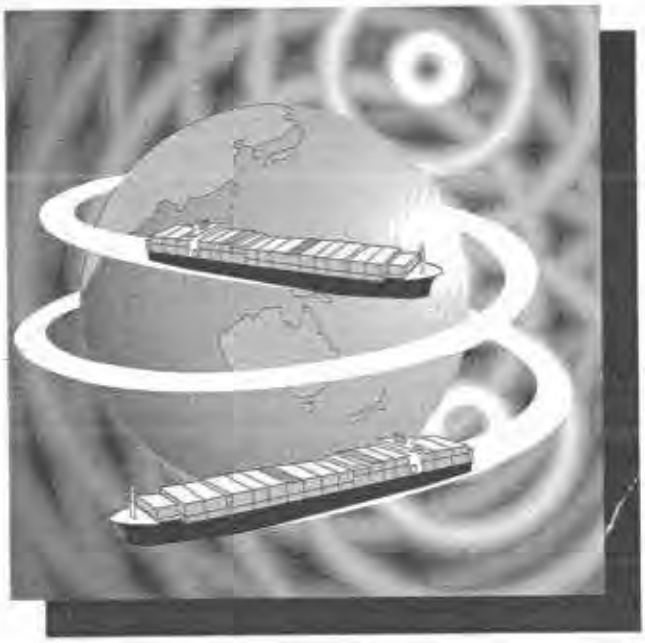
UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

REVIEW OF MARITIME TRANSPORT

1994



UNITED NATIONS

TD/B/CN.4/49

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT
Geneva

Review of Maritime Transport 1994

Report by the UNCTAD secretariat

UNITED NATIONS
New York and Geneva, 1995

NOTE

This *Review* has been prepared by the UNCTAD secretariat in accordance with section B of the programme of work of the Committee on Developing Services Sectors: Fostering Competitive Services Sectors in Developing Countries: Shipping. Any factual or editorial corrections that may prove necessary based on comments made by the Committee in its consideration of this document or received directly from Governments would be reflected in a corrigendum to be issued subsequently.

*

* *

Symbols of United Nations documents are composed of capital letters combined with figures. Use of such a symbol indicates a reference to a United Nations document.

*

* *

The designations employed and the presentation of the material in this publication do not imply an expression of opinion by the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

*

* *

TD/B/CN.4/49

UNITED NATIONS PUBLICATION

Sales No. E.95.II.D.17

ISBN 92-1-112385-2
ISSN 0566-7682

CONTENTS

		Page
Abbreviations		ix
Explanatory notes		ix
Introduction		x
Summary of main developments		x

Chapter		Paragraphs	Page
I.	Development of international seaborne trade	1 - 11	1
	A. World economic background	1 - 3	1
	B. World seaborne trade	4 - 11	1
II.	Development of the world fleet	12 - 33	13
	A. Structure of the world fleet	12 - 18	13
	B. Ownership of the world fleet	19 - 25	15
	C. The 35 most important maritime countries and territories	26 - 27	22
	D. Major open registries	28 - 30	22
	E. Comparison of cargo turnover and fleet ownership	31 - 32	25
	F. Forecast for world fleet development	33	25
III.	Productivity of the world fleet and the supply and demand situation in world shipping	34 - 40	29
	A. Estimate of tons and ton-miles per dwt	34 - 35	29
	B. Supply and demand in world shipping	36 - 40	34
IV.	Shipbuilding, second-hand market and demolition	41 - 54	41
	A. Newbuilding orders	41 - 42	41
	B. Ship prices	43	41
	C. Delivery of newbuildings	44 - 45	41
	D. Tonnage on order	46 - 49	45
	E. Sales and purchases of second-hand tonnage	50 - 51	45
	F. Demolition of ships	52 - 54	48

CONTENTS (continued)

Chapter		Paragraphs	Page
V.	Port development	55 - 65	53
	A. Container port traffic	55 - 56	53
	B. Institutional restructuring in ports	57 - 58	53
	C. Port marketing	59 - 61	53
	D. Technical innovation	62 - 65	55
VI.	Freight markets	66 - 100	57
	A. Freight rates of main cargo sectors	66 - 94	57
	B. Liner freight rates as a percentage of prices for selected commodities	95 - 96	63
	C. Estimates of total freight costs in world trade	97 - 99	63
	D. Marine bunker prices	100	66
VII.	Multimodal transport and technological developments	101 - 135	69
	A. Developments in the field of multimodal transport	101 - 109	69
	B. Landbridges and other block train services	110 - 117	70
	C. Multimodal river traffic in Europe	118 - 120	71
	D. World container production	121 - 125	71
	E. Container-leasing industry	126 - 128	72
	F. Container dimensions	129 - 135	72
VIII.	Other developments	136 - 152	77
	A. WTO Negotiating Group on Maritime Transport Services	136 - 137	77
	B. Conventions on Maritime Transport	138 - 143	77
	C. Technical cooperation and training	144 - 150	79
	D. United Nations International Symposium on Trade Efficiency	151 - 152	80
IX.	Review of regional developments - Latin America	153 - 182	83
	A. Economic background	153 - 163	83
	B. General situation of merchant fleets of Latin America	164 - 166	87
	C. Liner shipping	167 - 178	90

CONTENTS (continued)

Chapter		Paragraphs	Page
IX.	D. Crude petroleum and products shipments and demand for tonnage in the major trades of South American countries	179	96
	E. Major dry bulk shipments and demand for relevant ship tonnage in the major trades of South American countries	180 - 182	96

Annex		
I.	Classification of countries and territories	107
II.	World seaborne trade according to geographical areas, 1980, 1992 and 1993	111
III(a).	Merchant fleets of the world by flag of registration, groups of countries and types of ship (in grt), as at 31 December 1994	113
III(b).	Merchant fleets of the world by flag of registration, groups of countries and types of ship (in dwt), as at 31 December 1994	117
IV.	Major flows of selected bulk commodities	123

LIST OF TABLES

Table		Page
1.	Development of international seaborne trade, 1970, 1975, 1980 and 1985-1994	3
2.	World seaborne trade by types of cargo, 1970, 1980 and 1985-1994	6
3.	World seaborne trade in 1970, 1992, 1993 and 1994 (est.) by types of cargo and country groups	8
4.	World fleet size by principal types of vessel, 1992-1994	14
5.	Distribution of the world fleet and TEU capacity of fully cellular containerships by groups of countries, 1992, 1993 and 1994	16
6.	Age distribution of the world merchant fleet by types of vessel, as at 31 December 1994	17
7.	Distribution of world tonnage (grt and dwt) by groups of countries of registration, 1980, 1993 and 1994	18
8.	Percentage shares of world tonnage by types of vessel and country groups, 1980, 1993 and 1994	20
9.	Structure of the merchant fleets of the main country groups, as at 31 December 1994	21
10.	The 35 most important maritime countries, as at 31 December 1994	23
11.	Tonnage distribution of major open-registry fleets, as at 31 December 1994	24
12.	Tonnage owned by the nationals of, and registered in, the country of registry in the total fleet of the most important open and international registers, as at 31 December 1994	25
13.	True nationality of major open-registry fleets, as at 31 December 1994	26

CONTENTS (continued)

Table		Page
14.	Comparison between total cargo turnover and fleet ownership by groups of countries, 1980, 1993 and 1994	27
15.	Cargo carried and ton-miles performed per dwt of the total world fleet, 1984-1994	29
16.	Estimated productivity of tankers, bulk carriers, combined carriers and the residual fleet, 1984-1994	31
17.	Estimated productivity of tankers, bulk carriers, combined carriers and the residual fleet, 1984-1994	32
18.	Tonnage oversupply in the world merchant fleet, 1987-1994	34
19.	Analysis of tonnage oversupply by main vessel type, 1987-1994	35
20.	Tanker tonnage engaged in oil storage, 1983-1994	39
21.	Newbuilding contracts placed for the main types of ship during 1990-1994	42
22.	Representative newbuilding prices, 1980, 1985 and 1990-1994	43
23.	Distribution of deliveries of newbuildings by principal types of ship, 1993-1994	43
24.	Distribution of deliveries of newbuildings by groups of countries of build, 1993-1994	44
25.	World tonnage on order at the end of each quarter, 1992, 1993 and 1994	46
26.	World tonnage on order as at the end of 1994	47
27.	Second-hand prices for five-year-old vessels, 1988-1994	47
28.	Development of sales and purchases of second-hand bulkers in 1994	49
29.	Broken-up tonnage trends, 1980, 1987-1994	50
30.	Tonnage reported sold for breaking by types of vessel, 1989-1994	50
31.	Average age of broken-up ships by type during 1986-1994	51
32.	Demolition prices in 1992-1994	51
33.	Container port traffic of developing countries and territories, 1993 and 1992	54
34.	Traffic for selected ports in 1994	55
35.	Freight rate indices, 1992-1994	58
36.	Comparative freight rates for selected commodities, 1994 versus 1993	61
37.	Ratio of liner freight rates to prices of selected commodities	64
38.	Estimates of total freight costs in world trade by groups	65

CONTENTS (continued)

Table		Page
39.	Fluctuations in marine bunker fuel prices, 1992-1994	67
40.	Composition of container population of the major leasing companies	73
41.	Distribution of the world container fleet by length and height	73
42.	Introduction of domestic containers in United States	74
43.	Latin American free trade initiatives	84
44.	Real GDP of the countries of South America	85
45.	Foreign trade structure of Latin American countries	86
46.	Merchandise trades of Latin American countries and Far Eastern NIEs	86
47.	Merchant fleets of the world and those registered in Latin American countries, selected years 1980-1994	89
48.	Forecasts for liner shipments and demand of relevant fleet in the major trades of South America	90
49.	Liner-cargo movements between West and East Coasts of South America and country groups of major trading partners, 1993	92
50.	Capacity of fully cellular containerships operated by Latin American companies	93
51.	Container loading capacity of ships operated by Latin American companies	94
52.	Merchant fleets by flag of registration and types of ship, 1980 and 1990, 1993 to 1994	95
53.	Full-containership fleets serving main trades of South America (East and West Coasts), 1990-1993	97
54.	Comparison of fully cellular containerships' capacity between total fleet and the fleet operated by South American operators on the major trade routes of South America	98
55.	Forecasts for petroleum and products shipments and demand for tanker fleet in the major trades of South America	101
56.	Forecasts for major dry bulk shipments and demand for relevant dry bulker tonnage in the major trades of South America	101

CONTENTS (continued)

LIST OF BOXES

Box		Page
1.	Vessel and registry groupings used in the Review of Maritime Transport	xii
2.	Possible expansion of the world natural gas and LNG markets	7
3.	Reefer shipping - pendulum again swings owners' way	33
4.	Owners should shape up or ship out - VLCCs' supply and demand	37
5.	Two experts say oil trade changes may spell end for supertankers	40
6.	Record shoreside action	56
7.	Suezmax	68
8.	End of introduction period for the FIATA multimodal transport B/L	75
9.	IMO pollution regime will end TOVALOP	78
10.	Shippers aim to tip the balance of power	81
11.	Fixed-day services on South American trunk routes	99
12.	Panama Canal marks eightieth birthday, with long-term prospects uncertain	102

LIST OF GRAPHS

Graph		Page
1.	Annual change in OECD industrial production and world seaborne trade, 1985-1994	2
2.	International seaborne trade for selected years	4
3.	Export structure and direction of trade for developing countries	5
4.	World seaborne trade by country groups	10
5.	Forecast of world seaborne trade, 1995-2005	11
6.	World fleet size by principal types of vessel: selected years 1980-1994	15
7.	World tonnage by country groups, 1994	19
8.	Forecast of world fleet by principal types of vessel, 1995-2005	28
9.	Index of ton-miles performed per dwt of total world fleet, 1985-1994	30
10.	Trends in surplus capacity by main vessel type, 1985-1994	36
11.	Major conference rates, 1990-1994	59
12.	Baltic Freight Index and selected routes, 1994	60
13.	Estimates of total freight costs in world trade by groups	66
14.	Changes in freight rates for selected products in the Brazil-Europe liner trade, 1988-1993	88

ABBREVIATIONS

cif	cost, insurance and freight
CIS	Commonwealth of Independent States
DMEC	developed market-economy country
dwt	deadweight tons
EEC	European Economic Community
EU	European Union
FEU	forty-foot equivalent unit
fob	free on board
GDP	gross domestic product
grt	gross registered tons
ldt	light displacement tons
LNG	liquefied natural gas
Mgt	million gross tons
MTO	multimodal transport operator
NIC	newly industrializing countries
NVO-MTO	non-vessel-operating multimodal transport operator
OECD	Organisation for Economic Cooperation and Development
TEU	twenty-foot equivalent unit
ULCC	ultra-large crude carrier
VLCC	very large crude carrier
VO-MTO	vessel-operating multimodal transport operator
WS	Worldscale

EXPLANATORY NOTES

Tons refer to metric tons, unless otherwise stated.

Details and percentages presented in tables, due to rounding, do not necessarily add up to the totals.

Two dots (..) indicate that data are not available or are not separately reported.

A dash (-) signifies that the amount is nil, or less than half the unit used.

In some tables, the data shown for earlier years have been revised and updated, and may therefore differ from those shown in previous issues of this *Review*.

In the tables and the text, the use of the term "countries" refers to countries, territories or areas.

INTRODUCTION

The *Review of Maritime Transport* is an annual publication prepared by the secretariat of UNCTAD, in accordance with section B of the programme of work of the Committee on Developing Services Sectors: Fostering Competitive Services Sectors in Developing Countries: Shipping. */ The purpose of the *Review* is to identify the main developments in world maritime transport and to provide relevant statistical data. Emphasis is given to the development of the merchant marines in developing countries as compared with other groups of countries.

To maintain historical continuity and special characteristics on shipping practices, the overall structure of the *Review of Maritime Transport* is similar to previous editions, i.e. classification of countries and territories which has been detailed in annex I for statistical purposes only. The current issue, however, includes several new features such as a review of regional development - South America.

SUMMARY OF MAIN DEVELOPMENTS

Development of the world economy and seaborne trade

- The world real GDP increased in 1994 by 3.1 per cent over 1993. The industrial countries experienced a growth of 2.7 per cent over the previous year, while developing countries registered an average increase of 5.6 per cent.

- The volume of world merchandise exports grew in 1994 by 9 per cent, more than double the rate of 1993. This higher growth was attributed partially to a substantial recovery of trade in Western Europe.

- The total OECD industrial production index in 1994 soared by 4.4 per cent to 103.4 from 99.0 in 1993 (1990=100).

- World seaborne trade reached a new record at 4,46 billion tons. The annual growth rate increased to 3.0 per cent in 1994, as compared to 2.6 per cent in the previous year.

- The total services in ton-miles in global trade rose in 1994 by 2.8 per cent over 1993 to 19,500 billion.

Development of the world fleet

- The world merchant fleet continuously expanded to 719.8 million dwt by the end of 1994. This fleet expansion was mainly due to a net gain of newbuildings deliveries (29.3 million dwt) over scrapping (20.8 million dwt).

- The combined share of the world fleet of developed market-economy countries and the major open-registry countries maintained almost the same share as the previous year (67.5 per cent). The developing countries' share of the 1994 world total marginally increased to 22.6 per cent.

---

*/ *Report of the Standing Committee on Developing Services Sectors: Fostering Competitive Services Sectors in Developing Countries: Shipping, first session*, TD/B/39(2)/5-TD/B/CN.4/13, annex I.

Productivity of the world fleet and supply and demand in world shipping

- The main operational productivity indicators of the world fleet constantly rose to a relatively high level in 1994. In 1994, 6.19 tons of cargo carried per dwt was a record high. Ton-miles performed per dwt also continued on an upward trend to reach a new record of 27,135.

- The world total surplus tonnage decreased by 11.9 per cent over the previous year to 63.4 million dwt. The surplus capacity in the oil tanker sector and the dry bulk sector declined by 10.3 per cent and 14.0 per cent respectively over 1993 to 39.0 million dwt and 20.3 million dwt, respectively.

Shipbuilding, second-hand market and demolition

- The 1994 overall newbuilding contracts for main types of vessels were less than those in 1993, registering 42 million dwt. Shipbuilding activities in terms of deadweight were mainly concentrated on tankers and dry bulk carriers, accounting for 32.9 per cent and 47.3 per cent respectively of the total tonnage of the main types.

- The world total deliveries of newbuildings decreased in 1994 by 5.6 per cent in gross-registered tons over 1993, registering 18.8 million grt. Shipyards of developed market-economy countries maintained their predominant share of 63.7 per cent.

- In the five-year-old second-hand market for tankers, prices were somewhat static in most segments as compared to 1993. For dry bulk carriers, a moderate increase in values for modern tonnages was observed. The total dry bulk and tanker tonnages traded decreased by 31.8 per cent to 29.1 million dwt as compared to 42.6 million dwt in 1993.

Port development

- World total container traffic broke the 110 million TEU barrier, reaching 112,400,000 TEU in 1993, of which 43,400,000 TEU were handled at the ports of developing countries (38.6 per cent).

Freight markets

- The overall 1994 liner freight index continued to fall to the average level of 74, which was a two-point decline from the average of 1993 and the lowest since 1988 (1985=100).

- The overall increase in dry bulk charter markets in 1994 was attributed to an estimated increase of 2.2 per cent in the seaborne trade of main dry bulk commodities.

- Increasing demand for crude oil tanker tonnages, during the second half of 1994, pushed the average rate levels up substantially higher than the corresponding period of the previous year.

- World total freight payments as a proportion of total import value climbed to 5.59 per cent in 1993 from 5.37 per cent in 1992. While the proportion of developed market-economy countries increased in 1993 to 4.54 per cent from 4.33 in 1992, that of developing countries decreased to 8.33 per cent as compared to 8.52 per cent in 1992.

Multimodal transport and technological developments

- In 1994, 1.06 million TEUs were produced throughout the world, up 9.3 per cent over 0.97 million TEUs in 1993.

- By size, 40-foot-long containers significantly increased in 1994 to 4.55 million TEUs, accounting for 54.6 per cent of the world total container fleet. Eight-foot-6-inch-high and 9-foot-6-inch-high containers increased to 7.16 million TEUs and 1.04 million TEUs respectively, representing 85.8 per cent and 12.5 per cent respectively of the world total container fleet, whilst 8-foot-high containers continued to be phased out.

Other developments

- The Joint UNCTAD/IMO Intergovernmental Group of Experts met in Geneva in December 1994, preparing a set of "Draft Articles for a Convention on the Arrest of Ships".

- Ministers and decision makers from the world attended the United Nations International Symposium on Trade Efficiency in Columbus (Ohio, United States) in October 1994, proposing innovative ways to improve efficiency in international trade, which could result in a reduction of transaction costs of up to US$ 100 billion annually by the year 2000.

Box 1

Vessel and registry groupings used in the Review of Maritime Transport

As in the previous year's *Review*, five vessel groupings have been used throughout most shipping tables in this report. The cut-off point for all tables based on data from Lloyd's Maritime Information Services Ltd. is 100 grt, except those tables dealing with ownership where the cut-off level is 1,000 grt. The groups aggregate 20 principal types of vessel categories, as noted below.

Review group	Constituent ship types
Oil tankers	Oil tankers
Bulk carriers	Ore and bulk carriers, ore/bulk/oil carriers
General cargo	Refrigerated cargo, specialized cargo, ro-ro cargo, general cargo (single- and multi-deck), general cargo/passenger
Containerships	Fully cellular
Other ships	Oil/chemical tankers, chemical tankers, other tankers, liquefied gas carriers, passenger ro-ro, passenger, tank barges, general cargo barges, fishing, offshore supply, and all other types
Total all ships	Summation of all the above-mentioned vessel types

With the formation of new States in Eastern Europe, the registry situation as at 31 December 1993 had changed. Lloyd's Register advises that vessels are only allocated to a new register after confirmation that a new registry has been created and ships entered into a registry. The following guidelines are offered by Lloyd's Maritime Information Services Ltd. for the Review of Maritime Transport, 1994 tables relating to fleet development.

Former USSR

(i)Confirmation has been received from the Latvian (LAV), Lithuanian (LTH) and Estonian (ETN) registries, and these flag codes have been created and maintained.
(ii)The Russian (RUS), Ukrainian (UKE), Azerbaijani (AZE) and Georgian (GEO) republics have by this time started their own registries and these have also been allocated accordingly.
(iii)The other republics, Armenia (ARM), Belarus (BEL), Kazakhstan (KAZ), Kyrgyzstan (KYR), Moldova (MOL), Tajikistan (TAJ), Turkmenistan (TUR) and Uzbekistan (UZB), have not confirmed the establishment of registries. Lloyd's Register has however, received information from the Russian Registry as flag arrangements are still coordinated through this body. In consequence, ships have been coded where appropriate. Only a handful of ships are still held under the USSR flag (USR) where no confirmation has been received.

Former Yugoslavia

Ships have been allocated to either Croatia (CRT) or Slovenia (SLO). Any as yet unallocated have been left under Yugoslavia (YUG).

Source: Lloyd's Maritime Information Services Ltd. (London).

Chapter 1

DEVELOPMENT OF INTERNATIONAL SEABORNE TRADE

The initial chapter of the Review of Maritime Transport provides an overview of the demand for global shipping services, together with background information on the world economic situation and a review of developments in world seaborne trade.

A. World economic background

1. Developments in the world economy directly affect demand for shipping services. In 1994, the world real GDP increased by 3.1 per cent over 1993, reflecting a continuous economic growth in North America, and clearer signs of recovery across the European Union and in Japan. The GDP of industrial countries grew by 2.7 per cent, while continuing strong performance of developing countries as a whole yielded an average increase of 5.6 per cent over the previous year, although in the latter countries, discrepancies between individual countries continue to be large. Among the regional groups of countries, Asia including China (11.0 per cent) was particularly strong with an average rate of growth of 8.0 per cent over the previous year. Conversely, the countries in transition experienced a fourth consecutive decline of 8.3 per cent in 1994, with Russia even suffering a more dramatic decline of 12.0 per cent compared with 1993.[1]

2. The volume of world merchandise exports grew by 9.0 per cent in 1994, which was the strongest annual increase since 1976, and more than double the rate of 1993. This higher growth of world merchandise trade was primarily attributable to a sharp recovery of trade in Western Europe, and the continuation and strengthening of the trade expansions in Asia, North America and Latin America. Western Europe's higher import demand (8.0 per cent in 1994 as compared to -1.5 per cent in 1993) spilled over onto its export growth (9.0 per cent in 1994 and 1.5 per cent in 1993), mainly due to the intraregional trade. Higher export volume growth was reported by Germany which benefited from the strength of demand for capital goods. North America's merchandise imports in 1994, which were boosted by the United States' high growth of domestic demand, increased by 12.5 per cent, the largest volume gain since 1984. North America's exports were up 9.5 per cent, twice the rate of the preceding year, but remained below the level of import growth for the third consecutive year. For Latin America, the strength of import demand in North America and from within the region brought about a rise in exports of 10.5 per cent, the largest annual rise in volume since 1983. The region's export growth was however lower than the import growth (13.5 per cent in 1994). This reflects the trend of recent years. Asia's merchandise import volume growth was further accelerated in 1994 to 13.5 per cent, exceeding for the fourth consecutive year its export growth. Factors on the region's import expansion include the remarkably higher imports of Japan (up 13.5 per cent) and the Republic of Korea (up 21 per cent), which offset the slowdown in China. Asia's export growth nearly doubled from the previous year primarily due to sharp increases in export volumes of China, Singapore and the Republic of Korea. In contrast, the rise (2.0 per cent) in the volume of Japan's merchandise exports was the smallest among the world's ten leading merchandise exporters.[2]

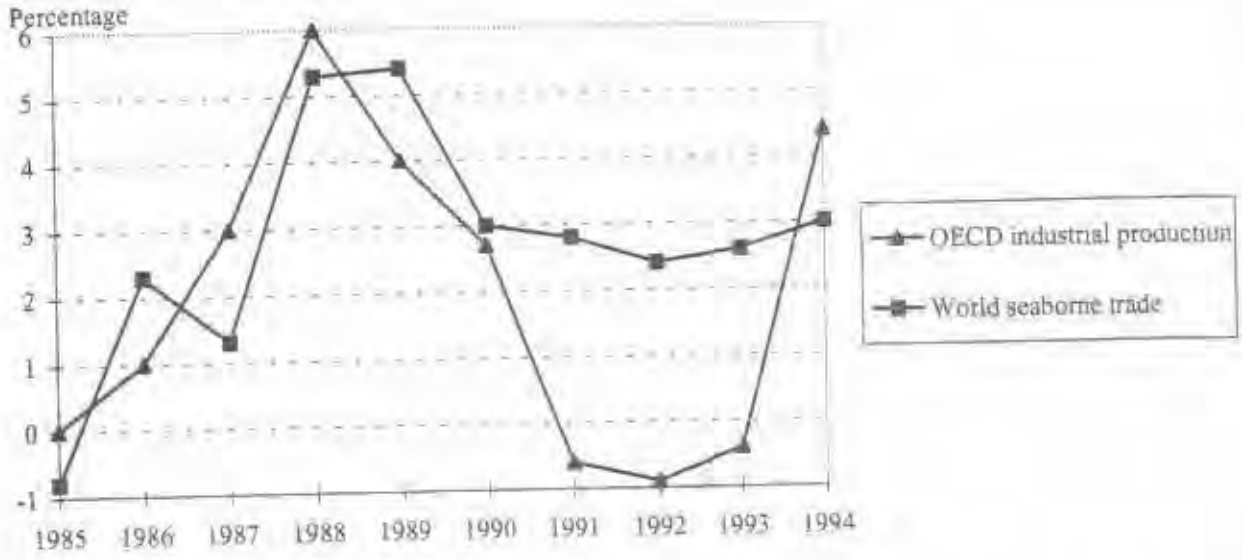
3. Industrial production, particularly of the OECD countries is another fundamental indicator for the global maritime sector. Graph 1 shows the relationship between the annual change in OECD industrial production and world seaborne trade. In 1994 the total OECD industrial production index substantially soared by 4.4 per cent to 103.4 from 99.0 in 1993 (1990=100) when they had experienced a set-back of 0.4 per cent. This climb primarily reflects a 5.4 per cent increase in the United States (4.1 per cent increase in 1993) and another favourable 4.9 per cent rise in the OECD European countries (3.0 per cent decrease in 1993). Japan marginally increased industrial production by 1.2 per cent during 1994 (a 4.2 per cent decrease in 1993).[3] In parallel the world seaborne trade also increased in 1994 at a steady rate of 3.0 per cent over the previous year. The trade of manufactured goods was up nearly 4 per cent in 1994, while tanker cargoes and main dry bulk commodities increased in 1994 by 2.8 per cent and 1.8 per cent, respectively (see table 1).

B. World seaborne trade

4. World seaborne trade continued to expand in 1994, as indicated in table 1 and graph 2. Total cargo tonnage reached a new record at 4.46 billion tons, marking the ninth consecutive annual increase. The annual growth rate again turned upwards, reaching 3.0 per cent, which was the highest since 1990, but

Graph 1

Annual change in OECD industrial production and world seaborne trade, 1985-1994



Source: OECD, *Main Economic Indicators*, March 1995.

remained slightly below the average annual rate of growth of 3.1 per cent over the period 1986-1993. By broad segments of maritime trade, tanker cargoes represented 44.6 per cent of the total 1994 seaborne trade, increasing by 2.3 per cent to 1,990 million tons, as compared to the 1993 growth of 4.6 per cent (reaching 1,945 million tons). The volume of total dry bulk commodities registered an increase of 3.5 per cent to 2,468 million tons in 1994, while main bulk commodities marginally increased by 2.2 per cent to 1,015 million tons. The total dry cargo increase was mainly attributable to the positive developments in general cargo trades including steel and unitized cargo.

5. World oil production rose by 36.2 million tons (1.14 per cent) over 1993's output to 3,202.5 million tons. The 1994 gains in world output are the largest increases reported since 1990. While OPEC countries' total production increased only by 0.88 per cent, the production of non-OPEC countries gained 1.33 per cent, of which Western European countries, primarily Norway and the United Kingdom showed the remarkable increase of 14.08 per cent and 26.78 per cent, respectively).[4] Crude oil shipments increased moderately by 1.8 per cent in 1994, with all growth from areas outside the Persian Gulf. Oil product shipments substantially increased by 4.7 per cent from 358 million tons to 375 million tons with continuing large increases in imports of countries in South-East Asia and the Far East, and growing imports of the United States[5] (see also table 1).

Table 1

Development of international seaborne trade, a/ 1970, 1975, 1980 and 1985-1994
(Estimates of goods loaded)

Year	Tanker cargo		Dry cargo				Total (all goods)	
			Total		of which: main bulk commodities b/			
	Millions of tons	Percentage annual change	Millions of tons	Percentage annual change	Millions of tons	Percentage annual change	Millions of tons	Percentage annual change
1970	1 440	13.1	1 165	13.0	448	16.0	2 605	13.0
1975	1 644	-10.0	1 428	-3.0	635	-5.0	3 072	-4.0
1980	1 871	-6.6	1 833	3.3	796	4.5	3 704	-2.0
1985	1 459	-22.0	1 923	4.9	857	7.7	3 382	-8.7
1986	1 514	3.8	1 945	1.1	834	-2.7	3 459	2.3
1987	1 506	-0.5	1 999	2.8	875	4.9	3 505	1.3
1988	1 587	5.4	2 105	5.3	940	7.4	3 692	5.3
1989	1 692	6.6	2 199	4.5	965	2.7	3 891	5.4
1990	1 755	3.7	2 253	2.5	968	0.3	4 008	3.0
1991	1 790	2.0	2 330	3.4	1 005	3.8	4 120	2.8
1992	1 860	3.9	2 360	1.3	990	-1.5	4 220	2.4
1993	1 945	4.6	2 385	1.1	993	0.3	4 330	2.6
1994 c/	1 990	2.3	2 468	3.5	1 015	2.2	4 458	3.0

Sources: Based on data from the United Nations Statistical Office; Fearnleys (Oslo), *World Bulk Trades 1993* and *Review 1994*, UNCTAD data bank and other specialized sources.

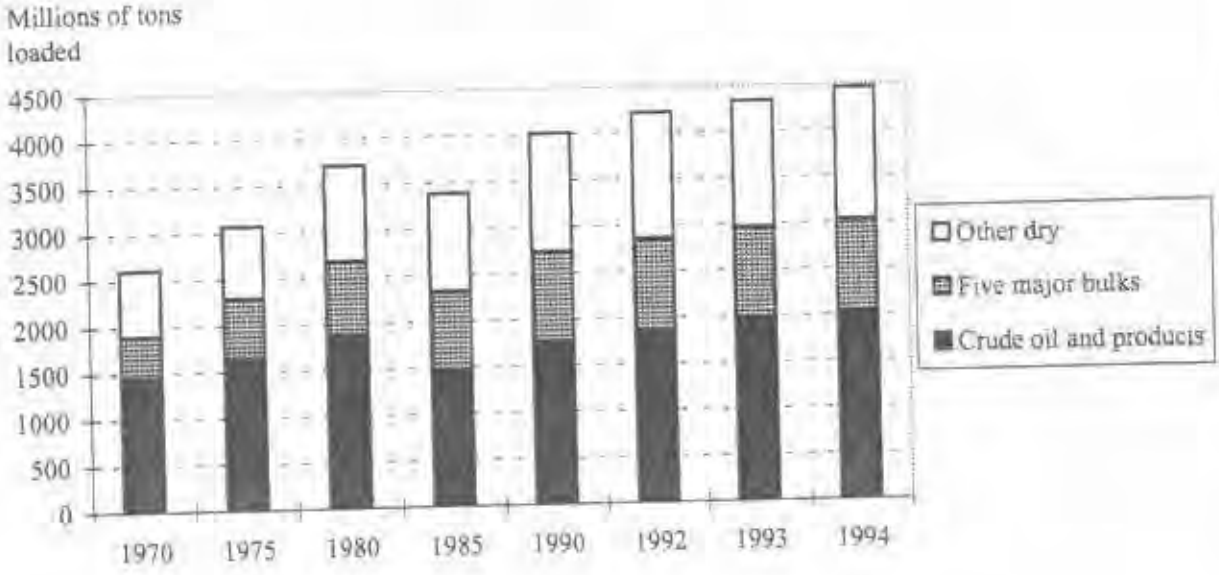
a/ Including international cargoes loaded at ports of the Great Lakes and St. Lawrence system for unloading at ports of the same system.

b/ Iron ore, grain, coal, bauxite/alumina and phosphate.

c/ UNCTAD preliminary estimates.

Graph 2

International seaborne trade for selected years



Source: *Review of Maritime Transport*, various issues.

6. Volumes of dry bulk shipments showed very divergent developments in 1994 depending on types of commodity. World crude steel production marginally declined by 0.9 per cent to 723.3 million tons. The share of the European Union expanded by 5.2 per cent to 139 million tons, as compared to the year before, the main contributor to this growth being Germany with an increase of 8.5 per cent from 1993. Asia made a marginal growth of 0.5 per cent, while China and the Republic of Korea were major contributors with increases of 3.2 per cent and 2.3 per cent respectively, whereas Japan reduced by 1.3 per cent. The Commonwealth of Independent States, including Russia, registered a remarkable decline of nearly 21 per cent from 1993.[6] Notwithstanding the slight decline of the world crude steel production in 1994, seaborne iron ore volumes increased by over 7 per cent from 354 million tons in 1993 to 380 million tons in 1994, as the European steel industry improved its performance and the increase in production in China was sufficient to compensate for the reduction in ore-based steel output in Japan.[7] Coal shipments showed a modest increase of about 1 per cent to 370 million tons. This increase applied both to coking coal as the steel industry recovered specifically in Western Europe, and to thermal coal, which gained some market shares from oil. China's exports rose over 20 per cent, supplying thermal coal to South-East Asian markets. South Africa and Canada also improved their volumes substantially.[8] Grain shipments again fell considerably in 1994 (-4.6 per cent) from 194 million tons in 1993 to 185 million tons. The most dramatic decline could be observed in imports of the former Soviet Union, which were about halved from 1993 levels.[9] This affected primarily the exports of the United States and Argentina. These countries' overall exports declined in 1994 by 11.4 per cent and 10.4 per cent, respectively.[10] The trades of primary aluminium products slightly improved as the world production increased in 1994 by 1.7 per cent to 15.2 million tons as compared to those in 1993, primarily due to a substantial increase of 22.4 per cent in Western Europe, despite a decline of 7.4 per cent in North America.[11]

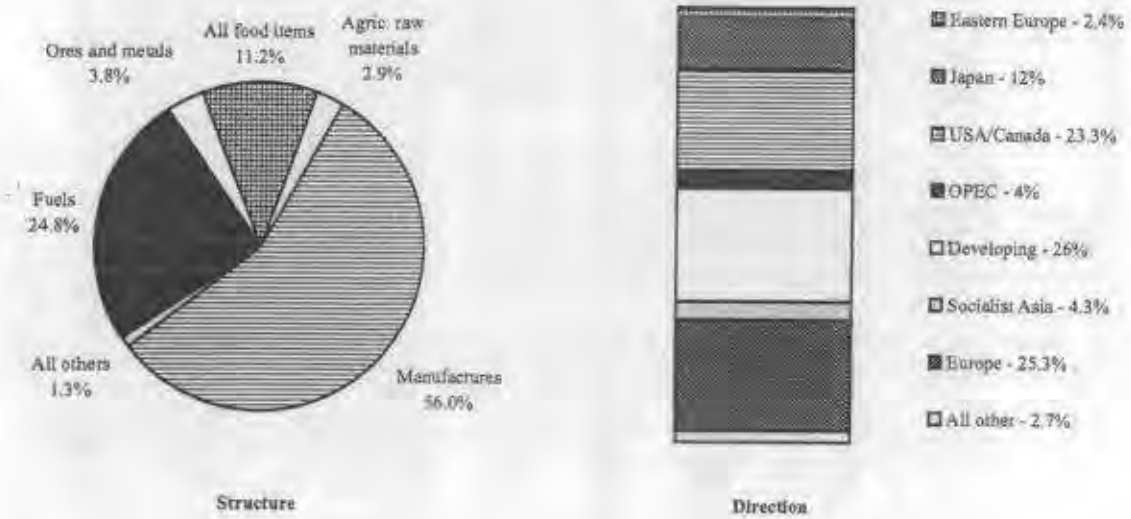
7. Shipments of "other dry cargo", mainly general cargo including steel and unitized cargo increased by 4.4 per cent over 1993 (see table 1). The 1994 global steel consumption reached almost 610 million tons.[12] China, the largest importer in

1993 reduced its import from 30 million tons to 20 million tons in 1994. On the other hand the United States' imports rose about 60 per cent in the first 10 months to 24.7 million tons, primarily from the former Soviet Union and Eastern Europe.[13] The total global liner trade in 1994 was estimated to have reached about 31.8 million TEUs, an increase of 8.1 per cent over 1993. The United States was very active in 1994, with a 9 per cent increase in exports, bolstered by strong advances to the Far East, and with imports from most sources totalling a near 13 per cent increase. Europe's exports registered a sustainable expansion of 6.5 per cent over 1993 with a tremendous growth at 14 per cent in the trades with the Far East. The high yen was the cause of Japan's strong import growth in 1994 (over 9 per cent) from nearly all supplying countries.[14]

8. Graph 3 illustrates the export structure and direction of trade of developing countries. The direction of the developing countries' exports by value is indicated, with 60.5 per cent of the total destined to developed market-economy countries and 26.0 per cent within the developing countries for 1994, as compared to 61.5 per cent and 23.4 per cent respectively for the previous year. The structure of exports by value comprises five broad categories. Manufactured goods, fuels and all food items are the dominant cargoes, accounting for 92.0 per cent of the total (92.6 per cent for 1993). Conversely, in terms of weight, developing countries' exports compose dominantly bulk cargoes with fuels, grains and ores sharing almost 80 per cent of the total.

Graph 3

Export structure and direction of trade for developing countries
(1991 percentage distribution by value)



Source: UNCTAD, *Handbook of International Trade and Development Statistics, 1993* (United Nations publication, Sales No. E/F.94.II.D.24) table 3.2, p. 76.

9. Total demand for shipping services expressed in ton-miles is reflected in table 2. Total services provided in global trades rose by 2.8 per cent in 1994. This was lower than the 1993 growth rate of 4.2 per cent, also far below the 10-year average annual growth-rate of 4.2 per cent. Performance in different market segments, however, varied significantly. Developments in crude oil trades marginally increased by 0.5 per cent in 1994, reflecting a small increase (1.8 per cent) in world crude oil shipments, with all growth from areas outside the Persian Gulf. Conversely in oil product trades, the ton-miles registered a substantial increase of 5.9 per cent from 1993, resulting from a continuous surge of oil-product imports to countries in South-East Asia and the Far East, and the United States, with the global growth of oil products at 4.7 per cent. The most notable development in ton-miles could be observed in iron ore shipments, which expanded by 8.3 per cent in 1994 due to increasing long-haul movements of iron ore, mainly to Europe and China. Grain transport services marked a considerable reduction of 3.7 per cent in 1994 from the year before and were the second lowest since 1981. This could be attributed mainly to the dramatic reduction in world grain trade (4.6 per cent down from 1993), specifically the reduction in imports to the former Soviet Union from the United States and Argentina. In the "other cargo" segment, improvements in steel shipments and liner trades in 1994 substantially contributed to the growth rate of 5.4 per cent in ton-miles.

Table 2

World seaborne trade by types of cargo, 1970, 1980 and 1985-1994
(Billions of ton-miles)

Year	Oil		Iron ore	Coal	Grain a/	Other cargo	Total trade
	Crude	Products					
1970	5 597	890	1 093	481	475	2 118	10 654
1980	8 385	1 020	1 613	952	1 087	3 720	16 777
1985	4 007	1 150	1 675	1 479	1 004	3 750	13 065
1986	4 640	1 265	1 671	1 586	914	3 780	13 856
1987	4 671	1 320	1 728	1 653	1 061	3 840	14 273
1988	5 065	1 445	1 919	1 719	1 117	4 040	15 305
1989	5 736	1 540	1 983	1 798	1 095	4 250	16 402
1990	6 261	1 560	1 978	1 849	1 073	4 440	17 161
1991	6 757	1 530	2 008	1 999	1 069	4 510	17 873
1992	6 970	1 620	1 896	2 001	1 091	4 650	18 228
1993	7 391	1 775	2 001	1 949	1 038	4 840	18 994
1994	7 430	1 880	2 167	1 955	1 000	5 100	19 532

Source: Fearnleys (Oslo), *Review 1994*.

a/ Including wheat, maize, barley, oats, rye, sorghum and soya beans.

Box 2

Possible expansion of the world natural gas and LNG markets

The world natural gas consumption was in 1993 about 2,158 billion m^3 (2,125 in 1992). International natural gas trade accounted for only 347 billion m^3. Over 76 per cent or 264 billion m^3 was piped and only 24 per cent, i.e. 83 billion m^3 or 61.3 million tons was transported as LNG (in 1992: 81 billion m^3 or 60 million tons).

Prudent estimation is putting the world gas consumption by 2010 at 3,100 billion m^3, an increase of over 40 per cent. It is based on a steady world economic growth and on the necessity of environment and atmosphere protection where natural gas is definitely the challenger to oil, coal and nuclear and has become more and more efficient and economical in power generation.

In Europe (EEC only), production by 2010 is estimated to develop to 225/245 billion m^3 whilst demand should reach 440/470 billion m^3. Imports in 1993 was about 170 billion m^3. At current level of imports, the deficit by 2010 would reach 45/55 billion m^3, already partially covered by agreed piped gas and LNG contracts under development.

The Far East (Japan, Republic of Korea and Taiwan Province of China), although a much smaller market, is depending almost entirely on LNG imports which reached in 1993: 61.35 billion m^3 or 45 million tons (60 billion m^3 and 44 million tons in 1992).

In that part of the world, estimates are putting demand already by the year 2000 at between 92/95 billion m^3 or 68/70 million tons. By the year 2010, demand could reach 109/117 billion m^3 or 81 to 86 million tons. Current supply commitments are amounting to about 92.5 billion m^3 or 73 million tons to be reached before 2000.

Shell's conservative estimates of world LNG demand of a minimum of 80 million tons (108 billion m^3) by 2000 will be met easily.

Shell's estimates of demand by 2010 of 100 million tons (135 billion m^3) could also be met when considering the numerous proposed expansions and grass root projects. However, the question awaiting a favourable reply is whether the world economy will recover enough to push oil prices up, allowing better project economics and financing but also higher LNG price ...

The steady increase, although at a slower pace of 2.5 per cent of the LNG trade to 61.3 million tons in 1993 has resulted in the contracting of 15 ships in 1993 bringing the total since 1989 to 33 newbuildings. Within the balance of 1994 or in 1995, at least 6 to 7 ships should be ordered, all for delivery between 1997 and 2000.

Beyond 1995, about 20 to 30 vessels of all sizes could be ordered for delivery between 1999 and 2004.

To conclude, proposed grassroots supply projects are plenty and could meet demand but the dramatic increase of costs to develop most of them (not to mention some presenting very difficult and expensive technical challenges), the scarcity of reasonable cost financing, the LNG pricing and indexation, the relatively limited number of specialized shipyards, the cost of new ships (although the unreasonable upward trend seems to have recently slowed down), the availability of skilled officers and trained crews, remain the other problems and obstacles which will have to be solved and overcome before the LNG industry legitimate expectations become reality.

Moreover and not to be ignored, several new proposed projects of gas pipelines are being studied linking the Middle East to Europe and India, Eurasia to Western, Central Europe, China and even Japan, another from Russia to Korea and Japan. Although distances, borders, depth of seas could make such proposals unrealistic, it is believed that some will materialize in the future.

Source: Barry Rogliano Salles, *Survey of the World LNG Fleet*, August 1994.

10. Summarized data on seaborne trade by major cargo segments and country groups are provided in table 3 and graph 4. In terms of regional distribution, developing countries in 1994 registered a small increase in their share of both oil and dry cargoes for the fourth consecutive year to a combined share of 50.8 per cent in world trade for loading, whilst their share for unloading slightly declined to 26.8 per cent after a constant increase over the previous years. Within the group, Asian countries continuously expanded their share in world trade in 1993 to 26.9 per cent (26.2 per cent in 1992) for loading and 17.6 per cent (17.3 per cent in 1992) for unloading. In 1993, American countries maintained their share at almost the same level as in 1992 for both directions of trade. Conversely, the share of African economies continued to diminish in 1993 to 10.2 per cent for loading and 4.2 per cent for unloading, as compared to 10.5 and 4.3 per cent respectively in 1992. Developed market-economy countries experienced a marginal increase in 1994 to 43.2 per cent and 67.9 per cent in world trade for loading and unloading, respectively. Countries of Central and Eastern Europe suffered a decrease to 3.8 per cent for loading and 3.2 per cent for unloading in 1994. It is notable that the share of the socialist countries of Asia turned upward in 1994 to 2.2 per cent for loading and 2.1 per cent for unloading after remaining at 2.1 and 2.0 per cent respectively since 1991.

Table 3

World seaborne trade a/ in 1970, 1992, 1993 and 1994 (est.)
by types of cargo and country groups b/

Country group	Year	Goods loaded				Goods unloaded			
		Oil		Dry cargo	Total all goods	Oil		Dry cargo	Total all goods
		Crude	Products			Crude	Products		
		(Trade in millions of tons)							
World total	1970	1 110	330	1 165	2 605	1 101	302	1 127	2 530
	1992	1 394	466	2 360	4 220	1 414	451	2 480	4 345
	1993	1 443	502	2 385	4 330	1 465	480	2 477	4 422
	1994	1 483	507	2 468	4 458	1 486	486	2 574	4 546
		(Percentage share of each category of goods in total)							
World total	1970	42.6	12.7	44.7	100.0	43.5	11.9	44.6	100.0
	1992	33.0	11.1	55.9	100.0	32.5	10.4	57.1	100.0
	1993	33.3	11.6	55.1	100.0	33.1	10.9	56.0	100.0
	1994	33.3	11.4	55.3	100.0	32.7	10.7	56.6	100.0
		(Percentage share of trade by groups of countries)							
Developed market-economy countries	1970	2.0	27.1	60.0	31.1	80.4	79.6	79.1	79.9
	1992	13.3	33.5	63.1	43.4	72.9	82.3	61.9	67.6
	1993	13.9	33.7	62.7	43.0	73.0	81.9	61.8	67.7
	1994	13.3	33.6	63.2	43.2	73.3	82.2	62.1	67.9
Countries of Central and Eastern Europe (including the former USSR)	1970	3.4	8.0	6.9	5.6	1.2	1.0	3.8	2.3
	1992	3.6	9.8	3.5	4.2	2.0	0.2	5.3	3.7
	1993	3.9	10.1	3.3	4.3	1.7	0.2	5.0	3.4
	1994	3.0	9.0	3.2	3.8	1.5	0.2	4.8	3.2
Socialist countries of Asia	1970	-	-	1.2	0.5	0.5	0.1	2.0	1.2
	1992	2.5	0.9	2.1	2.1	0.3	0.3	3.3	2.0
	1993	2.4	0.9	2.2	2.1	0.3	0.4	3.4	2.0
	1994	2.5	0.9	2.2	2.2	0.3	0.4	3.5	2.1

Table 3 (continued)

Country group	Year	Goods loaded				Goods unloaded			
		Oil		Dry cargo	Total all goods	Oil		Dry cargo	Total all goods
		Crude	Products			Crude	Products		
Developing countries	1970	94.6	64.9	31.9	62.8	17.9	19.4	15.1	16.6
	1992	80.6	55.9	31.4	50.3	24.8	17.3	29.5	26.7
	1993	79.8	55.3	31.8	50.6	25.0	17.5	29.8	26.9
	1994	81.2	56.5	31.4	50.8	24.9	17.2	29.6	26.8
of which in:									
Africa	1970	25.5	2.4	9.1	15.2	1.7	4.7	3.6	2.9
	1992	22.6	7.4	4.1	10.5	5.4	2.0	4.0	4.3
	1993	21.4	7.1	4.0	10.2	5.3	2.1	4.0	4.2
America	1970	12.2	35.4	13.8	16.0	10.5	5.6	4.4	7.2
	1992	13.5	12.0	13.2	13.2	5.5	3.5	4.0	4.4
	1993	13.4	11.8	13.1	13.1	5.4	3.4	4.0	4.4
Asia	1970	56.9	27.0	8.1	31.3	5.5	8.5	6.7	6.4
	1992	44.5	36.2	13.4	26.2	13.3	11.1	20.0	16.7
	1993	45.0	36.1	14.0	26.9	13.7	11.4	21.0	17.6
Europe	1970	-	-	-	-	-	0.1	0.1	-
	1992	-	0.2	0.3	0.2	0.7	0.4	0.8	0.7
	1993	-	0.2	0.3	0.2	0.6	0.3	0.7	0.6
Oceania	1970	-	0.1	0.8	0.4	-	0.5	0.3	0.2
	1992	-	0.1	0.4	0.2	-	0.5	0.1	0.2
	1993	-	0.1	0.4	0.2	-	0.3	0.1	0.1

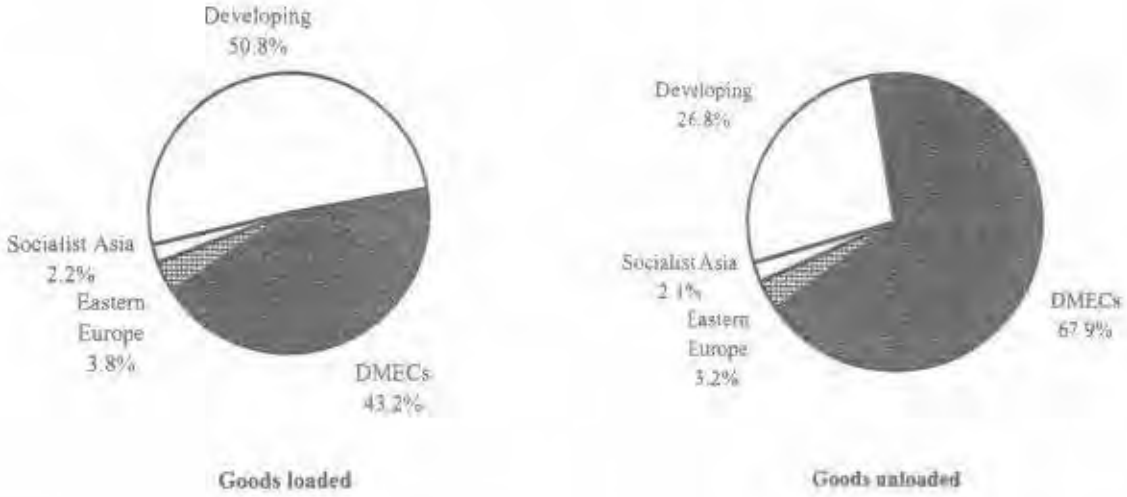
Sources: Based on statistics provided by the United Nations Statistical Office, the UNCTAD data bank, and other specialized sources.

a/ Including international cargoes loaded at ports of the Great Lakes and St. Lawrence system for unloading at ports of the same system, but excluding such traffic in main bulk commodities.

b/ See annex I for the composition of these groups, and note 4 thereto regarding the recording of trade of land-locked countries.

Graph 4

World seaborne trade by country groups
(Percentage distribution of tonnage, 1994)

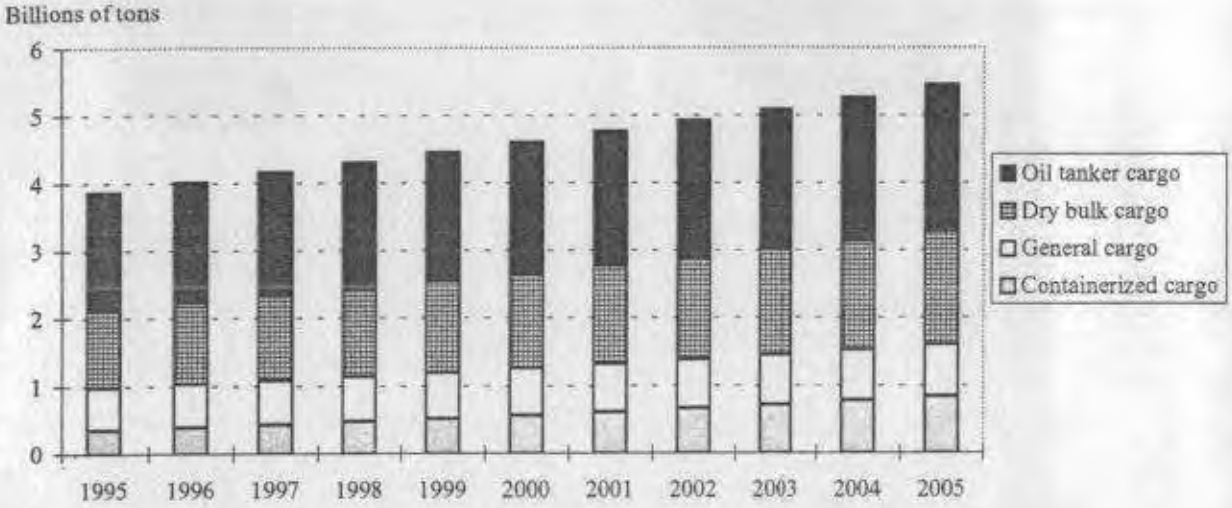


Source: UNCTAD data bank.

11. A forecast of world seaborne trade by main cargo sectors from 1995 to 2005 is provided in graph 5. The World Sea Trade Service (WSTS) forecasts that the trade, estimated at 3.870 billion tons for 1994, will increase by an average of 4.1 per cent per year, reaching 5.456 billion tons by 2005. Containerized and other general cargoes are projected to increased at a high rate of 6.3 per cent per year to 1.601 billion tons. Dry bulk cargo and oil tanker cargo, estimated at the average growth rate of 4.5 per cent and 2.6 per cent per year, are forecasted to reach 1.685 billion tons and 2.170 billion tons respectively by 2005.

Graph 5

Forecast of world seaborne trade, 1995-2005



Source: DRI/McGraw-Hill, World Sea Trade Service.

Chapter II

DEVELOPMENT OF THE WORLD FLEET

This chapter reviews the supply of the world maritime industry. The information and data comprehensively cover structure and ownership of the world fleet, the comparison of cargo generation and fleet ownership, and a forecast for fleet development.

A. Structure of the world fleet

12. Comparative time series data for 1992, 1993 and 1994 are presented in table 4. The world merchant fleet aggregated 719.8 million dwt by the end of 1994. This represents a 1.3 per cent increase over 1993, which is noticeably less than the 2.3 per cent increase of 1993, but largely exceeds the 0.36 per cent yearly average growth of the 1983-1993 period. The 1994 fleet expansion occurred mainly because newbuilding deliveries (29.3 million dwt) increased more than scrapping (20.8 million dwt), leaving a net gain of 8.5 million dwt.[15]

13. By vessel type, oil tankers and dry bulk carriers continued to dominate the world fleet. The former represented 37.7 per cent of the 1994 world total tonnage and the latter 34.8 per cent. The shares of general cargo ships and containerships were 14.4 per cent and 5.4 per cent, respectively. Comparative data on tonnage structures reveal that the shares of ore/bulk carriers and containerships are continuously increasing, whilst the relative growth of oil tankers halted after increasing for four consecutive years, and the share of general cargo ships and ore/bulk/oil carriers are on the decline. Graph 6 illustrates world fleet size trends by principal types of vessel for the 1980-1994 period.

14. The world fleet of fully cellular containerships continued to expand both in terms of TEU capacity and number of ships, reaching 1,603 ships of 2,367,000 TEU by the end of 1994. Developments since 1992 show an 11.5 per cent annual average increase in the world total TEU capacity and a 2.6 per cent increase in carrying capacity per ship. Table 5 indicates developments in detail for the 1992-1994 period.

15. The 1994 world containership fleet continued to expand in open-registry countries to 31.2 per cent of the world TEU capacity as compared to 28.7 per cent in 1993. Conversely, the share of developed market-economy countries fell for three consecutive years to 33.7 per cent in 1994 from 36.6 per cent in 1992. The combined share of the two groups, however, increased to 65.0 per cent from 62.8 per cent in 1993 (62.6 per cent in 1992).

16. The share of developing countries in TEU capacity of the world fleet continued to decrease to 15.7 per cent in 1994, the lowest level since 1990. This trend is attributed mainly to the decreasing share of the developing countries of Asia which represents the major proportion (82 per cent) of the containership fleet registered in developing countries. In 1994, Asia's share fell to 12.1 per cent of the world containership fleet, the lowest since 1990. Conversely, the share of developing countries of America slightly increased to 2.5 per cent. The share of other developing regions remained stagnant or practically non-existent.

17. Table 6 provides data on the age distribution of the world merchant fleet by types of vessel and by groups of countries and territories. It can be observed that the problematic ageing of the world fleet has not continued further in 1994. The average age of the total world fleet decreased marginally to 15.00 years, representing a decrease of 3.2 per cent over 1993. By types of vessel, the average age of tankers fell by 9.0 per cent to 15.35 years in 1994 from the previous year's age (16.86 years). The share of tanker tonnage aged 15 years and more decreased to 58.8 per cent in 1994 from 63.3 per cent in 1993, due to increasing scrapping of older tankers (13.1 million tons in 1994 versus 10.7 million tons in 1993). Conversely, ageing of the bulk carriers fleet continued with the average age up by 7.1 per cent (14.58 years in 1994 versus 13.61 years in 1993), reflecting a low level of scrapping activities in 1994 as a result of the surge in dry bulk freight markets, specifically in the second half of 1994. Containerships still represented the youngest fleet with an improved average age of 12.03 years (12.82 years in 1993).

18. By country grouping, developing countries showed the lowest average age of all ships (14.31 years) followed by developed market-economy countries (14.75 years), major open-registry countries (15.81 years) and countries of Central and Eastern Europe (16.76 years). Socialist countries of Asia have the oldest fleet, with vessels built 15 and more years ago representing 66.1 per cent of their total fleet (60.5 per cent in 1993).

Table 4

World fleet size by principal types of vessel, 1992-1994 a/
(Thousands of dwt)
(End-year figures)

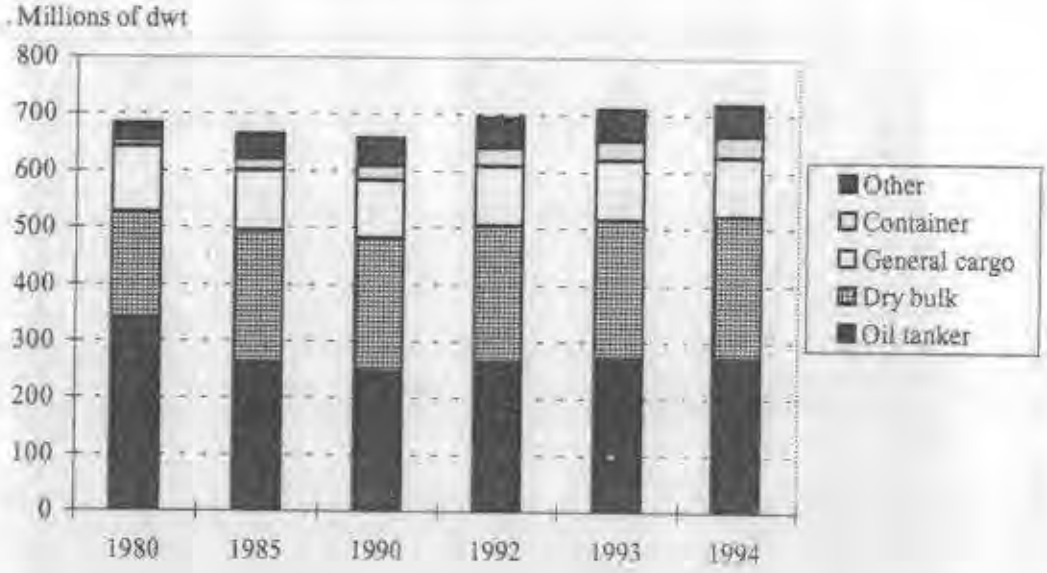
Principal types	1992	1993	1994	Percentage change 1993/1994
1. Oil tankers	263 334 *37.9*	271 222 *38.2*	270 997 *37.7*	-0.1
2. Bulk carriers	239 973 *34.5*	242 134 *34.1*	250 294 *34.8*	3.4
Ore/bulk/oil	36 460 *5.3*	34 207 *4.8*	27 445 *3.8*	-19.8
Ore/bulk	203 513 *29.3*	207 927 *29.3*	222 849 *31.0*	7.2
3. General cargo ships	104 933 *15.1*	106 866 *15.0*	103 731 *14.4*	-2.9
4. Containerships	32 408 *4.7*	34 848 *4.9*	39 005 *5.4*	11.9
5. Other types of ships	54 043 *7.8*	55 552 *7.8*	55 778 *7.8*	0.4
Liquefied gas carriers	12 721 *1.8*	13 388 *1.9*	14 044 *2.0*	4.9
Chemical tankers	7 113 *1.0*	7 381 *1.0*	7 616 *1.1*	3.2
Miscellaneous tankers	627 *0.1*	539 *0.1*	592 *0.1*	9.8
Ferries and passenger ships	3 673 *0.5*	3 811 *0.5*	3 951 *0.6*	3.7
Others	29 909 *4.3*	30 433 *4.3*	29 575 *4.1*	-2.8
World total	694 691 *100.0*	710 622 *100.0*	719 805 *100.0*	1.3

Source: Lloyd's Maritime Information Services Ltd. (London).

a/ Percentage shares are shown in italics.

Graph 6

World fleet size by principal types of vessel: selected years 1980-1994



Source: Lloyd's Maritime Information Services Ltd. (London).

B. Ownership of the world fleet

19. Table 7 and graph 7 provide information on the distribution of the world merchant fleet by groups of countries for the years 1980, 1993 and 1994. Developed market-economy countries and major open-registry countries owned 67.5 per cent of the 1994 total. This represents almost the same level as 1993, but a significant decline from 82.4 per cent in 1980. The developing countries' share of the total 1994 dwt marginally increased to 22.6 per cent, as compared to 22.2 per cent in 1993. This is a tremendous increase over 1980, with an average annual increase of 6.7 million dwt, which is the largest increase in dwt among the country groups. The fleet tonnage of developing countries in Asia in 1994 increased by 3.1 per cent from the previous year to 97.5 million dwt, which accounted for 60.1 per cent of the developing countries' total. The share of socialist countries in Asia remained almost the same as the previous year (3.6 per cent). On the other hand, the shares of the countries of Central and Eastern Europe slightly declined to 5.1 per cent in 1994 (5.4 per cent in 1993).

20. Table 8 provides more detailed data on fleet distribution by vessel types and country groups for the years 1980, 1993 and 1994. In the oil tanker sector, the share of developed market-economy countries in the world total tonnage decreased to 33.0 per cent in 1994. On the other hand, the share of major open-registry countries increased to 44.2 per cent, resulting in a combined share of 77.2 per cent of the two groups, which remained almost unchanged from the previous year, but tremendously decreased from 88.7 per cent in 1980. The developing countries in Asia very marginally decreased to 10.5 per cent in 1994, which represented the lowest share in their principal types of vessel.

21. In the dry bulk carrier sector, the tonnage share of developed market-economy countries in the world total continued to decrease to 24.6 per cent in 1994. Conversely, major open-registry countries expanded their share to 38.2 per cent. The combined tonnage accounts for 62.8 per cent, which remained unchanged from 1993. Developing countries' share in 1994 slightly expanded to 26.8 per cent from the 26.4 per cent share in 1993. The share of developing countries in Asia slightly increased in 1994 to 17.7 per cent, which however was the highest in their principal types of vessel.

Table 5

Distribution of the world fleet and TEU capacity of fully cellular containerships by groups of countries, 1992, 1993 and 1994
(End-year figures)

Flags of registration by groups of countries	Number of ships			TEU capacity and percentage shares a/		
	1992	1993	1994	1992	1993	1994
1. World total	1 371	1 423	1 603	1 925 177 *100.0*	2 092 204 *100.0*	2 366 720 *100.0*
2. Developed market-economy countries	417	397	436	704 258 *36.6*	714 088 *34.1*	797 994 *33.7*
3. Major open-registry countries b/	377	426	527	501 281 *26.0*	599 753 *28.7*	739 454 *31.2*
Total, 2 and 3	794	823	963	1 205 539 *62.6*	1 313 841 *62.8*	1 537 448 *65.0*
4. Countries of Central and Eastern Europe (including the former USSR)	67	55	57	34 899 *1.8*	35 343 *1.7*	37 698 *1.6*
5. Socialist countries of Asia	69	73	83	65 592 *3.4*	70 297 *3.4*	94 487 *4.0*
6. Developing countries	289	292	322	320 127 *16.6*	329 200 *15.7*	351 664 *14.9*
of which in: Africa	3	3	3	585 -	585 -	585 -
America	55	66	90	36 075 *1.9*	41 282 *2.0*	59 736 *2.5*
Asia	225	218	224	279 867 *14.5*	285 495 *13.7*	287 370 *12.1*
Europe	2	1	3	2 336 *0.1*	574 -	2 833 *0.1*
Oceania	4	4	3	1 264 *0.1*	1 264 *0.1*	1 140 *0.1*
7. Other, unallocated	152	180	178	299 020 *15.5*	343 523 *16.4*	345 423 *14.6*

Source: Lloyd's Maritime Information Services Ltd. (London).

a/ Percentage shares are shown in italics.

b/ Including Malta and Vanuatu.

Table 6

Age distribution of the world merchant fleet by types of vessel,
as at 31 December 1994
(Percentage of total in terms of dwt)

Country grouping	Types of vessel	Total	0-4 years	5-9 years	10-14 years	15 years and over	Average age (years) a/	Average age (years) 1993 a/
World total	All ships	100	15.2	14.7	17.6	52.5	15.00	15.05
	Tankers	100	19.7	11.2	10.3	58.8	15.35	16.86
	Bulk carriers	100	12.1	17.7	23.5	46.7	14.58	13.61
	General cargo	100	7.5	13.0	19.4	60.1	16.61	15.03
	Containerships	100	24.7	21.3	18.4	35.6	12.03	12.82
	All others	100	14.7	16.6	21.6	47.1	14.41	14.14
Developed market-economy countries	All ships	100	14.7	16.3	18.7	50.3	14.75	14.44
	Tankers	100	15.2	10.3	11.3	63.2	16.29	16.65
	Bulk carriers	100	11.4	20.5	26.1	42.0	14.04	12.70
	General cargo	100	12.5	19.6	21.4	46.5	14.42	13.26
	Containerships	100	28.0	19.9	17.1	35.0	11.71	13.07
	All others	100	16.5	20.8	22.0	40.7	13.38	13.17
Major open-registry countries b/	All ships	100	16.1	10.4	14.1	59.4	15.81	15.88
	Tankers	100	23.5	8.5	7.5	60.5	15.28	17.26
	Bulk carriers	100	8.7	10.1	19.9	61.3	16.76	15.22
	General cargo	100	6.0	13.1	20.0	60.9	16.84	14.34
	Containerships	100	26.9	21.5	16.2	35.4	11.78	13.73
	All others	100	16.5	17.1	16.8	49.6	14.46	14.11
Subtotal	All ships	100	15.3	13.8	16.8	54.1	15.19	15.23
	Tankers	100	18.9	9.5	9.6	62.0	15.84	16.99
	Bulk carriers	100	10.2	15.8	23.3	50.7	15.26	14.13
	General cargo	100	9.8	16.9	20.8	52.5	15.43	13.91
	Containerships	100	27.7	20.3	16.9	35.1	11.73	13.32
	All others	100	16.5	19.8	20.6	43.1	13.67	13.55
Countries of Central and Eastern Europe	All ships	100	4.9	15.6	19.2	60.3	16.76	14.87
	Tankers	100	1.0	14.7	23.6	60.7	17.24	14.13
	Bulk carriers	100	5.4	17.1	21.4	56.1	16.22	13.58
	General cargo	100	5.7	14.0	16.0	64.2	17.14	16.20
	Containerships	100	0.0	28.0	33.6	38.4	14.44	11.29
	All others	100	7.0	16.1	15.6	61.3	16.63	15.56
Socialist countries of Asia	All ships	100	7.8	11.5	14.6	66.1	17.26	16.66
	Tankers	100	14.6	10.5	14.5	60.4	16.06	17.38
	Bulk carriers	100	8.7	12.8	15.6	62.9	16.78	16.23
	General cargo	100	3.5	8.8	12.9	74.8	18.69	17.40
	Containerships	100	11.4	25.0	20.5	43.1	13.92	10.54
	All others	100	3.4	4.7	11.4	80.5	19.48	19.04
Developing countries (excluding open-registry countries)	All ships	100	13.5	20.1	19.8	46.6	14.31	14.35
	Tankers	100	16.3	14.2	11.1	58.4	15.50	16.61
	Bulk carriers	100	13.7	31.8	27.1	27.4	11.78	11.12
	General cargo	100	3.4	9.1	17.6	69.9	18.20	16.34
	Containerships	100	31.1	19.7	16.5	32.7	11.18	12.78
	All others	100	13.2	10.3	27.6	48.9	15.06	15.09

Source: Compiled on the basis of data supplied by Lloyd's Maritime Information Services Ltd. (London).

a/ To calculate average age, it has been assumed that the ages of vessels are distributed evenly between the lower and upper limit of each age group. For the 15-years-and-over age group, the mid-point has been assumed to be 22 years.

b/ Including Malta and Vanuatu.

Table 7

Distribution of world tonnage (grt and dwt) by groups of countries of registration, 1980, 1993 and 1994 a/
(End-year figures)

Flags of registration by groups of countries	Tonnage and percentage shares b/						Increase in tonnage (millions of dwt) d/	
	In grt (millions)			In dwt (millions)				
	1980 c/	1993	1994	1980 c/	1993	1994	1980-1994	1993-1994
1. World total	414.5	457.4	476.2	682.8	710.6	719.8	2.6	9.2
	100.0	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*		
2. Developed market-economy countries	214.3	142.7	144.5	350.1	216.6	211.9	-9.9	-4.7
	51.7	*31.2*	*30.3*	*51.3*	*30.5*	*29.4*		
3. Major open-registry countries	114.2	158.8	171.6	212.6	263.4	273.6	4.4	10.2
	27.6	*34.7*	*36.0*	*31.1*	*37.1*	*38.0*		
Total 2 and 3	328.5	301.5	316.1	562.7	480.0	485.5	-5.5	5.5
	79.3	*65.9*	*66.4*	*82.4*	*67.6*	*67.5*		
4. Countries of Central and Eastern Europe (including the former USSR)	32.0	33.2	32.3	37.8	38.2	36.8	-0.1	-1.4
	7.7	*7.3*	*6.8*	*5.5*	*5.4*	*5.1*		
5. Socialist countries of Asia	7.3	16.5	17.3	10.9	24.7	25.6	1.1	0.9
	1.8	*3.6*	*3.6*	*1.6*	*3.5*	*3.6*		
6. Developing countries	44.7	99.6	104.1	68.4	157.9	162.3	6.7	4.4
	10.8	*21.8*	*21.9*	*10.0*	*22.2*	*22.6*		
of which in:								
Africa	4.9	5.1	5.0	7.2	6.9	6.6	-0.0	-0.3
America	14.5	18.7	19.3	21.8	28.8	28.8	0.5	0.0
Asia	25.0	59.3	62.0	39.1	94.6	97.5	4.2	2.9
Europe	0.1	14.4	15.7	0.2	24.6	26.6	1.9	2.0
Oceania	0.1	2.1	2.1	0.1	3.0	2.8	0.2	-0.2
7. Other, unallocated	2.0	6.6	6.4	3.0	9.8	9.6	0.5	-0.2
	0.5	*1.4*	*1.3*	*0.4*	*1.4*	*1.3*		

Source: Lloyd's Maritime Information Services Ltd. (London).

a/ Excluding the United States Reserve Fleet and the United States and Canadian Great Lakes fleets, which in 1994 amounted respectively to 2.9, 1.1 and 1.5 million grt (3.8, 2.0 and 2.1 million dwt).

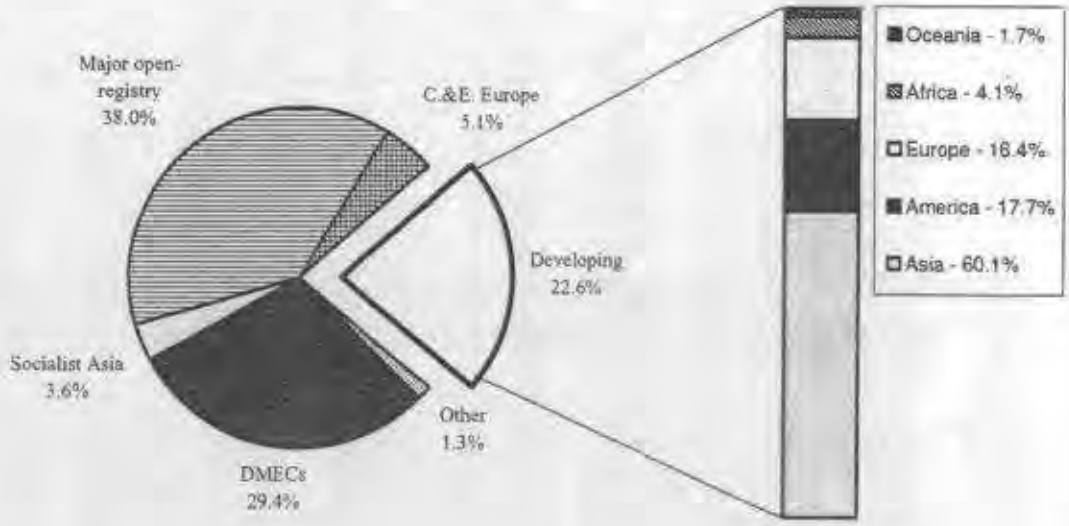
b/ Percentage shares are shown in italics.

c/ Mid-year figure.

d/ Average

Graph 7

World tonnage by country groups, 1994
(Percentage distribution of dwt)



Source: Lloyd's Maritime Information Services Ltd. (London).

22. In the sector of general cargo ships, the combined share of developed market-economy countries and major open-registry countries was on the downward trend, recording 50.2 per cent in 1994, as compared to 64.2 per cent in 1980. Developing countries continuously expanded to 27.8 per cent in 1994 (17.6 per cent in 1980), which represented the highest percentage proportion in their principal types of vessel.

23. The containership sector expanded to 5.4 per cent of the world deadweight in 1994, representing a constant expansion from 1.6 per cent in 1980. Developed market-economy countries decreased their share of the containership deadweight tons further to 39.5 per cent in 1994. On the other hand, the open-registry countries' share constantly expanded to 30.9 per cent in 1994. The 1994 combined share of the two country groups (70.4 per cent) exceeded their 1993 share (68.6 per cent). The share of developing countries in the world containership fleet further declined to 16.9 per cent in 1994, of which 12.5 per cent was registered by the developing countries in Asia.

24. The 1994 structure of the merchant fleet of the main country groups is provided in table 9. Developed market-economy countries' tonnage in oil tankers and dry bulk carriers reached 71.3 per cent of the group's total fleet, which is a small decrease from 71.9 per cent in 1993. Their general cargo ships amounted to 10.2 per cent (10.4 per cent in 1993), while containerships accounted for 7.3 per cent, as compared to 6.6 per cent in 1993. Major open-registry countries have a greater proportion of their fleets in the oil tanker and dry bulk carrier sector, accounting for a combined 78.8 per cent in 1994, which is the same share as in 1992 (78.2 per cent in 1993). Their share of general cargo ships (11.2 per cent) is higher than in developed market-economy countries (10.2 per cent); however containerships (4.4 per cent) account for less than the developed market-economy countries (7.3 per cent).

Table 8

Percentage shares of world tonnage by types of vessel and country groups
1980 (as at 1 July), 1993 and 1994 (as at 31 December) a/
(In terms of dwt)

Country group	Year	Total dwt		Oil tankers	Bulk carriers b/	General cargo ships	Container ships	Other ships
		Millions of dwt	Percentage of world total	Percentage share by vessel type				
World total	1980	682.8	100.0	49.7	27.2	17.0	1.6	4.5
	1993	710.6	100.0	38.2	34.1	15.0	4.9	7.8
	1994	719.8	100.0	37.6	34.8	14.4	5.4	7.8
				Percentage share by group of countries				
Developed market-economy countries	1980	350.1	51.3	52.5	52.7	43.4	74.3	50.4
	1993	216.6	30.5	34.3	25.9	21.2	40.8	43.3
	1994	211.8	29.4	33.0	24.6	20.8	39.5	42.6
Major open-registry countries	1980	212.5	31.1	36.2	31.7	20.8	13.5	17.0
	1993	263.4	37.1	43.0	37.0	31.0	27.8	26.3
	1994	273.6	38.0	44.2	38.2	29.5	30.9	27.7
Countries of Central and Eastern Europe	1980	37.8	5.5	2.8	4.2	12.3	2.9	19.2
	1993	38.2	5.4	2.6	4.6	13.1	1.9	9.5
	1994	36.8	5.1	2.4	4.3	13.4	1.8	8.8
Socialist countries of Asia	1980	10.9	1.6	0.6	1.6	4.7	0.1	1.3
	1993	24.6	3.5	1.5	4.1	7.5	3.8	2.6
	1994	25.7	3.6	1.5	4.1	8.0	4.2	2.4
Developing countries	1980	68.4	10.0	7.7	9.2	17.6	7.6	12.0
	1993	158.0	22.2	18.1	26.4	26.7	17.7	18.2
	1994	162.2	22.5	18.2	26.8	27.8	16.9	18.3
of which in: Africa	1980	7.1	1.0	1.1	0.1	2.3	..	2.1
	1993	6.9	1.0	0.7	0.5	2.1	..	2.6
	1994	6.6	0.9	0.8	0.5	1.9	..	2.1
America	1980	21.8	3.2	2.3	3.3	5.6	0.1	3.7
	1993	28.8	4.1	3.1	3.7	7.3	2.4	5.1
	1994	28.8	4.0	3.0	3.5	7.7	3.0	4.9
Asia	1980	39.1	5.7	4.3	5.7	9.8	2.7	5.7
	1993	94.6	13.3	10.7	17.1	13.4	14.0	8.9
	1994	97.5	13.5	10.5	17.7	14.0	12.5	9.4
Europe	1980	1.2	..	..	..	0.1	..	..
	1993	24.6	3.5	3.6	4.3	3.3	1.2	0.9
	1994	26.5	3.7	3.9	4.4	3.7	1.3	1.1
Oceania	1980	0.2	..	..	..	0.1	..	..
	1993	3.1	0.4	..	0.8	0.6	0.1	0.7
	1994	2.8	0.4	..	0.7	0.6	0.1	0.8
Other, unallocated	1980	3.0	0.4	0.2	0.6	0.9	1.6	0.1
	1993	9.8	1.4	0.5	2.0	0.5	8.0	0.1
	1994	9.6	1.3	0.6	1.9	0.4	6.6	0.2

Source: Compiled on the basis of data supplied by Lloyd's Maritime Information Services Ltd. (London).

a/ Excluding the United States Reserve Fleet and the United States and Canadian Great Lakes fleets.

b/ Ore and bulk carriers, including combined ore/oil and ore/bulk/oil carriers.

Table 9

Structure of the merchant fleets of the main country groups, as at 31 December 1994 a/
(Million dwt and percentage shares)

	World		Developed market-economy countries		Major open-registry countries		Developing countries		Countries of Central and Eastern Europe		Socialist countries of Asia	
	Million dwt	%	Million dwt	%	Million dwt	%	Million dwt	%	Million dwt	%	Million dwt	%
Total fleet	719.8	100.0	211.9	100.0	273.6	100.0	162.2	100.0	36.8	100.0	25.6	100.0
of which: Oil tankers	271.0	37.7	89.5	42.2	119.8	43.8	49.4	30.5	6.5	17.7	4.1	16.0
Bulk carriers	250.3	34.8	61.6	29.1	95.7	35.0	67.2	41.4	10.7	29.1	10.2	39.8
General cargo	103.7	14.4	21.6	10.2	30.6	11.2	28.8	17.8	14.0	38.0	8.3	32.4
Containerships	39.0	5.4	15.4	7.3	12.0	4.4	6.6	4.1	0.7	1.9	1.7	6.6
Other ships	55.8	7.8	23.8	11.2	15.5	5.7	10.2	6.3	4.9	13.3	1.3	5.1

Source: Compiled on the basis of data supplied by Lloyd's Maritime Information Services Ltd. (London).

a/ Ships of 100 grt and over, excluding the United States Reserve Fleet and the United States and Canadian Great Lakes fleets.

25. Tonnage distribution in developing countries is characterized by a comparatively high proportion of dry bulk carriers (41.4 per cent) and general cargo ships (17.8 per cent), while containerships represent only 4.1 per cent, which however slightly increased from 3.9 per cent in 1993. The low share of technically advanced containerships reflects ongoing structural deficiencies which characterize the liner fleet of developing countries. In the countries of Central and Eastern Europe, general cargo fleets were most concentrated, accounting for 38.0 per cent, while containerships made up only 1.9 per cent (1.8 per cent in 1993). The socialist countries of Asia continued to have a predominant share of both dry bulk carriers (39.8 per cent) and general cargo ships (32.4 per cent) in their merchant fleets.

C. The 35 most important maritime countries and territories

26. The 35 most important maritime countries in dwt terms are ranked in table 10. This table comprises merchant vessels registered under the national flag or a foreign flag when the controlling interest of the vessels is located in the maritime country or territory. These 35 countries control 93.1 per cent of the world merchant fleet. The five largest countries or territories control 51.5 per cent of the world fleet and the top ten control 67.7 per cent.

27. The trend for increasing foreign flag registry continued in 1994. Total tonnage registered under foreign flags in 1994 reached 319.6 million dwt, representing 51.9 per cent of the 35 countries' total fleet, as compared to 50.7 per cent in 1993. This means that more than half of the tonnage beneficially owned by the 35 countries was not registered in the countries of domicile of the parent companies. While registry under foreign flags has been a long-standing practice by owners from developed market-economy countries, it is gradually becoming a common practice in other country groups, including developing countries.

D. Major open registries

28. Foreign registers continue to expand their share in the world merchant fleet, as reviewed in the preceding paragraphs. Table 11 summarizes the tonnage distribution of the five major open-registry countries by principal types of vessels. The total tonnage registered in 1994 rose by 3.3 per cent to 250.2 million dwt from 242.2 million dwt in the previous year. Panama continuously increased to 86.5 million dwt, following Liberia whose fleet increased by 3.4 million dwt to 91.8 million dwt, thus regaining the level of 1992. While the Bahamas and Cyprus also increased their tonnage, Bermuda decreased to 4.5 million dwt from 5.1 million dwt in 1993. By vessel type, oil tankers represent 45.0 per cent of the total dwt (45.3 per cent in 1993), followed by dry bulk carriers with 33.9 per cent (33.1 per cent in 1993), general cargo ships with 10.8 per cent (12.3 per cent in 1993) and containerships with 4.6 per cent (3.8 per cent in 1993), thus clearly revealing the trend to also flag out container tonnage.

29. The participation of nationals in the registry of the most important open or international registers is provided in table 12. The information compares the total tonnage registered in the selected countries of registry with the tonnage owned by the nationals of, and registered in, the countries of registry. For most open-registry countries, except Cyprus, the share owned by the nationals is minimal or zero. However, with international registry, ownership remained unchanged from the 1993 level at over 90 per cent.

30. The true nationality of the five major open-registry fleets is surveyed in table 13. In 1994 total tonnage of the 20 countries or territories account for 92.0 per cent of the total five major open-registry fleets (92.4 per cent in 1993). Ownership is concentrated in 10 countries or territories which control 79.9 per cent of the dwt and 74.7 per cent of the number of vessels of the total five major open-registry fleets. These percentage figures compare with 81.2 per cent and 74.7 per cent respectively in 1993. Japan was again placed at the top in 1994 with the largest share (18.5 per cent) of the five major open-registry fleets, although Greece became the largest foreign-flag-fleet owner with 65.9 million dwt over Japan with 58.5 million dwt.

= 1 Jan 95

Table 10

The 35 most important maritime countries, as at 31 December 1994 a/

Country of domicile b/	Number of vessels			Deadweight tonnage				
	National flag c/	Foreign flag	Total	National flag	Foreign flag	Total	Foreign flag as percentage of total	Total as percentage of world total
Greece	1 048	1 889	2 937	52 457 838	65 941 146	118 398 984	55.69	17.89
Japan	1 018	1 853	2 871	27 009 824	58 545 022	85 554 846	68.43	12.93
United States	543	669	1 212	15 053 345	37 328 292	52 381 637	71.26	7.92
Norway	922	510	1 432	31 933 615	18 121 570	50 055 185	36.20	7.56
China	1 518	308	1 826	22 197 888	12 069 687	34 267 575	35.22	5.18
Hong Kong	98	514	612	5 545 416	24 097 041	29 642 457	81.29	4.48
United Kingdom	391	490	881	5 776 437	15 767 968	21 544 405	73.19	3.26
Russian Federation	2 755	236	2 991	15 491 549	4 892 433	20 383 982	24.00	3.08
Republic of Korea	450	234	684	9 829 152	9 657 492	19 486 644	49.56	2.95
Germany	561	823	1 384	6 373 965	9 865 754	16 239 719	60.75	2.45
Taiwan Province of China	179	239	418	7 446 166	5 564 354	13 010 520	42.77	1.97
Italy	502	112	614	8 738 013	3 137 302	11 875 315	26.42	1.79
Sweden	178	143	321	2 110 872	9 636 860	11 747 732	82.03	1.78
Denmark	449	211	660	6 240 644	5 487 214	11 727 858	46.79	1.77
India	372	53	425	10 292 034	1 352 923	11 644 957	11.62	1.76
Singapore	345	202	547	6 972 882	3 262 870	10 235 752	31.88	1.55
Brazil	233	16	249	8 724 415	1 499 900	10 224 315	14.67	1.55
Saudi Arabia	61	49	110	891 704	7 309 085	8 200 789	89.13	1.24
Turkey	384	10	394	8 005 759	44 587	8 050 346	0.55	1.22
France	177	101	278	3 865 777	3 318 301	7 184 078	46.19	1.09
Iran, Islamic Rep. of	145	1	146	6 708 775	1 600	6 710 375	0.02	1.01
Ukraine	611	38	649	5 530 957	296 649	5 827 606	5.09	0.88
Netherlands	449	195	644	3 367 475	2 108 753	5 476 228	38.51	0.83
Philippines	307	17	324	4 826 953	165 407	4 992 360	3.31	0.75
Romania	267	30	297	3 807 881	998 868	4 806 749	20.78	0.73
Switzerland	14	160	174	626 475	3 728 973	4 355 448	85.62	0.66
Indonesia	440	95	535	2 636 599	1 497 282	4 133 881	36.22	0.62
Belgium	37	125	162	178 296	3 600 098	3 778 394	95.28	0.57
Spain	203	119	322	1 056 087	2 715 548	3 771 635	72.00	0.57
Finland	108	60	168	1 115 346	2 597 791	3 713 137	69.96	0.56
Cyprus	43	32	75	2 856 083	745 541	3 601 624	20.70	0.54
Australia	83	21	104	3 170 397	275 497	3 445 894	7.99	0.52
Kuwait	33	5	38	2 891 849	509 760	3 401 609	14.99	0.51
Croatia	36	132	168	194 429	3 093 567	3 287 996	94.09	0.50
Malaysia	150	17	167	2 707 528	399 827	3 107 355	12.87	0.47
Total (35 countries)	15 110	9 709	24 819	296 632 425	319 634 962	616 267 387	51.87	93.14
Percentage	60.9	39.1	100	48.1	51.9	100		
World total	17 955	10 493	28 448	326 938 555	334 733 824	661 672 379	50.59	100.00
Percentage	63.1	36.9	100	49.4	50.6	100		

Source: Lloyd's Maritime Information Services Ltd. (London).

a/ Vessels of 1,000 grt and above, excluding the United States Reserve Fleet and the United States and Canada Great Lakes fleets.

b/ The country of domicile indicates where the controlling interest of the fleet is located, in terms of the parent company. In several cases, this has required certain judgements to be made. Thus, for instance, Greece is shown as the country of domicile with respect to vessels owned by a Greek owner with representative offices in New York, London and Piraeus, although the owner may be domiciled in the United States.

c/ Including vessels flying the national flag but registered in territorial dependencies or associated self-governing territories. For the United Kingdom, British flag vessels are included under the national flag, except for Bermuda (listed in table 11 as an open-registry country) and Hong Kong (shown separately in the present table).

Table 11

Tonnage distribution of major open-registry fleets, a/ as at 31 December 1994

Country	Oil tankers		Dry bulk carriers		General cargo		Containerships		Others		1994 Total		1993 Total	
	Ships	Thousand dwt	Ships	Thousand dwt	Ships	Thousand dwt	Ships	Thousand dwt	Ships	Thousand dwt	Ships	Thousand dwt	Ships	Thousand dwt
Liberia	404	51 933	415	26 172	245	3 786	122	3 399	307	6 473	1 493	91 763	1 461	88 354
Panama	358	32 262	693	32 052	1 389	11 779	222	5 863	560	4 505	3 222	86 461	3 151	82 992
Cyprus	88	6 081	493	19 226	583	5 748	78	1 250	70	623	1 312	32 928	1 230	32 669
Bahamas	167	19 192	124	7 190	434	5 581	39	847	209	1 699	973	34 509	921	33 062
Bermuda	15	3 210	7	209	9	79	7	149	29	845	67	4 492	78	5 098
Total	1 032	112 678	1 732	84 849	2 660	26 973	468	11 508	1 175	14 145	7 067	250 153	6 841	242 175

Source: Based on data supplied by Lloyd's Maritime Information Services Ltd. (London).

a/ Ships of 1,000 grt and above. This table is not fully comparable with tables 7 and 9, which list ships of 100 grt and above as the base.

Table 12

Tonnage owned by the nationals of, and registered in, the country of registry in the total fleet of the most important open and international registers, as at 31 December 1994 a/
(Thousand dwt)

Country of registry or register	Total tonnage registered in the country of register	Tonnage owned by nationals of, and registered in, the country of registry	Share of tonnage owned by nationals in the total registered fleet (%)
Liberia	91 764	0	0.0
Panama	86 460	0	0.0
Cyprus	35 785	2 856	8.0
Bahamas	34 697	187	0.5
Norwegian International Ship Registry	31 533	29 676	94.1
Danish International Ship Registry	6 170	6 039	97.9
Bermuda	4 493	0	0.0

Source: Based on data supplied by Lloyd's Maritime Information Services Ltd. (London).

a/ Ships of 1,000 grt and above. This table is not fully comparable with tables 7 and 9, which list ships of 100 grt and above as the base.

E. Comparison of cargo turnover and fleet ownership

31. The correlation between cargo volume handled in different country groups and their fleet ownership in 1980, 1993 and 1994 is summarized in table 14. In 1994, developed market-economy countries, either directly or through open or international ship registers, controlled 67.5 per cent (67.6 per cent in 1993) of the world fleet, while they handled 55.8 per cent of the world seaborne trade (55.5 per cent in 1993). On the other hand, the share of developing countries in the world cargo turnover stood at 38.5 per cent (38.6 per cent in 1993), while their merchant fleet constituted 22.5 per cent (22.2 per cent in 1993) of the total world fleet in deadweight tons.

32. In long-term comparisons, the gap between cargo turnover and fleet ownership narrowed significantly in both developed market-economy countries and developing countries. The ratio of goods loaded and unloaded in 1994 was almost unchanged from that in 1980 for both groups. In the meantime, the fleet ownership of developed market-economy countries fell considerably from as high as 82.4 per cent of the world fleet in 1980 to 67.5 per cent in 1994. At the same time, developing countries substantially raised their share to 22.5 per cent in 1994 from the 10.0 per cent registered in 1980.

F. Forecast for world fleet development

33. Forecasts for world fleet development by vessel type (four main types) are shown in graph 8. The World Fleet Forecast Service (WFFS) projects that the total world fleet will increase from 649.2 million dwt in 1995 to 883.9 million dwt by the year 2005. The combined tonnage of container and general cargo ships is expected to increase at the average annual growth rate of 5.4 per cent over the decade. Dry bulk carriers and oil tankers will increase by an annual average of 4.3 per cent and 2.1 per cent, respectively, by the year 2005.

Table 13

True nationality of major open-registry fleets, as at 31 December 1994

Flag country / Country or territory of domicile	Liberia			Panama			Cyprus			Bahamas			Bermuda			Subtotal			Total foreign-flag fleet	
	Thousand dwt	No. of vessels	%	Thousand dwt	No. of vessels	%	Thousand dwt	No. of vessels	%	Thousand dwt	No. of vessels	%	Thousand dwt	No. of vessels	%	Thousand dwt	No. of vessels	%	Thousand dwt	No. of vessels
Greece	18 662	128	11.6	7 909	340	9.2	22 148	737	67.3	5 000	126	14.3	-	-	0.0	45 719	1 331	18.3	65 941	1 889
Japan	9 176	217	10.0	35 884	1 261	41.5	156	26	0.5	1 058	56	3.1	-	-	0.0	46 274	1 534	18.5	58 545	1 853
United States	18 952	223	20.7	2 220	125	2.6	104	8	0.3	8 100	119	23.5	737	5	16.4	30 113	482	12.0	37 328	669
Hong Kong	6 647	109	7.2	12 288	281	14.2	338	1	1.0	370	8	1.1	-	-	0.0	19 643	381	7.9	24 097	514
Norway	7 150	148	7.8	1 662	65	1.9	1 956	16	5.9	5 402	146	15.7	314	6	4.6	16 384	383	6.6	15 122	510
United Kingdom	4 008	88	4.4	519	56	0.6	215	15	0.7	2 242	116	6.3	1 716	20	38.1	8 694	295	4.5	15 368	486
Germany	3 216	123	3.5	1 389	90	1.6	2 218	223	6.7	40	7	0.1	54	1	1.2	6 917	384	2.8	9 866	823
Republic of Korea	1 527	16	1.7	7 325	182	8.5	275	1	0.8	-	-	0.0	-	-	0.0	9 127	199	3.7	9 657	234
Sweden	5 050	31	5.5	80	4	0.1	-	-	0.0	1 615	34	4.7	916	2	20.4	7 661	71	3.1	9 632	143
China	4 735	72	5.2	4 202	122	4.9	315	20	1.0	-	-	0.0	-	-	0.0	9 252	214	3.7	13 070	408
Russian Federation	2 595	42	2.8	179	23	0.2	1 144	43	3.5	111	8	0.3	-	-	0.0	4 029	116	1.6	4 892	236
Taiwan Province of China	813	25	0.9	3 930	187	4.6	274	2	0.8	-	-	0.0	-	-	0.0	5 017	214	2.0	5 364	239
Saudi Arabia	6 323	31	6.9	212	32	0.3	-	-	0.0	510	3	1.5	-	-	0.0	7 045	35	2.8	7 309	66
France	368	5	0.4	740	17	0.9	23	1	0.1	1 499	44	4.4	-	-	0.0	2 634	66	1.1	3 318	101
Finland	-	-	0.0	22	5	0.0	254	1	0.8	2 169	39	6.5	-	-	0.0	2 445	45	1.0	3 598	90
Switzerland	298	9	0.3	1 104	62	1.3	201	11	0.6	684	16	2.0	-	-	0.0	2 287	98	0.9	3 729	160
Denmark	1 367	19	1.5	200	18	0.2	151	1	0.5	843	78	2.5	-	-	0.0	2 561	116	1.0	3 687	211
Italy	787	21	0.8	136	10	0.2	285	8	0.9	473	14	1.4	-	-	0.0	1 659	53	0.7	3 137	112
Singapore	319	14	0.4	703	77	0.8	339	3	1.0	566	12	1.6	-	-	0.0	1 927	106	0.8	3 263	202
Belgium	473	14	0.5	63	8	0.1	129	19	0.4	187	8	0.5	-	-	0.0	843	49	0.3	5 600	125
Subtotal	84 446	1 324	92.0	80 767	2 885	93.4	30 512	1 132	92.7	30 865	815	89.4	3 631	56	80.8	230 251	6 172	92.0	303 928	8 928
Others	7 317	169	8.0	5 694	337	6.6	2 416	180	7.3	3 644	158	10.6	861	11	19.2	19 932	895	8.0	30 806	1 565
TOTAL	91 763	1 493	100.0	86 461	3 222	100.0	32 928	1 312	100.0	34 509	973	100.0	4 492	67	100.0	250 183	7 067	100.0	334 734	10 493

Source: Based on data supplied by Lloyd's Maritime Information Services Ltd. (London).

Table 14

Comparison between total cargo turnover and fleet ownership by groups of countries, 1980, 1993 and 1994

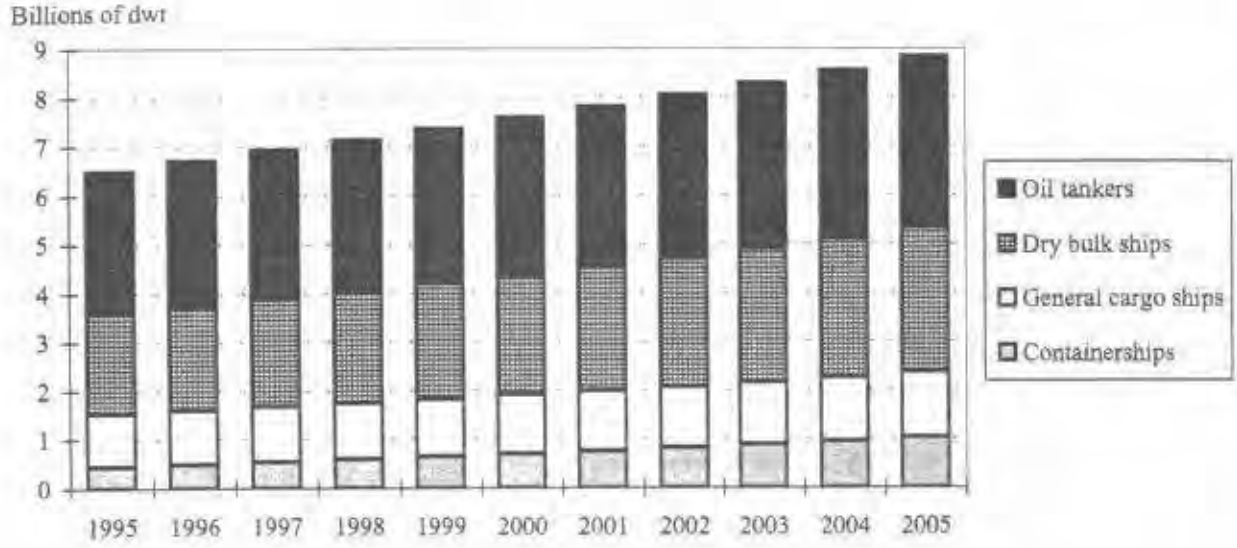
Country grouping	Year	Goods loaded and unloaded (millions of tons)		Total of goods loaded and unloaded (millions of tons)	Merchant fleet (millions of dwt)	Percentage of world total of	
		Loaded	Unloaded			Goods loaded and unloaded	Merchant fleet owned (dwt)
Developed market-economy and major open-registry countries	1980	1 424	2 626	4 050	562.7	54.9	82.4
	1993	1 864	2 994	4 858	480.0	55.5	67.6
	1994	1 935	3 091	5 026	485.6	55.8	67.5
Developing countries	1980	2 033	808	2 841	68.4	38.5	10.0
	1993	2 189	1 188	3 377	158.0	38.6	22.2
	1994	2 258	1 212	3 470	162.2	38.5	22.5
Countries of Central and Eastern Europe (including the former USSR)	1980	201	145	346	37.8	4.7	5.5
	1993	186	150	336	38.2	3.8	5.4
	1994	169	147	316	36.8	3.5	5.1
Socialist countries of Asia	1980	46	100	146	10.9	2.0	1.6
	1993	91	90	181	24.6	2.1	3.5
	1994	96	96	192	25.6	2.1	3.6
World total a/	1980	3 704	3 679	7 383	682.8		
	1993	4 330	4 422	8 752	710.6		
	1994	4 458	4 546	9 004	719.8		

Source: As per tables 3 and 8.

a/ Including unallocated tonnage indicated in annex III.

Graph 8

Forecast of world fleet by principal types of vessel, 1995-2005



Source: DRI/McGraw-Hill, World Fleet Forecast Service.

Chapter III

PRODUCTIVITY OF THE WORLD FLEET AND THE SUPPLY AND DEMAND SITUATION IN WORLD SHIPPING

This chapter provides information concerning the operational productivity of the world fleet and on analysis of the balance between supply and demand for tonnage. Key indicators are tons of cargo carried and ton-miles performed per dwt, and analysis of tonnage oversupply by main shipping market sectors.

A. Estimate of tons and ton-miles per dwt

34. The main operational productivity indicators for the world fleet continued to rise in 1994 as indicated in table 15 and graph 9. Tons of cargo carried per dwt stood at 6.19, which was higher than the 1993 level of 6.09 and a record-high. Ton-miles performed per dwt also continued the upward trend to reach a new record of 27,135. These improved practices can be attributed mainly to the expansion of world seaborne trade (an increase of 3.0 per cent in 1994 versus 2.6 per cent in 1993) and a comparatively moderate expansion of the world fleet (an increase of 1.3 per cent in 1994 versus 2.3 per cent in 1993), thus narrowing the supply/demand gap in world shipping.

35. Table 16 provides additional details on ton-miles performed by oil tankers, dry bulk carriers, combined carriers and the residual fleet. Ton-miles per dwt of tankers, combined carriers and residual fleet increased in 1994 by 2.5 per cent, 13.6 per cent and 3.4 per cent respectively over 1993. On the other hand, ton-miles per dwt of dry bulk carriers continued to mark a decline of 2.6 per cent in 1994. This can be explained by the fleet expansion that largely surpassed bulk trade growth. These trends are confirmed by the data in table 17 on tonnage productivity in terms of cargo carried per dwt. There was an expansion in tons carried per dwt of oil tankers, combined carriers and residual fleet: an increase of 1.1 per cent, 8.8 per cent and 4.0 per cent over 1993 respectively, while dry bulk carriers declined in tons carried per dwt by 2.7 per cent as compared to the 1993 results.

Table 15

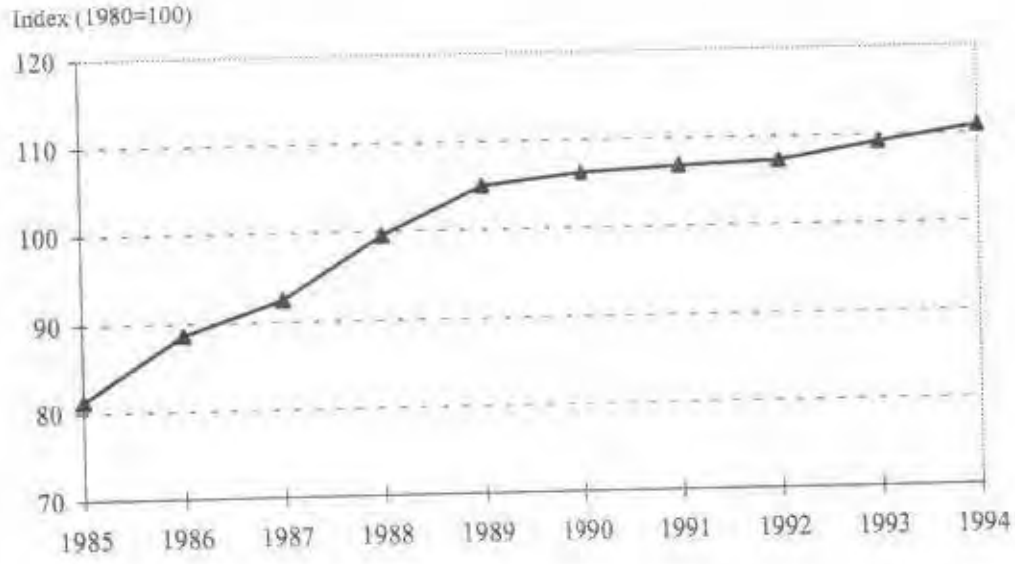
Cargo carried and ton-miles performed per dwt of the total world fleet, 1984-1994

Year	World fleet (millions of dwt)	Total cargo carried (millions of tons)	Total ton-miles performed (thousands of millions of ton-miles)	Tons of cargo carried per dwt	Ton-miles performed per dwt
1984	674.5	3 410	13 368	5.06	19 820
1985	664.8	3 382	13 160	5.09	19 800
1986	639.1	3 459	13 856	5.41	21 680
1987	632.3	3 505	14 298	5.54	22 610
1988	628.0	3 692	15 299	5.88	24 360
1989	638.0	3 891	16 385	6.10	25 680
1990	658.4	4 008	17 121	6.09	26 000
1991	683.5	4 120	17 873	6.03	26 150
1992	694.7	4 220	18 228	6.07	26 240
1993	710.6	4 330	18 994	6.09	26 730
1994	719.8	4 458	19 532	6.19	27 135

Source: World fleet: Lloyd's Maritime Information Services Ltd. (London) (mid-year data for 1984-1990, year-end data for 1991-1993); total cargo carried: UNCTAD data bank; ton-miles: Fearnleys (Oslo), *Review*, various issues.

Graph 9

Index of ton-miles performed per dwt of total world fleet, 1985-1994



Source: UNCTAD calculations based on table 15 of this publication.

Table 16

Estimated productivity of tankers, bulk carriers, combined carriers a/ and the residual fleet, b/ 1984-1994
(Ton-miles performed per dwt)

Year	Ton-miles of oil by tankers (thousands of millions)	Ton-miles per dwt of tankers	Ton-miles of dry bulk cargo by dry bulk carriers (thousands of millions)	Ton-miles per dwt of bulk carriers	Ton-miles of oil and dry bulk cargo by combined carriers (thousands of millions)	Ton-miles per dwt of combined carriers	Ton-miles of the residual fleet (thousands of millions)	Ton-miles per dwt of the residual fleet
1984	5 305	18 930	3 041	17 070	1 187	28 130	3 835	22 050
1985	4 853	18 350	3 208	17 080	1 192	29 000	3 812	22 240
1986	5 426	22 670	3 717	18 820	944	26 520	3 769	22 610
1987	5 600	24 030	3 922	20 010	1 022	30 690	3 729	21 940
1988	6 155	26 890	3 475	17 990	1 264	37 510	4 411	25 630
1989	6 960	30 000	3 629	18 560	1 247	37 450	4 566	25 780
1990	7 376	30 810	3 804	18 770	1 164	36 040	4 777	25 960
1991	7 884	30 920	4 035	18 680	1 049	33 620	4 905	26 980
1992	8 190	31 420	4 061	18 770	1 012	32 440	4 965	26 620
1993	8 735	32 900	4 257	19 297	1 012	34 896	4 967	25 524
1994	8 865	33 733	4 300	18 802	1 035	39 655	5 335	26 383

Source: Compiled on the basis of Fearnleys (Oslo), *Review*, *World Bulk Trades* and *World Bulk Fleet*, various issues.

a/ As from 1988 the source data for tankers pertain to ships above 50,000 dwt (previously 60,000 dwt). For bulk carriers the basis is now also ships above 50,000 dwt (previously 40,000 dwt). Combined carriers have been similarly amended.

b/ The residual fleet refers to all vessels included in table 9, excluding tankers, bulk carriers and combined bulk carriers of the size range indicated in footnote a/.

Table 17

Estimated productivity of tankers, bulk carriers, combined carriers and the residual fleet, 1984-1994
(Tons carried per dwt)

Year	Tons of oil carried by tankers a/ (millions)	Tons carried per dwt of tankers	Tons of dry cargo carried by bulk carriers of over 18,000 dwt (millions)	Tons carried per dwt of bulk carriers	Tons of oil and dry bulk cargo carried by combined carriers of over 18,000 dwt (millions)	Tons carried per dwt of combined carriers	Tons carried by the residual fleet b/ (millions)	Tons carried per dwt of the residual fleet
1984	1 174	4.19	566	3.18	214	5.07	1 358	7.81
1985	1 084	4.10	620	3.30	200	4.80	1 389	8.10
1986	1 140	4.76	663	3.36	195	5.48	1 420	8.52
1987	1 185	5.08	693	3.54	195	5.84	1 384	8.15
1988	1 295	5.66	610	3.16	214	6.35	1 556	9.04
1989	1 398	6.02	639	3.27	211	6.34	1 612	9.10
1990	1 427	5.96	667	3.29	203	6.28	1 680	9.13
1991	1 485	5.82	707	3.27	196	6.38	1 722	9.47
1992	1 550	5.95	709	3.28	194	6.22	1 762	9.45
1993	1 665	6.27	744	3.37	192	6.62	1 738	8.89
1994	1 667	6.34	750	3.28	188	7.20	1 870	9.25

Source: Compiled on the basis of Fearnleys (Oslo), *Review*, *World Bulk Trades* and *World Bulk Fleet*, various issues.

a/ Tankers of 50,000 dwt and above as from 1988 (previously 60,000 dwt and above).

b/ See footnote b/ to table 16.

Box 3

Reefer shipping - pendulum again swings owners' way

Following several years of exceptional growth between 1986 and 1992, years when leading reefer owners and operators enjoyed strong rates, high ship utilization and improving returns - the market took a turn for the worse. Reefer freight rates started to slide as the volumes of cargo - mainly fruit - sagged, and a flood of newly-built tonnage entered the market. But what of prospects for the future?

1993 and 1994 were poor years but the situation facing reefer operators was far from new - they experienced a similar slump in the middle of the 1980s. Then overcapacity, coupled with weak trade growth, eroded profitability and led to large trading losses. Large numbers of older, outdated reefers were eventually scrapped, the reduction in the fleet paving the way to the market's recovery in the latter half of the decade.

The rising reefer market was also underpinned by the expansion of perishable cargo trades. Between 1985 and 1990, the volumes of bananas and other fruit traded by sea rose by around 25 per cent and, led by meat, there was a sizeable increase in frozen cargo too.

Reefer operators are again looking to rising volumes, as the worlds pulls out of recession, to restore market confidence and improve on the poor trading returns of recent seasons. The more positive outlook has already brought an improvement in rates, and 1995 promises to be an even better year for owners. Refrigerated, seaborne trade is beginning to pick up again, stimulated by global economic recovery, and while it is unlikely that there will be a repeat of the large annual increases in reefer shipping volumes seen prior to 1993, positive developments are now taking place on the demand side.

Drewry forecasts that shipments by sea will increase to 39.3 million tonnes by the year 2000, a 27 per cent rise from 1991 levels. By 2005, shipping volumes are expected to reach 45.0 million tonnes, 46 per cent higher than in 1991. Drewry predicts that growth over the 1991-2005 period will average some 2.7 per cent per annum, with reefer shipping demand increasing at virtually the same rate. Global reefer trade as a whole will increase from just under 50 million tonnes to reach 63.5 million tonnes by 2005.

The other main cause of market weakness has been an oversupply of reefer shipping. The short-term prospect for supply, with a lull in newbuilding activity and increasing scrapping of over-aged ships, is for a decline in reefer fleet capacity at a time when employment prospects are gradually beginning to improve after two poor years. By 2005, the capacity of the reefer fleet is predicted to rise to 360 million cubic feet, with most of the forecast growth taking place in the categories about 400,000 cubic feet. In the smaller size ranges, the fleet shows virtually no growth. In 1995, the pendulum should again begin to swing in owners' favour, with overcapacity being trimmed back and renewed trade growth leading to a better balanced market. If this happens Drewry suggests that it would not be surprising if the improvement in rates seen in 1995 were to continue into 1996 and 1997, encouraging a continuation of fleet renewal and upgrading to full pallet/container friendliness.

Forecast growth of ship demand in major reefer trades
1991-2005 (average growth rates, percentage)

1991/2005 Trade	Increase in demand 1991/2005 (billion cubic feet miles)	Average annual growth rate (percentage per annum)
Bananas	800	1.2
Citrus fruit	755	2.9
Deciduous fruit a/	910	4.8
Exotic fruit b/	265	3.8
Meat c/	1 760	3.9
Dairy produce d/	165	2.1
Fish c/	450	2.7
Total	5 105	2.7

Source: Drewry Shipping Consultants
a/ Apples, pears and table grapes.
b/ Pineapples, kiwis and avocados.
c/ Fresh, chilled and frozen.
d/ Butter and cheese.

Source: Based on a report by Drewry Shipping Consultants, entitled "Reefer Shipping and Trades - Trends and Developments in Trade, Transport and Handling of Perishable Produce", published in *BIMCO Bulletin*, Volume 90, No. 1.95

B. Supply and demand in world shipping

36. A summary of tonnage oversupply for the 1987-1994 period is provided in table 18. The world merchant fleet in 1994 increased by 1.3 per cent over 1993. The total surplus tonnage reached 63.4 million dwt (the lowest since 1989), representing a record low of 8.8 per cent of the 1994 world merchant fleet.

37. By main vessel type, the capacity in the oil tanker sector in 1994 decreased to 282.9 million dwt (see table 19 and graph 10). A total of 39.0 million dwt or 13.8 per cent of the total world tanker fleet was in excess of the demand for global oil seaborne transport. This was a slight improvement over 1993, when 15.3 per cent of the total world tanker fleet was surplus. This relative reduction in surplus capacity is both demand and supply driven, as in 1994 tanker breakings (13.1 million dwt) exceeded newbuildings (10.2 million dwt), and tanker cargoes increased by 2.3 per cent over 1993 (see tables 1 and 30).

38. Overcapacity in the dry bulk sector further decreased in 1994 to 20.3 million dwt. This represents a substantial decline of 14.0 per cent over 1993 and accounts for 8.4 per cent of the world dry bulk fleet. This positive development can be explained mainly by improved demand generated by an increasing trade in dry bulk commodities, of 2.2 per cent in 1994 versus 0.3 per cent in 1993.

Table 18

Tonnage oversupply in the world merchant fleet, 1987-1994
(Million dwt and percentages)

	1987	1988	1989	1990	1991	1992	1993	1994
	Million dwt							
World merchant fleet (as at mid-year)	632.3	627.9	638.0	658.4	683.5 c/	694.7 c/	710.6 c/	719.8 c/
Surplus tonnage a/	101.1	83.4	62.3	63.7	64.2	71.7	72.0	63.4
Active fleet b/	531.2	544.5	575.7	594.7	619.3	623.0	638.6	656.4
	Percentages							
Surplus tonnage as a percentage of the world merchant fleet	16.0	13.3	9.8	9.7	9.4	10.3	10.1	8.8

Sources: Lloyd's Maritime Information Services Ltd. (London); *Lloyd's Shipping Economist* (London), various issues.

a/ Estimates of average year figures. Surplus tonnage is defined as tonnage that is not fully utilized due to slow steaming, lay-up status or because it is lying idle for other reasons.

b/ World fleet minus surplus tonnage.

c/ Year-end figure.

Table 19

Analysis of tonnage oversupply by main vessel type, 1987-1994 a/
(Average year figures in million dwt)

	1987	1988	1989	1990	1991	1992	1993	1994
Supply of world tanker fleet b/	255.1	250.6	253.9	266.2	273.5	283.4	284.6	282.9
Total tanker fleet surplus c/	65.8	54.7	41.0	40.9	39.8	41.8	43.5	39.0
Share of surplus fleet in the world tanker fleet (per cent)	25.8	21.8	16.2	15.4	14.6	14.8	15.3	13.8
Supply of world dry bulk fleet b/	213.8	220.6	225.4	228.7	235.0	237.3	238.6	242.6
Dry bulk fleet surplus c/	28.0	23.4	17.0	19.4	20.7	25.1	23.6	20.3
Share of surplus in the world dry bulk fleet (per cent)	13.1	10.6	7.5	8.5	8.8	10.6	9.9	8.4
Supply of world conventional general cargo fleet	65.6	64.7	63.4	63.6	63.5	63.0	62.1	61.9
Conventional general cargo fleet surplus	3.6	2.9	2.2	2.1	2.2	2.7	2.8	2.2
Share of surplus in the world conventional general cargo fleet (per cent)	5.5	4.5	3.5	3.3	3.5	4.3	4.5	3.6
Supply of world unitized fleet d/	32.9	34.4	35.8	37.5	40.3	43.0	45.7	49.8
Surplus of unitized fleet	1.7	0.8	0.8	0.5	0.4	0.7	0.7	0.5
Share of surplus in the world unitized fleet (per cent)	5.2	2.3	2.2	1.3	1.0	1.6	1.5	1.0

Source: Based on *Lloyd's Shipping Economist* (London), various issues.

a/ Aggregates for all sectors as shown in this table are averages for the years shown and therefore differ from the world figures in table 18, which indicate estimates at mid-year. Table 19 excludes tankers and dry bulk carriers of less than 10,000 dwt and conventional general cargo/unitized vessels of less than 5,000 dwt.

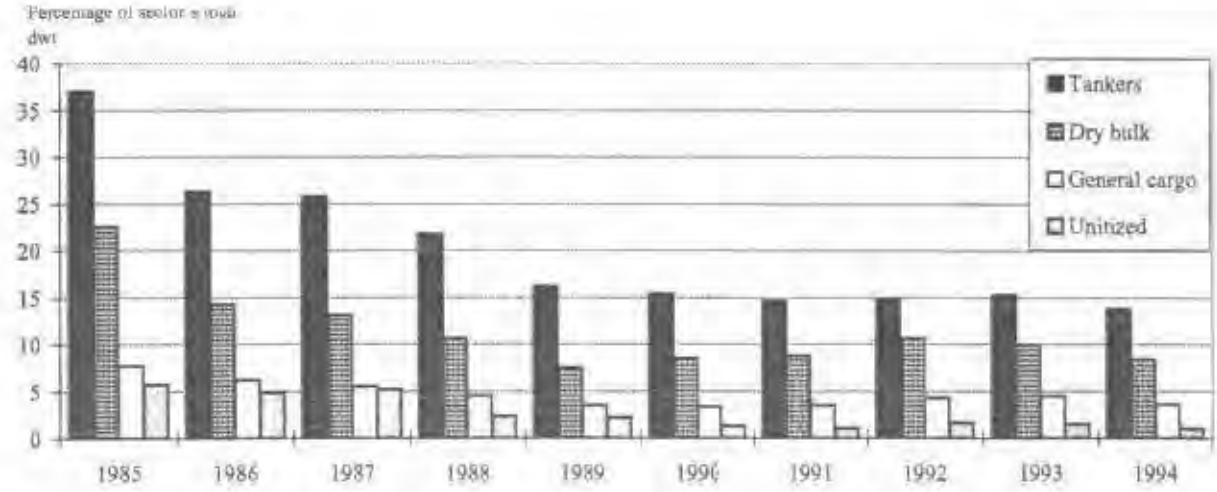
b/ Including combined ore/bulk/oil carriers on the basis of actual supply (e.g. December 1994, total of 27.5, of which 8.9 as tanker and 18.6 as dry bulker).

c/ Including 50 per cent of combined ore/bulk/oil carriers.

d/ Unitized fleet includes here fully cellular containerships, partly cellular containerships, ro-ro ships and barge carriers.

Graph 10

Trends in surplus capacity by main vessel type, 1985-1994



Source: Based on *Lloyd's Shipping Economist* (London), various issues.

39. Surplus capacity in the conventional general cargo and unitized sectors was relatively less important than in the bulk trades (liquid and dry) as shipowners concentrated more on steady shipping practices and were to a lesser extent involved in speculative operations. In 1994, the oversupply of the conventional general cargo sector substantially decreased by 21.4 per cent to 2.2 million dwt, representing 3.6 per cent of the world total conventional general cargo fleet. The unitized fleets also reduced their surplus capacity by 0.2 million dwt, which represents 1.0 per cent of the world unitized fleet and the lowest record since 1991 when the same level was attained.

40. The average amount of tanker tonnage engaged in oil storage throughout the 1994 substantially decreased to 10.05 million dwt (10.95 million dwt in 1993). In February, the tonnage for semi-permanent storage declined from the 7.0 million dwt level, and was on the downward trend through the last quarter of 1994. The tonnage for short-term storage continued to decline in the third and fourth quarters when VLCCs and ULCCs markets constantly improved (see table 20). In December 1994, the total tonnage of VLCCs and ULCCs accounted for 64.3 per cent (69.3 per cent in 1993) and 72.8 per cent (85.6 per cent in 1993) of the total tonnage for semi-permanent and short-term storage respectively.[16]

Box 4

Owners should shape up or ship out - VLCCs' supply and demand

"If only demand would pick up", cry beleaguered tanker owners as one of their number fixes a brand new ship to earn but a few thousand dollars a day to put towards his operating costs. It already has. Overall tanker demand has risen by more than 30 per cent since 1988; demand for VLCCs has risen 50 per cent over the same period. But over the same six years, overall tanker availability has grown 20 per cent and the availability of VLCCs has grown 22.5 per cent. Had availability been pegged at 1988 levels, a supply/demand balance for the tanker fleet would have been achieved in 1993. As it is, tanker supply is still tantalisingly above demand, although a balance, particularly in the larger sizes, many not be such a long way away.

Typical of the tanker market as a whole are VLCCs, felt by many to be a market-leading sector. Demand for VLCCs grew steadily by 35 per cent from 1988 to 1991, while tonnage availability grew by only 5 per cent (see table). By 1991, according to data from London-based market analysts Maritime Strategies International (MSI), demand exceeded supply. The result? VLCC earnings, which had by 1990 reached $24-28,000 a day, peaked in 1991 at $32-36,000 a day. But during that same period, there was a rush to jump on the newbuilding bandwagon while scrapping was deferred. About 125 new VLCCs have so far been delivered since 1988 while fewer than 60 have been scrapped.

Supply/demand
(in million dwt)

Tankers		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
10-80,000	S	62.3	62.7	64.7	65.0	65.5	64.5	64.6	64.7	65.1	66.3	68.3
	D	45.6	49.4	50.1	45.9	45.9	47.8	50.1	50.1	50.0	49.5	49.4
80-150,000	S	59.3	60.4	65.8	69.1	76.5	77.6	78.6	80.4	82.0	84.1	86.4
	D	53.5	50.4	55.0	57.5	59.6	65.5	66.8	69.3	71.2	72.9	73.8
VLCC	S	109.5	114.5	117.8	115.6	124.8	130.3	134.1	136.5	139.2	142.7	146.5
	D	88.2	99.9	104.2	119.7	119.9	119.0	130.3	132.1	127.2	141.7	142.7
Total	S	231.1	237.6	248.3	249.7	266.8	272.4	277.3	281.6	286.3	293.1	301.2
	D	187.3	199.7	209.3	223.1	225.4	232.3	247.2	251.5	258.4	264.1	265.9

Source: Maritime Strategies International.

The decline of the spot and the time charter markets in 1992 also saw tanker scrapping leap to 9.9 million dwt from just 2.1 million dwt in 1991. 1993 was even more active for demolition with 10.7 million dwt removed from the market, according to Clarkson Research Studies (CRS), World Shipyard Monitor. This is what the tanker fleet really needs to have any hope of matching supply to demand. The 4.5 million dwt of tankers sold for scrap in the first five months of this year, according to CRS, backs CRS' actual forecast for 11 million dwt of tanker scrapping 1994. But it forecasts only 8.2 million dwt for 1995.

These figures are, unfortunately, more than counterbalanced by newbuilding deliveries. The 13.6 million dwt scheduled for 1994 delivery is still nearly 2.6 million dwt more than forecast scrappings. In the same way the 11 million dwt of newbuilding tankers scheduled for 1995 is still 2.8 million dwt above forecast scrappings.

The beginning of an economic turnaround, particularly in Western Europe and (marginally) in Japan, will generate a 6 per cent improvement in tanker demand, calculates MSI. But because recovery is concentrated in countries that are significant users of VLCCs, this size derives particular benefit with demand forecast to rise 10 per cent this year (see table).

Box 4 (continued)

So what are the owners doing as this new age dawns? Reeling around the market place, hanging onto one lamppost after another, according to one of London-based broker E.A. Gibson's inimitable market reports. The reality is that supply and demand are nearer balance than they have been for some time. So what is causing rates to stagnate?

Once again isolating the VLCC market as an example, the tendency is to heap the blame on the charterer for employing increasingly tough negotiating tactics when they have the upper hand already. But many owners do admit to a major part of the problem lying in their own camp. Owners don't know their own market well enough, cry some, and, ignorant of the precise number and quality of their competition, often end up shooting themselves in the foot. There is also intense pressure on the owners of modern tonnage not to sit idle: pressure from the banks and pressure that comes from the fear of being ridiculed by one's peers for having a spot, unemployed $90 million newbuilding. This results in the initial bravado of everyone offering around WS 40 followed by an undignified rush to grab as much as above WS 30 as one can get without losing the business. "There's no market any more," said one major player. "It's more of a walkover."

Yet, regular as clockwork, we see roughly 20 ships a week fix out of the Gulf and five ships a week elsewhere. Availability is usually between 100 and 110 ships a month. The surplus is small, yet rates are at rock bottom. Why?

An Intertanko Council member believes that as long as tonnage supply is greater than cargo demand, rates will tend to drift down to a level that covers owners' direct operating costs with a small contribution towards interest and capital. It needs a shortage in supply, he believes, for the rate structure to change dramatically.

Would removing substandard ships be enough to restore market balance, he asked during Intertanko's Washington meetings? A major's president replied that he estimated the surplus in early 1994 to be no more than 40-50 VLCCs out of a fleet of some 450 ships. Taking the current 33 per cent failure rate for oil company vetting, he continued, gives nearly 150 substandard ships. The message is that some substandard ships are needed and will be chartered, even if not by the oil companies. Without them, the market would experience a severe shortage of tonnage. With them, rates are going to remain depressed.

In a situation where even substantial increases in demand have proved insufficient to balance the market, disposing of the poorest quality units is still the only answer. Simply waiting for operators to decide to scrap inefficient or substandard ships has proved ineffective – the market goes up and scrapping grinds to a halt. Strong arm tactics are clearly required. USCG targeting, enhanced class surveys and requirements for stringent hull assessment survey certificates are all now beginning to force owners to "shape up or ship out."

Source: *Seatrade Review* (London), July 1994.

Table 20

Tanker tonnage engaged in oil storage, 1983-1994
(Capacity in thousand dwt)

Date	Semi-permanent		Short-term		Total	
	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt
January 1983	51	11 135	16	2 615	67	13 750
July 1983	53	11 837	14	1 764	67	13 601
January 1984	49	9 737	25	4 658	74	14 395
July 1984	43	9 601	48	11 134	91	20 735
January 1985	30	6 384	49	12 093	79	18 477
July 1985	38	8 342	38	9 714	76	18 056
January 1986	43	7 514	35	8 353	78	15 867
July 1986	40	6 696	33	9 196	73	15 892
January 1987	41	7 148	45	12 879	86	20 027
July 1987	39	7 012	28	7 917	67	14 929
January 1988	40	6 837	30	9 394	70	16 231
July 1988	37	6 553	29	7 636	66	14 189
January 1989	35	6 123	20	4 783	55	10 906
July 1989	35	6 123	19	5 125	54	11 248
January 1990	37	6 234	16	4 162	53	10 396
July 1990	34	5 784	20	5 618	54	11 402
December 1990	33	5 929	27	6 720	60	12 649
July 1991	34	6 081	52	11 499	86	17 580
December 1991	34	6 291	22	4 553	56	10 844
July 1992	36	6 425	25	5 734	61	12 159
December 1992	34	6 299	16	2 886	50	9 185
July 1993	41	6 745	26	5 368	67	12 113
December 1993	39	7 019	20	3 582	59	10 601
January 1994	39	7 107	20	3 610	59	10 717
February 1994	38	6 718	21	3 800	59	10 518
March 1994	40	6 911	20	3 532	60	10 443
April 1994	40	6 911	21	3 740	61	10 651
May 1994	39	6 859	21	3 887	60	10 746
June 1994	39	6 832	22	3 847	61	10 679
July 1994	38	6 717	22	3 711	60	10 428
August 1994	35	6 130	23	3 379	58	9 509
September 1994	35	6 292	21	3 150	56	9 442
October 1994	36	6 441	20	2 795	56	9 236
November 1994	35	6 308	17	2 389	52	8 697
December 1994	36	6 461	19	3 047	55	9 508

Source: John I. Jacobs plc, *World Tanker Fleet Review* (London), various issues.

Box 5

Two experts say oil trade changes may spell end for supertankers

Supertankers may become as extinct as dinosaurs as oil distribution patterns change and freight rates remain at unprofitable levels. Two shipping experts predicted that very-large and ultra-large crude carriers, which have dominated the oil shipping markets for the past 20 years, would disappear in the near future. The US Oil Pollution Act marked the end of the era when biggest was best, said a former shipbroker and chartering manager.

Shipowners who order double-hull very-large crude carriers (VLCCs) in order to meet new US and international safety standards are never likely to see a return on their investment, he said.

Demand for these huge ships will decline as more oil is transported by pipeline and as new oil fields are developed closer to the main consuming markets, he said. For example, by next year Norway will be the second-largest oil exporter in the world after Saudi Arabia, he told delegates attending the Ship Repair and Conversion conference.

Countries around the Black Sea are developing their oil industries and are likely to build more pipelines to reach West European markets. And Latin American producers such as Mexico, on the doorstep of the United States, also are expanding output.

Demand for ultra-large crude carriers (ULCCs), which are tankers in excess of 300,000 deadweight tons, already accounts for only a very small share of oil shipments from the Middle East.

As distances between the producers and consumers shrink, so demand for VLCCs - typically between 200,000 dwt and 300,000 dwt - will be replaced by increasing use of smaller 1 million barrel ships of 130,000 dwt to 150,000 dwt, he said.

Summing up the future of the supertanker, he said: "There isn't one." "The next 15 years will see the end of the ULCC market and the twilight of the VLCC market," he said. His views are shared by the former chairman of the Baltic Exchange, who described ULCCs and VLCCs as "ships of the past".

These ships were first built in the late 1960s and enjoyed a huge newbuilding boom in the 1970s. The world VLCC fleet stands at about 462 units of 128 million dwt, two-thirds of which were built in the 1970s. The former chairman also cast doubt on the future of combined carriers, which can carry both wet and dry cargoes. Most of these vessels are old, with very few built in recent years, and he said they were expensive to run and not particularly popular in either the oil or dry-bulk cargo trades. In addition, he said maritime safety would be enhanced if shipowners ordered purpose-built iron-ore carriers. Many large bulk carriers loaded with iron-ore have sunk in recent years, killing hundreds of seafarers. Dedicated ore carriers built to much stronger specifications would be more expensive but would safe lives, he said.

On prospects for large tankers, the former chartering manager said VLCCs would still be used to ship oil from the Middle East to Asia and in the West African and North Sea trades. But operators in these markets also are investing in more double-hull 1 million barrel tankers, he said.

He also said that the first generation of double-hull VLCCs, costing more than $100 million, had so many design faults that "some may not last even 10 years". And yet these units need to earn approximately $40,000 a day over 15 years to break even. Spot market freight rates for modern VLCCs are currently about $17,500 a day.

Source: *Journal of Commerce*, 9 November 1994.

Chapter IV

SHIPBUILDING, SECOND-HAND MARKET AND DEMOLITION

This chapter reviews the supply of tonnage in the world shipping industry, covering newbuilding orders, prices and deliveries and tonnage on order. It also reviews markets for second-hand tonnage of major sectors and ship demolition.

A. Newbuilding orders

41. It is generally argued that existing global capacity of main types of vessel would be sufficient to accommodate the anticipated increase in demand. Nevertheless, in 1994 the shipbuilding industries experienced very substantial contracting deals and overall newbuilding contracts for main types of vessels practically remained at the relatively high levels of 1993 (see table 21). In 1994 as in previous years, shipbuilding activities in terms of deadweight were mainly concentrated on tankers and dry bulk carriers, both accounting for 32.9 per cent and 47.3 per cent respectively of total tonnage of the main types (40.3 per cent and 42.5 per cent respectively in 1993). The reduction in tanker orders in 1994, as compared to 1993, forecasts a gloomy future for the freight market, and reflects the consequences of a boost in orders in early 1993 in the wake of the entry into force on 7 July 1993 of IMO double-hull regulations, and the uncertain perspective of the Certificate of Financial Responsibility (COFR).[17] Conversely, for dry bulk carriers the healthy state of the dry bulk market in 1994 kept the ordering activity at high levels throughout the year. New orders for containerships increased in 1994 for the third consecutive year, not only for replacement of older inefficient vessels but also for further developments of containerization in the global general cargo trades.

42. As compared to 1993, the overall orders of tankers decreased in most segments except for product carriers. More than 40 product carriers were ordered in 1994, doubling the 1993 contracts, attributed mainly to the improved freight markets and second-hand values for this type of vessel. A total of 339 bulk carriers with the deadweight aggregating 19.9 million tons were ordered in 1994, compared to 299 vessels with 18.3 million deadweight in the previous year. Orders for Capesize vessels grew the most to 58 vessels from 33 vessels in 1993, while Panamax bulk carriers dropped to 46 vessels from 67 vessels in 1993. Handy-size bulk carriers were again in focus in 1994, with new orders up to 151 vessels from 107 vessels in 1993. Containership newbuilding orders increased by 28.5 per cent in deadweight in 1994; conversely, general cargo vessels fell drastically by 28.9 per cent, affecting the ongoing structural change in general cargo trades. As regards newbuilding orders of other segments in 1994 a considerable number of large high-speed ferries was placed on order while the orders for sizeable conventional car/passenger ferries were few, partly because of an uncertainty over the development of future rules and regulations in addition to those developed through IMO. A total of eight cruise vessels aggregating 577,000 grt was placed on order in 1994 compared to 10 vessels of 689,500 grt in 1993.[18]

B. Ship prices

43. Newbuilding prices for tankers, dry bulk carriers and large containerships decreased early 1994 and remained unchanged since the second quarter through to the end of 1994, despite high-level newbuilding orders being kept during the period (see table 22). These drops in prices are considered to have been triggered mainly by the intensified competition between Japan and the Republic of Korea, when Japan, despite the yen appreciation, secured more orders than the Republic of Korea, which had topped the list of world orders in 1993. When Korean yards proposed a markdown in prices of 5 to 10 per cent, securing orders for their new facilities, which had boosted their capacity by as much as 50 per cent or equivalent to about 15 per cent of world capacity, Japanese yards followed on a selective basis, together with support measures for domestic orders.[19] Prices of 125,000-cubic metre LNG carriers increased to the second highest level since 1991, reflecting expanding LNG exploration.

C. Delivery of newbuildings

44. As shown in table 23, the total newbuildings delivered in 1994 reached 1,430 vessels, aggregating 18.8 million grt. This represents a 20.0 per cent decline in the number of vessels and a 5.6 per cent decrease in gross registered tons (grt) over 1993. Bulk carriers significantly increased in 1994 by 51.6 per cent over 1993 to 6.5 million grt. Conversely, oil tankers dramatically plummeted by 44.0 per cent over 1993 to 5.5 million grt.

Table 21

Newbuilding contracts placed for the main types of ship a/ during 1990-1994
(Number of ships, thousands of dwt)

Year	Tankers		Bulk carriers		Combined carriers		General cargo ships		Container vessels		Passenger/ferries		Total b/	
	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt
1990	338	25 876	93	3 640	24	2 726	310	2 090	124	3 073	93	119	982	37 524
1991	308	19 872	148	11 836	4	322	167	877	66	1 796	84	90	777	34 793
1992	206	10 050	126	7 261	0	0	225	1 402	127	3 227	114	91	798	22 031
1993	267	17 327	299	18 303	1	83	261	2 102	182	5 057	122	163	1 132	43 035
1994														
January	32	2 730	21	1 185	-	-	25	178	24	654	14	36	116	4 783
February	8	426	12	557	-	-	22	171	18	505	6	12	66	1 671
March	34	682	32	1 762	-	-	9	49	26	802	7	2	108	3 297
April	22	1 075	37	2 300			17	95	13	358	13	19	102	3 847
May	8	1 146	23	1 160	-	-	11	67	16	377	12	13	70	2 763
June	16	764	24	1 799	-	-	13	49	13	480	8	4	74	3 096
July	27	673	33	1 612	-	-	35	164	21	314	6	16	122	2 779
August	21	885	18	1 767	-	-	9	59	35	1 076	12	15	95	3 802
September	21	1 638	22	717	-	-	10	164	12	196	15	1	80	2 716
October	34	947	33	2 061	-	-	37	265	14	327	10	22	128	3 622
November	18	2 365	53	2 544	2	220	20	129	18	284	3	1	114	5 543
December	15	502	31	2 432	-	-	19	103	32	1 124	12	18	109	4 179
Total 1994	256	13 833	339	19 896	2	220	227	1 493	242	6 497	118	159	1 184	42 098

Source: Institute of Shipping Economics and Logistics (Bremen), 1994, No. 1/2.

a/ Ships of 300 grt and over.

b/ Total does not include the data on newbuilding contracts for other types of ship.

Table 22

Representative newbuilding prices, 1980, 1985 and 1990-1994
(Millions of dollars)

Type and size of vessel	1980	1985	1990	1991	1992	1993	1994	Percentage change 1993/1994
30 000 dwt bulk	17	11	24	24	24	21	20	-4.8
32 000 dwt tanker	19	18	29	30	30	29	28	-3.5
70 000 dwt bulk	24	14	32	32	30	28	27	-3.6
80 000 dwt tanker	28	22	42	43	42	41	42	2.4
120 000 dwt bulk	32	27	45	47	44	41	40	-2.4
250 000 dwt tanker	75	47	90	95	86	84	82	-2.4
125 000 m^3 LNG	200	200	225	260	237	243	255	4.9
75 000 m^3 LPG	77	44	78	83	80	75	70	-6.7
1 200 TEU ro-ro	44	28	36	38	40	41	42	2.4
15 000 dwt general cargo ship	14	12	24	24	24	22	21	-4.6
2 500 TEU full containership	..	26	52	58	59	48	41	-14.6

Source: *Lloyd's Shipping Economist* (London), various issues.

Table 23

Distribution of deliveries of newbuildings by principal types of ship, 1993-1994 a/
(Number of ships, thousands of grt)

Ship type	1993		1994	
	No.	Thousand grt	No.	Thousand grt
Oil tankers	278	9 760 *49.0*	185	5 470 *29.1*
Bulk carriers	101	4 261 *21.4*	194	6 459 *34.4*
General cargo	441	1 520 *7.6*	324	1 627 *8.7*
Containerships	93	2 048 *10.3*	142	3 128 *16.6*
Other ships	875	2 324 *11.7*	585	2 116 *11.3*
World total	1 788	19 913 *100.0*	1 430	18 800 *100.0*

Source: Lloyd's Maritime Information Services Ltd. (London).

a/ Percentage shares of the world total are in italics.

Activities in the liner sector were more concentrated on unitized cargo fleets. Deliveries of containership tonnage tremendously increased by 52.7 per cent over 1993, both in the number and grt of vessels, while general cargo tonnage slightly increased by 7.0 per cent over 1993, with the total number of vessels decreasing by 26.5 per cent over 1993.

45. Distribution of deliveries of newbuildings by groups of shipbuilding countries are indicated in table 24. The world total deliveries of newbuildings decreased in 1994 by 9.6 per cent from the previous year to 17.91 million grt, with all the country groups, except Central and Eastern Europe, having experienced less deliveries. Shipyards of developed market-economy countries kept the same share in the total delivery of newbuildings in 1994 as in the previous year. However actual tonnage delivered in 1994 decreased by 9.8 per cent to 11.41 million grt of which 8.39 million grt were delivered by Japanese shipyards. Although the share of developing countries' yards in the total newbuildings delivered in 1994 marginally increased by 0.7 percentage points over 1993, the actual tonnage of newbuildings decreased in 1994 by 7.2 per cent over 1993 to 4.61 million grt of which 3.98 million grt were delivered by the Republic of Korea, which however registered a decline of 8.8 per cent over the previous year. Conversely, the countries of Central and Eastern Europe marked a substantial relative increase of 34.4 per cent to 821 million grt in 1994, of which 557 million grt were produced by Poland, accounting for 47.4 per cent of the country group's total.

Table 24

Distribution of deliveries of newbuildings by groups of countries of build, 1993-1994 a/ b/
(Thousands of grt)

Country grouping	1993	1994
Developed market-economy countries	12 656 *63.9*	11 410 *63.7*
Developing countries	4 969 *25.1*	4 611 *25.8*
of which: Africa	2 *0.0*	7 *0.0*
America	330 *1.7*	261 *1.5*
Asia	4 522 *22.8*	4 058 *22.7*
Others	115 *0.6*	285 *1.6*
Countries of Central and Eastern Europe	611 *3.1*	821 *4.6*
Socialist countries of Asia	644 *3.3*	468 *2.6*
Other, unallocated	931 *4.7*	598 *3.3*
World total	19 811 *100.0*	17 908 *100.0*

Source: Compiled by the UNCTAD secretariat on the basis of data contained in Lloyd's Register of Shipping: Merchant shipbuilding returns, quarterly issues of the respective years.

a/ Percentage shares of the world total are in italics.

b/ General cargo ships of 2,000 gross tons and over. This table is not fully comparable with table 23, which lists ships of 100 grt and over.

D. Tonnage on order

46. The world tonnage on order is indicated in table 25. Since the end of 1993 the world order book was moderately on the upswing through the end of 1994. Orders for oil tanker tonnage had been stabilized at a relatively low level since the middle of 1993 when IMO double-hull regulations came into force. On the other hand, continuous orders in 1994 for dry bulkers, with Capesize and handy-size tonnages in focus, maintained the order book for dry bulk carriers at a favourable level through to the end of the year when a record high of 28.8 million dwt was on the book. In the sector of other ships, the upsurge of new orders in 1994 for containerships and large high-speed ferries kept the backlog at a comparatively higher level throughout 1994.

47. Table 26 reflects world tonnage on order by countries of registry and by principal types of vessel. World total tonnage on order at the end of 1994 reached 67.7 million dwt, increasing by nearly 20 per cent from the volume at the end of the previous year. Tonnage on order by developed market-economy countries amounted to 17.3 million dwt, representing 25.5 per cent of the world total tonnage on order as compared to 29.7 per cent in 1993. Major open-registry countries represented 56.8 per cent with 38.4 million dwt on order, which substantially increased from 30.3 million dwt (53.7 per cent) in 1993. The 1994 combined tonnage of the two country groups accounted for 82.3 per cent, which was slightly less than 83.4 per cent in the previous year. Developing countries stood at 8.7 per cent of the world total tonnage on order in 1994, moderately decreasing from 8.9 per cent in 1993. This small decline was primarily because the countries in Asia failed to raise their share from 6.6 per cent in 1993 (6.6 per cent in 1994). The share of countries of Central and Eastern Europe very marginally moved to 2.4 per cent in 1994 (2.3 per cent in 1993). On the other hand, the socialist countries of Asia decreased their share to 3.3 per cent in 1994 from 3.6 per cent in the previous year.

48. By principal types of vessel, the 1994 combined share of developed market-economy countries and major open-registry countries in the orders for oil tankers, dry bulk carriers and containerships decreased to 86.0 per cent, 84.0 per cent and 71.7 per cent, respectively (86.4, 85.6 and 76.2 per cent respectively in 1993). Conversely, their share in the 1994 order book for general cargo ships increased to 65.1 per cent from 62.0 per cent in 1993. In all the sectors of principal types of vessel, developed market-economy countries reduced their share in 1994 from the level of the previous year, while open-registry countries raised their proportion in all sectors except oil tankers.

49. The developing countries' share of tonnage on order rose in 1994 for oil tankers and general cargo ships to 9.7 per cent and 10.4 per cent respectively (7.3 per cent and 8.9 per cent respectively in 1993), whereas their share of dry bulk carriers and containerships declined to 5.9 per cent and 13.3 per cent, respectively (7.2 and 16.1 per cent in 1993). Asian developing countries were the source of nearly three quarters of the group's total tonnage on order. Their share in oil tankers, general cargo ships and containerships rose to 6.0 per cent, 7.0 per cent and 12.6 per cent, respectively, but that in dry bulk carriers plummeted to 4.5 per cent from 5.1 per cent in the 1993 order book. The socialist countries of Asia decreased their share in oil tankers, general cargo ships and containerships in 1994 to 1.4 per cent (2.6 per cent in 1993), 2.6 per cent (3.5 per cent in 1993) and 5.3 per cent (5.7 per cent in 1993).

E. Sales and purchases of second-hand tonnage

50. As indicated in table 27, prices for second-hand tonnage remained static in 1994 for most types of tonnage as compared to 1993. While newbuilding prices for tankers began to decrease since the second quarter of 1994 despite high level newbuilding orders, most of the modern well-maintained second-hand tonnage offered for sale continued to be relatively highly priced in 1994. In these circumstances, many owners opted for newbuildings rather than second-hand units. Specifically among them, Greek owners, previously known as buyers of older tonnage, changed their attitude somewhat to become more active contenders in the newbuilding market. In the 1994 market for second-hand dry bulk carriers, a moderate increase in values for modern tonnage was observed. The rise in values seems mainly attributed to the booming dry-cargo freight markets in the second half of the year and fairly bright short- to medium-term prospects.

Table 25

World tonnage on order at the end of each quarter, 1992, 1993 and 1994
(Millions of dwt and percentage change a/)

Tonnage on order as at	All ships in millions of dwt	Percentage change	Tankers in millions of dwt	Percentage change	Dry bulk carriers in millions of dwt	Percentage change	Other ships in millions of dwt	Percentage change
31 March 1992	64.8		36.0		16.4		12.4	
		-3.6		-4.7		0.0		-4.8
30 June 1992	62.5		34.3		16.4		11.8	
		-4.6		-6.4		-4.9		0.9
30 September 1992	59.6		32.1		15.6		11.9	
		-6.0		-10.0		0.6		-4.2
31 December 1992	56.0		28.9		15.7		11.4	
		-12.1		-17.0		-7.6		-6.1
31 March 1993	49.2		24.0		14.5		10.7	
		3.9		-0.4		11.0		3.7
30 June 1993	51.1		23.9		16.1		11.1	
		8.2		2.1		16.8		9.0
30 September 1993	55.3		24.4		18.8		12.1	
		2.2		-5.7		11.2		4.1
31 December 1993	56.5		23.0		20.9		12.6	
		18.6		6.5		32.5		17.5
31 March 1994	67.0		24.5		27.7		14.8	
		-10.3		-7.4		-11.9		-12.8
30 June 1994	60.1		22.7		24.4		12.9	
		3.2		1.3		2.5		8.5
30 September 1994	62.0		23.0		25.0		14.0	
		9.2		2.6		15.2		9.3
31 December 1994	67.7		23.6		28.8		15.3	

Source: Lloyd's Maritime Information Services Ltd. (London).

a/ Percentages have been calculated on the basis of the exact net deadweight tonnages (before rounding).

Table 26

World tonnage on order as at the end of 1994
(Thousands of dwt)

Countries of registry	All ships	Oil tankers	Bulk carriers	General cargo	Container ships	Other ships
World total	67 708	23 612	28 793	3 041	7 617	4 645
Developed market-economy countries	17 270	4 867	6 985	960	2 501	1 958
Major open-registry countries a/	38 434	15 443	17 197	1 020	2 960	1 814
Subtotal	55 704	20 310	24 182	1 980	5 461	3 772
Countries of Central and Eastern Europe	1 641	396	441	564	-	239
Socialist countries of Asia	2 247	339	1 412	78	404	15
Developing countries, total	5 914	2 283	1 708	317	1 012	593
of which in:						
Africa	69	-	64	-	-	5
America	1 312	866	268	105	50	23
Asia	4 446	1 417	1 289	212	962	565
Europe	87	-	87	-	-	-
Oceania	-	-	-	-	-	-
Unallocated	2 202	284	1 050	102	740	26

Source: Lloyd's Maritime Information Services Ltd. (London).

a/ Including Malta and Vanuatu.

Table 27

Second-hand prices for five-year-old vessels, 1988-1994
(as at end of year)
(Millions of dollars)

Vessels	1988	1989	1990	1991	1992	1993	1994	Percentage change 1993/1994
30 000 dwt tanker	16.0	20.0	21.5	20.0	14.5	18.0	18.0	0.0
80 000 dwt tanker	22.0	34.0	34.0	32.0	22.0	31.0	30.0	-3.2
130 000 dwt tanker	28.0	40.0	37.0	36.0	29.0	34.5	34.0	-1.5
27 000 dwt dry bulk carrier	11.0	14.0	11.0	13.5	12.5	14.0	15.0	7.1
60 000 dwt dry bulk carrier	17.0	21.5	18.5	23.0	18.0	18.5	19.5	5.4
120 000 dwt dry bulk carrier	27.5	32.0	28.0	37.0	28.0	28.0	28.5	1.8

Source: Fearnleys (Oslo), *Review 1993*.

51. Table 28 reflects 1994 monthly fluctuations of sales and purchase of second-hand tankers, dry bulk carriers and combination carriers. In the tanker sector, reflecting chronically depressed global charter market and gloomy short-term prospects, as well as a drop in the newbuilding prices for tankers, the total deadweight tonnage of the tankers transacted in 1994 plummeted by as much as 52 per cent from that in 1993 when the increasing charter interests in good-quality modern tonnage significantly influenced the entire second-hand market. ULCCs and VLCCs were predominant in the second-hand markets throughout the year (42 per cent of total sold tankers in dwt) with 18 vessels aggregating 4.8 million dwt sold as compared to 37 vessels totalling 10.3 million dwt in the previous year. Forty-five medium tankers were traded in the market (nearly 70 vessels in 1993) and 9 small crude tankers were sold. Forty-four handy-size product carriers changed hands during the year as compared to 65 vessels in 1993.[20] For second-hand dry bulk carriers, the year started at a slow pace with low activity. This continued until May, when a definite upturn came about in the market activity. The market was stable in the second half of the year, specifically from the middle of the third quarter, as a result of a remarkable improvement in freight rates. The total tonnage of dry bulk carriers transacted in 1994 was below the 1993 level by a margin of 6.4 per cent. Handy-size and handy-max vessels dominated the second-hand markets for dry bulkers (55 per cent of the total). Indian buyers were keen and also the Turkish market showed much interest in this segment. Owners from the Republic of Korea emerged as aggressive buyers, as restrictions for second-hand acquisitions were lifted and competitive local finance became available. Conversely, the Chinese who stimulated 1993 handy-size and handy-max market were rather inactive as a result of restricted governmental funding.[21]

F. Demolition of ships

52. Values of older second-hand vessels were under pressure and newbuilding prices for tankers and dry bulk carriers decreased since the second quarter through the end of 1994. Reflecting such circumstances, the total volume sold for demolition in 1994 increased by 23.1 per cent to 304 vessels (20.8 million dwt) from 325 vessels (16.9 million dwt) in 1993 (see tables 29 and 30). The average age of ships sold for scrapping slightly increased for all ship types except for tankers, the average age of which very marginally declined to 24.6 years, the lowest level since 1988. Comparative trends for the 1986-1994 period are given in table 31.

53. Total tankers sold for demolition showed a substantial increase of 23 per cent in terms of deadweight from 112 vessels of 10.7 million dwt in 1993 to 89 vessels aggregating 13.1 million dwt in 1994. The average size remarkably increased from 95,500 dwt to 147,200 dwt, reflecting larger-scale scrapping of VLCCs, of which 36 were sold in 1994 as against 24 in 1993. Thirteen Suezmax tankers were sold in 1994 as against 16 in 1993. In the size range 50,000-100,000 dwt, the number of tankers sold decreased to 15 in 1994 as against 19 in 1993, and in the size group 10,000-50,000 dwt, only 25 tankers were scrapped in 1994 as against 53 in 1993. In the demolition markets for dry bulk carriers and combined carriers, 87 vessels of 6.4 million dwt were broken up, a 36 per cent increase from the 1993 total of 4.7 million dwt. Of these sales, 26 were within the segment of over 100,000 dwt as against 20 in 1993, and 22 were in the size range 50,000-100,000 dwt as compared to 11 vessels in 1992. For bulk carriers of 10,000-50,000 dwt, there was an increase from 36 to 39 vessels.[22]

54. In 1994, demolition markets showed a substantial shift in the geographic distribution of scrapping activities. While China had obtained just over half of the tonnage in 1993 (8.6 million dwt), their share dropped to only 16 per cent in 1994 (3.3 million dwt). Conversely, India emerged as the largest buyer of tonnage for demolition with the tonnage doubling from 2.9 million dwt to 5.7 million dwt. Similarly, Pakistan and Bangladesh recorded large increases from 1.7 million dwt and 2.6 million dwt to 5.4 million dwt and 4.6 million dwt, respectively. The tonnage of these four countries accounted for more than 90 per cent of the total sales for demolition. European breakers were very modest in 1994.[23] China's demand for scrap steel was hampered in 1994 mainly by financial restrictions and a glut of steel products on the domestic markets. On the other hand, the breakers in India expanded scrapping facilities and drove prices up by competing vigorously with firms in Pakistan and Bangladesh.[24] Such shifts in the geographical distribution is observed in the price fluctuations as indicated in table 32. The annual average price in the Far East decreased by 1.8 per cent to $US 151 per ldt. Conversely, in the Pakistan/India market, the price increased by as much as 7.6 per cent to US$ 171 per ldt. The Southern European market fell by 3.3 per cent to US$ 85 per ldt. Another important factor affecting the price fluctuations is what is obtainable for VLCCs. The price for VLCCs in the India/Pakistan range started off at US$ 155 per ldt. The intensified competition raised the price levels towards US$ 170 per ldt during the spring, further to US$ 180 per ldt in October and kept it at a high level for the remainder of the year.[25]

Table 28

Development of sales and purchases of second-hand bulkers in 1994
(Thousand dwt)

Type	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total 1994	Total 1993	Percentage change 1993/1994
Tankers	602	1 003	866	729	874	511	1 288	1 573	1 472	1 172	1 023	483	11 596	23 943	-51.6
Dry bulk carriers	468	696	951	1 913	903	1 234	1 135	1 954	1 777	1 756	1 640	1 342	15 769	16 849	-6.4
Combi	188	-	104	-	78	139	-	139	122	260	-	679	1 709	1 835	-6.9
Total	1 258	1 699	1 921	2 642	1 855	1 884	2 423	3 666	3 371	3 188	2 663	2 504	29 074	42 627	-31.8

Source: Drewry Shipping Consultants Ltd. (London), *Shipping Statistics and Economics*, 1994, various issues.

Table 29

Broken-up tonnage trends, 1986, 1987-1994

Broken-up tonnage	1980	1987	1988	1989	1990	1991	1992	1993	1994
Tonnage sold for breaking (million dwt)	10.0	16.3	5.7	3.3	3.3	4.7	19.0	16.9	20.8
Share of broken-up tonnage in the total world fleet (percentage)	1.5	2.6	0.9	0.5	0.5	0.7	2.7	2.4	2.9

Source: Fearnleys (Oslo), *Review*, various issues.

Table 30

Tonnage reported sold for breaking by types of vessel, 1989-1994
(Thousand dwt and percentage shares)

Types of vessel	Thousand dwt						Percentages					
	1989	1990	1991	1992	1993	1994	1989	1990	1991	1992	1993	1994
Tankers	1 567	1 000	2 714	11 561	10 665	13 102	48.1	29.9	57.3	60.9	63.3	63.1
Combined carriers	108	378	426	1 580	2 040	2 558	3.3	11.3	9.0	8.3	12.1	12.3
Dry bulk carriers	510	649	728	4 141	2 645	3 829	15.6	19.4	15.4	21.8	15.7	18.4
Other dry cargo ships	1 076	1 317	870	1 693	1 502	1 282	33.0	39.4	18.4	8.9	8.9	6.2
Total	3 261	3 344	4 738	18 975	16 852	20 772	100.0	100.0	100.0	100.0	100.0	100.0

Source: Fearnleys (Oslo), *Review*, various issues.

Table 31

Average age of broken-up ships by type during 1986-1994 a/
(years)

Year	Tankers	Dry bulk carriers	Containerships	General cargo ships
1986	21.3	19.4	21.7	23.6
1987	24.4	19.8	24.9	23.8
1988	24.6	22.4	25.1	24.2
1989	24.9	23.1	27.2	25.5
1990	26.4	21.7	19.5	25.1
1991	25.3	22.0	19.0	24.8
1992	25.8	22.9	19.1	25.7
1993	24.7	24.0	22.9	26.4
1994	24.6	24.1	24.0	27.1

Source: Institute of Shipping Economics and Logistics (Bremen), *Shipping Statistics*, 1995, No. 1/2.

a/ Ships of 300 grt and over.

Table 32

Demolition prices in 1992-1994
(Dollars per ldt)

Month	Market								
	Far East			Pakistan/India			Southern Europe		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
January	155.0	145.0	147.5	180.0	150.0	175.0	82.5	80.0	95.0
February	160.0	145.0	150.0	172.5	145.0	170.0	77.5	80.0	95.0
March	155.0	157.5	155.0	175.0	157.5	165.0	80.0	80.0	95.0
April	150.0	160.0	155.0	157.5	162.5	170.0	80.0	90.0	95.0
May	140.0	160.0	160.0	150.0	162.5	180.0	80.0	90.0	95.0
June	140.0	160.0	155.0	142.5	162.5	170.0	80.0	90.0	75.0
July	140.0	147.5	147.5	152.5	157.5	165.0	80.0	90.0	75.0
August	140.0	147.5	147.5	150.0	157.5	170.0	80.0	90.0	75.0
September	142.5	147.5	147.5	150.0	165.0	170.0	80.0	90.0	75.0
October	142.5	155.0	147.5	150.0	165.0	170.0	80.0	90.0	80.0
November	142.5	160.0	147.5	137.5	157.5	167.5	80.0	90.0	80.0
December	142.5	155.0	147.5	150.0	162.6	177.5	80.0	90.0	80.0
Annual average	145.8	153.3	150.6	155.6	158.8	170.8	80.0	87.5	84.6
Annual average change (%)	-7.0	5.1	-1.8	-7.7	2.1	7.6	-5.9	9.4	-3.3

Source: Institute of Shipping Logistics (Bremen), *Shipping Statistics*, various issues.

Chapter V

PORT DEVELOPMENT

This chapter covers recent developments in container port traffic for developing countries, institutional change in ports, the development of port marketing in ports and some technical innovations in container terminals.

A. Container port traffic

55. Table 33 gives the latest available figures on container port traffic in developing countries and territories for 1993. The world rate of growth of container port throughput in 1993 was a 9.3 per cent increase over the previous year's figures. This annual trend is consistent with the average annual containerized trade growth of 9.2 per cent registered over the last decade. The throughput for 1993 was 112,439,485 TEUs which was an increase of 9,533,974 TEUs. The rate of growth for developing countries and territories was 1.84 times that of the world average and reached 17.0 per cent in the period 1992-1993. This was an increase in comparison with the 16.2 per cent reached in 1991-1992. The growth is unevenly spread and frequently erratic from year to year due in some cases to improved data or lack of it, and in other cases to turbulent fluctuations in the trade.

56. In 1993, 12 ports of developing countries were among the world's top 30 container ports, lead by Hong Kong with 9,204,236 TEUs. In the top 30 countries there were 16 developing ones and their average annual growth was 17.0 per cent. Initial figures for 1994 are available for the main ports of developing countries and a socialist country of Asia. They are given in table 34 with the annual percentage increase shown as well. These growth figures point to the need for developing countries to plan for an increase of container handling capacity. This does not necessarily imply the construction of new facilities but can, in many cases, also be achieved through improvements in productivity of existing infrastructure and equipment.

B. Institutional restructuring in ports

57. Institutional restructuring continues in many ports with the private sector playing a greater role particularly in the form of joint ventures. These ventures have been generally been concentrated in the development of container terminals. Examples of this trend are found in Argentina, China, Korea, Mozambique, Philippines and Russian Federation. A number of other countries are in the process of setting up joint ventures or awarding leases to the private sector - these include India, Mexico, Pakistan, Panama, Uruguay and Vietnam. The government of Singapore is even considering privatizing the Port of Singapore Authority to strengthen the stock market rather than to improve performance or to attract capital.

58. For governments, the underlying motivation for this change is to increase the competitivity of the country's exports in the international markets. This is occurring as governments recognize that their path to economic development is through international trade and thus trade promotion is a national economic policy. Poor port performance can hamper trade development and even deter investment. A recent study by OECD found that the main positive factors for investing in developing countries are an educated work force and good transportation and communication. Governments are seeking partners who have proven experience in terminal management and financial capabilities to invest. Firms are looking for opportunities where there are good possibilities for growth. Changes to national legislation for dock workers and resistance from organized labourers sometimes delay this development.

C. Port marketing

59. Ports are in operation in a more and more competitive environment and the importance of marketing in port management and development is being recognized by the port community almost all over the world. Marketing in ports, as in many other economic sectors, is composed of activities related to market research and marketing implementation. The research activities will allow the port to have its market analyzed, objectives fixed, strategy defined and targets identified. In the implementation stage, marketing tools should be deployed to achieve those objectives.

60. Marketing tools are those elements that will have an influence on the "sales" of the product, or services in the case of seaports. The influence of those tools will differ from one country to another. Therefore, it is necessary to find the appropriate mix of all those elements for a given market, so that the result matches the targets aimed at. It is clear that in many cases, various tools can be complementary and inter-changeable. The appropriate mix for a given market will have some degree of individuality.

Table 33
Container port traffic of developing countries and territories, 1993 and 1992

Country or territory	Container traffic 1993 (TEUs)	Container traffic 1992 (TEUs)	Percentage change 1992/1993	Percentage change 1991/1992
Hong Kong	9 204 236	7 972 225	15.5	29.4
Singapore	9 046 100	7 560 000	19.7	19.0
Republic of Korea	3 070 681	2 751 066	11.6	7.0
United Arab Emirates	2 935 092	2 506 422	17.1	20.9
Philippines	1 658 686	1 157 912	43.2	-19.7
Indonesia	1 600 539	1 396 594	14.6	21.1
Thailand	1 492 333	1 337 013	11.6	14.1
Malaysia	1 398 120	1 218 338	14.8	13.4
Saudi Arabia	1 237 579	1 153 761	7.3	7.8
India	1 016 673	793 199	28.2	13.5
Egypt	921 487	737 018	25.0	28.0
Brazil	909 356	873 742	4.1	28.8
Sri Lanka	858 392	676 041	27.0	1.0
Pakistan a/	510 000	510 017	0.0	8.6
Chile	499 974	288 007	73.6	40.7
Argentina	498 000	350 000	42.3	37.4
Mexico	464 228	443 709	4.6	27.4
Cyprus	420 673	357 948	17.5	9.0
Costa Rica	389 208	277 386	40.3	125.1
Malta	318 828	288 128	10.7	46.1
Panama	308 617	288 666	6.9	21.1
Jamaica	285 022	189 213	50.6	14.9
Côte d'Ivoire	238 822	188 728	26.5	5.1
Kuwait	201 738	186 643	8.1	186.9
Honduras	196 500	228 800	-14.1	20.4
Bangladesh	191 062	164 259	16.3	n.a.
Lebanon a/	186 691	147 370	26.7	11.9
Morocco	180 963	182 252	-0.7	-1.9
Peru a/	153 462	146 360	4.9	48.9
Nigeria	150 324	169 340	-11.2	-8.9
Guam	147 126	146 338	0.5	0.4
Kenya	144 137	135 324	6.5	-0.2
Ecuador	136 909	n.a.	n.a.	n.a.
Colombia	120 700	118 649	1.7	-8.3
Syrian Arab Republic	120 496	92 554	30.2	11.7
Trinidad and Tobago	119 387	105 983	12.6	160.4
Papua New Guinea	110 169	107 423	2.6	9.8
Jordan	108 958	99 632	9.4	37.0
Dominican Republic	107 042	87 195	22.8	n.a.
Bahrain	102 092	89 829	13.7	6.6
Guadeloupe	95 567	95 244	0.3	-4.7
Martinique	95 303	88 715	7.4	-3.2
Ghana	92 900	83 000	11.9	17.4
Iran, Islamic Republic of	91 188	110 581	-17.5	32.7
Oman	89 538	115 206	-22.3	-26.4
Uruguay	88 941	75 568	17.7	36.1
Mauritius	88 335	80 254	10.1	14.2
Cameroon	75 506	82 360	-8.3	8.0
Netherlands Antilles	72 438	65 871	10.0	-27.8
Djibouti	65 302	57 722	13.1	-28.4
Venezuela	62 984	48 450	30.0	25.0
Bahamas	62 284	64 147	-2.9	n.a.
Slovenia	61 430	45 834	34.0	-26.2
Tunisia	59 957	52 093	15.1	16.7
Croatia	49 913	44 563	12.0	17.4
Aruba	45 626	43 270	5.4	28.8
Mozambique	41 482	35 153	18.0	n.a.
French Polynesia	38 699	60 519	-36.1	9.6
Qatar	38 196	38 714	-1.3	-70.2
Barbados	37 718	31 255	20.7	2.6
New Caledonia	37 695	38 992	-3.3	25.9
Benin	36 386	28 225	28.9	10.2
Bermuda	30 576	29 173	4.8	10.7
Total	43 218 356	36 937 944	17.0	17.8
Other reported b/	225 878	206 361	9.5	-
Total reported c/	43 444 234	37 144 305	17.0	17.4
World total reported	112 439 485	102 906 511	9.3	9.9

Source: Derived from information contained in *Containerization International Yearbook, 1994*.

a/ Data subject to omissions.

b/ Comprising developing countries and territories where less than 30,000 TEU per year were reported or where substantial lack of data was found.

c/ Certain ports did not respond to the background survey. While they were not amongst the largest ports, total omissions may be estimated at 5 to 10 per cent.

Table 34

Traffic for selected ports in 1994

Port	TEUs	Annual percentage increase
Hong Kong	11 100 000	20.6
Singapore	10 400 000	15.0
Kaohsiung	4 899 879	5.7
Busan	3 750 000	22.1
Keelung	2 046 588	8.5
Dubai	1 882 828	12.2
Bangkok	1 383 500	8.6
Shanghai	1 150 000	23.0
Tanjung Priok	1 061 701	8.5
Klang	943 724	22.3

Source: *Port Development International*, Vol. 11, Number 1/2, January/February 1995.

61. A modern port can afford to play an active role in the development of transportation infrastructure and services which can improve the flow of international cargo not only over its wharves, but throughout the surrounding region. To survive in the twenty-first century, ports will need to seek out new markets around the globe. Port marketing, a combination of product, price and promotion will become an important function for the port community.

D. Technical innovation

62. Container terminal operating companies continue to introduce computers to make operators more effective and to provide a better service to their clients. There is the automatization of the planning and the administrative functions of container transfer. This provides operators with accurate data on the jobs to be handled and allows confirmation to be sent upon completion of the actual container transfer. There is growing use of radio data transfer (RDT) to connect container handling terminal equipment with the control room and computer systems. Data is downloaded from a main frame computer to RDT personal computers and relayed by modem-radio link to an RDT terminal in the operators cabin. Data from the operator flows in the reverse direction. This provides operators with information on where to go to select the next container and also via feedback allows information in the container control system to be kept up-to-date. This prevents delays to inland transport operators when delivering or receiving boxes.

63. For example in a straddle carrier receipt-delivery operation, the system keeps track of the position of the straddle carrier units and when it receives a request from the gate for the delivery of a container it selects the closest available unit to the required container and sends instructions to the driver to select the container, giving him its location and also the location to deliver it to at the interchange area. Once the operation is completed, the driver signals he has finished and his next instruction is sent. At a major terminal in Antwerp, such a system reduced the number of straddle carriers required from 5 to 4. The purchase cost of a straddle carrier was more than double the cost of the computer system development.

64. A global survey [26] on ship-to-shore container cranes found that the majority of new cranes on orders are being built to post-Panamax size. These cranes which have an outreach from the quay-wall greater than 40 metres dominate the orders to be delivered in 1994-1995. There are 140 cranes (37 from developing countries and socialist countries of Asia) with 40 metres plus outreach and 82 (56 from developing countries and socialist countries of Asia) with 40 metres or less (mostly in the 35-40 metre range) on order.

65. Faster cranes with trolley travel speeds above 2.5 metres per second, have become the most common specification and there are signs that 3 metres per second is increasingly favoured. The production and installation costs of post-Panamax cranes have come down. The survey has also found that crane productivity and availability have increased since the last survey three years ago. Average crane lifts are now running at 20-30 moves per hour and annual downtime had decreased. The majority of the units in operation had availabilities of over 98 per cent.

Box 6

Record shoreside action

Asian ports are ordering record numbers of new quayside container gantry cranes, in their efforts to cope with the growing volumes of intra-Asian traffic. Suppliers in Asia, and outside, are benefiting from the bonanza.

Containerports throughout Asia are responding positively to the demands of intra-Asian operators by upgrading their capacity to handle boxes at the key ship/shore interface. Central to the large-scale expansion of terminal facilities taking place within the region is a substantial purchase of new quayside gantry cranes. Almost half of all current worldwide orders have come from ports in Asia, amounting to more than 100 units due for delivery during 1994-1995. This has been very good news for the various manufacturers based in the Asian locality, as many port customers in Asia continue to favour their local industry over manufacturers based outside. Companies in Europe and elsewhere have not entirely lost out, however.

Over 80 per cent of all container cranes presently destined for Asia, as a whole, have been contracted by a handful of leading countries, including Singapore, Japan, Taiwan Province of China, Hong Kong and mainland China. Japan and Taiwan Province of China are each taking around 17 units during 1994-95 (and into 1996), as compared with 15 cranes going to China. Hong Kong terminals are taking 14 cranes. The biggest single delivery is being made to the Port of Singapore Authority (PSA), which is installing 22 units at its existing terminals, and has now lodged further orders for its Pasir Panjang. Smaller deliveries are due for Thailand, South Korea, Malaysia and the Philippines.

The beneficiaries of this crane-ordering bonanza are varied. Hong Kong is continuing to favour the major suppliers in Japan. Taiwan is purchasing from Japan and German manufacturers. Japan naturally supports its own industry, as does South Korea. Chinese ports are largely supporting their one homespun manufacturer, although cranes have also been contracted from a variety of foreign companies.

Singapore has recently purchased from Japan, South Korea and Germany. Manila and Port Kelang are buying from Japan. Bangkok continues to opt for cranes from Slovenia, whereas Penang is using Australian companies. Indonesia has traditionally used manufacturers in North Europe, although the nomination of a new Paceco license in Jakarta could change this.

Source: *Containerisation International*, January 1995.

Chapter VI

FREIGHT MARKETS

This chapter indicates comprehensive conditions and trends in freight markets, covering main cargo sectors, liner freight rates as a percentage of prices, estimates of global freight costs and maritime bunker prices.

A. Freight rates of main cargo sectors

66. Table 35 contains data on the development of freight rates for three principal shipping markets. The monthly freight indices cover the 1992-1994 period for selected liner rates, dry cargo time and voyage charters, and tanker Worldscale for five sizes of crude and product vessels.

67. The overall 1994 liner freight index continued to come down very marginally to an average level of 74, which was a 2-point decline from the average of 1993 and the lowest since 1988, the year of introduction of the index presently applied. A closer look at the liner freight level in 1994 shows that the average index of container rates fell by 6 points from their 1993 level, while conventional general cargo decreased only by 1 point. The overall index of home-bound rates (to Antwerp/Hamburg range) fell by 4 points from 1993, as compared to only 1 point down in the out-bound rates.[27]

68. Developments of liner markets are also reflected in containership charter rates and container freight rates of major liner conferences. For the former, containerships of 550 TEU capacity experienced a considerable decline of 8.4 per cent from 1993 to an average of US$ 7,680 per day in 1994. While interest in this size of containerships seemed to decrease in Europe, it actually increased in Asia, where charterers were however reluctant to match the average rate levels being paid in European trades. Demand for longer-period charters was in 1994 centred on vessels of the 1,000 TEU class. Charter rates for this class reached their highest level in September with US$ 11,000 per day being paid. The average rate of US$ 10,722 per day represented a very marginal increase (0.2 per cent) from the previous year. Demand of self-sustained containerships exceeded supply in the global charter market throughout the year.[28]

69. As shown in graph 11, container rates (US$/TEU) of conferences turned upward in 1994 on the Europe-Far East and the Europe-Australia routes, thus halting the downward movement that had prevailed since 1990. Conversely, the North Atlantic Westbound and the Transpacific Westbound trades continued the downward trend with a drop of 4.6 per cent and 12.9 per cent, respectively, from 1993. In the Pacific Westbound trade, members of the Westbound Transpacific Stabilization Agreement have been confronted with immense competitive pressures from non-member lines on freight rates for main cargoes such as cotton, which increased in volume by 17 per cent from 1993. This formidable competition adversely affected the entire freights in this trade. In the Europe-Far East trade, the upturn of rates which had been under pressure since 1988 was mainly attributable to the expansion of cargo traffic in 1994. During the first half of the year, trade increased by 16 per cent over the corresponding period of 1993.[29]

70. In the dry bulk sector, the overall situation of the dry bulk charter market in 1994 reversed that of 1993. The average time charter index in 1994 showed a considerable decline from 1993, while the trip charter index increased marginally. The more favourable trip charter rates reflect some special market conditions, among which should be mentioned a sharp increase in demand for Capesize dry bulkers for the carriage of iron ore on the long-haul route from Australia to Europe, in such a contingent situation as a relatively tight balance of Capesize dry bulkers; additional upward pressure resulted from the overall increase in time of vessels at port, caused by severe congestion in many loading and unloading ports, experienced by dry bulker charterers from mid-1993 through early 1994, particularly on the US Gulf-Far East time charters for grain, transpacific-round time charters and transatlantic-round time charters.[30]

71. The 1994 overall improvement in dry bulk charter markets was attributed to an estimated increase of 2.2 per cent in the seaborne trade of the three major dry bulk commodities (from 915 million tons in 1993 to 935 million tons in 1994). In 1994, seaborne iron ore volumes increased by 7.3 per cent, from 354 million tons in 1993 to 380 million tons, as the European crude steel industries improved their production (European Union 5.2 per cent up to 139 million tons) as did the Republic of Korea and China (2.3 per cent up to 34 million tons and 3.2 per cent up to 92 million tons, respectively), despite Japan's reduction (1.3 per cent down to 98 million tons).[31]

Table 35

Freight rate indices, 1992-1994
(Monthly figures)

Period	Liner freight rates a/ (1985 = 100)			Dry cargo tramp time charter b/ (1985 = 100)			Dry cargo tramp trip charter c/ (July 1965 to June 1966 = 100)			Tanker freight indices c/														
										VLCC/ULCC			Medium-size crude carriers			Small crude and product carriers			Handy-size clean			Handy-size dirty		
	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994
January	78	77	76	98	117	105	208	196	189	49	51	44	91	95	89	134	110	144	195	182	221	185	167	171
February	77	77	76	106	116	111	202	192	185	41	45	37	84	98	88	141	127	131	168	160	219	209	172	175
March	77	77	75	100	120	108	195	191	185	34	43	38	81	98	84	116	132	126	154	168	200	158	181	171
April	80	75	75	101	129	117	192	194	198	41	43	47	72	93	94	110	141	125	147	159	199	161	193	169
May	83	75	74	105	133	120	191	195	191	39	46	44	70	101	89	109	154	126	160	170	182	155	177	170
June	79	76	73	103	134	110	195	209	196	36	46	38	69	102	92	104	141	130	154	162	189	172	184	165
July	77	77	74	88	153	109	190	206	199	44	52	46	75	89	89	110	123	124	155	167	182	158	154	169
August	75	77	73	93	124	105	191	194	202	45	42	49	72	78	93	114	111	134	162	172	186	165	161	202
September	74	75	73	81	136	109	193	196	204	43	42	45	71	81	91	113	119	142	162	178	196	156	154	200
October	76	75	72	96	135	120	191	188	212	50	43	48	79	92	102	116	126	153	149	186	199	165	153	199
November	80	77	73	100	118	126	195	196	232	57	41	68	65	93	118	117	120	173	177	210	235	174	159	209
December	79	75	74	107	101	127	196	200	234	52	38	52	98	91	116	139	134	176	193	243	251	183	162	184
Annual average	78	76	74	98	125	114	195	196	201	44	44	42	77	93	96	118	130	140	165	177	200	170	171	186

Note: All indices have been rounded to the nearest whole number.

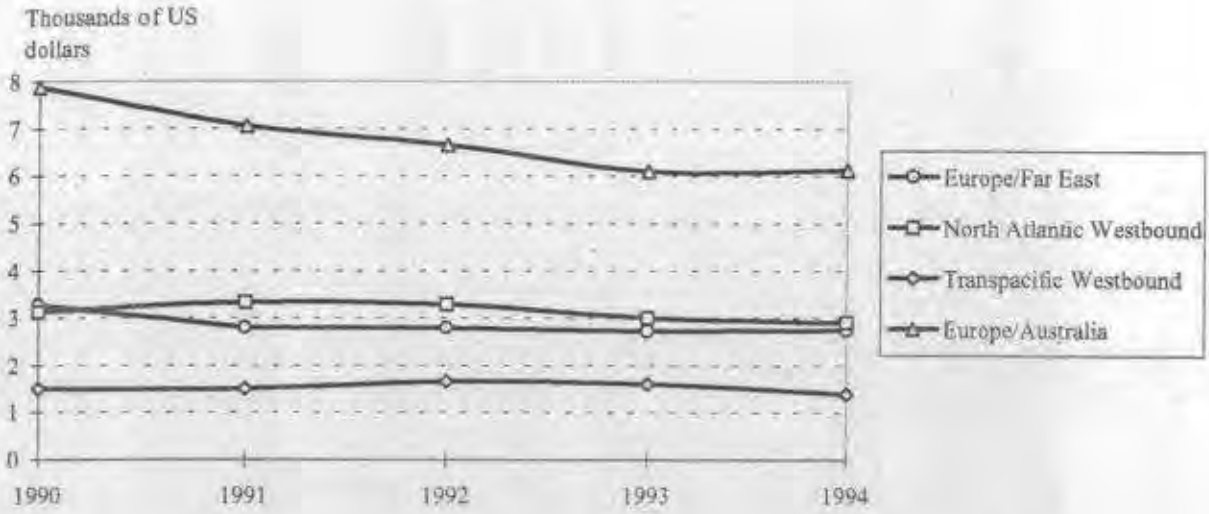
a/ Liner index compiled by the Ministry of Transport of Germany. Monthly weighted assessments of freight rates on cargoes loaded or discharged by liners of all flags at ports in the Antwerp/Hamburg range.

b/ Compiled by the Ministry of Transport of Germany.

c/ Compiled and published by Lloyd's Ship Manager. Worldscale = 100, as effective in each year. For tankers, vessel size groups are as follows: VLCC/ULCC: 150,000 dwt upwards; medium-sized crude carriers: 60,000- 150,000 dwt; small crude and product carriers: 30,000-60,000 dwt; and handy-sized clean and dirty tankers: below 30,000 dwt.

Graph 11

Major conference rates, 1990-1994



Source: *Lloyd's Shipping Economist*, April 1995 and previous issues.

72. Coal shipments in 1994 showed a modest increase of about 1 per cent to 367 million tons, both coking coal, as steel production increased and thermal coal for energy, as coal took some share from oil.[32] The 1994 grain shipments of five major exporting countries and country groups plummeted by 8 per cent from 1993 to 146 million tons in 1994. The most dramatic reduction was in the shipments to the former Soviet Union from the United States and Argentina.[33] As in previous years, the 1994 dry bulk freight rates developed along the market activities for iron ore and coal trades through the year; however, specifically in the last quarter, the overall market activities, combined with new grain sales, pushed freight rates up steadily to the record-high level.

73. For the handy-size segment, the Chinese steel-import boom was over in 1994, with steel import figures falling from over 30 million tons in 1993 to just over 20 million tons in 1994. On the other hand, United States' imports rose almost 60 per cent in the first 10 months to 25 million tons, mainly from the former Soviet Union and East Europe. The results were less dramatic market fluctuations through the year than those seen in 1993.

74. Developments of dry bulk markets are also reflected in the movements of the Baltic Freight Index (BFI). This index is weighted on the basis of the importance of the global major dry bulk trade routes. The composition of the index during 1994 was:

Route		Commodity	Weighting
1	US Gulf/North Continent	Grain	10 per cent
1a	Transatlantic round	T/c	10 per cent
2	US Gulf-Japan	Grain	10 per cent
2a	US Gulf-Far East time charter	Grain	10 per cent
3	US North Pacific-Japan	Grain	10 per cent
3a	Transpacific round	T/c	10 per cent
6	H Roads-R Bay-Japan	Coal	7.5 per cent
7	H Roads-Rotterdam	Coal	7.5 per cent
8	Queensland-Rotterdam	Coal	7.5 per cent
9	Far East to Nopac Cont	T/c	10 per cent
10	Tubarao-Rotterdam	Iron ore	7.5 per cent

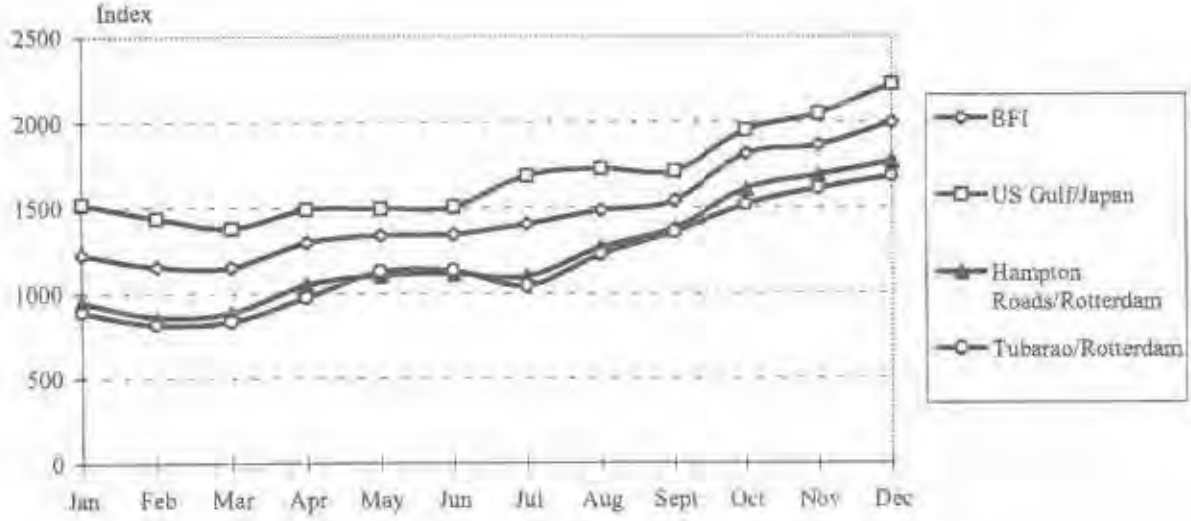
75. Graph 12 shows the trend of the BFI and selected trade routes for 1994. The surge in dry bulk freight markets in the second half of 1994 sent freight indicators up to a record high towards the end of the year. The BFI broke the 2,000 point barrier by early December 1994. This escalation in freight rates could be attributed not only to an increase in demand in the key trades, particularly from those regions that were emerging from recession, namely Western Europe and

Japan, but also other factors such as a significant increase in exchange rates which, together with problems of port congestion, prompted the rise in freight rates.[34/]

76. Table 36 indicates the highest and lowest freight rates reported during 1993 and 1994 in the leading dry bulk trades. The 1994 high rates for all the commodities except sugar were up compared to the previous year, while the low rates, except sugar and coal (Hampton Roads/Rotterdam), were slightly down. The range between the year's high and low rates increased largely for grain (United States Gulf/Japan), coal (Hampton Roads and Richards Bay/Japan) and ore on both trade routes. The highest rate of US$ 33 per ton for grain was paid in the United States Gulf/Japan trade in early December when the buoyant market paid US$ 31 per ton on average. The trade of ore on the Brazil/Continent paid the highest freight rate of US$ 10.25 per ton at the end of November for a Capesize bulker. The market for this size of dry bulkers improved particularly during the fourth quarter with the concurrent expansion of the ore trade from Australia to North-West Europe.

Graph 12

Baltic Freight Index and selected routes, 1994



Source: London Commodity Exchange.

Table 36

Comparative freight rates for selected commodities, 1994 versus 1993

Commodity	Route	Freight rate range			
		1994 (US$/ton)		1993 (US$/ton)	
		High	Low	High	Low
Grain	United States (Gulf of Mexico)/Venezuela	19.00	12.25	18.00	13.00
Grain	United States (Gulf of Mexico)/Japan	33.00	18.25	28.00	20.50
Sugar	Queensland/Japan	20.80	20.00	22.00	18.50
Coal	Hampton Roads and Richards Bay/Japan	15.80	9.25	13.40	12.75
Coal	Hampton Roads/Rotterdam	5.80	5.50	5.25	3.50
Ore	Brazil/Japan	13.45	7.50	11.25	9.50
Ore	Brazil/Continental Europe	10.25	3.83	5.50	4.55

Source: *Lloyd's List* (London), 14 June 1994 and 30 January 1995. Drewry Shipping Consultants Ltd. (London), *Shipping Statistics and Economics*, 1994, various issues.

77. In 1994, special conditions characterized the tanker market. Among them, firstly, was the price of crude oil which increased from March 1994, mainly due to the upsurge of United States imports. The upward trend of oil prices was accelerated by OPEC's policy decision to freeze its production ceiling in end-March and further pushed up by the confirmation of that decision in mid-June. In late June, the demand for tonnage in all categories of tankers began to increase in a market largely dominated by speculation about further increases in oil prices and a possible shortage of oil supply specifically in the last quarter of the year. This tendency was further reinforced by the petroleum labourer's strike in Nigeria in early June (in mid-July the August contract price at one time soared to a new 13-month high of US$ 18.56 a barrel (Brent Crude) during trading), and by a prospect of old-tanker breakings to exceed deliveries of newbuildings (breakings of 13.1 million dwt against 10.2 million dwt as at the end of 1994).[35]

78. The overall increasing demand for crude oil tanker tonnages, during the second half of 1994, pushed up the average rate levels substantially higher than the corresponding period of 1993. Specifically, the usual winter surge, coupled with other factors such as COFR,[36] and higher bunker prices, further raised the rate levels, reaching an average of WS 52 for VLCC/ULCC during December. Above all, the coverage of COFR became an important element not only for spot-markets but also for period-markets in all segments of the tanker business. The strong demand for clean tankers throughout the year kept the rates much above those experienced in 1993.[37]

79. Table 35 indicates the fluctuations of freight rates for five types of tanker. The VLCC/ULCC market was very weak during the first half of 1994, with a lack of any fundamental incentives in trading conditions for this sector. The Eastern trades dominated the general market activities; however, the market lacked the momentum needed to pull freights out of the doldrums and to give owners more profitable remunerations. During the period, rates for a 250,000 tonner from the Middle East Gulf to the East fluctuated between WS 39 and WS 42.5 while rates for a similar tonner to the West were between WS 32.5 and WS 35.[38]

80. June finally saw the long-awaited recovery in the VLCC spot charter market as a substantial number of cargoes were fixed mainly for the East. The increase in demand coincided with supply contractions due to a number of VLCCs having begun to be sold for demolition (see para. 52), and, finally, a psychological boost given to the market by the news of about 12 VLCCs to be dedicated to freshwater carriage.[39] In July, the market gained further momentum as the trades remained active with tonnage availability not very strong (71 VLCC/ULCCs of 21 million dwt available through July).[40] Moreover, there was great concern in the market that crude export from Nigeria could be increasingly threatened by the continuing strike.[41]

81. This market segment rose in July by nearly 10 Worldscale points and continued during the balance of 1994 to fluctuate between WS 49 and WS 53 for the East and between WS 42.5 and WS 47.5 for the West. A substantial premium was expected to be paid from November onwards for vessels which had obtained COFR.[42]

82. The category of medium-sized crude carriers is generally divided into two segments of vessels of 60,000-90,000 dwt and of 100,000-140,000 dwt. The larger tanker segment – which was dominated by fixtures for West African loadings in the first half of 1994 - picked up in March with rates tentatively rising to the low WS 80s. In April, the pace of demand slowed down as lack of orders turned the tide in the charterer's favour and the rate level remained stable in the WS 70s until September.[43] The troubles caused by the strike in Nigeria, West Africa's most important oil producer, had few adverse effects on the market of this size during the period.[44]

83. In October, the market rose to WS 80 and by November, when the COFR problem was looming in the background, rates were up at WS 90 for voyages to the United States with some five points down for European discharge, and they remained at this level through the year-end.[45]

84. Smaller tankers of this category were able to perform relatively well during 1994 as there was a wider selection of active markets available for this size sector than for any other type of crude oil carriers. These tankers actually traded mainly in the Caribbean, the Mediterranean and the North Sea. Like most other markets, the Caribbean was not active during the first half of the year and rates were between WS 100 and WS 115 for a 75,000 tonner. During the second half of 1994, the market became active, and except for July and August many owners were able to secure rates of WS 130 or better for the rest of the year. In mid-December, with the deadline for COFR approaching, owners were able to command rates in excess of WS 200.[46]

85. In the Mediterranean, the standard 80,000 ton cargo-movement paid up to only WS 85 in the first quarter. During the next six months, rates were solid in the WS 90s; in the final quarter, which was the most active of the year, they fluctuated between WS 115 and WS 120.

86. The North Sea showed rate trends very similar to those in the Mediterranean. Rates were virtually in the WS 90s in the first six months of the year and then dipped into the mid-WS 80s during July and August. The last four months represented an average of WS 100 or better. During October and November, there was a particularly active period when rates remained in the low WS 130s.[47]

87. For small crude and product carriers, the average rates for the first five months were about WS 6 less than for the corresponding period of 1993. Nevertheless, the buoyancy in the market during the last quarter raised the annual average Worldscale by 10 points to WS 140. The Caribbean market was relatively weak with low demand until April. In May, an upsurge of the United States demand for crude oil and products, coupled with a lack of suitable tonnage for 60,000- to 65,000-ton cargo lifted rates to as high as WS 130. The rates fluctuated between WS 120 and WS 130 during June and July. In August, with further momentum of fresh demands, the market for this size sector soared to WS 160 and consequently became established at WS 145 through September. Throughout the fourth quarter, the Caribbean market maintained the high level. Fixtures in the East Coast Mexico/United States Gulf trade paid up to WS 195.

88. The Mediterranean market was not so active and the rates remained in the range of WS 110 to WS 115 for cargoes of 50,000 tons in the first half of 1994. In July, the imminent demand for this size pushed up the rates to WS 125 and remained at that level until September. During the last quarter, this trade paid up to WS 175.[48]

89. In the market for handy-size clean tankers, demands for tonnage mainly from the Middle East Gulf, Asia (Indonesia) and the Caribbean retained the market level at as high as WS 200 to WS 220 in the first quarter of 1994. The United States' growing demand, combined with a general shortage of refining capacity in Asia and a limited availability of suitable tonnage, contributed to the upsurge of rates in the last quarter, specifically in the Caribbean, with rates climbing to a level as high as the middle WS 300s, including COFR coverage in early December.

90. The handy-size dirty market fluctuated narrowly in the range of WS 170s during the first half of the year. From then through to year end, rates varied between WS 185 and WS 200 depending mainly upon prompting demands for this size from oil-consuming countries.[49]

91. The time charter market for tankers in 1994 was more active than it was in the previous year, despite charterers' uncertainty over perspectives for global oil consumption and spot market prospects for larger tankers. A number of transactions were

concluded in the product market sector and in the Aframax (mainly 60,000-90,000 dwt) dirty sector. Conversely, activities were slow in the VLCC and Suezmax (mainly 100,000-140,000 dwt) categories. In the VLCC sector, some major oil companies replaced their ageing fleets with newbuildings at reportedly competitive rates around US$ 25,000 to 26,000 per day and other major companies fixed modern VLCCs on 12-month time charter at market-related rates. Such market rates obtainable for modern tonnage were in the range of US$ 20,000 to 22,000 per day for one year, and specifically in December up to nearly US$ 30,000 per day for a three-year charter.

92. The Suezmax market was fairly limited. The most conspicuous deal involved the fixing of a few modern Suezmax tankers on a two-year time charter at the market rate prevailing within the min/max of US$ 15,000/25,000 per day. On average, the rate for a 12-month fixture was about US$ 19,000 per day in mid-1994.

93. The Aframax period market was very active. Three newbuildings were chartered for 12 years. The rate structure of this deal was between US$ 21,000 and 24,000 per day. A double-hull tonnage obtained US$ 16,000 to 17,000 per day for 6 up to 12 months. Single-hull modern vessels were fixed at about US$ 14,500 to 15,000 per day for 12 months. Other Aframax tonnages built in the early 1980s were available at about US$ 12,000 to 13,000 per day for a 12-month period.

94. In the product carrier sector, chartering activity in the first half of 1994 was slow with only a few fixtures. Towards the summer, activity picked up, with several major companies seeking tonnage on time charter, stimulated by concern about a possible increase in demand in excess of tonnage available on clear spot markets. Three modern 40,000 tonners were fixed at US$ 13,500 per day for 12 months. The market was active in the second half of the year. Actually, rates started to rise in September and October with a 47,000 tonner built in 1991 fixed at US$ 13,500 per day for the first 12 months. Similar tonners were fixed in December at a rate in excess of US$ 16,000 per day for 12 months.[20/]

B. Liner freight rates as a percentage of prices for selected commodities

95. Table 37 provides data on liner freight rates as a percentage of market prices for selected commodities and trade routes for 1970 to 1994. In 1994, similar developments could be observed in all trades. While commodity prices were increasing, freight rates were under pressure bringing about a considerable decrease of the freight/price ratio. This was particularly so in the coffee trade, where prices increased due to production levels that were reduced by bad weather and consequent speculation in the market.

96. The decrease in the ratio of rubber could be attributed to booming Asian rubber markets caused by renewed Western tyre-makers' demand. On the other hand, the ratio in the tea trade slightly increased, primarily reflecting a moderate decrease in tea prices.

C. Estimates of total freight costs in world trade

97. Table 38 indicates estimated total freight payments for imports and its percentage of total import value by country groups. World total freight payment as a proportion of import value had been on a downward trend from 6.64 per cent in 1980 to 5.22 per cent in 1990. Since then, however, it climbed to 5.37 per cent in 1992 and 5.59 per cent in 1993 (see also graph 13).

98. The relative level of freight costs incurred to developed market-economy countries continued to be about half that of developing countries. While, however, the ratio between the two groups had remained almost unchanged from 1980 to 1992 (annual average of 50.7 per cent of the developing countries), it increased to 54.5 per cent in 1993, as the developing countries' freight factor fell to 8.33 per cent, and conversely that of developed market-economy countries rose slightly to 4.54 per cent. The difference between the two groups is attributable, among other things, to differences in the regional structure and commodity composition of their trade, the greater bargaining power of shippers of developed market-economy countries when negotiating with shipowners or liner conferences/operators for larger cargo volumes, and more efficient infrastructure facilities at ports and inland distribution systems on the part of such countries.

99. The relative ratio of developing countries declined almost yearly from 1980 to 1991 (as did that of developed market-economy countries) but increased slightly in 1992. For the group as a whole, the freight factor fell in 1993 with the exception of developing countries in Europe and Oceania where there were slight increases.

Table 37

Ratio of liner freight rates to prices of selected commodities

Commodity	Route	Freight rate as percentage of price a/ b/ c/						
		1970	1975	1980	1985	1990	1993	1994
Rubber	Singapore/Malaysia-Europe	10.5	18.5	8.9	n.a.	15.5	14.5	11.4
Tin	Singapore/Malaysia-Europe	1.2	1.6	1.0	n.a.	1.7	1.4	1.3
Jute	Bangladesh-Europe	12.1	19.5	19.8	6.4	21.2	24.3	21.8
Cocoa beans	Ghana-Europe	2.4	3.4	2.7	1.9	6.7	7.5	6.2
Coconut oil	Sri Lanka-Europe	8.9	9.1	12.6	12.6	n.a.	11.2	7.3
Tea	Sri Lanka-Europe	9.5	10.4	9.9	6.9	10.0	5.3	5.5
Coffee	Brazil-Europe	5.2	9.7	6.0	5.0	10.0	4.3	2.7
Coffee	Colombia (Atlantic)-Europe	4.2	5.7	3.3	6.7	6.8	7.1	3.6
Cocoa beans	Brazil-Europe	7.4	8.2	8.6	6.9	11.0	10.6	8.6
Coffee	Colombia (Pacific-Europe)	4.5	6.3	4.4	6.1	7.4	7.6	3.8

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by the Royal Netherlands Shipowners' Association (data for 1970-1989) and conferences engaged in the respective trades (data for 1990-1994).

a/ Cif prices are quoted for coffee (Brazil-Europe and Colombia-Europe) and coconut oil. For cocoa beans (Ghana-Europe and Brazil-Europe) and tea, average of the daily prices in London are quoted. Prices of the remaining commodities are quoted on fob terms.

b/ Freight rates include, where applicable, bunker surcharges and currency adjustment factors, a "tank cleaning surcharge" (for coconut oil only), port delay and additional port surcharges (for Colombia only). Conversion of rates to other currencies is based on parities given in *International Financial Statistics* published by the International Monetary Fund. Annual freight rates were calculated by taking a weighted average of various freight rates quoted during the year, weighted by their period of duration.

c/ For the period 1990-1994, the prices of the commodities were taken from UNCTAD, *Monthly Commodity Price Bulletin*, March 1995.

Table 38

Estimates of total freight costs in world trade a/ by groups
(Millions of US dollars)

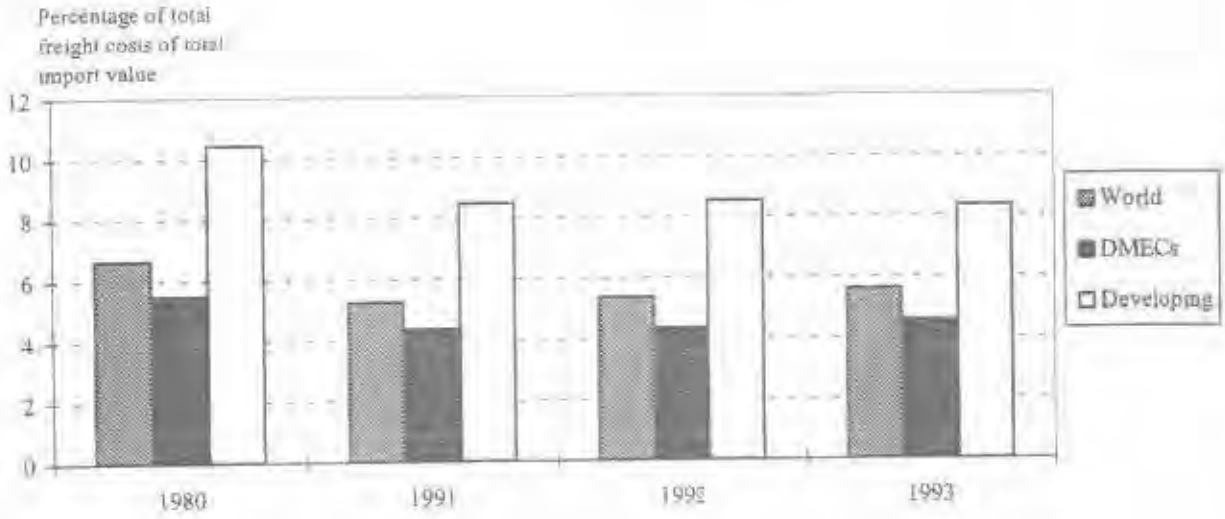
Year	Country group	Estimate of total freight costs of imports	Value of imports (cif)	Freight costs as percentage of import value
1980	1. World total	123 264	1 856 834	6.64
	2. Developed market-economy countries	78 286	1 425 979	5.49
	3. Developing countries - total	44 978	430 855	10.44
	of which in:			
	Africa	10 432	77 757	13.42
	America	10 929	123 495	8.85
	Asia	21 979	211 089	10.41
	Europe	1 320	16 037	8.23
	Oceania	318	2 477	12.84
1992	1. World total	197 981	3 688 162	5.37
	2. Developed market-economy countries	120 040	2 773 840	4.33
	3. Developing countries - total	77 941	914 322	8.52
	of which in:			
	Africa	10 117	91 011	11.12
	America	13 114	156 760	8.37
	Asia	52 931	647 264	8.18
	Europe	1 281	15 193	8.43
	Oceania	498	4 094	12.16
1993	1. World total	201 385	3 601 481	5.59
	2. Developed market-economy countries	118 043	2 600 770	4.54
	3. Developing countries - total	83 342	1 000 711	8.33
	of which in:			
	Africa	9 837	88 979	11.06
	America	15 098	189 094	7.98
	Asia	56 951	707 430	8.05
	Europe	934	10 940	8.54
	Oceania	522	4 268	12.23

Source: Derived from IMF cif/fob factors and IMF import data.

a/ The estimate for the world is not complete, since data for countries that are not members of the IMF are not included.

Graph 13

Estimates of total freight costs in world trade by groups



Source: Table 38.

D. Marine bunker prices

100. Total world sales of marine bunkers are valued at around US$ 15 billion annually. While volume sales have been increasing steadily since the mid-1980s to 151 million tons in 1992, the bunkering business is facing difficult times, brought on by fluctuations of crude oil prices, coupled with growing concern over product quality and environmental issues. Bunker prices tend to shadow movements in world crude oil prices - marine bunkers account for some 5 per cent of world oil consumption, but in the short term the prices respond to local supply/demand factors, particularly in relation to the availability of products.[51] The global bunker prices for high-viscosity fuel oil (HVF) and intermediate fuel oil (IFO) increased dramatically in 1994 by an average of 15.6 per cent and 13.6 per cent, respectively, as compared to 1993. Above all, HVF and IFO in North West Europe marked the highest increase of 25.4 per cent and 20.5 per cent respectively. Conversely, marine diesel oil (MDO) prices fell in 1994 by an average of 7.6 per cent in all the major markets except the West Coast of the United States, where it slightly increased (see table 39). Table 39 also reveals that during the first quarter of 1994 prices plummeted in the global markets by an average of 13.3 per cent for HVF, 12.6 per cent for IFO, and 8.6 per cent for MDO from those of the corresponding period of 1993. This was mainly attributable to the world crude-oil prices, which had reached the highest level of 1993 during the first quarter, followed by a downward trend that lasted until the first quarter of 1994. During the second quarter of 1994, the overall bunker prices picked up and continued the upward movement through the third quarter when they reached the highest level of 1994 in the major markets, except the United States Gulf. This increase was also affected primarily by the soaring of crude oil prices during the period from June through August.

Table 39

Fluctuations in marine bunker fuel prices, a/ 1992-1994
(US dollars per ton)

		1992	1993	1994				1994 percentage change (fourth quarter to first quarter)
		4Q	4Q	1Q	2Q	3Q	4Q	
Persian Gulf (Mina Ahmadi)	HVF	102	61	64	83	93	89	39.1
	IFO	110	70	74	92	98	96	29.7
	MDO	220	212	210	208	202	197	-6.2
Mediterranean (Genoa)	HVF	105	70	82	92	100	99	20.7
	IFO	113	79	88	98	106	103	17.1
	MDO	215	190	168	173	175	159	-5.4
North-West Europe (Rotterdam)	HVF	93	60	72	81	87	94	30.6
	IFO	97	66	77	86	91	98	27.3
	MDO	157	144	130	134	135	131	0.8
Gulf of Mexico (Houston)	HVF	88	64	65	79	87	91	40.0
	IFO	91	67	69	79	90	94	36.2
	MDO	173	158	150	147	148	147	-2.0
Caribbean (Cristobal)	HVF	99	69	72	85	99	96	33.3
	IFO	103	76	82	96	108	104	26.8
	MDO	204	178	174	176	176	174	0.0
West Coast of United States (Los Angeles)	HVF	99	66	70	87	100	91	30.0
	IFO	103	71	74	92	105	96	29.7
	MDO	204	208	205	210	208	177	-13.7
Far East (Singapore)	HVF	89	62	67	87	94	90	34.3
	IFO	94	66	69	91	97	93	34.8
	MDO	192	147	139	143	139	146	5.0

Source: Drewry Shipping Consultants (London), *Shipping Statistics and Economics*, various issues.

a/ Average prices for each quarter.

HVF, high-viscosity fuel oil
IFO, intermediate fuel oil
MDO, marine diesel oil

Box 7

Suezmax

The fate of the Suezmax (120-165,000 dwt) tanker appears, for the time being, to be inextricably linked with that of the VLCC.

This, combined with the uncertainty surrounding the 28 December OPA 90 COFR deadline (80 per cent of Suezmaxes trade in the Atlantic), is leading to some uncertainty among owners and charterers as well as brokers in discerning a clear market trend.

Why are the VLCCs competing so strongly for West Africa stems? Because as long as a poor AG market causes VLCC owners to ballast round the Cape rather than via Suez, explains one charterer, they go right past West Africa, where rates are higher, and can be tempted in. One week in October saw eight VLCCs fixed out of West Africa, four out of the North Sea and two out of the Mediterranean. That took care of 26 Suezmax cargoes and, say some, killed the market.

But many are adamant that the present lacklustre rates "are largely down to owners' failure to understand their competition."

"It all starts and finishes with quality," states one broker unequivocally. "No ifs and buts. Quality is paramount." This emphasis comes from the US oil company charterers, who dominate this sector, and also from the "extremely picky" terminal operators. "The United States charterers want to keep their nose clean. So they choose to fix - and need to fix - modern tonnage." But no clear message to that effect ever gets to the owners. Why? Because there aren't enough modern ships to go round. There are only some 90 Suezmaxes built since 1988. Fewer than 60 were built between 1978 and 1986. The rest (over 190 ships) are well over 15 years old.

What happens is that a feeling of insecurity among owners is generated by the circulation of huge ship position lists which include many ships that are theoretical rather than actual West Africa (or North Sea) players. The modern ships are then picked off well ahead, one by one, mostly off the market. "Many owners of modern ships are made to feel grateful at being given the chance to fix forward at a niggardly WS 2.5 premium," says one player. "Instead they should be capitalizing on the short supply of modern tonnage. Brokers should start using their heads to put out real position lists."

But all is not gloom. Opportunities in the Atlantic market are growing, even if the long-awaited Iraqi crude out of the East Mediterranean pipelines appears to have received another setback. More than one operator admits to eyeing the market East of Suez, currently prime Aframax territory. Some of Australia's biggest refineries are already gearing up to take Suezmaxes. And the predatory VLCCs? "When the VLCC market picks up, these big ships won't be bothered with short hops," believes one.

For the short term, one recent broker's report summarizes the feelings of many: "Whilst it is unlikely that Owners' remuneration will deteriorate much further, it is ... difficult to see why it should improve drastically for the time being due to the concerted effort ... to parcel up into big tankers."

In the longer term, the market will get increasingly tight for modern Suezmaxes and increasingly gloomy for older units, says another, forecasting that, "potentially, modern Suezmaxes could be one of the hottest-performing sectors in the shipping business." And to realize that potential? "The key is a more intelligent approach to the market," insists another, "with greater owner cooperation among those with the strategically important modern vessels."

The short term may look tricky. But the longer term looks positive. When will that be? Says one major player, "I'm not writing any blank cheques on Suezmaxes at the moment."

Source: *Seatrade Review*, November 1994.

Chapter VII

MULTIMODAL TRANSPORT AND TECHNOLOGICAL DEVELOPMENTS

This chapter updates developments in the field of multimodal transport, including developments in multimodal transport legislation, new block train services and other new features.

A. Developments in the field of multimodal transport

1. Institutional developments

101. In order to be able to take into account all interests involved in the development of multimodal transport, it becomes essential to rationalize and coordinate transport policies through a closer relationship between the many different players, transport providers and users, and those who set the rules. This implies not only changes of responsibilities, but also the establishment of new coordinating entities and new public-private partnerships in the operation of transport systems, and should facilitate the reduction or even eradication of existing trade barriers. All links in the manufacturing and transport chain would thus work in perfect harmony, but also in tune with a flexible regulatory machinery designed to support trade expansion.

102. An increasing number of countries have consequently come to realize that for multimodal transport to progress, considerable coordination between the many interested parties is required. As a consequence, countries as diverse as Colombia, Mozambique, Pakistan, Thailand and the Unites States have all introduced institutional arrangements which join public and private entities in a common committee - in some countries called a National Trade and Transport Facilitation Committee (NTTFC). By meeting regularly and by reaching consensus decisions, these NTTFCs are able not only to overcome misunderstandings, but also to propose widely acceptable solutions to problems and thus to promote transport efficiency. Based on its experience in assisting with the establishment of such committees, the UNCTAD secretariat has drafted an outline of how such a committee might be created, its draft terms of reference and a profile of the small organizational set-up required to support the smooth functioning of such a committee on a long-term basis.

103. Leading companies in the multimodal transport sector have begun investing time and resources in total quality management systems and have obtained certification of their conformity with ISO standards 9001 and 9002. Attention is now given to quality, safety and environmental protection, factors of particular importance in the transport of dangerous goods. Quality certification serves sometimes as an advertisement in the marketing strategies of transport companies, and assures customers who increasingly are demanding evidence of recognized quality management. The application of the total quality management (TQM) concept enhances the competitiveness of transport companies, and generates benefits resulting from wider customer satisfaction, leaner production and administrative processes, and reduced number of errors. In some countries where the process of quality certification in the field of transport has not yet been established, multimodal transport operators must register and, thereby, must demonstrate that they are qualified to provide their customers with some agreed quality level of services. In some countries, registration, or licensing, may thus be a viable alternative to TQM certification.

104. In the absence of dependable statistics regarding the quantities of cargoes handled by NVOCCs, trends are difficult to come by. However, there seems to be a decrease both in the number of common carriers and in the volumes they handle. As an example, in 1994, Japanese NVOCCs handled 12,360 million tons (a decrease of 19 per cent in comparison with the 1993 figure) while their number decreased from 232 (March 1993) to 194 in March 1994. In sea-air traffic, Japanese NVOCCs moved 40,101 tons in 1994, a figure that is 15 per cent lower than what was handled in 1993.[IV]

105. After its introduction in 1993, the FIATA Multimodal Transport Bill of Lading gained wide acceptance in international trade. This document, which is based on the UNCTAD/ICC Rules for Multimodal Transport Documents, is being issued through the national freight forwarding associations of more than 40 countries. It is likely that its use will spread over more countries, considering that the 1993 ICC Uniform Customs and Practice for Documentary Credits (UCP 500) offer the possibility of using multimodal transport documents in conjunction with documentary credits (article 26).

106. The Baltic and International Maritime Council (BIMCO) has finalized its updating of its

COMBIDOC on the basis of the UNCTAD/ICC Rules. The revised document is now before its Documentary Council and is expected to be approved in 1995. Furthermore, the Swiss Freight Forwarders' Association have used the UNCTAD/ICC Rules as the basis for the latest version of their own door-to-door transport document.

2. Developments of legislation and regulations at the national and subregional levels

107. In Pakistan, a draft law on multimodal transport has been drawn up and presented to the Government for consideration, while in India, changes in the current Multimodal Transport Act are being considered.

108. As part of a new draft treaty on maritime legislation for Central America, a chapter on multimodal transport legislation has been introduced. This chapter is based on the JUNAC decision 331 as amended and the draft project on multimodal transport of ALADI and MERCOSUR.

109. The European Community's (EC) Competition Directorate has banned members of the Far Eastern Freight Conference (FEFC) from agreeing on prices for inland transport services within the European Community territory. In a decision promulgated on 21 December 1994, 14 member lines were deemed to have infringed article 85 of the Treaty of Rome by their collective inland tariff-fixing, and 13 of them were fined ECU 10,000 (US$ 8,200). The FEFC has informed the EC of its intention to appeal to the European Court of First Intance. Some FEFC members have already drafted their own individual tariffs and - following precautionary advice from the FEFC - have notified customers that, in the light of the EC's decision, existing agreements on inland transport prices may be annulled at very short notice.[53]

B. Landbridges and other block train services

110. In Western Europe, several major ocean carriers and multimodal transport operators jointly put into operation shuttle-container train services - "European Rail Shuttle" - from the port of Rotterdam to Milan and to Gemersheim (Southern Germany). Other groups of shipowners also plan to combine their management of the inland movement of their containers on the European continent. With the reorganization of the operation activity of the European railways (EEC Directive 91/440), according to which, in particular, the network should be open to other intermodal operators, domestic and foreign, further development of such services may be expected.

111. With the revival of East-West trade in Europe, there has been an expansion of logistics services provided by Western carriers to the Commonwealth of Independent States (CIS) and other East and Central European countries with the implantation of their subsidiaries in these countries in order to provide door-to-door services. For example, a major liner operator of the United States is developing its rail-container services in a 50:50 joint venture with the Russian railways. It has introduced a two-block-trains-per-week service from Rotterdam to Moscow with a transit time of eight days. Beyond Moscow the carrier also serves other cities in CIS: Almaty, Ekaterinburg and Tashkent. At the Far-East end of the landbridge, the ports of Vladivostock and Vostochny serve as termini. On the Black Sea, the carrier has chosen the port of Novorossiysk as its terminus for rail service to interior destinations. It should be noted that Customs clearance procedures are arranged at the final destination rather than at the rail terminals. This streamlines the delivery process and eliminates delays at borders.

112. A new rail link between China and the CIS republics opened in 1992, but, in spite of the completion of double tracking on a 1,600-km stretch across western China, it did not attract much traffic. Shippers were frustrated by the separate tariffs assessed by each country along the route and by different Customs procedures at each border crossing. To improve the situation, an agreement on cooperation was signed on October 28 1994 by China, Russia and the republics of Kazakhstan, Kirgizia, Uzbekistan, Turkmenistan and Tadjikistan.

113. A memorandum of intent was signed in January 1995 between the transport ministries of Belarus, Germany, Poland and Russia on the modernization of the transport corridor Berlin-Warsaw-Minsk-Moscow for its utilization for rail/road intermodal transport services.[54] The purpose of the memorandum is to establish a pilot management committee to deal with administrative, financial and technical matters connected with the upgrading of this 1,800-km long transport corridor.

114. A significant increase in multimodal traffic in Europe has been registered in 1994 by the rail container transport operator, Intercontainer-Interfrigo (ICF), which transported 1,315,000 TEUs in 1994 (14.5 per cent increase in comparison with 1993). Further development saw the multimodal network "Qualitynet" for traffic between Belgium, Netherlands, Luxembourg, Switzerland, Italy and Spain first introduced in 1992. Qualitynet is based on the principle whereby containers, swap-bodies and semi-trailers heading for a variety of destinations are taken

on block trains from their place of departure to the hub at Metz (France), where new block trains are then formed and dispatched to their specific destinations. On average some 33 trains are formed daily at Metz.

115. The members of the International Union of Combined Rail-Road Companies (UIRR) also increased their volume of traffic consisting of the movement of swap-bodies, trailers and "rolling highway" trucks. This increase was especially noticeable in the Transalpine traffic. The opening of the Channel Tunnel for commercial operation has also stimulated the growth in multimodal transport in Intra-European movement of multimodal cargoes.

116. Malaysia has recently expanded its container block-train services between the major ports of Port Kelang and Penang and the interior of the country. A daily container block-train service is now operating to and from the two ports via Ipoh Cargo Terminal serving as an inland dry port. Similar inland dry ports that will enhance the use of door-to-door transport are being developed or planned in other regions of the country. The construction of a second track on the railway line will increase its capacity by approximately 40 per cent and will provide expanded opportunity for the development of intermodal traffic of containers. The project is expected to be commissioned in July 1995. The railway has created a subsidiary body, Multy Freight, which is geared to provide door-to-door service for its customers. Similar efforts to upgrade or to develop infrastructure, primarily rail, capacities have been made by other South East Asian countries.

117. In the United States, a further development of double-stack container train services became possible as the result of the completion of various tunnel clearance programmes. For example, the Santa Fe Railroad completed such a programme in Southern California. This permitted it to offer double-stack service (for two 9-foot-6-inch-high containers) to/from Northern California. It is estimated that the total volume of multimodal movements in the United States will reach 8 million units in 1994.

C. Multimodal river traffic in Europe

118. There was further development of container traffic on the main European inland waterways, primarily on the Rhine where the growth of container traffic in 1994 was about 20 per cent. It was estimated that in 1994 about 35 per cent of all container traffic between the port of Rotterdam and the German hinterland (800,000 TEUs in total) was carried by inland waterways.

119. One of the features in this field was the introduction of the concept of so-called "cargo centres" at river ports where shippers and freight forwarders are offered the possibility to use road, rail or inland waterway transport at their choice with a rapid multimodal exchange. The freight centres are used for repacking, labelling and other purposes, and to collect sufficient volumes of cargo to make it worthwhile to have rail and/or river services. The Rhine port of Duisburg is one such example. It is designed to become a combined traffic centre for the hinterland traffic of all maritime ports to the Antwerp/Rotterdam/Amsterdam range and is expanding its quays, shunting yard and terminals.

120. The opening of the Rhine-Main-Danube water link in 1992 connecting two of Europe's leading container ports, Rotterdam and Antwerp, and the Black Sea has expanded the range of multimodal possibilities of intra-European unit-load traffic between East and West European countries. However, owing to limitations inherent in the inland navigation and to this particular waterway (influence of water conditions, low speed, presence of numerous locks, limited size of vessels) as well as some external conditions (the blockade of the former Yugoslavia), by the end of 1994 there were only two container operators on this water link offering scheduled services. One of them provides weekly departures from Rotterdam/Antwerp using vessels of up to 78 TEUs capacity and serves several ports on the Danube including Linz, Vienna, Bratislava and Budapest, accommodating 20- and 40-foot containers, including high-cube containers. Until mid-October 1994, this service carried a total of approximately 6,500 TEUs in both directions, including empties. The freight rates are about 80 per cent of those offered by rail transport.[55] However, since the transit time proposed by river-container carriers is much longer than by rail or road, the volume of intra-European container traffic attracted by this route is limited. Nevertheless, it has demonstrated its attractiveness for moving low-cost, non-time sensitive containers on behalf of ocean carriers between Rotterdam/Antwerp and the Danube ports.

D. World container production

121. In 1994, 1.06 million TEUs were produced by the container manufacturing industry throughout the world. This represents a recovery in comparison with 1993, but does not attain the record of 1992 when 1.15 million TEUs were produced. This recovery was explained partly by the increase in new acquisitions by the leasing sector. The leasing

companies, in spite of the fact that their share in the total container population dropped from 51 per cent in 1987 to 45.5 per cent in 1994, has remained the main force behind overall fleet expansion since 1992, and they accounted for almost 70 per cent of the overall world container population growth.

122. A shift of manufacturing to new production centres in South-East Asia and the Peoples' Republic of China has continued, and in 1994 the Asian countries accounted for more than 75 per cent of the world container production. The Peoples' Republic of China became the biggest producer of containers in 1994 (283,000 TEUs) and its dominance is likely to continue for years. However, an expansion of the production capacities in this area has resulted in a regional oversupply and a lack of orders has led to an underutilization of production capacities and closure of several factories and production lines in Indonesia, the Peoples' Republic of China and Thailand. According to some estimates, the world's production capacity of dry freight containers by the end of 1994 was about 220 per cent of actual demand.

123. With many factories, principally in the Republic of Korea, converted to the production of reefer containers, as well as with the advent of reefer container-production capacities in the Peoples' Republic of China and India, overcapacity had also developed in the field of reefer containers, despite the growing demand for such containers in the world. Yet, in concrete numbers, the quantities of reefer containers remain small. In 1994, about 37,000 TEUs of reefer containers were produced worldwide, compared with 36,000 TEUs in 1993.[29]

124. With a view to addressing environmental issues in container production, the International Container Manufacturers Association (ICMA) has launched a "Green Label" programme. The purpose of the programme is to establish the criteria to certify that every container is produced in an "environmentally friendly manner". The criteria will cover the following aspects: solid and liquid wastes, gaseous and noise emissions, and choice of raw materials.

125. In line with the Montreal Protocol, the production of CFC refrigerant R12 for use in the fleet of refrigerated containers, was halted at the end of 1994. As a consequence, the question of retrofitting reefer containers for a new refrigerant became relevant. For new and retrofitted reefer containers, a CFC-free refrigerant (134a) is currently considered as dominant in the market although other refrigerants may become more popular in the future.

E. Container-leasing industry

126. Concentration continued in the container-leasing sector (which owns about 45 per cent of the total world container fleet). By the end of 1994, 55 per cent of all container-leasing companies' fleets (4,100,000 TEUs) were in the hands of the two major companies. According to the Institute of International Container Lessors (IICL), the current structure of the container leasing industry is divided into three groups: the major companies with over 900,000 TEUs in their fleets, of which there are two at present; the minor companies with 50,000 or fewer TEUs; and, in between these two groups, a middle group of leasing companies with fleets of between 100,000 and 400,000 TEUs, which are taking on a greater role in acquiring new containers. Total container-leasing companies' fleets increased from 3.7 million TEUs in 1993 to 10.8 per cent in 1994.

127. The introduction of EDI in the container industry between lessors, shipping lines and depots is proceeding rapidly. It allows leasing companies to communicate both with their clients, the shipping lines, and with their suppliers and their depots on a faster and more accurate basis. For example, the UN/EDIFACT CEDEX repair estimate message has already been implemented in hundreds of depots worldwide.

128. Major leasing companies bought approximately 714,000 TEUs in 1994, more than double the 320,000 TEUs planned at the beginning of the year. Concerning the composition of the container fleet, the shift towards 40-foot containers, which began some years ago, has continued though it has slowed. The percentage of 40-foot containers of the major leasing companies increased to 61.83 per cent in January 1995 from 61.23 per cent in January 1994. The composition of container fleet of these companies is shown in table 40.

F. Container dimensions

129. The situation concerning the dimensional characteristics of the world population of dry freight containers and its development over the last four years is seen in table 41. A rapid increase in the number of 40-foot containers and the phasing out of 8-foot-high containers, as well as the greater use of 9-foot-6-inch-high containers have been the main features of this development. There is a pronounced increase in the number of non-ISO overlength containers represented primarily in the United States domestic market.

Table 40

Composition of container population of the major leasing companies

Container length	Number of real units	Percentage share
20 foot	1 434 587	38.01
40 foot	1 116 735	61.83
45 foot	1 981	0.12
48 foot	679	0.04
Other lengths	50	0.001

Source: Institute of International Container Lessors.

Table 41

Distribution of the world container fleet by length and height
(TEUs)

Year	Length				Height				Total
	20 foot	40 foot	>40 foot	Others	8 foot	8 foot 6 inch	9 foot 6 inch	Others	
1990	2 846 027	2 921 056	89 157	17 844	162 755	5 228 631	436 651	46 047	5 874 084
1992	3 291 657	3 842 508	154 215	32 020	101 415	6 489 374	684 064	45 547	7 320 400
1994	3 484 228	4 550 774	262 580	41 850	95 998	7 157 756	1 039 650	46 028	8 339 432

Source: *Containerisation International* (London), January 1995.

130. In the absence of a global consensus on the future standards on container dimensions and with the idea of elaboration of standards for second generation ISO containers having been put on hold, the regional pressures for divergent dimensions of containers have become even stronger. As a result, divergent dimensional systems have to cohabit at interface points with the unavoidable burden of the price of incompatibility since certain types of non-ISO containers (e.g. 45-foot and 48-foot containers used by some ocean carriers in the Transpacific trades) cannot be considered as domestic.

131. The Japanese authorities enforced a new law in 1994 introducing strict control of maximum vehicle weights on its roads, which is limited to 26 tons. The law applies to all commercial vehicles, including trucks carrying containers. This measure, together with the limitation of the total permissible vehicle length, precludes the use of 45-foot and 48-foot containers beyond the port gates in Japan. However, according to the latest information, the Japanese authorities intend to permit the movement of containers up to 30 tons.

132. The pace of the introduction of domestic containers in the United States is shown in table 42, composed on the basis of the census conducted by Xtra Intermodal. There was a big jump in the number of domestic containers during eight months due to a massive introduction of 48-foot units. Contrary to this, the absolute number of 45-foot and 53-foot units during that period decreased. According to Xtra Intermodal, this growth includes 8,000 to 9,000 units

that were built speculatively and did not find customers.

133. In Europe, where, according to some estimates, about 90 per cent of goods are palletized, the common thread in the introduction of new types of equipment is therefore their ability to optimise the transport of the most commonly used types of pallets (800 x 1200 mm). Here the road transport is the main link in the logistics chain and this mode of transport determines dimensional and weight parameters for intermodal equipment. ISO standard containers are practically not used in domestic road and intermodal transport on the continent.

134. In January 1994, the European Commission submitted a proposal for a directive laying down maximum weights and dimensions for road vehicles in all EU countries. The directive will determine the maximum dimensions and weights of containers and other intermodal units. But since the perspectives of acceptance of the directive are apparently still distant, some countries have introduced regulations at the national level. Germany, for example, has authorized a vehicle width of 2.55 m, several North-European countries authorize 2.6 m, whereas in most other countries the width of road vehicles must not exceed 2.5 m, except for refrigerated equipment for which 2.6 m is authorized.

135. A remarkable innovation on the European continent has been the introduction of three-stackable 7.15-m swap-bodies with steel roofs, top-corner fittings for spreaders, full-end walls and sliding curtain sides, as well as container-look-alike 13.6-m swap-bodies. The tests of this type of equipment proved that it had a potential in intermodal transport in Europe. Another development concerned the use of swap-bodies and inland containers with external heights of 2.80, 3.0 and even 3.15 m. Such equipment targets specifically light-weight volume cargo. However, its use is confined to rail corridors that provide sufficient clearance. In any case, they always require special low-bed wagons. For road transportation, specialized low-bed chassis are also used.

Table 42

Introduction of domestic containers in the United States

Container length	September 1990	October 1991	October 1992	October 1993	June 1994	Percentage change June 1994 from October 1993
45 foot	2 300	2 845	2 225	2 175	1 240	-43.0
48 foot	17 784	19 516	25 297	34 234	49 782	45.4
53 foot	1 300	1 700	1 493	1 843	1 770	-4.0
Total	22 384	24 061	29 015	38 252	52 792	38.0

Source: *Cargo Systems*, October 1994, p. 8.

Box 8

End of introduction period for the FIATA multimodal transport B/L

The UNCTAD/ICC Rules for Multimodal Transport Documents, in the elaboration of which FIATA had actively participated, have replaced the previous, to some extent outdated ICC Uniform Rules for a Combined Transport Document. After the new UNCTAD/ICC Rules had come into force, it was only natural to base the FIATA FBL on these Rules and to revise the document accordingly.

In August 1993 the International Chamber of Commerce granted FIATA permission to show the ICC logo on the revised FBL - the FIATA Multimodal Transport Bill of Lading as it was named following the underlying Rules. After that FIATA introduced the document with national freight forwarders associations which are Ordinary FIATA members. To give Ordinary FIATA members sufficient time to prepare for mandatory liability insurance cover of the FIATA Multimodal Transport Bill of Lading and to give national freight forwarders' associations as well as freight forwarders the opportunity to use up old stocks of the previous FIATA Combined Transport Bill of Lading, FIATA has granted a transition period of six months for the replacement of the "old" FIATA FBL by the FIATA Multimodal Transport Bill of Lading. This period ended on 28 February 1994; which means that following that date only FIATA Multimodal Transport Bill of Lading may be issued and no FIATA Combined Transport Bills of Lading may be used any more.

To protect the copyright of the FIATA Multimodal Transport Bill of Lading, FIATA concluded licence agreements with its Ordinary members in which also the duties of Ordinary FIATA members in view of the FIATA Multimodal Transport Bill of Lading are laid down, such as control on the issuance of the documents, and the obligation to ensure that the new FIATA FBLs issued are sufficiently backed up by liability insurance cover.

On 7 March 1994, Ordinary FIATA members in 33 countries had signed the licence agreement and submitted to FIATA a correct proof of their FIATA Multimodal Transport Bill of Lading to be used in their country.

Source: *International Transport Journal*, No. 11/94, 18 March 1994.

Chapter VIII

OTHER DEVELOPMENTS

This chapter updates the status of various international agreements dealing with maritime transport and its related industries' activities, outlines UNCTAD's initiatives in technical assistance and training, and features new developments concerned.

A. WTO Negotiating Group on Maritime Transport Services

136. At its Ministerial meeting in Marrakesh from 12 to 15 April 1994, the Trade Negotiations Committee of GATT adopted the Decision on Negotiations on Maritime Transport Services. The Decision established the Negotiating Group on Maritime Transport Services (NGMTS) and requested it to hold its first meeting no later than 16 May 1994. The mandate of the NGMTS is to hold comprehensive negotiations aiming at commitments in international shipping, auxiliary services and access to and use of port facilities, leading to the elimination of restrictions within a fixed time scale.[57]

137. By the end of 1994, 37 countries were members of the NGMTS, while 10 countries and 3 international organizations (World Bank, UNCTAD and OECD) had acquired observer status. Substantive deliberations of the three meetings held in 1994 concentrated on the development of an information base that would provide details of the characteristics of the maritime sectors of the countries participating in the work of the NGMTS. To this end, the Group designed an extensive questionnaire that would provide the basis for further discussions on the state of maritime affairs and would consequently facilitate negotiations on commitments, which are expected to commence in the second half of 1995.

B. Conventions on Maritime Transport

United Nations Convention on a Code of Conduct for Liner Conferences

138. The United Nations Convention on a Code of Conduct for Liner Conferences[58] came into force on 6 October 1983. By the end of 1994, the number of Contracting Parties had reached 78, namely: Algeria; Bangladesh; Barbados; Belgium; Benin; Bulgaria; Burkina Faso; Cameroon; Cape Verde; Central African Republic; Chile; China; Congo; Costa Rica; Côte d'Ivoire; Cuba; Czech Republic; Denmark (except Greenland and the Faeroe Islands); Egypt; Ethiopia; Finland; France; Gabon; Gambia; Germany; Ghana; Guatemala; Guinea; Guyana; Honduras; India; Indonesia; Iraq; Italy; Jamaica; Jordan; Kenya; Kuwait; Lebanon; Madagascar; Malaysia; Mali; Mauritania; Mauritius; Mexico; Morocco; Mozambique; Netherlands (for the Kingdom in Europe and Aruba); Niger; Nigeria; Norway; Pakistan; Peru; Philippines; Portugal; Qatar; Republic of Korea; Romania; Russian Federation; Saudi Arabia; Senegal; Sierra Leone; Slovakia; Spain; Somalia; Sri Lanka; Sudan; Sweden; Togo; Trinidad and Tobago; Tunisia; United Kingdom of Great Britain and Northern Ireland (on behalf of the United Kingdom, Gibraltar and Hong Kong); United Republic of Tanzania; Uruguay; Venezuela; Yugoslavia; Zaire; Zambia.

United Nations Convention on International Multimodal Transport of Goods

139. This Convention,[59] adopted by consensus on 24 May 1980 by the United Nations Conference of Plenipotentiaries, was opened for signature in New York from 1 September 1980 to 31 August 1981 and remained open for accession thereafter. It will enter into force 12 months after 30 States have become contracting parties by definitive signature, ratification or accession. By the end of 1994, the Convention had been ratified/acceded to by the following seven States: Chile, Malawi, Mexico, Morocco, Rwanda, Senegal and Zambia. Another two countries - Norway and Venezuela - have signed the Convention subject to ratification.

United Nations Convention on Conditions for Registration of Ships

140. The United Nations Convention on Conditions for Registration of Ships was adopted by consensus on 7 February 1986 by the United Nations Conference on Conditions for Registration of Ships at the fourth part of its session.[60] The Convention contains a set of minimum conditions which should be applied and observed by States when accepting ships on their ship register(s). It defines the elements of the "genuine link" that should exist between a ship and the State whose flag it flies, and thus contains provisions for the participation by nationals of the flag State in the ownership, manning and management of

Box 9

IMO pollution regime will end TOVALOP

The chances of the IMO's updated oil pollution liability and compensation regime entering into force soon are steadily improving and all indications are that the conditions for entry into force will be met by the middle of 1995. If this happens, the new rules, which link liability obligations with compulsory insurance requirements, will enter into force a year later, by mid-1996, and the voluntary industry scheme, known as TOVALOP, will be abolished.

TOVALOP was established by the tanker industry in the immediate aftermath of the *Torrey Canyon*. At the time, it was widely welcomed as a timely response to growing environmental concern, although cynics would have said that TOVALOP was a clever ploy of the world's most powerful tanker owners to stave off stricter legislation. Whatever one's view, the fact remains that TOVALOP, in which some 97 per cent of the world's tanker tonnage is entered, has become a household name in the marine world for providing essential prompt assistance in handling and settling pollution damage claims.

The International Tanker Owners' Pollution Federation (ITOPF), a non-profit making organization that administers TOVALOP, celebrated its twenty-fifth anniversary in October. The federation too has become a marine household name as a technical expert providing advice and assistance at the scenes of spills and liaising closely with P&I clubs.

The 1992 Protocols to the 1969 Civil Liability Convention (CLC) and the 1971 Fund Convention each have now been ratified by six States. These are: France, Germany, Japan, Mexico, Oman and the United Kingdom. To meet the ratification requirements in full, the 1992 CLC Protocol needs four more ratifications and this must include one State with more than 1 Mgt of tankers on its register. An IMO spokesperson said it was hoped that Norway, which fulfils this particular requirement, would ratify soon.

The six-State ratification of the 1992 Fund Protocol meets the minimum oil volume which is required for this protocol's entry into force, which is 450 Mt of crude oil imported in contracting States. But it still needs to be ratified by two more States.

Talks are already underway with P&I clubs and other interested parties to secure the continued operation of ITOPF after the disappearance of TOVALOP.

Source: *Lloyd's Ship Manager*, November 1994.

ships. The Convention also stipulates that flag States are required to exercise effectively their jurisdiction and control over ships flying their flag. It also provides for the establishment by a flag State of a competent and adequate national maritime administration which is responsible for a number of specific tasks such as ensuring that a ship flying its flag complies with the State's laws and regulations concerning registration of ships and complies with applicable international rules and standards concerned with the safety of ships and persons on board and the prevention of pollution of the marine environment. The Convention will enter into force 12 months after the date on which no less than 40 States, the combined tonnage of which amounts to at least 25 per cent of world tonnage, as stipulated in annex III to the Convention, have become Contracting Parties to it. By the end of 1994, the Convention had been ratified by the following nine States: Côte d'Ivoire, Egypt, Ghana, Haiti, Hungary, Iraq, Libyan Arab Jamahiriya, Mexico and Oman. Another 10 States had signed the Convention subject to ratification, acceptance or approval: Algeria, Bolivia, Cameroon, Czech Republic, Indonesia, Morocco, Poland, Russian Federation, Senegal and Slovakia.

United Nations Convention on the Carriage of Goods by Sea, 1978 (Hamburg Rules)

141. The United Nations Convention on the Carriage of Goods by Sea, 1978,[91] came into force on 1 November 1992. By the end of 1994, the number of Contracting Parties had reached 22, namely: Austria, Barbados, Botswana, Burkina Faso, Cameroon, Chile, Egypt, Guinea, Hungary, Kenya, Lebanon, Lesotho, Malawi, Morocco, Nigeria, Romania, Senegal, Sierra Leone, Tunisia, Uganda, United Republic of Tanzania and Zambia. Additionally, 22 countries have signed the Convention subject to ratification.

International Convention on Maritime Liens and Mortgages, 1993

142. The Convention was adopted by consensus on 6 May 1993 by the United Nations/International Maritime Organization Conference of Plenipotentiaries on a Convention on Maritime Liens and Mortgages, which met at Geneva for a period of three weeks. The Convention is intended to improve conditions for ship financing and the development of national merchant fleets and to promote international uniformity in the field of maritime liens and mortgages. The Convention was opened for signature at United Nations Headquarters in New York from 1 September 1993 to 31 August 1994 and has remained open for accession thereafter. It will enter into force six months following the date on which 10 States have expressed their consent to be bound by it. By the end of 1994, there were 11 signatories subject to ratification namely: Brazil, China, Denmark, Finland, Germany, Guinea, Morocco, Norway, Paraguay, Sweden and Tunisia.[92]

Review of the 1952 Convention on Arrest of Ships

143. The Joint UNCTAD/IMO Intergovernmental Group of Experts met in Geneva from 5 to 9 December 1994, in order to examine the possible review of the International Convention for the Unification of Certain Rules relating to the Arrest of Sea-going Ships, 1952. The Joint Group, having completed preliminary consideration of the subject, prepared a set of "Draft articles for a Convention on the Arrest of Ships".[93] The draft articles are based on the Draft Revision of the 1952 Convention on Arrest of Ships prepared by the Comité Maritime International (CMI), the changes required as a results of the adoption of the International Convention on Maritime Liens and Mortgages, 1993 and the views expressed by delegations during the session. The Joint Group, having held a preliminary exchange of views on the draft articles, agreed to continue the examination of the subject at its next session, which is to be held at IMO headquarters in London in October 1995.

C. Technical cooperation and training

144. The volume of UNCTAD's technical cooperation and training activities in shipping, ports and multimodal transport increased by 13 per cent in 1994. A total of 33 projects was being carried out during the year with a total expenditure of $3.4 million (compared to 34 projects totalling $3.0 million in 1993).

145. Twenty policy seminars were conducted in shipping, ports and multimodal transport in 1994. These included multimodal transport workshops designed to inform government officials and potential multimodal transport operators of the benefits from involvement in this activity, UNCTAD's Strategic Planning Workshop for Senior Management (Stratship) and seminars on Container Terminal Management and the Commercial Role of Ports.

146. The TRAINMAR programme continued to provide support to institutions organizing management training in shipping, ports and multimodal transport. Three new TRAINMAR projects got under way during the year: a subregional project in Southern

Africa to help strengthen the maritime training sector in Angola and Mozambique, a national project in Romania to examine the training needs in maritime transport and to prepare a plan for the development of the maritime school in Constanza to meet these needs, and an interregional project to prepare a training course on short sea shipping.

147. The first of a series of four regional UNCTAD/BIMCO Colloquia on Charter Parties and Ship Financing was held in Santiago, Chile, from 19 to 27 October 1994 for participants from 16 Latin American countries. The objective of this colloquium, to which the IMO, the Economic Commission for Latin America and the Caribbean (ECLAC), the *Comité Maritime International* (CMI), the *Instituto Iberamericano de Derecho Maritimo* and the private sector all contributed, was to analyse the terms of charter parties most commonly used in the trade of the region, to brief the audience on recent changes and to promote discussion among the various countries and organizations represented.

148. UNCTAD continued the development and implementation of the Advance Cargo Information System (ACIS) in sub-Saharan Africa. Further work was carried out during the year to extend Railtracker, the module which tracks cargo along railway networks, in Burkina Faso, Senegal and the United Republic of Tanzania. A proposal for the installation of all the ACIS modules in Burundi, Kenya, Rwanda, the United Republic of Tanzania, Uganda and Zambia was approved by the European Development Fund in September 1994. This subregional project, which will be executed jointly by the Common Market of Eastern and Southern Africa (COMESA) and UNCTAD, will commence in the middle of 1995.

149. UNCTAD continued its involvement in the rehabilitation and management of ports in Somalia. An UNCTAD team acted as the Mogadishu Port Authority throughout 1994 and a national ports and transport unit was established during the year to advise the United Nations Operation in Somalia (UNOSOM) and the future Somali Government on all aspects of port policy. Towards the end of 1994, arrangements were made to transfer the management of the Port of Mogadishu to Somali counterparts and to establish a Board of Directors for the Port of Berbera in cooperation with the European Union's Office for Somalia.

150. In 1994, two multimodal transport projects were initiated in Mozambique and Colombia. The objective of the project in Mozambique is to promote sustainable growth of foreign trade by correcting inefficiencies in the trade and transport system. The first phase, completed in December 1994, identified a number of measures to facilitate trade flows and promote national transport activities. A national trade and transport facilitation committee was created and help was provided to the Customs Administration to install UNCTAD's automated system for customs data (ASYCUDA). In Colombia, a smaller, three-month project was conducted to:

- create the legal and institutional basis for the development of multimodal transport;
- assess the management capacity of national transport operators wishing to develop international transport activities; and
- prepare for the introduction of EDI technology in government agencies and among the providers and users of transport services.

D United Nations International Symposium on Trade Efficiency

151. Ministers and decision makers from all regions of the world met in Columbus, Ohio (United States) in October 1994 to propose innovative ways to improve efficiency in international trade, which could result in a reduction of transaction costs of up to US$ 100 billion annually by the year 2000. The ministers adopted a set of practical recommendations for immediate action in the key sectors of trade-related services: trade information, transport, telecommunications, business practices, customs, and banking and insurance, and also officially launched the Trade Point Global Network. In the field of transport, it was recommended that governments "... should review transport legislation with a view to encouraging the adoption of commercial practices in the transport chain and the investment by both domestic and foreign investors. They should implement specific transport operations improvements and encourage establishment of regional databases on transport."

152. Trade points are construed as "a valuable source of full, impartial and accurate information on all aspects of trade transactions." Trade Points should provide export clients, particularly small and medium-sized enterprises, with comprehensive financial advisory services, establish a computerized database of qualified financial service providers, as well as a database for providers of financing, payments services, credit insurance and credit information. They should be prepared to advise clients on available pre-shipment financing facilities.

Box 10

Shippers aim to tip the balance of power

In years to come the meeting in Brussels between European, American and Japanese shippers' organizations may well be seen as a milestone on the road to a major shift in the balance of power between shipping companies and those who use their vessels.

The declaration signed by the European Shippers' Council (ESC), the Japan Shippers' Council and the US's National Industrial Transportation League was, however, deceptively banal in its contents, which can be resumed as follows:

The signatories, despite being separated by competition as industrialists and traders, have shared interests in ensuring that their goods are transported in a reliable and cost efficient manner. Shipping services must be freed of all forms of price fixing and other obstacles to free and fair competition and rendered subject to the normal forces of supply and demand. Shipping companies should provide flexible and clearly understandable price mechanisms based on purely commercial principles and taking into account the interests of all categories of shippers. Shippers propose cooperating with shipowners with the aim of modernizing shipping services and business procedures.

So apparently banal were the terms of the declaration that the ESC's General Secretary felt obliged to address himself to journalists present at the signing ceremony at the headquarters of the Belgian employers' federation. "For the general interest press, it must seem strange to hear people saying that they want to have a normal business relationship with their suppliers and that they want normal competitive forces to determine the market. This is the case, however, in shipping, where we have a very specific situation. From the shippers' point of view, this very specific situation is essentially the privileged status enjoyed by shipping companies in relation to the competition laws and regulations to which the shippers as industrialists and traders are generally subject. This is embodied in the freedom accorded shipping companies to form conferences and other comparable structures which enable them to a greater or lesser extent to fix the prices and conditions of the services they offer to shippers." What the shippers had to say on this subject in Brussels was not in any way new.

European shippers, in particular, have stated and restated their position, most notably in recent months in relation to the efforts of shipping companies to impose the Trans-Atlantic Agreement and now its successor the Trans-Atlantic Conference Agreement in the regular line trade in the North Atlantic. What was new, however, was the fact that European, Japanese and American shippers were stating their position together for the first time, making it clear that the battle of the North Atlantic is only one aspect of a wider struggle by shippers to redress the historical imbalance which they see as characterizing their relations with the shipping companies.

Speakers were unanimous in their insistence that shipping companies must cease seeking to be treated as a sector apart and accept that they are part of the industrial chain just like other suppliers of services. The logic of the shippers is clear. They believe that, as producers and therefore the central element in what the new French ESC chairman called the "industrial act", they are the ones who should be setting the game plan.

Why they have taken so long to become conscious of their leadership role is less clear. One explanation lies in the fact that, as the shippers themselves explained, as industrialists, they are competitors and, therefore, not naturally inclined to concerted action. Another, however, is the emergence of the European Union as a force in world trade with its seriously policed arsenal of competition regulations.

The Chairman of the United States' National Industrial Transportation League (NITL) said: "You in Europe are ahead of us in the US in that you have competition regulations on which to base yourselves." In the US, he said, free trade principles were widely proclaimed but much less widely practised.

Box 10 (continued)

The President of NITL deplored the decision of the Federal Maritime Commission (FMC) to approve the Trans-Atlantic Conference Agreement after first having opposed it, following consultations with the shipping companies but not with US shippers. The FMC defended itself by pointing to the fact that it had a statutory duty to consult shipping companies not shippers, he said, but this did not mean that it could not consult shippers. "When it comes to maritime policy, you still have a federal government agency sitting with one side, the carriers," he said. "We find that process entirely unacceptable and, therefore, any agreement coming out of it is also unacceptable."

Though there was some scepticism about the reality of the Japan Shippers' Council's commitment to the declaration, given the fact that some of Japan's biggest industrial conglomerates have their own integrated shipping operations, the JSC managing director insisted that he was at one with his European and American colleagues. Even in cases where groups operated their own shipping companies, negotiations between the different units concerned had to be conducted on a strictly commercial basis. He was particularly pleased that the tripartite meeting in Brussels had ended the estrangement between Japanese and US shippers stemming from differences over US shipping legislation in the mid-1980s.

Previously, the JSC had had regular contacts with fellow Asian shippers' organizations and the ESC but not with the NITL. "In this respect, I think it is very, very significant that we can now communicate with the American shippers' council," he said. At tripartite level, the aims of the participants do not go much beyond communication and coordination at this point. They deny that they have any plans at the moment to create a world shippers' organization and their programme of common action does not go beyond an agreement to meet again in Tokyo in October 1995.

The ESC chairman insisted, moreover, that the shippers do not want war with the shipping companies but constructive dialogue, even if this implied painful changes in their ways of thinking and operating for shipping companies. "The world is now a little village," he said, "and our industries will survive only if we adapt to the market."

Source: *Lloyd's List* (London), 1 November 1994.

Chapter IX

REVIEW OF REGIONAL DEVELOPMENTS - LATIN AMERICA

This chapter reviews the expanding global and intraregional trades in Latin America, along with the developments of shipping and related services, with special emphasis placed on developments in South America.

A. Economic background

1. Debt crisis and recovery

153. In the period from the early 1970s through the early 1980s, traditional exports of South American countries gradually lost in importance due not only to competition from alternative sources of supply but also to structural changes resulting in increasing exports of manufactured goods and the emergence of new products and markets. South American countries needed more capital investments in order to increase their production and exports of manufactured goods (their share of world exports of manufactured goods was 1 per cent in 1970) and thus to improve their trade balance.[64] Consequently, many countries obtained extensive credit facilities from international financing institutions, causing a tremendous increase in external debt. Since the early 1980s, they had experienced a severe debt crisis, which reversed the economic progress they had attained in the preceding decade. The emerging debt crisis was exacerbated by a steep increase in international interest rates, the serious recession in the developed market-economy countries, and a sharp drop in the prices of commodities exported by the countries in the region. The basic strategy (which was actually forged in the early and mid-1980s) to conquer the crisis and to facilitate economic recovery also involved strong adjustment efforts by debtor countries, cooperative action by lenders and creditors, and strengthening of policies in developed market-economy countries to improve their external economic circumstances.[65]

2. Trade reforms

154. In the late 1980s and early 1990s, policies were designed and implemented to further strengthen subregional integration among Latin American countries (as shown in table 43). Existing cooperative arrangements, such as the ANDEAN Pact and the Central American Common Market, were strengthened and new ones created.

155. One of the new integration arrangements is the Southern Cone Common Market (MERCOSUR), which aims at fostering intraregional trades.[66] In fact, in the MERCOSUR countries from 1987 to 1993 the share of intra-member trade increased in Argentina from 22 per cent to almost 40 per cent, in Brazil 13 to 23 per cent and in Uruguay from about 30 to some 48 per cent.[67] Moreover, although the increasing share of intraregional trade might have involved some diversion of trade from the rest of the world, for many countries there was also significant trade creation from outside the region. During the period from 1987 through to 1993, Argentina expanded the value of its total trade to GDP from 13 to 20 per cent, Chile from 56 to 73 per cent, and Colombia from 37 to 44 per cent.[68]

3. Further adjustment and consolidation

156. The region overall made substantial progress in reducing trade imbalances, lowering inflation and improving economic growth during the period from 1990 through 1993. Much of the progress was attributable to the tightening of fiscal policies and the reinforcing of structural reforms. In this period, government control and intervention in a large number of loss-making public enterprises and financial institutions was gradually reduced. Privatization and liberalization also promoted diversifications of public enterprises and organizations.[69] In line with the rapid trend towards liberalization, domestic price controls were reduced or lifted in most countries, and business activity was deregulated in a number of sectors. Within the transportation sector, substantial deregulation was executed in maritime transportation and port operations.[70]

4. Macroeconomic performance

(a) Real GDP

157. As indicated in table 44, seven countries of South America registered an increase in real GDP of more than 3 per cent in 1993 compared to 1992. The 1993 average increase in real GDP of Latin American countries, including South America, Central America and the Caribbean, was 3.4 per cent, which was the highest since 1987, and also higher than the average annual growth of 3.3 per cent for the period from 1976 through 1985. Among them, Peru marked the highest leap (7 per cent) from 1992 when it had been suffering negative growth since 1988, with the

Table 43

Latin American free trade initiatives

Country	Name	Year	Highlight
Bolivia, Colombia, Ecuador, Peru, Venezuela	Andean Pact - "Cartagena Agreement"	1969	Chile part of original agreement.
United States and Andean Pact	Andean Trade Preference Act	1992	Selected products.
Chile-Mexico		1991	Tariff phase-out 1998.
Chile-Venezuela		1993	Eliminate tariffs on 300 products by 1996.
Chile-Bolivia		1993	Reduce tariffs on 100 products.
Argentina, Brazil, Paraguay, Uruguay	Mercosur - Southern Cone Common Market	1991	Entry into force 1995.
Mexico-Colombia, Venezuela	Mexican Free Trade Agreement (G-3)	1992	Free trade by 2000.
Central America-Colombia, Venezuela, Mexico	Caracas Declaration	1993	Free trade by 2000, G-3 discussions with Central America 5.
Mexico-Central America (5)		1992	Tariff phase-out 1996.
Venezuela-Central America (5)		1992	
Bolivia/Argentina		1994	Mutual tariff cuts
Bolivia/Brazil		1994	Selected products. Share business information.
Bolivia/Paraguay		1994	Covers 200 products.
Bolivia/Uruguay		1994	Mutual tariff cuts.
Central American Common Market	SICA	1993	Belize, Costa Rica, Panama to join later. Tariff cuts on intraregional trade to 5-20%.
Chile/Colombia		1994	Zero tariffs targeted for five-year stage-in. 40% of current products exempted from tariff as of January.
Chile/Ecuador			Technical accords, agreed to negotiate a bilateral trade agreement in 1994.
Colombia/Mexico/ Venezuela and 14 Caribbean nations	Association of Caribbean States	1994	Closer trade ties and greater intra-group investment and cooperation are the goals.
Colombia/Venezuela		1991	Bilateral tariff-free pact.
Costa Rica/Mexico		1994	Covers goods, labour, services, some intellectual property. Tariffs to be reduced over 10 years starting January 1995.
Cuba/Chile		1994	Bilateral trade accord.
Uruguay/Brazil	Trade Expansion Protocol	1975	Gives Uruguay duty-free concessions on 1,880 agricultural and manufactured products.

Source: DRI/McGraw-Hill, *World Sea Trade Service*, Third Quarter, 1994.

exception of 1991. Brazil also reversed a negative growth of 0.9 per cent in 1992, attaining 5 per cent in 1993. In 1993, Argentina and Chile grew at 6 per cent each with their performance somewhat down from 1992, when they recorded growth rates of 8.7 per cent and 10.3 per cent, respectively. Chile, specifically, has accomplished an average growth of 6.9 per cent per annum since 1986, following a period at 3.5 per cent from 1976 to 1985. Colombia has attained the second highest average annual growth with 4.2 per cent since 1986. On the other hand, the real GDPs of Ecuador and Venezuela diminished in 1993.

(b) Merchandise trade

158. Data on the foreign trade structure of Latin American countries in terms of commodity groups and direction of trade are shown in table 45. Major export items are fuels, manufactured goods and food items, which are mainly traded with the developed countries of North America and Europe. Imports are dominated largely by manufactured goods, which account for nearly 75 per cent of the total trade. Equal in terms of geographic structure, they are dominated by trades with North American countries (43.7 per cent of all imports). Intraregional trade is developing positively and accounts for 17 per cent of all exports and 15 per cent of all imports of Latin American countries.

159. Table 46 compares yearly developments of merchandise trades of Latin American countries and Far Eastern NIEs. The exports of the former group increased at the average annual growth rate of 5.3 per cent in value and 5.2 per cent in volume, while the imports rose tremendously at 12.3 per cent per year in value and 8.5 per cent in volume over the period from 1986 through 1992. This difference between exports and imports widened further over the period from 1990 through to 1992. The average annual growth rate for exports was 4.4 per cent in value and 6.0 per cent in volume, while for imports it was 16.3 per cent in value and 14.4 per cent in volume. From 1993 onwards, it was expected that exports and imports would be comparatively well balanced thanks mostly to the vigorous growth of intra-South American trade and the expansion of exports to the United States due to its economic recovery.[21] The trades of Far Eastern NIEs, on the other hand, expanded for exports at the average annual growth rate of 17.9 per cent in value and 13.2 per cent in volume and for imports at 19.2 per cent in value and 16.3 per cent in volume over the same period.

Table 44

Real GDP of the countries of South America
(Annual percentage change, 1976-1993)

	Average 1976-1985	1986	1987	1988	1989	1990	1991	1992	1993
Latin America	3.3	4.0	3.4	1.0	1.6	0.3	3.3	2.5	3.4
Argentina	-0.5	7.3	2.6	-1.9	-6.2	0.1	8.9	8.7	6.0
Bolivia	0.4	-2.5	2.6	3.0	2.8	2.6	4.1	2.7	3.2
Brazil	4.0	7.6	3.6	0.3	3.3	-4.4	0.9	-0.9	5.0
Chile	3.5	5.6	6.6	7.3	10.2	3.0	6.1	10.3	6.0
Colombia	3.8	5.8	5.4	4.1	3.4	4.3	2.1	3.5	5.2
Ecuador	4.3	3.1	-5.9	10.5	0.3	3.0	4.9	3.5	1.7
Paraguay	6.4	-	4.3	6.4	5.8	3.1	2.5	1.8	3.7
Peru	1.1	9.2	8.3	-8.2	-11.6	-4.4	2.7	-2.8	7.0
Uruguay	0.9	8.8	7.9	-	1.3	0.9	2.9	7.4	1.7
Venezuela	1.2	6.5	3.6	5.8	-8.6	6.5	9.7	6.8	-1.0

Source: Compiled by UNCTAD secretariat on the basis of data in IMF, *World Economic Outlook*, May 1994.

Table 45

Foreign trade structure of Latin American countries
(1991, total in thousand million US$, regional allocation in percentages)

Destination / Commodity groups	World total	North America	Europe	Japan	Latin America	Others
	EXPORT					
All products	136.6	37.0	26.0	5.6	16.9	14.4
of which:						
All food items	35.8	26.0	36.0	4.5	11.9	21.6
Agricultural raw materials	4.2	23.0	29.8	11.8	17.6	17.8
Ore and metals	15.0	19.2	36.9	20.5	8.7	14.7
Fuels	37.4	51.2	23.6	2.9	13.7	8.6
Manufactured goods	42.6	41.8	15.6	3.0	27.2	12.4
	IMPORT					
All products	150.0	42.5	21.6	8.2	15.4	12.3
of which:						
All food items	14.6	41.6	20.2	0.1	29.4	8.7
Agricultural raw materials	3.2	53.3	8.0	0.6	24.0	14.1
Ore and metals	3.0	41.8	8.5	0.7	42.7	6.3
Fuels	13.2	20.9	2.5	0.7	38.9	37.0
Manufactured goods	111.6	43.7	25.2	10.8	10.4	9.9

Source: UNCTAD, *Handbook of International Trade and Development Statistics, 1993* (United Nations publication, Sales No. E/F.94.II.D.24) tables 3.2 and 3.3, pages 84-85, 104-105.

Table 46

Merchandise trades of Latin American countries and Far Eastern NIEs
(Annual percentage change 1976-1993)

			Average 1976-1985	1986	1987	1988	1989	1990	1991	1992	1993
Latin America	Value a/	Export	10.0	-16.0	12.6	17.1	10.2	9.7	-1.2	4.7	5.4
		Import	4.0	2.2	12.2	15.8	7.1	12.0	16.6	20.2	7.5
	Volume	Export	4.2	-5.4	8.8	10.1	4.7	6.2	5.1	6.7	8.0
		Import	-1.1	4.1	2.6	7.6	2.3	7.8	17.3	18.0	8.0
Far Eastern NIEs	Value a/	Export	17.7	19.9	34.7	26.0	10.2	7.8	14.3	12.1	10.8
		Import	14.6	11.3	35.0	32.6	12.8	13.8	16.5	12.7	11.2
	Volume	Export	11.6	21.2	21.9	16.1	3.6	6.2	12.7	11.0	11.3
		Import	8.4	17.1	24.3	23.2	8.2	12.5	16.0	12.9	9.5

Source: Compiled by the UNCTAD secretariat on the basis of data in IMF, *World Economic Outlook*, May 1994.

a/ In United States dollars.

5. Cargo preference policy - Cargo reservation law and its promulgation and abolition

160. National merchant fleets were believed to be of vital economic and security interest by many of the world's governments, and in order to ensure that these interests were upheld, many governments developed a variety of aids and subsidies in support of their merchant fleets. These aids included ship construction and operating subsidies, official loan guarantees, interest subsidies, cargo-preference schemes, etc.

161. Under the cargo-preference scheme, South American countries, as well as other countries, promulgated and executed merchant marine programmes in the late 1960s and early 1970s, which guaranteed the country's national-flag operators privileged access to cargoes generated by the respective countries' seaborne foreign trade. The market segments affected by preference schemes varied from one country to another, ranging from general (liner) cargo to liquid/dry bulk cargo. Additionally, a number of countries had concluded maritime transportation agreements, which generally provided for equal access to cargoes by the country's national-flag ships and the ships of the trading partner.[72]

162. From the mid-1980s, cargo-reservation laws came under attack from trading circles, that felt adversely affected by the anticompetitive character of this type of legislation and by its impact on the level of liner freight rates. In the late-1980s and early 1990s, most cargo-preference laws were reformed or phased out in many South American countries. It is generally recognized that during nearly 20 years of its execution, this law made an intensive contribution to the development of the countries' shipping industries, increased the fleet tonnage and contributed to the improvement of the managerial expertise in the shipping industry and the creation of direct and indirect employment of a great number of people necessary for the management and operation of the expanded fleet.

163. After phasing out the cargo-reservation scheme, more shipping companies from outside the region came to serve South America's foreign trades, which proved to be advantageous for local shippers who benefited from a wider choice of carriers and much improved sailing frequencies. At the same time, freight rates decreased considerably both in East and West Coast trades, thus resulting in a short-term improvement of the competitive position of South American exporters in international markets. The actual development of freight rates for selected commodities in the Brazil-Europe trade is reflected in graph 14.

B. General situation of merchant fleets of Latin America

164. Table 47 provides data on the overall development of the merchant fleets of the world and Latin American countries by principal types of ship. The total tonnage of all the Latin American countries had increased from 3.2 per cent of the world total in 1980 to 3.9 per cent in 1990 and has remained at that level since (4.0 per cent in 1994). General cargo ships and containerships represented the most steady expansion of the world total respectively from 5.6 per cent and 0.1 per cent in 1980, to 6.1 per cent and 1.4 per cent in 1990, and to 7.7 per cent and 3.0 per cent in 1994.

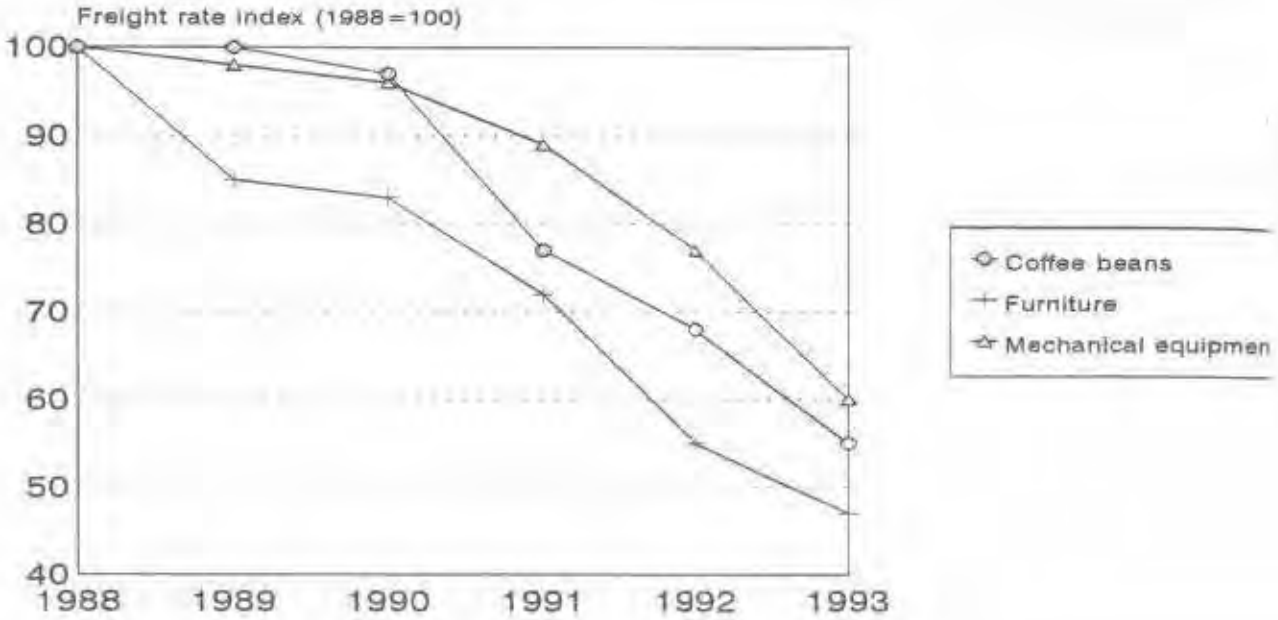
165. A subregional analysis reveals that since 1985, the total tonnage of the countries of both the East and West coasts of South America has been decreasing with the exception of containerships of East Coast countries. General cargo ships mainly contributed to the overall decrease and it is notable that there are no containerships registered in the countries of the West coast of South America.

166. The fleet expansion of other Latin American regions such as Central America, the Caribbean and Mexico had offset the decrease of the South American countries, resulting in a continuous increase in the total fleets of Latin American countries. General cargo ships and containerships had marginally, but constantly, increased from 1.6 per cent and 0.1 per cent of the world total respectively in 1980, to 3.3 per cent and 0.6 per cent in 1990, and to 6.2 per cent and 2.2 per cent in 1994. It has to be borne in mind, however, that approximately two thirds of the container tonnage was registered in some of the smaller open-registry countries of the region, such as Antigua and Barbuda, and St. Vincent and the Grenadines. These two countries, together with Mexico, accounted for the majority of the container tonnage increase observed in 1994.

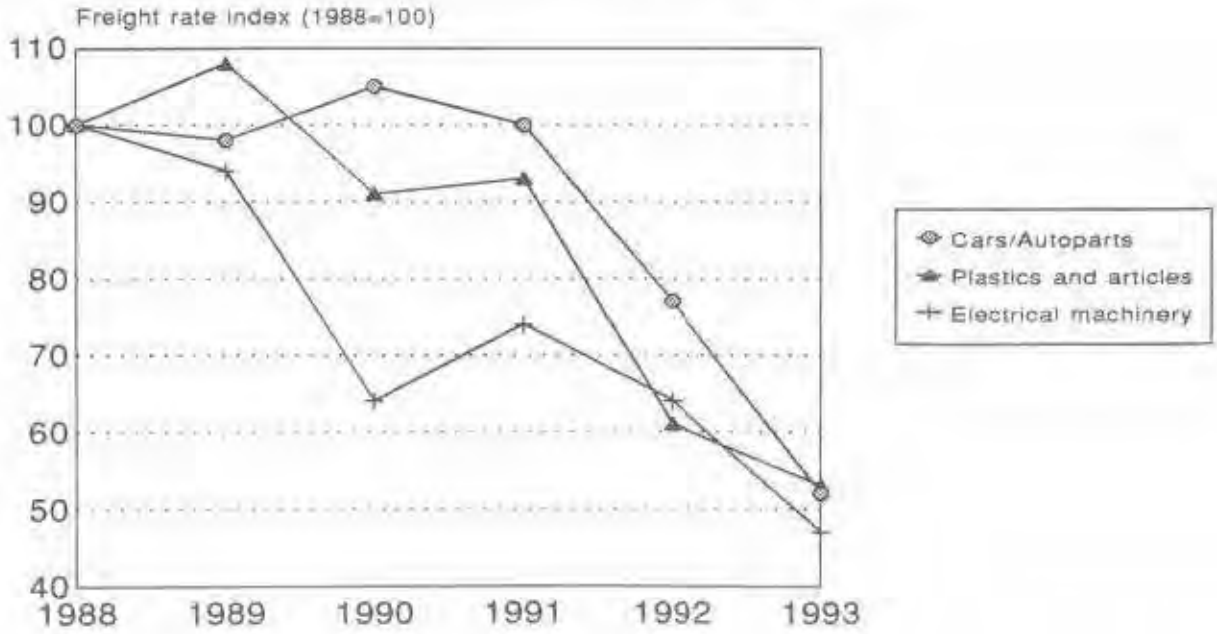
Graph 14

Changes in freight rates for selected products in the Brazil-Europe liner trade, 1988-1993

Northbound



Southbound



Source: Based on data supplied by shipping lines.

Table 47

Merchant fleets of the world and those registered in Latin American countries, selected years 1980-1994
(in thousand dwt)

	Year	Total	Tanker	Dry bulker	General cargo	Container	Others
World total	1980	682 768	339 324	185 652	115 824	11 243	30 725
	1985	664 800	261 439	232 107	105 846	19 939	45 469
	1990	658 377	245 936	234 659	102 676	25 955	49 151
	1993	710 622	271 222	242 133	106 863	34 848	55 556
	1994	719 805	270 996	250 293	103 717	39 005	55 794
Latin America - total	1980	21 794	7 914	6 183	6 547	37	1 113
	1985	23 283	7 354	7 765	6 363	102	1 699
	1990	25 529	7 501	9 025	6 348	364	2 291
	1993	28 827	8 505	8 865	7 802	839	2 816
	1994	28 843	8 075	8 873	7 959	1 189	2 747
East Coast of South America	1980	12 649	4 866	3 893	3 491	0	399
	1985	15 345	5 576	5 749	3 173	78	769
	1990	14 459	5 119	6 303	1 907	214	916
	1993	11 528	4 724	4 265	1 196	332	1 011
	1994	11 397	4 807	4 269	1 006	340	975
West Coast of South America	1980	2 717	484	929	1 212	0	92
	1985	2 914	651	830	1 190	0	193
	1990	2 770	558	973	1 022	0	217
	1993	2 078	378	834	556	0	310
	1994	1 844	344	643	526	0	331
Others (including Caribbean, Central America, Mexico)	1980	6 428	2 564	1 361	1 844	37	622
	1985	5 024	1 127	1 136	2 000	24	737
	1990	8 300	1 824	1 749	3 419	150	1 158
	1993	15 221	3 403	3 766	6 050	507	1 495
	1994	15 602	2 924	3 961	6 427	849	1 441

Source: UNCTAD, *Review of Maritime Transport*, various issues.

Note: Tonnages registered in the Bahamas, Bermuda and Panama are not included.

C. Liner shipping

1. Liner shipments and demand for tonnage in the major trades of South America

General trend

167. Forecasts for liner shipments and the relevant fleet are shown in table 48. The World Sea Trade Service (WSTS) projected that the total cargo quantity of the three major trades of South America would considerably expand at the average annual growth rate of 6.5 per cent over the period from 1994 through to the year 2000. The total tonnage of fleet will increase at the average rate of 10 per cent per annum in compliance with the high level of trade expansion.

Trade with North America

168. The overall trade with North America will gradually grow at the comparatively high level of 5 to 6 per cent per year. Southbound liner shipments from the United States in 1994 were expected to show a satisfactory rebound (5.5 per cent) from 1993. The South American buying spree for United States consumer goods reached a peak in 1992. While it fell off from that height, these liner shipments are expected to improve steadily every year. The long-term outlook up to 1998 for the liner shipments from the United States indicates an average annual growth of more than 6 per cent. This is a reflection of the expected expansion of consumer sectors in several key countries such as Brazil, Argentina and Colombia.

169. Overall northbound liner shipments from South America to the United States, estimated to be up 14.6 per cent in 1994, will show the sharpest rise from the West Coast of South America (up over 20 per cent). The shipments to Canada specifically from the East Coast of South America, projected to be up 16.7 per cent in 1994, will continue to show solid growth, averaging 11.4 per cent per year over the full 1994-1998 period.

Table 48

Forecasts for liner shipments and demand of relevant fleet in the major trades of South America

		1994	1995	1996	1997	1998	1999	2000
North America (US and Canada)	Cargo (thousands of tons)	12 333	13 081	13 830	14 720	15 597	16 414	17 306
	Ships (thousand dwt)	1 233	1 336	1 435	1 543	1 660	1 776	1 901
Europe (including Mediterranean)	Cargo (thousands of tons)	7 952	8 329	8 808	9 306	9 851	10 435	11 035
	Ships (thousand dwt)	927	999	1 098	1 203	1 319	1 442	1 573
Japan and Far Eastern NIEs	Cargo (thousands of tons)	5 318	5 822	6 382	6 985	7 650	8 361	9 009
	Ships (thousand dwt)	357	446	544	650	768	898	1 036
Total	Cargo (thousands of tons)	25 603	27 232	29 020	31 011	33 098	35 210	37 350
	Ships (thousand dwt)	2 517	2 781	3 077	3 396	3 747	4 116	4 510

Sources. Compiled by the UNCTAD secretariat on the basis of data supplied by DRI/McGraw-Hill, *World Sea Trade Service*, Third Quarter, 1994.

Trade with Europe

170. - The total trade with Europe will develop at almost the same growth rate as with North America (5 to 6 per cent per year). Southbound liner shipments to South America will continue to be in line with Europe's total export growth. The 6.6 per cent, projected for 1994, is expected to lead to even faster growth in the future, averaging 6.8 per cent over the 1994-1998 forecast horizon. Northbound shipments from South America were expected to be up less than 3 per cent in 1994, following the collapse in 1993 when the fruit and vegetable market, mainly from the West Coast of South America, was heavily depressed. The longer-term outlook for this trade is favourable; with no European recession in sight, shipments are expected to grow at 4.6 per cent per year on average through to 1998.

Trade with Far Eastern NIEs

171. Far Eastern NIEs, which recently attained miraculous economic development levels, will accelerate reciprocal trade with South American countries. The trade will increase initially at the average annual growth rate of about 9 per cent and then at marginally descending growth rates. In this trade, the rapidly increasing cargo volume, combined with long-distance haul between both destinations will demand a broad expansion of the fleet at the average annual growth rate of 15 to 20 per cent.

2. Liner-cargo movements

172. Table 49 shows movements of the liner cargo in 1993 between the countries on both the East and West coasts of South America and the three major worldwide areas (North America, the Far East and Europe) of their trading partners. Total cargo of 23.99 million tons was transported, of which two thirds were loaded or discharged on the East Coast. The import of 14.41 million tons represents 60 per cent of the total.

173. North America is the biggest trade partner with the share of nearly half of the total. The ratio between East and West Coast stands at 62 to 38, and the ratio between import and export is 47 to 53. Europe traded 7.68 million tons, sharing one third of the total. The ratios between East and West Coast, and between import and export are nearly 70 to 30 respectively. The trades with Japan and Far Eastern NIEs represent 20 per cent of the total. This trade, however,was highly imbalanced with imports to South America amounting to nearly four times the export volume.

3. Development of full containerization in Latin America

174. As regards TEU loading capacity of fully cellular containerships, the Latin American countries' share of the world total had steadily been increasing, even though at very low absolute and relative levels, i.e. 1.5 per cent per annum in 1990 and 1991, 1.9 per cent in 1992 and 2.5 per cent in 1994. The distribution by trade route, of their capacity as at the end of 1993, is shown in table 50. It is notable that there are two dominating routes both in terms of number and TEU capacity: the East Coast of South America/East Coast of North America and the East Coast of South America/Europe and Mediterranean. Furthermore, the Europe and Mediterranean trades with the whole of the Latin American region represent about half of the total container capacity.

175. Table 51 shows the distribution of TEU-loading capacity of the Latin American fleet by major liner service route and by ship type. On all the trade routes, except those routes covering Europe and the Mediterranean, the share of the services with fully cellular containerships is very low, both in number and TEU capacity. A similar trend is observed in table 52. The dwt capacity of Latin American flag containerships and general cargo ships had been increasing steadily, but marginally, from 1980 until 1990. This observation applies particularly to containerships, where Latin America accounted for only 3.1 per cent of the world container fleet in 1994. A much larger share of both types of tonnage was registered under Asian flags, where fleet growth both in absolute and in relative terms was particularly marked during the 1980s. Since 1990, general cargo tonnage has been stagnating while their participation in container-carrying capacity has been declining. Available information suggests, however, that a considerable amount of container tonnage, particularly of newbuildings, is beneficially owned by Asian developing countries, but flagged out to open registries.

176. Such a comparatively low share of fully cellular containerships operated by Latin American companies is considered to reflect that full containerization had still been under development, specifically infrastructure at ports and hinterland, and other related facilities, and that major global liner operators had been making inroads into these South-North liner services by combining the economies of scale of large full containerships on their trunk service-routes (East-West) and the best use of efficiently operated transhipment on the East Coast of North America or the Caribbean, Central American and United States Gulf ports.

Table 49

Liner-cargo movements between the West and East Coasts of South America and country groups of major trading partners, 1993
(Thousands of tons)

		West Coast of South America	East Coast of South America	Total
United States	In	1 865	3 098	4 963
	Out	2 075	3 171	5 246
	Subtotal	3 940	6 269	10 209
Canada	In	152	299	451
	Out	204	573	777
	Subtotal	356	872	1 228
Subtotal	In	2 017	3 397	5 414
	Out	2 279	3 744	6 023
	Subtotal	4 296	7 141	11 437
Japan	In	840	1 368	2 208
	Out	198	209	407
	Subtotal	1 038	1 577	2 615
Far Eastern NIEs	In	612	1 088	1 700
	Out	229	332	561
	Subtotal	841	1 420	2 261
Subtotal	In	1 452	2 456	3 908
	Out	427	541	968
	Subtotal	1 879	2 997	4 876
Northern Europe	In	1 219	2 271	3 490
	Out	496	1 306	1 802
	Subtotal	1 715	3 577	5 292
Southern Europe	In	519	1 085	1 604
	Out	212	572	784
	Subtotal	731	1 657	2 388
Subtotal	In	1 738	3 356	5 094
	Out	708	1 878	2 586
	Subtotal	2 446	5 234	7 680
Total	In	5 207	9 209	14 416
	Out	3 414	6 163	9 577
	Total	8 621	15 372	23 993

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by DRI/McGraw-Hill, *World Sea Trade Service*, Third Quarter, 1994.

Table 50

Capacity of fully cellular containerships operated by Latin American companies
(as at the end of 1993)

Trade route		Number of ships	TEU	Percentage of total TEU
From	To			
West Coast of South America	West Coast of North America	2	1 780	4.3
	East Coast of North America	2	2 426	5.9
	Europe/Mediterranean	4	6 157	14.8
	Far East and South-East Asia	3	2 690	6.5
	Subtotal	11	13 053	31.5
East Coast of South America	West Coast of North America	-	-	-
	East Coast of North America	8	8 415	20.3
	Europe/Mediterranean	8	9 416	22.8
	Far East and South-East Asia	-	-	-
	Subtotal	16	17 831	43.1
United States Gulf and the Caribbean	Europe/Mediterranean	5	5 370	13.0
	Far East and South-East Asia	3	5 125	12.4
	Subtotal	8	10 495	25.4
Total		35	41 379	100.0

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by NYK, *World Containership Fleet and Its Operations, 1994*.

Table 51

Container loading capacity of ships operated by Latin American companies
(as at the end of 1993)

Trade route		Fully cellular				Others a/				Total A	
From	To	No. of ships	% of total A	Capacity (TEU)	% of total A	No. of ships	% of total A	Capacity (TEU)	% of total A	No. of ships	Capacity (TEU)
West Coast of South America	West Coast of North America	2	13.3	1 780	26.0	13	86.7	5 073	74.0	15	6 853
	East Coast of North America	2	12.5	2 426	32.1	14	87.5	5 140	67.9	16	7 566
	Europe/Mediterranean	4	22.2	6 157	46.8	14	77.8	7 003	53.2	18	13 160
	Far East/South-East Asia	3	25.0	2 690	34.4	9	75.0	5 141	65.7	12	7 831
	Subtotal	11	18.0	13 053	36.9	50	82.0	22 357	63.1	61	35 410
East Coast of South America	West Coast of North America	-	-	-	-	9	100.0	6 944	100.0	9	6 944
	East Coast of North America	8	19.5	8 415	39.6	33	80.5	12 846	60.4	41	21 261
	Europe/Mediterranean	8	25.0	9 416	42.4	24	75.0	12 781	57.6	32	22 197
	Far East/South-East Asia	-	-	-	-	4	100.0	1 683	100.0	4	1 683
	Subtotal	16	18.6	17 831	34.2	70	81.4	34 254	65.8	86	52 085
United States Gulf and the Caribbean	Europe/Mediterranean	5	71.4	5 370	76.7	2	28.6	1 632	23.3	7	7 002
	Far East/South-East Asia	3	33.3	5 125	29.5	6	66.7	12 236	70.5	9	17 361
	Subtotal	8	50.0	10 495	43.1	8	50.0	13 868	56.9	16	24 363
Total B		35	21.5	41 379	37.0	128	78.5	70 479	63.0	163	111 858

Sources: Compiled by the UNCTAD secretariat on the basis of data supplied in NYK, *World Containership and its Operations, 1994* and *Containerisation International Yearbook 1994*.

a/ Includes semi-containerships, ro-ro, conventional general cargo ships, bulkers.

Table 52

Merchant fleets by flag of registration and types of ship, 1980 and 1990 (as at 1 July), 1993 to 1994 (as at 31 December)

(in terms of million dwt and percentage of the world total)

	Year	Total	Oil tankers	Dry bulk carrier	General cargo ship	Container ship	Others
World total	1980	682.8	339.3	185.7	115.9	11.2	30.7
	1990	658.4	245.9	234.7	102.7	26.0	49.1
	1993	710.6	271.2	242.1	106.9	34.8	55.6
	1994	719.8	271.0	250.3	103.7	39.0	55.8
Developing countries - total	1980	68.4	26.0	17.1	20.7	0.9	3.7
		10.0	*7.7*	*9.2*	*17.9*	*8.0*	*12.1*
	1990	139.7	40.1	60.0	26.9	4.1	8.6
		21.2	*16.3*	*25.6*	*26.2*	*15.8*	*17.5*
	1993	157.9	49.3	63.7	28.6	6.2	10.1
		22.2	*18.2*	*26.3*	*26.8*	*17.8*	*18.2*
	1994	162.2	49.4	67.2	28.8	6.6	10.2
		22.5	*18.2*	*26.9*	*27.8*	*16.9*	*18.3*
of which: America	1980	21.8	7.9	6.2	6.5	0.1	1.1
		3.2	*2.3*	*3.3*	*5.6*	*0.9*	*3.6*
	1990	25.5	7.5	9.0	6.3	0.4	2.3
		3.9	*3.1*	*3.8*	*6.1*	*1.5*	*4.7*
	1993	28.8	8.5	8.9	7.8	0.8	2.8
		4.1	*3.1*	*3.7*	*7.3*	*2.3*	*5.0*
	1994	28.8	8.0	8.9	8.0	1.2	2.7
		4.0	*3.0*	*3.6*	*7.7*	*3.1*	*4.8*
Asia	1980	39.1	14.5	10.5	11.4	0.8	1.9
		5.7	*4.3*	*5.7*	*9.8*	*7.1*	*6.2*
	1990	89.5	26.3	41.2	14.0	3.5	4.5
		13.6	*10.7*	*17.6*	*13.6*	*13.5*	*9.2*
	1993	94.6	28.9	41.6	14.3	4.9	4.9
		13.3	*10.7*	*17.2*	*13.4*	*14.1*	*8.8*
	1994	97.5	28.5	44.4	14.5	4.9	5.2
		13.6	*10.5*	*17.7*	*14.0*	*12.6*	*9.3*

Source: Compiled on the basis of the *Review of Maritime Transport*, various issues.

Note: Percentages are shown in italics.

4. TEU capacity of total full-containership fleets on the major trade routes of South America

177. Table 53 shows fluctuations in deployment of full-containership fleets on the major trade routes covering the East and West Coasts of South America. On the East Coast, the full-containership services expanded in 1991 in the number of ships as well as their loading capacity and then fell in 1992, but they again gained in 1993 on all routes except the Far East and South-East Asia. There were no direct full-container services between the East Coast of South America and the West Coast of North America. The majority of the cargo moving on this trade route were carried by East-West or Round-the-World liner operators through transhipment at the Caribbean ports. The services covering the West Coast of South America constantly expanded on all the trade routes.

178. Table 54 provides more information on the comparison of container-loading capacity between total full-cellular containership fleet and the fully cellular containership fleet operated by South American operators on the major trade routes of South America. Overall, South American-operated fully cellular containerships represent 30 per cent of the total fully cellular containerships both in deadweight ton and in TEU capacity, covering all main South American liner routes. By trade route, the ratio of fully cellular containerization between the West Coast and the East Coast represents 40 to 60. By operator, South American operators share 36 per cent in deadweight and 33 per cent in TEU of each total on the West Coast, while they gain 28 per cent both in deadweight and in TEU on the East Coast. The latest situation in liner operation in the context of full containerization has been reviewed in box 11.

D. Crude petroleum and products shipments and demand for tonnage in the major trades of South American countries

179. South America's major petroleum and products trades made a healthy 4.7 per cent gain in 1994, and they will continue to expand further at the average annual rate of 5 to 6 per cent through 1998, as shown in table 55. Most of this growth for South America came at the expense of other suppliers such as the Persian Gulf countries. The major market is North America, which absorbed nearly 80 per cent of South America's total exports in 1994. By 1998, Latin America is expected to supply nearly one third of North America's petroleum and products requirements at the average growth rate of 6 to 7 per cent per year. Tanker tonnage for the North American trades, which had been oversupplied, i.e. 7 per cent increase in 1994, will increase at the average annual growth rate of 5 to 6 per cent through 1998, rather moderately as compared with petroleum quantity. For European markets which account for 15 per cent of South America's total export quantity, South America will not be successful in expanding beyond its share of 6.8 per cent of total European imports in 1994, as Europe will rely more and more on Persian Gulf and Mediterranean sources.[75]

E. Major dry bulk shipments and demand for relevant ship tonnage in the major trades of South American countries

180. The major dry bulk trade of South America, shown in table 56, includes main dry bulk commodities (coal, iron ore and grain) and other dry bulk commodities shipped in large volumes such as sugar and fertilizers. In 1994, world shipments of major dry bulk commodities rose by 2.5 per cent and will continue to grow at the average annual rate of 4 per cent through 1998. South America's major dry bulk shipments are expected to grow at the marginally better rate of 4.5 per cent per year through 1998. Dry bulker tonnage will moderately expand at the rate of 2 to 3 per cent per year on each of the three major trade routes.[76]

181. In the trade of iron ore, the economic recovery in Japan is expected to be very moderate before 1998. This slow-growth recovery, together with increasing off-shore procurement of steel products, implies that iron ore imports from South America will not return to their 1989 peak (36 million tons). South America (Brazil and Peru) will, however, hold its share of nearly 30 per cent of Japan's total iron ore imports. While Northern Europe's iron ore from South America has considerably shrunk from its record high in 1989 (44 million tons), its imports of 27 million tons in 1994 are projected to increase to 30 million tons in 1998, with Brazil being the main beneficiary of this trade (89 per cent). In Southern Europe, on the other hand, South America's iron ore is expected to gain shares, reaching 14 million tons in 1998 from 13 million tons in 1994.[77]

182. For grain trades, Japan's imports from South America decreased from 1.5 million tons in 1993 to 1.3 million tons in 1994 and will gradually decline to 1.2 million tons in 1998, as the United States exports to Japan are expected to improve continuously in the coming years. Europe's imports from South America almost reached 16.6 million tons in 1994, accounting for 45 per cent of Europe's total imports. The outlook is positive for South America through 1998 as the export stimulus programmes in place in Argentina could help that nation maintain its share of the European market.[78]

Table 53

Full-containership fleets a/ serving main trades of South America (East and West Coasts), 1990-1993

Trade route		1990			1991			1992			1993		
From	To	No. of ships	Thousand dwt	TEU	No. of ships	Thousand dwt	TEU	No. of ships	Thousand dwt	TEU	No. of ships	Thousand dwt	TEU
East Coast of South America	Far East and South-East Asia	2	47	2 542	4	101	5 162	5	111	5 731	2	26	1 400
	Europe/Mediterranean	21	456	24 573	25	590	31 637	22	511	28 599	26	603	33 150
	East Coast of North America	13	277	16 602	20	419	24 842	18	399	23 459	22	452	28 269
	West Coast of North America	-	-	-	-	-	-	-	-	-	-	-	-
	Subtotal	36	780	43 717	49	1 110	61 641	45	1 021	57 789	50	1 081	62 819
West Coast of South America	Far East and South-East Asia	1	25	921	7	156	6 963	8	221	11 312	10	223	11 618
	Europe/Mediterranean	6	214	12 060	6	214	12 303	8	243	13 675	10	271	15 793
	East Coast of North America	4	58	2 176	6	78	5 148	9	138	7 553	10	172	10 149
	West Coast of North America	2	23	890	2	23	1 780	2	23	1 780	2	23	1 780
	Subtotal	13	320	16 047	21	471	26 194	27	625	34 320	32	689	39 340
Total		49	1 100	59 764	70	1 581	87 835	72	1 646	92 109	82	1 770	102 159

Source: NYK, various issues of *World Container Fleet and Operations*.

a/ Ships covered: lo-lo type and ro-ro type full-containerships of 3,000 grt and over.

Table 54

Comparison of fully cellular containerships' capacity between total fleet and the fleet operated by South American operators on the major trade routes of South America
(as at the end of 1993)

Trade route		Total fully cellular containership fleet			Fully cellular containership fleet operated by South American operators		
From	To	No. of ships	Thousand dwt	TEU	No. of ships	Thousand dwt	TEU
East Coast of South America	Far East and South-East Asia	2	26	1 400	-	-	-
	Europe/ Mediterranean	26	603	33 150	8	181	9 416
	East Coast of North America	22	452	28 269	8	117	8 415
	West Coast of North America	-	-	-			
	Subtotal	50	1 081	62 819	16	298	17 831
West Coast of South America	Far East and South-East Asia	10	223	11 618	3	68	2 690
	Europe/ Mediterranean	10	271	15 793	4	100	6 157
	East Coast of North America	10	172	10 149	2	58	2 426
	West Coast of North America	2	23	1 780	2	23	1 780
	Subtotal	32	689	39 340	11	249	13 053
Total		82	1 770	102 159	27	547	30 884

Source: Compiled by the UNCTAD secretariat on the basis of data supplied in NYK, *World Containership Fleet and its Operations, 1994*.

Box 11

Fixed-day services on South American trunk routes

In recent months there has been a sudden rush to set up fixed-day weekly schedules in the principal liner trades to South America, marking another phase in their rapid transformation. What lies behind this new trend and what are the implications?

When the large conference consortia were formed to containerize the main north-south trades, such a concept as fixed-day schedules seemed irrelevant. Plans were drawn up with an optimal vessel size in mind and trade projections determined the number of vessels to be built: frequency was of secondary importance to trade stability.

Volume shortfalls

However, in certain cases the consortia members had the rug swiftly pulled from under their feet by a combination of factors. In the first place, actual volumes seldom seemed to coincide with the plans - the number of vessels built proved to be excessive, with traffic severely depressed by the economic problems of the 1980s. Second, the success of new arrivals in the non-conference sector also came as a surprise. The abandonment in recent years of legislation designed to develop national flag has led to a phenomenal shakeout. The trades have been transformed dramatically and it is in the context of open competition that the current interest in fixed-day schedules has to be considered.

Fixed-day schedules

In the case of South America, the swing towards fixed-day operations first became apparent in the North American trades, notably to/from the United States east coast ports and a carrier of the United States was in the vanguard. Following the vanguard, some big names of global (east-west) carriers established the fixed-day strategy in consequent expansion into all main regional routes in South America, independently or in collaboration with regional liner operators. As at early December 1994, three major lines are operating a fixed-day weekly service on the east coast of North America/east coast of South America route, while three regional lines and one global line are offering a usual service of every 8-10 days on the same trade route. Two major lines and one group are providing a fixed-day weekly service on the east coast of North America and west coast of South America. The performance of the major global operators illustrates the extent to which the South American trades have lost their position as a protected niche. Plenty of lines with long service in these trades have buckled under the pressure - most of them South American - and the major lines with no traditional involvement are looking for ways of trying the subcontinent into their global networks.

Transhipment

As major lines east-west links between the three high-volume markets are all fixed-day, it is only natural that these carriers should strive for named-day departures and arrivals on the transhipment legs, to make a seamless whole.

Traditional operation

The creation of the "traditional carriers" on the long-haul routes from northern Europe and the Far East to the east coast of South America is interesting. In the former, the first fixed-day weekly operation is set to commence in December 1994 through a fusion of the separate non-conference services. From the Far East, the situation is rather more complicated, this trade having become increasingly treated as part of a pendulum pattern involving calls en route in South Africa. This merging of the two trades is very apparent in the mixed bunch of carriers which have got together to launch the first fixed-day weekly service, which is due to start in December 1994. Another group consisting of two lines has emerged in the trade with a pendulum service of four sailings a month.

Box 11 (continued)

Cost savings

While carryings to South America have boomed as confidence in the area has returned, this has only added to the region's attraction as a market, resulting in a sharp upturn in competition, and a consequent collapse in rates - now only companies with a real grip on their cost structure can hope to survive. To keep costs low while providing a competitive level of service has involved plenty of mental gymnastics with the two main strategies on the operational side being vessel-sharing arrangements and the use of larger, faster vessels.

Vessels

It is interesting that few of the more successful South American lines follow a policy of owning tonnage, others preferring a mix of owned/chartered vessels or relying purely on charters. The availability of suitable ships for charter, and the flexibility which this brings, have been a liberating force in the emerging north-south markets. A stream of geared vessels in a suitable size range has been taken on for South American duties. With operational realignments bringing scope for larger vessels, the average size has been increasing, and in recent months some newbuildings with a nominal 1,500-1,700 TEU capacity have been booked. There is no sign that this situation will change. Despite the demand, the high number of suitable vessels both in service and on order should keep charter rates from rising unduly. The major obstacle to using even larger vessels is the port situation - both physical limitations on ships, capacity limitations at berths and terminals. Port problems are also cited by some major operators as the main argument against fixed-day schedules.

Perspective

Eventually, these problems will be overcome and the intermodal infrastructure will also be developed enough to provide real competition between handling facilities (mainly ports and terminals). By this time, fixed-day operations will probably have become the norm and the next phase of development - involving larger vessels and hubbing - will then start to take root.

Source: *Lloyd's Shipping Economist*, January 1995, General Cargo/Unitized.

Table 55

Forecasts for petroleum and products shipments and demand for tanker fleet in the major trades of South America

		1994	1995	1996	1997	1998	1999	2000
North America (USA and Canada)	Cargo (thousands of tons)	103 567	111 302	118 111	127 841	135 411	142 677	149 395
	Ships (thousand dwt)	17 337	18 506	19 362	20 419	21 394	22 271	23 146
Europe (including Mediterranean)	Cargo (thousands of tons)	12 703	12 542	12 460	12 437	12 379	12 377	12 399
	Ships (thousand dwt)	2 491	2 484	2 483	2 439	2 497	2 509	2 519
Japan and Far Eastern NIEs	Cargo (thousands of tons)	4 037	4 252	4 443	4 635	4 833	5 029	5 230
	Ships (thousand dwt)	1 172	1 263	1 386	1 498	1 624	1 762	1 902
Total	Cargo (thousands of tons)	120 307	128 096	135 014	144 913	152 623	160 083	167 024
	Ships (thousand dwt)	21 000	22 253	23 231	24 406	25 515	26 542	27 567

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by DRI/McGraw-Hill, *World Sea Trade Service*, Third Quarter, 1994.

Table 56

Forecasts for major dry bulk shipments and demand for relevant dry bulker tonnage in the major trades of South America

		1994	1995	1996	1997	1998	1999	2000
North America (USA and Canada)	Cargo (thousands of tons)	46 533	48 819	50 478	52 735	54 424	56 291	58 324
	Ships (thousand dwt)	3 761	3 937	4 058	4 189	4 261	4 345	4 463
Europe (including Mediterranean)	Cargo (thousands of tons)	90 399	93 438	97 615	102 115	106 710	111 356	116 302
	Ships (thousand dwt)	15 964	16 299	16 680	17 084	17 491	17 867	18 217
Japan and Far Eastern NIEs	Cargo (thousands of tons)	60 208	63 649	66 749	69 747	73 342	77 355	81 371
	Ships (thousand dwt)	13 789	13 963	14 382	14 753	15 248	15 796	16 323
Total	Cargo (thousands of tons)	197 140	205 906	214 842	224 597	234 476	245 002	255 997
	Ships (thousand dwt)	33 514	34 199	35 120	36 026	37 000	38 008	39 003

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by DRI/McGraw-Hill, *World Sea Trade Service*, Third Quarter, 1994.

Box 12

Panama Canal marks eightieth birthday, with long-term prospects uncertain

The Panama Canal turned 80 faced with bright short-term prospects but a more uncertain overall future, a high-ranking canal official said.

"The canal did great business this year, and next year should be no different," said the executive planning director for the Panama Canal Commission. "But over the longer term, I don't see the canal trade growing much at all in the aggregate," he said.

The commission, a US government agency that runs the waterway between the Atlantic and Pacific, is headed by a nine-member board of directors, made up of five US and four Panamanian officials.

Canal officials expect the 50-mile waterway to register its second highest level of toll revenue in its 80-year history for the fiscal year ending 30 September. Toll revenue will probably rise about 3.5 per cent from the fiscal 1992/93 level of $400 million.

"A gradual, sustained recovery in the US economy and an increase in trade with Asia and Latin America has helped the canal this year," he said. "Fiscal 1994/95 should see the same high levels of cargo but with little growth in revenue", he added.

The canal's long-term future, however, is almost as uncertain as when the S.S. Ancon first sailed through its locks on 15 August 1914, according to experts. Changes in international shipping could also make it harder for Panama to maintain revenue levels without cutting costs or raising tolls. Most of the canal's business comes from already mature US-Asian trade. The canal also competes against the faster intermodal transit, using shipping and railway, for the US-Asian trade route.

At best the revenue will grow slightly, at worst it could decrease. Future growth, however, could come from more North-South trade between Europe or the United States and Latin America," he said.

Source: *Journal of Commerce*, 19 August 1994.

Notes

1/ IMF, *World Economic Outlook*, The World Economy in 1994-1995 (Overview of the World Economic Outlook Projections - October 1994).

2/ World Trade Organization, Press/8, March 1995.

3/ OECD, *Main Economic Indicators*, March 1995. Industrial production refers to the goods produced by establishments engaged in mining (including oil extraction), manufacturing and production of electricity, gas and water. These are the industry groups 2 through 4 of the International Standard Industrial Classification of All Economic Activities (ISIC).

4/ *Petroleum Economist*, February 1995, World Oil Production.

5/ Fearnleys (Oslo), *Review 1994*.

6/ International Iron and Steel Institute, *Estimates 1994*.

7/ Fearnleys (Oslo), *Review 1994*.

8/ Fearnleys (Oslo), *Review 1994*.

9/ Fearnleys (Oslo), *Review 1994*.

10/ International Wheat Council, *Grain Market Report*, January 1995.

11/ International Primary Aluminium Institute, IPAI Form 150, January 1995.

12/ *International Bulk Journal*, various issues.

13/ Fearnleys (Oslo), *Review 1994*.

14/ DRI/McGraw-Hill, *World Seatrade Service Review*, Fourth Quarter, 1994.

15/ Fearnleys (Oslo), *Review 1994*.

16/ John I. Jacobs plc., *World Tanker Fleet Review* (London), July-December 1994.

17/ Certificate of Financial Responsibility (COFR) is intended to ensure that owners of vessels trading to the United States have a practically unlimited liability in case of accident causing damage to the environment.

18/ Fearnleys (Oslo), *Review 1994*.

19/ Fearnleys (Oslo), *Review 1994*.

20/ John I. Jacobs plc, *World Tanker Fleet Review, 1994*; Drewry Shipping Consultants, January 1995.

21/ Fearnleys (Oslo), *Review 1994*.

22/ Fearnleys (Oslo), *Review 1994*.

23/ Fearnleys (Oslo), *Review 1994*.

24/ Drewry shipping Consultants, *Shipping Statistics and Economics*, various issues.

25/ Fearnleys (Oslo), *Review 1994*.

26/ *The ship-to-shore gantry crane market*, Containerisation International Market Analysis.

27/ Institute of Shipping Economics and Logistics (Bremen), *Shipping Statistics 1994*, various issues.

28/ *Containerisation International*, various issues.

29/ *Journal of Commerce*, various issues.

30/ *Lloyd's Shipping Economist* (London), January 1995; and *Kaiun* (Shipping), various issues.

31/ Fearnleys (Oslo), *Review 1994*, and International Iron and Steel Institute, January 1995.

32/ *International Bulk Journal*, February 1995.

33/ International Wheat Council, February 1995.

34/ *Journal of International Transport*, Transport 52/1994.

35/ Fearnleys (Oslo), *Review 1994*.

36/ Certificate of Financial Responsibility (COFR) is intended to ensure that owners of vessels trading to the United States have a practically unlimited liability in case of accident causing damage to the environment.

37/ *Nippon Keizai Shinbun*, 16 July, 1 August and 12 November 1994; *Petroleum Times Energy Report*, July 1994; *Lloyd's List* (London), various issues; and Drewry Shipping Consultants (London), *Shipping Statistics and Economy*, various issues.

38/ *Lloyd's Ship Manager*, June 1994.

39/ Drewry Shipping Consultants (London), *Shipping Economics and Statistics*, July 1994.

40/ *Lloyd's List* (London), 2 July 1994.

41/ Drewry Shipping Consultants (London), *Shipping Economics and Statistics*, August 1994.

42/ Fearnleys (Oslo), *Review, 1994*.

43/ *Lloyd's Ship Manager*, various issues.

44/ *Seatrade Week*, August 1994.

45/ *Lloyd's Ship Manager*, various issues.

46/ *Lloyd's Ship Manager*, various issues.

47/ Fearnleys (Oslo), *Review 1994*.

48/ *Lloyd's Ship Manager*, various issues.

49/ Fearnleys (Oslo), *Review 1994*; and *Lloyd's List* (London), various issues.

50/ Fearnleys (Oslo), *Review 1994*; Drewry Shipping Consultants, *Shipping Statistics and Economics*, various issues; and *Lloyd's List* (London), various issues.

51/ *BIMCO Bulletin*, Volume 89, No. 4, 1994.

52/ *Journal de la Marine Marchande* (Paris), 27 January 1995, p. 173

53/ *Containerisation International* (London), February 1995, page 20.

54/ *Le Lloyd* (Antwerp), 9 February 1995.

55/ *Containerisation International* (London), December 1994, p. 83.

56/ *Reefer Systems*, A Supplement of Cargo Systems, March 1995.

57/ For the text of the Decision and the Annex on Negotiations on Maritime Transport Services, see GATT, *Negotiations on Maritime Transport Services*, Note by the secretariat (TS/NGMTS/W/1).

58/ For the text of the Convention see *United Nations Conference of Plenipotentiaries on a Code of Conduct for Liner Conferences*, vol. II *Final Act (including the Convention and resolutions) and tonnage requirements* (United Nations publication, Sales No. E.75.II.D.12).

59/ For the text of the Convention, see *United Nations Conference on a Convention on International Maritime Transport*, vol. I, *Final Act and Convention on International Multimodal Transport of Goods* (United Nations publication, Sales No. E.81.II.D.7 (vol.I)).

60/ For the text of the Convention, see *United Nations Convention on Registration of Ships* (TD/RS/CONF/23).

61/ For the text of the Convention, see A/CONF.89/13.

62/ For the text of the Convention, see A/CONF.162/7. For more detailed information as to the main features of the Convention, see *Review of Maritime Transport, 1992*, p. 68, (TD/B/CN.4/27).

63/ See document TD/B/CN.4/GE.2/3, annex II.

64/ The International common-carrier transportation industry and the competitiveness of the foreign trade of the countries of Latin America and the Caribbean, United Nations, ECLAC, Santiago, 1989.

65/ IMF (Washington), *World Economic Outlook*, May 1994, Annex III.

66/ IMF (Washington), *World Economic Outlook*, May 1994, Annex III.

67/ World Bank (Washington), *1994 Regional Perspectives. Latin America and the Caribbean.*

68/ Ibid.

69/ IMF (Washington), *World Economic Outlook*, May 1994, Annex III.

70/ Ibid.

71/ UNCTAD, *Trade and Development Report*, 1994, p. 6.

72/ United States Department of Commerce, Maritime Administration, *Maritime Subsidies*, January 1981.

73/ DRI/McGraw-Hill, *World Sea Trade Service*, Fourth quarter, 1994.

74/ DRI/McGraw-Hill, *World Sea Trade Service*, Fourth Quarter, 1994.

75/ Dri/McGraw-Hill, *World Sea Trade Service*, Fourth Quarter, 1994; *International Bulk Journal*, January 1994.

76/ DRI/McGraw-Hill, *World Sea Trade Service*, Fourth Quarter, 1994.

Annex I

Classification of countries and territories

Code 1	Canada	United States of America
Code 2	Austria	Italy
	Belgium	Luxembourg
	Denmark	Monaco
	Faeroe Islands	Netherlands
	Finland	Norway
	France	Portugal
	Germany	Spain
	Gibraltar	Sweden
	Greece	Switzerland
	Iceland	Turkey
	Ireland	United Kingdom of Great Britain and Northern Ireland
	Israel	
Code 3	Japan	
Code 4	Australia	New Zealand
Code 5	South Africa	
Code 6	Albania	Latvia
	Armenia	Lithuania
	Azerbaijan	Moldova
	Belarus	Poland
	Bulgaria	Romania
	Czech Republic	Russian Federation
	Estonia	Slovakia
	Georgia	Tajikistan
	Hungary	Turkmenistan
	Kazakhstan	Ukraine
	Kyrgyzstan	Uzbekistan
Code 7	China	Viet Nam
	Democratic People's Republic of Korea	
Code 8 - 8.1	Northern Africa	
	Algeria	Morocco
	Egypt	Tunisia
	Libyan Arab Jamahiriya	

Code 8.2	Western Africa	
	Angola	Guinea-Bissau
	Benin	Liberia
	Burkina Faso	Mali
	Cameroon	Mauritania
	Cape Verde	Nigeria
	Congo	St. Helena
	Côte d'Ivoire	Sao Tome and Principe
	Equatorial Guinea	Senegal
	Gabon	Sierra Leone
	Gambia	Togo
	Ghana	Zaire
	Guinea	
Code 8.3	Eastern Africa	
	Burundi	Mozambique
	Comoros	Reunion
	Djibouti	Seychelles
	Ethiopia	Somalia
	Kenya	Sudan
	Madagascar	Uganda
	Malawi	United Republic of Tanzania
	Mauritius	Zambia
Code 9 - 9.1	Caribbean and North America	
	Anguilla	Guadeloupe
	Antigua and Barbuda	Haiti
	Aruba	Jamaica
	Bahamas	Martinique
	Barbados	Montserrat
	Bermuda	St. Pierre and Miquelon
	British Virgin Islands	Saint Kitts and Nevis
	Cayman Islands	Saint Lucia
	Cuba	Saint Vincent and the Grenadines
	Dominica	Trinidad and Tobago
	Dominican Republic	Turks and Caicos Islands
	Greenland	United States Virgin Islands
	Grenada	
Code 9.2	Central America	
	Belize	Honduras
	Costa Rica	Mexico
	El Salvador	Nicaragua
	Guatemala	Panama
Code 9.3	South America - Northern Seaboard	
	Guyana	Suriname
	French Guyana	Venezuela
	Netherlands Antilles	
Code 9.4	South America - Western Seaboard	
	Chile	Ecuador
	Colombia	Peru

Code 9.5	South America - Eastern Seaboard	
	Argentina	Falkland Islands (Malvinas) a/
	Bolivia	Paraguay
	Brazil	Uruguay
Code 10 - 10.1	Western Asia	
	Bahrain	Oman
	Cyprus	Qatar
	Iran (Islamic Republic of)	Saudi Arabia
	Iraq	Syrian Arab Republic
	Jordan	United Arab Emirates
	Kuwait	Yemen
	Lebanon	
Code 10.2	Southern and Eastern Asia	
	Bangladesh	Maldives
	Bhutan	Myanmar
	Brunei Darussalam	Pakistan
	Cambodia	Philippines
	Hong Kong	Republic of Korea
	India	Singapore
	Indonesia	Sri Lanka
	Macau	Thailand
	Malaysia	
Code 11	Bosnia and Herzegovina	Slovenia
	Croatia	Yugoslavia
	Malta	
Code 12	American Samoa	Papua New Guinea
	Christmas Island (Australia)	Samoa
	Fiji	Solomon Islands
	French Polynesia	Tonga
	Guam	Tuvalu
	Kiribati	Vanuatu
	Nauru	Wake Island
	New Caledonia	

Notes to Annex I

(1) This classification is for statistical purposes only and does not imply any judgement regarding the stage of development and the political situation of any country or territory.

(2) The groups of countries or territories used for presenting statistics in this *Review* are made up as follows:

Developed market-economy countries and territories: Codes 1, 2, 3, 4 and 5.

Countries of Central and Eastern Europe and Republics of the former Soviet Union: Code 6.

Socialist countries of Asia: Code 7.

Developing countries and territories: Codes 8, 9, 10, 11 and 12.

of which:
- in Africa: Codes 8.1, 8.2 and 8.3
- in America: Codes 9.1, 9.2, 9.3, 9.4 and 9.5
- in Asia: Codes 10.1 and 10.2
- in Europe: Code 11
- in Oceania: Code 12.

(3) In certain tables, where appropriate, major open-registry countries are recorded as a separate group. The group comprises Bahamas, Bermuda, Cyprus, Liberia and Panama.

(4) Trade statistics are based on data recorded at the ports of loading and unloading. Trade originating in or destined for neighbouring countries is attributed to the country in which the ports are situated; for this reason land-locked countries do not figure in these tabulations. On the other hand statistical tabulations on merchant fleets include data for land-locked countries that possess fleets.

a/ A dispute exists between the Governments of Argentina and of the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

Annex II

World seaborne trade a/ according to geographical area, 1980, 1992 and 1993
(Millions of tons)

Area b/	Year	Goods loaded				Goods unloaded			
		Oil		Dry cargo	Total all goods	Oil		Dry cargo	Total all goods
		Crude	Products			Crude	Products		
Developed market-economy countries									
North America	1980	0.5	6.9	498.0	505.3	274.3	71.4	170.1	515.7
	1992	1.3	25.0	546.1	572.4	300.6	105.0	245.0	650.6
	1993	1.2	24.7	548.8	574.7	325.8	111.2	252.8	689.8
Japan	1980	-	..	83.6	83.6	216.3	35.0	361.5	612.8
	1992	-	4.0	80.7	84.7	215.2	87.6	435.8	738.6
	1993	-	4.2	81.1	85.3	219.5	92.1	440.2	751.8
Australia and New Zealand	1980	-	1.5	148.4	150.0	9.8	6.6	13.5	29.9
	1992	9.5	1.6	276.5	287.6	9.0	7.4	18.8	35.2
	1993	9.4	1.7	277.4	288.5	9.2	7.7	19.1	36.0
Europe	1980	95.7	79.3	387.4	562.3	585.5	145.1	680.5	1 411.1
	1992	174.6	125.5	500.3	800.4	482.9	170.9	826.1	1 479.9
	1993	189.4	138.6	503.5	831.5	491.6	181.8	809.4	1 482.8
South Africa	1980	-	0.1	68.9	69.0	15.0	1.0	9.7	25.7
	1992	-	-	83.4	83.4	23.1	0.3	9.4	32.8
	1993	-	-	83.6	83.6	23.4	0.3	9.3	33.0
Subtotal: developed market-economy countries	1980	96.2	87.8	1 186.3	1 370.3	1 100.9	259.1	1 235.3	2 595.2
	1992	185.4	156.1	1 487.0	1 828.5	1 030.8	371.2	1 535.1	2 937.1
	1993	200.0	169.2	1 494.4	1 863.6	1 069.5	393.1	1 530.8	2 993.4
Countries of Central and Eastern Europe									
Countries of Central and Eastern Europe (including the former USSR)	1980	55.0	50.2	95.6	200.8	35.5	1.3	108.6	145.4
	1992	50.2	45.2	82.6	178.0	28.3	0.9	131.4	160.6
	1993	56.6	50.9	78.3	185.8	24.9	0.9	123.8	149.6
Socialist countries of Asia									
Socialist countries of Asia	1980	22.1	5.7	18.3	46.1	21.6	5.1	72.9	99.6
	1992	34.8	4.2	49.6	88.6	4.2	1.3	81.8	87.3
	1993	34.2	4.5	52.2	90.9	4.4	1.7	84.2	90.3
Developing countries and territories									
Northern Africa	1980	187.7	2.5	30.0	220.2	50.0	2.0	44.9	96.9
	1992	183.9	31.0	31.8	246.7	65.5	4.1	58.2	127.8
	1993	178.2	32.2	31.7	242.1	67.1	4.2	57.0	128.3
Western Africa	1980	102.6	1.9	66.8	171.3	4.3	5.5	30.8	40.6
	1992	131.5	3.0	55.6	190.1	4.3	2.9	27.9	35.1
	1993	130.4	3.0	55.2	188.6	4.4	3.0	27.5	34.9
Eastern Africa	1980	-	0.9	6.3	7.2	6.2	2.0	9.9	18.1
	1992	-	0.5	9.4	9.9	6.6	2.6	15.6	24.8
	1993	-	0.5	9.3	9.8	6.7	2.7	15.3	24.7

Annex II (continued)

Area	Year	Goods loaded				Goods unloaded			
		Oil		Dry cargo	Total all goods	Oil		Dry cargo	Total all goods
		Crude	Products			Crude	Products		
Developing countries and territories (cont.)									
Caribbean and North America	1980	16.0	26.6	31.7	74.3	58.2	6.4	12.1	76.7
	1992	15.3	11.7	30.1	57.1	30.8	8.1	20.9	59.8
	1993	15.5	12.4	30.4	58.3	31.5	8.2	21.0	60.7
Central America	1980	37.5	3.0	21.8	62.3	4.6	2.5	18.1	25.3
	1992	88.8	6.9	19.4	115.1	4.2	2.5	15.8	22.5
	1993	90.5	7.2	19.7	117.4	4.1	2.6	16.1	22.8
South America: Northern Seaboard	1980	127.8	61.9	29.3	219.0	92.3	3.4	17.1	112.8
	1992	64.8	24.5	17.8	107.1	-	1.5	19.6	21.1
	1993	67.1	26.2	17.9	111.2	-	1.6	19.1	20.7
South America: Western Seaboard	1980	7.6	3.4	26.7	37.7	4.9	1.4	13.7	20.1
	1992	19.2	8.4	37.5	65.1	3.7	1.2	14.8	19.7
	1993	19.8	8.6	37.7	66.1	3.8	1.2	15.1	20.1
South America: Eastern Seaboard	1980	-	2.6	133.0	135.6	43.9	2.4	37.4	83.7
	1992	0.1	4.4	206.7	211.2	39.1	2.5	28.1	69.7
	1993	0.1	4.6	207.8	212.5	40.8	2.6	28.5	71.8
Western Asia	1980	800.6	54.5	12.3	867.4	8.6	5.0	54.9	68.4
	1992	540.8	72.2	30.9	643.9	16.5	6.4	107.7	130.6
	1993	572.9	78.1	30.7	681.7	16.9	6.7	102.2	125.8
Southern and Eastern Asia (n.e.s)	1980	74.3	42.2	165.9	282.4	97.4	26.9	163.5	287.8
	1992	79.2	96.5	285.5	461.2	171.6	44.1	403.0	618.7
	1993	77.4	103.2	303.6	484.2	183.1	49.4	417.1	649.6
Developing countries in Europe	1980	-	-	0.1	0.1	-	0.5	0.6	1.1
	1992		0.9	7.1	8.0	8.5	1.4	17.4	27.3
	1993		0.8	6.7	7.5	8.3	1.4	16.5	26.2
Oceania (n.e.s.)	1980	-	0.7	8.4	9.1	1.6	2.3	3.5	7.4
	1992	-	0.5	9.4	9.9	-	0.5	2.5	3.0
	1993	-	0.6	9.5	10.1	-	0.6	2.4	3.0
Subtotal: Developing countries	1980	1 354.1	200.2	532.3	2 086.6	372.0	60.3	406.6	838.9
	1992	1 123.6	260.5	741.2	2 125.3	350.8	77.8	731.5	1 160.1
	1993	1 151.9	277.4	760.2	2 189.5	366.3	84.2	738.1	1 188.6
World total	1980	1 527.4	343.9	1 832.5	3 703.8	1 530.0	325.8	1 823.3	3 679.1
	1992	1 394.0	466.0	2 360.4	4 220.4	1 414.1	451.2	2 479.8	4 345.1
	1993	1 442.7	502.0	2 385.1	4 329.8	1 465.1	479.9	2 476.9	4 421.9

Source: Compiled on the basis of data supplied to the United Nations Statistical Office (by reporting countries), the UNCTAD data bank and other specialized sources.

a/ Including international cargoes loaded at ports of the Great Lakes and St. Lawrence River system for unloading at ports of the system.

b/ See annex I for the composition of groups.

Annex III(a)

- Merchant fleets of the world by flag of registration, a/ groups of countries and types of ship b/ as at 31 December 1994
(in grt)

	Total fleet	Oil tankers	Bulk carriers	General cargo c/	Container ships	Other types
World total d/	**476 203 835**	**145 592 805**	**142 463 320**	**86 893 947**	**35 090 396**	**66 163 367**
Developed market-economy countries						
Australia	3 042 212	800 240	1 036 194	136 278	121 316	948 184
Austria	134 525	..	49 015	84 636	..	874
Belgium	241 072	3 438	..	1 322	..	236 312
Canada	1 029 796	125 441	57 694	87 836	1 746	757 079
Denmark	5 799 900	788 682	568 838	911 334	1 899 740	1 631 306
Finland	1 403 711	302 929	71 345	353 067	..	676 370
France	4 350 131	2 031 882	461 615	323 308	568 561	964 765
Germany	5 705 452	83 181	284 657	1 482 922	3 068 158	786 534
Gibraltar	331 909	270 711	27 624	24 576	..	8 998
Greece	30 250 324	13 454 304	12 960 690	1 527 051	635 202	1 673 077
Iceland	174 508	1 578	415	21 901	..	150 614
Ireland	190 671	8 668	2 942	78 121	12 566	88 374
Israel	645 683	762	23 090	81 669	532 748	7 414
Italy	6 820 643	2 180 952	1 548 658	867 365	412 549	1 811 119
Japan	22 135 678	6 421 388	6 612 862	2 685 557	1 305 104	5 110 767
Luxembourg	1 143 185	3 338	401 039	68 574	65 399	604 835
Netherlands	4 404 889	434 958	243 740	1 604 490	917 300	1 204 401
New Zealand	261 570	61 252	24 565	47 814	..	127 939
Norway	22 396 066	8 961 958	4 850 482	3 653 397	84 070	4 846 159
Portugal	891 418	559 144	85 074	100 422	16 087	130 691
South Africa	331 964	2 039	..	579	210 460	118 886
Spain	1 561 000	429 936	59 051	192 404	64 330	815 279
Sweden	2 852 729	370 185	44 502	1 489 489	..	948 553
Switzerland	376 782	..	346 369	12 604	..	17 809
Turkey	5 455 797	954 021	3 252 614	1 003 264	8 220	237 678
United Kingdom	6 844 914	2 438 595	296 458	485 264	1 236 874	2 387 723
United States	15 716 229	6 410 639	1 089 344	2 131 565	2 941 876	3 142 805
Subtotal	144 492 758	47 100 221	34 398 877	19 456 809	14 102 306	29 434 545
Open-registry countries						
Bahamas	22 947 809	10 393 482	4 280 759	4 691 884	893 809	2 687 875
Bermuda	2 922 647	1 568 612	164 769	111 407	146 012	931 847
Cyprus	23 306 646	4 633 521	12 316 551	4 584 590	1 055 186	716 798
Liberia	58 087 087	28 593 275	15 909 629	4 416 519	3 127 904	6 039 760
Panama	64 308 476	18 650 608	22 070 393	13 043 631	5 655 654	4 888 190
Subtotal	171 572 665	63 839 498	54 742 101	26 848 031	10 878 565	15 264 470
Central and Eastern Europe and former USSR						
Albania	59 060	..	..	57 598	..	1 462
Armenia	..	..	..	..	..	..
Azerbaijan	621 377	179 877	..	95 145	..	346 355
Belarus	..	..	..	..	..	..
Bulgaria	1 295 188	256 680	577 589	332 565	56 379	71 975
Czech Republic	173 148	..	111 825	61 323	..	..
Estonia	695 290	9 862	160 189	276 204	..	249 035

	Total fleet	Oil tankers	Bulk carriers	General cargo c/	Container ships	Other types
Hungary	45 105	..	..	45 105	..	..
Georgia	439 401	220 240	170 148	2 706	..	46 307
Kazakhstan	8 603	..	..	1 305	..	7 298
Kyrgyzstan	..	..	..	..	..	..
Latvia	1 033 778	483 116	..	355 738	..	194 924
Lithuania	660 695	13 025	110 520	243 401	..	293 749
Moldova	..	..	..	..	..	..
Poland	2 612 733	88 163	1 511 060	688 910	..	324 600
Romania	2 685 730	438 084	980 425	1 026 292	15 160	225 769
Russian Federation	16 541 927	2 377 895	1 756 968	6 144 064	457 482	5 805 518
Tajikistan	..	..	..	..	..	..
Turkmenistan	23 033	950	..	8 193	..	13 890
Ukraine	5 285 045	84 276	1 195 699	2 722 109	139 187	1 143 774
Former USSR e/	113 649	12 154	..	38 821	..	62 674
Uzbekistan	..	..	..	..	..	..
Subtotal	32 293 762	4 164 322	6 574 423	12 099 479	668 208	8 787 330
Socialist countries of Asia						
China	15 830 407	2 278 373	5 960 389	5 160 261	1 353 802	1 077 582
Democratic People's Republic of Korea	696 343	114 801	127 940	387 118	..	66 484
Viet Nam	772 948	94 111	21 366	411 302	..	246 169
Subtotal	17 299 698	2 487 285	6 109 695	5 958 681	1 353 802	1 390 235
Developing countries of Africa						
Algeria	935 812	34 570	172 259	212 839	..	516 144
Angola	89 591	2 269	..	63 175	..	24 147
Benin	1 151	..	..	..	..	1 151
Cameroon	36 000	..	..	24 120	..	11 880
Cape Verde	21 797	445	..	16 245	..	5 107
Comoros	1 897	..	..	1 304	..	593
Congo	9 243	..	..	..	..	9 243
Côte d'Ivoire	61 501	789	..	45 731	..	14 981
Djibouti	3 727	..	..	1 967	..	1 760
Egypt	1 319 243	250 444	420 100	463 876	..	184 823
Equatorial Guinea	3 457	..	..	3 342	..	115
Ethiopia	83 386	3 809	..	78 635	..	942
Gabon	27 924	652	11 194	11 804	..	4 274
Gambia	2 816	..	..	..	..	2 816
Ghana	105 909	965	199	31 114	..	73 631
Guinea	8 401	..	..	808	..	7 593
Guinea-Bissau	4 646	..	..	1 640	..	3 006
Kenya	15 740	4 224	..	2 312	..	9 204
Libyan Arab Jamahiriya	739 522	579 205	..	81 047	..	79 270
Madagascar	36 115	8 863	..	14 227	..	13 025
Malawi	320	..	..	..	..	320
Mauritania	42 172	..	..	1 399	..	40 773
Mauritius	206 513	..	119 632	66 997	..	19 884
Morocco	362 151	13 954	..	76 866	4 608	266 723
Mozambique	35 629	366	..	9 330	..	25 933
Nigeria	473 750	245 262	841	151 370	..	76 277
St. Helena	..	..	..	..	..	..
Sao Tome and Principe	2 584	..	..	1 591	..	993
Senegal	49 961	..	..	4 474	..	45 487

	Total fleet	Oil tankers	Bulk carriers	General cargo c/	Container ships	Other types
Seychelles	4 371	..	..	2 879	..	1 492
Sierra Leone	23 979	1 405	..	490	..	22 084
Somalia	16 786	..	..	9 512	..	7 274
Sudan	56 763	832	..	53 831	..	2 100
Togo	1 073	..	..	..	..	1 073
Tunisia	141 476	6 433	37 230	47 493	..	50 320
Uganda	..	..	..	..	..	..
United Republic of Tanzania	42 507	4 142	..	30 404	..	7 961
Zaire	15 433	..	..	499	..	14 934
Subtotal	4 983 346	1 158 629	761 455	1 511 321	4 608	1 547 333
Developing countries of America						
Anguilla	2 935	..	..	2 174	..	761
Antigua and Barbuda	1 507 275	2 239	93 015	1 028 184	350 298	33 539
Argentina	739 381	124 094	61 699	241 377	55 512	256 699
Barbados	76 332	44 466	..	12 903	..	18 963
Belize	279 549	58 618	5 292	142 266	14 425	58 948
Bolivia	..	..	..	..	..	..
Brazil	5 300 100	2 118 137	2 213 560	400 200	192 777	375 426
Cayman Islands	395 077	5 571	136 175	157 591	1 599	94 141
Chile	725 817	41 457	305 958	124 781	..	253 621
Colombia	142 323	5 697	..	114 170	..	22 456
Costa Rica	7 570	..	..	873	..	6 697
Cuba	444 308	70 941	662	223 049	..	149 656
Dominica	1 992	..	..	1 758	..	234
Dominican Republic	12 482	674	..	8 145	..	3 663
Ecuador	269 770	76 628	22 010	123 059	..	48 073
El Salvador	1 479	..	..	..	..	1 479
Falkland Islands f/	16 337	..	..	735	..	15 602
Grenada	535	..	..	427	..	108
Guatemala	1 374	..	..	..	..	1 374
Guyana	14 874	125	..	6 853	..	7 896
Haiti	868	..	..	151	..	717
Honduras	1 214 358	85 497	123 662	744 975	7 362	252 862
Jamaica	7 409	1 887	..	4 044	..	1 478
Mexico	1 181 309	424 543	..	59 904	126 913	569 949
Montserrat	..	..	..	..	..	..
Nicaragua	3 924	..	..	498	..	3 426
Paraguay	33 335	2 296	..	26 092	..	4 947
Peru	320 160	67 684	30 594	52 401	..	169 481
St. Kitts and Nevis	300	..	..	300	..	..
St. Lucia	1 909	..	..	1 657	..	252
St. Vincent and the Grenadines	5 450 299	963 667	1 938 791	2 057 582	191 322	298 937
Suriname	8 471	1 819	..	3 335	1 343	1 974
Trinidad and Tobago	27 381	..	..	7 640	..	19 741
Turks and Caicos Islands	3 459	860	..	1 291	..	1 308
Uruguay	125 053	46 227	..	2 076	28 060	48 690
Venezuela	920 302	420 494	147 352	99 251	499	252 706
Virgin Islands, British	6 867	..	..	2 643	..	4 224
Subtotal	19 244 914	4 563 621	5 078 770	5 652 385	970 110	2 980 028

	Total fleet	Oil tankers	Bulk carriers	General cargo a/	Container ships	Other types
Developing countries of Asia						
Bahrain	168 811	54 505	7 984	64 576	..	41 746
Bangladesh	382 242	51 232		298 041	..	32 969
Brunei Darussalam	365 937	239		2 732	..	362 966
Cambodia	..	..		..	..	..
Hong Kong	7 945 069	696 636	5 805 674	631 966	653 493	157 300
India	6 503 551	2 348 656	2 739 606	687 119	75 756	652 414
Indonesia	2 688 128	653 690	169 620	1 164 783	154 518	545 517
Iran, Islamic Rep. of	3 804 684	2 135 391	1 048 237	451 578	1 593	167 885
Iraq	893 144	719 202		78 532	..	95 410
Jordan	61 032	50 490	9 654	..	..	888
Kuwait	2 017 359	1 342 507		249 257	85 594	340 001
Lebanon	258 470	1 536	45 998	205 062	1 380	4 494
Malaysia	2 815 652	383 489	797 814	453 397	292 251	888 701
Maldives	67 914	6 143	11 301	43 545	..	6 925
Myanmar	683 260	2 935	358 259	267 339	24 415	30 312
Oman	20 357	313	..	2 544	..	17 500
Pakistan	375 430	50 445	87 883	217 021	..	20 081
Philippines	9 412 902	419 192	6 496 098	1 948 845	132 095	416 672
Qatar	558 479	177 236	140 987	134 001	85 594	20 661
Republic of Korea	7 009 660	523 766	3 658 820	855 215	1 151 601	820 258
Saudi Arabia	1 080 605	210 370	..	563 803	67 599	238 833
Singapore	11 894 991	4 958 645	3 209 214	1 904 826	1 334 136	488 170
Sri Lanka	294 001	74 322	92 979	117 297	..	9 403
Syrian Arab Republic	279 462	..	48 260	227 948	..	3 254
Thailand	1 373 679	190 176	223 874	771 040	82 524	106 065
United Arab Emirates	1 017 966	501 535	47 156	193 239	180 189	95 847
Yemen	25 594	1 886	..	2 910	..	20 798
Subtotal	61 998 379	15 554 537	24 999 418	11 536 616	4 322 738	5 585 070
Developing countries of Europe						
Croatia	247 355	19 299	18 575	98 134	38 028	73 318
Malta	15 459 932	5 699 422	6 195 641	2 602 555	427 987	534 327
Slovenia	9 037	..	..	6 701	..	2 336
Yugoslavia	2 312	..	..	..	..	2 312
Subtotal	15 718 636	5 718 721	6 214 217	2 707 390	466 015	612 293
Developing countries of Oceania						
Fiji	31 166	3 470	..	13 155	..	14 541
Kiribati	5 375	..	..	4 708	..	667
Nauru	..	..	..	..	..	..
Papua New Guinea	46 528	3 199	..	34 065	..	9 264
Solomon Islands	7 992	..	..	3 286	..	4 706
Tonga	9 533	..	..	7 110	..	2 423
Tuvalu	51 434	..	..	16 099	..	35 335
Vanuatu	1 998 017	14 545	993 918	707 981	24 702	254 871
Western Samoa	6 253	..	..	4 339	..	1 914
Subtotal	2 156 298	21 214	995 918	790 743	24 702	323 721
Developing TOTAL	104 101 573	27 016 722	38 049 778	22 198 455	5 788 173	11 048 445
Other unallocated	6 413 379	984 757	2 558 446	332 492	2 299 342	238 342

Annex III(b)

- Merchant fleets of the world by flag of registration, a/ groups of countries and types of ship b/ as at 31 December 1994
(in dwt)

	Total fleet	Oil tankers	Bulk carriers	General cargo c/	Container ships	Other types
World total d/	**719 804 874**	**270 995 677**	**250 293 368**	**103 716 576**	**39 004 998**	**55 794 255**
Developed market-economy countries						
Australia	4 217 458	1 339 273	1 720 382	148 241	130 846	878 716
Austria	203 250	..	77 250	126 000	..	..
Belgium	210 149	5 092	..	1 716	..	203 341
Canada	661 410	202 902	94 916	80 882	1 910	280 800
Denmark	7 246 801	1 493 891	1 045 666	924 447	2 162 728	1 620 069
Finland	1 175 898	513 544	109 609	358 575	..	194 170
France	6 454 787	4 033 715	837 335	398 333	626 033	559 371
Germany	6 823 480	161 562	474 944	1 767 044	3 862 454	557 476
Gibraltar	617 721	532 992	43 768	38 021	..	2 940
Greece	53 993 554	26 496 810	23 145 090	2 231 988	705 389	1 414 277
Iceland	96 927	2 239	650	34 836	..	59 202
Ireland	187 105	14 218	4 074	117 456	10 167	41 190
Israel	785 777	1 437	35 570	100 735	644 556	3 479
Italy	9 334 563	3 718 045	2 836 183	789 946	431 571	1 558 818
Japan	32 322 902	11 581 779	12 305 273	3 363 118	1 289 875	3 782 857
Luxembourg	1 798 415	5 650	750 927	73 951	77 447	890 440
Netherlands	5 071 277	661 418	419 643	1 996 175	909 469	1 084 572
New Zealand	260 193	94 169	37 157	51 285	..	77 582
Norway	34 569 725	17 192 304	8 591 591	3 486 026	113 953	5 185 851
Portugal	1 449 247	1 013 834	166 422	149 080	22 216	97 695
South Africa	284 973	2 203	..	142	198 602	84 026
Spain	1 817 162	761 519	103 647	278 187	109 390	564 419
Sweden	2 293 756	655 672	61 544	1 022 184	..	554 356
Switzerland	654 464	..	614 047	12 428	..	27 989
Turkey	9 113 903	1 703 470	5 724 330	1 508 144	12 301	165 658
United Kingdom	8 436 837	4 560 120	531 607	512 253	1 252 963	1 579 894
United States	21 838 754	12 799 863	1 907 323	1 981 496	2 859 257	2 290 815
Subtotal	211 920 488	89 547 721	61 638 948	21 552 689	15 421 127	23 760 003
Open-registry countries						
Bahamas	35 740 833	19 604 600	7 523 744	5 923 633	905 637	1 783 219
Bermuda	4 566 799	3 209 861	273 960	80 347	149 161	853 470
Cyprus	39 325 233	8 876 343	21 791 666	6 562 318	1 274 668	820 238
Liberia	96 075 800	53 787 738	27 876 988	4 116 958	3 461 814	6 832 302
Panama	97 930 679	34 295 054	38 243 870	13 962 499	6 262 166	5 167 090
Subtotal	273 639 344	119 773 596	95 710 228	30 645 755	12 053 446	15 456 319
Central and Eastern Europe and former USSR						
Albania	80 954	..	..	80 954	..	..
Armenia	..	..	..	..	..	..
Azerbaijan	476 640	230 824	..	103 315	..	142 501
Belarus	..	..	..	..	..	..
Bulgaria	1 841 869	418 004	909 853	398 730	63 305	51 977
Czech Republic	271 836	..	188 221	83 615	..	..
Estonia	679 521	15 419	260 565	275 923	..	127 614

	Total fleet	Oil tankers	Bulk carriers	General cargo c/	Container ships	Other types
Hungary	64 979	..	..	64 979	..	..
Georgia	634 590	342 563	264 964	2 297	..	24 766
Kazakhstan	4 194	..	..	635	..	3 559
Kyrgyzstan	..	..	..	..	..	..
Latvia	1 177 170	729 275	..	330 765	..	117 130
Lithuania	605 011	19 204	160 212	251 672	..	173 923
Moldova	..	..	..	..	..	..
Poland	3 556 261	154 548	2 477 737	750 678	..	173 298
Romania	3 944 853	761 566	1 620 540	1 367 362	16 635	178 750
Russian Federation	17 182 076	3 696 488	2 857 371	6 855 516	483 002	3 289 699
Tajikistan	..	..	..	..	..	..
Turkmenistan	15 812	1 621	..	8 060	..	6 131
Ukraine	6 189 328	125 256	2 021 825	3 306 337	131 210	604 700
Former USSR e/	80 190	14 441	..	31 050	..	34 699
Uzbekistan	..	..	..	..	..	..
Subtotal	36 805 284	6 509 209	10 761 288	13 911 888	694 152	4 928 747
Socialist countries of Asia						
China	23 356 950	3 677 432	9 995 934	7 105 660	1 652 979	924 945
Democratic People's Republic of Korea	1 079 103	233 473	207 788	586 649	..	51 193
Viet Nam	1 214 233	188 115	36 014	622 762	..	367 342
Subtotal	25 650 286	4 099 020	10 239 736	8 315 071	1 652 979	1 343 480
Developing countries of Africa						
Algeria	1 093 063	52 547	288 145	296 277	..	456 094
Angola	116 347	2 665	..	100 419	..	13 263
Benin	210	..	..	..	..	210
Cameroon	40 194	..	..	33 509	..	6 685
Cape Verde	32 320	562	..	28 001	..	3 757
Comoros	2 959	..	..	2 295	..	664
Congo	11 010	..	..	..	..	11 010
Côte d'Ivoire	76 399	1 170	..	62 411	..	12 818
Djibouti	4 800	..	..	4 450	..	350
Egypt	1 899 126	450 165	705 700	624 753	..	118 508
Equatorial Guinea	3 279	..	..	3 279	..	..
Ethiopia	84 326	5 818	..	78 336	..	172
Gabon	37 000	742	19 089	15 149	..	2 020
Gambia	2 745	..	..	..	..	2 745
Ghana	92 510	1 167	260	39 876	..	51 207
Guinea	2 913	..	..	285	..	2 628
Guinea-Bissau	1 846	..	..	540	..	1 306
Kenya	15 579	6 412	..	1 524	..	7 643
Libyan Arab Jamahiriya	1 218 675	1 093 045	..	94 888	..	30 742
Madagascar	37 721	13 859	..	17 614	..	6 248
Malawi	..	..	..	..	..	..
Mauritania	20 311	..	..	1 871	..	18 440
Mauritius	301 082	..	203 750	85 043	..	12 289
Morocco	391 321	25 092	..	107 648	10 071	248 510
Mozambique	26 080	419	..	17 251	..	8 410
Nigeria	699 604	474 333	1 200	180 600	..	43 471
St. Helena	..	..	..	..	..	..
Sao Tome and Principe	2 277	..	..	1 285	..	992
Senegal	27 640	..	..	6 184	..	21 456

	Total fleet	Oil tankers	Bulk carriers	General cargo c/	Container ships	Other types
Seychelles	3 721	..	..	2 825	..	896
Sierra Leone	15 100	1 835	..	944	..	12 321
Somalia	17 288	..	..	11 899	..	5 389
Sudan	72 752	1 222	..	70 706	..	824
Togo	80	..	..	..	..	80
Tunisia	175 897	9 976	58 572	58 597	..	48 752
Uganda	..	..	..	..	..	..
United Republic of Tanzania	49 433	7 173	..	39 446	..	2 814
Zaire	15 892	..	..	599	..	15 293
Subtotal	6 591 500	2 148 202	1 276 716	1 988 504	10 071	1 168 007
Developing countries of America						
Anguilla	3 628	..	..	3 534	..	94
Antigua and Barbuda	1 982 504	3 711	154 253	1 326 325	454 119	44 096
Argentina	949 232	214 393	105 439	343 697	75 310	210 393
Barbados	114 253	76 219	..	20 005	..	18 029
Belize	429 995	108 829	7 226	247 368	17 641	48 931
Bolivia	..	..	..	..	..	..
Brazil	8 887 628	3 807 772	3 910 787	484 986	236 933	447 150
Cayman Islands	537 954	8 972	239 806	205 428	2 152	81 596
Chile	984 939	71 150	554 906	135 893	..	222 990
Colombia	183 138	9 681	..	155 505	..	17 952
Costa Rica	2 895	..	..	688	..	2 207
Cuba	542 991	102 249	632	298 463	..	141 647
Dominica	2 833	..	..	2 833	..	..
Dominican Republic	11 852	1 635	..	9 251	..	966
Ecuador	358 516	132 031	37 531	157 848	..	31 106
El Salvador	..	..	..	..	..	..
Falkland Islands f/	9 772	..	..	630	..	9 142
Grenada	555	..	..	555	..	..
Guatemala	..	..	..	..	..	..
Guyana	13 925	..	..	8 144	..	5 781
Haiti	170	..	..	..	..	170
Honduras	1 753 458	160 151	206 906	1 255 325	8 643	122 433
Jamaica	10 545	3 292	..	7 253	..	..
Mexico	1 551 537	705 093	..	77 500	139 411	629 533
Montserrat	..	..	..	..	..	..
Nicaragua	1 483	..	..	1 175	..	308
Paraguay	36 226	2 850	..	29 802	..	3 574
Peru	317 289	130 725	50 390	76 810	..	59 364
St. Kitts and Nevis	550	..	..	550	..	..
St. Lucia	2 279	..	..	2 279	..	..
St. Vincent and the Grenadines	8 595 448	1 749 929	3 353 395	2 944 655	223 267	324 202
Suriname	9 702	3 035	..	4 126	1 771	770
Trinidad and Tobago	17 037	..	..	7 524	..	9 513
Turks and Caicos Islands	2 635	1 391	..	1 000	..	244
Uruguay	150 296	93 297	..	2 748	28 153	26 098
Venezuela	1 374 282	688 755	252 315	144 201	1 180	287 831
Virgin Islands, British	3 876	..	..	3 203	..	673
Subtotal	28 843 423	8 075 160	8 873 586	7 959 304	1 188 580	2 746 793

	Total fleet	Oil tankers	Bulk carriers	General cargo c/	Container ships	Other types
Developing countries of Asia						
Bahrain	243 347	98 297	13 143	98 759	..	33 148
Bangladesh	532 434	86 388	..	428 396	..	17 650
Brunei Darussalam	352 816	270	..	4 834	..	347 712
Cambodia	..	..	..	..	..	..
Hong Kong	13 588 738	1 255 118	10 755 352	729 014	694 617	154 637
India	10 508 351	4 174 599	4 646 683	915 754	102 012	669 303
Indonesia	3 403 576	1 067 818	254 162	1 670 477	91 634	319 485
Iran, Islamic Rep. of	6 840 019	4 310 677	1 756 476	614 565	1 905	156 396
Iraq	1 548 029	1 351 180	..	108 710	..	88 139
Jordan	113 327	97 286	15 794	..	..	247
Kuwait	3 236 390	2 421 047	..	360 173	91 461	363 709
Lebanon	407 490	2 431	76 446	322 847	1 162	4 604
Malaysia	4 134 207	653 363	1 446 215	691 100	349 977	993 552
Maldives	106 808	12 679	19 536	66 937	..	7 656
Myanmar	934 081	4 713	600 578	276 862	25 297	26 631
Oman	10 604	460	..	2 996	..	7 148
Pakistan	575 014	90 821	161 928	310 444	..	11 821
Philippines	14 765 846	796 271	11 370 899	2 217 334	173 356	207 986
Qatar	915 671	331 763	270 329	207 024	91 536	15 019
Republic of Korea	10 797 515	1 029 417	6 657 425	970 455	1 367 573	772 645
Saudi Arabia	1 282 879	366 744	..	621 380	71 653	223 102
Singapore	18 520 025	8 893 630	5 626 138	1 889 004	1 494 500	616 753
Sri Lanka	450 585	131 532	180 225	134 782	..	4 046
Syrian Arab Republic	445 415	..	76 059	369 356	..	..
Thailand	2 111 659	355 185	383 477	1 172 701	112 087	88 209
United Arab Emirates	1 603 019	916 279	83 183	282 447	211 720	109 390
Yemen	26 431	3 185	..	2 893	..	20 353
Subtotal	97 454 276	28 451 153	44 394 048	14 469 244	4 880 490	5 259 341
Developing countries of Europe						
Croatia	269 081	30 549	31 343	139 088	46 131	21 970
Malta	26 267 730	10 646 168	10 923 409	3 669 158	450 363	578 632
Slovenia	9 061	..	..	8 172	..	889
Yugoslavia	506	..	..	..	..	506
Subtotal	26 546 378	10 676 717	10 954 752	3 816 418	496 494	601 997
Developing countries of Oceania						
Fiji	27 385	4 705	..	11 078	..	11 602
Kiribati	4 674	..	..	3 980	..	694
Nauru	..	..	..	..	..	..
Papua New Guinea	51 051	5 044	..	42 313	..	3 694
Solomon Islands	5 746	..	..	3 155	..	2 591
Tonga	12 307	..	..	11 043	..	1 264
Tuvalu	77 164	..	..	18 519	..	58 645
Vanuatu	2 569 838	21 833	1 669 670	498 349	29 890	350 096
Western Samoa	6 501	..	..	6 066	..	435
Subtotal	2 754 666	31 582	1 669 670	594 503	29 890	429 021
Developing TOTAL	162 190 243	49 382 814	67 168 772	28 827 973	6 605 525	10 205 159
Other unallocated	9 599 229	1 683 317	4 774 396	463 200	2 577 769	100 547

Annex III

Notes

Source: Lloyd's Maritime Information Services Ltd. (London).

a/ The designations employed and the presentation of material in this table refer to flags of registration and do not imply the expression of any opinion by the Secretariat of the United Nations concerning the legal status of any country or territory, or of its authorities, or concerning the delimitation of its frontiers.

b/ Ships of 100 grt and over, excluding the Great Lakes fleets of the United States and Canada and the United States Reserve Fleet.

c/ Including passenger/cargo.

d/ Excluding estimates of the United States Reserve Fleet and the United States and Canadian Great Lakes fleets, which amounted to respectively 2.9 million grt (3.8 million dwt), 1.1 million grt (2.0 million dwt) and 1.5 million grt (2.1 million dwt).

e/ All Republics of the former USSR which have not established new shipping registers (see box 1).

f/ A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

Annex IV

Major flows of selected bulk commodities

This annex provides an origin and destination matrix of the selected commodities for the most recent years, available in the UNCTAD Data Bank. The methodology used to compile the trade matrices is:

- Major exporters were identified by looking at total exports for each commodity as reported in the Comtrade (International Commodity Trade Statistics) data bank for the latest five years.
- Any country whose exports to the world exceeded a certain "floor" value (see table below) in any of the years was considered to be a candidate.
- From this list the top 10 or so reporters were retained.
- Major reporting **importers** of each commodity were then identified and the trading partners of the top three or four were used to identify any major traders that may not have been selected by the above procedure.
- Inverted trade was used to fill any non-reported gaps in the exporters series and also to supply data for known non-reporters, e.g. the former USSR and the South African Customs Union, as well as for countries that do not report quantity (Germany) or do not give a full bilateral breakdown (the Netherlands, Saudi Arabia).
- Tables were produced for each commodity with a cut-off applied to each individual cell that would produce between 2 and 4 pages of statistical data. This means that an empty cell does not necessarily indicate that there was no trade, but that the value did not reach the cut-off.

Commodity	Floor value (tons)	Cut-off (tons)
Bauxite	500 000	50 000
Wheat	1 000 000	250 000
Coal	2 000 000	500 000
Phosphates	100 000	50 000
Iron ore	1 000 000	250 000
Raw sugar	100 000	30 000
Timber	750 000	50 000
Crude petroleum	30 000 000	2 000 000

Note: Data for "Germany" as a reporting country for the years 1989 and 1990 refer to the Federal Republic of Germany only.

Also, in some tables destinations are specified as "special". This term covers free zones, ship stores and cases where countries do not report origins or destinations.

Exports of Bauxite (SITC 2873, rev. 2) by major suppliers (individual flows >50,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Australia to					
Argentina	289,980	205,616	335,308	166,420	150,045
Canada	629,109	956,697	1,125,096	1,369,128	2,036,553
China	202,009	535,326	625,304	841,885	710,100
Fm Yugoslav	105,109	166,988	-	-	-
Germany	-	-	1,455,752	1,295,986	824,380
Germany, FR	857,580	1,422,017	-	-	-
Iceland	160,756	160,286	185,456	204,446	158,222
Indonesia	360,043	279,061	182,060	247,173	320,022
Italy	653,329	839,128	919,068	745,341	1,019,082
Japan	1,438,036	1,424,989	1,246,950	1,035,378	1,053,031
New Zealand	509,550	481,964	531,534	446,001	538,186
Norway	190,672	74,489	76,558	224,838	185,164
Romania	-	234,000	59,802	-	-
S.Afr.Cus.Un	-	-	-	178,376	325,558
Saudi Arabia	139,334	100,251	-	-	-
Spain	-	71,112	-	-	-
Sweden	118,525	-	-	52,516	-
Switzerland	124,068	124,219	116,722	95,855	59,414
USA	5,145,135	5,037,466	4,473,804	3,678,831	2,826,234
Venezuela	-	1,218,646	452,567	261,904	263,446
Brazil to					
Argentina	-	-	-	134,804	172,298
Canada	1,373,715	1,719,134	1,616,963	1,585,615	1,857,324
Fm Yugoslav	-	51,130	-	-	-
France	50,365	-	-	-	-
Midway Is	-	-	-	-	875,321
Netherlands	-	-	-	100,789	-
Russian Fed	-	-	-	241,518	-
Spain	-	-	-	-	104,790
Uruguay	76,416	-	-	-	-
US.Virgin Is	100,558	-	-	-	-
USA	1,446,479	1,988,500	1,938,095	1,637,350	1,137,031
Venezuela	1,636,752	1,697,589	2,136,526	962,408	1,316,772
Special	-	-	-	-	1,072,136
China to					
Canada	87,000	-	-	-	-
Fm USSR	-	-	56,271	-	-
France	64,751	-	57,192	63,468	-
Germany	-	-	105,454	58,921	-
Germany, FR	92,111	142,195	-	-	-
Italy	69,784	82,619	59,046	-	-
Japan	183,542	148,026	165,923	100,869	61,953
Netherlands	242,546	241,172	167,441	174,013	72,617
Russian Fed	-	-	-	-	56,816
USA	425,545	331,725	326,355	263,501	199,972

	TONNES				
	1989	1990	1991	1992	1993
Greece to					
Fm USSR	137,345	-	97,650	-	-
France	204,216	278,556	433,409	411,687	-
Italy	-	-	-	72,580	-
Netherlands	-	-	71,676	100,505	-
Romania	332,365	342,562	401,612	201,678	264,486
Russian Fed	-	-	-	325,358	218,151
USA	-	-	-	-	71,196
Guinea to					
Brazil	-	-	169,031	160,450	188,791
Cameroon	164,669	139,330	439,740	-	-
Canada	382,582	257,357	397,591	197,053	145,013
Fm Yugoslav	540,490	229,352	-	-	-
France	1,044,217	1,081,091	885,890	1,007,146	658,590
Germany	-	-	571,717	771,146	885,573
Germany, FR	1,109,663	775,850	-	-	-
Ireland	1,602,052	1,742,305	1,970,085	1,984,228	2,184,435
Italy	763,022	712,563	676,930	885,942	618,569
Norway	-	132,371	180,291	115,334	53,571
Romania	-	-	-	-	162,856
Spain	1,620,598	1,627,380	1,837,612	1,624,396	1,489,845
USA	3,504,147	3,842,094	4,007,352	3,225,987	4,001,200
India to					
Brazil	104,249	-	-	-	-
Canada	-	-	-	-	62,121
China	-	-	65,165	-	55,999
Egypt	-	92,291	-	-	-
Fm USSR	199,536	96,032	-	-	-
Indonesia	-	51,664	-	-	50,425
Iran	-	-	-	-	87,549
Korea D P Rp.....	-	-	-	-	60,109
Norway	-	-	-	61,048	-
Romania	86,581	-	-	-	-
Russian Fed	-	-	-	67,881	100,650
Saudi Arabia.....	67,478	82,649	-	-	-
Sweden	-	-	53,000	-	-
Untd Arab Em.....	-	133,759	-	139,025	162,004
USA	-	58,168	125,097	80,694	96,509
Indonesia to					
Japan	549,499	511,237	636,368	529,348	606,673
USA	293,976	302,400	409,120	67,500	561,960

Exports of Bauxite (SITC 2873, rev. 2) by major suppliers (individual flows >50,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Ireland to					
Dominican Rp	-	-	-	-	81,132
Finland	-	-	181,121	114,017	-
Germany, FR	172,652	145,469	-	-	-
Italy	-	84,946	-	-	-
Netherlands	-	-	-	92,191	82,961
Norway	312,565	228,396	224,296	206,612	405,002
Poland	-	75,899	53,617	52,453	-
Russian Fed	-	-	-	77,485	-
Sweden	-	-	-	67,284	50,774
UK	306,204	261,900	337,378	226,988	306,781
Italy to					
Finland	-	-	-	128,748	-
Fm USSR	-	50,146	-	-	-
Fm Yugoslav	63,864	126,272	141,637	-	-
Netherlands	230,153	191,171	101,873	133,427	-
Russian Fed	-	-	-	52,884	128,106
Slovenia	-	-	-	59,505	126,983
Yugoslavia	-	-	-	79,955	-
Jamaica to					
Brazil	65,780	66,702	78,141	-	-
Canada	524,560	503,019	533,199	649,350	675,707
France	73,031	-	-	-	316,702
Germany	-	-	245,197	135,593	131,119
Germany, FR	195,444	132,455	-	-	-
Ghana	-	-	-	186,637	-
Netherlands	210,957	88,871	72,187	130,927	174,137
Norway	136,896	567,434	487,198	559,056	613,682
Sweden	-	63,725	101,387	-	62,936
UK	-	-	-	-	64,527
USA	4,228,471	4,675,716	4,634,081	5,187,229	4,921,040
Sierra Leone to					
Brazil	127,759	205,360	355,600	181,885	-
Canada	308,790	98,144	336,331	154,268	79,595
Germany	-	-	575,681	418,195	409,984
Germany, FR	851,918	744,233	-	-	-
USA	167,438	159,258	-	-	-
Venezuela	66,660	-	-	-	-
Suriname to					
Brazil	124,640	76,951	162,771	232,343	340,318
Fm Yugoslav	-	54,786	-	-	-
France	-	70,696	-	309,938	97,297
Germany, FR	69,685	-	-	-	-
Netherlands	275,165	338,003	285,171	258,705	267,189
Norway	503,060	706,285	575,691	422,417	425,756
USA	209,296	201,437	242,048	242,440	313,420

Exports of bauxite (SITC 2073, rev. 2) by major suppliers (individual flows >50,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
U.S.A. to					
Brazil	-	123,074	133,007	214,746	246,760
Canada	963,504	736,833	997,601	777,644	892,638
Ghana	124,782	82,807	91,092	100,785	-
Mexico	136,721	168,683	107,146	55,215	-
Norway	-	51,173	-	-	-
Sweden	-	62,091	-	-	-
Venezuela to					
Brazil	50,650	100,345	-	-	-
Finland	-	-	-	-	51,935
Fm USSR	-	-	84,588	-	-
Norway	101,509	-	-	-	78,146
USA	-	-	-	146,932	81,086

Exports of Wheat (SITC 041, rev. 2) by major suppliers (individual flows >250,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Argentina to					
Brazil	1,035,989	1,809,134	2,822,218	3,253,312	3,565,334
Chile	-	-	-	302,801	-
China	1,136,288	753,039	444,859	-	-
Fm USSR	624,120	482,357	-	-	-
Indonesia	-	301,454	375,550	345,205	292,591
Iran	664,335	1,481,635	359,508	410,685	-
Peru	491,200	326,096	612,524	576,757	514,898
Turkey	-	425,804	-	-	450,203
Australia to					
China	1,476,045	1,260,262	1,322,715	-	618,722
Egypt	1,875,984	1,779,286	1,481,109	-	755,395
Fm USSR	256,508	-	1,008,689	-	-
Fm Yemen	426,047	-	-	-	-
India	-	-	-	577,836	-
Indonesia	1,222,838	853,706	802,856	840,323	1,148,438
Iran	1,140,434	1,944,940	1,566,276	-	-
Iraq	1,426,481	1,024,048	-	-	-
Japan	1,240,282	1,098,583	950,978	1,002,334	1,155,126
Korea Rep.	-	509,580	1,136,536	489,274	1,152,017
Malaysia	665,062	555,244	504,603	409,355	658,912
Pakistan	492,247	-	-	323,842	-
Unid Arab Em.	368,779	-	-	-	-
Yemen	-	884,849	426,956	-	-
Canada to					
Algeria	536,450	572,345	627,419	261,959	776,050
Bangladesh	-	332,300	408,274	289,936	-
Belgium-Lux	-	-	279,050	-	-
Brazil	-	347,506	1,043,479	1,249,486	1,468,437
Chile	-	-	-	-	275,811
China	1,628,323	4,232,769	4,854,273	5,593,304	2,716,800
Colombia	-	-	-	353,588	425,611
Cuba	373,855	543,226	354,082	-	-
Fm USSR	1,890,206	4,029,652	7,120,969	-	-
India	-	-	-	1,028,246	-
Indonesia	297,041	-	368,593	748,952	768,709
Iran	1,110,406	916,528	1,017,799	1,378,715	704,450
Iraq	902,630	423,063	-	-	-
Italy	359,048	348,443	260,348	337,202	-
Japan	1,338,439	1,482,100	1,329,128	1,405,175	1,837,073
Korea D P Rp.	-	-	454,988	-	-
Korea Rep.	-	382,264	1,017,286	626,803	2,153,900
Libya	-	-	-	-	302,734
Mexico	-	-	-	592,085	602,591
Pakistan	-	-	-	278,147	-
Philippines	-	334,635	-	260,491	-
Russian Fed	-	-	-	4,792,557	486,134

Exports of Wheat (SITC 041, rev. 2) by major suppliers (individual flows >250,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Canada to					
S.Afr.Cus.Un.....	-	432,107	328,486	-	309,157
UK	-	300,818	302,419	-	-
USA	261,096	628,940	560,408	1,464,758	1,762,886
Uzbekistan	-	-	-	-	301,250
Venezuela	-	345,529	653,765	365,061	283,142
Denmark to					
Egypt	-	294,957	-	-	-
Fm USSR	-	410,984	-	-	-
Germany, FR	275,657	-	-	-	-
Russian Fed	-	-	-	295,973	266,648
France to					
Algeria	579,330	1,216,890	921,861	836,998	722,247
Bangladesh	318,272	-	-	-	-
Belgium-Lux	705,004	1,688,922	1,332,951	1,518,565	1,058,454
China	1,429,022	1,013,509	1,867,392	744,674	-
Cuba	-	-	-	357,214	540,484
Egypt	276,114	935,994	-	-	748,184
Fm USSR	1,549,798	1,475,505	2,511,777	-	-
Germany	-	-	893,021	731,276	857,968
Germany, FR	1,158,905	1,127,052	-	-	-
Greece	-	257,169	-	-	295,960
Iran	744,687	-	-	-	-
Italy	3,641,103	2,652,672	3,219,914	3,131,582	3,006,933
Libya	-	-	307,716	-	388,261
Morocco	461,733	493,414	540,037	735,313	570,256
Netherlands	711,585	2,238,964	1,088,777	812,508	1,314,834
Portugal	-	-	451,269	711,943	616,170
Romania	-	-	304,495	1,050,414	750,742
Russian Fed	-	-	-	2,083,265	2,068,315
Spain	-	313,414	773,693	802,824	1,001,290
Syria	425,682	651,839	-	-	-
Tunisia	402,787	391,484	-	-	-
Turkey	532,440	650,002	-	-	-
UK	-	291,649	255,114	395,732	801,765
Uzbekistan	-	-	-	265,815	-
Germany to					
Belgium-Lux	290,187	278,563	386,680	385,762	360,048
Fm USSR	898,115	-	-	-	-
Iran	265,042	-	-	-	-
Italy	-	-	-	385,492	336,642
Netherlands	443,000	331,867	573,773	518,837	465,890
Poland	1,089,854	567,649	-	277,213	339,228
Russian Fed	-	-	-	1,414,575	288,503
Turkey	-	-	-	-	278,411
UK	-	-	-	315,465	-
Ukraine	-	-	-	340,163	-

Exports of Wheat (SITC 041, rev. 2) by major suppliers (individual flows >250,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Greece to					
Italy	909,599	474,333	960,948	940,173	-
Italy to					
Algeria	691,369	-	-	-	-
Saudi Arabia to					
Special	1,602,538	355,500	-	-	-
Turkey to					
Azerbaijan	-	-	-	348,363	-
Fm USSR	-	-	865,958	-	-
Jordan	-	-	-	360,450	-
Korea Rep.	-	-	288,148	485,601	-
Morocco	-	-	-	421,925	-
Russian Fed	-	-	-	850,107	-
Uzbekistan	-	-	-	273,645	-
U.K. to					
Belgium-Lux	300,459	316,853	-	-	309,660
China	258,464	718,245	-	-	-
Cuba	293,369	-	-	-	-
Fm USSR	310,677	1,171,773	-	-	-
Germany	-	-	-	-	415,104
Germany, FR	370,526	-	-	-	-
Iran	433,056	-	-	-	-
Italy	250,960	452,254	1,250,760	948,582	-
Korea Rep.	-	-	461,574	-	-
Netherlands	-	449,157	262,026	735,137	268,586
Russian Fed	-	-	-	439,488	966,906
Spain	-	411,772	973,007	506,804	374,646
U.S.A. to					
Algeria	960,162	883,425	1,047,324	601,492	1,171,239
Bangladesh	890,175	466,742	-	829,572	317,587
China	7,301,252	3,691,677	4,586,557	2,982,448	2,685,949
Colombia	467,636	359,546	478,899	-	-
Ecuador	318,995	380,350	364,456	-	251,863
Egypt	3,254,907	1,654,005	1,736,255	3,939,745	2,344,027
El Salvador	-	-	316,668	-	-
Fm USSR	5,212,691	3,690,372	-	-	-
Guatemala	302,963	-	250,820	-	262,403
India	-	-	-	-	673,471
Indonesia	308,926	251,312	-	-	-
Iraq	953,173	335,086	-	-	-
Israel	503,834	495,500	-	621,114	598,274
Italy	491,039	435,032	376,126	299,017	288,788
Japan	2,736,086	2,837,416	3,279,595	3,545,243	3,247,411
Jordan	398,358	600,679	446,775	-	634,764
Korea Rep.	1,738,212	1,596,913	1,669,294	1,483,651	1,513,340
Lebanon	-	-	-	-	266,171
Mexico	415,088	359,021	-	409,448	974,716

Exports of Wheat (SITC 041, rev. 2) by major suppliers (individual flows >250,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
U.S.A. to					
Morocco	745,282	548,498	473,541	649,667	2,057,827
Nigeria	-	-	-	285,572	1,018,589
Pakistan	1,880,076	894,969	727,280	1,757,858	1,184,997
Peru	-	-	-	-	359,045
Philippines	904,884	1,088,630	1,336,163	1,482,596	1,611,230
Romania	-	-	-	-	333,754
Russian Fed	-	-	-	6,124,270	2,023,121
S.Afr.Cus.Un.....	-	-	-	-	634,637
Sri Lanka	600,995	514,026	-	621,354	857,192
Taiwan,Prv China .	743,606	680,847	-	761,143	860,403
Thailand	-	-	-	-	318,525
Tunisia	251,179	330,762	354,528	-	488,765
Turkey	523,075	301,983	-	-	-
Ukraine	-	-	-	-	402,793
Uzbekistan	-	-	-	400,367	541,542
Venezuela	647,995	633,055	410,246	570,737	756,718
Yemen	-	-	-	414,940	831,974
Special	919,228	657,244	-	893,995	946,196

Exports of Coal (SITC 322, rev. 2) by major suppliers (individual flows >500,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Australia to					
Belgium-Lux	646,006	1,397,045	1,213,678	2,405,618	1,999,165
Brazil	1,328,041	1,248,978	1,773,450	2,783,751	4,178,004
Chile	-	-	680,966	677,946	1,199,061
China	-	508,651	-	-	-
Denmark	1,864,249	1,577,331	2,004,470	1,455,394	655,222
France	2,653,195	3,095,525	4,042,019	4,712,695	2,513,224
Germany	-	-	525,954	562,536	1,531,707
Germany, FR	-	1,151,406	-	-	-
Hong Kong	2,897,733	3,360,756	3,572,471	3,710,966	3,664,364
India	4,290,846	5,176,941	5,180,286	6,049,499	6,673,237
Indonesia	705,802	-	-	-	-
Iran	-	-	-	516,834	-
Israel	-	-	670,144	-	-
Italy	1,245,545	980,690	1,269,776	1,838,997	2,329,351
Japan	53,394,204	57,404,793	60,831,633	61,272,499	63,401,731
Korea Rep.	7,904,950	9,162,153	11,329,251	14,189,330	15,622,992
Malaysia	696,126	697,128	613,231	505,248	-
Netherlands	3,739,283	5,337,845	5,853,106	4,649,713	4,123,416
Pakistan	648,178	733,496	848,600	907,786	1,141,193
Philippines	-	586,607	-	-	-
Romania	1,764,827	1,533,110	713,185	1,212,527	-
Spain	1,009,941	869,407	1,128,402	1,126,148	1,042,775
Sweden	893,386	636,331	607,625	514,099	674,803
Taiwan,Prv China	5,798,630	6,654,837	7,026,538	7,749,348	-
Turkey	515,360	1,415,893	1,808,507	1,775,372	2,851,726
UK	2,980,096	3,962,198	4,746,650	4,754,040	4,039,232
Canada to					
Brazil	1,358,232	1,227,973	1,283,216	1,073,373	789,593
Denmark	757,858	-	763,231	1,042,648	-
France	602,659	-	-	-	-
Japan	19,990,609	19,616,479	18,562,757	14,191,479	17,167,918
Korea Rep.	4,916,013	5,213,905	5,675,419	4,666,037	5,536,779
Mexico	-	-	-	527,560	-
Netherlands	521,439	523,660	670,051	-	-
Taiwan,Prv China	1,173,999	1,062,968	796,382	609,919	900,317
UK	804,320	884,379	903,164	768,583	-
USA	880,689	1,361,184	1,350,078	1,562,432	1,597,655
China to					
Belgium-Lux	-	-	-	553,924	-
France	646,096	1,532,699	1,656,306	966,280	591,248
Hong Kong	2,115,057	2,629,501	2,645,118	2,041,998	1,968,385
Indonesia	-	636,115	-	-	-
Japan	4,407,832	5,283,353	5,798,586	6,230,353	6,452,057
Korea D P Rp	1,596,919	1,728,077	1,912,890	1,369,165	1,668,080
Korea Rep.	-	1,942,717	3,197,225	4,213,813	5,342,207

Exports of Coal (SITC 322, rev. 2) by major suppliers (individual flows >500,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
China to					
Malaysia	1,106,379	641,984	-	-	-
Netherlands	1,129,167	555,785	-	-	-
Philippines	1,875,915	844,614	-	-	-
Taiwan,Prv China	-	661,357	1,518,415	2,339,222	2,158,584
UK	-	-	514,178	-	-
Colombia to					
Belgium-Lux	-	-	-	-	568,556
Denmark	2,585,129	2,028,089	2,623,484	1,393,643	1,834,345
Finland	-	-	630,454	-	-
France	1,255,275	1,935,233	1,743,719	1,142,806	1,095,910
Germany	-	-	-	633,166	722,744
Hong Kong	551,297	-	-	-	-
Ireland	583,863	693,962	651,632	839,812	1,336,461
Israel	592,555	-	566,102	539,290	812,352
Italy	520,093	-	-	-	-
Netherlands	1,823,988	1,809,189	2,883,008	2,643,549	2,100,487
Portugal	-	-	-	515,451	858,432
Spain	683,410	-	782,637	872,809	848,030
UK	767,301	2,390,534	1,819,130	2,172,527	1,323,824
USA	1,274,286	1,074,118	1,892,656	1,507,523	3,444,729
Fm Czechoslovakia to					
Austria	772,016	745,592	773,997	1,186,471	-
Germany	-	-	3,182,505	3,310,873	-
Germany, FR	2,153,112	2,312,752	-	-	-
Hungary	-	-	861,172	-	-
Germany to					
Belgium-Lux	1,999,840	1,758,928	1,277,781	1,064,119	877,943
France	1,654,915	1,835,321	1,387,009	535,398	-
Italy	1,493,696	1,089,378	695,117	-	-
Netherlands	1,926,555	1,672,917	1,640,864	1,433,178	1,318,304
Spain	-	517,778	-	-	-
Indonesia to					
Hong Kong	-	638,159	1,468,934	2,505,700	2,263,429
Japan	-	947,552	2,473,923	5,198,757	5,900,424
Korea Rep.	-	-	-	-	806,058
Malaysia	-	777,691	885,799	1,064,117	1,324,561
Netherlands	-	-	-	894,999	894,086
Spain	-	-	-	546,411	645,683
Taiwan,Prv China	623,145	735,912	803,376	3,352,968	3,872,852
USA	-	-	-	-	762,946
Netherlands to					
Belgium-Lux	571,459	683,627	642,368	544,758	-
Germany	-	-	1,477,177	1,471,580	1,688,002
Germany, FR	-	1,373,834	-	-	-

Exports of Coal (SITC 322, rev. 2) by major suppliers (individual flows >500,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Poland to					
Austria	1,721,175	1,887,397	2,150,712	1,828,453	1,539,948
Brazil	1,646,000	2,176,000	1,414,611	1,204,623	1,401,364
Czechoslovak	1,399,011	1,609,000	-	3,874,874	-
Czech Repub	-	-	-	-	2,039,407
Slovakia	-	-	-	-	864,412
Denmark	835,000	977,000	705,781	707,733	2,094,049
Finland	2,599,000	2,820,000	2,601,373	1,867,502	3,623,167
Fm German Dr	601,000	-	-	-	-
Fm USSR	9,947,000	8,637,000	-	-	-
France	-	-	-	510,909	1,060,878
Germany	-	-	4,936,667	3,624,936	3,474,384
Germany, FR	1,808,000	3,611,198	-	-	-
Hungary	569,000	-	1,064,874	619,738	589,511
Ireland	581,000	-	-	577,651	592,676
Italy	789,445	736,827	598,990	864,585	504,486
Netherlands	790,000	1,216,000	820,326	732,494	848,407
Romania	1,363,000	-	-	-	-
Sweden	759,000	735,000	-	-	763,695
UK	1,270,000	945,000	539,989	1,072,015	1,566,118
Ukraine	-	-	-	1,335,259	1,260,731
U.K. to					
Denmark	520,550	-	-	-	-
U.S.A. to					
Algeria	671,149	610,961	599,780	554,706	-
Argentina	672,970	580,785	-	-	-
Austria	517,053	-	-	-	-
Belgium-Lux	6,437,986	7,709,990	5,435,843	6,528,205	4,744,019
Brazil	5,153,269	5,297,347	6,498,905	5,778,483	4,715,082
Bulgaria	-	-	-	545,746	821,644
Canada	15,220,405	14,090,698	11,704,962	13,739,517	6,126,194
Chile	856,216	-	-	-	-
Denmark	2,882,906	2,892,017	4,702,816	3,476,648	-
Egypt	530,848	586,177	591,293	768,945	787,512
Fm Yugoslav	1,369,785	846,073	-	-	-
France	5,911,843	6,240,618	8,678,652	7,371,548	3,603,344
Germany	-	-	1,414,242	910,305	-
Germany, FR	675,438	959,140	-	-	-
Ireland	1,131,776	1,322,362	1,284,316	1,314,445	894,009
Israel	-	579,688	-	747,513	770,439
Italy	10,209,819	10,838,610	10,222,232	8,477,422	6,276,186
Japan	12,561,455	12,093,294	12,024,401	11,161,416	10,775,660
Korea Rep.	3,480,036	3,627,860	3,544,326	3,040,565	3,007,839
Morocco	747,252	682,427	845,962	668,168	532,749
Netherlands	5,512,148	7,588,851	6,292,995	8,298,323	5,045,919
Portugal	1,291,835	1,620,189	1,542,577	1,341,984	1,352,647

Exports of Phosphates (SITC 2713, rev. 2) by major suppliers (individual flows >50,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Algeria to					
Austria	-	-	352,387	248,991	-
China	-	-	52,766	-	-
Fm USSR	-	107,734	152,784	-	-
France	-	-	134,677	-	-
Hungary	63,430	-	-	-	-
Poland	80,900	-	-	-	-
Romania	-	-	88,983	66,166	-
Russian Fed	-	-	-	101,144	-
Switzerland	-	-	69,928	-	-
UK	-	-	91,239	-	-
China to					
Japan	-	-	100,470	145,703	188,495
Korea D P Rp.	-	-	141,752	-	50,636
Korea Rep.	69,039	73,989	100,980	142,503	177,140
Malaysia	83,639	146,151	168,475	100,941	167,659
Jordan to					
Australia	-	-	-	92,275	-
Belgium-Lux	141,781	50,731	-	-	-
Bulgaria	-	-	-	60,775	-
Fm Yugoslav	420,166	-	-	-	-
France	-	69,300	-	-	-
Greece	-	79,960	78,068	-	65,455
India	1,134,255	1,218,379	1,036,764	1,275,092	722,842
Indonesia	468,750	479,850	743,280	539,500	90,800
Japan	221,400	237,650	218,000	179,650	162,350
Korea Rep.	140,537	117,393	123,780	131,200	120,317
Malaysia	206,916	110,408	73,469	133,400	71,030
Netherlands	-	68,000	303,300	302,070	390,740
New Zealand	-	-	-	-	71,300
Pakistan	206,443	257,243	167,664	192,760	99,700
Philippines	-	67,350	69,600	-	-
Poland	860,931	59,141	-	139,920	-
Romania	172,767	-	-	81,800	-
Taiwan,Prv China	-	-	-	243,283	-
Turkey	527,436	468,696	389,372	432,975	309,325
Yugoslavia	-	-	-	235,700	-
Morocco to					
Australia	221,951	119,244	-	63,000	119,674
Austria	-	-	-	97,599	80,165
Belgium-Lux	1,172,000	1,260,000	1,139,500	918,001	553,016
Brazil	94,926	87,500	56,184	101,189	83,409
Bulgaria	224,000	103,993	94,826	-	143,118
Canada	-	-	-	-	91,871
China	266,000	222,940	201,627	217,668	248,982
Croatia	-	-	-	-	263,474
Czechoslovak	180,000	103,145	-	-	-
Denmark	174,163	73,681	-	-	-

Exports of Phosphates (SITC 2713, rev. 2) by major suppliers (individual flows >50,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Morocco to					
Fm German Dr.....	228,000	57,515	-	-	-
Fm Yugoslav	551,040	369,042	271,676	-	-
France	626,000	387,000	541,600	291,811	264,115
Germany	-	-	268,600	269,516	170,948
Germany, FR	129,000	195,000	-	-	-
Greece	245,000	223,000	206,600	65,024	100,137
Hungary	148,000	-	-	-	-
India	265,808	509,494	576,512	258,490	217,439
Indonesia	378,000	574,478	364,069	370,704	492,231
Iran	171,581	79,789	-	-	-
Italy	344,554	413,712	82,311	202,689	207,345
Japan	209,862	193,318	193,592	131,341	119,424
Korea Rep.	-	60,500	59,128	175,095	144,245
Malaysia	74,205	109,169	72,494	-	-
Mexico	925,785	943,180	703,713	583,936	436,000
Netherlands	729,000	684,161	430,500	358,740	271,000
New Zealand	209,700	116,710	136,346	143,830	169,544
Norway	186,543	157,320	111,600	64,000	67,041
Pakistan	-	-	106,561	103,652	163,536
Philippines	118,860	190,759	-	114,118	-
Poland	439,137	844,220	193,511	496,015	481,316
Portugal	154,210	109,156	88,936	-	60,305
Romania	606,000	576,605	259,947	278,325	410,469
Spain	1,706,000	1,508,229	1,404,363	1,287,887	1,222,992
Sweden	278,824	258,804	236,041	97,692	72,033
Taiwan,Prv China .	-	56,198	-	-	63,278
Turkey	-	-	52,000	115,057	69,596
UK	476,000	494,000	420,500	133,412	-
USA	683,024	407,903	663,234	1,644,000	1,461,000
Venezuela	68,000	74,382	76,084	84,887	59,000
Yugoslavia	-	-	-	293,153	-
Netherlands to					
Germany	-	-	124,768	154,983	96,162
Germany, FR	188,615	199,827	-	-	-
Saudi Arabia to					
Philippines	-	-	-	-	57,907
Special	102,720	-	-	-	-
Senegal to					
Canada	-	-	-	-	154,185
Fm Yugoslav	62,550	-	-	-	-
France	166,466	54,656	88,606	74,258	-
Greece	139,541	123,421	102,693	55,705	-
India	285,229	312,030	247,519	160,029	224,664
Iran	-	208,425	133,785	-	-
Japan	71,287	56,005	55,590	-	-
Philippines	356,374	310,433	233,608	239,861	115,791
Spain	218,153	115,347	93,675	-	-

Exports of Phosphates (SITC 2713, rev. 2) by major suppliers (individual flows >50,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Sweden to					
Norway	80,328	-	-	-	-
Syria to					
Austria	158,134	141,047	-	123,484	-
Bulgaria	-	-	-	74,778	-
China	52,803	52,074	-	-	-
Fm German Dr.....	252,908	60,574	-	-	-
Fm Yugoslav	187,582	93,568	-	-	-
France	258,622	101,970	328,170	253,350	81,385
Italy	52,456	61,960	-	-	-
Japan	-	-	-	139,133	-
Lebanon	84,761	128,986	-	403,023	-
Portugal	61,721	52,100	68,891	64,183	-
Romania	354,041	105,522	-	63,154	79,758
Spain	57,601	-	-	-	-
Switzerland	214,174	302,625	-	242,962	-
Turkey	60,666	64,777	79,522	-	-
UK	222,419	86,947	-	117,168	-
Togo to					
Australia	261,653	-	-	-	-
Br.Ind.Oc.Tr.....	-	91,760	150,134	-	-
Canada	890,380	802,766	815,592	849,840	642,969
China	-	-	65,340	-	-
Fm Yugoslav	65,625	-	-	-	-
France	319,840	301,381	290,939	114,420	-
Greece	-	81,773	179,528	107,778	-
India	178,700	252,767	132,836	-	-
Italy	258,688	171,410	194,011	139,050	-
Mexico	80,800	86,600	421,872	-	-
Nigeria	-	-	92,113	-	-
Philippines	285,116	225,299	272,779	112,200	221,700
Poland	291,680	67,750	102,277	-	-
S.Afr.Cus.Un.....	-	-	-	281,522	319,950
Spain	384,865	241,307	313,213	160,350	-
UK	296,800	-	-	-	-
USA	-	54,450	-	-	-
Tunisia to					
Brazil	-	-	59,935	95,594	144,540
Bulgaria	97,881	-	-	59,479	-
France	155,012	168,887	90,357	176,512	153,381
Greece	185,269	-	-	-	-
India	-	-	-	58,127	-
Indonesia	99,344	64,961	69,078	-	-
Poland	107,971	-	84,556	306,690	322,391
Romania	71,368	65,885	-	54,870	107,811
Turkey	151,264	144,134	-	81,131	238,898

Exports of Iron Ore (SITC 281, rev. 2) by major suppliers (individual flows >250,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Australia to					
Belgium-Lux	1,416,089	1,485,860	1,511,088	1,146,388	880,993
China	4,130,135	5,068,266	14,594,323	14,371,991	17,088,816
France	1,547,434	1,981,274	3,226,120	2,839,195	3,146,303
Germany	-	-	4,056,008	4,989,736	3,234,353
Germany, FR	3,524,397	3,644,377	-	-	-
Italy	1,231,293	1,967,366	1,862,541	2,218,529	1,780,764
Japan	35,767,850	53,592,213	60,769,222	53,018,147	53,473,124
Korea Rep.	4,633,503	4,720,022	12,743,939	14,663,552	17,364,164
Netherlands	1,366,137	1,394,960	1,656,203	1,377,355	978,314
Pakistan	562,005	415,578	636,135	614,337	1,356,889
Philippines	430,114	860,965	1,232,071	309,255	-
Romania	-	353,000	-	-	259,753
Spain	870,247	697,331	726,643	525,537	809,600
Taiwan,Prv China	3,764,851	4,489,930	5,086,255	4,595,144	-
UK	1,915,890	1,788,630	2,036,026	2,466,352	5,673,302
USA	393,656	-	-	-	254,482
Brazil to					
Argentina	4,370,805	3,184,638	3,112,166	2,716,623	3,581,126
Australia	488,220	593,890	354,806	774,988	275,000
Austria	293,264	508,314	266,521	-	-
Bahrain	277,599	475,700	-	713,967	1,756,967
Belgium-Lux	6,583,818	6,988,711	7,552,398	6,915,213	5,107,086
Canada	294,133	408,305	-	-	418,289
China	2,302,263	2,702,957	4,238,248	4,819,076	5,956,173
Czechoslovak	2,928,199	1,236,531	975,339	686,671	-
Egypt	1,010,320	804,070	785,493	755,076	985,303
Fm German Dr	953,533	645,810	-	-	-
Fm Yugoslav	1,210,586	523,879	-	-	-
France	6,356,328	6,263,478	5,818,979	6,332,283	6,673,172
Germany	-	-	18,593,470	20,577,279	16,533,630
Germany, FR	20,295,229	18,572,491	-	-	-
Indonesia	863,297	1,001,388	600,987	881,714	863,597
Iran	477,892	408,399	1,175,533	568,144	1,005,200
Italy	4,928,900	6,225,187	6,507,740	7,154,633	6,748,975
Japan	32,639,584	29,603,738	29,449,521	26,575,177	28,254,736
Korea Rep.	5,429,590	7,263,684	8,107,869	7,505,001	8,836,315
Libya	537,357	592,228	908,231	470,279	981,499
Malaysia	583,292	940,953	1,011,503	443,867	969,421
Mexico	482,329	-	-	-	-
Netherlands	1,905,902	2,306,393	2,342,159	2,073,255	3,136,389
Nigeria	833,112	-	-	-	-
Pakistan	530,279	-	375,198	266,252	-
Philippines	1,891,203	2,252,173	1,918,203	1,573,382	1,793,939
Poland	643,205	749,107	1,217,985	344,964	431,784
Qatar	572,033	267,671	274,343	281,576	279,168
Romania	1,376,937	834,177	764,848	-	404,438

Exports of Iron Ore (SITC 281, rev. 2) by major suppliers (individual flows >250,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Brazil to					
Saudi Arabia	1,264,093	1,207,712	1,306,658	1,812,530	2,813,994
Spain	3,717,590	3,402,430	3,763,434	3,061,366	4,161,114
Taiwan,Prv China	2,956,467	3,097,883	3,147,845	2,512,928	3,274,961
Trinidad Tbg	752,617	601,243	755,311	636,534	628,156
Turkey	424,412	863,322	574,498	844,050	639,104
UK	2,471,617	3,533,608	3,778,185	3,315,794	2,699,167
Untd Arab Em	389,793	534,515	-	342,131	-
USA	5,132,359	4,260,058	2,900,258	2,504,784	3,145,190
Special	-	-	-	-	2,193,610
Canada to					
Belgium-Lux	878,312	469,106	1,247,932	1,493,761	1,580,194
France	2,332,604	2,064,983	2,101,035	1,669,482	2,021,007
Germany	-	-	4,970,008	4,272,871	4,079,543
Germany, FR	3,918,860	4,049,209	-	-	-
Italy	1,211,201	1,189,666	854,995	1,169,590	1,070,278
Japan	2,471,014	1,797,293	1,880,306	1,188,088	1,146,826
Korea Rep.	548,260	664,822	1,162,277	792,076	940,634
Netherlands	2,697,814	2,656,226	4,016,122	2,915,259	2,590,701
Philippines	-	489,184	422,933	464,348	476,690
Portugal	424,317	285,062	-	312,172	-
Spain	682,649	549,620	693,830	622,246	833,363
Sweden	-	-	301,491	-	392,570
UK	4,839,223	3,254,294	3,902,604	3,096,462	2,931,437
USA	9,639,866	9,222,190	7,229,527	6,758,196	7,343,978
Chile to					
France	662,119	439,902	517,623	422,378	-
Germany	-	-	996,230	1,030,413	816,840
Germany, FR	855,601	1,186,996	-	-	-
Japan	4,409,139	3,956,740	3,403,257	3,894,900	3,573,290
Korea Rep.	-	519,929	1,152,638	994,332	599,272
Malaysia	-	-	-	-	363,250
Mexico	-	250,866	-	-	-
France to					
Belgium-Lux	3,461,693	3,280,117	3,152,602	2,874,562	2,762,413
India to					
Australia	526,976	309,444	422,556	-	-
Bahrain	453,430	-	-	-	327,685
Belgium-Lux	398,285	-	-	-	-
China	-	-	597,627	2,334,167	2,750,400
Fm German Dr	663,883	-	-	-	-
France	-	-	345,741	-	-
Hungary	570,780	463,506	-	-	-
Indonesia	-	-	316,810	-	276,650
Iran	-	324,104	1,056,492	594,954	1,285,531
Italy	968,380	1,457,500	1,094,461	1,424,696	2,047,251
Japan	21,135,984	21,602,096	18,642,935	13,424,352	14,837,347

	TONNES				
	1989	1990	1991	1992	1993
India to					
Korea D P Rp......	739,439	718,491	516,603	-	412,324
Korea Rep.	3,559,871	3,063,496	2,771,736	1,760,311	1,845,445
Liberia	380,450	-	-	-	-
Netherlands	340,000	743,501	539,102	426,471	300,348
Pakistan	310,664	418,381	406,228	-	558,246
Romania	2,352,881	1,138,913	-	-	-
Taiwan,Prv China .	382,484	732,101	1,088,457	481,641	487,005
Turkey	350,472	389,404	410,741	292,603	424,557
Untd Arab Em......	277,099	-	-	-	-
Liberia					
Belgium-Lux	994,267	-	-	-	-
France	999,223	504,389	709,802	-	-
Germany, FR	5,301,712	3,157,532	-	-	-
Italy	-	1,123,594	-	576,288	-
Romania	997,000	702,000	-	-	-
Spain	837,990	-	-	-	-
New Zealand to					
Japan	1,441,218	894,535	1,002,645	1,348,189	1,186,658
Norway to					
France	392,177	563,304	326,774	494,004	-
Germany	-	-	866,809	1,147,495	1,362,155
Germany, FR	422,320	258,148	-	-	-
UK	913,464	958,163	689,544	387,888	827,342
Peru to					
China	-	-	-	-	1,630,821
Fm Yugoslav	465,445	287,706	-	-	-
Japan	961,025	666,339	540,871	783,715	636,399
Korea Rep.	2,452,077	1,399,115	608,618	1,954,076	1,251,719
Mexico	-	-	-	-	565,148
Philippines					
Japan	4,507,224	4,849,456	4,864,255	3,892,459	4,131,019
S.A.C.U.					
Austria	1,137,135	1,314,651	1,259,309	1,394,130	1,441,538
China	-	-	-	-	3,939,343
France	986,743	778,166	501,119	333,583	445,352
Germany	-	-	493,986	658,971	331,511
Germany, FR	1,845,197	1,166,260	-	-	-
Italy	-	1,714,768	1,437,204	1,305,875	1,804,145
Japan	4,852,591	4,804,779	4,993,303	4,844,581	4,136,432
Korea Rep.	-	-	-	513,719	466,868
Netherlands	288,518	592,753	-	-	-
Norway	-	-	-	-	564,624
Poland	-	-	-	467,211	553,021
Romania	-	-	576,046	-	1,183,237
Turkey	1,132,817	939,992	736,632	518,108	332,918
UK	2,209,683	1,785,501	1,977,330	1,694,913	1,924,881

Exports of Iron Ore (SITC 281, rev. 2) by major suppliers (individual flows >250,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Spain to					
Belgium-Lux	-	-	307,038	-	-
France	312,675	253,444	329,916	359,796	-
Netherlands	666,618	406,779	502,138	433,353	-
Romania	-	379,030	-	-	-
UK	397,650	326,182	815,643	633,390	360,895
Sweden to					
Austria	512,392	-	-	-	-
Belgium-Lux	3,073,751	2,966,827	2,617,433	2,566,595	2,691,901
Egypt	292,502	363,295	-	384,028	350,135
Finland	1,918,105	1,817,044	1,746,439	1,858,330	1,853,239
Fm German Dr	520,082	303,125	-	-	-
France	518,339	530,164	593,911	579,610	806,187
Germany	-	-	5,793,586	5,665,899	6,086,282
Germany, FR	6,314,891	5,723,459	-	-	-
Indonesia	945,593	1,018,121	949,938	956,602	1,142,987
Japan	777,658	438,745	-	-	-
Libya	-	-	590,822	423,956	314,053
Netherlands	1,482,504	1,503,291	1,343,756	1,785,078	2,064,507
Qatar	-	263,246	268,794	-	273,594
Saudi Arabia	251,119	345,399	342,121	539,813	532,554
UK	356,922	383,264	409,289	417,295	-
U.S.A. to					
Canada	5,345,439	3,709,957	4,782,934	5,042,614	5,043,256
Egypt	-	-	268,141	-	-
Venezuela to					
Belgium-Lux	1,527,152	1,541,426	1,632,650	1,014,365	703,776
China	-	-	-	-	480,057
France	1,068,756	936,345	1,194,348	462,595	444,121
Germany	-	-	667,425	562,214	-
Germany, FR	638,341	743,291	-	-	-
Italy	-	1,114,073	1,662,979	738,666	1,053,916
Japan	540,492	1,798,060	1,407,405	1,683,403	1,503,841
Netherlands	461,217	426,998	431,517	605,678	581,472
Poland	477,107	301,568	-	-	-
Romania	949,000	618,000	-	-	-
Spain	604,756	820,646	1,036,624	870,532	636,998
Trinidad Tbg	362,369	271,857	-	-	-
Turkey	289,440	-	324,160	-	-
UK	1,166,006	1,071,055	512,099	945,592	1,009,768
USA	4,232,015	3,502,946	2,762,155	2,540,097	3,189,335

Exports of Raw Sugar (SITC 0611, rev. 2) by major suppliers (individual flows >30,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Argentina to					
Brazil	56,755	-	-	-	-
Morocco	-	40,417	-	-	-
Uruguay	-	-	-	47,998	-
USA	74,261	96,004	85,540	45,604	-
Australia to					
Canada	408,628	492,252	451,804	336,664	684,690
China	196,406	141,451	105,508	183,994	153,962
Japan	673,697	657,879	578,771	579,317	869,460
Korea Rep.	496,906	394,914	280,582	411,494	678,228
Malaysia	368,944	551,092	503,384	449,528	561,723
New Zealand	95,981	55,213	110,872	92,424	135,193
Singapore	132,312	132,306	147,006	144,006	108,009
USA	-	-	140,411	132,053	125,043
Brazil to					
Algeria	-	-	-	-	36,051
Angola	-	-	-	-	44,168
Bangladesh	-	-	-	-	35,000
Bulgaria	-	-	-	43,800	-
Egypt	84,878	140,341	154,915	178,526	204,823
Finland	-	-	-	-	44,300
Fm USSR	44,091	152,406	39,470	-	-
Jordan	-	-	-	-	58,204
Kenya	-	-	-	40,000	-
Libya	-	-	-	-	54,900
Mexico	-	-	32,512	-	-
Morocco	87,250	165,457	270,841	300,080	207,956
Nigeria	-	-	-	79,130	126,546
Peru	-	-	-	-	46,175
Portugal	-	-	-	47,421	111,887
Romania	-	-	-	-	43,497
Russian Fed	-	-	-	135,966	370,981
S.Afr.Cus.Un	-	-	-	68,300	-
Sri Lanka	-	-	-	33,000	82,288
Syria	-	-	-	41,578	-
Tunisia	-	-	-	-	52,631
UK	31,361	-	-	-	-
Uruguay	-	-	-	-	44,129
USA	-	395,566	223,694	142,199	187,894
Yemen	-	-	40,125	51,000	132,950
Special	163,447	-	-	-	102,463
Colombia to					
USA	292,336	340,180	74,371	45,349	108,603
Venezuela	-	-	72,245	53,481	194,464

Exports of Raw Sugar (SITC 0611, rev. 2) by major suppliers (individual flows >30,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Fiji to					
Canada	-	-	-	-	33,942
China	-	-	-	40,200	-
Japan	47,250	47,500	44,668	-	46,255
Malaysia	108,050	110,000	87,975	103,114	95,213
New Zealand	-	40,273	-	-	-
UK	173,199	153,453	247,113	196,649	191,800
Guatemala to					
Ecuador	118,373	47,500	50,645	66,811	-
Egypt	-	-	120,428	91,279	-
Fiji	-	-	-	69,273	-
Fm USSR	196,816	-	-	-	-
Haiti	-	-	-	30,057	-
Jamaica	-	54,964	-	35,327	-
Kenya	-	47,782	-	-	-
Mexico	191,027	-	64,200	71,691	-
Morocco	-	-	-	83,183	-
Sri Lanka	-	-	70,347	33,172	-
Tunisia	-	-	-	53,848	-
USA	83,126	88,741	201,863	139,827	-
Mauritius to					
Fm USSR	44,700	-	-	-	-
Portugal	-	31,952	-	-	-
UK	471,102	456,386	477,341	496,515	443,360
Special	32,562	-	-	-	-
Mexico to					
Fm USSR	76,087	-	-	-	-
Morocco	54,000	-	-	-	-
UK	119,951	-	-	-	-
USA	123,905	-	-	-	-
Nicaragua to					
Brazil	-	30,864	-	-	-
Fm USSR	46,948	85,003	-	-	-
USA	-	106,373	112,170	59,068	40,598
Venezuela	-	-	-	41,400	-
Special	-	30,864	-	-	-
Philippines to					
Japan	-	-	-	-	119,503
Korea Rep.	-	-	-	-	38,258
USA	187,056	239,436	274,147	208,070	151,653
Reunion to					
France	188,027	197,786	143,297	186,764	141,422

Exports of Raw Sugar (SITC 0611, rev. 2) by major suppliers (individual flows >30,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Thailand to					
China	325,450	177,013	276,904	79,833	39,290
Egypt	-	-	-	-	50,016
Fm USSR	589,094	93,193	-	-	-
Indonesia	-	-	-	36,713	-
Iran	42,254	60,359	136,016	83,424	-
Japan	530,017	528,714	489,339	846,721	621,791
Korea Rep.	375,649	469,056	603,693	851,849	481,185
Malaysia	218,584	154,036	225,019	349,808	208,018
Morocco	155,325	-	-	-	-
Mozambique	-	-	-	-	32,691
Portugal	42,002	-	-	-	-
Romania	-	-	-	31,000	-
Sri Lanka	54,845	-	-	-	-
Syria	-	49,895	-	-	-
UK	30,897	-	-	-	-
USA	45,865	33,424	36,500	-	-

Exports of Timber (SITC 247, rev. 2) by major suppliers (individual flows >50,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Austria to					
Fm Yugoslav	95,224	234,637	99,092	-	-
Italy	467,433	467,244	409,054	370,294	381,472
Romania	-	65,290	-	-	-
Belgium/Luxmbrg to					
France	76,276	116,263	198,454	156,252	83,219
Germany	-	-	361,396	350,921	322,483
Germany, FR	665,980	503,829	-	-	-
Italy	55,659	101,459	204,405	142,811	70,665
Netherlands	224,224	269,665	269,483	191,443	151,108
Canada to					
China	64,782	-	-	-	-
Italy	-	71,812	-	-	-
Japan	625,004	360,726	362,165	524,524	343,081
Korea Rep.	-	-	-	-	76,765
Sweden	-	-	-	70,284	-
Chile to					
China	77,289	-	-	-	-
Italy	-	65,415	64,322	-	-
Japan	82,803	525,988	538,482	226,964	208,149
Korea Rep.	399,288	502,838	413,583	445,855	653,238
Norway	-	53,983	-	-	-
Sweden	-	69,165	-	-	-
Turkey	159,563	310,725	228,432	235,605	216,444
China to					
Japan	73,230	50,362	87,818	-	83,994
France to					
Belgium-Lux	1,656,153	1,575,363	1,460,242	1,302,832	543,415
Finland	90,476	-	-	-	-
Germany	-	-	219,041	243,255	152,048
Germany, FR	351,356	295,518	-	-	-
Italy	745,971	793,264	869,744	788,257	421,643
Portugal	59,684	-	-	54,892	-
Spain	821,511	773,811	793,832	553,980	151,865
Sweden	151,185	-	-	-	-
Switzerland	168,705	118,650	115,275	95,573	74,140
Germany to					
Austria	1,036,028	1,337,452	2,415,403	1,644,635	1,279,677
Belgium-Lux	58,800	79,673	83,717	93,361	64,609
Czechoslovak.....	-	-	232,854	98,963	-
Denmark	90,025	77,173	104,359	74,502	92,861
Finland	114,708	155,124	192,201	169,185	72,410
France	51,676	100,917	416,689	313,491	116,823
Hungary	-	119,911	155,825	-	-
Italy	292,431	402,523	791,595	581,635	424,952
Netherlands	86,169	76,021	87,037	71,894	-

	TONNES				
	1989	1990	1991	1992	1993
Germany to					
Romania	-	86,659	110,551	-	-
Sweden	969,394	557,257	922,824	906,857	595,992
Switzerland	119,963	79,507	73,485	120,768	139,632
Turkey	-	104,476	277,462	72,293	376,089
Malaysia to					
China	162,093	416,198	860,513	1,114,335	571,375
Hong Kong	380,966	396,246	392,990	371,624	285,791
India	662,944	973,111	515,023	551,603	166,495
Indonesia	-	124,350	-	-	-
Japan	8,784,601	7,824,142	6,950,789	6,522,942	4,006,557
Korea Rep.	2,396,857	2,339,147	2,413,530	1,514,118	751,163
Philippines	265,161	200,237	212,060	372,284	108,472
Singapore	60,389	50,600	-	-	-
Taiwan,Prv China	2,746,611	2,503,320	2,737,604	2,524,713	1,005,045
Thailand	572,124	574,375	488,972	528,619	160,151
New Zealand to					
China	243,212	148,179	120,484	445,523	259,620
Japan	647,392	1,060,892	1,483,990	1,289,106	1,203,911
Korea Rep.	447,918	951,954	1,169,218	1,150,253	1,350,581
Taiwan,Prv China	-	-	-	55,878	75,688
Turkey	-	-	-	-	84,878
Norway to					
Sweden	805,692	384,357	450,515	462,799	377,180
Turkey	-	-	-	-	84,400
Papua-N Guinea to					
China	-	-	52,315	-	82,474
Hong Kong	-	-	-	-	67,480
Japan	766,727	517,815	564,134	730,673	1,246,538
Korea Rep.	313,573	331,294	398,974	603,637	743,102
Philippines	-	-	-	-	67,316
Switzerland to					
Austria	-	67,652	57,352	-	-
Italy	538,036	670,291	719,398	729,749	695,468
U.S.A. to					
Austria	548,048	390,308	270,820	-	-
China	1,942,884	991,681	189,263	-	-
Finland	-	913,075	855,520	-	-
Fm Yugoslav	210,658	166,688	-	-	-
Hungary	-	-	367,824	-	-
Italy	259,680	278,043	191,636	-	-
Japan	3,673,321	3,405,333	3,012,890	-	-
Korea Rep.	-	-	81,537	-	-
Norway	183,317	121,044	79,413	-	-
Poland	58,200	-	-	-	-
Sweden	1,874,754	1,084,019	1,097,975	-	-

Exports of Timber (SITC 247, rev. 2) by major suppliers (individual flows >50,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
USSR to					
China	1,784,104	1,338,526	1,472,080	-	613,025
Germany	-	-	78,683	82,090	50,689
Germany, FR	110,789	94,411	-	-	-
Italy	-	-	52,519	57,513	-
Japan	7,720,173	7,239,426	6,342,527	5,988,318	5,400,063
Korea Rep.	-	2,562,210	2,402,248	1,747,083	1,139,210
Mexico	-	-	-	60,582	-
Turkey	-	-	197,650	217,472	256,889

Exports of Crude Petroleum (SITC 333, rev. 2) by major suppliers (continued) (see +2,000,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Algeria to					
Belgium-Lux	2,048,417	2,207,948	-	-	-
France	3,112,222	3,080,506	3,659,575	3,707,440	-
Germany	-	-	-	2,984,707	-
Germany, FR	2,679,040	-	-	-	-
Italy	5,316,400	6,629,770	4,991,720	4,736,301	-
Netherlands	2,710,923	2,180,497	2,422,906	-	-
Spain	-	-	2,028,115	2,545,142	-
USA	6,953,632	7,858,141	8,336,825	6,059,412	-
Canada to					
USA	30,895,077	29,725,430	36,556,138	39,781,510	44,899,909
Indonesia to					
Australia	-	-	2,389,384	2,622,814	2,672,253
China	-	-	3,508,983	4,471,983	4,137,622
Japan	21,393,567	22,825,998	20,640,154	20,653,259	18,340,574
Korea Rep.	-	2,332,186	4,437,945	4,844,737	3,946,615
Taiwan,Prv China	-	2,122,561	2,035,907	-	-
USA	9,839,162	5,757,408	5,185,780	3,365,013	3,563,832
Iran to					
Belgium-Lux	8,396,510	7,214,337	7,870,762	7,730,246	-
Brazil	2,892,422	4,954,025	6,972,268	7,771,770	2,748,551
France	7,546,454	8,677,842	8,895,714	7,116,288	11,516,773
Germany	-	-	2,615,588	-	2,170,174
Germany, FR	2,049,918	2,744,855	-	-	-
Greece	2,797,620	3,033,820	4,608,244	5,299,860	6,366,913
India	-	3,164,000	4,225,000	2,957,000	2,808,000
Indonesia	-	2,628,402	-	-	3,359,958
Italy	5,156,113	9,005,505	10,499,015	10,634,502	9,962,901
Japan	14,189,307	19,408,762	18,944,695	18,492,337	18,789,276
Korea Rep.	-	-	7,502,520	8,302,201	9,501,733
Netherlands	8,312,181	7,287,007	8,750,239	10,281,731	9,646,129
Philippines	2,225,242	-	-	-	-
Poland	-	-	-	2,800,021	2,418,368
Romania	8,700,000	3,820,000	3,406,620	3,678,201	5,420,821
Singapore	2,832,749	-	2,446,796	2,929,232	4,477,107
Spain	6,237,450	5,456,028	4,917,452	2,152,574	4,748,317
Sweden	-	-	2,773,530	-	-
Turkey	-	3,156,262	-	2,457,709	5,149,746
UK	2,887,675	2,982,359	-	-	2,285,461
USA	-	-	2,005,482	-	-
Libya to					
France	2,417,671	2,782,774	3,874,249	3,171,922	2,005,557
Germany	-	-	12,265,968	11,438,992	11,336,155
Germany, FR	11,013,975	11,492,540	-	-	-
Greece	-	2,098,274	2,948,126	3,118,356	2,753,273
Italy	19,385,523	23,345,835	25,780,559	24,185,594	23,503,146
Spain	4,155,663	4,961,786	5,567,077	6,652,501	5,459,415
Turkey	-	2,553,186	-	2,996,660	-

Exports of Crude Petroleum (SITC 333, rev. 2) by major suppliers (individual flows >2,000,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Mexico to					
France	2,865,021	2,797,542	2,312,494	-	-
Japan	8,326,849	7,268,953	6,559,607	4,489,155	4,014,063
Spain	9,819,762	10,688,380	12,607,416	11,945,453	9,938,906
USA	36,206,887	36,094,757	38,870,612	39,903,251	43,891,332
Nigeria to					
Austria	-	-	-	-	2,348,352
Canada	2,816,664	2,583,203	2,734,799	2,555,262	3,935,609
Chile	-	-	-	-	2,265,046
France	3,217,827	2,943,297	3,923,584	4,542,407	5,439,790
Germany	-	-	6,793,523	8,942,239	5,967,452
Germany, FR	4,409,033	6,127,025	-	-	-
India	-	-	-	4,027,000	6,347,000
Italy	2,253,268	-	2,705,347	-	-
Netherlands	2,728,443	2,408,672	4,365,059	3,654,324	3,828,699
Portugal	2,422,944	2,810,362	-	2,478,443	2,455,557
Spain	9,199,516	8,250,136	10,802,776	8,574,227	5,360,458
UK	-	2,002,340	-	-	-
USA	-	36,543,462	33,002,426	33,766,082	37,806,566
Norway to					
Belgium-Lux	-	-	-	2,745,704	-
Canada	3,382,730	3,807,902	5,275,031	5,663,044	5,213,916
Denmark	-	-	3,098,604	2,989,677	2,512,371
Finland	-	-	2,681,463	2,313,899	3,285,923
France	7,847,758	5,299,037	5,400,627	6,240,176	7,716,279
Germany	-	-	3,563,091	8,807,580	8,587,372
Germany, FR	-	2,617,114	-	-	-
Netherlands	5,242,914	7,270,566	8,552,469	8,258,949	11,728,899
Sweden	5,745,612	4,946,033	4,971,387	4,986,602	5,568,793
UK	33,412,453	33,960,887	40,220,887	40,704,740	41,585,925
USA	4,365,655	5,517,244	2,944,246	5,152,149	7,274,269
Saudi Arabia to					
Belgium-Lux	2,915,332	-	4,525,900	5,211,317	-
Brazil	5,251,175	8,326,169	9,430,941	10,509,892	10,326,099
Canada	-	3,070,989	3,524,805	3,380,694	3,390,278
France	13,074,900	14,735,556	19,959,383	19,395,782	21,785,211
Germany	-	-	7,769,242	8,692,552	8,258,520
Germany, FR	5,173,069	6,008,583	-	-	-
India	4,706,000	6,779,000	6,885,000	8,114,000	8,874,000
Indonesia	-	-	4,193,439	4,110,733	-
Italy	6,045,840	7,637,099	13,290,919	13,024,266	12,023,315
Japan	31,133,121	38,232,555	46,342,449	51,657,856	52,864,230
Korea Rep.	4,385,097	6,215,166	18,297,618	21,843,919	24,086,044
Morocco	-	-	-	2,317,822	2,672,361
Netherlands	8,746,719	7,794,736	19,198,791	17,718,353	12,966,849
New Zealand	-	-	2,035,389	-	-
Pakistan	2,207,744	2,328,067	2,287,850	2,465,653	2,570,443
Philippines	-	-	4,642,276	6,291,692	5,444,607

Imports of Crude Petroleum (SITC 333, rev. 2) by major suppliers (individual flows >2,000,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Saudi Arabia to					
Romania	4,385,000	4,303,000	2,464,616	-	-
Singapore	13,930,280	15,897,186	20,002,478	24,524,789	24,028,028
Spain	3,273,395	2,637,372	6,673,080	7,750,975	8,313,119
Sweden	-	-	-	-	2,649,832
Taiwan,Prv China	-	66,681,531	-	-	-
Thailand	-	-	-	3,013,601	2,820,398
Turkey	-	2,573,539	11,858,431	10,812,591	11,355,664
UK	2,683,493	4,614,873	8,291,518	6,957,308	9,456,325
USA	-	67,048,234	84,044,267	80,430,791	65,048,510
U.A.E. to					
France	2,356,039	2,429,459	2,924,929	-	-
India	5,008,000	3,826,000	6,557,000	6,172,000	6,083,000
Italy	2,273,430	-	-	-	-
Japan	35,984,546	41,094,073	52,499,698	52,881,051	54,945,714
Korea Rep.	6,315,484	6,425,244	6,240,153	7,497,736	7,349,307
Morocco	-	2,028,708	-	-	-
Philippines	2,081,599	-	-	-	-
Singapore	5,934,972	8,416,764	8,242,574	3,967,141	6,329,508
Thailand	2,074,006	-	-	2,081,035	3,184,634
Turkey	-	-	2,273,699	2,203,568	2,281,076
USA	-	5,003,601	3,834,298	4,306,782	3,577,296
U.K. to					
Canada	5,816,689	4,966,140	4,378,614	3,014,988	4,052,212
Finland	-	-	-	2,930,840	2,710,628
France	4,344,687	5,365,768	6,865,227	5,319,968	7,279,088
Germany	-	-	10,189,361	11,845,012	10,094,612
Germany, FR	9,801,879	10,572,429	-	-	-
Netherlands	9,871,940	10,046,568	10,351,763	9,121,673	6,949,738
Poland	-	-	-	2,951,707	2,940,507
Spain	-	-	-	2,282,663	-
USA	12,603,780	14,748,590	10,215,962	13,167,939	19,678,441
Fm USSR to					
Belgium-Lux	-	2,283,645	-	-	-
Cuba	8,679,531	-	-	-	-
Finland	8,272,920	5,263,822	3,382,067	-	-
Fm Yugoslav	5,704,321	6,082,921	-	-	-
France	5,098,943	5,088,963	-	-	-
Germany	-	-	15,251,688	-	-
Germany, FR	5,853,865	5,625,521	-	-	-
India	3,167,000	2,309,000	-	-	-
Italy	7,038,539	6,062,691	3,418,834	-	-
Netherlands	2,370,297	2,573,660	-	-	-
Poland	13,075,000	10,751,586	-	-	-
Romania	4,001,000	2,474,000	-	-	-
Spain	4,922,539	4,898,440	-	-	-
Sweden	-	2,574,107	-	-	-

Imports of Crude Petroleum (SITC 333, rev. 2) by major suppliers (individual flows >2,000,000 mt)

	TONNES				
	1989	1990	1991	1992	1993
Venezuela to					
Brazil	-	-	2,359,644	-	-
Germany	-	-	5,679,477	6,852,625	5,387,622
Germany, FR	4,744,066	4,654,433	-	-	-
Trinidad Tbg.....	-	-	-	-	2,290,210
USA	-	33,361,335	35,489,822	42,347,981	49,861,420

كيفية الحصول على منشورات الامم المتحدة

يمكن الحصول على منشورات الامم المتحدة من المكتبات ودور التوزيع في جميع انحاء العالم . استعلم عنها من المكتبة التي تتعامل معها أو اكتب الى : الامم المتحدة ،قسم البيع في نيويورك او في جنيف .

如何购取联合国出版物

联合国出版物在全世界各地的书店和经售处均有发售。请向书店询问或写信到纽约或日内瓦的联合国销售组。

HOW TO OBTAIN UNITED NATIONS PUBLICATIONS

United Nations publications may be obtained from bookstores and distributors throughout the world. Consult your bookstore or write to: United Nations, Sales Section, New York or Geneva.

COMMENT SE PROCURER LES PUBLICATIONS DES NATIONS UNIES

Les publications des Nations Unies sont en vente dans les librairies et les agences dépositaires du monde entier. Informez-vous auprès de votre libraire ou adressez-vous à : Nations Unies, Section des ventes, New York ou Genève.

КАК ПОЛУЧИТЬ ИЗДАНИЯ ОРГАНИЗАЦИИ ОБЪЕДИНЕННЫХ НАЦИЙ

Издания Организации Объединенных Наций можно купить в книжных магазинах и агентствах во всех районах мира. Наводите справки об изданиях в вашем книжном магазине или пишите по адресу: Организация Объединенных Наций, Секция по продаже изданий, Нью-Йорк или Женева.

COMO CONSEGUIR PUBLICACIONES DE LAS NACIONES UNIDAS

Las publicaciones de las Naciones Unidas están en venta en librerías y casas distribuidoras en todas partes del mundo. Consulte a su librero o diríjase a: Naciones Unidas, Sección de Ventas, Nueva York o Ginebra.

Printed in Switzerland
GE.95-52837–September 1995–3,695

TD/B/CN.4/49

United Nations publication
Sales No. E.95.II.D.17

ISBN 92-1-112385-2
ISSN 0566-7682