from overseas <sup>b</sup></i>	<i>Number of ship calls at Australian ports (includes coastal) <sup>c</sup></i>
1996–1997	2 870	8 138	18 643
1997–1998	3 239	9 706	20 322
1998–1999	3 187	9 744	20 899
1999–2000	3 165	9 893	21 683
2000–2001	3 162	9 738	21 542
2001–2002	3 103	8 779	21 358
2002–2003	3 140	8 935	23 454

*a. Standard visits, as defined by Lloyd's Marine Information Unit*

*b. Excludes ships that do not leave the Australian coast*

*c. Ship calls includes ships coasting around Australia*

*Note A ship which sails to Australia 3 times and makes a total of 15 port calls in Australia in a year, counts as 1 ship, 3 voyages and 15 ship calls or visits.*

*Source: Lloyd's Marine Information Unit, Lloyd's Voyage Record, unpublished.*

**In 2002–2003 the number of international voyages increased by 1.8 per cent, while ship calls increased by 9.8 per cent. In line with an increase in ship activity, the amount of cargo that moved across Australian wharves increased by 6.2 per cent making 2002–2003 the busiest period yet recorded.**

## AUSTRALIAN FLEET

The Australian merchant fleet increased in size in 2002–2003, both in deadweight and in gross tonnage terms (Table 1.5). In terms of ship numbers, the number of ships in the Australian trading fleet decreased by 3 to 74 vessels.

**TABLE 1.5: AUSTRALIAN TRADING SUMMARY 1994 TO 2003**

<i>Year as at 30 June</i>	<i>Number of ships</i>	<i>Deadweight (tonnes)</i>	<i>Gross Tonnage (tons)</i>
1994	90	3 499 527	2 414 844
1995	85	3 203 623	2 298 894
1996	82	3 303 294	2 267 719
1997	76	3 164 568	2 238 141
1999	77	2 505 369	1 864 976
2000	77	2 283 336	1 729 770
2001	81	2 323 983	1 764 298
2002	77	2 028 637	1 587 743
2003	74	2 135 982	1 628 203

*Note:* Data for 1998 was not collected.

*Sources:* Department of Transport and Regional Services—personal communications; Lloyd’s Maritime Information Unit, Lloyd’s Voyage Record, unpublished; Lloyd’s Register Fairplay, World Shipping Directory 2003-2004; Lloyd’s List DCN, Directory of Australian Shipping, Air, Road and Rail Services, 2003; Shipping companies (various)—personal communications.

## CHAPTER 2: INTERNATIONAL SEA FREIGHT

In 2002–2003 international sea freight to/from Australia increased by 1.9 per cent by value, and 5.5 per cent by weight compared to 2001–2002<sup>1</sup>. The international sea freight task for exports in the same period was dominated by a noticeable drop in the value of exports, which decreased by 6.5 per cent, while the weight increased by 5.4 per cent. International sea imports rose by 10.2 per cent by value and 7.1 per cent by weight.

The largest exporting state (by weight and value) continues to be Western Australia (Table 2.1), with Queensland emerging as the largest importing state by weight. New South Wales remains the largest importing state by value with Victoria in 2nd place.

**TABLE 2.1: INTERNATIONAL SEA FREIGHT BY AUSTRALIAN STATE OF ORIGIN / FINAL DESTINATION, 2002–2003**

State	Value (\$'000s)		Tonnes	
	Imports	Exports	Imports	Exports
New South Wales	33 322 527	16 718 322	15 651 859	90 582 869
Victoria	32 320 077	15 354 543	14 606 809	12 066 596
Queensland	13 983 059	20 461 431	15 882 794	150 128 996
South Australia	5 098 814	7 529 248	3 914 205	8 597 275
Western Australia	8 730 282	25 440 225	9 857 577	250 228 159
Tasmania	492 811	2 080 889	861 687	7 700 928
Northern Territory	999 237	2 441 098	1 443 221	8 079 125
ACT	670	1 243	37	64
State Confidential	0	429 409	- 8 404	1 581 671
Foreign Origin		2 972 222		390 013
Total	94 947 476	93 428 630	62 209 786	529 355 694

Source: ABS, *International Cargo Statistics*, unpublished

### AUSTRALIAN PORTS

In terms of Australian port of loading/unloading (Table 2.2), very little has changed since 1999–2000<sup>2</sup> with Sydney continuing to be the largest importer by weight and value, and Melbourne being the largest exporter by value and Dampier the largest exporter by weight.

<sup>1</sup> BTRE2004, *Australian Sea Freight 2001-2002*, Information paper 50, Canberra

<sup>2</sup> BTRE2002, *Australian Sea Freight 1999-2000*, Information paper 47, Canberra

**TABLE 2.2: INTERNATIONAL SEA FREIGHT LOADED AND DISCHARGED BY AUSTRALIAN PORTS, 2002–2003**

<i>Australian port</i>	<i>Value (\$'000s)</i>		<i>Tonnes</i>	
	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>
Abbot Point	.	497 406	.	10 783 432
Adelaide	2 836 410	4 391 793	3 308 278	3 861 217
Albany	45 997	382 306	141 078	1 689 532
Ardrossan	.	680	.	66 600
Brisbane	12 205 405	7 426 038	9 708 466	8 935 832
Broome	14 364	51 634	12 304	133 484
Bunbury	103 226	2 241 088	1 011 960	9 415 470
Bundaberg	1 518	35 194	9 046	126 615
Burnie	63 796	225 056	149 118	1 758 171
Cairns	143 609	478 481	297 391	2 256 338
Cape Cuvier	.	39 587	.	1 925 266
Carnarvon	204	1 943	8	44 763
Coffs Harbour	75	7	27	3
Conf Aust Ports	0	429 409	- 8 404	1 509 896
Conf NT Ports	180 348	693 941	976 393	4 538 952
Dampier	847 539	10 221 718	459 227	100 757 788
Darwin	796 591	715 263	414 911	224 051
Derby	.	92 139	.	276 203
Devonport	18 600	10 343	62 218	10 381
Edithburg	.	70 497	.	274 724
Esperance	51 458	790 511	160 843	5 605 960
Fremantle/Perth	7 916 716	7 439 399	7 925 484	9 956 077
Geelong	1 900 254	789 766	5 070 146	2 920 161
Geraldton	141 705	793 632	148 625	2 154 107
Gladstone	233 024	3 640 490	1 009 761	40 869 331
Grafton	30	13 561	0	8 436
Hay Point	.	5 189 664	.	76 018 545
Hobart	71 498	430 534	198 526	598 766
Innisfail	.	146 800	.	599 926
Karumba	27 270	362 853	3 718	944 621
Launceston	210 101	919 349	411 741	3 368 471
Lucinda	.	156 461	.	571 583
Mackay	79 364	356 983	222 774	1 322 727
Melbourne	32 070 770	17 896 448	9 210 426	8 378 075

**TABLE 2.2: INTERNATIONAL SEA FREIGHT LOADED AND DISCHARGED BY AUSTRALIAN PORTS, 2002–2003 (continued)**

<i>Australian port</i>	<i>Value (\$'000s)</i>		<i>Tonnes</i>	
	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>
Newcastle	423 142	4 883 218	1 251 999	73 610 132
Other Ports NT	.	85 278	.	384 638
Port Bonython	.	295 377	.	626 502
Port Hedland	66 983	2 457 835	174 206	77 216 525
Port Kembla	335 043	1 660 198	2 011 652	11 106 490
Port Latta	.	46 827	.	1 023 194
Port Lincoln	18 946	475 003	56 966	1 523 913
Port Pirie	4 925	157 045	7 774	369 040
Port Walcott	14 478	828 887	29 083	39 584 930
Portland	126 877	1 145 503	374 361	2 340 810
Rockhampton	1 406	82 021	3 697	79 976
Stanley	781	73 990	12 100	915 491
Sydney	33 290 014	9 801 517	12 496 087	4 115 156
Thevenard	40	42 344	87	424 699
Thursday Island	2 268	590	571	44
Townsville	547 171	2 568 658	4 397 359	3 998 999
Twofold Bay	.	59 076	.	741 727
Useless Loop	.	24 438	.	1 117 795
Wallaroo	6 829	112 189	29 823	390 149
Weipa	21 435	96 600	46 654	3 699 914
Westernport	98 783	283 337	230 406	510 869
Whyalla	2 108	28 514	116 813	249 828
Wyndham	26 377	1 280 068	66 083	3 104 471
Yampi Sound	.	9 140	.	314 896
Total	94 947 476	93 428 627	62 209 786	529 355 694

Source: ABS, *International Cargo Statistics*, unpublished

## INTERNATIONAL TRADING PARTNERS BY REGION

In terms of region of origin of Australian imports, Europe maintains its place as our largest supplier by value, followed by Japan / North Asia and South East Asia. South East Asia also dominated our imports in terms of weight (Table 2.3). Figure 2.1 shows this information for value by region of loading/unloading, but it also reflects Australia's trading patterns, which continue to be dominated by the Asia Pacific nations. In terms of exports, Japan/North Asia was Australia's largest export market by both weight (278.9 million tonnes) and value (AUS\$28.34 billion), followed by East Asia and South East Asia (3rd in value, 4th in weight).

## INTERNATIONAL FREIGHT BY REGION OF LOADING

Not surprisingly, the situation does not change when we examine Australian sea trade in terms of region of origin/final destination, by weight and value. The same patterns are present, with Europe dominating as the source of Australian imports by value, South East Asia by weight (Table 2.4 and Figure 2.2) and Japan/North Asia dominating as the destination for exports by weight and value.

The difference between Table 2.3 and Table 2.4 is that:

- Table 2.2 shows where the goods are transhipped or loaded/discharged, which may not be the same region of origin/final destination, while
- Table 2.4 shows the region of origin or final destination

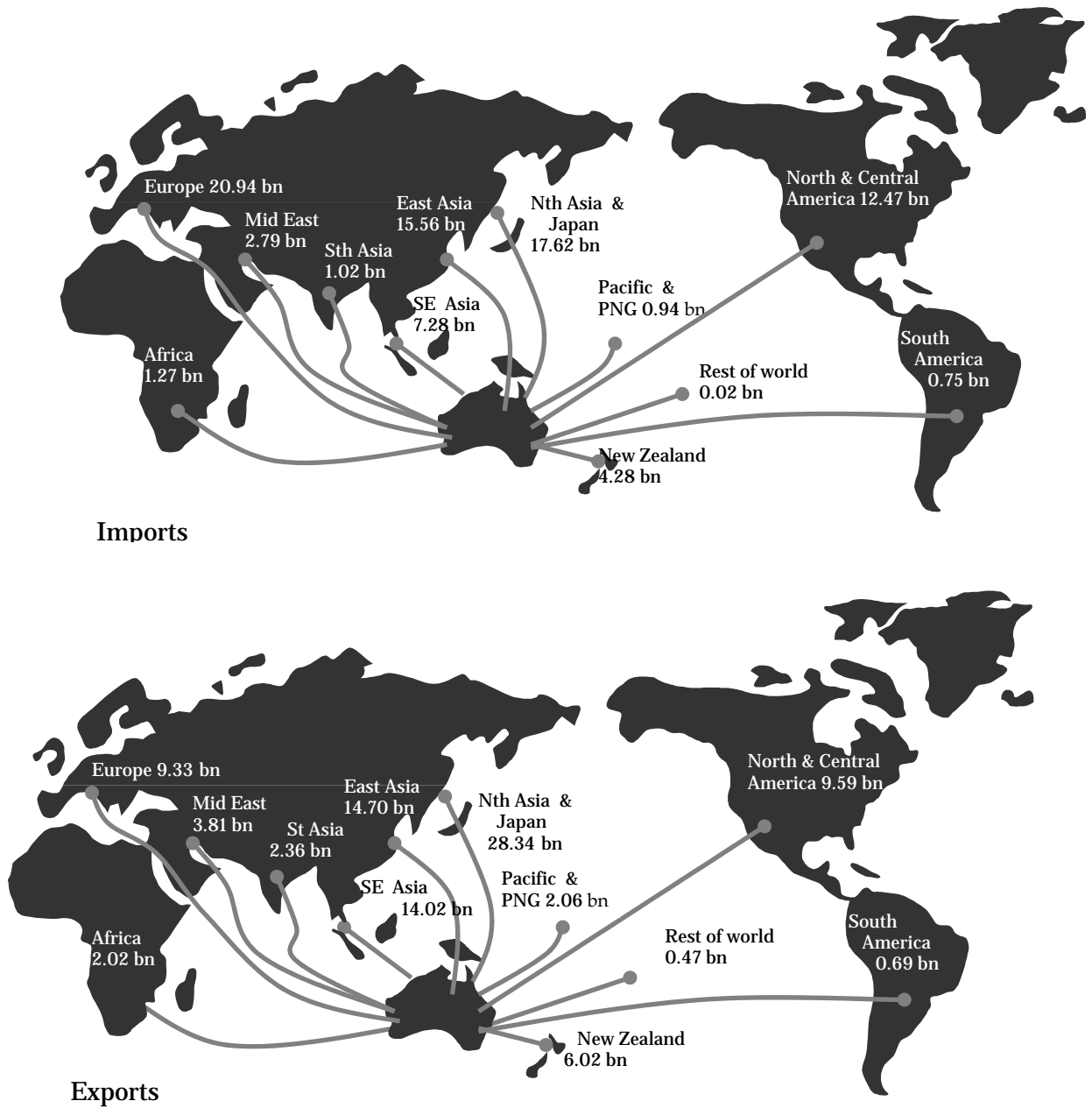
**TABLE 2.3: INTERNATIONAL FREIGHT BY REGION OF LOADING / UNLOADING, 2002–2003**

<i>Region of loading / unloading</i>	<i>Value (\$'000s)</i>		<i>Tonnes</i>	
	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>
Africa	1 273 247	2 020 467	1 263 537	5 715 279
East Asia	15 558 811	14 704 631	5 630 457	108 892 958
Europe	20 937 911	9 327 458	4 113 518	57 646 673
Japan & North Asia	17 620 394	28 344 379	5 496 378	275 875 996
Middle East	2 794 427	3 813 540	8 172 574	9 113 309
New Zealand	4 284 075	6 019 326	2 792 085	5 432 948
North & Central America	12 470 853	9 589 119	6 485 075	15 052 847
Pacific Islands and PNG	943 258	2 062 758	4 021 562	2 564 602
Rest of world	16 542	471 136	32 008	1 558 831
South America	747 390	694 577	699 249	6 818 113
South East Asia	17 279 274	14 018 287	22 934 306	21 323 216
South Asia	1 021 292	2 362 953	569 037	19 360 922
Total	94 947 476	93 428 630	62 209 786	529 355 694

Source: ABS, *International Cargo Statistics*, unpublished.

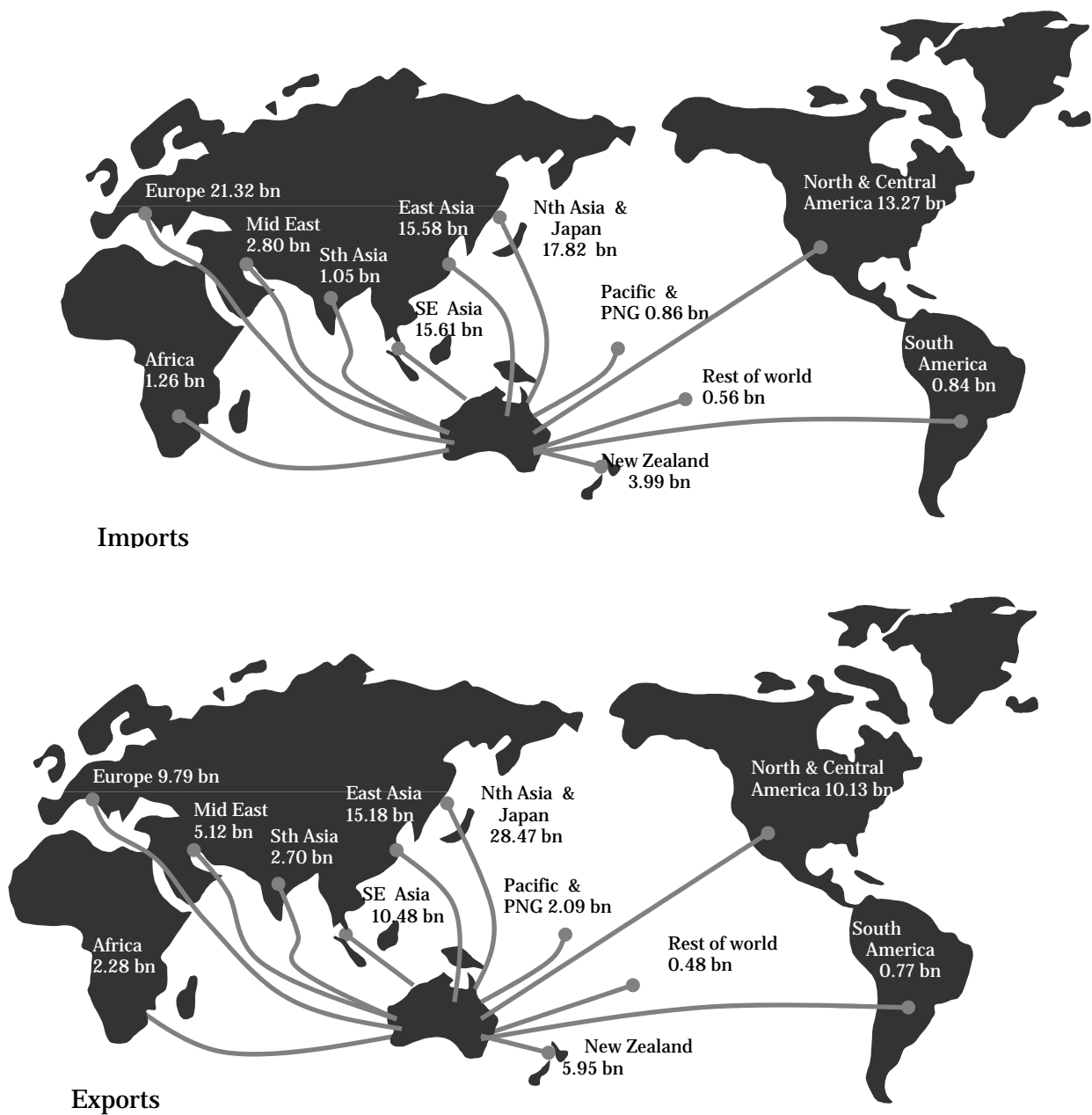


**FIGURE 2.1: INTERNATIONAL FREIGHT BY REGION OF LOADING / UNLOADING, 2002–2003, (\$billion)**



Source: ABS, International Cargo Statistics, unpublished

**FIGURE 2.2: INTERNATIONAL FREIGHT BY REGION OF ORIGIN / FINAL DESTINATION, 2002–2003, (\$billion)**



Source: ABS, International Cargo Statistics, unpublished

**TABLE 2.4: INTERNATIONAL FREIGHT BY REGION OF ORIGIN / FINAL DESTINATION, 2002–2003**

<i>Region of origin/ final destination</i>	<i>Value (\$'000s)</i>		<i>Tonnes</i>	
	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>
Africa	1 257 857	2 278 087	1 183 969	6 230 755
East Asia	15 581 201	15 176 604	5 602 918	108 773 660
Europe	21 317 437	9 787 275	4 216 507	57 507 592
Japan & North Asia	17 824 539	28 467 723	5 527 284	276 630 901
Middle East	2 794 416	5 120 844	8 205 837	9 113 251
New Zealand	3 988 608	5 950 830	2 750 415	5 416 394
North & Central America	13 270 845	10 131 276	6 598 311	14 951 152
Pacific Islands and PNG	857 446	2 091 681	4 003 423	2 536 478
Rest of world	555 407	476 969	129 330	1 554 713
South America	839 404	767 502	721 422	7 084 721
South East Asia	15 607 228	10 479 848	22 735 581	20 111 432
South Asia	1 053 088	2 699 993	534 789	19 444 645
Total	94 947 476	93 428 630	62 209 786	529 355 694

Source: ABS, *International Cargo Statistics*, unpublished

## COMMODITIES

Australia's leading commodity export by value is coal followed by petroleum products, confidential items, iron ore and concentrates, meat, transport equipment and cereals (Table 2.5). By weight, exports of coal and iron ore dominate. The major import commodity by value is machinery followed by road vehicles, and by weight, petroleum products and chemicals.

**TABLE 2.5: INTERNATIONAL FREIGHT BY COMMODITY, 2002–2003**

<i>Commodity</i>	<i>Value (\$'000s)</i>		<i>Tonnes</i>	
	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>
Coal, coke & briquettes	18 709	11 991 856	167 105	209 728 606
Petroleum oil	8 904 374	5 949 667	24 472 500	15 067 723
Confidential	2 006 844	5 393 579	1 004 867	16 904 808
Iron ore & concentrates	114 473	5 329 457	4 610 788	193 093 693
Meat & meat preps	199 228	5 307 771	53 891	1 444 347
Road vehicles & transport equipment	17 475 021	4 313 737	1 194 350	305 992
Cereals & cereal preps	381 610	4 182 600	572 461	13 408 517
Aluminium & aluminium alloys	505 647	4 050 940	119 412	1 647 249
Aluminium ores & concentrate; alumina	12 190	3 587 636	18 689	12 820 191
Machinery	21 897 435	3 553 256	1 615 393	339 334
Wool, sheep & lambs	68 270	3 274 577	15 189	411 603
Liquefied natural gas	.	2 607 099	.	0
Chemicals	4 094 606	2 454 408	4 165 992	1 339 808
Wine & vermouth	146 923	2 415 627	33 917	898 222
Other metal ores & metal scrap	45 056	2 375 951	112 144	9 847 979
Dairy products & birds eggs	295 217	2 307 855	86 987	950 910
Petroleum oils & refined prods	1 597 672	1 618 105	3 805 835	3 739 335
Misc manufactures articles	8 424 641	1 559 568	1 331 426	207 652
Copper & copper alloys	286 315	1 325 203	143 796	469 653
Vegetables & fruit	898 079	1 197 872	560 235	1 236 791
Cotton	979	1 157 801	279	605 028
Nickel & nickel alloys	21 771	1 097 250	1 456	85 991
Copper ores & concentrate	18 803	1 042 565	18 890	1 256 269
Live animals	670	1 024 818	394	638 981
Cork & wood	589 956	978 281	540 263	11 483 319
Lead & zinc ores & concentrate	46 773	958 093	127 359	2 456 935
Liquefied petroleum gas (LPG)	77 931	855 928	153 912	1 733 477
Iron & steel	1 899 818	815 316	1 884 124	2 125 611
Fish, crustaceans, molluscs etc	901 916	814 963	188 234	43 830
Feeding stuff for animals	328 408	786 389	716 034	1 362 357
Zinc & zinc alloys	3 182	770 090	1 147	495 878
Paper, paperboard & articles	2 464 956	763 425	1 623 818	887 253
Misc edible products & prep	1 133 682	664 496	239 240	214 789
Leather, leather manufactures nes	140 136	657 326	6 915	190 174
Manufactures of metal nes	2 650 694	653 888	637 080	241 044

**TABLE 2.5: INTERNATIONAL FREIGHT BY COMMODITY, 2002–2003 (continued)**

<i>Commodity</i>	<i>Value (\$'000s)</i>		<i>Tonnes</i>	
	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>
Tobacco & tobacco manufactures	332 316	605 276	39 803	741 172
Crude minerals	125 186	476 342	1 531 539	15 194 495
Uranium & thorium ores & concentrate	.	427 045	.	10 187
Oil seeds & oleaginous fruits	66 831	401 972	93 687	907 794
Lead & lead alloys	7 612	372 322	7 684	420 837
Plastics	2 212 844	362 743	972 255	180 574
Textile yarn, fabrics, & articles	2 310 588	361 875	369 662	49 107
Non-metallic mineral manufactures nes	1 569 048	334 196	1 989 192	612 163
Oils & fats	361 373	320 518	281 789	450 942
Mineral sands	6 360	224 149	26 006	1 155 937
Cork & wood manufactures (exc furniture)	672 822	211 969	338 562	377 023
Crude animal & veg materials nes	195 612	197 032	98 767	59 939
Sugars, sugar preps & honey	179 945	188 063	99 165	403 625
Other non-ferrous metals nes	64 929	163 765	9 492	24 130
Apparel & clothing access	2 597 741	162 794	189 029	16 063
Fertilisers	827 283	129 952	3 663 405	441 383
Rubber manufactures nes	1 632 307	115 013	371 690	25 387
Organic chemicals	1 580 742	104 993	868 338	68 482
Ale, beer & stout, cider (alcoholic)	96 319	88 497	89 226	91 031
Coffee, tea, cocoa, spices etc	558 673	65 739	143 883	14 129
Spirits (potable), alcoholic beverages nes	391 722	56 918	93 306	22 841
Other textile fibres	101 069	52 907	54 844	39 686
Pulp & waste paper	262 647	51 886	415 309	321 794

**TABLE 2.5: INTERNATIONAL FREIGHT BY COMMODITY, 2002–2003 (continued)**

Commodity	Value (\$'000s)		Tonnes	
	Imports	Exports	Imports	Exports
Misc	18 417	40 448	6 271	2 657
Footwear	898 482	29 844	67 647	6 502
Non-alcoholic beverages nes	88 190	28 707	88 068	24 381
Crude rubber (including synthetic)	136 217	15 988	76 968	9 990
Gases, natural & manufactures nes	217	284	77	88
<b>Total</b>	<b>94 947 476</b>	<b>93 428 630</b>	<b>62 209 786</b>	<b>529 355 694</b>

Note: nes – not elsewhere specified.

incl – including.

exc – excluding.

Confidential items may only be confidential for weight or value or both, eg Liquefied natural gas is confidential by weight but not value.

Source: ABS, International Cargo Statistics, unpublished.

## INTERNATIONAL TRADING PARTNERS BY COUNTRY

Japan is Australia's largest trading partner for imports and exports by value followed by China and the United States of America. Over the last few years, while trade with China is growing, trade with the USA is decreasing<sup>3</sup>. Our near neighbours New Zealand (5th imports and exports), Indonesia (8th exports and 6th imports) and Papua New Guinea (26th on imports and 21st on exports), which is included in the Rest of the World, remain important as trading partners for Australia.

<sup>3</sup> Compared to BTRE2002, *Australian Sea Freight 1999-2000*, Information paper 47, Canberra

**TABLE 2.6: TOP TWENTY TRADING PARTNERS BY SEA, 2002–2003**

Country of origin	Imports		Country of final destination	Exports		Rank
	\$'000s	Tonnes		\$'000s	Tonnes	
Japan	14 702 841	4 182 617	Japan	20 782 571	211 262 870	1
China (incl Hong Kong)	12 762 599	3 724 684	China (incl Hong Kong)	10 279 721	75 701 191	2
USA	11 434 754	4 635 876	USA	7 955 717	7 695 573	3
Germany	6 035 554	736 369	Korea, Republic of	7 561 446	65 226 765	4
New Zealand	3 988 608	2 750 415	New Zealand	5 950 830	5 416 394	5
Indonesia	3 533 466	6 454 389	Taiwan	3 861 179	31 737 635	6
United Kingdom	3 214 975	770 178	Singapore	3 158 717	5 969 216	7
Italy	3 120 862	707 656	Indonesia	2 996 890	6 242 476	8
Korea, Republic of	3 072 683	1 253 512	United Kingdom	2 457 318	12 131 149	9
Thailand	3 010 852	1 503 031	India	1 940 108	16 800 241	10
Malaysia	2 968 966	3 304 571	Saudi Arabia	1 919 263	969 123	11
Singapore	2 924 006	3 959 744	Malaysia	1 877 510	5 291 864	12
Vietnam	2 482 709	5 675 832	Italy	1 782 966	7 447 780	13
Taiwan	2 390 126	1 159 365	Thailand	1 723 266	1 784 118	14
France	1 849 378	294 215	Canada	1 561 159	3 164 874	15
Canada	1 316 556	1 859 955	Netherlands	1 173 203	10 354 342	16
Saudi Arabia	1 283 246	4 272 996	South Africa	1 158 461	3 263 604	17
Sweden	989 776	176 381	Philippines	977 268	1 324 893	18
South Africa	958 938	481 996	United Arab Emirates	967 076	1 649 291	19
Netherlands	901 828	255 417	France	914 327	8 967 312	20
Rest of World	12 004 755	14 050 587	Rest of World	12 429 632	46 954 981	
Total	94 947 476	62 209 786	Total	93 428 630	529 355 694	

Source: ABS, *International Cargo Statistics*, unpublished.

## LINER TRADE

A liner or a liner ship is defined as a cargo carrying ship that provides carriage for cargo, in regularly scheduled services between specified ports. It does not include bulk cargo, or general cargo carried on charter services such as car carriers, or tramp shipping. It includes most containerised, ro-ro and general cargo freight shipping services.

In 2002–2003 the Australian liner trade was valued at \$117.7 billion, (Table 2.7). Europe was the largest source of imports, while Japan/North Asia, East Asia, North and Central America, South East Asia and Europe were our largest markets for liner exports, Figure 2.3.

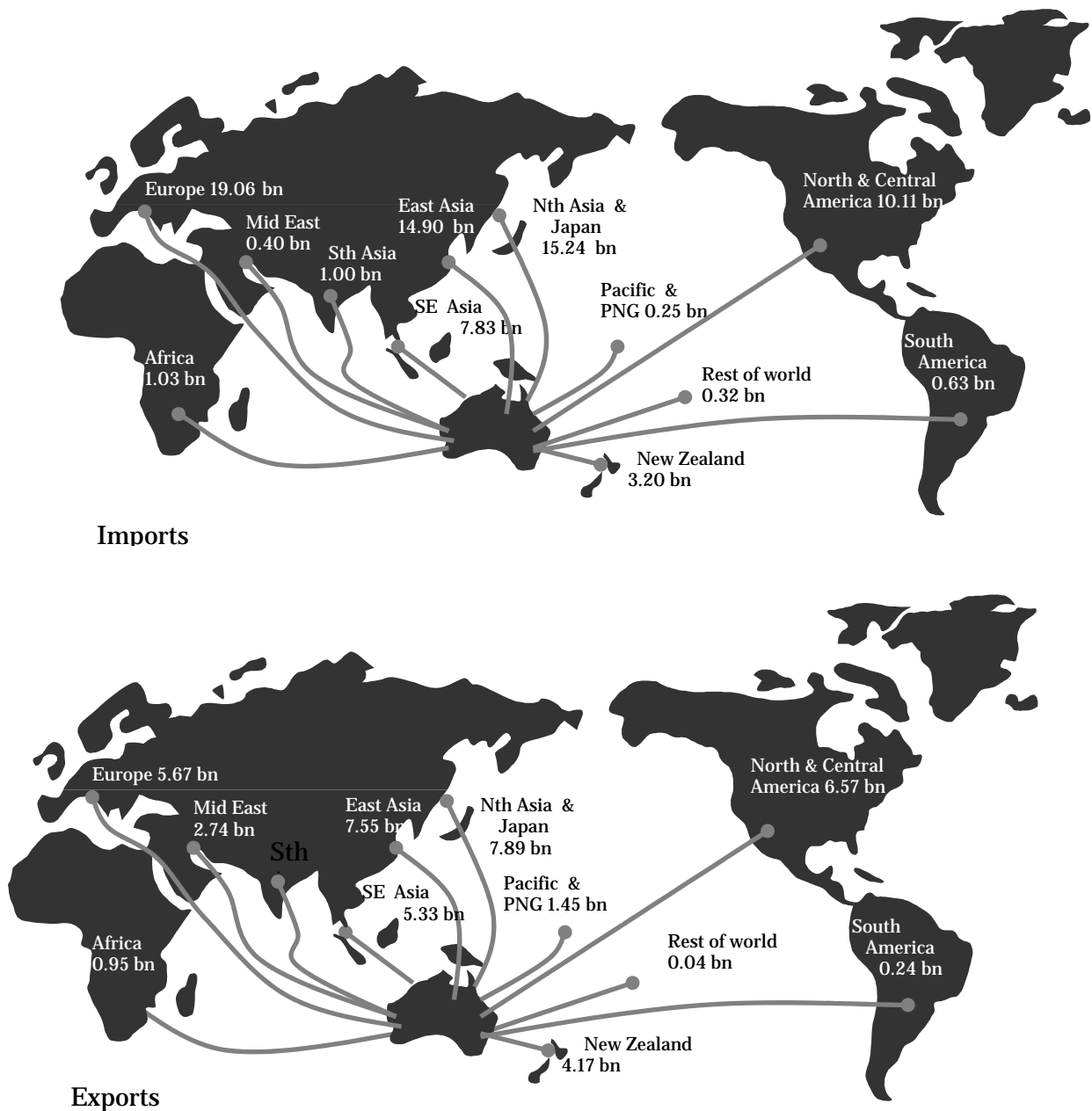
**TABLE 2.7: INTERNATIONAL LINER TRADE BY REGION, 2002–2003**

Region of origin / final destination	Value (\$'000s)		Tonnes	
	Imports	Exports	Imports	Exports
Africa	1 033 306	946 558	327 820	424 446
East Asia	14 896 857	7 549 108	3 280 374	3 587 874
Europe	19 055 486	5 665 312	3 424 936	2 274 541
Japan & North Asia	15 449 167	7 888 224	2 049 363	3 948 550
Middle East	391 055	2 743 599	229 193	763 982
New Zealand	3 198 113	4 167 015	1 478 411	1 718 793
North & Central America	10 112 488	6 569 097	1 733 113	1 817 567
Pacific Islands and PNG	245 446	1 452 478	127 416	953 752
Rest of world	323 493	43 361	60 607	10 728
South America	628 528	234 915	270 909	62 681
South East Asia	7 825 859	5 326 521	2 767 392	3 551 835
South Asia	998 594	956 609	354 661	671 837
<b>Total</b>	<b>74 158 393</b>	<b>43 542 795</b>	<b>16 104 196</b>	<b>19 786 585</b>

*Source: ABS, International Cargo Statistic, unpublished.*



**FIGURE 2.3: INTERNATIONAL LINER FREIGHT EXPORTS AND IMPORTS BY REGION OF FINAL DESTINATION, 2002–2003, (\$billion)**



Source: ABS, International Cargo Statistics, unpublished

## NON-LINER

Non-liner cargo consists of all of dry and liquid bulk, but also comprises of cargo not shipped on regular liner services such as charters, dedicated car carriers and passenger ships. Australian non-liner trade in 2002–2003 was valued at \$70.7 billion (Table

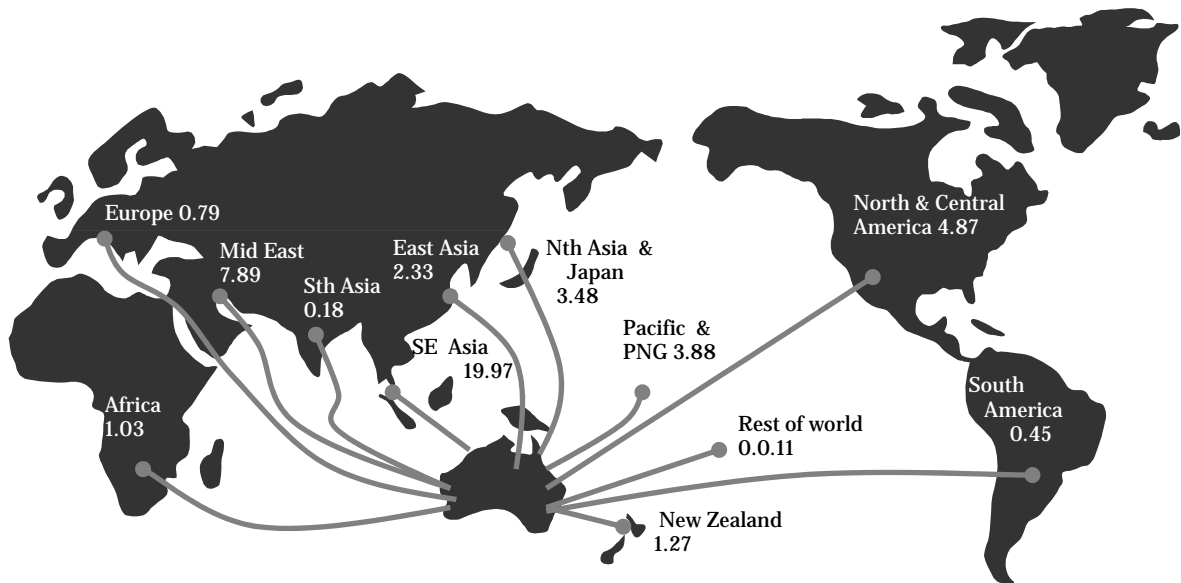
2.8). Value wise, South East Asia was the largest source of imports (\$7.8 billion), while Japan / North Asia was our largest market for non–liner exports (\$20.6 billion), Figure 2.4.

**TABLE 2.8: INTERNATIONAL NON–LINER TRADE BY REGION, 2002–2003**

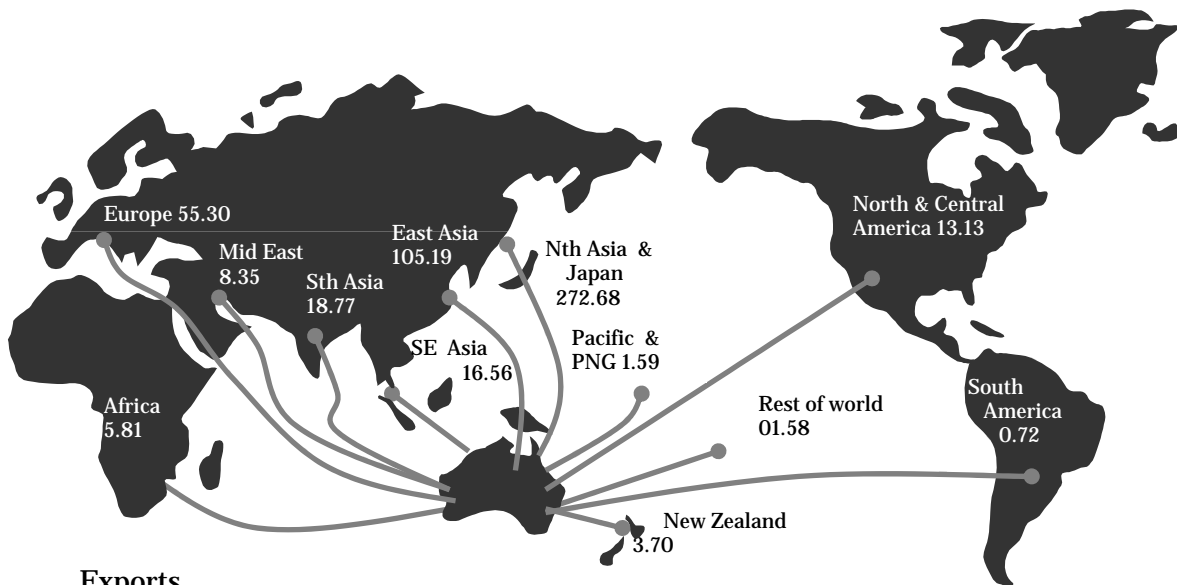
<i>Region of origin / final destination</i>	<i>Value (\$'000s)</i>		<i>Tonnes</i>	
	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>
Africa	224 551	1 331 529	856 149	5 806 309
East Asia	684 344	7 627 496	2 329 855	105 185 786
Europe	2 261 952	4 121 963	792 659	55 304 826
Japan & North Asia	2 375 373	20 579 499	3 477 884	272 682 350
Middle East	2 403 360	2 377 245	7 976 644	8 349 269
New Zealand	790 495	1 783 815	1 272 004	3 697 601
North & Central America	3 158 357	3 562 179	4 865 203	13 133 586
Pacific Islands and PNG	612 001	639 203	3 876 017	1 585 018
Rest of world	231 914	433 609	108 932	1 584 569
South America	210 876	532 588	450 513	7 022 040
South Asia	7 781 368	5 153 326	19 968 216	16 559 597
South East Asia	54 494	1 743 384	180 128	18 772 808
<b>Total</b>	<b>20 789 083</b>	<b>49 885 836</b>	<b>46 154 203</b>	<b>509 683 759</b>

*Source: ABS, International Cargo Statistics, unpublished.*

**FIGURE 2.4: INTERNATIONAL NON-LINER FREIGHT EXPORTS AND IMPORTS BY REGION OF FINAL DESTINATION, 2002–2003, (tonnes million)**



Imports



Exports

Source: ABS, International Cargo Statistics, unpublished



## CHAPTER 3: COASTAL FREIGHT

In 2002–2003, 106.3 million tonnes of coastal cargo was handled through Australian ports. Of this, 52.8 million tonnes of coastal cargo was loaded and 53.5 million tonnes was discharged.

In terms of task performed, based on cargo loaded, the Australian coastal fleet performed 114.8 billion tonne kilometres. This is up on the previous year, with minor increases in *iron ore*, *bauxite/alumina*, *petroleum products* and *other cargo*; and a slight decrease in *crude oil*.

### MAJOR COMMODITIES

In 2002–2003, there were slight increases in tonnage loaded in all categories except for Other Cargo, which decreased slightly (Table 3.1).

**TABLE 3.1: COASTAL FREIGHT LOADED BY MAJOR COMMODITY, 1997–98 TO 2002–2003**

ATFCC code	Commodity	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
<i>Tonnes (millions)</i>							
281	Iron ore	8.2	8.6 <sup>b</sup>	6.8	6.7	6.5	6.6
282	Bauxite/alumina	10.3	9.9	12.1	11.6	11.6	11.7
331	Crude oil	8.9	6	6.6	7.5	7.0	7.3
33	Petroleum products <sup>a</sup>	7.2	6.9	6.5	5.8	6.5	6.8
	Other cargo	18.0	17.0	19.2	20.3	20.9	20.4
	Total	52.5	48.4	51.3	52.0	52.4	52.8
<i>Tonne-kilometres (billions)</i>							
281	Iron ore	40.9	40.3 <sup>b</sup>	29.7	28.3	26.3	27.2
282	Bauxite/alumina	22.4	21.8	27.9	25.7	25.6	25.9
331	Crude oil	21.7	15.1	17.1	15.2	20.3	20.2
33	Petroleum products <sup>a</sup>	10.7	10.7	9.6	9.4	9.4	10.9
	Other cargo	21.2	20.9	24.6	25.9	28.8	30.5
	Total	116.6	108.8	108.9	104.5	110.4	114.8

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

## CARGO FLOWS

Coastal freight flows between the States are detailed in Table 3.2. Queensland and Western Australia are ranked 1st and 2nd in terms of state of origin, while Queensland and New South Wales are ranked 1st and 2nd in terms of state of destination. Queensland's top ranking as state of origin is due to the large tonnages of intrastate bauxite trade. As was the case in 2001-2002, Western Australia's and Victoria's overall ranking have strengthened, while New South Wales' position has again declined slightly.

**TABLE 3.2: TOTAL COASTAL FREIGHT FLOWS, 2002–2003**

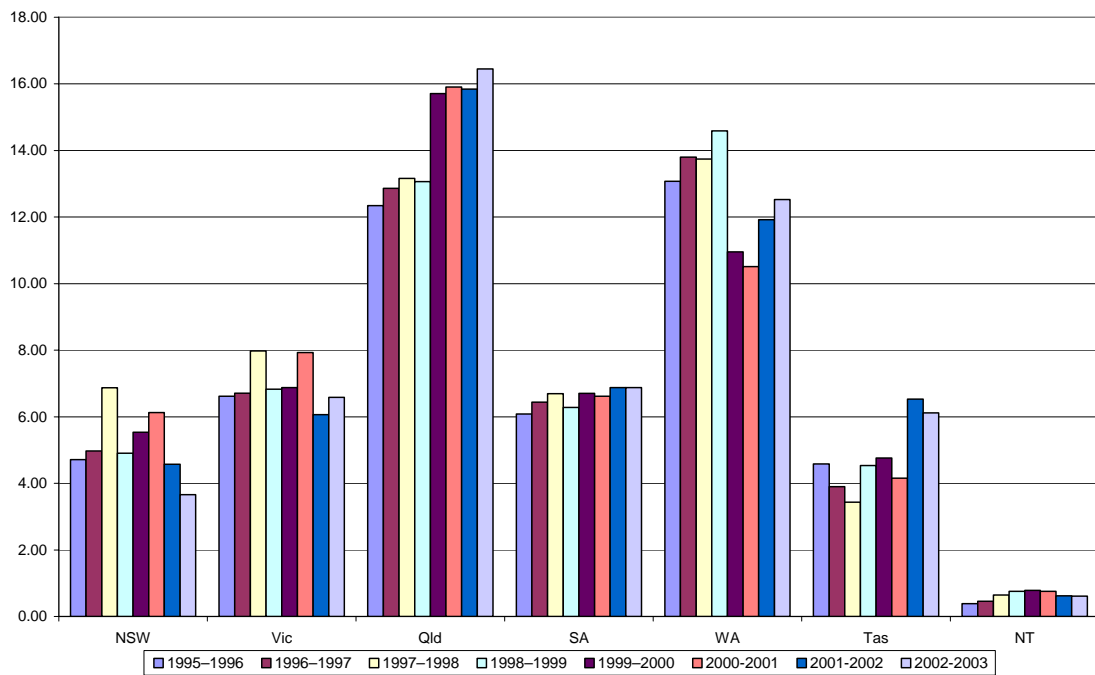
<i>State of origin</i>	<i>State of destination (kilotonnes)</i>							<i>Total</i>
	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas</i>	<i>NT</i>	
NSW	166	1 260	631	1 151	241	193	19	3 661
Vic	2 683	152	962	143	505	2 139	0	6 585
Qld	1 969	1 006	12 838	186	73	345	32	16 450
SA	2 341	1 315	611	1 984	357	268	0	6 875
WA	5 603	1 399	1 342	592	3 034	222	331	12 523
Tas	2 025	3 045	97	254	487	209	0	6 117
NT	82	0	3	0	14	369	146	614
Total	14 869	8 177	16 485	4 311	4 711	3 745	528	52 825

*Source: Australian port authorities—personal communications*

The changes by state of shipping activity are more clearly seen in Figures 3.1 and 3.2, which show the freight flows over the last 8 years. Trends include:

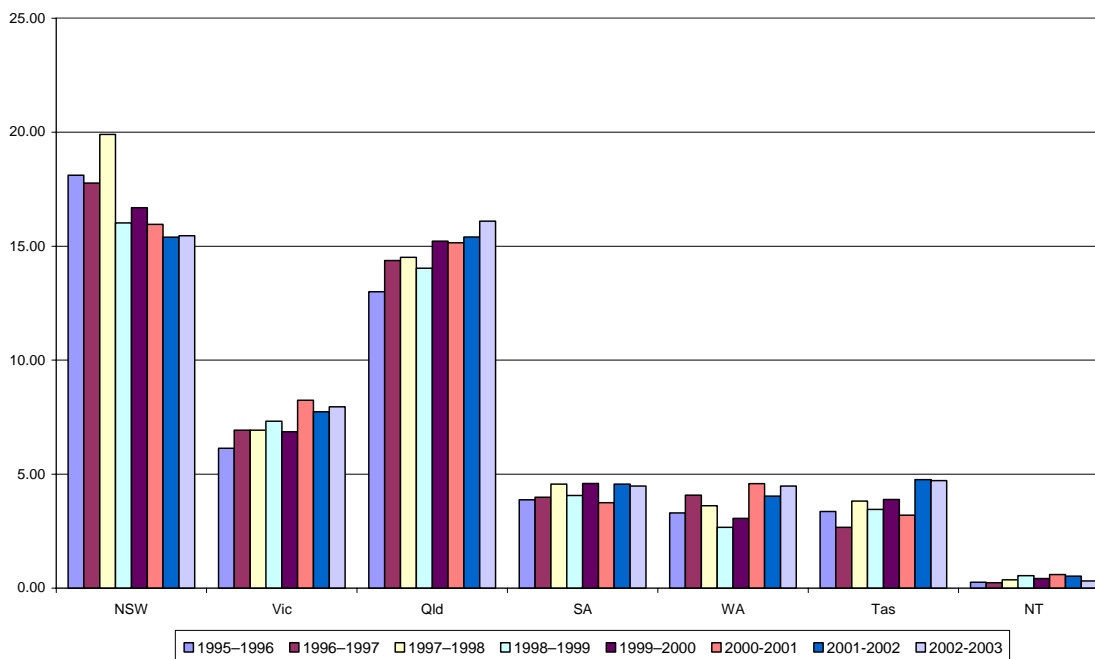
- continued increasing tonnages in Western Australia and an upturn in tonnages for Victoria and Queensland, with a corresponding continued decline in New South Wales and a decline in Tasmania following a significant increase in the previous year;
- relative stability in the discharge of cargo for all States, with slight declines in South Australia, Tasmania and the Northern Territory balanced by increases in New South Wales, Victoria, Queensland and Western Australia.

**FIGURE 3.1: COASTAL FREIGHT LOADED BY STATE, 1995–96 TO 2002–2003**



Source: BTRE, Coastal Freight Database, unpublished.

**FIGURE 3.2: COASTAL FREIGHT DISCHARGED BY STATE, 1995–96 TO 2002–2003**



Source: BTRE, Coastal Freight Database, unpublished.

**TABLE 3.3: COASTAL FREIGHT FLOWS BETWEEN AUSTRALIAN PORTS, 2002–2003**

<i>Port of origin</i>	<i>Port of destination (kilotonnes)</i>												<i>Total</i>		
	<i>Sydney</i>	<i>Rest of Melbourne NSW</i>	<i>Rest of Vic</i>	<i>Brisbane</i>	<i>Rest of Adelaide Qld</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	38	75	164	28	11	0	193	0	10	37	2	0	559
Rest of NSW	27	139	69	1 078	99	341	6	1 134	22	26	63	82	18	0	3 103
Melbourne	128	0	0	79	144	0	132	11	370	0	3	1 561	0	0	2 427
Rest of Vic	2515	40	40	34	650	168	0	0	9	127	310	265	0	0	4 158
Brisbane	329	2	19	47	0	1 627	10	0	28	6	10	4	27	0	2 108
Rest of Qld	320	1 317	720	220	909	10 303	59	117	36	3	0	331	5	0	14 342
Adelaide	231	0	608	0	269	0	0	0	102	232	0	8	0	0	1 450
Rest of SA	531	1 579	487	220	302	39	1 775	208	23	0	169	91	0	0	5 425
Fremantle	120	0	251	662	72	12	548	9	0	730	101	84	330	0	2 919
Rest of WA	1153	4 330	82	404	1055	212	36	0	2290	5	25	12	1	0	9 604
Hobart	0	39	19	172	14	0	13	192	192	13	0	0	0	0	652
Rest of Tas	446	1539	2 848	6	12	72	24	26	282	0	173	36	0	0	5465
Darwin	0	0	0	0	3	0	0	0	11	2	0	0	0	121	138
Rest of NT	0	82	0	0	0	0	0	0	0	0	0	369	24	1	477
<b>Total</b>	<b>5 800</b>	<b>9 069</b>	<b>5 181</b>	<b>2 997</b>	<b>3 692</b>	<b>12 801</b>	<b>2 614</b>	<b>1 697</b>	<b>3 557</b>	<b>1 145</b>	<b>863</b>	<b>2 881</b>	<b>406</b>	<b>122</b>	<b>52 825</b>

*Source: Australian port authorities—personal communications*



The changes in trading patterns can be seen in more detail in Table 3.3 which shows cargo flows between state capitals and their respective rest of state. In comparing the tonnages moved over 2001–2002 (BTRE, 2003) it can be seen that:

- there has been an increase in *Rest of WA* to *Rest of Vic* and *Adelaide* which is due to an increase in crude oil moving from WA oil fields straight to the South Australian and Victorian refineries. Another notable increase was from *Brisbane* to *Rest of WA*, caused by some direct shipments from *Brisbane* to *Dampier*;
- there was a notable decline in NSW intrastate shipments, most probably due to ceasing of coal shipments between *Catherine Hill Bay* and *Newcastle*.

## PACK TYPE

Pack type is a description of the way cargo is packaged and moved. It is primarily split between bulk and non bulk. The best description of bulk cargo is cargo that can be poured or dropped, as a liquid or solid, into a ship's hold. Non bulk is effectively those types of cargo that would be damaged if dropped or poured. For example:

- wheat as a bulk cargo is loaded as loose grain, via a conveyor belt to a spout, where it is poured into a hold;
- wheat as a non bulk cargo is bagged. In this form, it has to be lifted into the ship's hold either on pallets, containerized or in nets and stacked into the hold. If it was poured into the hold, as in the bulk case, the bags would break.

Bulk cargo is further subdivided, between liquid and dry bulk, which is a characteristic of the cargo. Gas cargo is considered as liquid bulk for the purposes of this report since it is pumped on board like most liquid bulk cargoes.

Non bulk cargo is similarly split between containerised, and other not classified and/or non-containerised cargo.

Bulk cargo (see Tables 3.4 and 3.5) makes up the majority of coastal cargo, representing 87.6 per cent of all coastal cargo, down slightly from 88 per cent of in 2001–2002, and down from a high of 92 per cent in 1993–1994.

The increase in liquid bulk cargo evident since 1999–2000 has fallen from the high levels of 16.0/15.7 million tonnes loaded/discharged in 2000–2001 to 14.9/14.9 million tonnes loaded/discharged in 2002–2003 or a slight increase on the levels in 2001–2002.

Non-bulk cargo has increased by over 60 per cent: 3.7/3.8 million tonnes loaded/discharged in 1993–94 to 6.0/7.1 million tonnes loaded/discharged in 2002–2003; but has decreased by almost 10 per cent on the high levels of 2000–2001. Most of the growth has been in containerised cargo.

Table 2.6 shows the flow of cargo between the states by pack type. Of significance is the overall decrease in the 2002–2003 levels of non-bulk cargo, offset by increases in containerised cargo, particularly between Vic and Tasmania. WA has also raised its oil output and recent shipments of Gypsum from Cape Cuvier have raised its dry bulk output.

**TABLE 3.4: COASTAL FREIGHT LOADED BY PORT AND PACK TYPE, 2002–2003**

Port of origin	Bulk (kilotonnes)		Non-bulk (kilotonnes)		Total (kilotonnes)
	Dry bulk	Liquid bulk	Container	Other	
Sydney	0	263	285	10	559
Rest of NSW	1 420	311	80	1 291	3 103
Melbourne	14	393	1 464	556	2 427
Rest of Vic	72	4 064	0	22	4 158
Brisbane	58	1 962	69	19	2 108
Rest of Qld	13 688	439	125	90	14 342
Adelaide	863	559	23	5	1 450
Rest of SA	4 943	482	0	0	5 425
Fremantle	800	1 809	304	6	2 919
Rest of WA	5 255	4 330	10	9	9 604
Hobart	223	345	6	78	652
Rest of Tas	2 931	0	1 771	763	5 465
Darwin	2	17	2	117	138
Rest of NT	458	0	0	18	477
<b>Total</b>	<b>30 728</b>	<b>14 974</b>	<b>4 139</b>	<b>2 983</b>	<b>52 825</b>

Source: Australian port authorities—personal communications

**TABLE 3.5: COASTAL FREIGHT DISCHARGED BY PORT AND PACK TYPE, 2002–2003**

<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	1 746	4 072	35	35	5 888
Rest of NSW	9 212	95	23	248	9 577
Melbourne	2 071	971	1 397	578	5 017
Rest of Vic	2 293	637	0	6	2 936
Brisbane	1 577	2 038	89	8	3 711
Rest of Qld	10 028	2 223	36	93	12 380
Adelaide	1 981	533	58	0	2 572
Rest of SA	1 864	42	0	0	1 906
Fremantle	89	2 537	777	40	3 443
Rest of WA	160	834	33	5	1 032
Hobart	446	360	0	0	806
Rest of Tas	1 048	402	1 814	650	3 914
Darwin	1	237	14	67	318
Rest of NT	0	0	0	0	0
<b>Total</b>	<b>32 516</b>	<b>14 979</b>	<b>4 275</b>	<b>1 730</b>	<b>53 501</b>

*Source: Australian port authorities—personal communications*

**TABLE 3.6: COASTAL FREIGHT LOADED BY PACK TYPE, 2002–2003**

<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>	
<i>Dry Bulk</i>								
NSW	51	55	70	1 108	0	136	0	1 420
Vic	40	0	10	0	8	28	0	86
Qld	1 632	901	10 717	169	0	327	0	13 746
SA	2 066	910	557	1 984	23	266	0	5 806
WA	4 373	1 131	379	73	63	37	0	6 055
Tas	1 981	683	89	202	18	182	0	3 155
NT	82	0	0	0	0	369	9	460
Sub Total	10 225	3 680	11 822	3 535	112	1 345	9	30 728
<i>Liquid Bulk</i>								
NSW	94	160	265	10	28	19	0	574
Vic	2 627	152	820	116	139	603	0	4 456
Qld	325	93	1 953	17	0	13	0	2 401
SA	273	404	51	0	311	2	0	1 041
WA	1 122	173	942	508	2 903	176	317	6 140
Tas	0	135	5	13	192	0	0	345
NT	0	0	0	0	0	0	17	17
Sub Total	4 440	1 118	4 036	664	3 572	811	333	14 974
<i>Container</i>								
NSW	2	37	86	10	198	25	7	366
Vic	15	0	124	25	310	990	0	1 464
Qld	8	9	82	0	62	5	28	194
SA	0	0	0	0	22	0	0	23
WA	108	94	21	12	56	9	12	313
Tas	6	1 495	3	1	258	14	0	1 777
NT	0	0	0	0	2	0	0	2
Sub Total	139	1 637	316	48	908	1 043	48	4 139
<i>Non-Bulk</i>								
NSW	19	1 008	211	23	15	13	12	1 301
Vic	1	0	7	2	49	519	0	578
Qld	4	2	86	0	11	1	4	109
SA	2	0	3	0	1	0	0	5
WA	0	1	1	0	12	0	2	15
Tas	38	731	0	39	19	13	0	840
NT	0	0	3	0	12	0	120	135
Sub Total	65	1 742	311	64	118	546	138	2 983
Total	14 869	8 177	16 485	4 311	4 711	3 745	528	52 825

Source: Australian port authorities—personal communications

## COMMODITY GROUPS

Total tonnages for all commodity classifications changed only slightly over 2001–2002 figures (Table 3.7). One of the greatest changes between 2001–2002 and 2002–2003 was in the commodity grouping *Crude materials inedible except fuels*, which fell sharply due to a drop in loading of Tasmanian intrastate woodchips. *Chemicals and related materials nes* showed a slight overall increase, but increased markedly between Queensland and Victoria. Total *Mineral fuels lubricants and related materials* loadings was quite stable, with slight decreased loadings in New South Wales, (intrastate coal) and Victoria (interstate crude oil) balanced by a slight increase in Western Australia loadings of crude oil.

**TABLE 3.7: COASTAL FREIGHT LOADED BY MAJOR COMMODITY GROUPS, 2002–2003**

State of origin	State of destination (kilotonnes)							Total
	NSW	Vic	Qld	SA	WA	Tas	NT	
<i>Food and live animals</i>								
NSW	0	1	5	0	40	11	2	60
Vic	2	0	35	5	96	282	0	419
Qld	189	322	94	0	45	0	0	650
SA	139	0	150	0	2	23	0	314
WA	64	40	79	37	2	15	5	241
Tas	0	323	3	0	81	7	0	414
NT	0	0	0	0	0	0	0	0
Sub total	395	687	365	42	265	338	7	2 099
<i>Beverages and tobacco</i>								
NSW	0	0	1	0	16	0	0	18
Vic	1	0	5	1	2	42	0	50
Qld	0	0	0	0	1	0	25	27
SA	0	0	0	0	0	0	0	0
WA	1	0	0	0	0	0	0	2
Tas	0	27	0	0	8	0	0	35
NT	0	0	0	0	0	0	0	0
Sub total	3	28	6	1	27	42	26	132
<i>Crude materials inedible except fuels</i>								
NSW	5	56	6	1	12	73	0	152
Vic	2	0	16	0	32	125	0	176
Qld	1 241	122	9 236	93	9	327	0	11 027
SA	1 867	427	220	1 984	0	226	0	4 725
WA	4 337	1 107	259	31	73	26	3	5 836
Tas	1 493	273	81	241	17	177	0	2 281
NT	82	0	3	0	2	369	14	470
Sub total	9 027	1 985	9 821	2 350	144	1 323	16	24 666

**TABLE 3.7: COASTAL FREIGHT LOADED BY MAJOR COMMODITY GROUPS, 2002–2003 (continued)**

State of origin	State of destination (kilotonnes)							Total
	NSW	Vic	Qld	SA	WA	Tas	NT	
<i>Mineral fuels lubricants and related materials</i>								
NSW	115	136	263	1 112	4	82	0	1 711
Vic	2 627	141	820	109	149	618	0	4 464
Qld	330	34	2 098	41	0	13	1	2 517
SA	267	359	51	0	334	18	0	1 029
WA	1 122	173	942	508	2 903	176	317	6 140
Tas	0	0	0	0	0	0	0	0
NT	0	0	0	0	0	0	17	17
Sub total	4 461	843	4 174	1 770	3 390	907	334	15 878
<i>Animal and vegetable oils, fats and waxes</i>								
NSW	0	1	6	0	0	0	0	8
Vic	0	1	1	1	0	14	0	16
Qld	3	1	13	0	0	0	0	18
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	3	3	21	1	1	14	0	42
<i>Chemicals and related materials nes</i>								
NSW	26	79	110	7	63	9	0	294
Vic	5	10	20	8	30	112	0	184
Qld	133	521	58	52	6	4	3	777
SA	66	45	0	0	0	0	0	112
WA	11	19	2	7	3	0	1	43
Tas	6	191	14	13	205	10	0	438
NT	0	0	0	0	1	0	6	7
Sub total	247	866	204	87	307	135	10	1 855
<i>Manufactured goods classified chiefly by material</i>								
NSW	17	981	219	30	79	14	13	1 354
Vic	39	0	37	4	130	194	0	405
Qld	64	2	1 241	0	3	0	1	1 311
SA	0	483	187	0	0	0	0	670
WA	48	37	57	6	33	4	3	187
Tas	521	1 154	0	1	163	0	0	1 839
NT	0	0	0	0	8	0	36	43
Sub total	690	2 657	1 741	41	417	212	52	5 810

**TABLE 3.7: COASTAL FREIGHT LOADED BY MAJOR COMMODITY GROUPS, 2002–2003 (continued)**

State of origin	State of destination (kilotonnes)							Total
	NSW	Vic	Qld	SA	WA	Tas	NT	
<i>Machinery and transport materials</i>								
NSW	0	2	5	0	13	1	0	21
Vic	1	0	7	2	13	73	0	96
Qld	2	1	0	0	4	1	0	8
SA	2	0	3	0	1	0	0	5
WA	4	3	1	0	3	0	1	12
Tas	0	154	0	0	2	0	0	156
NT	0	0	0	0	3	0	0	3
Sub total	8	160	16	3	38	75	1	301
<i>Miscellaneous manufactured articles</i>								
NSW	1	4	7	1	9	1	0	23
Vic	3	0	11	3	39	546	0	601
Qld	0	0	0	0	2	0	0	2
SA	0	0	0	0	0	0	0	0
WA	11	10	1	1	0	0	0	24
Tas	0	6	0	0	1	0	0	7
NT	0	0	0	0	1	0	0	1
Sub total	15	20	19	4	53	547	1	659
<i>Commodities and transactions nes</i>								
NSW	2	1	8	0	5	1	4	20
Vic	3	0	10	11	14	135	0	173
Qld	7	2	98	0	3	0	3	113
SA	0	0	0	0	20	0	0	20
WA	5	8	1	1	18	2	2	36
Tas	5	915	0	0	11	15	0	946
NT	0	0	0	0	0	0	73	73
Sub total	21	927	117	13	70	152	81	1 382
Total	14 869	8 177	16 485	4 311	4 711	3 745	528	52 825

Source: Australian port authorities—personal communications

## TASMANIAN TRADE

The trade to and from Tasmania (Table 3.8) decreased in 2002–2003 from 2001-02<sup>4</sup>:

<sup>4</sup> BTRE2004, *Australian Sea Freight 2001-2002*, Information paper 50, Canberra

- by 6.2 per cent from 6.5 million tonnes to 6.1 million tonnes from Tasmania to the mainland;
- by 11.3 per cent from 5.3 million tonnes to 4.7 million tonnes from the mainland to Tasmania.

The decrease was driven by a substantial decrease in movements in the *cork and wood* category. There also appears to be some re-classification of commodities resulting in slight drops across some categories but a rise in both *special transactions and commodities* and *other commodities and transactions*.

**TABLE 3.8: TASMANIAN FREIGHT LOADED AND DISCHARGED BY COMMODITY, 2002–2003**

<i>ATFCC code</i>	<i>Description</i>	<i>Loaded in Tasmania (kilotonnes)</i>	<i>Discharged in Tasmania (kilotonnes)</i>
0	Food and live animals	19	17
1	Meat and meat preparations	12	0
2	Dairy products and birds eggs	39	0
3	Fish, crustaceans and molluscs	7	2
4	Cereals and cereal preparations	5	122
5	Vegetables and fruit	187	31
6	Sugars, sugar preparations and honey	25	5
7	Coffee, tea, cocoa, spices	0	0
8	Feeding stuff for animals	3	2
9	Miscellaneous edible products & preps	117	36
11	Beverages	35	86
21	Hides, skins and fur skins, raw	5	0
22	Oil seeds and oleaginous fruits	0	3
24	Cork and wood	186	17
25	Pulp and waste paper	10	88
26	Textile fibres	21	0
27	Crude fertilizers and crude minerals	134	112
28	Metalliferous ores and metal scrap	1 926	1 106
32	Coal, coke and briquettes	0	128
33	Petroleum and petroleum products	0	784
34	Gases, natural and manufactured	0	31



**TABLE 3.8: TASMANIAN FREIGHT LOADED AND DISCHARGED BY COMMODITY, 2002–2003 (continued)**

<i>ATFCC code</i>	<i>Description</i>	<i>Loaded in Tasmania (kilotonnes)</i>	<i>Discharged in Tasmania (kilotonnes)</i>
41	Animal oils and fats	1	0
51	Organic chemicals	3	13
52	Inorganic chemicals	362	8
56	Fertilizers, manufactured	73	52
57	Plastics in primary forms	0	0
58	Plastics in non-primary forms	0	2
59	Chemical materials & products, n.e.s.	0	1
62	Rubber manufactures, n.e.s.	0	0
63	Cork & wood manufactures (exc furniture)	0	0
64	Paper, paperboard & articles of paper	588	52
65	Textile yarn, fabrics, made-up articles	3	0
66	Non-metallic mineral manufactures, n.e.s.	1 189	166
67	Iron and steel	9	53
68	Non-ferrous metals	51	0
69	Manufactures of metal, n.e.s.	0	20
72	Machinery specialized particular by industry	6	7
74	General industrial machinery & equipment nes	0	0
78	Road vehicles	150	185
79	Other transport equipment	0	0
82	Furniture and parts thereof	7	15
89	Miscellaneous manufactured articles nes	1	36
90	Commodities and transactions nes	2	0
93	Special transactions and commodities	643	983
99	Other commodities and transactions	301	557
All	Total	6 117	4 721

*nes* Not elsewhere stated.

Source: Australian port authorities—personal communications



## CHAPTER 4: COASTAL VOYAGE PERMITS

Part VI of the *Navigation Act, 1912* requires vessels trading interstate on the Australian coast to be licensed or have a permit. Some trades have exemption under the *Navigation Act*, mostly concerning the external territories, but there is also an exemption for cruise liners to carry passengers, except between Victoria and Tasmania.

An unlicensed ship may be granted a permit to trade on the Australian coast in the carriage of either cargo or passengers, where:

- there is no suitable licensed ship available for the shipping task; or
- the service carried out by licensed ships is inadequate; and
- it is considered to be desirable in the public interest that an unlicensed ship be allowed to undertake that shipping task.

Two kinds of permits are issued:

- a single voyage permit (SVP) is issued for a single voyage between designated ports for the carriage of a specified cargo or passengers
- a continuing voyage permit (CVP) is issued for a period of up to three months (up to December 2002 a CVP could be issued up to 6 months) and enables a vessel to carry specified cargo between specified ports for that period

In 2002–2003, 1 252 voyages were undertaken by foreign flag ships using voyage permits to move cargo around the Australian coast. Of these 589 voyages, used SVPs and 663 voyages used CVPs. Table 4.1 shows the split of permits between commodity groups. Voyage permits are at present rarely used in the bauxite alumina industries, however, other industries, such as iron ore and oil petroleum, are using voyage permits more extensively.

Note that information provided in this paper on voyage permits is different from that appearing in the BTRE's *Waterline* series. Figures in *Waterline* report tonnes as specified on the permits when issued, while in this paper, the figures reported are the actual tonnes and TEUs carried, as notified by the permit holders after they have used the permit. In addition, *Waterline* reports on numbers of permits issued within a given period, whereas this paper reports on cargo carried subject to the actual CVP or SVP sail date where it falls within that period.

Table 4.2 shows that the split between different pack types is not in the same proportions as in the total coastal freight market (Table 3.6). Dry bulk using coastal permits only represents 25.6 per cent of total coastal dry bulk cargo loaded, liquid bulk 22.8 per cent, containerised cargo 20.5 per cent and other non bulk 5.4 per cent.

Most of the growth in permit use has been in dry bulk, particularly the non iron ore and bauxite/alumina trades.

**TABLE 4.1: VOYAGE PERMITS BY COMMODITY TYPE, 2002–2003**

	<i>Commodity group</i>					<i>Total</i>
	<i>Bauxite / alumina</i>	<i>Crude oil</i>	<i>Iron ore</i>	<i>Petroleum products</i>	<i>Other</i>	
	<i>(No of voyages)</i>					
SVP	1	21	49	65	453	589
CVP	3	0	0	0	660	663
Total	4	21	49	65	1 113	1 252
	<i>(Tonnes)</i>					
SVP	28 103	1 310 552	3 108 780	1 558 324	4 524 512	10 530 271
CVP	70 836	0	0	0	1 701 141	1 771 977
Total	98 939	1 310 552	3 108 780	1 558 324	6 225 653	12 302 249
	<i>(TEUs)</i>					
SVP	0	0	0	0	12 161	12 161
CVP	0	0	0	0	37 619	37 619
Total	0	0	0	0	49 780	49 780

*Source: Department of Transport and Regional services, SVP and CVP Registers, unpublished*

**TABLE 4.2: TONNES CARRIED UNDER VOYAGE PERMITS BY PACK TYPE**

<i>Pack type</i>	<i>1999–2000</i>	<i>2000–2001</i>	<i>2001–2002</i>	<i>2002–2003</i>
Dry bulk	1 864 074	4 049 276	5 924 212	7 876 261
Liquid bulk	1 431 537	2 380 265	3 013 168	3 421 382
Containerised	375 987	505 537	887 480	841 398
Other non bulk	43 666	61 531	513 172	163 207
Total	3 715 264	6 996 609	10 338 032	12 302 249

*Source: Department of Transport and Regional services; SVP and CVP Registers, unpublished*

The proportion of total coastal freight moved using voyage permits in 2002–2003 was 23.3 per cent by weight or 33.0 per cent of tonne kilometres performed (Table 4.3). This is up significantly from 2001–2002 when it was 19.6 per cent by weight and 21.4 per cent of tonne kilometres performed. In general, the use of voyage permits is irregular, with permits being used more on longer coastal routes than on the shorter routes where road and rail competition is fiercer.

The largest group of shippers using coastal permits in terms of tonne kilometres is the iron ore industry (47.0 per cent in terms of tonne kilometres performed and 47.1 per cent in terms of tonnes loaded). For the bauxite alumina industry, the use is only 0.8 per cent and 0.7 per cent respectively.

**TABLE 4.3: IMPACT OF VOYAGE PERMITS ON COASTAL TRADE, 2002–2003**

<i>Cargo group</i>	<i>Tonnes (millions)</i>			<i>Tonne kilometres (billion)</i>		
	<i>Coastal</i>	<i>SVP and CVP</i>	<i>Per cent coastal</i>	<i>Coastal</i>	<i>SVP and CVP (estimate)</i>	<i>Per cent coastal</i>
Iron ore	6.6	3.1	47.1%	27.2	12.8	47.0%
Bauxite Alumina	11.7	0.1	0.8%	25.9	0.2	0.7%
Crude oil	7.3	1.3	18.0%	20.2	3.4	16.7%
Petroleum products	6.8	1.6	22.9%	10.9	4.5	41.1%
Other	20.4	6.2	30.5%	30.5	17.1	56.0%
Total	52.8	12.3	23.3%	114.8	37.9	33.0%

*Source: Department of Transport and Regional services; SVP and CVP Registers, unpublished*



## CHAPTER 5: AUSTRALIAN PORT ACTIVITY

In 2002–2003, there was a 9.8 per cent increase in the number of ship calls at Australian ports and a 0.5 per cent increase in number of ships using Australian ports. There was also a 1.8 per cent increase in the number of international voyages made to Australia. Melbourne was the busiest port in terms of ship visits, while Brisbane was the busiest in terms of first port of call of international voyages.

**TABLE 5.1: PORT CALLS AT AUSTRALIAN PORTS, 2002–2003**

Port	Total		First port of arrival from overseas	
	Visits <sup>b</sup>	Ships <sup>a</sup>	Voyages	Ships <sup>c</sup>
Abbot Point	107	72	75	60
Adelaide	729	357	100	80
Albany	95	77	0	0
Ardrossan	18	15	0	0
Australia	73	61	47	43
Barrow Island Terminal	2	2	0	0
Bing Bong	18	18	5	5
Botany Bay	1 159	295	496	175
Brisbane	2 127	698	1 125	420
Broome	51	27	17	17
Buffalo Terminal	7	6	0	0
Bunbury	321	263	210	183
Bundaberg	28	13	3	3
Burnie	488	76	32	23
Caboolture	0	1	0	0
Cairns	359	76	70	34
Cape Cuvier	7	7	7	7
Cape Flattery	33	18	30	18
Challis Terminal	3	3	0	0
Cooktown	60	1	0	0
Cossack Pioneer Terminal	26	23	0	0
Dampier	462	292	280	229
Darwin	649	138	271	87
Derby	33	30	27	24

**TABLE 5.1: PORT CALLS AT AUSTRALIAN PORTS, 2002–2003  
(continued)**

Port	Total		First port of arrival from overseas	
	Visits <sup>b</sup>	Ships <sup>a</sup>	Voyages	Ships <sup>c</sup>
Devonport	877	52	0	0
Eden	16	10	12	6
Elang-Kakatua Field	4	4	0	0
Esperance	141	121	74	70
Exmouth	1	1	0	0
Fremantle	1 594	737	838	483
Geelong	496	259	152	111
Geraldton	215	158	123	104
Gladstone	1 132	534	496	356
Gove	109	103	98	93
Grassy	2	1	0	0
Griffin Terminal	6	6	0	0
Harwood Is_	0	1	0	0
Hastings	160	58	0	0
Hay Point	831	526	684	473
Hobart	310	132	56	46
Horn Is_	1	1	0	0
Jabiru Terminal	7	7	0	0
Karumba	96	35	31	26
Kincumber South	0	1	0	0
Kurnell	1	1	0	0
Kwinana	2	2	1	1
Laminaria-Corallina Terminal	26	19	0	0
Launceston	447	173	112	76
Legendre Terminal	6	7	0	0
Lucinda	15	14	15	14
Mackay	152	100	40	37
Macquarie Is	1	1	0	0
Margate	1	3	0	0
Melbourne	3 183	588	463	203
Milner Bay	59	55	48	46
Mourilyan	33	29	24	23
Newcastle	1 351	660	0	0
Onslow	2	2	2	2



**TABLE 5.1: PORT CALLS AT AUSTRALIAN PORTS, 2002–2003  
(continued)**

<i>Port</i>	<i>Total</i>		<i>First port of arrival from overseas</i>	
	<i>Visits<sup>b</sup></i>	<i>Ships<sup>a</sup></i>	<i>Voyages</i>	<i>Ships<sup>c</sup></i>
Port Alma	40	36	15	14
Port Bonython	27	25	9	9
Port Giles	26	23	2	1
Port Hedland	677	367	615	349
Port Jackson	1	1	0	0
Port Kembla	588	301	175	156
Port Latta	39	28	11	10
Port Lincoln	90	81	26	26
Port Pirie	79	49	10	10
Port Stanvac	98	37	23	19
Port Walcott	250	144	246	142
Portland	299	138	0	0
Queensland	1	1	1	1
Saladin Terminal	4	3	0	0
Shark Bay	7	4	7	4
South Australia	1	1	0	0
Stag Terminal	11	7	0	0
Stenhouse Bay	1	1	0	0
Sydney	1 103	365	245	90
Thevenard	96	35	22	19
Thursday Is	883	4	6	5
Townsville	622	311	373	211
Triabunna	1	1	1	1
Useless Loop	3	3	3	3
Varanus Island Terminal	9	9	0	0
Wallaroo	41	35	19	19
Wandoo Terminal	3	3	0	0
Weipa	243	81	81	72
Western Australia	2	2	0	0

**TABLE 5.1: PORT CALLS AT AUSTRALIAN PORTS, 2002–2003  
(continued)**

Port	Total		First port of arrival from overseas	
	Visits <sup>b</sup>	Ships <sup>a</sup>	Voyages	Ships <sup>c</sup>
Whyalla	62	28	6	6
Woollybutt Terminal	0	1	0	0
Wyndham	7	6	3	3
Yamba	8	1	3	1
Total	23 454	3 267	8 935	3 140

a. No of ships involved in coastal and international voyages

b. No of port calls made by ships involved in coastal and international voyages

c. No of ships involved in international shipping (Based on arrivals from overseas)

Notes: 1. These figures will differ from port authority figures due to vessels not appearing in the source data.

2. Figures for Dampier should be treated caution, LMIU had problems in obtaining reliable data for this port and the figures are understated.. It is estimated approximately 1 540 ships actually visited Dampier in 2002–2003.

Source: Lloyd's Marine Information Services, Lloyd's Voyage Record, unpublished.

**In terms of tonnes of cargo handled in 2002–2003 the busiest ports in order, were Dampier, Port Hedland, Newcastle, Hay Point, Gladstone, Port Walcott, Melbourne, Brisbane, Fremantle, Port Kembla and Sydney (Table 5.2).**

**TABLE 5.2: CARGO LOADED AND DISCHARGED BY AUSTRALIAN PORTS, 2002–2003**

State	Destination	Coastal		International <sup>a</sup>		Total	Rank
		Discharged	Loaded	Imports	Exports		
(tonnes)							
NSW	Catherine Hill Bay	0	46 500	0	0	46 500	67
NSW	Coffs Harbour	0	0	27	3	30	77
NSW	Eden	18 183	0	0	741 727	741 727	46
NSW	Grafton	0	0	0	8 436	8 436	71
NSW	Lord Howe Is	5 358	1 665	0	0	7 023	73
NSW	Newcastle	1 860 131	402 311	1 251 999	73 610 132	77 124 573	3
NSW	Port Kembla	7 693 105	2 648 783	2 011 652	11 106 490	23 460 030	10
NSW	Sydney	5 887 661	558 637	12 496 087	4 115 156	23 057 540	11
NSW	Yamba	534	3 412	0	0	3 946	74
VIC	Geelong	1 053 426	1 538 732	5 070 146	2 920 161	10 582 465	16
VIC	Melbourne	5 016 887	2 427 384	9 210 426	8 378 075	25 032 772	7
VIC	Port Welshpool	2 779	1 041	0	0	3 819	75
VIC	Portland	780 271	5 000	374 361	2 340 810	3 500 442	22
VIC	Westernport	1 099 497	2 612 892	230 406	510 869	4 453 665	20
QLD	Abbot Point	0	0	0	10 783 432	10 783 432	14
QLD	Brisbane	3 711 042	2 107 540	9 708 466	8 935 832	24 462 880	8
QLD	Bundaberg	63 397	230 306	9 046	126 615	429 365	53
QLD	Cairns	433 424	143 238	297 391	2 256 338	3 130 391	26
QLD	Gladstone	9 846 713	3 216 481	1 009 761	40 869 331	54 942 286	5
QLD	Hay Point	65 000	0	0	76 018 545	76 083 545	4
QLD	Innisfail	0	0	0	599 926	599 926	48
QLD	Karumba	0	109 869	3 718	944 621	1 058 209	41
QLD	Lucinda	0	3 023	0	571 583	574 606	49
QLD	Mackay	493 192	266 000	222 774	1 322 727	2 304 692	30
QLD	Mourilyan	0	73 350	0	0	73 350	65
QLD	Port Alma	0	75 433	0	0	75 433	64
QLD	Quintell Beach	1 366	81	0	0	1 447	76
QLD	Rockhampton	0	0	3 697	79 976	83 673	62

**TABLE 5.2: CARGO LOADED AND DISCHARGED BY AUSTRALIAN PORTS, 2002–2003 (continued)**

State	Destination	Coastal		International <sup>a</sup>		Total	Rank
		Discharged	Loaded	Imports	Exports		
(tonnes)							
QLD	Thursday Island	72 838	2 772	571	44	76 225	63
QLD	Townsville	1 185 433	732 223	4 397 359	3 998 999	10 314 014	17
QLD	Weipa	218 912	9 489 507	46 654	3 699 914	13 454 987	12
SA	Adelaide	2 571 984	995 981	3 308 278	3 861 217	10 737 461	15
SA	Ardrossan	0	541 968	0	66 600	608 568	47
SA	Edithburg	0	0	0	274 724	274 724	55
SA	Klein Point	0	1 775 290	0	0	1 775 290	34
SA	Port Bonython	0	456 757	0	626 502	1 083 259	40
SA	Port Giles	0	46 393	0	0	46 393	68
SA	Port Lincoln	104 816	40 840	56 966	1 523 913	1 726 536	35
SA	Port Pirie	436 434	223 467	7 774	369 040	1 036 715	42
SA	Port Stanvac	0	453 734	0	0	453 734	52
SA	Thevenard	0	1 183 920	87	424 699	1 608 706	36
SA	Wallaroo	47 868	50 256	29 823	390 149	518 097	50
SA	Whyalla	1 317 039	1 106 246	116 813	249 828	2 789 926	27
WA	Albany	22 542	74 853	141 078	1 689 532	1 928 005	33
WA	Barrow Island	0	932 839	0	0	932 839	43
WA	Broome	106 907	4 565	12 304	133 484	257 261	56
WA	Buffalo Venture	0	171 309	0	0	171 309	58
WA	Bunbury	97 582	404 049	1 011 960	9 415 470	10 929 061	13
WA	Cape Cuvier	0	197 500	0	1 925 266	2 122 766	32
WA	Carnarvon	0	0	8	44 763	44 771	69
WA	Challis Venture	0	137 064	0	0	137 064	59
WA	Christmas Island	7 680	280	0	0	7 960	72
WA	Cossack Pioneer	0	853 536	0	0	853 536	45
WA	Dampier	271 617	440 336	459 227	100 757 788	101 928 968	1
WA	Derby	0	190 233	0	276 203	466 436	51
WA	Esperance	279 245	84 734	160 843	5 605 960	6 130 782	19

**TABLE 5.2: CARGO LOADED AND DISCHARGED BY AUSTRALIAN PORTS, 2002–2003 (continued)**

State	Destination	Coastal		International <sup>a</sup>		Total	Rank
		Discharged	Loaded	Imports	Exports		
(tonnes)							
WA	Fremantle	3 442 794	2 918 759	7 925 484	9 956 077	24 243 113	9
WA	Geraldton	188 085	1 000	148 625	2 154 107	2 491 817	28
WA	Griffin Venture	0	93 327	0	0	93 327	61
WA	Jabiru Venture	0	131 272	0	0	131 272	60
WA	Port Hedland	46 041	4 405 731	174 206	77 216 525	81 842 503	2
WA	Port Walcott	0	0	29 083	39 584 930	39 614 013	6
WA	Thevenard Island	0	255 733	0	0	255 733	57
WA	Useless Loop	0	0	0	1 117 795	1 117 795	38
WA	Varanus Island	0	1 217 268	0	0	1 217 268	37
WA	Wyndham	12 306	8 269	66 083	3 104 471	3 191 129	24
WA	Yampi Sound	0	0	0	314 896	314 896	54
WA	Wyndham	12 306	8 269	66 083	3 104 471	3 191 129	25
TAS	Burnie	766 458	1 245 496	149 118	1 758 171	3 919 244	21
TAS	Devonport	1 242 463	1 894 862	62 218	10 381	3 209 925	23
TAS	Hobart	806 156	652 238	198 526	598 766	2 255 686	31
TAS	King Island	33 258	29 134	0	0	62 393	66
TAS	Lady Baron	19 598	13 069	0	0	32 667	70
TAS	Launceston	1 852 664	934 625	411 741	3 368 471	6 567 501	18
TAS	Port Latta	0	1 347 518	0	1 023 194	2 370 712	29
Tas	Stanley	0	0	12 100	915 491	927 591	44
NT	Conf NT Ports	0	0	976 393	4 538 952	5 515 345	
NT	Darwin	317 995	137 803	414 911	224 051	1 094 760	39
NT	Other Ports NTb	0	476 579	0	384 638	861 217	
	Conf Aust Ports	0	0	- 8 404	1 509 896	1 501 492	
<b>Total</b>		<b>53 610 569</b>	<b>53 237 334</b>	<b>63 287 829</b>	<b>541 875 635</b>	<b>711 993 184</b>	

a. ABS records offshore exports such as crude oil through the nearest mainland port, although the actual cargo does not pass through the actual port. For example: most of the 3.2 million tonnes of exports through Wyndham are actually exported from offshore crude oil terminals.

b. Other Ports NT consists of Bing Bong, remote communities, Gove, Grootte Eylandt and rigs, which are not split up easily.

Sources: BTRE Coastal Database; ABS, International Cargo Statistics, unpublished



## CHAPTER 6: AUSTRALIAN MERCHANT FLEET

The Australian merchant fleet increased in terms of deadweight and gross tonnage, with larger ships engaged primarily in the international trade. In 2002–2003, the major trading fleet increased from 54 to 55 ships although overall the fleet decreased in numbers from 77 in 2002 to 74 ships in 2003. Eleven vessels left the fleet, while eight newer ships joined the fleet (Table 6.1).

**TABLE 6.1: SUMMARY OF THE AUSTRALIAN TRADING FLEET, AS AT 30 JUNE 2003**

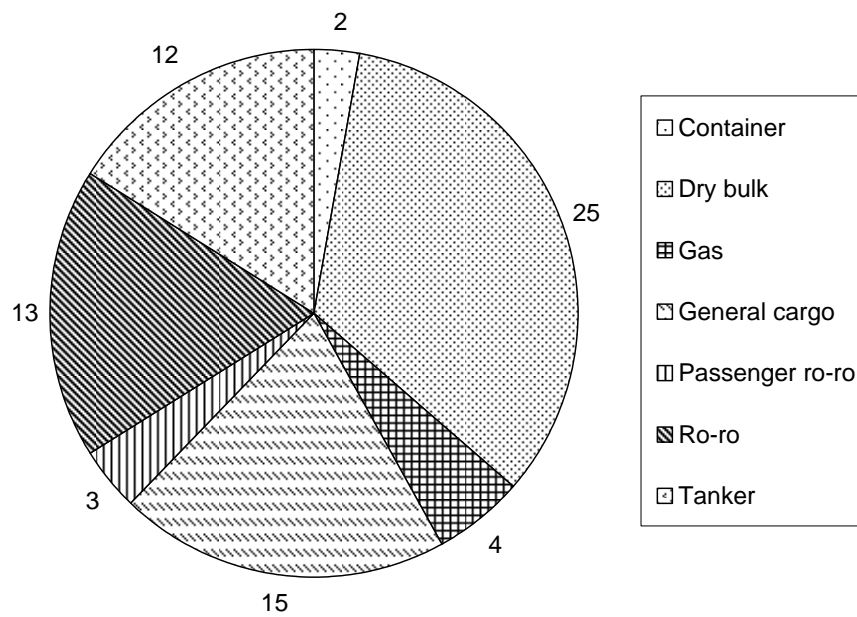
<i>Trade</i>	<i>No. of vessels</i>	<i>Deadweight (tonnes)</i>	<i>Gross tonnage (tonnes)</i>
Major Trading Fleet (>2000 dwt)			
Coastal			
Australian registered	38	1 107 153	770 154
Overseas registered	6	151 271	85 477
Total Coastal	44	1 258 424	855 631
Overseas			
Australian registered	8	578 946	603 610
Overseas registered	3	285 812	159 376
Total Overseas	11	864 758	762 986
Total major trading fleet	57	2 130 037	1 626 319
Other (minor) Trading ships (>150grt < 2000 dwt)			
Australian registered	16	9 937	7 068
Overseas registered	3	2 863	2 518
Total other trading ships	19	12 800	9 586
Total Australian registered	62	1 696 036	1 380 832
Total Overseas registered	12	439 946	247 371
Total Australian trading fleet	74	2 135 982	1 628 203

Sources: Department of Transport and Regional Services—personal communications; Lloyd’s Maritime Information Unit, Lloyd’s Voyage Record, unpublished; Lloyd’s Register Fairplay, World Shipping Directory 2003-2004; Lloyd’s List DCN, Directory of Australian Shipping, Air, Road and Rail Services, 2003; Shipping companies (various)—personal communications.

Changes to note to number of ships by ship type (Figure 6.1):

- ro-ro landing barges decreased by 18.75 per cent from 16 to 13 ships, and
- general cargo, multipurpose ships increased by 36 per cent from 11 to 15 ships.

**FIGURE 6.1: NUMBER OF SHIPS BY SHIP TYPE, AS AT 30 JUNE 2003**



Sources: Department of Transport and Regional Services—personal communications; Lloyd’s Maritime Information Unit, Lloyd’s Voyage Record, unpublished; Lloyd’s Register Fairplay, World Shipping Directory 2003-2004; Lloyd’s List DCN, Directory of Australian Shipping, Air, Road and Rail Services, 2003; Shipping companies (various)—personal communications.

Tables 6.2 and 6.3 show the main trades and commodities in which the major trading vessels were engaged during 2002–2003.



**TABLE 6.2: 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>			
Nivosia	o (c)	Crude oil	Singapore, Brunei, SE Asia, Vietnam, Malaysia, Jabiru Terminal, Laminaria-Corallina Field and Dampier to Sydney, Melbourne, Geelong, New Caledonia, Singapore
Northwest Sanderling	o	LNG	Dampier, Japan
Northwest Sandpiper	o	LNG	Dampier, Japan
Northwest Snipe	o	LNG	Dampier, Japan
Northwest Stormpetrel	o	LNG	Dampier, Japan
Samar Spirit	o (c)	Crude oil	Pt Bonython, Hastings, Dampier, PNG, Singapore, Indonesia, Malaysia, to Botany Bay, Brisbane, SE Asia and Philippines
<b>Bulk carriers</b>			
Alltrans	o (c)	Alumina	Gladstone to Bluff (NZ), Launceston, Newcastle
Iron Kembla	o (c)	Iron ore, coal	Hay Pt to Japan, Sth Korea and Singapore (coal); Pt Hedland to Pt Kembla (iron ore)
Pacific Triangle	o (c)	Iron ore, coal	Pt Hedland to Pt Kembla (iron ore); Pt Kembla, Gladstone, Newcastle to Japan
<b>General Cargo</b>			
Aurora Australis	o	General cargo	Hobart and Launceston to Macquarie Is and Antarctica
Norfolk Guardian	o (c)	General cargo	Brisbane/Yamba- Norfolk Is - NZ

o Overseas

(c) Also undertakes occasional coastal voyages.

Sources: Prepared by BTRE using Lloyd's Marine Information Unit, Lloyd's Voyage records, unpublished; Shipping companies (various)—personal communications.

**TABLE 6.3: SHIPS IN THE MAJOR TRADING FLEET – COASTAL TRADES**

Name	Trade	Products	Ports called at
<b>Tankers</b>			
Barrington	c (o)	Petroleum products	Botany Bay, Brisbane, Cairns, Mackay, Gladstone, Townsville, Melbourne, Geelong, Launceston, Devonport, Hobart, Esperance Darwin, Fiji and American Samoa
Broadwater	c (o)	Crude oil	Hastings, Kumul Terminal (PNG), Pt Bonython, SE Asia and Singapore to Botany Bay and Brisbane
Helix	c (o)	Petroleum products	Geelong, Sydney, Brisbane, Townsville, Esperance, Botany Bay, Hobart, Devonport, Singapore, NZ
Japonica	c (o)	Petroleum products	Fremantle, WA ports, Darwin, Adelaide, Port Lincoln, Melbourne, Hastings and Tasmanian ports
Palmerston	c (o)	Petroleum products	Botany bay, Brisbane, Geelong, Hastings to Melbourne, Cairns, Townsville, Gladstone, Mackay, NZ
Scottish Bard	c	Petroleum products	Melbourne, Geelong Hastings, Adelaide, Pt Stanvac, Pt Lincoln, Launceston, Botany Bay and Sydney
Scottish Wizard	c (o)	Petroleum products	Melbourne, Geelong, Adelaide, Pt Stanvac, Pt Lincoln, Launceston, Botany Bay Albany, Fremantle, Singapore and Japan
Seakap	c (o)	Bitumen & bituminous materials, chemicals	Newcastle ,Pt Kembla, Botany Bay, Portland, Launceston, Whyalla, Gladstone, Taiwan
Stolt Australia	c (o)	Chemicals	Vic, Tas, NSW ,SA, Qld, WA, New Caledonia, and Tasmania
<b>Bulk Carriers</b>			
Aburri	c	Metal concentrates	Bing Bong
Accolade II	c	Limestone	Adelaide, Klein Point
Alcem Calaca	c	Cement	Devonport to Melbourne; Gladstone to Townsville Newcastle and Brisbane

**TABLE 6.3: 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> (continued)			
Cementco	c (o)	Cement, lead concentrates	Cement – Gladstone, Devonport to Darwin, Townsville, Brisbane, Mackay, Adelaide, Pt Lincoln, Hobart, Vietnam, New Caledonia; Lead concentrates Pt Pirie Hobart.
Dara	c	Dry bulk	Brisbane
Endeavour River	c	Bauxite, alumina	Bauxite: Weipa to Gladstone; Alumina: Gladstone to Newcastle
Enterprise	c	Bulk carrier	NSW, SA, Tas, Vic, Qld
Fitzroy River	c	Bauxite, Alumina	Bauxite: Weipa to Gladstone, Alumina: Gladstone to Newcastle
Goliath	c	Cement	Devonport, Sydney, Melbourne, Newcastle, Pt Kembla
Iron Carpentaria	c	Iron Ore, Dolomite, Alumina, Coal	Pt Latta to Pt Kembla; Ardrossan to Pt Kembla; Gladstone to Newcastle-; Gladstone –Pt Kembla
Iron Chieftain	c	Iron ore, coal, steel products	Whyalla to Pt Kembla; Pt Kembla to Whyalla; Whyalla to Pt Kembla Sydney
Iron Sturt	c	Cement, Metal concentrates, Alumina, Zinc	Adelaide, Burnie, Geelong, Hobart, Newcastle, Pt Pirie, Portland
Iron Yandi	c (o)	Iron ore and coal	Pt Headland Pt Kembla; Pt Kembla, Newcastle, Gladstone to Japan, Taiwan, Korea
Kowulka	c	Gypsum, salt, sugar, Alumina, chemicals	Thevenard to Sydney, Melbourne, Pt Kembla; Bundaberg to Sydney, Melbourne; Gladstone to Geelong; Sydney and Melbourne to Bundaberg
Lindesay Clark	c	Alumina; dolomite; fertilizers, steel products	Bunbury, Fremantle, Gladstone to Geelong, Portland, Ardrossan to Whyalla; Newcastle; Portland to Adelaide, Bunbury; Whyalla to Fremantle
Ormiston	c	Gypsum, salt; Sugar	Thevenard to Sydney/Melbourne; Bundaberg Mackay to Sydney/Melbourne

**TABLE 5.3: 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> (continued)			
Pioneer	c (o)	Sugar	Mackay to Sydney/Singapore
Portland	c	Alumina; Steel Products	Fremantle/Bunbury to Portland and Geelong; Whyalla to Fremantle
River Boyne	c	Bauxite	Weipa, to Gladstone,
River Embley	c	Bauxite	Weipa to Gladstone
Warden Point	c	Cement	Gladstone, Townsville
Wunma	c	Dry bulk	Intra Qld
<b>General Cargo</b>			
ANL Bass Trader	c	General	Melbourne, Launceston, Burnie (occasional)
Claudia	c	Blue metal	Bass Point, Sydney
Frances Bay	c	General Cargo	Nth Australia
Iron Monach	c	Steel products	Pt Kembla, Westernport
Kimberley	c	General cargo	Fremantle, WA coastal, Darwin
Newcastle Bay	c	General cargo	Cairns, Qld cape, Weipa
Searoad Mersey	c	General cargo	Melbourne, Devonport, Grassy
Searoad Tamar	c	General cargo	Melbourne, Devonport, Launceston
Spirit of Tasmania I	c	General cargo, passengers	Melbourne to Devonport
Spirit of Tasmania II	c	General cargo and passengers	Melbourne to Devonport
Tasmanian Achiever	c	General cargo	Melbourne, Burnie
Trinity Bay	c	General Cargo and passengers	Cairns, Cape York, Gulf ports
Victorian Reliance	c	General cargo	Melbourne, Burnie

*c* Coastal.

*(o)* Also undertakes occasional overseas voyages.

Sources: Prepared by BTRE using Lloyd's Marine Information Unit, Lloyd's Voyage records, unpublished; Shipping companies (various)—personal communications.

## EXPLANATORY NOTES

### SOURCES

Coastal 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*, 13th edition, 1993, published by the Australian Chamber of Shipping.

The vessel movement details for the Australian trading fleet have been obtained from Lloyd's Marine Information Unit, *Lloyd's Ship Movements*, unpublished, and, from data supplied by shipping companies and from BTRE's knowledge of the shipping industry.

International sea cargo data was obtained from ABS, *International Cargo Statistics*, unpublished.

### DEFINITIONS AND ABBREVIATIONS

**ABS:** Australian Bureau of Statistics

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

**ATFCC: (Australian Transport Freight Commodity Code Classification):** A systematic classification of commodities transported by sea, air, road, rail and pipeline, developed jointly by precursors of the Department of Transport and Regional Services 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>5</sup> level of classification.

**BTRE:** Bureau of Transport and Regional Economics

---

<sup>5</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).

**CVP (Continuing Voyage Permit):** Allows international foreign flag vessels to trade on the Australian coast, in the coasting trade over predetermined set route for a set period for a predetermined amount of cargo. This may include several coastal voyages. CVP's are used in the general cargo (container) and bulk trades.

**DOTARS:** Department of Transport and Regional Services

**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 ship 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). GRT is expressed as a volume, in cubic metres divided by 2.83

**Liner:** A liner service is a fleet of ships, with a common ownership or management, which provide a fixed service, at regular intervals, between named ports, and offer transport to any goods in the catchment area served by those ports and ready for transit by their sailing dates. A fixed itinerary, inclusion of regular service, and obligation to accept cargo from all comers and to sail, whether filled or not, on the date fixed by a published schedule is what distinguishes the liner trade from the tramp trade.<sup>6</sup>

**LMIU:** Lloyd's Marine Information Unit

**Major trading fleet:** Vessels of 2000 DWT or more

**Minor trading fleet:** Vessels of 150 GRT or more but less than 2000 DWT

**nes:** not elsewhere stated.

**State:** Australian states plus Northern Territory.

**SVP (Single Voyage Permit):** Allows international foreign flag vessels to trade on the Australian coast in the coasting trade over a set route (once only per permit) for a predetermined amount of cargo.

**TEU (twenty foot equivalent unit):** measure used to count containers. A 40 foot container counts as 2 TEUs.

**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 transhipment and assigned to Australian Transport Freight Commodity Code Classification (ATFCC), Division 93.

## STATISTICAL ISSUES

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

---

<sup>6</sup> Stopford M, 2003, *Maritime Economics*, 2<sup>nd</sup> edition, Routledge, London

- Port authorities record cargo as having been discharged during the month the vessel arrives in port, and, cargo loaded against the month of the vessel's departure. Consequently, variations in the loaded and discharged cargo totals will occur due to cargo being in transit during the financial year cut off period.
- A port authority's record of cargo loaded and discharged is based on information provided by the ship's 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 fertilizer at NSW ports, and petroleum products are classified as kerosene in Cairns.

The BTRE has endeavoured to reconcile some of the above data problems as far as possible. It 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.

## REFERENCES

---

ABS 2004	<i>International Cargo Statistics</i> , unpublished, Canberra
Brodie Peter, 1997	<i>Definition of shipping terms</i> , LLP Limited, third edition, London
BTRE 2005	<i>Coastal Sea Fright database</i> , unpublished, Canberra
BTRE 2004	<i>Waterline</i> , BTRE series published quarterly, BTRE, Canberra
BTRE 2003	<i>Australian Sea Freight, 2001–2002</i> , BTRE Information Paper 50, BTRE, Canberra
BTRE 2001	<i>Australian Sea Freight, 1999–2000</i> , BTRE Information Paper 47, BTRE, Canberra
Lloyd's List DCN 2003	<i>Directory of Australian Shipping, Air, Road and Rail Services, 2003</i> , LLDCN, Sydney
Lloyd's Marine Information Unit 2004	<i>Lloyd's Voyage Record</i> , LMIU, unpublished, London
Lloyd's Register–Fairplay 2003	<i>World Shipping Directory 2003-2004</i> , Red Hill
Stopford M 2003	<i>Maritime Economics</i> , second edition, Routledge, London

---