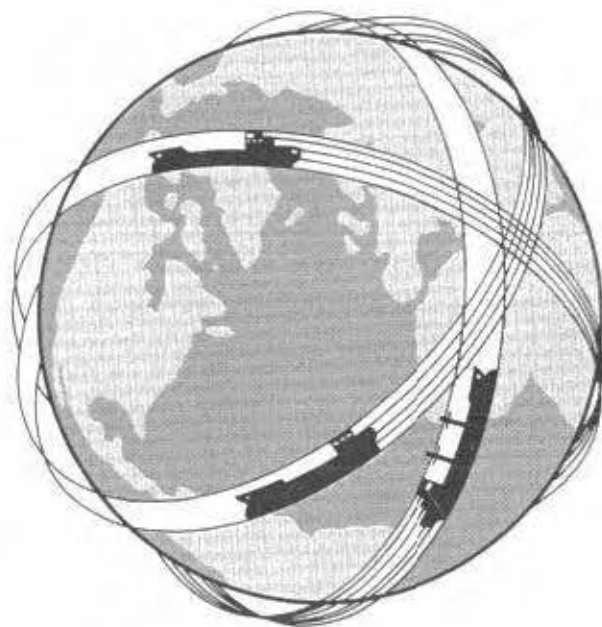


UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

REVIEW OF MARITIME TRANSPORT 1991



UNITED NATIONS

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT
Geneva

Review of Maritime Transport 1991

Report by the UNCTAD secretariat



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NOTE

This *Review* has been prepared by the UNCTAD secretariat in accordance with item vi of the programme of work of the Committee on 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.

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ABBREVIATIONS

cif	Cost, insurance and freight
dwt	Deadweight tons
EEC	European Economic Community
FEU	Forty-foot equivalent unit
fob	Free on board
grt	Gross registered tons
ldt	Light displacement tons
NVO-MTO	Non-vessel-operating multimodal transport operator
TEU	Twenty-foot equivalent unit
ULCC	Ultra large crude carrier
VLCC	Very large crude carrier
VO-MTO	Vessel-operating multimodal transport operator

EXPLANATORY NOTES

References to dollars (\$) are to United States dollars.

Billion means a thousand million.

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 VI of the programme of work of the Committee on 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, the overall structure of the *Review of Maritime Transport* is similar to previous editions. The current issue, however, includes several new features. Among them are (1) analyses of the open and international registers' fleet; (2) structure of the fleet by the main country groupings (chapter II); (3) a fresh glance at supply/demand equilibrium in containerized shipping (chapter III); (4) expanded analyses of shipbuilding and shipscrapping (chapter IV); (5) analyses of development of ports' privatization in different countries (chapter V).

To enable the users to get a more complete picture of the world fleet development during the year under review and to provide them with the most recent information on the fleet, starting from 1991 the *Review of Maritime Transport* shows the data on the world tonnage as at the end of the year in question and not as at mid-year as had been the case in previous reports.

Summary of main developments in 1991

- International seaborne trade continued to expand for the sixth consecutive year, exceeding 4 billion tons. However, it developed at a slower pace than in the previous years and the gain over 1990 amounted to 1 per cent (compared to 3 per cent in 1990 and 5.4 per cent in 1989).
- Total ton-miles for all cargoes increased to 17,390 billion (a 1.6 per cent gain over 1990).
- The world merchant fleet expanded for the third consecutive year and had reached 638.5 million dwt by the end of 1991 (a 3.8 per cent increase over the mid-1990 figure). This upturn was the combined

result of a steady increase of deliveries of newbuildings and the slow pace of demolition. By the end of the year, the world newbuilding order book reached its highest level since September 1977 and amounted to 64.7 million dwt with tankers accounting for 57.7 per cent of the total tonnage on order. The major part of this tonnage was scheduled for delivery in 1992 and 1993.

- Developed market-economy countries and the major open-registry countries continued to be the dominant groupings in the world merchant fleet (by flag of registration). With the combined tonnage of 467.2 million dwt, they accounted for 68.3 per cent of the total world fleet. Countries of Central and Eastern Europe and socialist countries of Asia owned 6 per cent and 3.2 per cent, respectively, of the world merchant fleet. Developing countries increased their fleet to 144.3 million dwt; however, their share in the total world fleet slightly decreased to 21.1 per cent (versus 21.2 per cent in 1990). Almost 72.5 per cent of this fleet was concentrated in only 10 developing countries or territories.

- The disparity between developing country cargo generation and fleet ownership remains. Thus, developing countries were the origin of 49.4 per cent of all goods in world seaborne trade but owned only 21.1 per cent of the world deadweight tonnage. Conversely, developed market-economy countries loaded 44 per cent of the world seaborne trade and, either directly or indirectly through open registry fleets, controlled 68.3 per cent of the world tonnage.

- The year was favourable for dry bulk carriers which experienced a remarkable growth in freight rates. Freight rates in the tanker sector showed significant fluctuations during 1991 reaching in almost all cases their lowest level by the end of the year.

- The proportion of total freight costs to c.i.f. import values of world trade marginally decreased from the previous year's figure. It stood at 5.22 per cent in 1990. For developing countries the ratio was still nearly double that for developed market-economy countries (8.6 per cent versus 4.4 per cent, respectively).

^{*}/ Official records of the Trade and Development Board, Tenth Session, Supplement No. 5 (TD/B/301), annex III.

Box 1

Vessel 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 groups aggregate the 20 principal types of vessel categories found in table 2 of the Lloyd's Register of Shipping *Statistical Tables, 1991*. For cross reference please note:

Review Group	Vessel included from Lloyd's Register-statistical tables
Oil tankers	Oil tanker
Bulk carriers	Ore and bulk carriers, ore/bulk/ore 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

Source: Lloyd's Register of Shipping.

THE DEVELOPMENT OF INTERNATIONAL SEABORNE TRADE

1. The year 1991 marked further deceleration of the pace of world economic activity, continuing a trend that had begun in 1989. World output had been estimated to grow by approximately 0.7 per cent in 1991 as compared to 1.8 per cent in 1990, 3.2 per cent in 1989 and 4.5 per cent in 1988.^{1/}

2. International seaborne trade in 1991 also experienced the impact of the overall slowdown trend in the world economy development. Even though it continued to expand for the sixth consecutive year, the rate of growth was the lowest observed since 1985. As shown in table 1 and illustrated in graph 1, the total volume of international seaborne trade (goods loaded) in 1991 amounted to 4.05 billion tons, the highest level ever recorded. This represents a 1.0 per cent increase over the previous year's figure, compared with a 3 per cent increase in 1990 and a 5.4 per cent increase in 1989. World seaborne trade in dry bulk cargoes continued to increase in 1991 showing a 2.1 per cent growth over the previous year's figure (against a 2.5 per cent increase in 1990). In the meantime, the seaborne trade in tanker cargoes marginally decreased by 0.3 per cent after three years of continuous remarkable augmentation (+3.7 per cent in 1990; +6.6 per cent in 1989 and +5.4 per cent in 1988). Tanker cargoes accounted for 43.2 per cent of the total volume of international seaborne trade in 1991 as compared with 43.8 per cent in the previous year. The reduction in tanker trade should be mainly attributed to the hostilities in the Gulf at the beginning of 1991, which had considerable adverse effects on shipping and trade and at a certain stage even prevented shipments of crude oil and oil products from the countries of that region.

3. The major dry bulk commodities accounted for 24.1 per cent of the world trade volume in 1991, which is practically the level of the previous year. They showed a 0.7 per cent increase in 1991 versus a 0.3 per cent increase in 1990. However, the annual rate of change varied considerably for individual cargoes. Coal shipments continued to increase significantly all through the year (a 5.3 per cent increase from 1990), largely based on continuously strong demand for thermal coal. Coal exports from the two largest exporting countries Australia and the United States increased substantially in 1991. Thus, total coal shipments from Australia were up by 13.5 per cent and those to Europe even increased by 20 per cent. United States exports were up by 8 per cent, also with a considerable increase in steam coal exports to Europe.^{2/} Iron ore shipments increased by 1.4 per cent over 1990 figure, while grain shipments

decreased by 6.2 per cent to 180 million tons, the lowest level recorded since 1986.^{3/}

4. International experts had forecast a further increase for seaborne trade in iron ore and growth of trade in coking coal in the first half of the 1990s. Shipments of these cargoes were expected to increase by approximately 5.1 to 5.2 per cent by 1996, as compared with the figure reached in 1990.^{4/}

5. Table 2 gives details of world seaborne trade by types of cargo in terms of ton-miles. Total 1991 ton miles increased by 1.6 per cent over the previous year figure reaching the record high of 17,390 billion ton-miles. This increase should be mainly attributed to a significant growth in the carriage of crude oil which increased by 3.8 per cent as compared to the previous year figure. This increase was caused by certain reorientations made by oil consumers with respect to oil suppliers in connection with the hostilities in the Gulf. Growth in the carriage of crude oil represented 88.8 per cent of the total annual increase of trade in terms of ton-miles. On the whole the share of tanker cargoes in the total ton-miles increased only marginally from 1990 and stood at 46 per cent in 1991 (versus 45.7 per cent in the previous year) due to a reduction in transportation of oil products. In 1991 grain suffered the most significant decrease of 5.9 per cent as compared with the previous year, as grain shipments were short of requirements mostly due to payment problems in some Central and East European countries. Trade in coal (in terms of ton-miles) increased by 3 per cent, while trade in iron ore declined by 0.6 per cent compared to 1990.

6. The distribution of world seaborne trade according to country groups and broad cargo categories is indicated in table 3 and graph 2. The split between dry cargoes and oil cargoes (goods loaded) remained practically unchanged over the previous year. Dry cargoes represented 56.8 per cent of goods loaded in 1991 (versus 56.2 per cent in 1990) and crude oil, as the single largest cargo group, accounted for 32.0 per cent (32.1 per cent in 1990). Changes could also be observed in the geographic structure of trade. Developed market-economy countries increased their participation in world seaborne trade in 1991, generating 44 per cent of all goods loaded and accounting for 67.7 per cent of all goods unloaded. The share of countries of Central and Eastern Europe decreased for the third consecutive year for both goods loaded and unloaded and amounted to 3.6 per cent and 3.9 per cent respectively. The share of socialist countries of Asia stood at 2 per cent for both goods loaded and unloaded.

Table 1

Development of international seaborne trade, a/ 1970 and 1980-1991
(Estimates of goods loaded)

	Tanker cargo		Dry cargo				Total (all goods)	
			Total		of which: main bulk commodities b/			
Year	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
1980	1 871	-6.6	1 833	3.3	796	4.5	3 704	-2.0
1981	1 693	-9.5	1 866	1.8	806	1.3	3 559	-3.9
1982	1 480	-12.6	1 793	-3.9	759	-5.8	3 273	-8.0
1983	1 461	-1.4	1 770	-1.3	732	-3.7	3 231	-1.3
1984	1 498	2.5	1 912	8.0	833	13.8	3 410	5.5
1985	1 459	-2.6	1 923	0.6	857	2.9	3 382	-0.8
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 c/	1 750	-0.3	2 300	2.1	975	0.7	4 050	1.0

Sources: Based on data from the United Nations Statistical Office; Fearnleys, *World Bulk Trades 1990* (Oslo), 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.

7. Developing countries further expanded their seaborne exports so that their share in all goods loaded reached 49.4 per cent in 1991. Developing countries generated 79.8 per cent of crude oil and 55.6 per cent of petroleum product shipments. Their share in dry cargo goods loaded in 1991 amounted to 31.3 per cent. With respect to goods unloaded, the share of developing countries decreased marginally to 26.4 per cent.

8. A forecast of world trade by cargo sector from 1992 to 2002 is presented in graph 3. Being estimated at 3.86 billion tons in 1992, trade is expected to increase by an average of 2.53 per cent per year, reaching 4.95 billion tons by 2002.⁵¹ Containerized and other general cargoes are projected to increase at 3.41 per cent per year to 1.19 billion tons. Estimated growth by the

year 2002 for the dry bulk and tanker sectors is 1.77 and 1.99 billion tons, respectively.

Graph 1

International seaborne trade for selected years

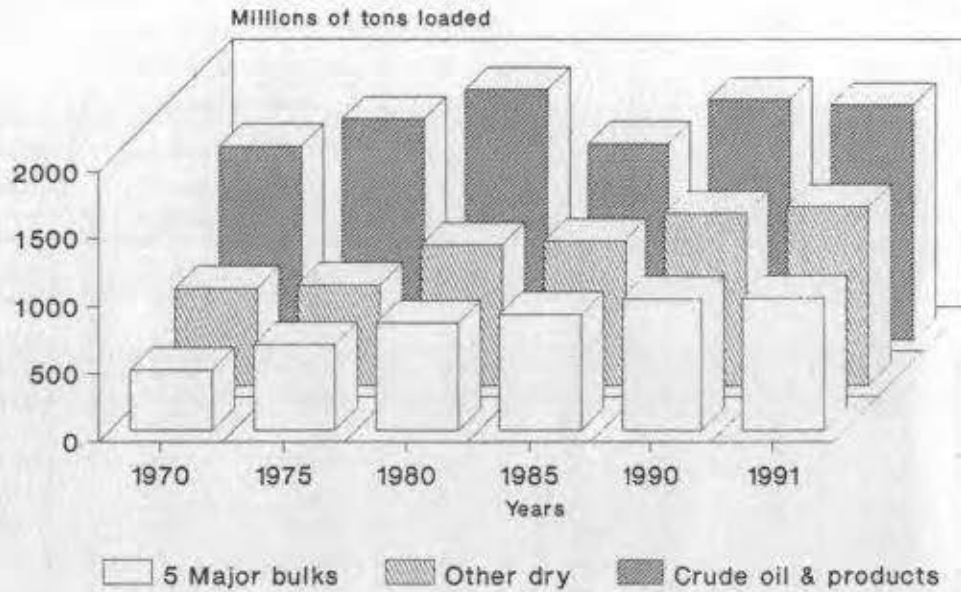


Table 2

World seaborne trade by types of cargo, 1970 and 1980-1991
(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
1981	7 371	1 000	1 508	1 120	1 131	3 710	15 840
1982	5 212	1 070	1 443	1 094	1 120	3 560	13 499
1983	4 478	1 080	1 320	1 057	1 135	3 510	12 580
1984	4 508	1 140	1 631	1 270	1 157	3 720	13 426
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	4 400	17 121
1991	6 500	1 500	1 965	1 905	1 010	4 510	17 390

Source: Fearnleys (Oslo) Review 1991.

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

Table 3

World seaborne trade a/ in 1970, 1989, 1990 and 1991 (est.)
by type 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
	1989	1 214	477	2 198	3 889	1 249	439	2 330	4 018
	1990	1 287	468	2 253	4 008	1 315	446	2 365	4 126
	1991	1 296	454	2 300	4 050	1 325	438	2 418	4 181
(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
	1989	31.2	12.3	56.5	100.0	31.1	10.9	58.0	100.0
	1990	32.1	11.7	56.2	100.0	31.9	10.8	57.3	100.0
	1991	32.0	11.2	56.8	100.0	31.7	10.5	57.8	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
	1989	15.7	30.3	63.5	44.5	72.2	81.1	61.5	67.0
	1990	13.4	32.6	63.4	43.8	72.5	81.4	61.7	67.3
	1991	13.3	33.2	63.3	44.0	73.2	82.4	62.0	67.7
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
	1989	5.3	14.5	4.0	5.7	2.9	0.3	5.9	4.4
	1990	4.6	11.8	3.8	5.0	2.6	0.3	5.8	4.1
	1991	4.0	10.3	3.6	4.5	2.2	0.2	5.5	3.9
Socialist countries of Asia	1970	-	-	1.2	0.5	0.5	0.1	2.0	1.2
	1989	2.7	1.0	2.2	2.2	0.3	0.3	3.4	2.1
	1990	2.5	0.9	2.0	2.0	0.3	0.3	3.4	2.1
	1991	2.5	0.9	2.0	2.1	0.3	0.3	3.3	2.0
Developing countries	1970	94.6	64.9	31.9	62.8	17.9	19.4	15.1	16.6
	1989	76.3	54.2	30.3	47.6	24.6	18.3	29.2	26.5
	1990	79.6	54.7	30.8	49.2	24.6	18.0	29.1	26.5
	1991	79.8	55.6	31.1	49.4	24.3	17.1	29.2	26.4
of which in: Africa	1970	25.5	2.4	9.1	15.2	1.7	4.7	3.6	2.9
	1989	24.3	6.9	4.3	10.8	5.1	2.4	4.3	4.5
	1990	24.1	7.6	4.3	11.2	5.6	2.3	4.3	4.5

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		
(Percentage share of trade by groups of countries)									
America	1970	12.2	35.4	13.8	16.0	10.5	5.6	4.4	7.2
	1989	13.4	11.7	13.0	13.0	5.7	3.9	4.1	4.6
	1990	13.3	11.9	13.2	13.1	5.7	3.8	4.0	4.5
Asia	1970	56.9	27.0	8.1	31.3	5.5	8.5	6.7	6.4
	1989	39.2	35.3	12.3	23.3	12.6	11.0	19.9	16.6
	1990	42.2	34.9	12.6	24.7	12.6	10.9	19.9	16.6
Europe	1970	-	-	-	-	-	0.1	0.1	-
	1989	-	0.2	0.3	0.2	0.7	0.6	0.8	0.7
	1990	-	0.2	0.3	0.2	0.7	0.5	0.8	0.7
Oceania	1970	-	0.1	0.8	0.4	-	0.5	0.3	0.2
	1989	-	0.1	0.4	0.2	-	0.6	0.1	0.2
	1990	-	0.1	0.4	0.2	-	0.5	0.1	0.2

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 2 thereto regarding the recording of trade of land-locked countries. The estimates presented here reflect the inclusion of Yugoslavia in 1986 in the group "Developing countries in Europe"; in previous years Yugoslavia was classified as a developed market-economy country.

Graph 2

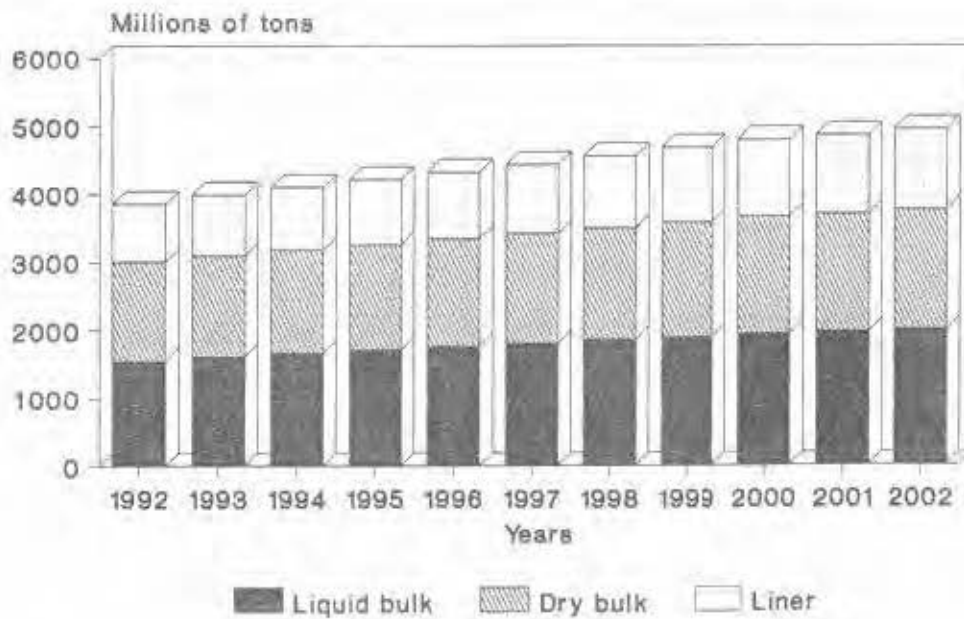
World seaborne trade by country groups, percentage distribution of tonnage, 1991



Source: UNCTAD data bank.

Graph 3

Forecast of world seaborne trade, 1992 to 2002



Source: World Sea Trade Service.

DEVELOPMENT OF THE WORLD FLEET

A. Size and ownership of the world fleet

9. The distribution of the world merchant fleet by country groupings for the years 1970, 1990 and 1991 follows in table 4 and in graph 4. The world fleet expanded for the third consecutive year and reached 638.5 million dwt at the end of 1991, attaining the 1983 figure. Thus, during the 18-month period since mid-1990, the total deadweight tonnage increased by 25.1 million dwt or by 3.8 per cent. This upturn was the combined result of the steady growth of newbuilding deliveries and a slow pace of ship scrapping.

10. Table 4 indicates that developed market-economy countries and open-registry countries continued to be the dominant groupings in the world merchant fleet in 1991 (by flag of registration). During the period from mid-1990 to end-1991, their combined share in the total world fleet increased from 67.4 per cent to 68.3 per cent and the tonnage of these two country groupings extended to 467.2 million dwt or by 5.3 per cent. During the period in question, the volume of fleet registered in Central and Eastern European countries and in the socialist countries of Asia decreased to 40.8 million dwt and 22.0 million dwt, respectively. Subsequently their shares in total world tonnage diminished to 6 per cent (-0.7 per cent) and to 3.2 per cent (-0.2 per cent) respectively. Graph 5 shows distribution of world tonnage (in terms of deadweight) by country groups as at the end of 1991.

11. Developing countries increased their total fleet by 4.6 million dwt or by 3.3 per cent from mid-1990, reaching 144.3 million dwt at the end of 1991. However, their share in the total world fleet decreased marginally to 21.1 per cent (versus 21.2 per cent in 1990). Meanwhile, the fact that a certain amount of the tonnage registered in developing countries related to vessels bareboat chartered-in rather than effectively owned by them should be taken into account. The increase in developing countries' fleet should be attributed to the growth of tonnage registered in developing countries of Europe (+3.2 million dwt) and Latin America (+1.9 million dwt). Tonnage registered in developing countries of Oceania remained at the level of the previous year (3.6 million dwt), while the amount of tonnage registered in developing countries of Africa and Asia diminished (-0.3 million dwt and -0.2 million dwt, respectively).

12. As in the previous year, Asian countries accumulated the major part of the total tonnage registered in developing countries, i.e. 61.9 per cent (64.1 per cent in 1990); they were followed by Latin American countries (19.0 per cent versus 18.2 per cent in 1990). Countries of Europe significantly increased their share in the developing countries' fleet. This increase is attributed to a growth of 95.5 per cent of tonnage registered in Malta (from 7.7 million dwt in 1990 to 15.2 million dwt in 1991) which significantly exceeded the decrease of the merchant fleet of the second developing country in Europe, i.e. Yugoslavia (from 6 million dwt in 1990 to 1.8 million dwt in 1991), from where a certain number of ships were transferred to the Maltese register. Thus, the combined share of the fleet registered in developing countries in Europe expanded to 11.8 per cent of the total developing countries' tonnage in 1991 (9.9 per cent in 1990). The fleet of African countries decreased by 4.1 per cent during the period in question and their share diminished to 4.8 per cent (5.2 per cent in 1990).

13. On the whole, 72.5 per cent of the developing countries' fleet was registered in only 10 countries or territories^{2/} while the next 10 most important countries^{2/} accounted for a further 13.8 per cent of the fleet.

B. Forecasts for world fleet development

14. Forecasts for world fleet development by vessel type are shown in graph 6. The World Fleet Forecast Service (WFFS)^{2/} projections indicate that the total world fleet deadweight will increase from 678.4 million dwt in 1992 to 851.7 million tons by the year 2002. The liner and dry bulk vessel types are expected to increase by 32.8 and 24.6 per cent respectively over the decade. The deadweight tonnage of the world tanker fleet will increase by 22.4 per cent by the year 2002.

Table 4

Distribution of world tonnage (grt and dwt) by groups of countries
of registration, 1970, 1990 and 1991 ^{a/}
(Mid-year figures)

Flags of registration by groups of countries	Tonnage and percentage shares ^{b/}						Increase in tonnage (mill. of dwt)	
	In grt (millions)			In dwt (millions)			1970-1991 1990-1991 average	
	1970	1990	1991 ^{c/}	1970	1990	1991 ^{c/}		
1. World total	217.9 (100.0)	417.6 (100.0)	435.3 (100.0)	326.1 (100.0)	658.4 (100.0)	683.5 (100.0)	17.0	25.1
2. Developed market- economy countries	141.8 (65.1)	141.5 (33.9)	145.1 (33.3)	209.7 (65.0)	219.0 (33.3)	233.0 (32.6)	0.6	4.0
3. Open-registry countries	40.9 (18.8)	130.2 (31.2)	143.4 (33.0)	70.3 (21.6)	224.6 (34.1)	244.2 (35.7)	8.3	19.6
Total 2 & 3	182.0 (83.9)	271.7 (65.1)	288.5 (66.3)	282.2 (86.6)	443.6 (67.4)	467.2 (68.3)	8.8	23.6
4. Countries of Central and Eastern Europe (including the former USSR)	18.6 (8.5)	37.4 (9.0)	34.8 (8.0)	22.7 (6.2)	44.3 (6.7)	40.8 (6.0)	0.9	-3.5
5. Socialist countries of Asia	0.9 (0.4)	14.8 (3.5)	14.8 (3.4)	1.2 (0.4)	22.1 (3.4)	22.0 (3.2)	1.0	-0.1
6. Developing countries ^{d/}	14.5 (6.7)	87.9 (21.0)	91.1 (20.9)	20.5 (6.3)	139.7 (21.2)	144.3 (21.1)	5.9	4.6
<u>of which in:</u>								
Africa	0.8	5.3	5.1	1.1	7.3	7.0	0.3	-0.3
America	6.4	16.7	17.9	8.7	25.5	27.4	0.9	1.9
Asia	7.3	55.2	55.7	10.7	89.5	89.3	3.7	-0.2
Europe ^{d/}	-	8.3	10.0	2.2	13.8	17.0	0.7	3.2
Oceania	-	2.4	2.4	-	3.6	3.6	-	-
7. Other, unallocated	1.2 (0.5)	5.8 (1.4)	5.9 (1.4)	1.7 (0.5)	8.7 (1.3)	9.2 (1.4)	0.4	0.5

Source: Compiled on the basis of data supplied by the Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.

^{a/} Excluding the United States Reserve Fleet and the United States and Canadian Great Lakes fleets, which in 1990 amounted respectively to 3.0, 1.1 and 1.5 million grt.

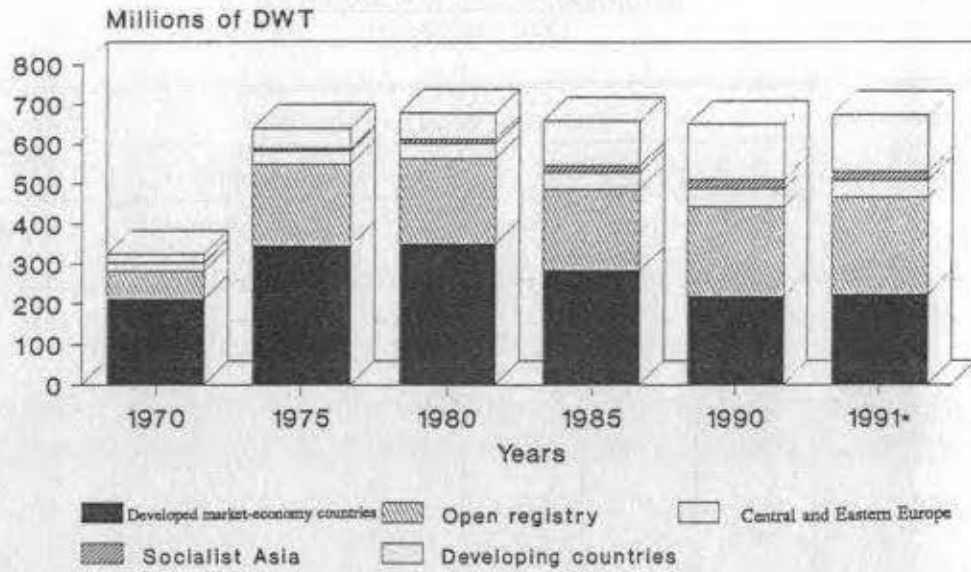
^{b/} Percentage shares are shown in brackets.

^{c/} Year-end figure.

^{d/} Including Yugoslavia, classified as from 1986 as a developing country in Europe.

Graph 4

World fleet capacity by country groups
Selected years 1970 to 1991

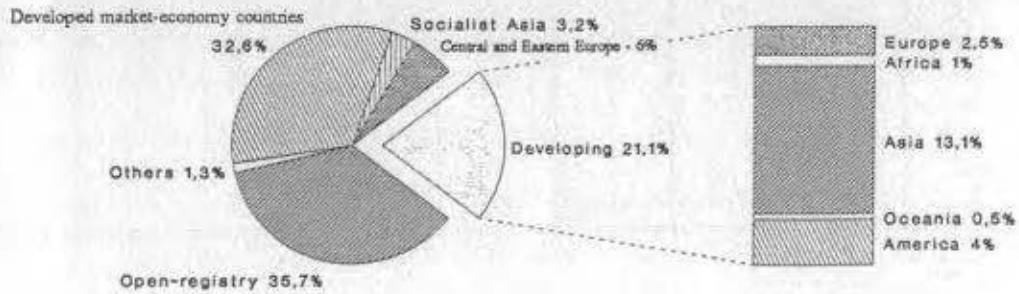


Source: Lloyd's Maritime Information Services Ltd., at mid-year.

* Year-end figures for 1991.

Graph 5

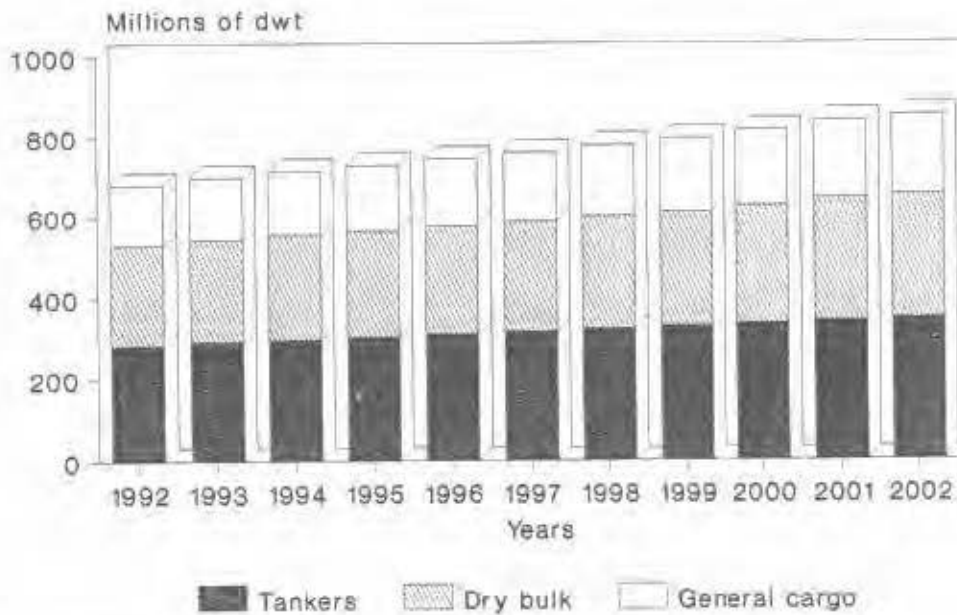
World tonnage by country groups: year end 1991
(in dwt)



Source: Lloyd's Maritime Information Services Ltd.

Graph 6

Forecast of world fleet by principal type of vessel, 1992-2002



Source: World Fleet Service.

C. The 35 most important maritime countries and territories

15. Table 5 shows the 35 most important maritime countries in terms of "controlling interest" of the world merchant fleet. The table lists merchant fleets (ships of 1,000 grt and above) by country of domicile which shows the country where the controlling interest of the ships is located in terms of parent companies indicating ships registered under national flags as well as foreign flags.

16. The table indicates that as at end-1991 the controlling interest of nearly 93.9 per cent of the world deadweight tonnage was located in 35 countries and territories. Moreover, shipowners of four leading countries (Greece, Japan, the United States and Norway) controlled 46.41 per cent of the world fleet, while the 10 most important countries and territories controlled 69.14 per cent of world tonnage. For the 20 most important countries and territories, controlling interest reached almost 84 per cent of the world fleet.

17. The table also shows that 47.7 per cent of the fleet controlled by the above-mentioned 35 countries was flagged out, i.e. registered in other countries or territories, at the end of 1991 (46.2 per cent on a world-wide basis). It should be noted that flagging out of merchant ships showed a steady increase during

the past three years, both in the 35 most important maritime countries and on a world-wide basis. Thus, in 1989, the deadweight tonnage of vessels registered in other countries or territories amounted to 43 per cent of the fleet controlled by the 35 most important maritime countries (41.5 per cent on a world-wide basis); in 1990 it already stood at 44.2 per cent for the above countries (42.8 per cent on a world-wide bases).² There was no evidence that this trend for flagging out of vessels would stop in the near future.

18. Registration of tonnage under foreign flags is now practised by a large number of developed and developing countries. For certain countries and territories, tonnage registered under foreign flags considerably exceeds that under the national flag. Thus, for Belgium it stands at 96.87 per cent; Hong Kong - 87.91 per cent; Switzerland - 86.04 per cent; Finland - 78.22 per cent; United Kingdom - 74.86 per cent; and for the United States - 70.19 per cent.

Table 5

The 35 most important maritime countries
(as at 31 December 1991) ^{a/}

1 Jan 92

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	984	1 595	2 579	41 859 998	52 549 313	94 409 311	55.66	14.84
Japan	1 156	1 751	2 907	32 951 196	49 836 719	82 787 915	60.20	13.01
United States	539	714	1 253	18 307 576	43 108 154	61 415 730	70.19	9.65
Norway	967	509	1 476	37 838 056	18 934 850	56 772 906	33.35	8.92
Hong Kong	70	602	672	3 887 664	28 258 782	32 146 447	87.91	5.05
Former USSR	4 135	110	4 245	27 233 783	2 579 203	29 812 986	8.65	51.47 ^{d/}
China	1 386	155	1 541	19 855 948	6 058 735	25 914 683	23.38	4.69
United Kingdom	438	487	925	5 870 529	17 570 273	23 440 802	74.96	4.07
Republic of Korea	482	145	627	11 414 224	6 361 036	17 775 260	35.79	3.68
Germany	648	495	1 143	6 535 611	8 967 829	15 523 440	57.77	2.79
Denmark	408	222	630	7 763 652	4 927 169	12 690 821	38.82	2.44
Italy	593	51	644	9 900 320	1 663 541	11 563 861	14.39	69.14
Taiwan, Province of China	195	181	376	7 368 914	4 108 553	11 477 467	35.80	1.99
India	396	39	435	10 203 623	610 144	10 813 767	5.64	1.82
Brazil	252	5	257	9 356 082	443 112	9 799 194	4.52	1.70
Sweden	196	135	331	3 342 995	5 717 387	9 060 382	63.10	1.54
Iran (Islamic Rep.of)	141	3	144	8 274 363	18 863	8 293 226	0.23	77.99
Turkey	359	21	380	7 017 974	561 281	7 579 255	7.41	1.42
Singapore	263	154	417	4 972 367	2 066 801	7 039 168	29.36	1.30
France	172	92	263	2 971 030	3 201 033	6 172 063	51.86	1.19
Belgium	45	129	174	185 258	5 726 084	5 911 342	96.87	0.97
Romania	325	5	330	5 539 862	90 709	5 630 571	1.61	83.98
Cyprus	42	25	67	4 096 618	1 259 348	5 355 966	23.51	0.89
Spain	352	74	426	4 858 235	463 882	5 322 117	8.72	0.84
Yugoslavia	71	185	256	1 731 107	3 478 390	5 209 497	66.77	0.84
Netherlands	434	167	601	3 485 137	1 691 181	5 176 318	32.67	0.82
Switzerland	17	132	149	609 944	3 759 080	4 369 024	86.04	0.81
Poland	279	4	283	3 653 251	25 130	3 678 381	0.68	0.69
Kuwait	29	11	40	2 601 496	1 043 566	3 645 062	28.63	0.58
Finland	98	74	172	790 294	2 837 636	3 627 930	78.22	0.57
Philippines	258	13	271	3 239 575	102 196	3 341 771	3.06	0.53
Indonesia	383	63	446	2 353 583	972 768	3 326 351	29.24	0.52
Saudi Arabia	71	28	99	938 263	2 146 162	3 084 425	69.58	0.48
Australia	78	18	96	2 533 225	325 954	2 859 179	11.40	0.45
Malaysia	131	14	145	2 156 286	270 752	2 427 038	11.16	0.38
Total (35 countries)	16 393	8 407	24 800	315 718 039	281 735 617	597 453 656	47.7	93.90
Percentage	66.1	33.9	100	52.8	47.2	100		
World total	18 709	9 022	27 731	342 472 348	293 705 564	636 177 912	46.2	100.0
Percentage	67.5	32.5	100	53.8	46.2	100		

Source: Information supplied by Lloyd's Maritime Information Services Ltd. (LMIS), London.

^{a/} Vessels of 1,000 grt and above, excluding United States reserve fleet and United States and Canada Great Lakes fleet.

^{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 6 as an open-registry country) and Hong Kong (shown separately in the present table).

^{d/} Figures in this column show cumulative totals.

D. Open and international ship registers

19. Rapid increase in the number of countries and territories offering open-registry facilities or establishing international or offshore registers with special ship registration conditions available to national and/or foreign shipowners represents an important feature of modern shipping. In 1970, six countries, i.e. Cyprus, Liberia, Oman, Panama, Singapore and Somalia were classified as open-registry countries,¹⁰ while at the end of 1991 the number of open and international registers in accordance with the classification adopted by the International Shipping Federation and Lloyd's of London Press reached 29.¹¹ Thus, more and more countries take or intensify measures to attract ships to their ship registers. In some cases such efforts are largely directed at retaining ships owned by nationals on the register or re-attracting such ships to the national register, for instance, in the case of the Norwegian International Ship Register (NIS) and the Danish International Ship Register (DIS). Thus, new classifications and terminology have recently emerged such as "traditional", "captive" or "off-shore" registers. The term "international registers" is becoming increasingly used to refer to registers with registration requirements (in particular in relation to taxation, registration and annual tonnage fees and the manning of vessels by non-nationals) which are designed both to attract foreign-owned tonnage and re-attract flagged-out ships owned by nationals.

20. Open and international registry fleets play an important role in world shipping. In December 1991, their combined deadweight amounted to 329,9 million tons which represented about 48.2 per cent of the world fleet. This fleet is mainly concentrated in the five major open-registry countries and territories usually shown as an individual group (Bahamas, Bermuda, Cyprus, Liberia and Panama). They account for 74 per cent of the total open and international registers tonnage. They are followed by NIS (11.5 per cent), Malta (4.6 per cent), Singapore (4.3 per cent) and Hong Kong (3.3 per cent).¹² According to estimates made by some marine consultants, approximately 31 per cent of shipowners now operate their tonnage solely under open registries and over 60 per cent of shipowners enjoy open-registry benefits.¹³

21. An analysis made in respect of ship type composition (ships over 1,000 grt) of the five major open-registry countries, as shown in table 6, indicates that between mid-1990 and end-1991 this country grouping's fleets grew both in terms of number of ships (up 9.9 per cent) and their deadweight capacity (up 11.6 per cent).

22. The fleet registered in the most important open-registry country, Liberia, decreased by 1.5 per cent to 88 million dwt, thus the country accounted for 39 per cent of the deadweight of the grouping in question (44.2 per cent in 1990). During the same period, Panama increased its fleet by 25.4 per cent to 68.3 million dwt and its share in the total main open-registry countries' fleet reached nearly 30.3 per cent (27 per cent in 1990). The fleet of Cyprus expanded by 13.9 per cent and its share reached 14.9 per cent (14.6 per cent in 1990). The Bahamas demonstrated the most noticeable change of fleet from mid-1990, i.e. +45.4 per cent, thus its share reached 13.5 per cent (10.4 per cent in 1990) while Bermuda's fleet decreased by 33.1 per cent and its share dropped to 2.3 per cent of the main open-registry countries' tonnage (3.8 per cent in 1990). The composition of the major open-registry countries' fleet remained practically unchanged in comparison to the previous year. In 1991 oil tankers represented the largest category (in terms of deadweight). Their share in the total fleet remained at the level of the previous year, namely 47 per cent. They were followed by dry bulk carriers (33.2 per cent versus 33.7 per cent in 1990) and general cargo ships (11.4 per cent versus 11.6 per cent in 1990). The share of container ships increased marginally to 2.9 per cent (2.6 per cent in 1990).

23. Table 7 indicates the role of tonnage owned by nationals in the total fleet registered in certain open and international registers, as at the end of 1991. It shows that the most important open-registry countries and territories either have no fleet owned by nationals at all (Liberia, Bermuda) or its share in the total fleet is very small (Panama, Bahamas). The countries having the largest portion of tonnage owned by nationals in the total fleet flying their flags are Singapore (36.8 per cent) and Cyprus (15.6 per cent). Norwegian and Danish international ship registers have been designed to maintain the national fleet in the respective second registers or re-attract the previously flagged-out vessels. Thus, 95.3 per cent of the tonnage registered in NIS is represented by ships owned by nationals, while all ships registered in DIS are owned by nationals.

24. The process of creating open, second and international registers actively continues. The possibility of creation in the near future of a second or international register is being considered in Finland and Sweden.¹⁴ Turkish shipowners are urging their Government to establish an international register similar to NIS and DIS, so as, *inter alia*, to attract operators in the neighbouring States having strong commercial links with Turkey. The Faroe Islands are expected to have an international ship register in 1992. It is believed that the Norwegian and Danish ship register models will be closely followed.¹⁵

Table 6

Tonnage distribution of major open-registry fleets a/
(As at the end of 1991)

Country	Oil tankers		Dry bulk carriers		General cargo		Containerships		Others		Total		1990 Total b/	
	Ships	'000 dwt	Ships	'000 dwt	Ships	'000 dwt	Ships	'000 dwt	Ships	'000 dwt	Ships	'000 dwt	Ships	'000 dwt
Liberia	395	47 844	459	26 891	320	5 113	78	2 316	213	5 881	1 465	88 045	1 469	89 351
Panama	268	26 342	557	21 902	1 344	13 263	144	3 112	470	3 683	2 783	68 302	2 612	54 483
Cyprus	99	10 062	442	17 646	519	4 708	38	484	67	666	1 165	33 566	1 009	29 468
Bahamas	166	17 852	167	8 168	288	2 628	29	632	194	1 168	844	30 448	591	20 934
Bermuda	22	3 891	8	343	15	135	1	29	29	803	75	5 201	79	7 779
TOTAL	950	105 991	1 633	74 950	2 486	25 847	290	6 573	973	12 201	6 332	225 562	5 760	202 015

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

a/ Ships of 1,000 grt and above; figures have been rounded to the nearest thousand. This table is not fully comparable with tables 4 and 11, which take ships of 100 grt and above as the base.

b/ As at 1 July 1990.

Table 7

Tonnage owned by the nationals of the country of registry in the total fleet
of the most important open and international registers
(Thousand dwt as at the end of 1991) a/

Country of registry or register	Liberia	Panama	NIS	Cyprus	Bahamas	Singapore	Malta	DIS	Bermuda	Vanuatu
Total tonnage registered in the country or register	88 045	68 302	37 996	33 566	30 448	13 468	12 827	7 492 443	5 201	3 118
Tonnage owned by nationals of the country of registry	0	70	36 197	4 079	577	4 959	268	7 492 443	0	0
Share of tonnage owned by nationals in the total registered fleet (%)	0	0.1	95.3	12.1	0.2	36.8	2.1	100	0	0

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

a/ Ships of 1,000 dwt and above.

25. Various countries which had previously opposed the open-registry system have recently reconsidered their attitude towards open and international registers. Guided by different economic or political reasons, their shipping or ship-managing companies have started and are intensifying employment of open-registry facilities. Thus, for instance, AKP Sovcomflot (former USSR) flagged out part of its fleet under pressure from foreign banks, who regarded this move as an added security for the finance being provided for the company's newbuilding programme.^{16/} Most of these flagged out vessels fly flags of Cyprus and Malta. It was also decided that a further ten 2,700 TEU containerships due for delivery up to mid-1993 would operate under the Liberian flag. These ships have already been taken on time charter by a German shipowner.^{17/} In view of the unstable situation in Yugoslavia, some national ship-owning companies have transferred a significant part of their tonnage to St. Vincent and the Grenadines and Malta. A number of ships were registered in Liberia and Panama. At the end of 1991, about 67.8 per cent of tonnage owned by Yugoslav citizens was registered abroad.^{18/}

26. Table 8 gives information on the true nationality of the five major open-registry fleets as at the end of 1991. As in previous years, the ownership of the five major open-registry fleets was concentrated in a relatively small number of countries with 10 countries or territories controlling 82.8 per cent of its deadweight and 76.2 per cent of the total number of ships. Greek shipowners continued to dominate in the combined open-registry fleet with more than 40 million dwt or 17.7 per cent of its total deadweight. They are closely followed by Japanese shipowners (38.3 million dwt or 17.0 per cent of the fleet in question) and shipping companies from the United States (36.3 million dwt or 16.1 per cent of the fleet).

E. Type of vessel

27. A presentation of the current world merchant fleet by principal type of vessel is provided in table 9 and graph 7. As in previous years, four types of vessel - i.e. oil tankers, ore and bulk carriers, bulk/oil carriers and general cargo ships - constituted the main part of the fleet in 1991. Their combined deadweight reached 620.4 million dwt or 89.6 per cent of the world fleet. However, the share of these four types of vessel in the world merchant fleet tonnage slightly decreased compared to 1990, when it stood at 90.2 per cent. Oil tankers showed a 4.5 per cent increase and the tonnage of ore and bulk carriers grew by 3.3 per cent, while general cargo tonnage (including passenger cargo ships) increased only by 0.6 per cent and

bulk/oil tonnage slightly decreased (by 0.5 per cent as versus the 1990 figure). The most significant change was shown by containerships (+13.5 per cent increase of fleet from mid-1990 to end-1991) and by liquefied gas carriers (+11.3 per cent during the above period). The tonnage of chemical carriers and ferries (including passenger vessels) increased by 8.2 per cent and by 6.7 per cent, respectively.

Table 8

True nationality of major open-registry fleets
As at 31 December 1991

Flag country	Liberia			Panama			Cyprus			Bahamas			Bermuda			Sub-total			Total foreign-flag fleet	
	dwt '000	No of vessels	%	dwt '000	No of vessels	%	dwt '000	No of vessels	%	dwt '000	No of vessels	%	dwt '000	No of vessels	%	dwt '000	No of vessels	%	dwt '000	No of vessels
Genec	10 208	131	11.6	6 270	278	9.2	19 316	630	57.5	4 224	104	13.9	-	-	-	40 018	1 143	17.7	52 549	1 595
Japan	10 630	263	12.1	26 736	1 095	39.1	131	18	0.4	831	38	2.7	-	-	-	38 328	1 414	17.0	49 836	1 751
United States	23 592	273	26.8	2 392	134	3.5	139	7	0.5	8 096	115	26.6	2 102	10	40.4	36 341	529	16.1	43 108	714
Hong Kong	10 945	167	12.4	12 169	301	17.4	497	4	1.5	332	4	1.1	-	-	-	23 943	481	10.6	28 259	602
Norway	8 755	183	9.9	2 124	66	3.1	2 223	23	6.4	3 369	100	11.1	225	8	4.3	16 696	380	7.4	18 935	509
United Kingdom	4 443	75	5.1	1 074	65	1.6	340	16	1.0	3 074	113	10.1	1 269	32	28.4	10 200	301	4.5	17 520	487
Germany	3 166	60	3.6	1 728	29	2.5	1 767	178	5.3	356	12	1.2	-	-	-	7 077	279	3.1	8 968	195
Republic of Korea	1 866	19	2.1	4 095	97	6.0	-	-	-	-	-	-	-	-	-	5 961	116	2.6	6 361	143
China	1 357	25	1.3	2 957	75	4.3	23	1	0.1	-	-	-	-	-	-	4 337	101	1.9	6 058	155
Sweden	1 810	18	2.1	150	16	0.7	20	6	0.1	34	34	4.2	945	5	18.2	3 691	164	1.6	3 717	135
Taiwan, Province of China	802	24	0.9	2 238	125	3.3	651	5	1.9	-	-	-	-	-	-	2 570	45	1.1	2 638	74
Finland	-	-	-	-	-	-	254	1	0.8	2 316	44	7.6	-	-	-	2 227	56	1.0	3 201	91
France	617	9	0.7	138	15	0.2	-	-	-	1 472	37	4.8	-	-	-	1 472	37	0.9	3 759	132
Switzerland	640	12	0.7	723	47	1.1	281	12	0.8	328	10	1.1	-	-	-	1 972	81	0.9	4 927	222
Denmark	519	8	0.6	416	33	0.6	51	9	0.2	943	26	3.1	-	-	-	1 929	116	0.8	2 146	29
Saudi Arabia	1 256	3	1.4	30	6	0.1	-	-	-	510	2	1.7	21	2	0.4	1 877	15	0.8	2 067	154
Singapore	304	12	0.4	779	76	1.0	-	-	-	418	5	1.4	-	-	-	1 201	93	0.7	1 726	126
Belgium	859	13	1.0	-	-	-	245	7	0.7	342	6	1.1	-	-	-	1 446	26	0.6	3 726	126
Subtotal	81 769	1 292	93.9	64 029	2 448	93.8	25 958	922	77.3	27 892	700	91.6	4 562	87	87.7	304 260	5 419	90.8	366 134	7 599
Others	6 279	173	7.1	4 223	335	6.2	7 608	343	22.7	2 556	144	8.4	639	18	12.3	21 302	913	9.4	27 572	1 423
TOTAL	88 045	1 465	100.0	68 302	2 783	100.0	33 566	1 165	100.0	30 448	844	100.0	5 201	105	100.0	225 562	6 332	100.0	293 706	9 022

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

Table 9

World fleet by principal types of vessel, 1989-1991 ^{a/}
(thousands of dwt) ^{b/}

Principal types	1989 ^{c/}	1990 ^{c/}	1991 ^{d/}	Percentage change 1990/1991
1. Oil tankers	248 355 (38.4)	257 413 (38.6)	269 102 (38.9)	+4.5
2. Liquefied gas carriers	10 358 (1.6)	10 892 (1.6)	12 121 (1.8)	+11.3
3. Chemical carriers	5 850 (0.9)	6 026 (0.9)	6 523 (0.9)	+8.2
4. Miscellaneous tankers	558 (0.1)	536 (0.1)	544 (0.1)	+1.5
5. Bulk/oil carriers (including ore/oil carriers)	37 835 (5.8)	37 821 (5.7)	37 626 (5.4)	-0.5
6. Ore and bulk carriers	193 540 (29.9)	201 060 (30.1)	207 616 (30.0)	+3.3
7. General cargo (including passenger cargo)	104 141 (16.1)	105 433 (15.8)	106 050 (15.3)	+0.6
8. Containerships (fully cellular) and lighter carriers	24 647 (3.8)	26 070 (3.9)	29 591 (4.3)	+13.5
9. Ferries and passenger vessels	2 927 (0.5)	3 220 (0.5)	3 435 (0.5)	+6.7
10. All other vessels	18 599 (2.9)	18 356 (2.8)	19 156 (2.8)	+4.4
World total	646 810 (100.0)	666 827 (100.0)	691 764 (100.0)	+3.7

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

^{a/} The totals in this table are not fully comparable with those in table 4, because they include the United States Reserve Fleet and the United States and Canadian Great Lakes fleets.

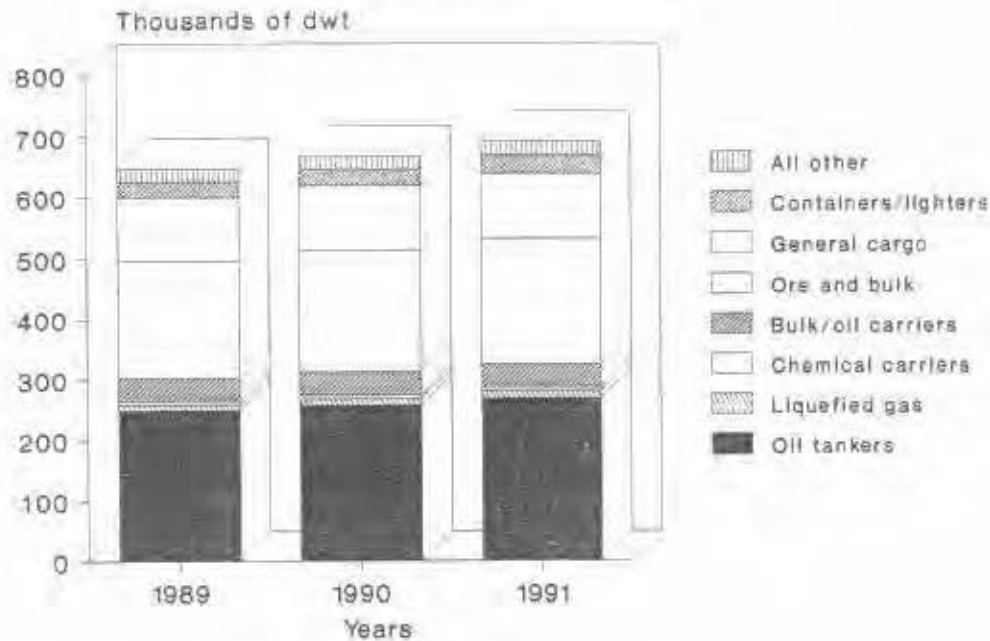
^{b/} Percentage shares are shown in brackets.

^{c/} Mid-year figure.

^{d/} End-year figure.

Graph 7

World fleet by principal types of vessel
(Mid-year 1989-1990, Year end 1991)



Source: Lloyd's Maritime Information Services Ltd.

28. Information about the world merchant fleet by types of vessel and country groups, as presented in table 10, indicates that the five major open-registry countries and territories (Bahamas, Bermuda, Cyprus, Liberia and Panama) further increased their share in all ship types in 1991. They accounted for the largest share of such types of vessel as oil tankers, dry bulk carriers (including combined carriers) and general cargo ships (43.5 per cent, 34.5 per cent and 28 per cent of the world fleet, respectively). They also accounted for 23.1 per cent of the world container fleet and 25.8 per cent of other ships. Participation of developed market-economy countries (ships flying their flag) in all types of vessel slightly decreased during 1991. However, they continued to own the largest share of container fleet (44.8 per cent of the world fleet) and other ships' tonnage (43.9 per cent). They also accounted for 36 per cent of oil tankers, 29.2 per cent of dry bulk carriers and 23 per cent of general cargo ships. Thus, developed market-economy countries and the five major open-registry countries combined accounted for 79.5 per cent of the world oil tanker tonnage (78.9 per cent in 1990), 63.7 per cent of dry bulk carriers (62.7 per cent in 1990), 51 per cent of general cargo ships (49.3 per cent in 1990), 67.9 per cent of container tonnage (67.6 per cent in 1990) and 69.7 per cent of other ships (69.4 per cent in 1990).

29. In 1991 the share of developing countries in the bulk fleet slightly decreased. Developing countries accounted for 16 per cent of oil tankers (versus 16.3 per cent in 1990) and 25.2 per cent of dry bulk carriers (25.6 per cent in 1990). Their participation in the world container fleet expanded to 17.9 per cent (16 per cent in 1990), to 26.9 per cent in the general cargo fleet (26.2 per cent in 1990) and to 17.8 per cent in other ships' tonnage (17.4 per cent in 1990).

30. Since mid-1990 the share of countries of Central and Eastern Europe decreased in all types of vessel. At the end of 1991 they accounted for 2.9 per cent of the world oil tanker tonnage (3.2 per cent in 1990), 5.3 per cent of dry bulk carriers (6.1 per cent in 1990), 13.9 per cent of general cargo ships (15.5 per cent in 1990), 2.5 per cent of container ships (3.2 per cent) and 10.2 per cent of other ships' tonnage (10.9 per cent). The share of socialist countries of Asia remained at the same level for oil tankers (1.1 per cent of the world tanker fleet) and other ships (2.2 per cent). It slightly increased for dry bulk carriers to 3.7 per cent (versus 3.6 per cent in 1990) and decreased for general cargo ships (to 7.8 per cent from 8.5 per cent in 1990) and container ships (to 4 per cent from 4.2 per cent in 1990).

Table 10

Percentage shares of world tonnage by type of vessel and country groups
1980, 1990 (as at 1 July) and 1991 (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	49.7	27.2	17.0	1.6	4.5
	1990	658.4	100	37.4	35.6	15.6	3.9	7.5
	1991	683.5	100	37.6	35.3	15.1	4.3	7.7
				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
	1990	219.0	33.3	37.3	29.5	23.1	46.5	45.2
	1991	223.0	32.6	36.0	29.2	23.0	44.8	43.9
Open-registry countries	1980	212.5	31.1	36.2	31.7	20.8	13.5	17.0
	1990	224.6	34.1	41.6	33.2	26.2	21.1	24.2
	1991	244.2	35.7	43.5	34.5	28.0	23.1	25.8
Countries of Eastern Europe	1980	37.8	5.5	2.8	4.2	12.3	2.9	19.2
	1990	44.3	6.7	3.2	6.1	15.5	3.2	10.9
	1991	40.8	6.0	2.9	5.3	13.9	2.5	10.2
Socialist countries in Asia	1980	10.9	1.6	0.6	1.6	4.7	0.1	1.3
	1990	22.1	3.4	1.1	3.6	8.5	4.2	2.2
	1991	22.0	3.2	1.1	3.7	7.8	4.0	2.2
Developing countries c/	1980	68.4	10.0	7.7	9.2	17.6	7.6	12.0
	1990	139.7	21.2	16.3	25.6	26.2	16.0	17.4
	1991	144.3	21.1	16.0	25.2	26.9	17.9	17.8
<u>of which in:</u>								
Africa	1980	7.1	1.1	1.1	0.1	2.3	-	2.1
	1990	7.3	1.1	1.0	0.5	2.3	0.2	2.9
	1991	7.0	1.0	0.8	0.5	2.2	-	3.2
America	1980	21.8	3.2	2.3	3.3	5.6	0.1	3.7
	1990	25.5	3.9	3.0	3.8	6.2	1.4	4.7
	1991	27.4	4.0	3.1	3.8	7.1	1.6	4.6
Asia	1980	39.1	5.7	4.3	5.7	9.8	2.7	5.7
	1990	89.5	13.6	10.7	17.6	13.7	13.5	9.1
	1991	89.3	13.1	10.0	16.6	13.9	15.5	8.9
Europe c/	1980	1.2	-	-	-	0.1	-	-
	1990	13.8	2.1	1.4	2.8	3.2	0.6	0.4
	1991	17.0	2.5	2.0	3.4	3.0	0.7	0.6
Oceania	1980	0.2	-	-	-	0.1	-	-
	1990	3.6	0.5	0.2	0.9	0.8	0.3	0.3
	1991	3.6	0.5	0.1	0.9	0.7	0.1	0.5
Other, unallocated	1980	3.0	0.5	0.2	0.6	0.9	1.6	0.1
	1990	8.7	1.3	0.5	2.0	0.5	9.0	0.1
	1991	9.2	1.4	0.5	2.1	0.5	7.7	0.1

Source: Compiled on the basis of data supplied by the Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.

- a/ Excluding the United States Reserve Fleet and the United States and Canadian Great Lakes Fleet.
b/ Ore and bulk carriers of 6,000 grt and above, including combined ore/oil and ore/bulk/oil carriers.
c/ Including Yugoslavia as of 1986.

F. Structure of the merchant marine fleets of the main country groups

31. Data on the structure of the merchant marine fleets of the main country groups, as at the end of 1991, is provided in table 11. Oil tankers represented the largest tonnage grouping in the fleets of developed market-economy countries and in the main open-registry countries (41.4 per cent and 45.7 per cent of their total tonnage, respectively), followed by bulk carriers (31.6 per cent and 34.1 per cent of their total tonnage, respectively). The share of containerships in the merchant tonnage of the developed market-economy countries was higher than in other country groupings, i.e. 5.9 per cent of their total fleet, while that of the general cargo ships was the lowest one (10.7 per cent of the total fleet).

32. With 42 per cent of the total developing countries' tonnage, bulk carriers constituted the major part of their merchant fleet. It was followed by oil tankers (28.6 per cent of their total fleet) and general cargo ships (19.3 per cent of their total fleet). Container ships accounted for only 3.7 per cent of the developing countries' tonnage.

33. In the fleet of countries of Central and Eastern Europe general cargo ships and bulk carriers dominated (35.3 per cent and 31.6 per cent of their total tonnage, respectively); the share of oil tankers stood at 18.4 per cent while that of container ships was only 1.7 per cent of their total tonnage. Bulk carriers and general cargo ships accounted for the major part of the tonnage registered in the socialist countries of Asia (40.9 per cent and 36.4 per cent of their total fleet, respectively). The share of container ships in their tonnage was relatively high, i.e. 5.4 per cent. Oil tankers accounted for only 12.3 per cent of this country grouping's tonnage.

G. TEU capacity and ownership of the world container fleet

34. Table 12 summarizes the development of the world container fleet during the last three years. The total number of containerships increased from 1,169 in 1990 to 1,269 in 1991 (+8.5 per cent) and their TEU capacity rose from 1,502,731 to 1,734,016 (+15.4 per cent). The world container fleet remained concentrated in the developed market-economy and open-registry countries, the former owning 33 per cent of the number of ships (35.1 per cent in 1990) and 38.9 per cent of their TEU capacity (41.2 per cent in 1990). The five main open-registry countries represented 24.3 per cent and 22.8 per cent of the number of ships and world TEU capacity, respectively

(versus 22.3 per cent and 20.8 per cent, respectively, in 1990).

35. In 1991 the share of developing countries in the TEU capacity of the world fleet continued to increase and reached 17.1 per cent (versus 15.4 per cent in 1990). These countries accounted for 21.9 per cent of the total number of containerships (19.9 per cent in 1990). However, a certain proportion of this container fleet was controlled by shipowners domiciled in the developed market-economy countries. The major part of the containership fleet registered in developing countries (86.3 per cent of their total TEU capacity versus 84 per cent in 1990) was concentrated in the developing countries of Asia. The share of developing countries in Latin America and Europe stood at 8.7 per cent and 4.2 per cent, while the share of Oceanian and African developing countries diminished to 0.6 per cent and 0.2 per cent, respectively.

36. The share of countries of Central and Eastern Europe in world TEU capacity decreased to 2.2 per cent in 1991 (2.9 per cent in 1990), while that of socialist countries in Asia stood at 3.6 per cent (versus 3.8 per cent in 1990).

H. Age distribution of the world fleet

37. Table 13 provides data on the age distribution of the world merchant fleet by type of vessel and country grouping (in terms of dwt) as at end-1991. The average age of all ships reached 14.31 years in 1991, as compared to 14.06 years in 1990 (+1.8 per cent). Containerships were the youngest type of ships (averaging 11.81 years versus 10.43 years in 1990) with 21.9 per cent of tonnage being less than five years' old. They were followed by bulk carriers (13.18 years versus 12.90 years in 1990). Tankers represented the oldest type of vessel (15.63 years versus 15.34 years in 1990) with vessels built 15 and more years ago constituting 51.4 per cent of the available tonnage. By country grouping, developed market-economy countries showed the lowest average age of ship (13.34 years), followed by developing countries (13.61 years), countries of Central and Eastern Europe (13.87 years) and open-registry countries (15.52 years). Socialist countries of Asia had the oldest fleet, with an average age of 15.71 years.

Table 11

Structure of the merchant marine fleet of the main country groups
as at 31 December 1991 a/
(Million dwt and percentage shares)

	World		Developed market-economy countries		Open-registry countries		Developing countries b/		Countries of Central and Eastern Europe		Socialist countries of Asia	
	Million dwt	%	Million dwt	%	Million dwt	%	Million dwt	%	Million dwt	%	Million dwt	%
Total fleet	683.5	100.0	223.0	100.0	244.1	100.0	144.3	100.0	40.8	100.0	22.0	100.0
of which:												
Oil tankers	256.9	37.6	92.4	41.4	111.6	45.7	41.2	28.6	7.5	18.4	2.7	12.3
Bulk carriers c/	241.2	35.3	70.5	31.6	83.2	34.1	60.7	42.0	12.9	31.6	9.0	40.9
General cargo	103.4	15.1	23.8	10.7	28.9	11.8	27.8	19.3	14.4	35.3	8.0	36.4
Container ships	29.5	4.3	13.2	5.9	6.8	2.8	5.3	3.7	0.7	1.7	1.2	5.4
Other ships	52.5	7.7	23.1	10.4	13.6	5.6	9.3	6.4	5.3	13.0	1.1	5.0

Source: Compiled on the basis of data supplied by the Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.

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

b/ Including Yugoslavia.

c/ Ore and bulk carriers of 6,000 grt and above, including combined ore/oil and ore/bulk/oil carriers.

Table 12

Distribution of the world fleet and TEU ^{a/} capacity of fully cellular containerhips by groups of countries, at mid-year 1989, 1990 and end-1991

Flags of registration by groups of countries	Number of ships			TEU capacity and percentage shares ^{b/}		
	1989	1990	1991	1989	1990	1991
1. World total	1 122	1 169	1 269	1 408 480 (100.0)	1 502 731 (100.0)	1 734 016 (100.0)
2. Developed market-economy countries	406	410	419	599 301 (42.5)	618 701 (41.2)	674 018 (38.9)
3. Open-registry countries	257	261	308	305 490 (21.7)	312 055 (20.8)	395 661 (22.8)
Total, 2 and 3	663	671	727	904 791 (64.2)	930 756 (62.0)	1 069 679 (61.7)
4. Countries of Central and Eastern Europe (including the former USSR)	78	78	68	40 955 (2.9)	43 227 (2.9)	38 888 (2.2)
5. Socialist countries of Asia	53	59	62	45 677 (3.2)	57 508 (3.8)	62 356 (3.6)
6. Developing countries	213	233	278	205 358 (14.6)	232 199 (15.4)	296 200 (17.1)
of which in:						
Africa	4	4	3	1 810 (0.1)	1 810 (0.1)	585 (-)
America	34	36	40	19 413 (1.4)	22 954 (1.5)	25 745 (1.5)
Asia	158	172	213	174 928 (12.4)	195 353 (13.0)	255 796 (14.8)
Europe	10	12	16	7 032 (0.5)	9 072 (0.6)	12 377 (0.7)
Oceania	7	9	6	2 175 (0.2)	3 010 (0.2)	1 697 (0.1)
7. Other, unallocated	115	128	134	211 709 (15.1)	239 041 (15.9)	266 893 (15.4)

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

^{a/} Twenty-foot equivalent unit.

^{b/} Percentage shares are shown in brackets.

Table 13
Age distribution of the world merchant fleet by type of vessel
as at 31 December 1991
 (Percentage of total in terms of dwt)

Country grouping	Type of vessel	Total	0-4 years	5-9 years	10-14 years	15 years and over	Average age (years) a/	Average age (years) mid-1990 a/
World total	All ships	100	11.5	19.6	24.5	44.4	14.31	14.06
	Tankers	100	10.1	10.0	28.5	51.4	15.63	15.34
	Bulk carriers	100	12.3	29.0	20.1	38.6	13.18	12.90
	General cargo	100	9.2	17.6	27.4	45.8	14.78	14.97
	Containerships	100	21.9	24.7	21.0	32.4	11.81	10.43
	All others	100	13.3	23.6	22.0	41.1	13.60	13.13
	Developed market-economy countries	All ships	100	12.3	22.4	28.4	36.9	13.34	13.24
Tankers		100	8.6	11.6	39.0	40.8	14.64	14.58
Bulk carriers		100	14.2	32.3	19.4	34.1	12.37	12.14
General cargo		100	13.2	25.3	28.3	33.2	12.73	13.46
Containerships		100	18.1	24.0	22.7	35.2	12.51	11.57
All others		100	15.9	27.0	21.6	35.5	12.61	12.36
Open-registry countries		All ships	100	10.3	15.3	21.2	53.2	15.52	15.12
	Tankers	100	11.1	6.2	20.7	62.0	16.78	16.30
	Bulk carriers	100	7.7	24.5	19.5	48.3	14.83	14.59
	General cargo	100	10.0	17.8	28.4	43.8	14.49	14.34
	Containerships	100	26.5	21.3	18.1	34.1	11.69	9.34
	All others	100	13.3	22.1	21.4	43.2	13.88	12.94
	Subtotal	All ships	100	11.3	18.7	24.6	45.4	14.47	14.18
Tankers		100	10.0	8.6	28.8	52.6	15.83	15.49
Bulk carriers		100	10.8	28.2	19.4	41.6	13.67	13.38
General cargo		100	11.4	21.0	28.4	39.2	13.73	13.91
Containerships		100	20.9	23.1	21.2	34.8	12.23	10.89
All others		100	15.0	25.2	21.5	38.3	13.07	12.56
Countries of Central and Eastern Europe		All ships	100	12.6	20.6	25.2	41.6	13.87	13.86
	Tankers	100	15.1	20.4	33.0	31.5	12.62	12.87
	Bulk carriers	100	12.1	28.3	33.0	26.6	12.03	11.95
	General cargo	100	10.8	15.3	17.1	56.8	15.83	15.87
	Containerships	100	12.3	36.3	28.8	22.6	11.21	9.61
	All others	100	14.8	14.7	16.4	54.1	15.19	15.15
	Socialist countries of Asia	All ships	100	6.7	17.9	22.6	52.8	15.71	16.28
Tankers		100	12.2	15.6	30.7	41.5	14.15	15.36
Bulk carriers		100	6.4	21.8	21.8	50.0	15.27	15.48
General cargo		100	4.5	11.6	21.9	62.0	17.17	17.92
Containerships		100	14.6	46.5	4.9	34.0	11.61	10.99
All others		100	3.4	6.9	32.6	57.1	17.02	17.12
Developing countries (excluding open-registry countries)		All ships	100	12.5	22.5	25.1	39.9	13.61	13.44
	Tankers	100	9.6	14.9	25.8	49.7	15.26	15.13
	Bulk carriers	100	19.3	33.4	20.2	27.1	11.11	11.13
	General cargo	100	4.7	13.0	32.9	49.4	15.82	15.79
	Containerships	100	22.3	19.4	23.1	35.2	12.32	10.30
	All others	100	6.0	24.6	26.7	42.7	14.44	13.74

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

I. Comparison of cargo turnover and fleet ownership

38.- The relationship between cargo volumes generated by different country groups and fleet ownership in 1970, 1990 and 1991 is summarized in table 14. The data show that in 1991 developed market-economy countries increased their share both in world tonnage and in ownership of the world merchant fleet. However, a certain disproportion between their participation in seaborne trade and fleet ownership remained.

39. Developed market-economy countries, either directly or through open-registry countries, controlled

a considerably larger share of the world fleet compared to their share in total world turnover. For example, in 1991 these two country groups combined generated 56.8 per cent of the international seaborne trade but owned 68.3 per cent of the world's deadweight. At the same time, the share of developing countries in world cargo turnover in 1991 stood at 37 per cent, while their merchant fleet constituted 21.1 per cent of the total world fleet (in terms of deadweight). The shares of countries of Central and Eastern Europe decreased both in world turnover and fleet ownership and amounted to 4.2 per cent and 6 per cent, respectively. The shares of socialist countries of Asia were 2 per cent and 3.2 per cent, respectively.

Table 14

Comparison between total cargo turnover and fleet ownership by groups of countries, 1970, 1990 and 1991

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 open-registry countries	1970	802.7	2 010.4	2 812.1	282.2	54.8	86.5
	1990	1 793.4	2 795.6	4 589.0	443.6	56.4	67.4
	1991	1 823.9	2 850.4	4 674.3	467.2	56.8	68.3
Developing countries	1970	1 643.3	431.6	2 074.9	20.5	40.4	6.3
	1990	1 933.0	1 072.0	3 005.0	139.7	37.0	21.2
	1991	1 961.9	1 082.2	3 044.1	144.3	37.0	21.1
Countries of Central and Eastern Europe (including the former USSR)	1970	145.4	57.4	202.8	20.5	3.9	6.3
	1990	199.1	172.7	371.8	44.3	4.6	6.7
	1991	180.5	162.7	343.2	40.8	4.2	6.0
Socialist countries of Asia	1970	13.4	30.2	43.6	1.2	0.9	0.4
	1990	82.1	85.6	167.7	22.1	2.0	3.4
	1991	83.7	85.7	169.4	22.0	2.0	3.2
World total ^{a/}	1970	2 604.8	2 529.6	5 134.4	326.1	100.0	100.0
	1990	4 008.0	4 126.0	8 134.0	658.4	100.0	100.0
	1991	4 050.0	4 181.0	8 231.0	683.5	100.0	100.0

Source: As per tables 3 and 4.

^{a/} Including unallocated tonnage indicated in annex III

Chapter III

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

A. Estimates of tons and ton-miles per dwt

40. Both main indicators (ton-miles performed per dwt and tons carried per dwt) estimated for the total world fleet, as presented in table 15, show a certain reduction in 1991 as compared to the previous year. Tons of cargo carried per dwt amounted to 5.93 in 1991 (versus 6.09 in 1990) and ton-miles performed per dwt amounted to 25,440 (versus 26,000 in 1990), representing 2.5 per cent and 2.1 per cent decrease, respectively, from the 1990 figure. It should be noted that the estimates for tons of cargo carried per dwt and ton-miles performed per dwt in 1990 and 1991 are not fully comparable, as the world merchant fleet data for 1990 is indicated as at mid-year while that for 1991 as at year-end. Thus, taking into account the upward trend in the development of the world merchant fleet in 1991, it can be assumed that the annual variations for the period 1990/1991 was less significant for both main indicators. However, generally, the decline in the productivity of the world fleet should be attributed to the slowdown trend in international seaborne trade, accompanied by expansion of the fleet, especially of dry bulk and oil tanker tonnage (see chapter II). The above-mentioned indicators (ton-miles performed per dwt and tons carried per dwt) estimated for individual

types of vessels for 1980-1991, as presented in tables 16 and 17, show a certain improvement of productivity for combined carriers and the residual fleet in 1991 while productivity of tankers and dry bulk carriers decreased.

B. Supply and demand situation in world shipping

41. The overall tonnage balance between supply and demand in the world merchant fleet remained almost unchanged in 1991. As shown in table 18, the estimated surplus tonnage increased marginally from 63.7 million dwt in 1990 to 64.2 million dwt in 1991. However, the share of surplus tonnage in the world fleet diminished further to 9.4 per cent (9.7 per cent in 1990) reflecting the significant increase of world tonnage.

42. The surplus capacity problem continued to affect all sectors of the world fleet. Analysis of the imbalance between supply and demand by the three main shipping sectors is provided in table 19. The tanker sector continued to have the largest excess fleet of 39.8 million dwt. However, the gap between supply and demand narrowed in this market from 15.4 per cent in 1990 to 14.5 per cent in 1991.

Table 15

Cargo carried and ton-miles performed per dwt of the total world fleet, 1980-1991

Year	World fleet (millions of dwt)	Total cargo carried (millions of dwt)	Total ton-miles performed (thousands of millions of ton-miles)	Tons of cargo carried per dwt	Ton-miles performed per dwt
1980	682.8	3 704	16 777	5.42	24 470
1981	688.8	3 555	15 840	5.16	22 990
1982	693.5	3 273	13 699	4.72	20 460
1983	686.0	3 230	12 850	4.70	18 340
1984	674.5	3 410	13 368	5.06	19 820
1985	664.8	3 382	13 160	5.08	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	4 050	17 390	5.93	25 440

Source: World fleet: *Lloyd's Register of Shipping: Statistical Tables* (London), various issues, Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd. (mid-year data for 1980-1990, year-end data for 1991); total cargo carried: UNCTAD data bank; ton-miles: Fearnleys, *Review* (Oslo), various issues.

Table 16

Estimated productivity of tankers, bulk carriers, combined carriers a/ and the residual fleet b/ 1980-1991
(Ton-miles performed per dwt)

Year	Ton-miles of oil and grain by tankers (thousands of millions) <u>c/</u>	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 <u>b/</u> (thousands of millions)	Ton-miles per dwt of the residual fleet
1980	9 007	27 560	2 009	14 470	1 569	32 430	4 192	24 830
1981	8 009	24 800	2 169	14 730	1 518	32 140	4 144	24 260
1982	5 893	18 400	2 422	15 660	1 310	28 920	3 874	22 350
1983	5 230	17 380	2 640	15 600	1 016	23 570	3 694	21 380
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	7 600	29 830	3 900	18 060	1 150	37 460	4 740	26 070

Source: Compiled on the basis of *Fearnleys Review, World Bulk Trades and World Bulk Fleet* (Oslo) 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. This factor largely accounts for the significant revision of the 1988 estimates published here, in relation to those found in previous issues of this annual report.

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/.

c/ Excluding grain since 1982, as data are not available.

Table 17

Estimated productivity of tankers, bulk carriers, combined carriers and the residual fleet, a/ 1980-1991
(Tons carried per dwt)

Year	Tons of oil and grain carried by tankers (millions)	Tons carried per dwt of tankers	Tons of dry bulk 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 <u>b/</u> (millions)	Tons carried per dwt of the residual fleet
1980	1 564	4.79	396	2.85	282	5.83	1 406	8.33
1981	1 419	4.39	421	2.86	262	5.53	1 404	8.22
1982	1 191	3.72	455	2.94	232	5.12	1 321	7.62
1983	1 132	3.76	493	2.90	196	4.55	1 272	7.36
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	1 428	5.60	670	3.10	195	6.35	1 732	9.53

Source: As for table 16.

a/ See footnote a/ to table 16.

b/ See footnote b/ to table 16.

Table 18

Tonnage oversupply in the world merchant fleet, 1982-1991
(Million dwt and percentages)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	(Million dwt)									
World merchant fleet (as at mid-year)	693.5	686.0	674.5	664.8	639.1	632.3	627.9	638.0	658.4	683.5 ^{c/}
Surplus tonnage ^{a/}	184.1	195.8	171.2	161.5	108.0	101.1	83.4	62.3	63.7	64.2
Active fleet ^{b/}	509.4	490.2	503.3	503.3	531.0	531.2	544.5	575.7	594.7	619.3
	(Percentages)									
Surplus tonnage as a percentage of the world merchant fleet	26.5	28.5	25.4	23.4	16.9	16.0	13.3	9.8	9.7	9.4
Surplus tonnage as a percentage of the active world merchant fleet	36.1	39.9	34.0	32.2	20.3	19.0	15.3	10.8	10.7	10.4

Source: Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.; *Lloyd's Shipping Economist* (London), various issues.

^{a/} Estimates of average year figures. Surplus tonnage is defined as tonnage which is not fully utilized due to slow steaming, lay-up status or because it is lying idle for other reasons. As of March 1989, *Lloyd's Shipping Economist* (London), (the main source for estimates of surplus tonnage in the world fleet shown in the present paper) changed the base for its calculation of slow-steaming bulk carriers (see the March 1989 issue of *Lloyd's Shipping Economist* (London), p. 10). Thus the figures for the bulk carriers' surplus fleet for 1982-1985 in this table are estimated in accordance with the method used before March 1989. Estimates for 1986-1991 are based on a new method which show considerably lower figures.

^{b/} World fleet minus surplus tonnage.

^{c/} Year-end figure.

Table 19

Analysis of tonnage oversupply by main vessel type, 1982-1991
(Average year figures in million dwt) a/

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Supply of world tanker fleet	335.0	319.4	296.7	273.0	261.7	255.1	250.6	253.9	266.2	273.5
Total tanker surplus fleet	130.7	134.0	111.7	100.9	68.8	65.8	54.7	41.0	40.9	39.8
Share of surplus fleet in the world tanker fleet (per cent)	39.0	41.9	37.6	36.9	26.3	25.8	21.8	16.1	15.4	14.5
Supply of world dry bulk fleet	197.0	202.9	215.0	222.7	215.4	213.8	220.6	225.4	228.7	235.0
Dry bulk fleet surplus	46.4	52.0	50.3	50.1	30.8	28.0	23.4	17.0	19.4	20.7
Share of surplus in the world dry bulk fleet (per cent)	23.5	25.6	23.4	22.5	14.3	13.1	10.6	7.5	8.5	8.8
Supply of world general cargo fleet <u>b/</u>	85.4	82.1	79.8	74.9	69.7	65.6	64.7	63.4	63.6	63.5
General cargo fleet surplus	6.1	8.3	7.6	5.8	4.3	3.6	2.9	2.2	2.1	2.2
Share of surplus in the world general cargo fleet (per cent)	7.1	10.1	9.5	7.7	6.2	5.5	4.5	3.5	3.3	3.5

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

a/ Aggregates for all sectors as shown in the present table are averages for the years shown and therefore differ from the world figures in table 18, which indicate estimates at mid-year.

b/ General cargo vessels which are not unitized.

43. Tanker tonnage engaged in oil storage continued to play an important role in the utilization of surplus fleet. As shown in table 20 and in graph 8, oil-carrying tonnage employed in floating storage duties fluctuated more than usual in 1991. With 21.3 million dwt engaged in oil storage in May 1991 it reached the highest level since April 1984. Subsequently it started to decrease, especially in the second half of 1991 and dropped to 10.8 million dwt in December. The permanent storage fleet remained little changed during the year. Its amount increased from 5.4 million dwt in January to 5.7 million dwt in June and ultimately to 6.3 million dwt in December. Fleet engaged in temporary storage fluctuated considerably during 1991. It rapidly grew during the first half of the year under the influence of the hostilities in the Gulf area. Thus, the amount of

tonnage employed in short-term storage increased during the January-May period by 48.5 per cent to almost 16 million dwt. A constant decline started in June and continued until December with the low figure of 4.5 millions dwt (71.5 per cent decrease from the May level). Much of the reduction in temporary storage tonnage was attributed to Saudi Arabian and Iranian interests, who at the end of June 1991 had a considerable number of VLCCs and ULCCs engaged in short-term storage in the Caribbean, off North Africa, Spain and in north-west Europe. Many of these tankers were discharged during the second half of the year and released from storage operations.^{19/} According to estimates, in December 1991 the total floating oil storage at sea amounted to 54 million barrels as compared with 93 million barrels at the start of the year.^{20/}

Table 20

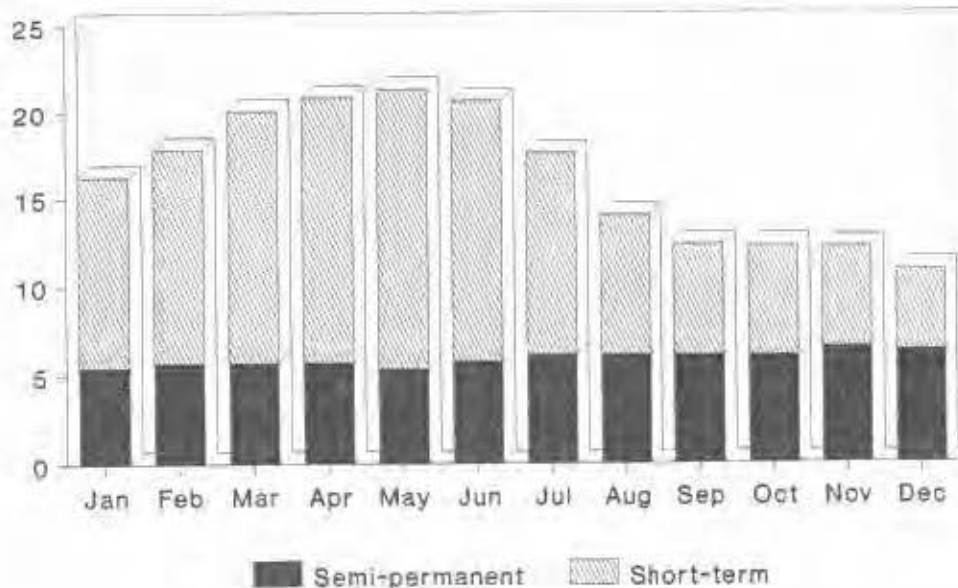
Tanker tonnage engaged in oil storage, 1981-1991
(Capacity in thousand dwt)

Date	Semi-permanent		Short-term		Total	
	No.	Dwt	No.	Dwt	No.	Dwt
July 1981	52	10 649	62	16 205	114	26 854
January 1982	58	12 682	45	11 772	103	24 454
July 1982	58	12 703	16	2 753	74	15 456
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	15 876
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
January 1991	31	5 438	40	10 767	71	16 205
February 1991	33	5 667	53	12 143	86	17 810
March 1991	33	5 667	60	14 398	93	20 065
April 1991	33	5 667	60	15 172	93	20 839
May 1991	30	5 324	65	15 994	95	21 318
June 1991	34	5 763	64	14 870	98	20 633
July 1991	34	6 081	52	11 499	86	17 580
August 1991	34	6 081	38	7 922	72	14 003
September 1991	34	6 081	32	6 259	66	12 340
October 1991	33	6 037	33	6 212	66	12 649
November 1991	36	6 482	26	5 665	62	12 147
December 1991	34	6 291	22	4 553	56	10 844

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

Graph 8

Tanker tonnage engaged in oil storage during 1991
(Millions of dwt)



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

44. The imbalance between supply and demand in the dry bulk fleet sector increased both in terms of tonnage (from 19.4 million dwt in 1990 to 20.7 million dwt in 1991) and of the relative share in the world tonnage (from 8.5 per cent of the world dry bulk fleet supply in 1990 to 8.8 per cent in 1991). This development should be mainly attributed to a discrepancy between the increase in dry bulk shipments in 1991 (+0.7 per cent for the main bulk commodities) and the growth of the dry bulk fleet, including combined carriers (2.8 per cent as compared with the previous year's figure). Surplus tonnage in the general cargo fleet sector increased slightly to 2.2 million dwt in 1991, amounting to 3.5 per cent of the world general cargo fleet supply (versus 3.3 per cent in 1990).

C. Utilization of the container fleet capacity

45. Estimates on the utilization of unitized tonnage in terms of TEU capacity in the most important trades, which account for more than 60 per cent of world TEU capacity, in 1991 and forecasts of its development until 1996 made by Drewry Shipping Consultants (London), as shown in table 21 indicate that the container fleet surplus is significantly high.

46. In 1991, the situation on the North Atlantic was less satisfactory than in other main trades, while in the trade between Europe and the Far East (westbound trade) utilization of the container capacity was the highest, i.e. 85.7 per cent. In the North Atlantic trade an improvement has been forecast during the coming five years with an increase in utilization of containers to 66.8 per cent (eastbound) and to 60.8 per cent (westbound). Drewry Shipping Consultants foresaw an improvement in the situation for shipowners being brought about mainly by a withdrawal of tonnage.

47. A steady increase in capacity utilization has been forecast for both directions on the Pacific. Container capacity utilization is expected to reach 79.3 per cent in eastbound trade and 65.5 per cent in the westbound trade. The capacity withdrawn from the market under the Transpacific Stabilization Agreement is believed to result in higher profits for the shipping companies. In the trade between Europe and the Far East a decrease of capacity utilization is anticipated from 1992 onwards. The main reasons for this mode of development are a slower growth of trade, bringing into service of new ships and expected appearance of certain shipping companies in the trade.²¹

Table 21

Utilization of container capacity for transportation of commercial cargoes
in the most important trades in 1991 and forecasts until 1996
(percentages)

Year	Transatlantic		Transpacific		Europe-Far East	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
1991	62.2	54.4	71.7	60.7	53.1	85.7
1992	62.8	56.4	76.1	63.8	51.3	84.2
1993	62.6	56.3	77.9	64.9	50.2	82.1
1994	62.7	56.4	78.5	65.1	50.0	81.4
1995	64.7	58.5	79.1	65.5	49.0	77.6
1996	66.8	60.8	79.3	65.5	51.1	78.7

Source: *International Transport Journal*, Basel, 1991, No. 49, p. 4391.

SHIPBUILDING

A. Ship prices

48. As shown in table 22, prices for newbuildings paid during 1991 remained either at the level of 1990 which was the highest for the last six years - or saw a slight increase. Thus, the average annual prices remained unchanged for 30,000 dwt and 70,000 dwt dry bulk carriers and 15,000 dwt general cargo ships. The increase in prices for large dry bulk carriers and tankers was marginal and fluctuated from 2 per cent to 6 per cent with the most significant growth for VLCC (6 per cent over the previous year figure). The biggest increase in prices for newbuildings in 1991 concerns 125,000 m³ LNG carriers and 2,500 TEU full containerships (16 per cent and 11 per cent over the previous year figure, respectively). Prices for these two types of ship reached their highest level of the last decade.

49. Changes in prices for five-year-old second-hand bulk carriers during the period 1985-1991 are shown in table 23. The increase in demand for dry bulk tonnage led to a sharp increase in prices for second-hand dry bulk carriers. Their values rose rapidly and steadily throughout the year. As a result, the year-end price for 120,000 dwt dry bulk carriers stood at the decade highest level of SUS 37 million, which represents a 32.1 per cent increase over 1990. Prices for 60,000 dwt and 27,000 dwt dry bulk carriers grew by 24.3 per cent and 22.7 per cent, respectively. On the whole, the total of 299 sales (vessels of more than 20,000 dwt) reported in 1991, represented an almost 50 per cent increase over 1990.

50. The values of five-year-old tankers showed a certain reduction in 1991 as compared to the previous year. Values held relatively steady during the first quarter, owing to the high freight market; the remaining part of the year showed a moderate decline of market values for most types of second-hand tanker tonnage. Thus, after five years of steady growth, the price for 30,000 dwt tankers decreased by 7 per cent to the level of 1989. The 1991 prices for five-year-old 80,000 dwt and 130,000 dwt tankers were respectively 5.9 per cent and 2.7 per cent lower than 1990. The total number of transactions was up somewhat over 1990; approximately 192 vessels (including combined carriers) were sold versus 180 units in 1990. ²³

B. Sales and purchases of second-hand bulker tonnage

51. Table 24 provides details of sale and purchase activity in second-hand bulker tonnage through 1991. The total amount of tonnage which changed ownership remained practically at the level of the previous year, showing a marginal decrease of 1.2 per cent from the 1990 figure. The overall activity in the second-hand market for tankers in 1991 was slower than in the previous year, which resulted in a 24 per cent decline in tonnage sales. At the same time, the second-hand market for dry bulk carriers demonstrated a stronger activity showing a 23.4 per cent increase in the sold/purchased dry bulk tonnage. The total volume of transactions in combined carriers increased by 54.6 per cent in 1991, as compared with the previous year.

52. The sales and purchase activity, as illustrated in graph 9, varied during 1991. The year start was rather passive for all types of vessel. Only 18.2 per cent of annual second-hand sales of bulk tonnage took place in the first quarter of 1991. The activity started gathering momentum in the second quarter (29.1 per cent of total tonnage sold during the year) and continued in the third quarter (29.0 per cent). The fourth quarter showed a certain decrease in the activity (23.7 per cent of the annual figure) with the year lowest amount of second-hand tonnage sold in December.

C. Newbuilding orders contracted in 1991

53. Newbuilding orders placed worldwide in 1991 decreased as compared to the previous year, both in terms of number of newbuildings and their deadweight capacity. As indicated in table 25, a total of 777 new vessels (20.9 per cent less than in 1990) with a combined tonnage of about 34.8 million dwt (7.3 per cent decrease from the 1990 figure) was contracted during the year.

Table 22

Representative newbuilding prices, 1980, 1985 and 1987-1991
(Millions of dollars)

Type and size of vessel	1980	1985	1987	1988	1989	1990	1991	Percentage change 1990/1991
30 000 dwt bulk	17	11	13	19	22	24	24	-
32 000 dwt tanker	19	18	18	23	27	29	30	3
70 000 dwt bulk	24	14	18	24	27	32	32	-
80 000 dwt tanker	28	22	24	33	38	42	43	2
120 000 dwt bulk	32	27	25	33	42	45	47	4
250 000 dwt tanker	75	47	46	63	75	90	95	6
125 000 m ³ LNG	200	200	150	150	190	225	260	16
75 000 m ³ LPG	77	44	55	57	68	78	83	6
1 200 TEU ro/ro	44	28	27	28	32	36	38	6
15 000 dwt general cargo ship	14	12	15	17	22	24	24	-
2 500 TEU full containership	..	26	32	32	41	52	58	11

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

Table 23

Second-hand prices for five-year old vessels, 1985-1991
(as at end of year)
(Millions of United States dollars)

	1985	1986	1987	1988	1989	1990	1991	Percentage change 1990/1991
30 000 dwt tanker	6.5	11.0	13.0	16.0	20.0	21.5	20.0	-7.0
80 000 dwt tanker	9.0	13.0	16.0	22.0	34.0	34.0	32.0	-5.9
130 000 dwt tanker	8.3	13.8	20.0	28.0	40.0	37.0	36.0	-2.7
27 000 dwt dry bulk carrier	3.8	4.0	7.0	11.0	14.0	11.0	13.5	+22.7
60 000 dwt dry bulk carrier	6.1	7.8	13.0	17.0	21.5	18.5	23.0	+24.3
120 000 dwt dry bulk carrier	11.0	12.0	19.5	27.5	32.0	28.0	37.0	+32.1

Source: Fearnleys (Oslo), *Review 1991*.

Table 24

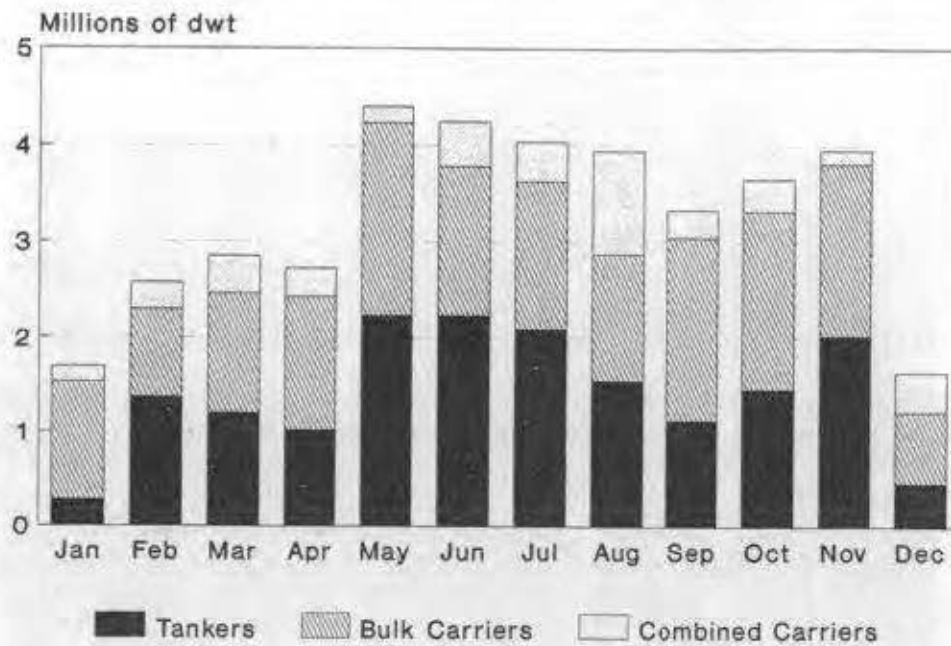
Development of sales and purchases of second-hand bulkers in 1991
(Thousand dwt)

Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total 1991	Total 1990	Percentage change 1990/1991
Tankers	270	1 366	1 203	1 018	2 234	2 234	2 086	1 544	1 126	1 454	2 019	456	17 010	22 393	-24.0
Dry bulk carriers	1 256	930	1 262	1 410	1 996	1 553	1 539	1 326	1 916	1 861	1 792	767	17 608	14 270	+23.4
Combi	162	283	388	294	169	459	415	1 077	291	338	139	414	4 429	2 866	+54.5
Total	1 688	2 579	2 853	2 722	4 399	4 246	4 040	3 947	3 333	3 653	3 950	1 637	39 047	39 529	-1.2

Source: Drewry Shipping Consultants Ltd. (London), *Shipping Statistics and Economics*, 1991, 1992, various issues.

Graph 9

Development of sale and purchase of second-hand vessels in 1991



Source: Drewry Shipping Consultants Ltd.

Table 25

Newbuilding contracts placed for the main types of ship a/ during 1987-1991
(Thousands of dwt)

Year	Tankers		Bulk carriers		Combined carriers		General cargo ships		Container vessels		Passenger/Ferries		Total b/	
	No	Dwt	No	Dwt	No	Dwt	No	Dwt	No	Dwt	No	Dwt	No	Dwt
1987	235	12 049	69	4 018	2	198	231	1 675	56	1 768	128	178	721	20 045
1988	216	8 427	111	8 021	6	24	253	1 556	79	1 827	101	106	766	19 957
1989	286	17 995	210	11 590	17	1 975	327	2 077	124	3 255	122	118	1 086	37 096
1990	338	25 876	93	3 640	24	2 726	310	2 090	124	3 073	93	119	982	37 524
1991														
January	11	503	6	137	-	-	12	72	9	217	13	19	51	948
February	42	3 665	6	422	-	-	25	105	6	38	17	24	96	4 254
March	26	1 206	6	387	-	-	11	39	4	143	3	1	50	1 776
April	19	730	11	664	-	-	5	24	1	23	10	8	46	1 450
May	27	1 734	14	1 262	-	-	2	10	2	25	1	-	46	3 032
June	14	891	4	714	2	161	4	38	5	206	2	-	31	2 010
July	59	3 108	23	2 004	-	-	40	169	7	325	12	10	141	5 616
August	19	1 913	18	1 904	-	-	7	32	4	130	5	12	53	3 991
September	25	2 520	4	286	-	-	16	78	10	312	5	8	60	3 204
October	27	1 521	14	1 140	-	-	17	95	5	178	9	7	76	2 941
November	21	1 636	14	1 071	-	-	14	133	5	115	6	1	60	2 955
December	18	445	28	1 845	2	161	14	82	4	84	1	1	67	2 618
Total 1991	308	19 872	148	11 836	4	322	167	877	66	1 796	84	90	777	34 795

Source: Institute of Shipping Economics and Logistics (Bremen), 1992, No. 1/2, p. 75.

a/ Ships of 300 grt and over.

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

54. The year started off with very low activity arising from the uncertainty engendered by the Gulf crisis. However, a flow of newbuilding orders started in February and picked up in July (see graph 10). Towards year end, growing cautiousness on the part of shipowners, mostly due to uncertain economic prospects, slowed down new contracting. The volume of tonnage contracted in December 1991 was nevertheless about 2.8 times as big as in January. Thus, a certain increase in orders for newbuildings may be expected in 1992. The principal driving force for the expected increase in contracting is the steady deterioration of the age profile of the existing fleet and the need soon to replace ships built in the 1970s.

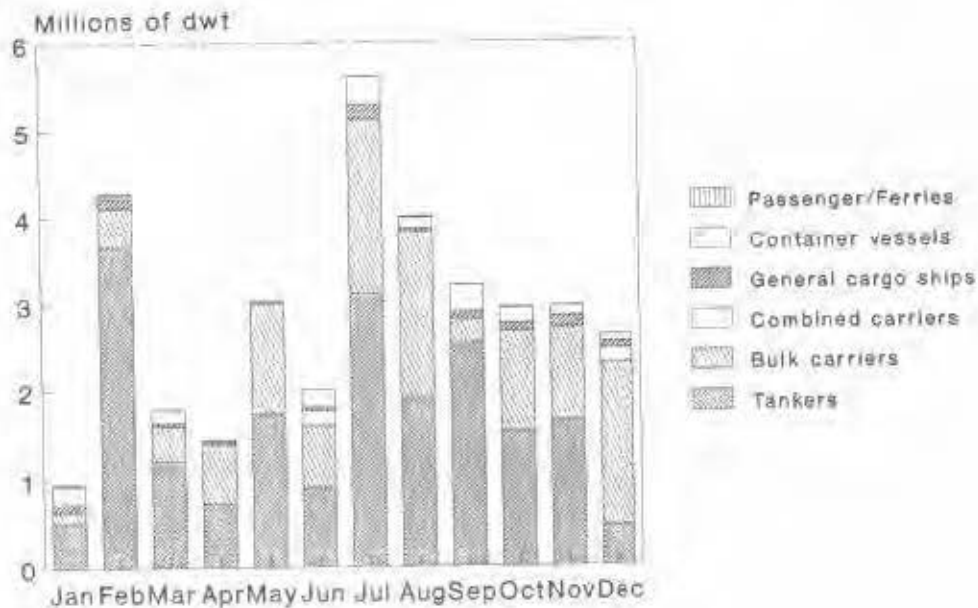
55. Dry bulk carriers were the only ship type which experienced an increase in contracts for newbuildings in 1991. Bulk carrier orders more than tripled from 3.6 million dwt in 1990 to 11.8 million dwt in 1991. Thus, the share of dry bulk carriers in the total contracted new tonnage increased from 9.7 per cent in 1990 to 34 per cent in 1991. In the

same period, tanker orders decreased by 23.2 per cent to 19.9 million dwt. However, tankers continued to dominate the new contracting, accounting for 57.1 per cent of the total contracted tonnage (versus 68.9 per cent in 1990). Contracting attention was focused on VLCCs as most of the existing tankers in this category were already over 15 years old. Combined carriers experienced the strongest reduction (from 2.7 million dwt in 1990 to 0.3 million dwt in 1991). The volume of newbuilding contracts for general cargo ships and container ships was also significantly lower than in the previous year.

56. The major part of new orders (37.5 per cent of the total tonnage contracted in 1991) was placed with Japanese yards. They were closely followed by the shipbuilders of the Republic of Korea (27.4 per cent of the total tonnage). Yards in Taiwan Province of China, United Kingdom and Romania accounted for a further 6 per cent, 5 per cent, 3.5 per cent and 3.2 per cent of new orders, respectively.²³

Graph 10

Newbuilding contracts placed for the main types of ships during 1991



Source: Institute of Shipping Economics and Logistics (Bremen).

D. Cancellations of newbuilding orders

57. Table 26 gives indications on reported cancellations of newbuilding orders for the last four years. In 1991, the volume of cancelled orders reached the highest level during the period in question. Orders for almost half of this tonnage (1.60 million dwt) were cancelled during January and February.²⁶ On the whole, during the first half of 1991 orders amounting to 2.42 million dwt were cancelled. Owners' hesitations about tankers in the first half of the year were reflected in the relatively high level of cancellations, 76.4 per cent of which were tankers. Combined carriers and ships referred to as other vessels accounted for 15.8 per cent and 5.8 per cent, respectively. Orders amounting to 0.97 million dwt (mostly dry bulk carriers and other vessels) placed before 1 July 1991 and reported cancelled in the second half of the year were mainly for ships constructed in Poland for Central and Eastern European countries, cancelled owing to financial problems.²⁷

E. Tonnage on order

58. The trends of world tonnage on order during the period 1989-1991 on a quarterly basis are summarized in table 27. It indicates a decrease in the world fleet on order during the first quarter of 1991 which could be mainly attributed to the developments in the Gulf. This reduction was compensated by the increase in newbuilding construction activities maintained during the rest of the year, to the extent that the world order book at the end of December 1991 reached its highest level since September 1977, i.e. 64.7 million dwt.

59. Oil tankers continued to dominate the world order book with 37.3 million dwt on order as at 31 December 1991. However, the share of tankers in the total tonnage on order slightly decreased by the end of the year and stood at 57.7 per cent (versus 58.8 per cent in December 1990). The amount of dry bulk carriers' tonnage on order varied considerably during 1991. After a significant decrease during the first quarter of the year (-15.9 per cent from the December 1990 figure) it slightly increased by the end of June then afterwards started to grow rapidly at the rate of about 25 per cent per quarter until the year end. Thus, in December 1991 it stood at 14.5 million dwt, or 22.4 per cent of the world order book (17.9 per cent one year earlier). Other ships on order showed a certain reduction (-6.5 per cent) during 1991 and their share in the total fleet diminished from 23.3 per cent of the total order book in December 1990 to 19.9 per cent in December 1991.

60. The distribution of world tonnage on order among country groupings (by country of registry) as at the end of 1991 shown in table 28 indicates that the combined total deadweight of developed market-economy countries and the five major open-registry countries amounted to 53.8 million dwt representing 83.2 per cent of the tonnage on order. Developing countries and countries of Central and Eastern Europe accounted for 8.1 per cent and 4 per cent, respectively (8.7 per cent and 4.6 per cent respectively in 1990). The share of socialist countries of Asia increased from 0.7 per cent of world tonnage on order in 1990 to 2.3 per cent in 1991.

61. As in previous years, developed market-economy countries and open-registry countries had the largest portion of orders for all types of newbuildings as at 31 December 1991. Their combined share in newbuilding orders for containerships and oil tankers increased to 77.2 per cent and 88.8 per cent, respectively, while that for dry bulk carriers and general cargo ships diminished to 74.1 per cent and 64.3 per cent, respectively.

62. At the same time, developing countries increased their share to 7.8 per cent in the total dry bulk carrier newbuildings and decreased it in the newbuilding orders for oil tankers, general cargo ships and containerships to 6.9 per cent, 8.5 per cent and 14.3 per cent, respectively. The major part of newbuildings ordered by developing countries belonged to shipowners domiciled in Asia (68.9 per cent of all developing countries' orders). They were followed by the Latin American shipowners (30.1 per cent). The share of developing countries in Europe in the developing countries' newbuilding orders stood at 0.6 per cent, while that of countries in Africa and Oceania amounted to 0.3 per cent and 0.1 per cent, respectively.

63. The major part of tonnage on order shown in table 28 is scheduled for delivery in the following two years. Thus, for example, an addition to the existing world merchant fleet of 136 new tankers, with a combined deadweight of 15.3 million dwt was planned in 1992 and a further 117 tankers (15.8 million dwt) were expected to join the world merchant fleet in 1993. Deliveries of 65 new dry bulk carriers (4.4 million dwt) and a further 60 dry bulk carriers (5.8 million dwt) were scheduled for 1992 and 1993, respectively.²⁸

Table 26

Reported cancellations of shipbuildings orders, 1988-1991
(Million dwt)

	1988	1989	1990	1991
Tankers	0.50	0.38	0.83	1.90
Combined carriers	-	-	0.89	0.38
Dry bulk carriers	0.36	0.32	0.51	0.68
Others	0.08	0.24	0.22	0.39
TOTAL	0.94	0.94	2.45	3.35

Source: WESCOL International Marine Services (London), *World Trade Review and Outlook*, March 1992, p. 33.

Table 27

World tonnage on order at the end of each quarter, 1989, 1990 and 1991
(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 1989	35.7		16.3		12.0		7.4	
30 June 1989	39.5	+10.9	17.8	+9.7	13.9	+15.4	7.8	+6.2
30 September 1989	43.3	+9.4	17.8	+0.1	14.5	+4.7	10.0	+39.2
31 December 1989	45.3	+4.7	18.7	+5.1	14.6	+0.5	12.0	+9.8
31 March 1990	51.5	+13.6	23.7	+26.5	14.6	+0.1	13.2	+10.0
30 June 1990	59.7	+15.9	30.7	+29.4	14.7	+0.9	14.3	+8.4
30 September 1990	61.9	+3.6	34.6	+12.9	12.3	-16.5	14.9	+4.4
31 December 1990	59.3	-4.1	34.9	+0.9	10.6	-14.0	13.8	-7.5
31 March 1991	55.0	-7.3	32.3	-7.4	8.9	-15.9	13.7	-0.5
30 June 1991	57.7	+4.9	34.9	+8.0	9.3	+4.3	13.5	-1.9
30 September 1991	59.7	+3.5	35.0	+0.1	11.5	+24.0	13.2	-2.0
31 December 1991	64.7	+8.4	37.3	+6.7	14.5	+25.8	12.9	-2.2

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

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

Table 28

World tonnage on order as at the end of 1991
(Thousands of dwt) a/

Countries of registry	All ships	Oil tankers	Bulk carriers	General cargo	Container ships	Other ships
<u>World total</u>	64 700	37 308	14 475	3 284	4 855	4 778
Developed market-economy countries	17 953	8 473	3 817	1 102	2 135	2 426
Open-registry countries	35 872	24 651	6 915	1 010	1 614	1 682
<u>Subtotal</u>	53 825	33 124	10 733	2 112	3 748	4 108
Countries of Central and Eastern Europe	2 623	600	998	718	263	44
Socialist countries of Asia	1 501	647	576	169	70	38
Developing countries, total	5 270	2 584	1 125	281	693	588
<u>of which in:</u>						
Africa	13	7	-	-	-	6
America	1 586	1 229	135	135	47	40
Asia	3 632	1 348	987	136	620	542
Europe	33	-	-	7	26	-
Oceania	6	-	3	3	-	-
Unallocated	1 481	353	1 043	3	82	-

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

a/ Owing to rounding, the totals do not always add up.

Box 2

Increasing productivity of Japanese shipbuilding

The shipbuilding industry of Japan which is the world leading shipbuilder showed significant improvement of its productivity during the last ten years.

Estimates measured in man hour requirements for construction of vessels provide confirmation of advances made by Japanese shipbuilding since 1981.

Type	Dwt	Man hours 1981	Man hours 1991	Man hours 1991 to 1981 (per cent)
Dry bulk carrier	40 000	230 000	125 000	54.3
Dry bulk carrier	62 000	380 000	170 000	44.7
Tanker	260 000	1 000 000	380 000	38.0

Source: Drewry Shipping Consultants (London), *Shipping Statistics and Economics*, 1991, No. 10, p. 34.

As shown above the man hour requirement to construct the three standard vessels in Japanese yards has reduced by between 45.7 per cent and 62 per cent. This upswing in productivity arises from increasing automatization of yards and application of robotics to shipbuilding.

F. Deliveries of newbuildings

64. Newbuilding deliveries during 1989-1991 are shown in table 29. It indicates that the total tonnage of newbuildings delivered by shipyards in 1991 reached 15.9 million grt, showing a 1.5 per cent growth over the previous year's figure. At the same time the number of newbuildings decreased from 1,642 units in 1990 to 1,556 units in 1991 (-5.2 per cent). Thus, the average grt capacity of new ships increased from 9,566 grt in 1990 to 10,242 grt in 1991. In this respect oil tankers showed remarkable growth; the average grt capacity of new deliveries of this type of ship stood at 39,793 grt in 1991 versus 35,394 in 1990 and 31,475 in 1989. Oil tankers dominated newbuilding deliveries. In 1991 their gross tonnage increased by 33.8 per cent from 1990 and reached 6.7 million tons or 42.2 per cent of the total delivered new tonnage (versus 32.0 per cent of new tonnage delivered in 1990). The deliveries of new ore/bulk carriers decreased from 5.5 million grt in 1990 to 3.1 million grt in 1991 (43.6 per cent less than a year ago) and the share of this ship type in the total deliveries decreased to 19.4 per cent, versus 35.1 per cent in 1990. The deliveries of general cargo ships increased during 1991 by 7.3 per cent and reached 3.3 million grt, thus amounting to 20.8 per cent of the total new tonnage (versus 19.7 per cent in 1990). Liquefied gas and chemical carriers shared a 20.4 per cent increase over 1990 deliveries, while deliveries of all other ships decreased by 3.4 per cent.

65. Newbuilding deliveries (in terms of grt) by country groupings - according to country of build - are indicated in table 30. Shipyards of developed market-economy countries maintained their leading position in newbuilding deliveries. Tonnage delivered by them during 1991 increased by 5.3 per cent as compared to the previous year's deliveries to reach 10.5 million grt, or 66.2 per cent of all newbuilding deliveries (versus 63.8 per cent in 1990). The major part of new tonnage delivered during 1991 was contracted in Japan (7.2 million grt or 45.1 per cent of the world total). The amount of tonnage delivered by developing countries' yards slightly increased during 1991 and stood at 3.9 million grt. With 3.5 million grt constructed at its shipyards, the Republic of Korea accounted for 89.5 per cent of total new tonnage delivered by developing countries in 1991.²⁷ The developing countries' share remained at the level of the previous year, viz. 24.5 per cent of the world newbuilding deliveries. Countries of Central and Eastern Europe and socialist countries of Asia built less new tonnage than in 1990 (16.7 per cent and 18.8 per cent less, respectively). Thus, their shares in the newbuilding world total decreased to 4.3 per cent and 1.8 per cent, respectively.

G. Demolition of ships

66. Improvement of the situation in the demolition market which cautiously started in 1990 continued also in 1991. As shown in table 31, the total amount of tonnage sold for demolition reached 4,738,000 dwt in 1991, which represents a 41.7 per cent increase over the previous year's figure. The share of broken-up tonnage in the world fleet increased from 0.5 per cent in 1990 to 0.7 per cent in 1991. However, in spite of a certain increase in 1991, the total volume of tonnage sold for demolition was significantly below the scrapping levels seen during the 1980s. Thus, the amount of tonnage sold for demolition in 1991 amounted to only about one-tenth of tonnage sold for demolition in 1985.

67. Insufficient levels of demolition resulting in further ageing of the world fleet has been a cause of concern to the international organizations, governmental bodies and environmental interests. Anti-pollution laws became stricter in 1991 and Governments started enforcing these laws. The United States Oil Pollution Act imposes liability on any vessels (tankers of any type or dry cargo vessels) which spill oil carried as cargo or fuel in United States navigable waters. In the face of increasing awareness of the fragility of the environment, large sectors of the available tanker fleet have been excluded from trading by certain countries. Thus, for instance, in the Libyan Arab Jamahiriya, the maximum 20-year ship restriction was strictly enforced.

68. Details of the type of tonnage sold for demolition during the period 1985-1991 are specified in table 32 and given in graph 11. Actually, the volume of demolition sales reflects developments in the freight market and changes in the second-hand values for older ships. The influence of these factors significantly contributed to the increase of sales of tanker tonnage for breaking in 1991 while sales of dry bulk carriers and combined carriers remained rather stable and showed a much less significant increase.

Table 29

Distribution of deliveries of newbuildings by principal types of ships, 1989-1991
(Number of ships, thousands of grt) ^{a/}

Ship types	1989		1990		1991	
	No.	Grt	No.	Grt	No.	Grt
Oil tankers	158	4 973 (38.7)	142	5 026 (32.0)	169	6 725 (42.2)
Bulk/oil carriers	2	37 (0.3)	-	-	9	615 (3.8)
Ore/bulk carriers	100	3 807 (29.6)	123	5 521 (35.1)	79	3 089 (19.4)
General cargo	188	2 177 (17.0)	288	3 087 (19.7)	310	3 314 (20.8)
Liquefied gas and chemical carriers	92	672 (5.2)	122	802 (5.1)	135	966 (6.1)
All other ships	945	1 187 (9.2)	967	1 271 (8.1)	854	1 228 (7.7)
World total	1 485	12 852 (100.0)	1 642	15 707 (100.0)	1 556	15 937 (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 indicated in brackets.

Table 30

Distribution of deliveries of newbuildings by groups of countries
of build, 1989-1991
(Thousands of grt) ^{a/}

Country grouping	1989	1990	1991
Developed market-economy countries	7 477 (58.2)	10 014 (63.8)	10 548 (66.2)
Developing countries	3 879 (30.2)	3 845 (24.5)	3 902 (24.5)
Countries of Central and Eastern Europe	770 (6.0)	820 (5.2)	683 (4.3)
Socialist countries of Asia	319 (2.5)	361 (2.3)	293 (1.8)
Other, unallocated	407 (3.1)	667 (4.2)	511 (3.2)
World total	12 852 (100.0)	15 707 (100.0)	15 937 (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 indicated in brackets.

Table 31

Broken-up tonnage trends, 1980-1991

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Tonnage sold for breaking (million dwt)	10.0	14.6	28.3	32.7	29.2	41.7	31.2	16.3	5.7	3.3	3.3	4.7
Share of broken-up tonnage in the total world fleet (percentage)	1.5	2.1	4.1	4.8	4.3	6.3	4.9	2.6	0.9	0.5	0.5	0.7

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

Table 32

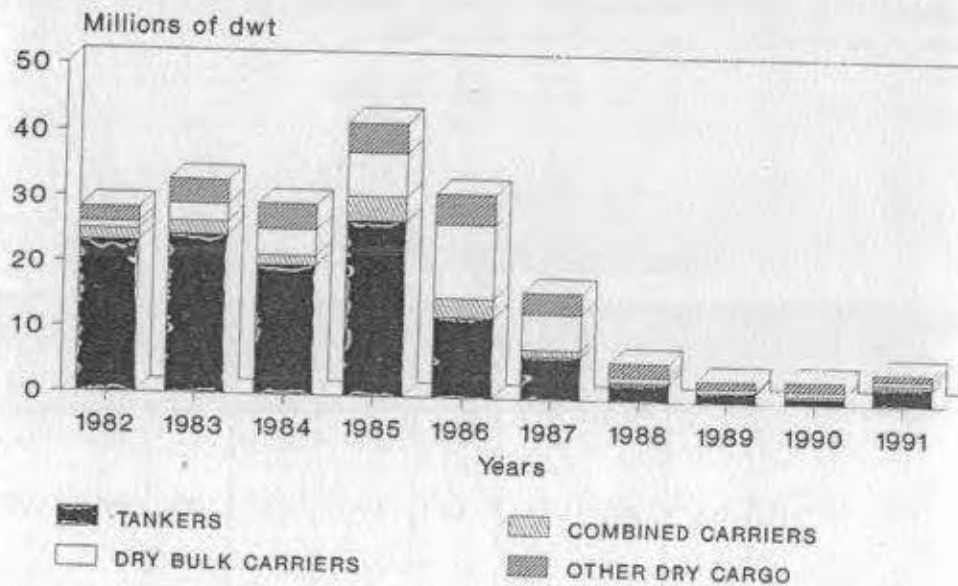
Tonnage reported sold for breaking by type of vessel, 1986-1991
(Thousand dwt and percentage shares)

Type of vessel	Thousands of dwt						Percentage shares					
	1986	1987	1988	1989	1990	1991	1986	1987	1988	1989	1990	1991
Tankers	12 306	6 549	2 570	1 567	1 000	2 714	39.4	40.1	44.6	48.1	29.9	57.3
Combined carriers	2 889	950	293	108	378	426	9.3	5.8	5.1	3.3	11.3	9.0
Dry bulk carriers	11 365	5 539	846	510	649	728	36.4	33.9	14.7	15.6	19.4	15.4
Other dry cargo ships	4 654	3 310	2 050	1 076	1 317	870	14.9	20.2	35.6	33.0	39.4	18.3
Total	31 214	16 348	5 759	3 261	3 344	4 738	100.0	100.0	100.0	100.0	100.0	100.0

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

Graph 11

Tonnage sold for breaking by type of vessel, 1982-1991



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

69. The 1991 volume of tanker tonnage sold for scrapping increased by 171.4 per cent as compared with the previous year. This high rate of increase, however, has to be seen in the light of low absolute levels of tonnage sold for demolition. Thus, the increase was to a large extent attributable to two VLCCs which had been damaged since the Iran/Iraq war and another VLCC seriously damaged by explosion and fire.²⁸

70. Dry bulk carrier and combined carrier demolition sales increased by 12.2 per cent and 12.7 per cent, respectively. Owners of dry bulk carriers were rather reluctant to sell their tonnage for breaking as the freight market was rather healthy in 1991 and second-hand prices increased through most of the year. The average size of dry bulk carriers sold for demolition decreased from 37,800 dwt in 1990 to 30,300 dwt in 1991. Demolition sales of vessels attributed to other dry cargo ships categories showed a 33.9 per cent decrease in 1991 from the previous year's figure.

71. Tankers represented the major quantity of tonnage sold for breaking in 1991 (57.3 per cent as compared with 29.9 per cent in 1990). The share of dry bulk carriers and combined carriers in tonnage sold for demolition was 15.4 per cent (against 19.4 per cent in 1990) and 9.0 per cent (against 11.3 per cent in 1990) respectively. The share of other dry cargo ships dropped from 39.4 per cent in 1990 to 18.3 per cent in 1991.

72. Table 33 shows the average age of seagoing merchant ships demolished during the last seven years with distribution by the main ship types. The average age of tankers broken-up in 1991 remained the highest (25.3 years), however, it showed a 4.2 per cent decrease as compared to the previous year figure, while the average age of dry bulk carriers was the lowest, i.e. 22 years (a 1.4 per cent increase over 1990). The average age of scrapped general cargo ships diminished slightly by 1.2 per cent as compared with 1990 and stood at 24.8 years. In general, the age of vessels broken up was slightly lower in 1991 than in 1990. It remains to be seen, however, whether this will mark the reversal of the trend to increasing age of vessels broken up that had been observed since the 1980s.

73. Demolition prices paid by scrapping yards in 1991 were at the lowest level of the last three years. Reduction in prices in all three main markets may mostly be attributed to the increased supply of tonnage as well as to growth in import levies in some countries and foreign exchange constraints experienced by the shipbreakers. As shown in

table 34, demolition prices were much lower than in 1990. The decrease in scrapping prices which had started in August 1990 continued until July 1991 when prices dropped to their three-year lowest level. Since the summer of 1991, prices remained constant in the Far East market and showed only a marginal improvement (+3.1 per cent) in the southern European market.

74. As in previous years, the India/Pakistan market offered the highest monthly prices. Its development during the second half of 1991 differed from the stagnant situation in two other markets, and in December demolition prices in India and Pakistan gained a 7.9 per cent recovery. However, the price remained below the year-start level.

75. Consequently, the annual average prices in all three main markets considerably weak as compared to 1990, with the 1991 average being 30 per cent less than a year before in the India/Pakistan market, 28.8 per cent change in the southern Europe market and 20.6 per cent change in the Far East market. Average demolition price changes over the last five years are illustrated in graph 12.

76. In 1991 Pakistan became the most important demolition area. Since the emphasis of their breaking activity is on larger tankers, its demolition yards benefited from the general change in the market trend towards this type of tonnage. With 17 vessels of 1.4 million dwt, Pakistan accounted for 29.5 per cent of all scrapped tonnage. It was followed by India with 55 vessels of 1.0 million dwt (21.3 per cent of world total), Bangladesh with 0.8 million dwt (17 per cent) and China with 0.6 million dwt (12.8 per cent).²⁹

77. It is expected that 1992 will see further development of ship demolition, as sales for scrapping of all ship types doubled in the first quarter of 1992 as compared with the corresponding period of the previous year. A total of 69 vessels of 2.7 million dwt were committed for demolition in January-March 1992 (with March sales exceeding 1.2 million dwt) versus 37 units of 1.11 million dwt in the first quarter of 1991.³⁰

Table 33

Average age of broken-up ships by type during 1985-1991 a/
(years)

Year	Tankers	Dry bulk carriers	General cargo ships
1985	20.9	20.1	22.3
1986	21.3	19.4	23.6
1987	24.4	19.8	23.8
1988	24.6	22.4	24.2
1989	24.9	23.1	25.5
1990	26.4	21.7	25.1
1991	25.3	22.0	24.8

Source: Institute of Shipping Economics and Logistics (Bremen), *Shipping Statistics*, 1992, No. 1/2, p. 30.

a/ Ships of 300 grt and over.

Table 34

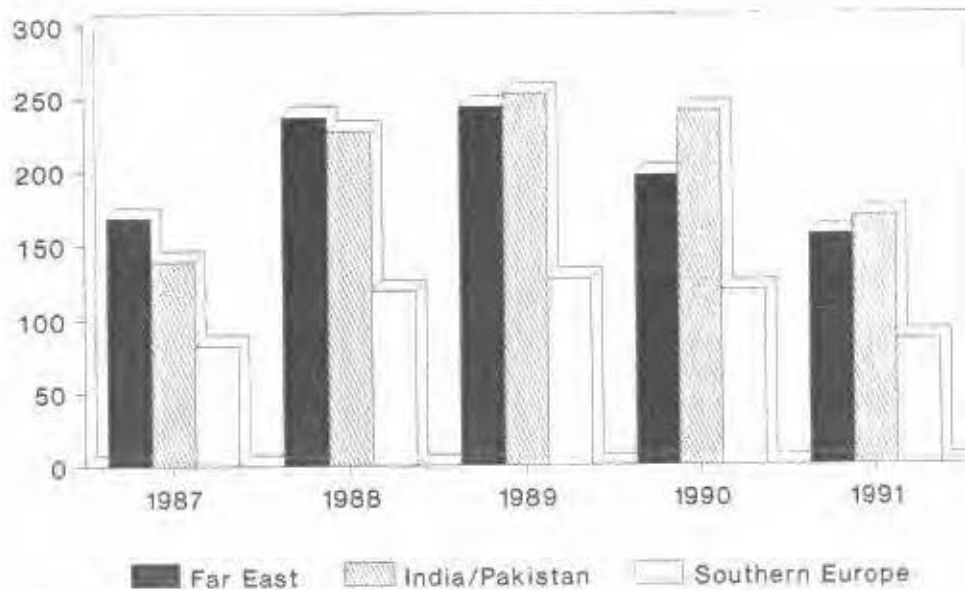
Demolition prices in 1989-1991
(Dollars per ldt)

Month	Market								
	Far East			Pakistan/India			Southern Europe		
	1989	1990	1991	1989	1990	1991	1989	1990	1991
January	250.0	215.0	160.0	245.0	260.0	180.0	130.0	120.0	107.5
February	250.0	215.0	160.0	250.0	260.0	160.0	130.0	120.0	85.0
March	250.0	202.5	160.0	250.0	252.5	175.0	130.0	122.5	85.0
April	250.0	202.5	157.5	250.0	260.0	185.0	130.0	122.5	90.0
May	250.0	202.5	157.5	260.0	262.5	180.0	130.0	122.5	80.0
June	250.0	202.5	155.0	262.5	260.0	180.0	130.0	122.5	80.0
July	250.0	202.5	155.0	262.5	262.5	157.5	130.0	122.5	80.0
August	250.0	202.5	155.0	262.5	252.5	157.5	130.0	120.0	82.5
September	250.0	192.5	155.0	250.0	232.5	157.5	130.0	117.5	82.5
October	230.0	190.0	155.0	230.0	210.0	160.0	120.0	117.5	82.5
November	230.0	180.0	155.0	250.0	195.0	160.0	120.0	117.5	82.5
December	215.0	160.0	155.0	260.0	180.0	170.0	120.0	107.5	82.5
Annual average	243.7	197.3	156.7	252.7	240.6	168.5	127.5	119.4	85.0
Annual average change (%)	+2.8	-19.0	-20.6	+11.3	-4.8	-30.0	+6.7	-6.3	-28.8

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

Graph 12

Average demolition prices
(US Dollars per ldt)



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

Box 3

Concern about shipbreaking facilities

There is widespread concern within the shipping community about the reduced shipbreaking facilities left in the world after the dramatically low volumes broken up over the last 4-5 years. After the withdrawal of Taiwan Province of China and Republic of Korea, which were by far the dominating takers of scrap tonnage in the early and mid-1980s, the outlets for owners of demolition vessels were dramatically reduced. One factor is the lack of physical breaking facilities, suitable yards and downstream logistics to handle the scrap materials. Another problem is the negative effects that come with the industry. First and the foremost of them is heavy pollution. Finally, there is the financial question, which has been hampering the demolition industry for several years as ship breakers in the remaining demolition markets have to compete with other importing industries for the limited foreign currency available.

Source: Fearnleys (Oslo) *Review 1991*, p. 28.

Chapter V

PORT DEVELOPMENT

A. Container port traffic

78. Table 35 gives the latest available data on world container port traffic in developing countries and territories for 1990.

79. The world rate of growth for containerized port throughput for 1989-1990 was 5.5 per cent, which is less than that achieved in 1988-1989 (6.3 per cent). As in the previous period, the rate of growth for developing countries and territories was more than double that of the world average and reached 12.2 per cent in the period 1989-1990. However, it showed a modest decrease in comparison with the 13.2 per cent reached in 1988-1989. 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.

B. Port privatization development

80. The concept of the private port was very popular, especially in some Anglo-Saxon countries (United Kingdom, United States, etc.). Sometimes the public powers would give the private sector the whole port as an operating concession and also require the concessionaire to construct facilities (Morocco, Lebanon, etc.). With the independence of numerous developing countries at the beginning of the 1960s, the private sector lost ground, especially in Africa, to public organizations which were often granted management autonomy. This was the period of the creation of national port organizations, or autonomous authorities, and equally nationalized cargo handling companies. Even in the United States the number of public port terminals grew by almost 10 per cent in the 10 years from 1970-1980.

81. The 1980s have seen a strong return by the private sector to ports. Private operators have established themselves in certain countries (Malaysia, Jamaica, etc.) to operate specialized terminals, especially container terminals. But some countries have gone further and have "privatized", in different ways, the total port sector. In 1983-1984, in the United Kingdom, the privatized "Associated British Ports" (ABP) was created which owned 19 ports that handled more than one quarter of the national port traffic. Further measures are presently being taken to privatize other United Kingdom ports.

82. Privatization is presently touching all regions: Latin America, Western, Central and Eastern Europe, Asia, Australia, and New Zealand, with the exception of Africa which has been more prudent in this

domain. Literature on this subject is abundant and colloquiums frequent.

83. Privatization has often been perceived as a means to curtail inefficiencies in public port organizations. Numerous public organizations have been too passive and often incapable of overcoming the hold of the State or the unions so as to meet the demands of the traffic. However, the public port sector can function very well (Singapore and Morocco), but it can also become bureaucratic and ineffective in the absence of feedback to improve itself. This is not the case for the private sector which must balance its books and impose sanctions when necessary. Certainly the private sector, simply because of its existence, will not obtain better results in all domains. Instead of establishing a port system based on the rejection of one type of organization which has its limits, the countries examining this question should undertake a methodical analysis to develop a coherent sound port system.

84. The starting point of all considerations is to define the objectives of the port or of the country's port system. Privatization cannot be an objective in itself, but rather a means to reach the port's objectives. The economic environment of the port must be first examined and the evolution of international trade studied. Numerous signs show that the world is heading towards the creation of single global market where competition will be intense. All countries are involved as their products must compete for a place in the world market. The period of captive port hinterlands has gone.

85. Numerous developing countries are replacing or complementing their classic policy of import substitution by an active policy of export promotion. Containerization has progressively led to the replacement of port-to-port routes by networks built around transshipment or hub ports. The concept of an integrated chain of door-to-door transport is growing and often the various organizations in the port (forwarders, multimodal transport operators, ship owners, port authorities) are its architects and taking more and more care of the needs of the shippers. The fact that the cost of the port portion is only one twentieth (and often less) of the total cost of the transport chain could be a demotivating factor for this port community involvement. However, this evolution and integration of international trade and transport will only occur when there is a key element or link that is indispensable for the functioning of the system. There is no better link than the port, thus the importance of the port as a logistical platform for international trade.

Table 35
 Container port traffic of developing countries and territories, 1990 and 1989

Country or territory	Container traffic 1990 (TEUs)	Container traffic 1989 (TEUs)	Percentage change 1989/1990	Percentage change 1988/1989
Singapore	5 213 500	4 364 400	19.6	29.3
Hong Kong	5 100 637	4 463 709	14.3	10.6
Republic of Korea	2 348 475	2 158 828	8.8	4.5
United Arab Emirates	1 563 277	1 366 741	14.4	22.9
Philippines	1 383 525	1 286 208	7.5	5.7
Thailand	1 078 290	939 040	14.8	18.1
Indonesia	922 547	862 256	20.9	33.3
Malaysia	881 741	723 933	21.8	25.5
Saudi Arabia	788 567	758 526	3.9	-7.8
India	696 255	632 101	10.1	30.5
Sri Lanka	583 811	544 197	7.1	-12.3
Brazil ^{a/}	569 186	743 840	-21.0	-6.1
Pakistan	390 391	342 946	14.0	0
Cyprus	384 279	369 291	4.0	26.7
Egypt	316 314	195 447	62.0	4.8
Mexico	228 182	185 929	23.2	4.2
Chile	217 457	200 264	8.5	25.1
Argentina	209 150	218 312	-4.1	10.8
Nigeria	208 144	171 291	21.6	0
Honduras	180 253	193 432	-6.7	16.8
Panama	176 639	149 992	18.1	17.8
Oman	168 465	165 723	1.8	11.8
Morocco	164 015	116 381	41.3	16.5
Jamaica	139 626	152 935	-8.7	-16.0
Kenya	136 406	129 666	5.2	19.9
Malta	135 790	40 439	235.7	-6.3
Bangladesh	120 884	112 977	6.9	42.2
Colombia ^{a/}	113 889	81 880	39.0	33.9
Jordan	107 000	99 487	7.6	-14.7
Costa Rica	105 084	172 110	-38.9	17.0
Guadeloupe	102 140	95 672	7.3	1.2
Guatemala	99 179	92 807	6.8	25.9
Netherlands Antilles	95 128	82 768	14.9	15.9
Cameroon	91 379	87 208	4.7	3.5
Papua New Guinea	89 510	86 900	2.9	7.9
Dominican Republic	75 064	70 040	7.1	n.a.
Trinidad and Tobago	71 027	62 784	13.1	9.5
Kuwait	69 800	105 065	-33.5	4.1
Syrian Arab Republic	67 340	54 798	22.9	18.7
United Rep. of Tanzania	64 416	63 595	1.3	2.6
Uruguay	64 286	50 587	27.0	11.3
Mauritius	62 272	59 815	4.1	12.0
Ghana	49 632	46 003	7.9	7.2
Haiti	45 724	50 675	9.7	n.a.
Togo	42 240	40 199	5.1	4.1
Zaire	37 833	40 790	-7.2	15.7
Barbados	36 701	36 983	-0.1	12.0
Algeria	36 500	36 519	0	0
Djibouti	36 107	22 654	59.3	n.a.
St. Lucia	35 877	32 710	9.6	19.9
Tunisia	33 771	33 464	0.1	26.9
American Samoa	33 706	30 237	11.4	9.8
French Polynesia	33 004	31 630	4.3	n.a.
Other reported ^{b/}	377 171	359 863	4.8	26.7
Total reported ^{c/}	26 391 586	23 516 067	12.2	13.2
World total reported	84 223 778	79 816 162	5.5	6.3

Source: Derived from information printed in *Containerisation International Yearbook, 1992*.

^{a/} Data subject to omissions.

^{b/} Comprising developing countries and territories where less than 10,000 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.

86. These general considerations are the necessary starting point from which to identify the essential port functions, the best means to carry them out and the role which privatization can eventually play. At present, one of the priority port functions is to offer a commercial service not only at minimum port cost, but equally giving a more comprehensive range of port services to shippers. This includes such activities as distribution and building up of transport networks, managing the flow of commercial information, etc.

87. It is essential that the port's industry orient itself to satisfy the needs of trade (market driven) and be managed and developed in an efficient way. Privatization is one of the most effective methods to achieve this objective. The following are generally recognized as the benefits of privatization:

- To increase the choice of services offered to users (thus the port adapts better to needs),
- To enlarge the range of financial plans, to reduce the cost to the State, and to facilitate the financing of works and equipment,
- To make personnel and organizations aware of their responsibility, to increase the effectiveness of management, and the profitability of investments. (The results obtained by Associated British Ports in terms of staff productivity, profitability and increased value of shares speak for themselves.)

88. These often are the main arguments for port commercialization. However, other elements are required to promote trade: to bring together and motivate all the port community, to have labour regulations adapted to the needs, etc. All the port community must work together to serve and promote traffic. Moreover, privatization is not without risks. In certain developing countries the private sector is unorganized, fragmented, looking for short-term profit, unable to make heavy or long-term investments, and unwilling to develop human resources. Privatization can also lead to the situation of monopoly without competition, maximizing profits rather than production. It can result in minimizing costs for the operator and not for the user. Also, it is noted that the countries that have gone the furthest in privatization have all introduced limits to the involvement of the private sector, to prevent excesses and to stop the port from losing its basic purpose. This results in the strengthening of the laws and regulations controlling the functioning of ports, so that either the transfer of port installations (reserved to local bodies, to staff, to individuals or to national interests), or their rental or leasing and operation,

avoids excesses in various domains, economic (pricing), technical (maintenance), social (employment), and assures the good functioning of the port (free access, security, etc.). There is a certain contradiction of liberalizing while reinforcing legal constraints. All excessive regulation will finally be contrary to the sought after goal and the interests of the port and the country. Also, rather than speak of privatization *stricto sensu*, some authors prefer a wider meaning and use the term commercialization which better reflects the spirit of the reforms envisaged. The forms of such an enlarged privatization are numerous. They can be grouped together as follows:

Organizational

- Restructuring the port authority by creating a subsidiary, with the State being the owner of the principal company and controlling the subsidiary.
- Creation of local public companies (with shares) that take over the assets (and liabilities) of the port. For example: Senegal and New Zealand.
- Simple reorganization of the port by the rationalization of the objectives, structure, commercial and pricing policy and control by public powers.

Operational

- Management contracts or concessions for the operation of all or a part of the installations. For example, a container terminal (Jamaica, Canada, Philippines) or a ro-ro terminal (Nigeria).
- Rationalization of operations (working methods, productivity incentives, cost controls, equipment maintenance, etc.).

Ownership

- Denationalization and take-over by the staff or a cooperative.
- Sale (open or restricted) of public shares or the assets of the port.
- Privatization (partial or total) of only the extensions of the port (specialized terminals).

89. In the UNCTAD study on the organization and management of ports,²⁰ privatization à la carte and

in several steps was proposed. The steps would be as follows:

Examine one by one all the functions of the port and determine in each case what are the strong and weak points of the public and the private sectors. It is necessary to examine both the conditions of operation and financing (present and future) of the installations and infrastructure. Capital is generally more attracted to profitable short or mid-term investments and services than to the financing of heavy infrastructure (breakwaters, dredging, etc.). The revenue (and thus the tariffs) from the port must permit the establishment of a reserve and provisions for renewing, or improving those investments that are often inherited but overlooked when examining the implications of port privatization.

At the end of this examination, prepare a table which shows for each function the strong points and the weak points of the public sector and those of the private sector. It will then be necessary to examine which type of enlarged privatization (presented previously) should be chosen to maximize the strong points and minimize the weak points. For example, certain costly functions, not financially profitable but important for users and the country, will be carried out under the form of public ownership and operation, but with decentralized operation and limited governmental controls. At the other extreme, other functions related to commercial activities may be carried out better by private operators with facilities owned as either private property, or public, or mixed, according to the case.

It is best to be pragmatic in treating each case separately, spacing the process out over time to experiment, leaving the door open to future evolutions and privatizing each of the functions when that solution seems to be the best and according to the best formula.

90. Each country has its specificities and foreign models must be modified to the country's needs. Innovation must always be practised, especially on the part of port authorities who must get involved and take risks, support initiatives and sometimes support the private sector when it is not sufficiently developed or organized; at least during a certain transition period and in the fields essential for the future of the port (reinforcement of the port community, development of new activities, computerization, etc.). This new role of coordinator, or conductor of the orchestra, is

difficult to reconcile with the role of performer. It will probably become the rule in the future for port authorities in countries which have not opted for total privatization. This role will usually lead to the concentration of all the activities in one organization, either private or semi-private, which will be perceived as the *de facto* if not *de jure* port authority.

FREIGHT MARKETS

A. Freight rates of main cargo sectors

91. Data on freight rate indices for the 1989-1991 period provided in table 36 indicate that freight rates varied considerably by type of vessel. The last year was favourable for dry bulk carriers which experienced remarkable growth in freight rates. In the dry-bulk time-charter sector, freight rates showed a steady increase during the first half of the year reaching their highest level in June, when the freight rate index was 52.6 per cent above the January figure. Freight rates started decreasing during the remaining part of the year. However, the freight rate indices stood nearly 40 per cent above those for the corresponding months of 1990. The lowest December 1991 freight rate index was 18 per cent higher than that of December 1990. As a result, the 1991 average annual tramp time charter index saw a 14.1 per cent growth from the 1990 annual figure. The dry-cargo tramp-trip charter freight rates demonstrated a moderate but steady increase through most of the year. Thus, the December freight rate index which was at the year-highest level showed a 5 per cent increase over the year-lowest level of January 1991. The 1991 annual average for dry-cargo tramp-trip charter freight rate indices was about 3.5 per cent higher than in 1990. In the liner sector, a certain increase in freight rates in 1991 when most of the freight rate indices²² were above the corresponding figures of the previous year, led to a 5 per cent growth of the 1991 annual average from the 1990 figure. However, the December 1991 figure was below the level reached a year ago.

92. Freight rates in the tanker sector showed remarkable fluctuations during 1991. Rate levels for all tanker sizes were at their highest level at the beginning of the year. To a great extent, this upswing in freight rates is to be attributed to the developments in the Persian Gulf. When the Gulf conflict ended freight rates fell quickly. As the year progressed, the general trend was downward. Although there were certain peaks and valleys, the year terminated in a depressed market with the lowest rates registered during recent years. VLCC and ULCCs were the only group which showed an increase of the annual average freight rate index in 1991 as compared with the previous year (3.2 per cent up). However, this size group experienced the deepest drop in freight rates during the year with the freight rate index registered in December being only 38.8 per cent of the January figure. It could be suggested that alongside the factors influencing tanker freight markets in general,

such as the existence of a large excess fleet, active deliveries of newbuildings, accompanied by a certain decrease in shipment of tanker cargoes and only a marginal increase in ton-miles performed by tankers, the reduction of tanker tonnage employed for storage and appearance of this additional tonnage in the freight market played an important role in the decline of the freight rates for ULCCs/VLCCs. Thus, during the third quarter, 32 vessels having total tonnage of 8.3 million dwt were taken from storage (for further information see paragraph 43 and table 20), a development which was accompanied by a substantial decrease in freight rates for VLCCs and ULCCs. Consequently, freight rates for this size group in September 1991 were 38.4 per cent lower than in June.

93. Other tanker size groups did not experience such changes in freight rates during 1991 as did ULCCs and VLCCs. Thus, for instance the annual change of freight rates for handy-size tankers (January-December 1991 period) varied from 32.1 per cent for clean tankers to 47.7 per cent for dirty tankers. However, the annual average freight rate indices for handy-size clean and dirty tankers showed a significant decrease from the previous year's level (-21.2 per cent and -18.7 per cent, respectively). The annual average changes (1990/1991) were less significant for small crude and product carriers and medium-size tankers. Thus, the annual average freight rate index for small crude and product carriers was 7 per cent lower than for 1990, while that for medium-size crude carriers was almost at the level of the previous year (-1.8 per cent).

94. Examples of the highest and lowest freight rates reported during 1990 and 1991 for single voyages in certain leading dry cargo trades which are of particular interest to developing countries are summarized in table 37. It indicates that low freight rates for almost all dry bulk commodities augmented compared to the previous year with the most significant increase being for ores from Brazil to Continental Europe (+32.6 per cent) and to Japan (+20 per cent) and for fertilizers from Continental Europe to the West Coast of India (+20 per cent). At the same time high rates for fertilizers from Aqaba and the Gulf of Mexico to the West Coast of India increased by 10.9 per cent and by 3.2 per cent, respectively, while freight rates for ore from Brazil to Japan and from Brazil to Continental Europe decreased by 14.9 per cent and by 11 per cent, respectively.

Table 36
Freight rate indices, 1989-1991
(Monthly figures)

Period	Liner freight rates ^{a/} (1985 = 100)			Dry cargo tramp time charter ^{b/} (1982 = 100)			Dry cargo tramp trip charter ^{c/} (July 1965 to June 1966 = 100)			Tanker freight indices ^{c/}														
	1989	1990	1991	1989	1990	1991	1989	1990	1991	VLCC/ULCC			Medium size crude carriers			Small crude and product carriers			Handy size clean			Handy size dirty		
										1989	1990	1991	1989	1990	1991	1989	1990	1991	1989	1990	1991	1989	1990	1991
January	83	76	78	141	130	97	205	208	198	48	61	98	98	132	137	147	190	183	225	292	271	221	280	291
February	83	74	78	141	129	101	202	205	199	36	63	93	93	108	151	132	153	206	229	309	357	207	207	250
March	84	75	79	141	127	121	212	176	207	35	79	61	89	115	110	139	152	166	213	187	254	224	204	195
April	84	76	82	145	116	131	203	203	205	39	62	46	82	107	102	146	143	140	197	183	184	181	215	176
May	80	95	82	152	114	132	232	198	205	45	57	75	110	109	112	157	159	156	179	205	178	195	214	179
June	86	76	84	143	109	148	202	191	205	52	53	86	101	95	109	134	139	149	181	204	162	191	206	179
July	83	75	82	130	94	136	189	190	206	47	64	61	97	99	104	129	140	131	170	203	185	188	189	185
August	84	73	80	133	92	114	204	197	206	45	57	60	91	96	94	124	144	124	162	221	140	177	204	165
September	86	75	79	138	97	125	193	195	205	52	66	53	103	99	92	114	131	115	186	297	342	194	240	152
October	84	76	78	128	85	125	198	197	206	68	34	59	107	106	85	143	158	190	221	358	173	225	252	163
November	83	76	76	139	86	120	208	199	208	77	69	53	119	111	87	159	170	119	228	303	165	248	269	173
December	80	77	74	134	88	104	204	213	208	65	72	38	133	125	87	194	177	121	269	299	184	267	338	152
Annual average	84	75	79	139	108	121	204	198	205	51	63	65	102	108	106	141	156	145	205	246	194	210	235	191

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. (See footnote 32 for comments regarding this index).

^{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.

Table 37

Comparative freight rates for selected commodities, 1991 versus 1990

Commodity	Route	Freight rate range			
		1990 (\$US/ton)		1991 (\$US/ton)	
		High	Low	High	Low
Grain	United States (Gulf of Mexico)/Venezuela	21.75	11.00	20.00	11.00
Sugar	Queensland/Japan	22.00	16.90	19.90	17.25
Fertilizers	Aqaba/West Coast India	23.00	18.25	25.50	18.95
Fertilizers	United States (Gulf of Mexico)/West Coast India	47.00	35.75	48.50	39.50
Fertilizers	Continental Europe/West Coast India	44.00	32.50	41.25	39.00
Ore	Brazil/Japan	16.10	9.50	13.70	11.40
Ore	Brazil/Continental Europe	9.10	4.90	8.10	6.50

Source: *Lloyd's List*, London, 14 January 1991, 10 February 1992.

95. On the whole, for most of the above cargoes, the annual variation in freight rates in 1991 was less significant than in the previous year. Thus, for instance, the difference between the year's high and low rates for grain from the United States to Venezuela was 45 per cent in 1991 (49.4 per cent in 1990), for fertilizers from Continental Europe to India it was 5.4 per cent (26.1 per cent in 1990). For ore from Brazil to Continental Europe, it amounted to 19.7 per cent (46.1 per cent in 1990).

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

96. Most of the non-bulk exports and imports of developing countries are carried by liner services and liner rates may thus have a significant effect on the efficiency of developing countries' foreign trade. Table 38 provides information on liner freight rates as a percentage of prices for selected commodities and routes in 1970-1991. The ratio of freight rates increased for the majority of cargoes in 1991 as compared with the previous year. These developments should be attributed mainly to a decrease in prices for commodities, while in most cases the freight rates either remained at the level of the previous year or showed a less significant decrease than prices. Thus, for instance, prices for jute (Bangladesh-Europe) in 1991 showed a 15.9 per cent decrease from the 1990 figure while freight rates remained almost at the 1990 level. Thus, the ratio of liner freight rates reached 25 per cent in 1991 (versus 21.2 per cent in 1990). Prices for tea (Sri Lanka-Europe) decreased by 8.9 per cent in 1991, while

freight rates remained at the level of the previous year. The ratio of freight rates increased for tea in this trade to 10.9 per cent (versus 10 per cent in 1990). The increase in freight rates was registered for cocoa beans from Brazil to Europe (+5 per cent over the 1990 figure) which was accompanied by a 5.3 per cent decrease in prices for these goods. The ratio of freight rates thus increased to 12.2 per cent in 1991. For coffee from Brazil to Europe the price decreased by 11.9 per cent as compared with 1990 while freight rates showed a more significant decrease of 20 per cent. As a result, the ratio of freight rates diminished to 9.3 per cent in 1991.

C. Marine bunker prices

97. Changes in prices for marine bunker fuel usually represent special interest for shipowners due to the fact that marine bunker fuel costs frequently comprise more than half of their operating costs. Details of development of marine bunker fuel prices in 1991 are presented in table 39. Generally, bunker prices were lower and more stable in 1991 than in the previous year. Reflecting the increased political tension in the Gulf, they stood at their highest level at the beginning of the year, especially in January. When the Gulf conflict ended, prices started decreasing quickly and fell to their year lowest level in almost all markets in the second quarter of 1991. They stabilized during the third quarter and even slightly increased by year end. However, bunker prices quoted during the fourth quarter in all main bunker markets were considerably lower than in the first quarter.

Table 38

The ratio of liner freight rates to prices of selected commodities

Commodity and route		Freight rate as percentage of price a/ b/ c/						
		1970	1975	1980	1985	1989	1990	1991
Rubber	Singapore/Malaysia-Europe	10.5	18.5	8.9	n.a.	15.2	15.5	12.6
Tin	Singapore/Malaysia-Europe	1.2	1.6	1.0	n.a.	1.5	1.7	1.9
Jute	Bangladesh-Europe	12.1	19.5	19.8	6.4	24.8	21.2	25.0
Cocoa beans	Ghana-Europe	2.4	3.4	2.7	1.9	5.8	6.7	7.2
Coconut oil	Sri Lanka-Europe	8.9	9.1	12.6	12.6	15.2	n.a.	10.6
Tea	Sri Lanka-Europe	9.5	10.4	9.9	6.9	10.0	10.0	10.9
Coffee	Brazil-Europe	5.2	9.7	6.0	5.0	7.1	10.0	9.3
Coffee	Colombia (Atlantic)-Europe	4.2	5.7	3.3	6.7	5.8	6.8	7.2
Cocoa beans	Brazil-Europe	7.4	8.2	8.6	6.9	9.5	11.0	12.2
Coffee	Colombia (Pacific)-Europe	4.5	6.3	4.4	6.1	6.5	7.4	7.8

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 1989-1991).

a/ C.i.f. prices were quoted for jute (UK-pwc grade), cocoa beans (Ghana-Europe), and palm kernels. For cocoa beans (Brazil-Europe) and coffee (Colombia-Europe and Brazil-Europe), unit values of exports were quoted. Prices of the remaining commodities are quoted on f.o.b. 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 1989-1991, the prices of the commodities were taken from UNCTAD, *Monthly Commodity Price Bulletin*, the March 1992 issue.

Table 39

Fluctuations in marine bunker fuel prices a/ 1989-1991
(\$US per ton)

		1989	1990	1991				1991 Percentage change (Fourth quarter to first quarter)
		4Q	4Q	1Q	2Q	3Q	4Q	
Persian Gulf (Ras Tanura)	IFO	107	160	134	89	92	91	-32.1
	MDO	175	308	273	182	188	202	-26.0
Mediterranean (Genoa)	HVF	112	151	115	82	84	92	-20.0
	IFO	117	162	126	90	93	102	-19.0
	MDO	214	335	275	199	210	226	-17.8
North West Europe (Rotterdam)	HVF	101	139	96	71	71	82	-14.6
	IFO	104	147	103	77	77	88	-14.6
	MDO	164	263	220	155	149	172	-21.8
Gulf of Mexico (Houston)	HVF	96	135	84	66	69	72	-14.3
	IFO	98	139	89	71	74	77	-13.5
	MDO	179	258	209	153	162	172	-17.7
West Coast of United States (Los Angeles)	HVF	95	140	96	72	68	76	-20.8
	IFO	99	146	102	78	73	81	-20.6
	MDO	180	290	232	201	187	192	-17.2
Far East (Singapore)	HVF	100	147	121	79	79	82	-32.2
	IFO	102	151	128	84	84	86	-32.8
	MDO	180	295	267	170	169	178	-33.3

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

a/ Average prices for each quarter.

HVF - High viscosity fuel oil (380 cSt)
IFO - Intermediate fuel oil (180 cSt)
MDO - Marine diesel oil

D. Estimates of global freight costs

98. Global payments for maritime transport services, presented in table 40, increased in 1990 by 15.5 per cent as compared with the previous year's figure and reached \$US 173.1 billion. During the same period the value of international seaborne trade grew at a rate of 17 per cent and reached \$US 3,314.3 billion. Consequently, the ratio of ocean freight in the total c.i.f. value of international trade decreased from 5.29 per cent in 1990 to 5.22 per cent in 1991. For developing countries, however, and especially those in Oceania and Africa, this proportion remained almost double that for developed market-economy countries, i.e. 8.60 per cent versus 4.40 per cent (see also graph 13). The differences in the ratio

of ocean freight to the total c.i.f. value of imports by groups of countries may be partly due to the fact that importers in developed market-economy countries can exercise greater control over levels of freight rates applicable to liner imports than importers in developing countries. The high level of freight factors applicable to the imports of developing countries, particularly in Africa and Oceania, may also to a certain extent be due to the fact that those countries generally import goods by sea over longer distances and may be using relatively more expensive liner services.

Table 40

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

Year	Country group	Estimate of total freight costs of imports (millions of dollars)	Value of imports (c.i.f.) (millions of dollars)	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
	<u>of which:</u>			
	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	
1989	1. World total	149 824	2 832 575	5.29
	2. Developed market-economy countries	101 768	2 301 830	4.42
	3. Developing countries - total	48 056	530 745	9.05
	<u>of which:</u>			
	in Africa	7 494	66 780	11.22
	America	8 476	99 249	8.54
	Asia	30 151	360 910	8.35
	Europe	1 467	16 392	8.95
Oceania	468	3 806	12.30	
1990	1. World total	173 102	3 314 298	5.22
	2. Developed market-economy countries	117 004	2 661 650	4.40
	3. Developing countries - total	56 098	652 648	8.60
	<u>of which:</u>			
	in Africa	9 048	81 890	11.00
	America	9 626	117 769	8.17
	Asia	35 054	427 926	8.19
	Europe	1 909	21 303	8.96
Oceania	461	3 760	12.26	

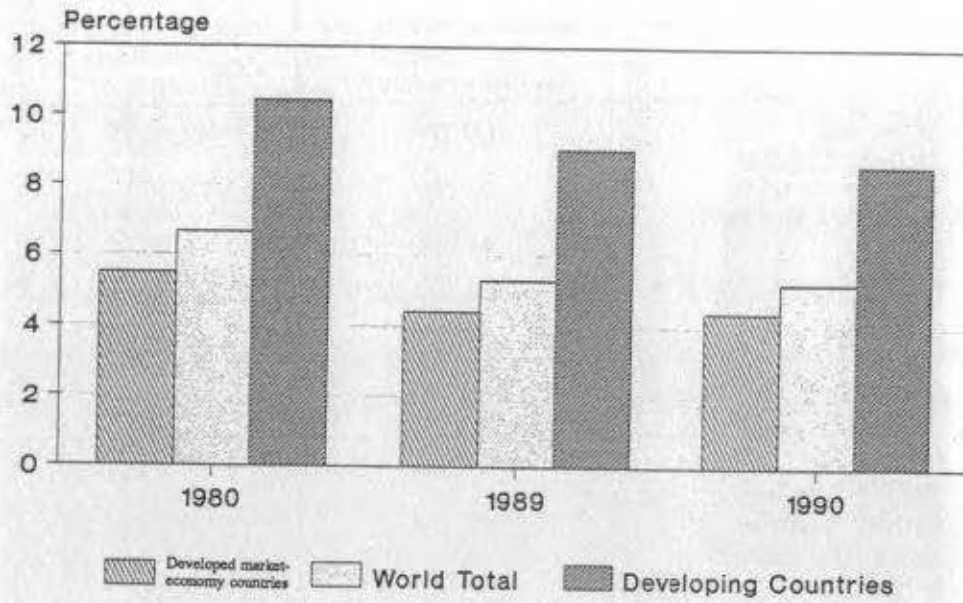
Source: Derived from IMF c.i.f./f.o.b. factors and IMF import data.

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

b/ The estimates presented here reflect the inclusion of Yugoslavia in this review in "developing countries in Europe" as of 1986. In previous years Yugoslavia was classified as a developed market-economy country.

Graph 13

Freight as a percentage of c.i.f. import values by country groups



Source: IMF, *International Financial Statistics Yearbook*.

Chapter VII

MULTIMODAL TRANSPORT AND TECHNOLOGICAL DEVELOPMENT

A. Meeting of the Group of Experts on Multimodal Transport

99. A Group of Experts on Multimodal Transport was convened by UNCTAD from 9 to 13 March 1992 to discuss developments in the field of multimodal transport and containerization, to take stock of the principal problems that are experienced by users and providers of multimodal and/or container transport operations and to suggest elements of a future programme of work for the UNCTAD Committee on Shipping in these fields.

100. The Group was composed of 19 experts attending in their personal capacity selected from among the countries in accordance with the usual geographical distribution practised by UNCTAD; three each from Africa, Asia and Latin America, six from developed market-economy countries, three from Central and Eastern Europe and one from China. Selection of the experts was made in such a way that the balance between transport providers, users and government entities was respected and both the private and the public sectors were represented. In addition, observers representing sectors mentioned above as well as representatives of intergovernmental organizations and United Nations regional commissions were also invited to attend the meeting.

101. The documents put before the experts by the UNCTAD secretariat exposed a wide range of developments and principal problems in the field of multimodal transport and containerization, paying due account to the conditions and constraints of developing countries as well as of the countries in transition to market economies.

102. Physical limitation of infrastructure, equipment and technology, an inadequate institutional and legal transport environment as well as unfavourable operational and commercial conditions were identified as the principal constraints affecting the development of multimodal transport in developing countries.

103. Concerning the countries in transition, monopolistic organization of transport systems and the absence of a competitive environment have up to now been the main hindrances in the introduction of modern multimodal transport services. After the liberalization of the economic conditions, new operators have emerged in the fields of freight forwarding and multimodal transport operations.

104. The impact of new technologies, such as the use of block train services in multimodal transport, electronic data processing (EDP), electronic data interchange (EDI) and the use of the larger than present ISO standard containers was brought to the attention of the experts.

105. The draft programme of work, which covers the rest of this century, will be submitted to the Committee on Fostering Service Sectors in Developing Countries.

B. UNCTAD survey on international NVO-MTOs

106. As the presently available statistics on the development of NVO-MTOs in the world are far from complete, it has not been possible to form an accurate picture of the development of the multimodal transport industry. UNCTAD has consequently attempted to find a way which will make it possible to document the developments in this important field. As a result and with the cooperation of *Containerisation International Yearbook*, the Shipping Division distributed a questionnaire asking a few, simple questions to freight forwarders and MTOs throughout the world. The results of the survey will be published by the UNCTAD secretariat.

C. Container traffic by inland waterwaysAsia

107. In response to the UNCTAD secretariat's request, the Economic and Social Commission for Asia and the Pacific (ESCAP) has conducted an enquiry on container traffic by inland waterways in the region, the main results of which are reproduced below.

Bangladesh

108. Though at present no container traffic is handled by the inland water transport in this country, a feasibility study was carried out for construction of an inland container depot at Dhaka for handling containers moved by inland waterways directly from the maritime ports of Chittagong and Mongla. In 1988-1989 the number of containers handled at these seaports was 91,000 TEUs with an average growth rate of 33 per cent per annum. According to the feasibility study, inland water transport will be able to handle in the short term (by 1995) about 70,000 TEUs annually and in the long term (by 2005) about

150,000 TEUs. Considering this mode of transport as the most economic for the conditions of Bangladesh, the study recommends to put in operation four vessels with the capacity of 88 TEUs in the short term and in the long term to increase their number to six.

China

109. River transport of containers in China is growing rapidly. According to incomplete statistics, the volume of container traffic handled by inland water transport in recent years was as follows:

1988	81,000 TEUs
1989	143,000 TEUs
1990	220,000 TEUs
1991 (anticipated)	300,000 TEUs.

India

110. In India a regular scheduled service for transporting containers by tugged barges with the capacity of 66 TEUs has been established between Calcutta and Haldia. It is anticipated that the number of containers moved by this service will increase from 2,000 TEUs in 1989-1990 to 3,000 TEUs in 1991-1992.

Thailand

111. Despite some difficulties container traffic by inland water transport in Thailand has seen a significant increase during recent years. According to statistics which are considered as incomplete, this traffic has risen from 1,440 TEUs in 1989 to 6,300 TEUs in 1991. These containers have been transported primarily on the Chao Phraya River.

112. For container transportation by inland waterways a specialized company, Thai Barge Container Services, has been established which operates a specialized barge container terminal, ensuring also land delivery of containers by road transport and providing other freight-forwarding and customs services.

Europe

113. Transportation of containers by inland waterways has become relatively important in comparison with other modes of transportation as being more environmentally acceptable and energy efficient. This is especially pertinent to the European conditions where the Governments are introducing increasingly stringent control in relation to congested road transport. The volume of transportation of containers on the Rhine has become significant

(approximately 430,000 TEUs in 1990, excluding the shuttle traffic between Antwerp and Rotterdam, which is estimated at around 350,000 TEUs) and it is expected to continue rising. A system of cooperation between different operators has been established regulating offered services encompassing multimodal terminal-to-house or house-to-house rates. Specialized container vessels with the capacity between 90 and 224 TEUs are used for container traffic in this water artery.

114. Besides container traffic there is another kind of multimodal service - a ro-ro operation known as "the floating motorway". This service offers two scheduled sailings per week in each direction between Rotterdam and Mannheim and Karlsruhe. The service uses two specialized ro-ro vessels. When used in conjunction with a push-barge each provides capacity for 72 trailers.

115. Contrary to the previous issue of the *Review* in relation to container traffic on the Danube, the volume of containerized traffic on this major European waterway, as the volume of goods traffic in general, has significantly decreased with the serious recession in the economies in transition in Eastern and Central Europe (see table 41).

Table 41

International containerized cargo movement on the Danube
(in tonnes)

Country	Export			Import		
	1988	1989	Change 1988/1989	1988	1989	Change 1988/1989
Austria	10 110	9 249	-8.5	6 643	5 602	-15.6
Bulgaria	14 403	8 444	-41.4	650	1 568	+141.2
Czechoslovakia	27 213	-	-	17 218	8 000	-53.5
Federal Republic of Germany	7 292	7 389	+1.3	2 629	1 512	-42.5
Hungary	1 700	1 400	-17.6	-	2 123	-
Former USSR	196 003	128 359	-34.5	139 113	136 882	-1.6
Total	256 721	154 841	-39.7	166 253	155 627	-6.4

Source: *Annuaire Statistique de la Commission du Danube pour 1989*, Danube Commission, Budapest, 1991.

D. Land-bridges

Malaysia

116. With fast growing economy and foreign trade, the demand on transport services was particularly high in Malaysia. Malayan Railways (KTM), handling at present 10 per cent of inland container traffic, saw demands for its multimodal service rise to a high level. More than 100,000 TEUs were carried in 1991 by block trains between Port Klang, Ipoh and Penang. New capacities were added in the form of rolling stock and depot facilities, particularly at Kuala Lumpur, Padang Besar and Ipoh. The facilities at Padang Besar are being upgraded from a depot to a dry port (ICD) that will permit to further expand multimodal transport operations, attracting additional traffic.

Trans-Siberian Container Service (TSCS)

117. The Trans-Siberian land-bridge has seen the appearance of numerous operators instead of one, namely SOTRA. However, in view of the limited capacity of the railway and because of the absence of any experience of internal competition in the country for many decades, the emergence of new operators has resulted in a number of problems of an organizational nature. Furthermore, technical and organizational measures and investments in infrastructure, rolling stock and computer systems are required in order to reduce the transit time and to upgrade the level of services provided. Despite certain progress achieved up to the present, in order to

improve transit times and quality of service, the downward trend in the volume of container traffic through TSCS has not been reversed (see table 42). Changes and economic difficulties as well as advantageous rates practised by all-water operators have also been partially responsible for this situation.

118. Container block trains have been operated on TSCS routes for many years, but only in the westbound traffic. At present attempts have been made to organize a shuttle block train service covering the distance of about 10,000 kilometres between Vostochny and the western terminals within 12-14 days strictly in accordance with a schedule in both directions.

119. In view of expected major increase of cargo flow on the route over the coming years, discussions are in progress concerning the construction of two new container terminals at the eastern extremity of the service. These terminals will be connected with the Japanese ports Niigata or Maizuru by rail ferries that will permit the handling of containerized cargo without using cranes and thus shorten the transit time of containers through the ports.

Table 42

Trans-Siberian Container Service traffic
(in TEUs)

Far East-Afghanistan

	1981	1985	1986	1987	1988	1989	1990
Westbound	1 804	6 789	6 789	5 866	3 700	2 653	2 052
Eastbound	913	202	32	-	-	1 626	1 821
Total	2 717	5 292	6 853	5 866	3 700	4 279	3 873

Far East-Iran

	1981	1985	1986	1987	1988	1989	1990
Westbound	44 131	11 930	6 368	3 692	4 300	2 184	4 521
Eastbound	33 799	3 181	1 814	725	430	366	3 870
Total	77 930	15 111	8 282	4 417	4 730	2 550	8 391

Far-East Europe

	1981	1985	1986	1987	1988	1989	1990
Westbound	46 704	43 108	44 844	44 844	44 844	56 400	39 424
Eastbound	25 972	28 365	24 024	24 024	27 944	35 000	17 266
Total	72 676	71 473	68 868	72 788	91 400	74 149	56 690

Total container traffic

	1981	1985	1986	1987	1988	1989	1990
Total	15 323	91 876	84 003	83 071	99 830	80 978	68 954

Source: Report given by a representative of SOTRA at Cargo Systems Intermodal '91 conference in November 1991 in Berlin.

Note: The above figures do not include traffic controlled by operators other than SOTRA. This additional traffic accounted for around 13,000 TEUs between Far East and Europe in 1990. Meanwhile, the new Ministry of Railways/Sea-Land joint venture plans to move around 100,000 TEUs in 1992.

North America

120. Double-stack container services have seen further development. In the United States, where many operators maintain intensive eastbound land-bridge services from the West coast, efforts have been made by some railways in developing westbound services. Norfolk Southern has inaugurated such service from the port of Hampton Roads. To allow double-stack train operation, two tunnels were reconstructed on this route. Conrail has recently introduced daily double-stack service from the port of New York and New Jersey to Chicago. A total of

about 1 million TEUs are moved yearly in a westbound direction in comparison with 1.6 million TEUs moved in an eastbound direction. These figures include domestic and international intermodal traffic.

121. A double-stack container train service has been launched between the port of Halifax and the central part of Canada by Canadian National Railways. This service is seen as a significant step in strengthening the competitive position of Halifax as Canada's gateway for container traffic. The introduction of double-stack service followed the announcement by Halifax of an EDI project designed to replace paper

documentation with the computer-to-computer exchange of cargo and business information.

122. Canadian Pacific, the major Canadian rail operator, is planning to open double-stack container train operation between Montreal, Toronto and Vancouver. Specially-designed rail platforms of non-articulated structure coupled into sections of three will be used for this service. The opening of the service will be possible on the completion of "the tunnel raising" programme which will increase clearances to permit the operation of double-stack container trains loaded with 9-foot 6-inch high containers through the total length of this route.

Mexican double-stack service

123. The rapid development of trade between the United States and Mexico in recent years (\$60 billion in 1990 in comparison with \$36 billion in 1988) has stimulated requirements in transport services between these two countries. The growing share of manufactured goods in this trade has boosted, in turn, the volume of container traffic. Although road transport and all-water services still traditionally dominate in this traffic, double-stack container trains, inaugurated a few years ago, have made successful inroads for container traffic and, according to industry observers, will continue to gain in popularity. A significant contribution to this traffic is made by the intermodal movements of containers via United States Gulf of Mexico ports. Table 43 contains details on double-stack container train services between the United States/Canada and Mexico.

E Container production

124. The container manufacturing industry during the past five years (1987-1991) has seen a stable growth averaging about 15 per cent a year. Output of all container types is estimated at 900,000 TEUs during 1991. About 80 per cent of all containers were manufactured in Asia, almost half of that production still comes from the Republic of Korea. However, the pattern of the world's container manufacturing industry is changing, and becoming more widely dispersed across the People's Republic of China and the countries of South-East Asia. This is shown in table 44. In addition to the existing plants, a further five container plants started operations in China in 1990 pushing total output of the country up to 95,000 TEUs a year. With several new plants under construction, by the end of 1992, China will have developed a theoretical annual manufacturing capacity of 200,000 TEUs from 20 different manufacturers.

125. Within the next few years, if all the projects reach fruition, Indonesia (160,000 TEUs), Malaysia (150,000 TEUs), Thailand (200,000 TEUs), and China (200,000 TEUs) will have developed a combined annual capacity of 700,000 TEUs of standard steel dry freight containers. Such a development in the container manufacturing industry may lead to serious global over-production of standard steel dry freight containers. Competition in this sector is likely to be intensified significantly over the next several years.

Table 43

Regular double-stack train services connecting the United States and Mexico

Route	Operator	Frequency
Chicago-Mexico City	American President Domestic	6 times a week
Detroit-Hermosillo	American President Domestic	3 times a week
Montreal, Toronto, New York, Chicago, Kansas City-Mexico City	K-Line/Rail-Bridge Corp.	Weekly
Long Beach-Mexico City	K-Line/Rail-Bridge Corp.	Weekly
Los Angeles-Mexico City	Mitsui-OSK Lines	Weekly
Los Angeles-Mexico City	Nippon Yusen Kaisha	Twice a week

Source: *Containerisation International*, May 1991, p. 67

Table 44

Breakdown of annual container production by region/country for 1989-1991
(in TEUs)

Region/Country	1991	1990	1989	Current production split	
				Standard per cent	Special per cent
<u>Asia</u>					
Republic of Korea	325 000	350 000	347 000	92.0	8.0
Taiwan Province of China	115 000	100 000	100 000	94.0	6.0
China	95 000	45 000	40 000	100.0	0
Thailand	45 000	35 000	20 000	100.0	0
Malaysia	45 000	10 000	-	100.0	0
India	40 000	25 000	18 000	100.0	0
Philippines	15 000	14 000	12 000	100.0	0
Japan	10 000	15 000	27 000	8.0	92.0
Indonesia	10 000	1 000	-	100.0	0
Singapore	10 000	5 000	1 000	100.0	0
Subtotal	710 000	600 000	565 000	93.8	6.2
<u>Europe</u>					
Former USSR	35 000	40 000	35 000	100.0	0
Italy	30 000	45 000	40 000	50.0	50.0
United Kingdom	15 000	20 000	15 000	20.0	80.0
Federal Republic of Germany	15 000	17 000	18 000	40.0	60.0
Scandinavia	15 000	7 000	5 000	90.0	10.0
Poland	9 000	7 000	8 000	90.0	10.0
Spain/Portugal	8 000	8 000	8 000	80.0	20.0
Hungary	3 000	5 000	5 000	70.0	30.0
Turkey	3 000	-	-	100.0	0
Benclux	2 000	8 000	9 000	75.0	25.0
Others	5 000	13 000	10 000	80.0	20.0
Subtotal	140 000	170 000	153 000	68.5	31.5
<u>Others</u>					
Central/South America	20 000	2 000	-	100.0	0
South Africa	18 000	17 000	15 000	90.0	10.0
North America	10 000	9 000	15 000	0	100.0
Australasia	2 000	2 000	2 000	0	100.0
Subtotal	50 000	30 000	32 000	72.0	28.0
WORLD TOTAL	900 000	800 000	750 000	88.8	11.5

Source: *Containerisation International Yearbook, 1992*, p. 14.

F. World container population

126. According to estimations made by Cargoware International, the world container population during last five years has tended to expand by 7-8 per cent yearly. At the beginning of 1992, the world container population stood at about 6.8 million TEUs. Approximately one-half of the world's container fleet has been delivered during the past five years (1987-1991). During this period, replacement of scrapped containers has steadily represented about 5 to 6 per cent of the total container population. Out of total production of 900,000 TEUs in 1991, approximately 350,000 TEUs have gone to exchange scrapped containers and 550,000 TEUs have been added to the container fleet as its direct expansion.

G. Failure to introduce wide-body container standard

127. Pressure for the introduction of larger-than-ISO standard containers has been reflected in the work of ISO and an attempt to introduce a new standard for the so-called second generation wide-body container has been made. This task was entrusted to the Working Group 4 "Future Containers" (WG4) convened within the International Organization for Standardization's (ISO) TC 104 in 1987. Numerous subsequent meetings of this group has revealed the complexity of the problem and the difficulty in finding a universally acceptable solution. However, the group has finally managed to develop a technical report entitled "Future Wide-body containers" and to submit it to the sixteenth meeting of TC 104 (15-17 May 1991, Seoul) for adoption as "a prospective standard for provisional application" for a period of not more than two years after its official publication by ISO.

128. This technical report proposed the following main external dimensions for future generation containers:

Height:	2,896 mm	(9 feet 6 inches)
	2,591 mm	(8 feet 6 inches)
Length:	7,430 mm	(24 feet)
	14,935 mm	(49 feet)
Width:	2,595 mm	(8 feet 6 inches)

129. These parameters differed from those adopted by the regional standardization bodies, which had been based, in general, on non-ISO units already in operation in the regions. In view of the massive opposition voiced before and during the sixteenth session of TC 104, the WG4 document was not adopted for publication as a formal ISO technical report.

130. According to many operators, non-ISO dimension containers pose great inconveniences in their transportation and handling and consequently provoke additional costs and reduced flexibility. UNCTAD's report "Developments in the field of container standards" (TD/B/C.4/AC.11/6) indicated that there was no universal need for oversized containers and hence little prospect of their being generally adopted in the near future. Furthermore, according to the same report, there were some indications that the markets where such containers were in demand, had approached saturation, and orders for such containers had been declining.

131. Altogether a shift of attitude has become noticeable in relation to the use of oversized containers. Indeed, Maersk and other operators use at the moment on the European continent only refrigerated 45-foot containers, while Sea-Land has completely abandoned this type of container.

132. At its sixteenth session in May 1991, TC 104 confirmed its decision to introduce an additional container height of 9 foot 6 inches (2.9 m) into the ISO 668 standard with designation IAAA (40-foot) and IBBB (30-foot). A draft international standard (DIS) in this respect has been circulated by the ISO secretariat to all ISO member bodies for voting. Publication as an International Standard requires approval by at least 75 per cent of the member bodies casting a vote.

H. Automatic container identification

133. A new international standard ISO 10374 "Freight containers - Automatic Identification" was approved by ISO member bodies in 1991. This standard specifies a system for the automatic identification of containers and the electronic transfer of the identity of the container and permanent related information to third parties in a standard format. It is intended that the Automatic Equipment Identification (AEI) system will facilitate documentation, resource control, and communications, including electronic data processing systems. The standard spells the operational requirements to the basic components of the AEI system (electronic device - tag - on container and electronic sensing equipment), safety and regulatory considerations, tag positioning, etc.

I. Leasing industry

134. By the end of 1991, the container leasing industry was in possession of around 3 million TEUs, whereas the container population of shipping lines and other owners was approaching 4 million TEUs. That means that the gap between operator and lessor

ownership is widening: the share of lessors in the world container stock slipped from 47 per cent at the end of 1990 to less than 43 per cent at the end of 1991. -

135. Container stocks of ten major container lessors by the end of 1991 and the estimated additions in 1992 (in TEUs), classified by type of containers, are shown in table 45.

136. The process of concentration in the industry is continuing, which means that the companies are striving to benefit further from the economy of scale factor by increasing their container fleet without a

proportionate increase in the costs of operations. For example, the plans of one of the leading container lessors, Typhoon, for the 1991-1992 financial year, predicted the acquisition of an additional 120,000 TEUs thus bringing the total fleet by the end of April 1992 to 524,000 TEUs.

137. Another major container lessor, Textainer, was also boosting its container fleet. The company was planning to add about 70,000 TEUs during 1992 to its container stock which would amount to more than 200,000 TEUs by year end. The company intended to bring its fleet to more than 400,000 TEUs by 1995.

Table 45

Container stock of the major container lessors
(in TEUs)

Type of containers	1991		1992 addition	
	TEUs	Per cent	TEUs	Per cent
Dry freight containers	2 258 919	85.5	420 344	86.2
High cube	144 385	5.4	36 866	7.6
Tank containers	8 543	0.3	1 300	0.3
Reefers	92 636	3.6	12 950	2.7
Open top containers	76 270	2.9	8 789	1.8
Flat racks	51 003	1.9	-	-
Bulk containers	2 451	0.1	} 6 870	1.4
Other types	9 768	0.3		
Total	2 645 609	100.0	487 119	100.0

Source: Institute of International Container Lessors.

Note: The stock of other leasing companies was estimated at 350,000 TEUs. The scrapping figure for the world container industry was estimated at 122,265 TEUs in 1991.

OTHER DEVELOPMENTS

A. United Nations Convention on a Code of Conduct for Liner Conferences

138. The United Nations Convention on a Code of Conduct for Liner Conferences came into force on 6 October 1983. Throughout 1991 the number of Contracting Parties remained at 75, namely: Algeria; Bangladesh; Barbados; Belgium; Benin; Bulgaria; Burkina Faso; Cameroon; Cape Verde; Central African Republic; Chile; China; Congo; Costa Rica; Côte d'Ivoire; Cuba; Czechoslovakia; Denmark (except Greenland and the Faroe 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; Republic of Korea; Romania; Saudi Arabia; Senegal; Sierra Leone; Somalia; Sri Lanka; Sudan; Sweden; Togo; Trinidad and Tobago; Tunisia; Union of Soviet Socialist Republics; * 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 and Zambia.

B. Review Conference of the United Nations Convention on a Code of Conduct for Liner Conferences (resumed session)

139. The resumed session of the Review Conference, commenced work on 21 May 1991 and concluded on 7 June 1991 with the adoption by consensus of a resolution proposed by the President of the Conference.²⁹

140. The resolution adopted by the Conference, while reaffirming the continuing validity of the Convention, incorporates six guidelines relating to the implementation of the Convention. Three of the guidelines relate to the modalities of implementation of the Convention. Two of these amplify the role of Governments in Code implementation, while the other recognizes collective consultations by a group of national shippers' councils. The other three guidelines

relate to technological and structural changes in liner shipping. Two of them are designed to include multimodal transport services and transshipment services explicitly within the trade-sharing provisions of the Code, while the other is designed to include container slot-chartering and space-chartering within the Code concept of chartered tonnage.

141. The resolution also includes two operative paragraphs which deal with the continuing technological and structural changes in liner shipping. One of these calls for discussion between Contracting Parties and relevant commercial parties on a bilateral, subregional and/or regional basis of the implications for the developing countries of the continuing technological and structural changes in liner shipping, while the other requests UNCTAD and relevant intergovernmental organizations to continue to study within the context of their programmes of work during the 1990s the implications of these changes for the developing countries.

142. In other operative paragraphs, the resolution recognizes the role of the Registrar in providing guidance and assistance to Governments towards the effective implementation of the Convention and requests that the next Review Conference be held in accordance with the provisions of article 52, which would be in 1996, or any time earlier if requested by one-third of all Contracting Parties.

C. United Nations Convention on International Multimodal Transport of Goods

143. This Convention,³⁰ adopted by consensus on 24 May 1980 by the United Nations Conference of Plenipotentiaries, was open 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. In 1991 one more country, Zambia, joined the other five Contracting Parties to the Convention - Chile, Malawi, Mexico, Rwanda and Senegal. Another three countries - Morocco, Norway and Venezuela - have signed the Convention subject to ratification.

* As of 24 December 1991, the name Russian Federation is used in place of the Union of Soviet Socialist Republics in the United Nations.

D. United Nations Convention on the Carriage of Goods by Sea (Hamburg Rules)

144. This Convention,³⁹ adopted by consensus on 30 March 1978 by the United Nations Conference of Plenipotentiaries, was open for signature in New York from 31 March 1978 to 30 April 1979 and remained open for accession thereafter. It will enter into force 12 months after 20 States have become contracting parties by definitive signature, ratification or accession. On 7 October 1991, the twentieth country - Zambia - became a Contracting Party to the Convention. The Convention thus had the necessary number of Contracting Parties for entry into force. It will enter into force on 1 November 1992, in all trades from or to a Contracting Party. The Contracting Parties to the Convention are: Barbados, Botswana, Burkina Faso, Chile, Egypt, Guinea, Hungary, Kenya, Lebanon, Lesotho, Malawi, Morocco, Nigeria, Romania, Senegal, Sierra Leone, Tunisia, Uganda, United Republic of Tanzania and Zambia. Another 22 countries - Austria, Brazil, Czechoslovakia, Denmark, Ecuador, Finland, France, Germany, Ghana, Holy See, Madagascar, Mexico, Norway, Pakistan, Panama, Philippines, Portugal, Singapore, Sweden, United States, Venezuela and Zaire - have signed it subject to ratification.

E. United Nations Convention on Conditions for Registration of Ships

145. 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.³⁹ 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 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.

146. By the end of January 1992, the Convention had been ratified by the following eight States: Côte d'Ivoire, Egypt, Haiti, Hungary, Iraq, Libyan Arab Jamahiriya, Mexico and Oman. Another nine States had signed the Convention subject to ratification, acceptance or approval: Algeria, Bolivia, Cameroon, Czechoslovakia, Indonesia, Morocco, Poland, Senegal and the former USSR.

F. Working Group on International Shipping Legislation

147. The subject of general average was under review by the Working Group on International Shipping Legislation (WGISL). The thirteenth session of the WGISL which was held in Geneva from 11 to 19 November 1991 discussed the matter, having before it a report prepared by the secretariat entitled "General Average - A preliminary review" (TD/B/C.4/ISL/58). The WGISL decided to request the UNCTAD secretariat to approach, in consultation with the Comité Maritime International (CMI), the insurance industry and international organizations involved with general average, to study the extent to which insurance arrangements could simplify the operation of the general average system. It further requested the secretariat to consult Governments of developing countries and their commercial interests concerned with general average on their experiences and also to seek to obtain some relevant statistics, in particular on the time and expenses involved in general average settlements.

G. Maritime liens and mortgages

148. The draft Convention on Maritime Liens and Mortgages, prepared by the Joint UNCTAD/IMO Intergovernmental Group of Experts on Maritime Liens and Mortgages and Related Subjects, will be placed before the Conference of Plenipotentiaries for consideration and adoption in the spring of 1993. The General Assembly of the United Nations, at its forty-sixth session, upon recommendations of the Trade and Development Board, decided that (Resolution 46-213) a United Nations/International Maritime Organization Conference of Plenipotentiaries on a Draft Convention on Maritime Liens and Mortgages be convened at Geneva during the first half of 1993 for a period of three weeks to consider the draft convention and to embody the results of its work in a Convention on Maritime Liens and Mortgages.

Box 4

Establishment of the UNCTAD Standing Committee on Developing Services Sectors:
Fostering Competitive Services Sectors in Developing Countries

The United Nations Conference on Trade and Development at its eighth session held in Cartagena de Indias (Colombia) in February 1992 agreed that with the exception of the Special Committee on Preferences and the Intergovernmental Group of Experts on Restrictive Business Practices, whose terms of reference remained unchanged, the existing Committees of the Board should be suspended and standing committees on the following topics be established:

- Commodities
- Poverty alleviation
- Economic cooperation among developing countries
- Developing services sectors: fostering competitive services sectors in developing countries.

It was decided that the terms of reference of the Committee on Shipping and of the Committee on Finance and Invisibles related to Trade (Insurance) should be included in that of the Standing Committees on Fostering Competitive Services Sectors in Developing Countries. a/

In accordance with the Cartagena Commitment, the Trade and Development Board at the second part of the thirty-eighth session adopted on 1 May 1992 terms of reference of the Standing Committee on Developing Services Sectors: Fostering Competitive Services Sectors in Developing Countries. b/

The main tasks of the Committee in the field of shipping, ports and multimodal transport were particularly focused on:

- (a) Review of shipping policies so as to identify elements leading to the development of competitive shipping sectors, in order to enhance the participation of developing countries in world shipping;
- (b) Consideration of conditions facilitating intra-regional and interregional cooperation;
- (c) Exchange of information on infrastructure development, including port infrastructure;
- (d) Identification of human resources development needs, including on-the-job training;
- (e) Exchange and dissemination of information on developments in the shipping sector;
- (f) The efficient conduct of multimodal transport processes, bearing in mind economic, commercial and legal aspects;
- (g) Review of technological developments that affect maritime transport;
- (h) Consideration of various aspects of port management operations, with a view to increasing efficiency.

The Committee should take into account the work of the Ad Hoc Working Group on Trade Efficiency on transport-related information systems.

The Committee shall ensure that its work does not duplicate or overlap the activities of GATT.

The Committee will hold separate sessions on services in general, shipping and insurance, respectively.

a/ For further information see "A New Partnership for Development, The Cartagena Commitment" (TD(VIII)/Misc.4).

b/ For the full text of the resolution, see UNCTAD/PSM/CAS/41() and annex V to the present report.

149. The draft Convention aims at achieving greater international uniformity and introducing a widely acceptable international legal instrument governing maritime liens and mortgages. It covers such issues as: recognition and enforcement of mortgages/hypothèques and charges, claims to be granted maritime liens status and their priority, rights of retention, extinction of maritime liens, effects of forced sale, and provisions dealing with temporary change of flag.

H. New UNCTAD/ICC Rules for Multimodal Transport Documents

150. The new UNCTAD/ICC Rules for Multimodal Transport Documents, elaborated by a working group set up jointly by UNCTAD and the International Chamber of Commerce (ICC) in 1988, took effect on 1 January 1992. The Rules set minimum standard conditions for contracts of carriage. They are better adapted to current forms of transport, which are increasingly dominated by the use of containers in international trade, than the 1975 ICC Rules for a Combined Transport Document. The old ICC Rules became inoperable as of 31 December 1991. The new Rules explicitly retain the "nautical default defence" imbedded in the Hague Rules. Before the Convention on the International Multimodal Transport of Goods entered into force, the UNCTAD/ICC Rules were the means of providing a private transport contract with a consistent legal regime.

I. Technical cooperation and training

151. UNCTAD's technical cooperation and training programme in shipping, ports and multimodal transport declined slightly in 1991. A total of 37 projects were executed during the year, for a total value of \$US 3.2 million.

152. The TRAINMAR programme, which is helping promote a greater maritime and multimodal transport training capability in developing countries, continued to expand and, by the end of 1991, some 43 training centres were participating in this programme. These centres are organized within regional and subregional networks to facilitate mutual cooperation. The programme is managed by a Central Support Team based in the Shipping Division which provides pedagogic support, promotes extension of the networks, and seeks donor support for specific activities. Although the ultimate objective is for centres that are financially and technically self-sufficient, seven country projects, six regional projects, and two inter-regional projects, financed by a variety of donors, were being undertaken in 1991. These projects were helping:

- To establish viable training centres in certain countries;
- To develop new courses and upgrade existing ones;
- To provide technical and pedagogic advice to all centres;
- To finance the travel of counterparts for training purposes.

153. Over 20 policy seminars were conducted by UNCTAD in 1991. These included:

- Multimodal Transport Workshops developed under the TRAINMAR programme;
- Improving Port Performance (IPP) Seminars on Container Terminal Development Policy and Equipment Maintenance;
- Strategic Planning Workshops for Senior Shipping Management (STRATSHIP);
- Container Terminal Management Seminars developed and delivered jointly with Antwerp Port Engineering and Consulting (APEC).

154. The development and implementation of an Advance Cargo Information System (ACIS) for African transport operators in Sub-Saharan Africa continued during 1991. By year end the following relay logistics units (RLU) modules had been implemented:

- The UN/EDIFACT manifest transfer system had been installed in Dar es Salaam and satellite transmission of manifests from Europe via INMARSAT was operational;
- The Harbour Master module had been installed in the ports of Dar es Salaam and Mombasa;
- The Railtracker module was operational allowing goods and rolling stock to be tracked on five rail networks (Malawi, Tazara in the United Republic of Tanzania, Zaire, Cameroon and Senegal) and under installation in Ghana, Côte d'Ivoire, Burkina Faso and Mali;
- The Railtracker tutorial had been successfully used to train operators in Malawi, Tanzania, Zaire, Cameroon and Senegal;

- Uniform systems of both rail and port statistics and performance indicators were being implemented progressively.

Development work was continued on the road-tracking and lake-tracking modules. A Shippers' Council databank had been installed in Douala, Cameroon.

155. In addition to several new TRAINMAR projects, the following other projects were initiated during 1991:

(a) A preparatory assistance project in the Libyan Arab Jamahiriya developed proposals to assist the General National Maritime Transport Company in improving its organizational structure and fleet composition to maximize the company's operational efficiency;

(b) UNCTAD is collaborating with the International Maritime Organization (IMO) in updating and harmonizing the maritime legislation of Central American countries (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua). The objective is to bring the laws and regulations up to current international standards, making them complete and comprehensive. The project will provide the legal framework for more effective and profitable maritime transport in the subregion;

(c) In Ethiopia a draft maritime code has been prepared and is currently under discussion by a team of national counterparts. The project includes the preparation of draft laws and regulations on maritime administration, marine safety and pollution, maritime commercial law and port and harbour regulations. The preparation of guidelines for the harmonization and modernization of national legislation of the member countries of MINCONMAR is underway. The project entails, *inter alia*, a review of the various international Conventions on maritime law to which MINCONMAR member States may be recommended to accede, with due regard for economic and technological implications. MINCONMAR member countries would be advised on follow-up to the recommendations of the report upon their adoption by the MINCONMAR Ad Hoc Committee on Maritime Legislation;

(d) Funds have been obtained for the development of two new training programmes in Port Tariff Management:

- A three- to four-day strategy course (IPP-4); and
- A one- to two-week middle management course.

A draft of the policy course material allowed a first try-out of this course to be conducted in December 1991. The course materials are now being finalized and will be used in the preparation of the middle management course in 1992.

156. Funding for UNCTAD's technical cooperation and training activities in shipping, ports and multimodal transport was provided by the United Nations Development Programme (UNDP), the European Economic Community (EEC) and the Governments of Belgium, France, Germany, Netherlands, Norway and United States of America and by the recipient countries themselves.

J. Recent developments towards the establishing of the EEC common shipping policy

157. In 1991 the Commission of the European Communities continued to base its work in the field of maritime transport on the political decision adopted by the EEC Council of Ministers in December 1986.³² At the same time it tried to improve the proposals which it had already made with respect to the "positive measures". Thus, for instance, with a view to promoting the Community fleet's competitiveness, the Commission amended its proposal, following the opinion of the European Parliament, for a Regulation setting up a Community shipping register. The purpose of this Regulation, which is intended to provide shippers with a joint instrument to offset the advantages granted to shipowners who operate ships flying other flags, is twofold. First, by refunding the taxes paid by shipping companies on the earnings of seafarers, it is intended to reduce operating costs and, accordingly, halt and reverse the decline in Community fleets. Secondly, the Regulation is designed to ensure that, as far as possible, Community nationals are employed on Community vessels.

158. Regarding legal obligations concerning the completion of the Single Market, the Commission continued its efforts to obtain a Council decision on a draft cabotage regulation. As a result, the Council of Ministers meeting on 17 December 1991 agreed in principle to a proposal for the liberalization of cabotage starting on 1 January 1993, with an exemptions time-table for which dates had not yet been stated.

159. At the Council of Ministers meeting of 25 February 1992, a Regulation was adopted which authorizes the Commission to grant a consortia group exemption from the prohibition of agreements, restricting competition in accordance with the provision of the Treaty of Rome. A legislative basis has thus been created which will allow the sector to

be streamlined and at the same time guarantee effective competition. The Commission continued its consideration of a number of complaints and requests for individual exemptions on the basis of EEC Regulation No. 4056/86.

160. The Commission has continued its talks with member States on the adjustment of bilateral maritime agreements on cargo sharing. Member States are required by Regulation 4055/86 to adjust or terminate such agreements.

161. The Commission developed cooperation with non-EEC countries by organizing seminars on maritime policy and round tables. Thus, a seminar on "Central America's Maritime Policy in the 1990s" was held in Costa Rica in September 1991. In addition, the association agreements concluded by the Community with Czechoslovakia, Hungary and Poland include specific maritime transport provisions, such as market access.

- 1/ UNCTAD, *Trade and Development Report, 1991*, p.1.
- 2/ *Lloyd's List* (London), 3 January 1992.
- 3/ Fearnleys (Oslo), *Review 1991*, pp. 5 and 37.
- 4/ Drewry Shipping Consultants, Ltd. (London); Instituté of Shipping Economics and Logistics (Bremen) *Shipping Statistics*, No. 3, 1992, p. 77.
- 5/ Lloyd's Maritime Information Services (LMIS) and DRI/McGraw Hill (DRI) have combined resources to produce a global trade and fleet forecast service, the LMIS/DRI World Fleet Forecast Service (WFFS), which in turn is based on fleet information from LMIS and global trade forecasts from the DRI/TBS World Sea Trade Service (WSTS). WFFS forecasts supply and demand in respect of 34 vessel types and sizes across 700 global trade routes based on the WSTS forecasts of total trade in 40 commodity groups and assigned to each appropriate vessel type on relevant trade routes.
- 6/ Malta, Singapore, the Philippines, Republic of Korea, Hong Kong, India, Brazil, Iran (Islamic Republic of), Saint Vincent and the Grenadines, Vanuatu.
- 7/ Indonesia, Malaysia, Kuwait, Argentina, Yugoslavia, Egypt, Iraq, Mexico, Myanmar, Libyan Arab Jamahiriya.
- 8/ World Fleet Forecast Service (London) based upon information supplied by Lloyd's Maritime Information Services and DRI/McGraw-Hill.
- 9/ For additional information on the distribution of fleets of the 35 most important countries between national and foreign flags in 1989 and 1990, see respective annual issues of the *Review of Maritime Transport*.
- 10/ See *Review of Maritime Transport, 1975*, p. 52.
- 11/ *Guide to International Ship Registers, Ship Managers, Manning Agents and Crew Travel, 1991/92* edition, Lloyd's Ship Manager Directory (London), 1992. Countries and territories considered to be offering open or international registry facilities and international registers are: Antigua and Barbuda, Bahamas, Belize, Bermuda, Cayman Islands, Costa Rica, Cyprus, Denmark - Danish International Ship Register (DIS), Gibraltar, Honduras, Hong Kong, Isle of Man, Kerguelen Islands, Liberia, Luxembourg, Madeira, Malta, Marshall Islands, Mauritius, Netherlands Antilles, Norway - Norwegian International Ship Register (NIS), Palau, Panama, Sao Tome and Principe, Singapore, Sri Lanka, Saint Vincent and the Grenadines, Turks and Caicos Islands, Vanuatu. Vessels under the flags of Hong Kong, the Philippines and Singapore are usually defined as flag of convenience ships (FOC) on a ship-by-ship basis. Those countries with a second register where status as flag of convenience ship depends on its ownership being from the flag country and agreements acceptable to that country's unions are: Denmark (DIS), France (Kerguelen Islands Register), Luxembourg (for Belgian ships only), Norway (NIS) and the United Kingdom (Isle of Man Register).
- 12/ Estimates are based on data supplied by Lloyd's Maritime Information Services Ltd., London.
- 13/ *Lloyd's Ship Manager* (London), January 1992, p. 3.

14/ *INTERCARGO Bulletin* (London), September 1991, p. 17; *Fairplay International* (London), September 1991, p. 17; *Seatrade Week* (New York), 1-7 November 1991, p. 2.

15/ *Lloyd's List* (London), 3 June 1991 and 6 September 1991.

16/ *Lloyd's Shipping Economist* (London), April 1991, p. 10.

17/ *Lloyd's List* (London), 2 August 1991.

18/ Estimates are based on the data supplied by Lloyd's Maritime Information Services Ltd., London.

19/ John I. Jacobs PLC, *World Tanker Fleet Review* (London), July-December 1991, p. 19.

20/ *Lloyd's List* (London), 22 February 1992.

21/ *International Transport Journal* (Basel), 1991, No. 49, p. 4391.

22/ Fearnleys (Oslo) *Review 1991*, pp. 18 and 47.

23/ WESCOL International Marine Services (London), *World Trade Review and Outlook*, March 1992,
p. 33.

24/ WESCOL International Marine Services (London), *World Trade Review and Outlook*, March 1991,
p. 32.

25/ WESCOL International Marine Services (London), *World Trade Review and Outlook*, March 1992,
p. 33.

26/ Fearnleys (Oslo), *World Bulk Fleet*, January 1992, p. 18.

27/ *Lloyd's Register of Shipping: Merchant Shipbuilding Return*, quarterly issues, March-December 1991.

28/ Fearnleys (Oslo) *Review 1991*, p. 29.

29/ Fearnleys (Oslo) *Review 1991*, p. 29.

30/ *Lloyd's List* (London), 6 April 1992.

31/ UNCTAD, *The principles of modern port management and organization*, TD/B/C.JAC.7/13, 1992.

32/ The liner freight rate indices shown in table 36 were compiled by the Ministry of Transport of the Federal Republic of Germany and are based on the foreign trade of that country. Nevertheless, it is considered that these indices provide a general indication of trends for the liner sector of the world shipping industry.

33/ The text of the resolution is available as document TD/CODE.2/11 and is reproduced in annex IV. For the report of the Resumed Session of the Review Conference, see document TD/CODE.2/13.

34/ 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.1)).

35/ For the text of the Convention, see *United Nations Conference on the Carriage of Goods by Sea* (United Nations publication, Sales No. E.80.VIII.1).

36/ For the text of the Convention, see document TD/RS/CONF/23.

37/ Council Regulation (EEC) No. 4055/86 applying the principle of freedom to provide services in maritime transport between member States and member States and third countries; Council Regulation (EEC) No. 4056/86 laying down detailed rules for the application of articles 85 and 86 of the Treaty to maritime transport; Council Regulation (EEC) No. 4057/86 on unfair practices in maritime transport; Council Regulation (EEC) No. 4058/86 concerning co-ordinated action to safeguard free access to cargoes in ocean trades, Official Journal L.378, 31 December 1986. These Regulations were briefly considered in the *Review of Maritime Transport, 1986*. Later developments in the establishing of the EEC common shipping policy were considered in the *Review of Maritime Transport, 1990*.

Annex IClassification of countries and territories

Code 1	Canada	United States of America
Code 2	Japan	
Code 3	Australia	New Zealand
Code 4	Austria (L) Belgium Denmark Faeroe Islands Finland France Germany a/ Gibraltar Greece Iceland Ireland Israel	Italy Luxembourg (L) Monaco Netherlands Norway Portugal Spain Sweden Switzerland (L) Turkey United Kingdom of Great Britain and Northern Ireland
Code 5	South Africa	
Code 6	Albania Bulgaria Czechoslovakia Hungary (L)	Poland Romania Former Union of Soviet Socialist Republics
Code 7	China Democratic People's Republic of Korea	Viet Nam
Code 8 - 8.1	<u>Northern Africa</u> Algeria Egypt Libyan Arab Jamahiriya	Morocco Tunisia
Code 8.2	<u>Western Africa</u> Angola Benin Burkina Faso (L) Cameroon Cape Verde Congo Côte d'Ivoire Equatorial Guinea Gabon Gambia Ghana Guinea	Guinea-Bissau Liberia Mali (L) Mauritania Nigeria St. Helena Sao Tome and Principe Senegal Sierra Leone Togo Zaire

Code 8.3	<u>Eastern Africa</u> Burundi (L) Comoros Djibouti Ethiopia Kenya Madagascar Mauritius Mozambique	Reunion Seychelles Somalia Sudan Uganda (L) United Republic of Tanzania Zambia (L)
Code 9 - 9.1	<u>Caribbean and North America</u> Anguilla Antigua and Barbuda Aruba Bahamas Barbados Bermuda British Virgin Islands Cayman Islands Cuba Dominica Dominican Republic Greenland Grenada	Guadeloupe Haiti Jamaica Martinique Montserrat St. Pierre and Miquelon Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Trinidad and Tobago Turks and Caicos Islands United States Virgin Islands
Code 9.2	<u>Central America</u> Belize Costa Rica El Salvador Guatemala	Honduras Mexico Nicaragua Panama
Code 9.3	<u>South America - Northern Seaboard</u> Guyana French Guyana Netherlands Antilles	Suriname Venezuela
Code 9.4	<u>South America - Western Seaboard</u> Chile Colombia	Ecuador Peru
Code 9.5	<u>South America - Eastern Seaboard</u> Argentina Bolivia (L) Brazil	Falkland Islands (Malvinas) b/ Paraguay (L) Uruguay
Code 10 - 10.1	<u>Western Asia</u> Bahrain Cyprus Iran (Islamic Republic of) Iraq Jordan Kuwait Lebanon	Oman Qatar Saudi Arabia Syrian Arab Republic United Arab Emirates Yemen

Code 10.2	<u>Southern and Eastern Asia</u> Bangladesh Bhutan Brunei Darussalam Cambodia Hong Kong India Indonesia Macau Malaysia	Maldives Pakistan Philippines Republic of Korea Singapore Sri Lanka Thailand Union of Myanmar
Code 11	Malta	Yugoslavia
Code 12	American Samoa Christmas Island (Australia) Fiji French Polynesia Guam Kiribati Nauru	New Caledonia Papua New Guinea Samoa Solomon Islands Tonga Tuvalu Vanuatu Wake Island

Notes to Annex I

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

(2) 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: these countries are marked "(L)".

(3) 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: 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 Oceania: Code 12.

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

a/ Through accession of the German Democratic Republic to the Federal Republic of Germany with effect from 3 October 1990, the two German States have united to form one sovereign State. As from the date of unification, the Federal Republic of Germany acts in the United Nations under the designation "Germany".

b/ 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 areas, 1970, 1989 and 1990
(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	1970	0.7	5.3	308.0	314.0	73.4	103.6	170.0	347.0
	1989	1.5	25.5	503.5	530.5	260.1	98.6	223.8	582.5
	1990	1.4	25.8	515.1	542.3	274.9	100.8	227.6	603.3
Japan	1970	-	1.3	41.6	41.9	170.4	30.4	235.1	435.9
	1989	-	1.3	80.3	81.6	190.2	80.5	432.5	703.2
	1990	-	1.2	81.9	83.1	201.2	82.0	440.7	723.9
Australia and New Zealand	1970	-	1.3	92.3	93.6	18.8	2.9	15.4	37.1
	1989	5.9	1.6	260.5	268.0	8.0	7.2	17.8	33.0
	1990	9.2	1.5	266.3	277.0	8.6	7.2	18.1	33.9
Europe	1970	28.6	82.3	244.8	355.6	621.0	100.4	469.0	1 190.4
	1989	183.2	116.1	470.8	770.1	423.0	169.5	748.9	1 341.4
	1990	162.1	124.2	482.2	768.5	446.8	172.7	763.2	1 382.7
South Africa	1970	-	-	13.2	13.2	8.8	2.6	6.2	17.6
	1989	-	-	80.1	80.1	20.7	0.3	9.5	30.5
	1990	-	-	82.5	82.5	21.9	0.3	9.6	31.8
Subtotal: developed market-economy countries	1970	29.3	89.2	699.9	818.3	892.4	239.9	895.7	2 028.0
	1989	190.6	144.6	1 395.1	1 730.4	902.0	356.1	1 432.5	2 690.7
	1990	172.7	152.7	1 428.0	1 753.4	953.4	363.0	1 459.2	2 775.6
Countries of Central and Eastern Europe									
Countries of Central and Eastern Europe (excluding the former USSR)	1970	0.2	3.4	34.8	38.5	10.8	3.0	29.2	43.0
	1989	-	16.5	43.5	60.0	28.6	0.7	58.7	88.0
	1990	-	8.5	41.2	49.7	27.2	0.8	58.2	86.2
Former USSR	1970	38.0	22.9	46.0	106.9	2.5	-	11.9	14.4
	1989	64.5	52.6	46.2	163.3	7.8	0.6	79.4	87.8
	1990	58.6	46.8	44.0	149.4	7.0	0.5	79.0	86.5
Socialist countries of Asia									
Socialist countries of Asia	1970	-	0.1	13.3	13.4	5.4	0.4	24.4	30.2
	1989	33.0	4.9	47.4	85.3	3.6	1.4	78.2	83.2
	1990	32.0	4.0	46.1	82.1	3.9	1.3	80.4	85.6
Developing countries and territories									
Northern Africa	1970	221.4	5.6	28.3	255.4	9.9	5.9	17.9	33.8
	1989	174.0	28.6	33.2	235.8	60.4	4.5	37.5	122.4
	1990	182.7	31.5	32.0	246.2	63.4	4.3	37.8	125.5
Western Africa	1970	60.5	1.0	61.5	123.0	3.6	4.0	14.8	22.4
	1989	121.0	3.3	51.6	175.9	3.7	3.3	27.6	34.6
	1990	127.1	3.4	55.2	185.7	4.0	3.2	27.7	34.9

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		
<u>Developing countries and territories (cont.)</u>									
Eastern Africa	1970	-	1.2	16.1	17.3	5.5	2.6	8.3	16.4
	1989	-	0.7	9.0	9.7	6.0	2.6	15.9	24.5
	1990	-	0.6	9.3	9.9	6.4	2.6	16.0	25.0
Caribbean and North America	1970	-	1.4	28.4	29.8	23.5	4.5	11.2	39.2
	1989	13.5	12.1	27.1	52.7	28.3	8.5	20.2	57.0
	1990	14.0	11.8	28.9	54.7	29.7	8.4	20.0	58.1
Central America	1970	-	3.7	11.9	15.6	6.0	5.5	6.5	18.0
	1989	76.7	7.1	18.0	101.8	3.9	2.8	15.5	22.2
	1990	81.3	7.0	18.6	106.9	4.0	2.8	15.4	22.2
South America: Northern Seaboard	1970	131.1	11.8	36.0	278.9	63.1	3.0	6.7	72.9
	1989	55.6	24.3	16.3	96.2	-	1.5	19.0	20.5
	1990	58.3	24.2	17.0	99.5	-	1.5	18.8	20.3
South America: Western Seaboard	1970	4.6	1.6	29.8	35.9	4.1	1.5	5.9	11.5
	1989	16.9	8.0	33.6	58.5	3.4	1.4	14.6	19.4
	1990	17.4	8.2	36.0	61.6	3.5	1.3	14.4	19.2
South America: Eastern Seaboard	1970	0.1	1.1	54.3	55.5	18.8	1.0	19.8	39.6
	1989	0.1	4.3	190.7	195.1	36.0	2.8	27.6	66.4
	1990	0.1	4.3	197.8	202.2	37.8	2.8	26.9	67.5
Western Asia	1971	588.7	65.6	3.3	658.6	0.1	1.0	13.1	14.2
	1989	393.0	83.8	31.1	507.9	15.3	7.0	104.9	127.2
	1990	463.9	74.8	30.5	569.2	15.6	7.1	107.0	129.7
Southern and Eastern Asia (n.e.s.)	1970	35.0	23.7	89.3	148.0	148.0	23.3	61.9	139.9
	1989	74.9	84.2	240.0	399.1	141.7	41.3	357.1	540.0
	1990	78.6	88.4	253.0	420.0	150.4	41.6	362.9	554.9
Developing countries in Europe	1970	-	1.0	-	-	-	0.3	0.7	1.0
	1989	0.3	1.1	7.3	8.7	8.5	2.6	17.5	28.6
	1990	0.3	1.1	7.4	8.8	8.7	2.4	17.7	28.8
Oceania (n.e.s.)	1970	-	0.2	9.5	9.7	0.6	1.6	2.9	5.1
	1989	-	0.3	7.9	8.2	-	2.4	3.5	5.9
	1990	-	0.3	8.0	8.3	-	2.3	3.6	5.9
Subtotal: Developing countries	1970	1 041.4	216.9	368.4	1 627.7	189.9	5.5	169.7	414.0
	1989	926.2	257.9	665.7	1 849.8	307.2	80.5	680.1	1 068.1
	1990	1 023.9	255.6	693.7	1 973.0	323.5	80.3	688.2	1 092.0
<u>World total</u>	1970	1 110.0	330.0	1 165.0	2 606.0	1 101.0	302.0	1 127.0	2 530.0
	1989	1 214.3	476.7	2 198.0	3 889.0	1 249.1	439.4	2 329.4	4 017.9
	1990	1 287.2	467.6	2 253.0	4 007.4	1 315.0	445.9	2 365.0	4 125.9

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. Great Lakes and St. Lawrence River trade (in dry cargo) amounted to 42 million tons in 1970, and 27 million tons in 1989.

b/ See annex I for the composition of groups.

c/ Figures rounded to the nearest million.

Annex III(a)

Merchant fleets of the world by flag of registration, a/ groups of countries and types of ships b/
(in thousand grt)
as at 31 December 1991

	Total fleet	Oil tankers	Bulk carriers c/	General cargo d/	Container ships	Other types
World total e/	435 306 563	134 509 263	134 078 442	80 125 505	26 784 499	59 808 854
<u>Developed market-economy countries</u>						
Australia	2 666 363	778 198	1 003 626	172 179	121 040	591 320
Austria	126 175	..	71 482	54 693	..	..
Belgium	263 523	7 089	..	6 345	..	240 089
Canada	1 127 135	184 107	38 280	99 806	8 040	796 902
Denmark	5 736 804	1 351 424	528 033	755 248	1 639 421	1 462 678
Finland	1 020 735	124 990	67 659	271 736	..	556 350
France	3 942 640	1 695 362	405 564	443 830	588 815	809 067
Germany	5 834 882	100 682	633 974	1 715 912	2 315 581	1 068 733
Gibraltar	875 640	681 380	80 690	86 411	..	27 129
Greece	23 919 608	9 384 544	11 348 432	1 493 661	315 729	1 377 242
Iceland	165 360	146	..	34 147	..	131 067
Ireland	201 366	6 875	9 145	71 429	18 262	95 655
Israel	640 908	394	22 476	84 627	524 816	8 595
Italy	7 849 991	2 222 693	2 256 024	1 017 419	405 689	1 948 166
Japan	25 610 696	6 934 896	8 033 015	4 486 112	1 442 511	4 714 162
Luxembourg	1 595 224	105 634	878 839	44 580	169 482	396 689
Netherlands	4 152 297	395 931	390 465	1 292 166	626 185	1 447 550
New Zealand	254 054	80 486	12 775	91 936	..	68 857
Norway	23 747 173	10 385 805	6 829 851	1 983 776	114 445	4 433 296
Portugal	780 774	460 322	88 589	72 205	11 974	147 684
South Africa	344 459	1 270	..	445	210 460	132 284
Spain	3 411 001	1 370 136	655 211	419 055	76 400	890 199
Sweden	3 317 254	772 231	415 290	1 035 061	31 446	1 063 226
Switzerland	359 224	..	329 321	17 570	..	12 333
Turkey	4 416 967	819 442	2 563 874	819 571	..	214 140
United Kingdom	6 302 992	2 228 826	477 103	493 493	1 091 268	2 012 302
United States	16 449 551	7 483 686	1 225 466	1 871 055	2 747 996	3 121 348
<u>Subtotal</u>	<u>145 102 760</u>	<u>47 576 549</u>	<u>38 365 184</u>	<u>18 934 410</u>	<u>12 459 560</u>	<u>27 767 063</u>
<u>Open-registry countries</u>						
Bahamas	19 189 380	9 454 751	5 109 146	2 105 512	610 057	1 912 914
Bermuda	3 136 229	1 971 927	199 479	114 257	30 817	819 749
Cyprus	20 361 020	5 247 457	10 602 586	3 498 419	418 454	594 104
Liberia	53 289 569	25 816 423	15 552 617	4 862 261	2 177 791	4 880 477
Panama	47 468 938	14 663 226	14 053 063	12 332 208	2 932 006	3 488 435
<u>Subtotal</u>	<u>143 445 136</u>	<u>57 153 784</u>	<u>45 516 891</u>	<u>22 909 657</u>	<u>6 169 125</u>	<u>11 695 679</u>
<u>Central and Eastern Europe</u>						
Albania	59 060	..	..	57 598	..	1 462
Bulgaria	1 350 773	284 060	601 178	355 163	19 097	91 275
Czechoslovakia	290 033	..	205 476	84 557	..	..
Hungary	94 403	..	17 252	77 151	..	..
Poland	3 181 647	89 471	1 608 782	1 078 464	60 355	344 565
Romania	3 704 873	618 666	1 658 339	1 175 362	15 160	237 346
Former USSR	26 133 359	3 831 590	3 848 360	9 311 790	638 232	8 503 387
<u>Subtotal</u>	<u>34 814 148</u>	<u>4 823 787</u>	<u>7 939 397</u>	<u>12 140 085</u>	<u>732 844</u>	<u>9 178 035</u>

Annex III(a) (continued)

	Total fleet	Oil tankers	Bulk carriers c/	General cargo d/	Container ships	Other types
<u>Socialist countries of Asia</u>						
China	13 780 495	1 626 860	5 188 889	5 103 417	912 767	948 562
Democratic People's Republic of Korea	489 230	..	79 092	365 732	..	44 406
Viet Nam	557 352	90 750	21 366	299 603	..	145 633
<u>Subtotal</u>	14 827 077	1 717 610	5 289 347	5 768 752	912 767	1 138 601
<u>Developing countries of Africa</u>						
Algeria	921 342	28 326	172 259	203 875	..	516 882
Angola	93 643	2 052	..	67 653	..	23 938
Benin	1 666	..	..	105	..	1 561
Cameroon	34 765	..	..	24 120	..	10 645
Cape Verde	21 245	445	..	16 683	..	4 117
Comoros	2 296	..	..	1 703	..	593
Congo	8 598	..	..	..	..	8 598
Côte d'Ivoire	82 002	300	..	67 016	..	14 686
Djibouti	1 838	..	..	214	..	1 624
Egypt	1 142 696	156 187	343 079	487 335	..	156 095
Equatorial Guinea	6 527	..	..	6 412	..	115
Ethiopia	69 481	3 809	..	62 740	..	2 932
Gabon	24 817	652	..	19 149	..	5 016
Gambia	2 720	..	..	..	..	2 720
Ghana	143 493	965	..	62 525	..	80 003
Guinea	5 813	..	..	1 195	..	4 618
Guinea-Bissau	4 380	..	..	832	..	3 548
Kenya	12 312	3 727	..	..	..	8 585
Libyan Arab Jamahiriya	842 482	580 913	..	79 778	..	181 791
Madagascar	73 447	4 657	..	54 826	..	13 964
Malawi	..	..	..	..	..	..
Mauritania	41 421	..	..	2 689	..	38 732
Mauritius	79 671	..	46 705	23 139	..	9 827
Morocco	476 999	9 778	92 339	84 470	4 608	285 804
Mozambique	37 546	885	..	11 442	..	25 219
Nigeria	496 334	224 559	..	197 955	..	73 820
St. Helena	..	..	..	..	..	..
Sao Tome and Principe	1 488	..	..	495	..	993
Senegal	55 780	..	..	11 081	..	44 699
Seychelles	4 465	..	..	2 116	..	2 349
Sierra Leone	21 262	779	..	1 714	..	18 749
Somalia	16 730	..	..	8 809	..	7 921
Sudan	45 445	832	..	42 653	..	1 960
Togo	21 852	..	..	11 118	..	10 734
Tunisia	276 992	27 030	37 230	45 433	..	167 299
Uganda	5 091	2 885	..	5 091	..	..
United Republic of Tanzania	40 547	..	..	30 526	..	7 136
Zaire	28 074	..	..	13 980	..	14 094
<u>Subtotal</u>	5 145 260	1 048 801	691 612	1 648 872	4 608	1 751 367

Annex III(a) (continued)

	Total fleet	Oil tankers	Bulk carriers g/	General cargo d/	Container ships	Other types
<u>Developing countries of America</u>						
Anguilla	4 775	..	..	3 203	..	..
Antigua and Barbuda	495 369	5 598	2 999	363 572	69 456	1 572
Argentina	1 372 976	419 447	258 662	406 823	50 890	53 744
Barbados	7 745	..	..	3 811	..	237 151
Belize	13 613	1 471	..	7 950	2 905	3 934
Bolivia	9 610	..	..	9 610	..	1 287
Brazil	5 782 182	1 913 546	2 813 206	544 656	86 973	..
Cayman Islands	408 593	71 535	53 539	169 568	..	423 801
Chile	624 859	4 167	296 457	133 427	..	113 951
Colombia	311 261	5 697	80 593	209 477	..	190 808
Costa Rica	13 931	..	..	5 685	..	15 494
Cuba	726 871	78 296	30 341	440 880	..	8 246
Dominica	2 107	..	..	2 004	..	177 354
Dominican Republic	11 574	674	..	8 655	..	103
Ecuador	379 839	113 233	26 629	199 753	..	2 245
El Salvador	1 634	..	..	..	..	40 224
Falkland Islands f/	15 570	..	..	537	..	1 634
Grenada	623	..	..	199	..	15 033
Guatemala	1 329	..	..	..	..	424
Guyana	16 937	125	..	6 388	..	1 329
Haiti	711	..	..	199	..	10 424
Honduras	870 144	147 196	57 272	526 964	7 358	512
Jamaica	14 433	1 887	2 496	5 235	3 442	131 354
Mexico	1 143 306	478 854	16 816	69 893	..	1 373
Montserrat	711	..	..	711	..	577 743
Nicaragua	4 064	..	..	1 323	..	..
Paraguay	35 232	639	..	15 662	..	2 741
Peru	542 258	167 945	93 296	135 408	..	18 931
St. Kitts and Nevis	300	..	..	300	..	145 609
St. Lucia	1 891	..	..	1 534	..	..
St. Vincent	3 962 085	586 056	1 435 655	1 571 195	124 396	357
Suriname	12 876	1 800	..	7 215	1 343	244 783
Trinidad and Tobago	24 444	..	..	9 179	..	2 518
Turks and Caicos Islands	4 915	853	..	1 450	..	2 612
Uruguay	96 724	46 915	..	3 473	13 392	32 944
Venezuela	960 277	466 312	146 953	193 824	499	152 689
Virgin Islands British	6 473	..	..	3 181	..	3 292
<u>Subtotal</u>	<u>17 882 242</u>	<u>4 512 246</u>	<u>5 314 917</u>	<u>5 052 944</u>	<u>360 654</u>	<u>2 631 481</u>
<u>Developing countries of Asia</u>						
Bahrain	218 298	1 841	..	87 142	53 060	76 255
Bangladesh	425 137	50 681	..	335 554	..	38 902
Brunei	361 116	239	..	1 601	..	359 276
Cambodia	..	..	..	..	..	..
Hong Kong	6 430 783	813 601	4 260 692	319 468	792 919	244 103
India	6 431 836	1 735 351	3 064 925	1 028 306	..	603 254
Indonesia	2 360 808	589 041	148 757	1 040 945	76 629	505 436
Iran, Islamic Rep. of	4 576 996	2 944 541	1 046 501	428 292	..	157 662
Iraq	926 063	724 501	..	76 472	..	125 090
Jordan	61 266	50 490	..	9 888	..	888
Kuwait	1 565 907	1 237 937	..	118 580	..	209 390
Lebanon	272 625	1 536	44 127	220 516	..	6 446

Annex III(a) (continued)

	Total fleet	Oil tankers	Bulk carriers c/	General cargo d/	Container ships	Other types
Malaysia	1 835 030	241 690	355 785	393 278	269 410	574 897
Maldives	61 678	2 481	21 377	30 673	..	4 320
Myanmar	1 036 512	5 308	550 315	416 884	24 415	42 417
Oman	22 578	116	..	11 773	..	10 689
Pakistan	364 497	49 635	..	291 179	..	23 683
Philippines	8 474 133	373 437	6 101 391	1 579 664	94 250	325 391
Qatar	490 636	160 385	..	162 627	150 662	16 962
Republic of Korea	7 811 151	528 303	4 402 380	1 083 768	1 014 803	781 897
Saudi Arabia	1 059 639	276 047	..	492 290	67 109	224 193
Singapore	8 853 234	3 656 698	2 170 406	1 488 418	1 133 150	404 562
Sri Lanka	327 771	78 322	92 979	145 293	..	11 177
Syrian Arab Republic	108 875	..	14 017	93 779	..	1 079
Thailand	755 914	99 964	38 683	465 703	67 843	83 721
United Arab Emirates	867 933	332 319	60 138	199 362	190 786	85 328
Yemen	16 716	1 886	..	3 903	..	10 927
Subtotal	55 717 162	13 956 350	22 372 473	10 525 358	3 935 036	4 927 945
<u>Developing countries of Europe</u>						
Malta	8 929 607	2 759 438	3 877 979	1 817 065	179 996	295 129
Yugoslavia	1 101 063	7 161	773 347	249 459	..	71 096
Subtotal	10 030 670	2 766 599	4 651 326	2 066 524	179 996	366 225
<u>Developing countries of Oceania</u>						
Fiji	58 111	4 440	..	41 995	..	11 676
Kiribati	3 538	..	..	3 417	..	121
Nauru	5 374	..	..	4 426	..	948
Papua New Guinea	41 650	1 908	12 264	12 728	1 450	13 300
Solomon Islands	8 214	..	..	3 688	..	4 526
Tonga	15 550	..	..	12 495	..	3 055
Tuvalu	1 216	..	..	1 043	..	173
Vanuatu	2 233 148	186 796	1 172 021	675 810	32 262	166 259
Western Samoa	6 253	..	..	3 838	..	2 415
Subtotal	2 373 054	193 144	1 184 285	759 440	33 712	202 473
Developing TOTAL	91 148 388	22 477 140	34 214 613	20 063 138	4 514 006	9 879 491
<u>Other unallocated</u>	5 969 048	760 393	2 753 010	309 463	1 996 197	149 985

Annex III(b)

Merchant fleets of the world by flag of registration, a/ groups of countries and types of ships b/
(in thousand dwt)
as at 31 December 1991

	Total fleet	Oil tankers	Bulk carriers c/	General cargo d/	Container ships	Other types
World total e/	683 513 380	256 904 513	241 215 150	103 386 458	29 521 311	52 485 948
<u>Developed market-economy countries</u>						
Australia	3 804 661	1 298 201	1 688 855	205 229	130 846	481 530
Austria	211 412	..	122 494	88 918	..	..
Belgium	236 316	10 830	..	6 971	..	218 515
Canada	729 968	286 032	64 292	91 729	7 011	280 904
Denmark	8 058 814	2 700 395	992 515	897 468	1 830 474	1 637 962
Finland	838 965	192 403	106 101	274 838	..	265 623
France	5 621 236	3 315 669	716 476	498 404	620 092	470 595
Germany	7 174 901	192 543	1 004 465	2 310 794	2 821 551	845 548
Gibraltar	1 634 642	1 347 116	138 109	119 611	..	29 806
Greece	44 010 755	18 873 375	21 229 358	2 272 729	413 682	1 221 611
Iceland	115 689	201	..	55 669	..	59 819
Ireland	211 949	11 424	14 336	108 472	22 940	54 777
Israel	701 400	785	35 570	117 732	542 832	4 481
Italy	10 931 739	3 821 593	4 084 143	1 105 426	400 143	1 520 434
Japan	38 175 186	12 597 856	15 103 702	5 779 464	1 395 150	3 299 014
Luxembourg	2 624 720	174 539	1 629 464	54 559	188 473	577 685
Netherlands	5 165 129	621 384	631 897	1 878 912	615 558	1 417 378
New Zealand	286 836	125 395	20 118	108 269	..	33 054
Norway	41 070 629	20 954 232	12 535 761	2 251 104	133 262	5 196 270
Portugal	1 239 295	853 800	145 629	115 971	18 172	105 723
South Africa	284 424	1 187	..	..	198 602	84 635
Spain	5 428 467	2 821 670	1 195 194	671 736	102 252	637 615
Sweden	3 818 501	1 381 818	693 452	1 047 412	34 680	661 139
Switzerland	632 013	..	582 892	27 052	..	22 069
Turkey	7 635 469	1 519 062	4 710 544	1 292 326	..	113 537
United Kingdom	7 839 268	3 999 690	805 060	614 246	1 018 536	1 401 736
United States	24 565 688	15 344 090	2 258 057	1 809 357	2 732 636	2 421 548
<u>Subtotal</u>	<u>223 048 072</u>	<u>921 445 290</u>	<u>70 508 484</u>	<u>23 804 398</u>	<u>13 226 892</u>	<u>23 063 008</u>
<u>Open-registry countries</u>						
Bahamas	31 628 388	18 161 159	8 817 374	2 746 598	643 086	1 260 171
Bermuda	5 214 238	3 890 959	343 563	136 270	29 398	814 048
Cyprus	36 240 428	10 414 977	19 301 338	5 289 763	531 041	703 309
Liberia	94 807 604	51 127 808	29 557 315	5 398 819	2 370 479	6 353 183
Panama	76 258 118	28 055 839	25 149 562	15 368 995	3 251 976	4 431 746
<u>Subtotal</u>	<u>244 148 776</u>	<u>111 650 742</u>	<u>83 169 152</u>	<u>28 940 445</u>	<u>6 825 980</u>	<u>13 562 457</u>
<u>Central and Eastern Europe</u>						
Albania	80 954	..	..	80 954	..	..
Bulgaria	1 940 307	459 384	950 511	451 363	18 282	60 767
Czechoslovakia	445 705	..	330 867	114 838	..	..
Hungary	136 151	..	28 757	107 394	..	..
Poland	4 253 643	156 312	2 614 120	1 219 128	55 719	208 364
Romania	5 583 268	1 086 247	2 776 658	1 552 903	16 870	150 590
Former USSR	28 403 434	5 834 866	6 162 572	10 841 950	645 432	4 918 614
<u>Subtotal</u>	<u>40 843 462</u>	<u>7 536 809</u>	<u>12 863 485</u>	<u>14 368 530</u>	<u>736 303</u>	<u>5 338 335</u>

Annex III(b) (continued)

	Total fleet	Oil tankers	Bulk carriers c/	General cargo d/	Container ships	Other types
<u>Socialist countries of Asia</u>						
China	20 427 689	2 546 757	8 783 483	7 000 372	1 175 725	921 352
Democratic People's Republic of Korea	721 342	..	124 815	563 692	..	32 835
Viet Nam	862 338	184 781	36 014	460 964	..	180 579
Subtotal	22 011 369	2 731 538	8 944 312	8 025 028	1 175 725	1 134 766
<u>Developing countries of Africa</u>						
Algeria	1 093 363	46 410	288 145	296 577	..	462 231
Angola	122 767	2 286	..	106 685	..	13 796
Benin	210	..	..	..	..	210
Cameroon	39 797	..	..	33 509	..	6 288
Cape Verde	30 921	562	..	28 534	..	1 825
Comoros	3 579	..	..	2 915	..	664
Congo	10 840	..	..	..	..	10 840
Côte d'Ivoire	98 618	150	..	84 977	..	13 491
Djibouti	350	..	..	..	..	350
Egypt	1 604 891	275 131	565 499	662 370	..	101 891
Equatorial Guinea	6 699	..	..	6 699	..	..
Ethiopia	84 326	5 818	..	77 627	..	881
Gabon	29 956	742	..	26 022	..	3 192
Gambia	2 029	..	..	..	..	2 029
Ghana	133 069	1 167	..	82 488	..	49 414
Guinea	1 749	..	..	285	..	1 464
Guinea-Bissau	1 846	..	..	340	..	1 506
Kenya	11 649	5 558	..	..	..	6 091
Libyan Arab Jamahiriya	1 469 747	1 092 537	..	100 410	..	276 800
Madagascar	91 908	7 012	..	74 855	..	10 041
Malawi	..	..	..	..	..	..
Mauritania	22 843	..	..	3 711	..	19 132
Mauritius	111 925	..	79 339	28 729	..	3 857
Morocco	593 094	18 426	162 910	121 438	10 071	280 249
Mozambique	29 942	1 620	..	20 400	..	7 922
Nigeria	725 931	441 922	..	242 159	..	41 850
St. Helena	..	..	..	..	..	992
Sao Tome and Principe	1 172	..	..	180	..	..
Senegal	38 865	..	..	16 576	..	22 289
Seychelles	3 337	..	..	2 170	..	1 167
Sierra Leone	14 237	1 835	..	2 090	..	10 312
Somalia	18 488	..	..	12 695	..	5 793
Sudan	62 244	1 222	..	60 198	..	824
Togo	34 126	..	..	20 553	..	13 573
Tunisia	439 822	47 200	58 572	58 656	..	275 394
Uganda	..	..	..	..	..	..
United Republic of Tanzania	48 780	4 857	..	39 607	..	4 316
Zaire	30 692	..	..	15 949	..	14 743
Subtotal	7 013 812	1 954 455	1 154 465	2 229 404	10 071	1 665 417

Annex III(b) (continued)

	Total fleet	Oil tankers	Bulk carriers e/	General cargo d/	Container ships	Other types
<u>Developing countries of America</u>						
Anguilla	6 145	..	..	5 549	..	596
Antigua and Barbuda	827 884	12 745	4 798	617 398	102 936	90 007
Argentina	1 991 012	672 641	456 278	591 987	67 274	202 832
Barbados	7 781	..	..	7 716	..	65
Belize	18 494	2 534	..	11 795	4 165	..
Bolivia	15 765	..	..	15 765	..	..
Brazil	9 721 826	3 486 403	4 931 438	677 503	111 978	514 504
Cayman Islands	557 707	199 725	94 047	238 240	..	105 685
Chile	885 196	6 254	554 232	181 735	..	142 975
Colombia	463 574	9 681	157 141	284 323	..	12 429
Costa Rica	9 918	..	..	6 261	..	3 657
Cuba	941 096	115 070	49 888	605 502	..	170 636
Dominica	3 153	..	..	3 153	..	..
Dominican Republic	10 369	1 635	..	8 641	..	93
Ecuador	521 894	203 458	45 913	245 176	..	27 347
El Salvador	..	..	..	..	..	..
Falkland Islands <i>f/</i>	4 375	..	..	380	..	3 995
Grenada	484	..	..	235	..	249
Guatemala	353	..	..	..	..	353
Guyana	13 509	..	..	7 728	..	5 781
Haiti	429	..	..	259	..	170
Honduras	1 291 463	258 155	98 058	845 490	9 125	80 635
Jamaica	21 317	3 292	4 440	8 475	5 110	..
Mexico	1 542 962	805 646	26 440	92 189	..	618 687
Montserrat	1 016	..	..	1 016	..	..
Nicaragua	1 295	..	..	1 175	..	120
Paraguay	38 513	1 030	..	21 026	..	16 457
Peru	695 983	293 032	154 500	201 219	..	47 232
St. Kitts and Nevis	550	..	..	550	..	..
St. Lucia	2 070	..	..	2 070	..	..
St. Vincent	6 224 889	1 058 833	2 444 068	2 333 958	149 705	238 325
Suriname	15 721	3 035	..	10 145	1 771	770
Trinidad and Tobago	16 046	..	..	8 607	..	7 439
Turks and Caicos Islands	5 843	1 391	..	1 642	..	2 810
Uruguay	144 169	94 332	..	3 891	21 357	24 589
Venezuela	1 424 666	792 048	245 587	278 223	1 180	107 628
Virgin Islands British	3 974	..	..	3 371	..	603
Subtotal	27 431 441	7 940 940	9 266 828	7 322 393	474 601	2 426 679
<u>Developing countries of Asia</u>						
Bahrain	274 259	1 295	..	135 544	55 967	81 453
Bangladesh	589 517	84 248	..	486 394	..	18 875
Brunei	348 684	270	..	2 178	..	346 236
Cambodia	..	..	..	..	..	..
Hong Kong	10 849 411	1 524 015	7 829 405	420 120	823 885	251 986
India	10 358 965	3 015 950	5 265 976	1 466 415	..	610 624
Indonesia	3 158 590	988 734	219 934	1 551 807	97 869	300 246
Iran, Islamic Rep. of	8 372 664	5 876 358	1 756 502	580 568	..	159 236
Iraq	1 586 017	1 359 995	..	111 585	..	114 437
Jordan	113 557	97 286	..	16 271	..	..
Kuwait	2 639 860	2 280 043	..	157 194	..	202 623
Lebanon	421 379	2 431	73 886	338 432	..	6 630

Annex III(b) (continued)

	Total fleet	Oil tankers	Bulk carriers c/	General cargo d/	Container ships	Other types
Malaysia	2 657 629	412 154	648 232	607 114	326 745	663 184
Maldives	99 122	11 058	38 944	44 736	..	4 384
Myanmar	1 488 546	4 483	982 093	437 531	25 297	39 142
Oman	11 941	86	..	6 535	..	5 320
Pakistan	513 543	89 937	..	411 874	..	11 732
Philippines	13 999 634	720 608	10 837 808	2 123 329	123 468	194 421
Qatar	733 347	297 920	..	256 950	162 766	15 711
Republic of Korea	12 234 454	1 021 907	7 983 050	1 323 685	1 202 167	703 645
Saudi Arabia	1 447 822	458 891	..	689 375	71 653	227 903
Singapore	14 289 508	6 674 011	3 916 029	1 831 874	1 337 966	529 628
Sri Lanka	507 087	139 313	180 225	182 113	..	5 436
Syrian Arab Republic	179 292	..	25 650	153 642	..	..
Thailand	1 116 908	187 511	66 344	708 922	95 655	58 476
United Arab Emirates	1 330 345	586 100	103 154	305 874	238 139	97 078
Yemen	13 653	3 185	..	4 784	..	5 684
Subtotal	89 335 734	25 837 789	39 927 232	14 354 846	4 561 777	4 654 090
<u>Developing countries of Europe</u>						
Malta	15 169 013	5 077 546	6 841 745	2 761 922	200 864	286 936
Yugoslavia	1 773 189	10 879	1 373 666	360 308	..	28 336
Subtotal	16 942 202	5 088 425	8 215 411	3 122 230	200 864	315 272
<u>Developing countries of Oceania</u>						
Fiji	59 616	6 349	..	46 824	..	6 443
Kiribati	2 685	..	..	2 685	..	..
Nauru	5 791	..	..	5 791	..	..
Papua New Guinea	37 839	2 942	16 901	8 295	730	8 971
Solomon Islands	5 771	..	..	3 972	..	1 799
Tonga	20 845	..	..	18 398	..	2 447
Tuvalu	798	..	..	590	..	208
Vanuatu	3 426 570	381 959	2 076 810	672 340	39 147	256 314
Western Samoa	6 501	..	..	5 536	..	965
Subtotal	3 566 416	391 250	2 093 711	764 431	39 877	277 147
Developing TOTAL	144 289 605	41 212 859	60 657 647	27 793 304	5 287 190	9 338 605
Other unallocated	9 172 096	1 327 275	5 072 070	454 753	2 269 221	48 777

Source: *Lloyd's Register of Shipping - Statistical Tables, 1991* (London), and supplementary data regarding the Great Lakes fleets of the United States and Canada and the United States Reserve Fleet.

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/ Ore and bulk carriers of 6,000 grt and over, including ore/bulk/ore carriers.

d/ Including passenger/cargo.

e/ Excluding estimates of the United States Reserve Fleet and the United States and Canadian Great Lakes fleets, which amounted to respectively 3.0 million grt (4.0 million dwt), 1.1 million grt (2.0 million dwt) and 1.5 million grt (2.2 million dwt).

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).



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REVIEW CONFERENCE OF THE UNITED NATIONS CONVENTION
ON A CODE OF CONDUCT FOR LINER CONFERENCES
Resumed session
Geneva, 21 May 1991
Agenda item 12

CONSIDERATION OF FINAL DOCUMENTS AND RESOLUTIONS

Resolution II */

The Review Conference on the United Nations Convention on a Code of
Conduct for Liner Conferences.

Having convened in Geneva from 31 October to 13 November 1988 and from 21
May to 7 June 1991, pursuant to Article 52, paragraph 1, of the United Nations
Convention on a Code of Conduct for Liner Conferences, and having reviewed the
working and implementation of the Convention,

Noting that the Convention constitutes a widely accepted flexible
international legal instrument, taking into account the special needs and
problems of developing countries,

Noting the magnitude of technological and structural changes in liner
shipping since the adoption of the Convention in 1974,

Having reached agreement on certain matters relating to the working and
implementation of the Convention as reflected in this resolution,

*/ Adopted at the 11th (closing) plenary meeting of the resumed session of
the Review Conference on the United Nations Convention on a Code of Conduct for
Liner Conferences, on 7 June 1991.

1. Reaffirms the continuing validity of the United Nations Convention on a Code of Conduct for Liner Conferences;

2. Adopts the following guidelines:

- (a) The provisions of the Convention should not be seen as excluding a shipping line which is a container slot/space-charter operator from becoming a member of a liner conference, subject to the provisions of Article 1, paragraph 2, of the Convention. Article 1, paragraph 2, and Article 2, paragraph 11, of the Convention should not be seen as excluding container slot-charter or space sharing arrangements;
- (b) The provisions of Article 2 of the Convention apply to the international sea-leg of multimodal transport services;
- (c) The provisions of Article 2 of the Convention apply when cargoes are carried through transshipment, including cargoes to and from landlocked countries;
- (d) Governments may seek consultations with one another over issues of concern arising from the implementation of the Convention;
- (e) A group of national shippers or shippers' organizations from more than one country may participate in the consultations under Article 11 of the Convention on behalf of national shipper interests;
- (f) States Contracting Parties may take such measures as are necessary to ensure the implementation of the Convention. Such measures may include consultations involving the appropriate authorities, liner conferences, shipping lines and shippers and shippers' organizations concerned;

3. Invites all States Contracting Parties to strengthen their efforts towards the effective implementation of the Convention, taking into account its objectives and principles;

4. Calls upon liner conferences, shippers, shippers' organizations, States Contracting Parties or their appropriate authorities at the two ends of the trade to which the Convention applies to hold consultations, as and when appropriate, in order to find mutually acceptable solutions to problems relating to the working and implementation of the Convention;

5. Invites all States Contracting Parties which have not yet done so to take the necessary legislative and - as appropriate - other measures to implement the Convention, taking into account its objectives and principles and the above-mentioned guidelines;

6. Urges that the implications for the developing countries of the continuing technological and structural changes which have a bearing on the Convention be discussed between the relevant commercial parties concerned and, where necessary, Governments of States Contracting Parties, on a bilateral, subregional and/or regional basis, with a view to finding satisfactory solutions;

7. Requests UNCTAD and relevant intergovernmental organizations to continue to study these implications within the context of their programmes of work during the 1990s;

8. Requests the Registrar, appointed in accordance with Article 46, paragraph 1, of the Convention, to provide, within available resources, guidance and assistance to Governments, at their request, towards a better understanding and effective implementation of the Convention;

9. Invites all States which have not yet become Contracting Parties to the Convention to consider ratifying or acceding to the Convention;

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10. Requests the Secretary-General of the United Nations to convene the next Review Conference in accordance with the provisions of Article 52 of the Convention;

11. Instructs the depositary to seek the views of all States entitled to attend the next Review Conference in preparing the relevant documentation for such Conference;

12. Calls upon all States entitled to attend the next Review Conference to contribute, as appropriate, to the preparation for such Conference to be undertaken by the depositary.

11th plenary meeting

7 June 1991

Annex V

TERMS OF REFERENCE

Standing Committee on Developing Services Sectors: Fostering
Competitive Services Sectors in Developing Countries

Pursuant to General Assembly resolution 1995 (XIX), as amended, and to A New Partnership for Development: the Cartagena Commitment adopted at the eighth session of the United Nations Conference on Trade and Development, a Standing Committee on Developing Services Sectors: Fostering Competitive Services Sectors in Developing Countries is established by the Trade and Development Board with the following terms of reference:

1. To analyse and assist, as appropriate, in the formulation of national policies aimed at strengthening the production, export and technological capacity of services sectors taking into account their level of development in different countries, with a view to contributing to development and, thus, increasing the participation of developing countries in world trade in services. The Committee should focus on:

(a) Review of the development of services sectors in developing countries and comparative analysis of policies, including identification of domestic weaknesses and capabilities, aimed at creating the conditions necessary for the development of competitive service sectors and export of services;

(b) Policies aimed at developing and strengthening the institutional, technological, and physical infrastructure relating to services;

(c) Policies aimed at human resources development, the development of knowledge-intensive services, and producer services related to primary and manufacturing sectors and telecommunications;

(d) Improving the capacity of individual countries, in particular developing countries, to benefit from information related to services production, trade and technology;

(e) Identifying sector-specific policy options, with a view to developing competitive services sectors;

(f) Analysing issues relating to access to information networks and distribution channels for services.

2. The Committee should also focus on:

(a) Examining difficulties particularly faced by developing countries in enhancing exports of services thereby increasing their participation in world trade in services;

(b) The impact of progressive liberalization in the development of competitive service sectors;

(c) Policies aimed at enhancing cooperation with other countries, at regional, subregional, and interregional level, including mutual trade liberalization, pooling capabilities to improve skills, distribution networks and infrastructure development;

(d) Promoting efficient marketing of export-competitive industries and domestic labour skills;

(e) Increasing knowledge of laws and regulations concerning the services sector with a view, *inter alia* to adapting them to the requirements of increasing globalization of services, promoting transparency and mutual knowledge of the pertinent regulations;

(f) Collecting and disseminating statistics on trade in services in areas where such collection or dissemination is not being undertaken by other international organizations, and defining ways to improve such collection and dissemination.

3. (i) With reference to paragraph 72 of the Cartagena Commitment, the main tasks of the Committee in the field of shipping, ports, and multimodal transport should be as outlined above, and particularly focus on:

(a) Review of shipping policies so as to identify elements leading to the development of competitive shipping sectors, in order to enhance the participation of developing countries in world shipping;

(b) Consideration of conditions facilitating intraregional and interregional cooperation;

(c) Exchange of information on infrastructure development, including port infrastructure;

(d) Identification of human resources development needs, including on-the-job training;

(e) Exchange and dissemination of information on developments in the shipping sector;

(f) The efficient conduct of multimodal transport processes, bearing in mind economic, commercial and legal aspects;

(g) Review of technological developments that affect maritime transport;

(h) Considering various aspects of port management operations, with a view to increasing efficiency.

(ii) The Committee should take into account the work of the Ad Hoc Working Group on Trade Efficiency on transport-related information systems.

4. To analyse prospects for developing and strengthening the insurance sector and enhancing the trade of developing countries in this sector.

5. The Committee, in implementing its functions, should pay due attention to the role of services in market-oriented development, including issues related to privatization and deregulation.
6. In implementing the above, the Committee shall take into account the work undertaken by the Intergovernmental Group of Experts on Restrictive Business Practices.
7. The Committee shall ensure that its work does not duplicate or overlap the activities of GATT.
8. The Committee will hold separate sessions on services in general, shipping and insurance respectively.
9. The work of the Committee should follow a progressive sequence in accordance with paragraphs 49 to 60 of the Cartagena Commitment. In line with what is set out in the Cartagena Commitment, particularly paragraphs 18 and 47, the Committee should be inspired by the need to promote international consensus on principles and strategies for policy action at the national and international levels to enhance the development prospects of member States, particularly those of developing countries. It should provide a forum for the exchange of experiences among member States so as to enable them to draw appropriate lessons for the formulation and implementation of policies at the national and international levels and for international economic cooperation.
10. In its work, the Committee should take due account of the diversity of country situations and experiences. It may base its work on country reviews by the secretariat and seek from relevant countries the presentation of studies on their national experiences. It could also, depending on the issue, seek the participation of, and draw on the experience and expertise of, non-governmental actors, particularly enterprises, trade unions, the academic community and non-governmental organizations as well as representatives of international institutions.
11. The Committee should identify for consideration areas in which technical cooperation should be strengthened.
12. The work of the Committee should be coordinated with that of other Committees and Working Groups.
13. The work of the Committee should complement that of other international bodies while seeking to ensure that no duplication occurs.
14. The Committee may recommend for the consideration of the Board the establishment of expert groups.
15. The Committee shall submit periodic reports to the Trade and Development Board on its work. In accordance with paragraph 68 of the Cartagena Commitment the Board will conduct a review and evaluation of the work programme of the Committee midway between conferences.
16. The frequency of sessions of the Committee is to be decided by the Board in accordance with the existing procedures concerning the calendar of meetings. The duration of the sessions should be of five days or less.

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