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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, for consideration at the fourteenth session of the Committee. Any factual and editorial corrections that may prove necessary in the light of comments made by the Committee at that session or received directly from Governments would be reflected in a corrigendum to be issued subsequently.

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ABBREVIATIONS

CFS	Container freight station
cif	Cost, insurance, freight
dwt	Deadweight tons
EEC	European Economic Community
FEU	Forty-foot equivalent unit
fob	Free on board
GDP	Gross domestic product
GNP	Gross national product
grt	Gross registered tons
ICC	International Chamber of Commerce
ISO	International Organisation for Standardization
LCL	Less than container load
LDT	Light displacement tons
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
LUF	Lifting unit frame
MTO	Multimodal transport operator
NVOCC	Non-vessel-operating common carrier
NVO-MTO	Non-vessel-operating multimodal transport operator
OBO	Oil/bulk/ore
OECD	Organisation for Economic Co-operation and Development
ro/ro	Roll-on/roll-off
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.

Tons refer to metric tons, unless otherwise stated.

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

Two dots (..) indicate that the 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, data shown for earlier years have been revised and updated, and may therefore differ from those shown in previous issues of this Review.

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 outline and analyse the main developments in world maritime transport in the past year and to assess expected future short-term developments. Emphasis is given to the development of the merchant marines in developing countries as compared with other groups of countries.

Summary of main developments in 1987

(i) The total volume of international seaborne trade increased slightly in 1987, with goods loaded estimated at 3.5 billion tons or 0.8 per cent more than in 1986.

(ii) The declining trend in the size of the world merchant fleet also continued in 1987. At mid-year 1987 the total deadweight of the world merchant fleet was 632.3 million tons, representing a decline of 6.8 million dwt or 1.1 per cent from the previous year's figure.

(iii) Ownership remained concentrated in the developed market-economy and open-registry countries, with a combined tonnage amounting at mid-year 1987 to 68.1 per cent of the total deadweight of the world merchant fleet. The share of developing countries increased to 20.9 per cent in 1987 from 19.9 per cent in 1986. Socialist countries of Eastern Europe and Asia owned 9.9 per cent of the world merchant fleet.

(iv) The participation of developing countries in the world merchant fleet continued to be considerably lower than their share of international seaborne trade. Thus, in 1987, developing countries generated 34.8 per cent of world cargo moving in international seaborne trade (exports and imports combined) but owned only 20.9 per cent of deadweight tonnage. On the other hand, developed market-economy countries, either directly or indirectly through open-registry fleets, owned 68.1 per cent of world tonnage while generating 57.4 per cent of world trade.

(v) The supply/demand disequilibrium remained a serious problem in the world shipping industry, although in 1987 the amount of surplus decreased slightly as compared with the previous year. Nevertheless, average surplus tonnage was still estimated at 125.7 million dwt or 19.9 per cent of the total world merchant fleet as at 1 July 1987 (surplus tanker tonnage was estimated at 74.8 million dwt or 29.1 per cent of the world tanker fleet).

(vi) The proportion of freight costs to cif import values for developing countries continued to be more than twice as high as that for developed market-economy countries (9.11 per cent against 4.44 per cent).

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

(vii) Freight rate indices for dry cargo ships and for tankers showed a significant upward movement in 1987 as compared with 1986. This was largely the result of an increase in international seaborne trade in dry bulk cargoes, as well as a somewhat more balanced supply/demand relationship for a number of ship types.

(viii) The UNCTAD Committee on Shipping held its thirteenth regular session in Geneva from 14 to 22 March 1988. The session was primarily devoted to the consideration of questions of the imbalance between supply and demand in ocean shipping and the elaboration of practical measures to be taken in order to bring about a balanced situation in the shipping industry. The Committee also considered a large number of issues relating to international maritime policy and international co-operation in ocean shipping. It adopted two resolutions and one decision and decided to devote its next session primarily to the consideration of issues of multimodal transport and problems arising from development of co-operation among developing countries in the field of maritime transport and problems of multimodal transport.

Chapter I

THE DEVELOPMENT OF INTERNATIONAL SEABORNE TRADE

1. As shown in table 1, according to preliminary estimates, the total volume of international seaborne trade increased by 0.8 per cent in 1987 as compared with 1986 and amounted to 3.5 billion tons. However the development of trade varied between commodities. Thus, seaborne trade in dry cargoes increased by 1.5 per cent as compared with 1986, whilst crude oil and oil products shipments practically remained at the level of the previous year, showing a marginal decrease of 0.2 per cent.

2. A consolidation of the relatively stable volume established over the past few years could be considered to be the main feature of international oil seaborne trade in 1987. Tanker cargoes accounted for 43.6 per cent of the total amount of international seaborne trade. Dry bulk cargoes as a group showed an increase of 1.3 per cent as compared with the previous year. This increase should be attributed mainly to the growth of grain shipments, with seaborne trade in the other main dry bulk cargoes either remaining at the level of 1986 or slightly decreasing.

3. Table 2 shows world seaborne trade by types of cargo in terms of ton-miles. Total 1987 ton-miles increased by 0.8 per cent as compared to the level of 1986. This increase should be attributed mainly to a significant growth in the carriage of grain (9.6 per cent). At the same time the seaborne trade of the other two main dry bulk commodities - iron ore and coal - was below the 1986 level (-1.3 per cent and -1.2 per cent respectively). Transportation of oil and oil products in terms of ton-miles remained unchanged. On the whole, the share of liquid hydrocarbons in the total ton-miles for 1987 decreased slightly to 42.3 per cent (42.6 per cent in 1986), while the combined share of the three main bulk commodities amounted to 30.2 per cent (30.1 per cent in 1986).

4. The distribution of world seaborne trade by goods loaded/unloaded, broad commodity classifications and country groupings is given in table 3. Globally, dry cargoes represented 56.4 per cent of goods loaded in 1987, while crude oil, as the single largest cargo group, accounted for 32.2 per cent. Comparable country grouping data indicate that in 1987 developing countries generated 45.9 per cent of all goods loaded and 25.1 per cent of all goods unloaded, while developed market-economy countries accounted for 45.5 per cent of all goods loaded and 67.9 per cent of all goods unloaded. The socialist countries' shares were 8.6 per cent of the goods loaded and 7.0 per cent of the goods unloaded.

5. Developing countries experienced a slight decline in their share of world seaborne exports (all goods), which stood at 46.4 per cent of all goods loaded in 1986 and at 45.9 per cent in 1987. However, developing countries accounted for 74.2 per cent of the amount of crude petroleum and 54.8 per cent of petroleum products loaded in 1987. With respect to goods unloaded, the share of developing countries decreased from 25.8 per cent in 1986 to 25.1 per cent in 1987.

Table 1

Development of international seaborne trade, a/ 1970 and 1980-1987
(Estimates of goods loaded)

	Tanker cargo		Dry cargo				Total (all goods)	
			Total		Of which: main bulk commodities b/			
Year	Millions of tons	Percentage increase/ decrease over previous year	Millions of tons	Percentage increase/ decrease over previous year	Millions of tons	Percentage increase/ decrease over previous year	Millions of tons	Percentage increase/ decrease over previous year
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	1 533	5.1	1 945	1.1	834	-2.7	3 478	2.8
1987 c/	1 530	-0.2	1 975	1.5	845	1.3	3 505	0.8

Sources: (i) For tanker cargo, total dry cargo and all goods, base data were communicated to the UNCTAD secretariat by the United Nations Statistical Office. Owing to possible subsequent revisions or other factors, these detailed data may differ marginally from the aggregated figures reported in the United Nations Monthly Bulletin of Statistics.

(ii) For main bulk commodities: Fearnleys, World Bulk Trades 1986 (Oslo) and Review 1987.

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

c/ UNCTAD preliminary estimates.

Table 2

World seaborne trade by types of cargo, 1970 and 1980-1987
(Billions of ton-miles)

Year	Crude	Oil product	Iron ore	Coal	Grain a/	Other cargo	Total trade
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	4 610	1 295	1 650	1 567	1 002	3 840	13 964

Source: Fearnleys (Oslo), Review 1987.

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

Table 3

World seaborne trade in 1970, 1985, 1986 and 1987 (est.) a/ by types of cargo and shares of groups of countries b/ c/
(Millions of tons and percentages of world total)

Country group	Year	Goods loaded: Petroleum: Crude	Goods loaded: Petroleum: Products	Goods loaded: Dry cargo	Goods loaded: Total all goods	Goods unloaded: Petroleum: Crude	Goods unloaded: Petroleum: Products	Goods unloaded: Dry cargo	Goods unloaded: Total all goods
		(Trade in millions of tons)							
World total	1970	1 110	330	1 165	2 605	1 101	302	1 127	2 530
	1985	1 069	390	1 923	3 382	1 067	365	1 993	3 425
	1986	1 123	410	1 945	3 478	1 105	401	2 024	3 530
	1987	1 130	400	1 975	3 505	1 125	395	2 065	3 585
		(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
	1985	31.6	11.5	56.9	100.0	31.2	10.6	58.2	100.0
	1986	32.3	11.8	55.9	100.0	31.3	11.4	57.3	100.0
	1987	32.2	11.4	56.4	100.0	31.4	11.0	57.6	100.0
		(Percentage share of trade by groups of countries)							
Developed market-economy countries	1970	2.0	27.1	60.0	31.1	80.4	79.6	79.1	79.9
	1985	14.7	29.4	66.0	45.6	72.6	81.4	62.7	67.8
	1986	16.2	27.0	64.7	45.1	72.3	82.4	61.4	67.2
	1987	16.4	27.5	65.3	45.5	72.1	82.3	62.3	67.9
Socialist countries of Eastern Europe and Asia	1970	3.4	8.0	8.1	6.1	1.7	1.1	5.8	3.5
	1985	8.9	16.6	5.9	8.1	3.3	0.8	10.0	6.9
	1986	9.4	17.5	6.1	8.5	3.5	0.7	10.1	7.0
	1987	9.4	17.7	6.2	8.6	3.5	0.8	10.0	7.0
<u>of which</u>: in Eastern Europe	1970	3.4	8.0	6.9	5.6	1.2	1.0	3.8	2.3
	1985	6.1	15.0	4.6	6.3	3.0	0.4	6.4	4.7
	1986	6.0	15.8	4.8	6.5	3.2	0.4	6.5	4.8
	1987	6.0	16.0	4.9	6.6	3.2	0.5	6.4	4.8
in Asia	1970	-	-	1.2	0.5	0.5	0.1	2.0	1.2
	1985	2.8	1.6	1.3	1.8	0.3	0.4	3.6	2.2
	1986	3.4	1.7	1.3	2.0	0.3	0.3	3.6	2.2
	1987	3.4	1.7	1.3	2.0	0.3	0.3	3.6	2.2
Developing countries	1970	94.6	64.9	31.9	62.8	17.9	19.4	15.1	16.6
	1985	76.4	54.0	28.1	46.3	24.1	17.8	27.3	25.3
	1986	74.4	55.5	29.2	46.4	24.2	16.9	28.5	25.8
	1987	74.2	54.8	28.5	45.9	24.4	16.9	27.7	25.1

Table 3 (continued)

Country group	Year	Goods loaded				Goods unloaded			
		Petroleum		Dry cargo	Total all goods	Petroleum		Dry cargo	Total all goods
		Crude	Products			Crude	Products		
		(Percentage share of trade by groups of countries)							
of which:									
in Africa	1970	25.5	2.4	9.1	15.2	1.7	4.7	3.6	2.9
	1985	22.3	8.7	4.9	10.8	6.1	2.6	4.7	5.0
	1986	21.8	8.1	5.0	10.6	5.9	2.3	4.6	4.7
in America	1970	12.2	35.4	13.8	16.0	10.5	5.6	4.4	7.2
	1985	12.2	11.8	13.5	12.9	5.9	4.4	4.4	4.9
	1986	11.7	12.2	13.8	13.0	5.5	4.1	4.4	4.7
in Asia	1970	56.9	27.0	8.1	31.3	5.5	8.5	6.7	6.4
	1985	41.9	33.1	9.0	22.2	11.4	9.6	17.2	14.5
	1986	40.9	34.8	9.6	22.4	12.1	9.4	18.5	15.5
in Europe	1970	-	-	-	-	-	0.1	0.1	-
	1985	-	0.2	0.3	0.2	0.7	0.6	0.8	0.8
	1986	-	0.2	0.3	0.2	0.7	0.5	0.8	0.8
in Oceania	1970	-	0.1	0.8	0.4	-	0.5	0.3	0.2
	1985	-	0.1	0.4	0.2	-	0.6	0.2	0.1
	1986	-	0.1	0.4	0.2	-	0.5	0.2	0.1

Source: Based on statistics provided by the United Nations Statistical Office and the UNCTAD data bank.

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. At the time of publication, figures for 1987 were available only as shown in the table.

b/ See annex I for the composition of these groups. (See note 2 to that annex regarding the recording of trade of land-locked countries.)

c/ 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.

Chapter II

DEVELOPMENT OF THE WORLD FLEET

A. Size and ownership of the world fleet

6. A summary of the world merchant fleet by country groupings for the years 1970, 1986 and 1987 is shown in table 4. The declining trend in the size of the world fleet, which started in 1983, has continued. At mid-year 1987, the total deadweight tonnage of the world merchant fleet was 632.3 million tons (as compared to a peak of 693.5 million dwt in 1982). This represents a 6.8 million dwt or 1.1 per cent decline from the previous year's figure. However, the overall decrease since the peak of 1982 has been 61.2 million dwt or 8.8 per cent.

7. The declining trend in the size of the world merchant fleet derived mostly from the scrapping of uneconomic tonnage. Tonnage broken up between mid-1986 and mid-1987 amounted to 27.7 million dwt 1/ (including ships sold for breaking and ship losses). However, it should be noted that the amount of demolished tonnage was 38.8 per cent less than for the period mid-1985 to mid-1986.

8. Ownership of the world merchant fleet remains concentrated largely in the developed market-economy countries and open-registry countries, with 34.2 per cent and 33.9 per cent of the world merchant fleet respectively. The share of developing countries increased to 20.9 per cent in 1987 from 19.9 per cent in 1986. It should be noted, however, that a certain amount of this tonnage relates to vessels bareboat chartered in - rather than effectively owned in - the developing countries concerned. Socialist countries of Eastern Europe and Asia owned 9.9 per cent of the world merchant fleet, with 6.8 per cent owned by socialist countries of Eastern Europe.

9. As shown in table 5, between mid-1986 and mid-1987 the open-registry countries' fleet showed the most noticeable increase for the period 1980-1987. It grew by 13.4 million dwt, or by 6.7 per cent as compared with the mid-1986 figures. Total tonnage under open registries (214.5 million dwt) now approximately equals that registered in developed market-economy countries (216.2 million dwt).

10. This increase of tonnage of the open-registry fleet should be mainly attributed to the growth of tonnage under the flags of Cyprus (+45.2 per cent), the Bahamas (+48.1 per cent) and Bermuda (+72.2 per cent). The share of these three countries in the total tonnage of the open-registry fleet increased to 12.7 per cent, 7.3 per cent and 1.5 per cent respectively in 1987. The amount of tonnage registered in Liberia continued to decline, although Liberia remained the most important open-registry country. In 1987 Liberian-registered tonnage decreased by 3.6 per million dwt and the share of Liberia in the open-registry fleet stood at 45.7 per cent, against 50.5 per cent in mid-1986. In spite of a 3 per cent growth of its tonnage between mid-1986 and mid-1987, the share of Panama in the open-registry fleet decreased slightly to 32.8 per cent against 34.0 per cent a year before.

Table 4

Distribution of world tonnage (grt and dwt) by groups a/ of countries of registration, 1970, 1986 and 1987
(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	1986	1987	1970	1986	1987	1970-1987 (average)	1986-1987
World total	217.9 (100.0)	399.0 (100.0)	397.7 (100.0)	326.1 (100.0)	639.1 (100.0)	632.3 (100.0)	19.6	-6.8
Developed market-economy countries	141.8 (65.1)	156.0 (39.1)	140.5 (35.3)	209.7 (65.0)	243.8 (38.1)	216.2 (34.2)	2.1	-27.6
Open-registry countries	40.9 (18.8)	111.8 (28.0)	121.3 (30.5)	70.3 (21.6)	201.1 (31.5)	214.5 (33.9)	8.2	13.4
Total 2 & 3	182.0 (83.9)	267.8 (67.1)	261.8 (65.8)	282.2 (86.6)	444.9 (69.6)	430.7 (68.1)	10.2	-14.2
Socialist countries of Eastern Europe and Asia	19.5 (8.9)	47.2 (11.8)	48.4 (12.2)	21.7 (6.6)	60.7 (9.5)	62.4 (9.9)	2.4	1.7
Of which:								
in Eastern Europe	18.6 (8.5)	34.9 (8.7)	35.3 (8.9)	22.7 (6.2)	42.1 (6.6)	42.8 (6.8)	1.2	0.7
in Asia	0.9 (0.4)	12.3 (3.1)	13.1 (3.3)	1.2 (0.4)	18.6 (2.9)	19.6 (3.1)	1.1	1.0
Developing countries c/	14.5 (6.7)	79.8 (20.0)	83.0 (20.9)	20.5 (6.3)	127.0 (19.9)	132.3 (20.9)	6.7	5.3
Of which:								
in Africa	0.8	5.4	5.3	1.1	7.5	7.3	0.4	-0.2
in America	6.4	16.9	16.3	8.7	25.9	24.7	1.1	-1.2
in Asia	7.3	52.2	55.8	10.7	85.1	91.3	4.7	6.2
in Europe c/	-	4.9	4.9	2.2	7.9	7.8	0.4	-0.1
in Oceania	-	0.3	0.7	-	0.5	1.2	-	0.7
Other, unallocated	1.2 (0.5)	4.3 (1.1)	4.5 (1.1)	1.7 (0.5)	6.6 (1.0)	6.9 (1.1)	0.3	0.3

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 1987 amounted respectively to 2.6, 1.4 and 1.8 million grt.

b/ Percentage shares are shown in brackets.

c/ Including Yugoslavia, classified as from 1986 as a developing country in Europe.

Table 5

Distribution of tonnage of open-registry fleets by open-registry countries (grt and dwt), 1982-1987
(Mid-year figures)

	Tonnage and percentage shares (shown in brackets)											
	In grt (millions)						In dwt (millions)					
	1982	1983	1984	1985	1986	1987	1982	1983	1984	1985	1986	1987
Open-registry countries Total	106.4 (100)	107.3 (100)	110.0 (100)	112.0 (100)	111.7 (100)	121.2 (100)	198.7 (100)	199.8 (100)	202.2 (100)	203.4 (100)	201.1 (100)	214.5 (100)
Liberia	70.7 (66.4)	67.6 (63.0)	62.0 (56.4)	58.2 (52.0)	52.6 (47.1)	51.4 (42.4)	139.2 (70.1)	133.2 (66.7)	121.4 (60.0)	113.5 (55.8)	101.6 (50.5)	98.0 (45.7)
Panama	32.6 (30.6)	34.7 (32.4)	37.2 (33.8)	40.7 (36.3)	41.3 (37.0)	43.2 (35.6)	54.8 (27.6)	58.3 (29.2)	62.0 (30.7)	67.3 (33.1)	68.3 (34.0)	70.4 (32.8)
Cyprus	2.2 (2.1)	3.4 (3.2)	6.7 (6.2)	8.2 (7.3)	10.6 (9.5)	15.6 (12.9)	3.4 (1.7)	5.8 (2.9)	11.8 (5.9)	14.3 (7.0)	18.8 (9.3)	27.3 (12.7)
Bahamas	0.4 (0.4)	0.8 (0.7)	3.2 (2.9)	3.9 (3.5)	6.0 (5.4)	9.1 (7.5)	0.6 (0.3)	1.2 (0.6)	5.7 (2.8)	6.9 (3.4)	10.6 (5.3)	15.7 (7.3)
Bermuda	0.5 (0.5)	0.8 (0.7)	0.8 (0.7)	1.0 (0.9)	1.2 (1.0)	1.9 (1.6)	0.7 (0.3)	1.3 (0.6)	1.3 (0.6)	1.4 (0.7)	1.8 (0.9)	3.1 (1.5)

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.

11. The main trends in the development of open-registry fleets over a longer period, as well as the beneficial ownership and true management of open-registry fleets as at 1 July 1987, are considered in the UNCTAD secretariat report TD/B/C.4/309/Add.1. This report indicates inter alia that beneficial ownership and true management of open-registry fleets continued to be largely concentrated in a relatively small number of developed market-economy countries. This is shown in tables 6 and 7 which provide more precise details of the linkage between open-registry fleets and developed market-economy countries as at mid-1987. As in past years, the control and beneficial ownership of the open-registry fleet were dominated by three countries and one territory (Greece, the United States of America, Japan and Hong Kong) which together are true managers of 60.6 per cent and beneficial owners of 67.5 per cent of the world deadweight tonnage of the open-registry fleet. The concentration continued to be highest in the tanker sector, as beneficial ownership located in the above-mentioned three countries and Hong Kong accounted for 82.1 per cent of the world tanker fleet under open-registry flags.

12. The phenomenon of "flagging-out" from traditional maritime countries has been an important feature of world shipping during the last decade. During more recent years, in addition to the open-registry oountries shown in table 5, a number of other countries have taken or intensified measures to attract ships to their national 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). Thus, new classifications and terminology are emerging such as "traditional", "captive", or "off-shore" and "new" open registers. The general 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 to the manning of vessels by non-nationals) which are largely designed to attract foreign-owned tonnage or re-attract flagged-out ships owned by nationals.

B. Types of vessel

13. The composition of the world merchant fleet by principal types of vessel at mid-year 1985, 1986 and 1987, as well as the percentage changes between 1986 and 1987, are shown in table 8. As in previous years, four types of vessel - i.e. oil tankers, bulk and combined carriers, general cargo and unitized ships - constituted the main part of the world fleet in 1987. Their combined deadweight amounted to 604.1 million tons, which represents 94.3 per cent of the world fleet. Thus, the share of these four types of vessel in the world merchant fleet remained at the level of 1986.

14. The distribution of world tonnage by country groups and by types of vessels, as given in table 9, shows that the developed market-economy countries continued to own the largest share of such types of vessels as containerships, including lighter carriers and general cargo ships (55.4 per cent and 26.9 per cent of the world fleet respectively). They also own 37.9 per cent of the world tanker fleet and 30.1 per cent of ore and bulk carriers, including combined carriers. During the last year the share of the open-registry fleet in all types of vessels grew considerably; 40.5 per cent of the world tanker fleet, 34.8 per cent of the world ore and bulk carrier fleet (including combined carriers), 22.9 per cent of general cargo ships and 19.2 per cent of container ships and lighter carriers are now under

Table 6

True management a/ of open-registry fleets, 1987

(Number of vessels and thousands of dwt)

Country or territory of registration / Country or territory of true management	Liberia		Panama		Cyprus		Bahamas		Bermuda		TOTAL	
	Number	DWT	Number	DWT	Number	DWT	Number	DWT	Number	DWT	Number	DWT
United States of America	303	27 151	227	4 542	6	86	37	4 262	2	98	575	36 139
Japan	173	8 919	1 365	25 083	20	166	21	425	-	-	1 579	34 593
Hong Kong	334	20 986	470	10 418	13	972	3	182	1	55	821	32 613
Greece	108	8 484	320	5 850	608	12 623	17	823	-	-	1 053	27 780
United Kingdom-based Greek shipowners	63	4 063	37	1 826	100	7 550	19	1 749	-	-	219	15 188
Norway	178	8 241	99	3 571	8	50	45	2 049	10	265	340	14 176
United Kingdom	47	2 394	90	1 520	21	560	69	1 102	60	2 622	287	8 198
Germany, Federal Republic of	99	3 369	118	2 104	177	1 571	5	13	1	6	400	7 063
Monaco	36	2 699	31	1 237	1	38	5	43	-	-	73	4 017
Switzerland	26	1 624	83	904	14	238	16	504	-	-	139	3 270
Taiwan, Province of China	15	345	116	1 849	2	309	-	-	-	-	133	2 503
Republic of Korea	9	785	73	1 702	-	-	-	-	-		82	2 487
Singapore	9	344	127	990	1	2	17	633	-	-	154	1 969
Netherlands	26	883	45	677	40	289	24	30	-	-	135	1 879
Finland	-	-	1	4	15	314	35	1 452	-	-	51	1 770
France	4	616	23	511	1	1	9	639	-	-	37	1 767
Bermuda	15	1 573	1	7	2	10	1	4	4	20	23	1 614
Panama	-	-	18	1 559	-	-	-	-	-	-	18	1 559
Sweden	3	342	19	149	-	-	14	1 060	-	-	36	1 551
Israel	13	862	4	157	1	15	-	-	-	-	18	1 034
72 countries, entities or territories, each managing less than 1 million dwt	100	4 013	403	3 597	144	1 664	55	746	11	61	713	10 081
Unidentified	15	1 230	209	2 829	54	1 064	4	7	1	1	283	5 131
TOTAL	1 576	98 923	3 879	71 086	1 228	27 522	396	15 723	90	3 128	7 169	216 382

Source: Based on data supplied to the UNCTAD secretariat by A. & P. Appledore Ltd.

a/ The "true manager" is the person, company or organization responsible for day-to-day husbandry of the ship concerned (as distinct from the manager of the company nominally owning the vessel). The country of management has been assumed to be the country of domicile of the true manager.

Table 7

Beneficial ownership a/ of open-registry fleets, 1987
(Number of vessels and thousands of dwt)

Country or territory of registration / Country or territory of beneficial ownership	Liberia		Panama		Cyprus		Bahamas		Bermuda		TOTAL	
	Number	DWT	Number	DWT	Number	DWT	Number	DWT	Number	DWT	Number	DWT
Greece	187	14 024	377	8 333	709	20 161	38	2 637	-	-	1 311	45 155
United States of America	286	27 537	234	6 088	6	86	39	4 275	4	1 014	569	39 000
Japan	161	7 880	1 388	25 323	21	185	21	425	-	-	1 591	33 813
Hong Kong	304	19 227	377	7 853	12	874	2	122	1	55	696	28 131
Norway	220	11 015	103	3 581	8	50	44	1 763	10	265	385	16 674
Germany, Federal Republic of	102	3 432	121	2 132	196	1 751	5	13	3	12	427	7 340
United Kingdom	27	968	99	1 377	21	653	61	1 344	49	1 334	257	5 676
Switzerland	26	1 624	78	905	14	238	17	536	-	-	135	3 303
Taiwan, Province of China	15	345	116	1 849	2	309	-	-	-	-	133	2 503
Republic of Korea	9	785	73	1 702	-	-	-	-	-	-	82	2 487
China b/	5	171	61	2 213	-	-	-	-	-	-	66	2 384
Singapore	11	567	109	819	1	2	11	618	-	-	132	2 006
Netherlands	32	1 022	43	669	41	275	30	38	-	-	146	2 004
Monaco	26	1 160	21	703	1	38	5	43	-	-	53	1 944
Finland	-	-	1	4	15	314	35	1 452	-	-	51	1 770
France	4	616	24	512	1	1	9	639	-	-	38	1 768
Sweden	4	352	21	160	-	-	17	1 077	-	-	42	1 589
Brazil	9	1 354	2	3	-	-	-	-	-	-	11	1 357
Israel	18	1 144	6	164	2	17	-	-	-	-	26	1 325
72 countries, entities or territories, each beneficially owning less than 1 million dwt	115	4 470	416	3 867	124	1 504	58	734	22	447	735	11 022
Unidentified	15	1 230	209	2 829	54	1 064	4	7	1	1	283	5 131
TOTAL	1 576	98 923	3 879	71 086	1 228	27 522	396	15 723	90	3 128	7 169	216 382
Share in total open-registry fleets	22.0	45.7	54.1	32.9	17.1	12.7	5.5	7.3	1.3	1.4	100.0	100.0

Source: Based on data supplied to the UNCTAD secretariat by A. & P. Appledore Ltd.

a/ The beneficial owner is the person, company or organization which gains the pecuniary benefits from the shipping operations.

b/ The Government of China has indicated that many of the vessels attributed to China were chartered ships, being operated by the China Ocean Shipping Company.

Table 8

Analysis of the world fleet by principal types of vessel, 1985-1987 a/
(Thousands of dwt) b/

Principal types	1985	1986	1987	Percentage change 1986/1987
Oil tankers	268 355 (39.8)	247 523 (38.2)	245 492 (38.3)	- 0.8
Liquified gas carriers	10 249 (1.5)	10 117 (1.6)	10 039 (1.6)	- 0.8
Chemical carriers	5 832 (0.9)	6 065 (0.9)	5 927 (0.9)	- 2.3
Miscellaneous tankers	431 (-)	405 (0.1)	398 (0.1)0	- 1.7
Bulk/oil carriers (inc. ore/oil carriers)	45 024 (6.7)	40 303 (6.2)	38 611 (6.0)	- 4.2
Ore and bulk carriers	192 288 (28.5)	194 892 (30.1)	193 191 (30.1)	- 0.9
General cargo (inc. passenger cargo)	108 329 (16.1)	103 578 (16.0)	100 565 (15.7)	- 3.0
Containerships (fully cellular) and lighter carriers	19 939 (3.0)	21 524 (3.3)	23 078 (3.6)	+ 7.2
Vehicle carriers	3 339 (0.5)	3 387 (0.5)	3 200 (0.5)	- 5.5
Fish factories and carriers, and fishing (inc. factory trawlers)	7 995 (1.2)	8 118 (1.3)	8 183 (1.3)	+ 0.8
Ferries and passenger vessels	2 622 (0.4)	2 687 (0.4)	2 758 (0.4)	+ 2.6
All other vessels	9 287 (1.4)	9 040 (1.4)	9 322 (1.5)	- 3.1
World total	673 692 (100.0)	647 639 (100.0)	640 764 (100.0)	- 1.1

Source: Shipping Information Services of Lloyd's Register of Shipping, and Lloyd's of London Press Limited, 1985-1987 (mid-year figures).

a/ The totals in this table are not 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.

Table 9

Percentage shares of world tonnage by type of vessel and groups of countries (as at 1 July), 1980, 1985, 1986 and 1987 a/

(In terms of dwt)

Country group	Year	Total dwt		Tankers	Ore and bulk carriers b/ including combined carriers	General cargo ships c/	Container ships and lighter carriers	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
	1985	664.8	100	39.3	34.9	15.9	3.0	6.9
	1986	639.1	100	37.5	36.0	15.8	3.4	7.3
	1987	632.3	100	37.4	36.0	15.4	3.6	7.6
				Percentage share by groups of countries				
Developed market-economy countries	1980	350.1	51.3	52.5	52.7	43.4	74.3	50.4
	1985	282.9	42.5	46.8	38.9	34.4	63.4	46.7
	1986	243.8	38.1	41.7	34.8	30.8	59.4	42.8
	1987	216.2	34.2	37.9	30.1	26.9	55.4	40.4
Open-registry countries	1980	212.5	31.1	36.2	31.7	20.8	13.5	17.0
	1985	203.4	30.6	35.5	32.8	20.3	13.0	23.1
	1986	201.1	31.5	38.2	31.9	20.7	14.6	25.6
	1987	214.5	33.9	40.5	34.8	22.9	19.2	27.2
Socialist countries of Eastern Europe and Asia	1980	48.7	5.5	2.8	4.2	12.3	2.9	19.2
	1985	58.5	8.8	4.4	7.3	20.8	5.5	15.2
	1986	60.6	9.5	4.5	8.2	22.1	6.8	15.3
	1987	62.4	9.9	4.8	8.6	23.2	6.5	14.9
of which:								
in Eastern Europe	1980	37.8	5.5	2.8	4.2	12.3	2.9	19.2
	1985	41.3	6.2	3.4	4.7	13.9	3.3	14.0
	1986	42.1	6.6	3.3	5.3	14.4	3.9	13.8
	1987	42.8	6.8	3.6	5.5	14.8	3.6	13.5
in Asia	1980	10.9	1.6	0.6	1.6	4.7	0.1	1.3
	1985	17.2	2.6	1.0	2.6	6.9	2.2	1.2
	1986	18.5	2.9	1.2	2.9	7.7	2.9	1.5
	1987	19.6	3.1	1.2	3.1	8.4	2.9	1.4
Developing countries d/	1980	68.4	10.0	7.7	9.2	17.6	7.6	12.0
	1985	113.4	17.1	12.9	19.4	24.0	12.1	15.0
	1986	127.0	19.9	15.2	23.5	25.8	13.0	16.2
	1987	132.3	20.9	16.4	24.8	26.5	12.0	17.8
of which:								
in Africa	1980	7.1	1.1	1.1	0.1	2.3	..	2.1
	1985	8.0	1.2	1.4	0.4	2.5	0.1	2.3
	1986	7.5	1.2	1.1	0.5	2.7	0.1	2.3
	1987	7.3	1.2	1.0	0.5	2.7	0.1	2.3

Table 9 (continued)

Country group	Year	Total dwt		Tankers	Ore and bulk carriers b/ including combined carriers	General cargo ships c/	Container ships and lighter carriers	Other ships
in America	1980	21.8	3.2	2.3	3.3	5.6	0.1	3.7
	1985	23.3	3.5	2.8	3.3	6.0	0.5	3.7
	1986	25.9	4.1	3.6	3.7	6.5	0.8	4.0
	1987	24.7	3.9	3.2	3.8	6.7	0.9	4.0
in Asia	1980	39.1	5.7	4.3	5.7	9.8	2.7	5.7
	1985	78.6	11.8	8.5	15.0	14.4	11.5	8.9
	1986	85.1	13.3	9.8	17.6	13.9	11.8	9.7
	1987	91.3	14.4	11.5	18.7	14.1	10.6	11.2
in Europe	1980	1.2	..	..	..	0.1	-	-
d/	1985	3.0	0.5	0.2	0.6	0.9	-	..
	1986	7.9	1.2	0.7	1.6	2.5	0.3	0.1
	1987	7.8	1.2	0.5	1.7	2.7	0.4	0.2
in Oceania	1980	0.2	..	..	..	0.1	-	-
	1985	0.4	0.1	..	0.1	0.2	-	0.1
	1986	0.5	0.1	..	0.1	0.2	-	0.1
	1987	1.2	0.2	0.2	0.2	0.3	-	0.1
Other, unallocated	1980	3.0	0.5	0.2	0.6	0.9	1.6	0.1
	1985	6.7	1.0	0.4	1.6	0.6	5.9	0.1
	1986	6.6	1.0	0.4	1.6	0.6	6.2	0.1
	1987	6.9	1.1	0.4	1.7	0.5	6.9	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 passenger cargo vessels.

d/ Including Yugoslavia as of 1986.

open-registry flags. Thus, developed market-economy countries and open-registry countries combined accounted for 78.4 per cent of the world tanker fleet, 64.9 per cent of the ore and bulk carriers fleet (including combined carriers), 49.8 per cent of the world general cargo fleet, and 74.6 per cent of the world container fleet (including lighter carriers).

15. Since mid-1986 the share of developing countries in the world bulk and combined carriers fleet has increased to 24.8 per cent and in the world general cargo fleet to 26.5 per cent. However, their share in the world tanker fleet has remained relatively small, i.e. 16.4 per cent. The developing countries' share in the world fleet of containerships decreased slightly to 12.0 per cent in 1987. At mid-1987, socialist countries of Eastern Europe and Asia owned 23.2 per cent of the world general cargo fleet, 4.8 per cent of the tanker fleet, 8.6 per cent of bulk carriers, including combined carriers, and 6.5 per cent of the world container fleet.

16. The share of developing countries (including Yugoslavia as of 1986) in the total fleet increased from 19.9 per cent in 1986 to 20.9 per cent in 1987 and amounted to 132.3 million dwt. However, the distribution of this fleet among the developing countries remained unbalanced. Ten countries or territories 2/ represented 92.9 million dwt or 70.2 per cent of the aggregated deadweight owned by developing countries, while the next 10 most important developing countries 3/ owned a further 14.8 per cent.

17. Table 9 indicates that there were no significant changes in the composition of the world fleet in the period 1986-1987. The share of tankers and general cargo ships decreased slightly (to 37.4 per cent and 15.4 per cent of the world fleet respectively), while the share of containerships and lighter carriers increased to 3.6 per cent. The share of ore and bulk carriers, including combined carriers, remained unchanged at the level of 36.0 per cent.

18. The distribution of the world container fleet and its TEU capacity at mid-1987 is shown in table 10. The total number of containerships increased from 1,023 in 1986 to 1,052 in 1987 (+2.8 per cent) and their TEU capacity rose from 1,087,775 to 1,215,215 (+11.7 per cent). The world container fleet remained concentrated in the developed market-economy countries, which owned 45.7 per cent of the number of ships and 54.7 per cent of their TEU capacity. Open-registry countries represented 21.6 per cent and 19.7 per cent of the number of ships and world TEU capacity respectively. It should be noted that the TEU capacity of the container fleet under the flags of open-registry countries increased from mid-1986 to mid-1987 by 48.1 per cent or by 77,632 TEU. Thus, developed market-economy countries and open-registry countries combined owned 67.3 per cent of the number of ships and 74.4 per cent of their TEU capacity, as compared to 68.0 per cent and 73.5 per cent in mid-1986.

19. During the period from mid-1986 to mid-1987 the number of containerships in developing countries decreased by 3 (-1.7 per cent), while their TEU capacity increased by 4,256 (+2.9 per cent). However, during the period in question the share of developing countries in the world TEU capacity declined to 12.5 per cent, which is the lowest level since 1982. It may be noted that 89.9 per cent of the total TEU capacity of containerships owned by developing countries was concentrated in developing countries of Asia. The TEU capacity of the container fleet of socialist countries of Eastern Europe decreased by

Table 10

Distribution of the world fleet and TEU capacity of fully cellular containerships by groups of countries, at mid-year 1985, 1986 and 1987

Flags of registration by groups of countries	Number of ships			TEU capacity and percentage shares a/		
	1985	1986	1987	1985	1986	1987
1 World total	970	1 023	1 052	942 222 (100.0)	1 087 775 (100.0)	1 215 215 (100.0)
2 Developed market-economy countries	516	503	481	577 915 (61.3)	638 068 (58.7)	664 760 (54.7)
3 Open-registry countries	176	193	227	122 290 (13.0)	161 399 (14.8)	239 031 (19.7)
Total, 2 and 3	692	696	708	700 205 (74.3)	799 467 (73.5)	903 791 (74.4)
4 Socialist countries of Eastern Europe and Asia	75	96	106	47 963 (5.1)	63 144 (5.8)	65 791 (5.3)
of which						
in Eastern Europe	48	59	65	25 674 (2.7)	33 078 (3.0)	32 124 (2.6)
in Asia	27	37	41	22 289 (2.4)	30 066 (2.8)	32 967 (2.7)
5 Developing countries	156	177	174	123 600 (13.1)	146 813 (13.5)	151 069 (12.5)
of which						
in Africa	3	3	3	585 (0.1)	585 (-)	585 (-)
in America	16	23	24	3 873 (0.4)	7 279 (0.7)	10 701 (0.9)
in Asia	137	146	140	119 142 (12.6)	135 792 (12.5)	134 820 (11.2)
in Europe	-	5	7	-	3 157 (0.3)	3 953 (0.3)
in Oceania	-	-	-	-	-	-
6 Other, unallocated	47	54	64	70 454 (7.5)	78 351 (7.2)	95 274 (7.8)

Source: Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.

a/ Percentage shares are shown in brackets.

2.8 per cent as compared with mid-1986 and their share of world TEU capacity decreased to 2.6 per cent. The share of socialist countries in Asia also showed some decrease, amounting to 2.7 per cent as at mid-1987.

20. Table 11 gives the latest available figures on world container port traffic in developing countries and territories for 1986. The world rate of growth for 1985/1986 was 6.5 per cent, which is more than that achieved for 1984/1985 (4.6 per cent). The rate of growth for developing countries and territories was almost two times more than that of the world total, reaching 12.2 per cent in the period 1985/1986; it also showed a strong recovery from the weak 3 per cent reached in the period 1984/1985. The growth is unevenly spread and frequently erratic from year to year, due in some cases to lack of reliable information and in other cases to violent fluctuations in the trade.

C. Age distribution of the world merchant fleet

21. The age distribution of the world merchant fleet by type of vessel and country grouping (in terms of dwt) in mid-1987 is presented in table 12. The average age of all ships increased slightly in 1987 to 11.70 years as compared to 11.37 in 1986. The most significant increase in average age (+3.7 per cent) was shown by tankers (12.05 as compared to 11.62). Dry bulk carriers continued to be the youngest type of vessel (10.66 years) and general cargo ships the oldest (13.68 years). By country groupings, developed market-economy countries showed the lowest average age of ships (11.16 years), followed by developing countries (11.72 years), open-registry countries (11.76 years) and socialist countries (13.55 years).

D. Comparison of cargo turnover and fleet ownership

22. The relationship between cargo volumes generated by different groups of countries and fleet ownership is represented in table 13. The data demonstrate the fact that developed market-economy countries, either directly or indirectly through open-registry countries, continue to own a disproportionate share of the world merchant fleet compared to total world cargo turnover. Thus, in 1987 these two country groups combined generated 57.4 per cent of the world's international seaborne trade but owned 68.1 per cent of the world's merchant fleet (in terms of deadweight tonnage). At the same time, the share of developing countries in goods loaded and unloaded in world seaborne trade in 1987 was 34.8 per cent, while their merchant fleet represented 20.9 per cent of total world deadweight fleet. The share of the socialist countries of Eastern Europe and Asia in world international trade was slightly less than their share of the world's deadweight tonnage.

Table 11

Container port traffic of developing countries and territories
1985 and 1986

Country or territory	Container traffic 1986 (TEUs)	Container traffic 1985 (TEUs)	Percentage change 1985/1986	Percentage change 1984/1985
Hong Kong	2 774 025	2 288 953	21.2	8.5
Singapore	2 203 100	1 698 800	29.7	9.4
Republic of Korea a/	1 448 225	1 278 538	13.3	8.5
United Arab Emirates	920 391	711 652	29.3	18.7
Saudi Arabia	823 906	946 916	-13.0	-19.5
Philippines	741 782	638 471	16.1	-
Brazil	602 539	611 178	-1.5	11.4
Thailand	511 264	400 419	27.7	17.4
India	429 415	422 229	1.7	29.2
Malaysia	401 880	389 279	3.2	7.4
Sri Lanka	341 358	215 877	58.1	18.9
Pakistan	292 168	244 086	19.7	52.6
Jamaica	274 206	232 386	18.0	56.1
Indonesia	210 331	228 619	-8.0	4.2
Cyprus	206 891	197 256	4.9	-26.2
Kuwait	200 599	235 793	-15.0	-6.5
Egypt	179 636	176 386	1.8	-5.0
Panama	167 217	140 714	18.8	5.3
Côte d'Ivoire	159 316	162 522	-1.9	7.4
Dominican Republic	137 909	96 617	42.7	-7.8
Jordan	121 614	108 891	11.7	6.2
Mexico	120 109	130 584	-8.0	-61.0
Argentina a/	120 000	121 336	-1.0	-9.0
Kenya	119 853	103 362	15.6	11.8
Chile	116 977	102 326	14.3	-3.0
Oman	112 735	113 565	-	24.1
Costa Rica	112 264	98 213	14.3	-39.2
Nigeria	110 746	180 177	-38.5	7.4
Venezuela	105 874	111 294	-4.9	-4.5
Cameroon	102 373	97 021	5.5	9.3
Bahrain	89 519	104 081	-14.0	-6.9
Papua New Guinea	81 251	76 450	6.3	13.2
Guadeloupe	79 898	73 251	9.0	1.8
Guatemala	75 200	63 683	18.1	34.3
Trinidad and Tobago	74 262	78 195	-5.0	8.1
Ecuador	72 414	65 687	10.2	26.2
Morocco	71 924	65 911	9.1	10.0
Syrian Arab Republic	64 568	84 727	-23.8	66.9
Peru	56 674	50 574	12.1	13.0
Netherlands Antilles	54 634	48 663	12.3	-6.3
United Republic of Tanzania	47 186	42 592	10.8	26.1
Algeria	47 086	50 409	-6.6	-13.1
Colombia a/	46 109	63 336	-27.2	12.7
Togo	42 950	41 803	2.7	15.1
Haiti	42 765	40 294	6.1	8.8

Table 11 (continued)

Country or territory	Container Traffic 1986 (TEUs)	Container Traffic 1985 (TEUs)	Percentage Change 1985/1986	Percentage Change 1984/1985
Zaire	40 733	36 994	10.1	n.a.
Mauritius	38 000	31 976	18.8	n.a.
Uruguay	34 942	23 444	49.0	n.a.
Barbados	30 713	30 852	-	11.4
Other reported b/	383 723	376 873	1.8	-6.0
Total reported c/	15 643 254	13 933 255	12.2	3.0
World total reported	59 413 875	55 789 410	6.5	4.6

Source: Derived from information presented in Containerisation International Yearbooks of 1987 and 1988.

a/ Data subject to omissions.

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

c/ Certain ports did not respond to the background survey, although they were not among the largest ports; the total omission may be estimated at 5-10 per cent.

Table 12

Age distribution of the world merchant fleet by type of vessel as at 1 July 1987
(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/ July 1987	Average age (years) a/ July 1986
World total	All ships	100	17.5	19.7	38.4	24.4	11.70	11.37
	Tankers	100	9.6	15.8	56.6	18.0	12.05	11.62
	Bulk carriers b/	100	26.1	20.9	29.8	23.2	10.66	10.43
	General cargo	100	13.0	22.4	23.6	41.0	13.68	13.40
Developed market-economy countries	All ships	100	19.0	22.4	36.8	21.8	11.16	10.95
	Tankers	100	11.0	18.6	52.4	18.0	11.77	11.55
	Bulk carriers b/	100	27.0	22.6	30.9	19.5	10.12	10.12
	General oargo	100	19.2	27.7	18.5	34.6	12.15	11.86
Open-registry countries	All ships	100	15.6	16.3	46.7	21.4	11.76	11.31
	Tankers	100	7.7	13.0	63.8	15.5	12.13	11.43
	Bulk carriers b/	100	23.8	18.3	32.4	25.5	11.25	10.87
	General cargo	100	13.9	21.7	31.6	32.8	12.80	12.86
Subtotal	All ships	100	17.3	19.5	41.6	21.6	11.45	11.12
	Tankers	100	9.3	15.7	58.3	16.7	11.95	11.49
	Bulk carriers b/	100	25.4	20.4	31.7	22.5	10.69	10.47
	General cargo	100	16.9	25.2	24.1	33.8	12.43	12.23
Socialist countries of Eastern Europe and Asia	All ships	100	14.8	20.3	24.4	40.5	13.55	13.32
	Tankers	100	11.8	21.2	31.8	35.2	13.28	13.42
	Bulk carriers b/	100	20.7	25.5	27.4	26.4	11.29	10.66
	General cargo	100	9.5	15.5	20.4	54.6	15.73	15.59
Developing countries (excluding open-registry countries)	All ships	100	18.3	20.4	35.6	25.7	11.72	11.42
	Tankers	100	9.9	13.9	56.9	19.3	12.24	11.75
	Bulk carriers b/	100	29.3	21.3	26.9	22.5	10.25	10.15
	General cargo	100	7.9	23.0	25.7	43.4	14.40	13.95

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

b/ Including combined carriers.

Table 13

Comparison between total cargo turnover and fleet ownership by groups of countries, 1970 and 1985-1987
(In terms of dwt)

Country grouping	Year	Goods loaded and unloaded (millions of tons) Loaded	Goods loaded and unloaded (millions of tons) Unloaded	Total of goods loaded and unloaded (millions of tons)	Deadweight tonnage of merchant fleet (millions of tons)	Percentage of world total of goods loaded and unloaded	Percentage of world total of 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
	1985	1 571.2	2 331.9	3 903.1	486.3	57.3	73.1
	1986	1 585.2	2 382.1	3 967.3	444.9	56.6	69.6
	1987	1 624.8	2 444.2	4 069.0	430.7	57.4	68.1
Socialist countries of Eastern Europe and Asia	1970	158.8	87.6	264.4	21.7	4.8	6.7
	1985	273.2	237.4	510.6	58.5	7.5	8.8
	1986	293.2	245.8	539.0	60.6	7.7	9.5
	1987	301.4	251.0	552.4	62.4	7.8	9.9
Developing countries	1970	1 643.3	431.6	2 074.9	20.5	40.4	6.3
	1985	1 538.0	855.7	2 393.7	113.4	35.2	17.1
	1986	1 599.6	902.6	2 502.2	127.0	35.7	19.9
	1987	1 578.8	890.0	2 469.0	132.4	34.8	20.9
World total a/	1970	2 604.8	2 529.6	5 134.4	326.1	100.0	100.0
	1985	3 382.3	3 425.0	6 807.3	664.8	100.0	100.0
	1986	3 478.0	3 530.5	7 008.5	639.1	100.0	100.0
	1987	3 505.0	3 585.2	7 090.2	632.3	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 PROBLEM OF TONNAGE OVERSUPPLY

A. Estimates of tons and ton-miles per dwt

23. Both main indicators (ton-miles performed per dwt and tons carried per dwt) estimated for the total world fleet as presented in table 14 show some increase in the productivity of the fleet in 1987 as compared to 1986. Tons of cargo carried per dwt amounted to 5.54 in 1987 (as compared to 5.44 in 1986) and ton-miles performed per dwt amounted to 22.08 (as compared to 21.68 in 1986).

Table 14

Cargo tonnage carried and ton-miles performed per dwt of the total world fleet, 1970 and 1976-1987

Year	World fleet (millions of dwt)	Total cargo carried (millions of tons)	Total ton-miles performed (thousands of millions of ton-miles)	Tons of cargo carried per dwt	Ton-miles performed per dwt (thousands)
1970	326.1	2 605	10 654	7.99	32.67
1976	601.2	3 391	17 053	5.64	28.36
1977	642.3	3 453	17 476	5.38	27.21
1978	662.8	3 461	17 022	5.22	25.68
1979	673.7	3 778	17 675	5.61	26.24
1980	682.8	3 704	16 777	5.42	24.47
1981	688.8	3 555	15 840	5.16	22.99
1982	693.5	3 273	13 699	4.72	20.46
1983	686.0	3 230	12 850	4.70	18.34
1984	674.5	3 364	13 368	4.99	19.82
1985	664.8	3 330	13 160	5.01	19.80
1986	639.1	3 478	13 856	5.44	21.68
1987	632.3	3 505 a/	13 964	5.54	22.08

Sources: World fleet: Lloyd's Register of Shipping: Statistical Tables (London), various issues (mid-year figures); total cargo carried: UNCTAD data bank; ton-miles: Fearnleys, Review (Oslo), various issues.

a/ Preliminary estimates.

24. The above-mentioned productivity indicators (ton-miles performed per dwt and tons carried per dwt) estimated for individual types of carriers for 1976-1987, as shown in tables 15 and 16, demonstrate a considerable improvement of productivity for combined carriers in 1987 as compared with the previous year. Productivity of tankers and dry bulk carriers also increased, although not so significantly. This development may be largely attributed to a general - although only slight - increase in world seaborne trade in 1987, combined with an improvement in ocean freight and charter rates, as well as some improvement in the overall supply/demand relation in world shipping.

B. Estimates of tonnage oversupply

25. The supply/demand disequilibrium remained a serious problem facing the world shipping industry in 1987. Table 17 shows the development of surplus tonnage in world shipping as from 1970. The steady increase of surplus tonnage 4/ during the early 1980s reached its peak in 1983 when the average year figure of surplus tonnage amounted to 195.8 million dwt or 28.5 per cent of the total world merchant fleet and 39.9 per cent of the world active fleet. Despite a certain decrease in the surplus tonnage during the last four years, the estimated average figure (eight month average) for the surplus fleet in 1987 amounted to 125.7 million dwt or 19.9 per cent of the total world merchant fleet as at 1 July 1987 (127.8 million dwt or 20.0 per cent in 1986) and 24.8 per cent of the active world merchant fleet (25.0 per cent in 1986). Thus, the improvement in the balance between supply and demand in 1987 was rather marginal as compared to 1986, although the outlook for the future now appears to allow for more optimism.

26. The imbalance between supply and demand of tonnage affects practically all sectors of world shipping. Tanker surplus tonnage in 1987 was estimated at 74.8 million dwt, while the surplus of dry bulk carriers (43.4 million dwt) and tankers combined represented 94.0 per cent of the surplus tonnage of the world merchant fleet (118.2 million dwt). For tanker tonnage, a considerable amount of estimated surplus tonnage is on account of slow steaming.

Table 15

Estimated productivity of tankers, bulk carriers, combined carriers a/ and the residual fleet, b/ 1970 and 1976-1987
(Ton-miles performed per dwt)

Year	Ton-miles of oil and grain by tankers (thousands of millions) c/	Ton-miles per dwt of tankers (thousands)	Ton-miles of dry bulk cargo by bulk carriers (thousands of millions)	Ton-miles per dwt of bulk carriers (thousands)	Ton-miles of oil and dry bulk cargo by combined carriers (thousands of millions)	Ton-miles per dwt of combined carriers (thousands)	Ton-miles of the residual fleet b/ (thousands of millions)	Ton-miles per dwt of the residual fleet (thousands)
1970	6 039	43.82	1 891	39.40	745	52.46	1 979	15.69
1976	10 335	33.71	2 917	29.11	1 660	36.64	2 141	14.36
1977	10 527	32.16	3 088	27.35	1 685	35.55	2 176	14.16
1978	9 950	30.16	3 387	27.76	1 524	31.36	2 161	13.31
1979	9 997	30.52	3 575	28.58	1 665	34.19	2 438	14.14
1980	9 007	27.56	2 009	14.47	1 569	32.43	4 192	24.83
1981	8 009	24.80	2 169	14.73	1 518	32.14	4 144	24.26
1982	5 893	18.40	2 422	15.66	1 310	28.92	3 874	22.35
1983	5 230	17.38	2 640	15.60	1 016	23.57	3 694	21.38
1984	5 305	18.93	3 041	17.07	1 187	28.13	3 835	22.05
1985	4 853	18.35	3 208	17.08	1 192	29.00	3 812	22.24
1986	5 426	22.67	3 717	18.82	944	26.52	3 769	22.61
1987	5 435	23.33	3 770	19.23	1 020	30.54	3 739	22.01

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

a/ As from 1980 the data cover bulk carriers and combined bulk carriers of over 40,000 dwt as against 18,000 dwt in the previous years. The change affects figures for the bulk carrier fleet and consequently the residual fleet, but the combined bulk fleet is not affected as the combined bulk fleet of size range 18,000 dwt-40,000 dwt forms only 0.3 per cent of the total combined bulk fleet.

b/ The "residual fleet" refers to all vessels included in table 4, excluding tankers, bulk carriers and combined bulk carriers of the size range indicated in footnote a/.

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

Table 16

Estimated productivity of tankers, bulk carriers, combined carriers and the residual fleet, a/ 1970 and 1976-1987
(Tons carried per dwt)

Year	Tons of oil and grain by tankers (millions)	Tons per dwt of tanker	Tons of dry bulk cargo by bulk carriers of over 18,000 dwt (millions)	Tons per dwt of bulk carriers	Tons of oil and dry bulk cargo by combined carriers of over 18,000 dwt (millions)	Tons per dwt of combined carriers	Tons carried by the residual fleet (millions)	Tons per dwt of the residual fleet
1970	1 182	8.58	403	8.40	97	6.83	800	6.34
1976	1 563	5.10	607	6.06	244	5.39	910	6.10
1977	1 591	4.86	643	5.70	268	5.65	921	5.99
1978	1 589	4.82	675	5.53	261	5.37	966	5.95
1979	1 681	4.82	728	5.82	308	5.82	1 038	6.02
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	1 142	4.90	673	3.43	198	5.93	1 405	8.27

Source: As for table 15.

a/ See footnote a/ in table 15.

Table 17

Tonnage oversupply in the world merchant fleet, 1970, 1975, 1980-1987
(Million dwt and percentages)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987 (est)
	(Million dwt)									
World merchant fleet (as at mid-year)	326.1	546.3	682.2	688.8	693.5	686.0	674.5	664.8	639.1	632.3
Surplus tonnage a/	0.6	46.3	97.1	149.1	184.1	195.8	171.2	161.5	127.8	125.7
Active fleet b/	325.5	500	585.1	539.7	509.4	490.2	503.3	503.3	511.3	506.6
	(Percentages)									
Surplus tonnage as a percentage of the world merchant fleet	0.2	8.4	14.2	21.6	26.5	28.5	25.4	24.3	20.0	19.9
Surplus tonnage as a percentage of the active world merchant fleet	0.2	9.3	16.6	27.6	36.1	39.9	34.0	32.2	25.0	24.8

Sources: Shipping Information Services of Lloyds's Register of Shipping and Lloyd's of London Press Ltd.; Lloyd's Shipping Economist (London), various issues; Institute of Shipping Economics (Bremen), Shipping Statistics Yearbook 1981.

a/ Data for 1970-1975 refers to tonnage laid up for lack of employment (year-end figures). Data for 1980-1987 includes laid-up tonnage, ships idle for other reasons and estimates of surplus on account of slow steaming (figures shown are averages for the respective year).

b/ World fleet minus surplus tonnage.

27. As shown in table 18 the share of tanker surplus tonnage in the total world tanker fleet amounted to 29.1 per cent in 1987 (average year figures). This, however, shows a significant improvement of the situation as compared with 1983 and subsequent years. This situation in tanker supply/demand imbalance did not of course develop evenly during the year. The first four months showed a steady decrease in demand for tanker tonnage (from 187.3 million dwt in January to 176.1 in April) accompanied by a growth of tanker surplus (from 73.8 million dwt to 80 million dwt), indicating tanker surplus tonnage in April at the highest level since March 1986. The improvement generally started in May when stock replenishing began to take place.

28. Fears of disruption to Persian Gulf supplies led to a much higher level of buying and tanker demand in July. Following a temporary decrease in demand in September tonnage demand increased again in October and was broadly sustained until the year end. Two areas to benefit from this resurgence were West Africa and the Caribbean. The improvement of demand for tanker tonnage especially in the second half of 1987 also led to some reactivation of laid-up tonnage.

29. The situation in the dry bulk carrier sector showed some improvement in 1987 as compared with the previous year. It is considered that the large amounts of grain imported by the USSR and China were a major factor which led to some decrease in laid-up and idle tonnage in the dry bulk sector.

30. As shown in table 18, the decrease in laid-up and idle tonnage of tankers and dry bulk carriers in 1987 as compared with 1986 was accompanied by an increase in estimated surplus on account of slow steaming. Thus, the share of slow steaming tonnage in the tanker surplus fleet increased from 40.4 per cent in 1986 to 44.5 per cent in 1987 and the share of slow steaming dry bulk tonnage in the dry bulk surplus fleet increased during this period from 77.8 per cent to 80.9 per cent. It can be presumed that, expecting further improvement in the situation in the freight market and improvement in the balance between supply and demand, shipowners preferred to have tonnage reactivated and ready for the carriage of cargoes, rather than laid-up.

31. Thus, between January and December 1987 the amount of laid-up tanker tonnage decreased from 16.08 million dwt (167 vessels) to 11.88 million dwt (135 vessels). The December total included 25 ultra large and very large crude carriers of 8.76 million dwt representing 74 per cent of the laid-up tanker tonnage figure. 5/

32. The volume of laid-up dry bulk carrier tonnage also decreased significantly during 1987. The amount of surplus tonnage in the general cargo fleet also decreased as compared with the previous year and stood at 3.6 million dwt or 5.4 per cent of the relevant world fleet in 1987. At the same time the surplus tonnage of unitized fleet increased to 5.8 per cent (in terms of deadweight) of the total supply figure.

Table 18

Analysis of tonnage oversupply by vessel type, 1980-1987
(Average year figures in million dwt) a/

	1980	1981	1982	1983	1984	1985	1986	1987 (est)
Supply of world tanker fleet	341.8	341.3	335.0	319.4	296.7	273.0	261.7	256.9
Total tanker surplus fleet, of which:	74.0	107.7	130.7	134.0	111.7	100.9	75.7	74.8
Laid-up and idle	25.3	41.1	76.7	89.2	71.3	68.5	45.1	40.8
Slow steaming	48.7	66.6	54.0	71.3	40.4	32.4	30.6	34.0
Share of surplus fleet in the world tanker fleet (per cent)	21.6	31.5	39.0	41.9	37.6	36.9	28.9	29.1
Supply of world dry bulk fleet	172.8	184.0	197.0	202.9	215.0	222.7	215.4	213.3
Dry bulk fleet surplus, of which:	19.7	36.4	46.4	52.0	50.3	50.1	44.1	43.4
Laid-up and idle	3.9	4.8	11.8	19.2	13.1	10.8	9.8	8.3
Slow steaming	15.8	31.6	34.6	32.8	37.2	39.3	34.3	35.1
Share of surplus in the world dry bulk fleet (per cent)	11.4	19.8	23.5	25.6	23.4	22.5	20.5	20.3
Supply of world general cargo fleet	b/ 103.4	b/ 108.4	85.4	82.1	79.8	74.9	69.7	66.9
General cargo fleet surplus	3.0	4.4	6.1	8.3	7.6	5.8	4.3	3.6
Share of surplus in the world general cargo fleet (per cent)	2.9	4.0	7.1	10.1	9.5	7.7	6.2	5.4
Supply of world unitized fleet	19.0	21.1	22.9	25.2	27.3	29.9	31.2	32.6
Surplus of unitized fleet	0.4	0.6	0.9	1.5	1.6	1.7	1.5	1.9
Share of surplus in the world unitized fleet (per cent)	2.1	2.8	3.9	5.9	5.9	5.7	4.8	5.8

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 total figures in table 17, which indicate estimates at mid-year.

b/ Average figures for the second half of the year.

33. In liner shipping and in its container sector in particular, estimated overcapacity on a world-wide basis was considered to be 25 to 35 per cent. Surplus capacity on some major liner trade routes may even be considerably higher, as shown by the following estimates: 6/

	Estimated traffic 1986-1987 (annual) (million TEU)	Estimated capacity available (annual) (million TEU)	Surplus (percentage)
TransPacific	4.4	6.3	43
TransAtlantic	2.8	4.0	43
Europe/Far East	2.0	2.4	20
Total: 3 major trade routes	9.2	12.7	38

34. As shown in table 19, tanker tonnage engaged in oil storage continued to play an important role in the utilization of surplus tonnage. In January 1987 it accounted for 20.0 million dwt, which was the highest figure since mid-1984, and amounted to 47.7 per cent of the total laid-up and idle tonnage for that month. 7/ Due to reactivation of a number of tankers and sales for breaking, the amount of tonnage engaged in oil storage decreased significantly during 1987. Thus, in July 1987 it stood at 15.4 million dwt or 39.3 per cent of the total July amount of laid-up and idle tanker tonnage. 8/ During the second half of 1987 the amount of tonnage employed as floating oil storage continued to diminish and in October it stood at 14.7 million dwt, which is the lowest level since January 1984. 9/ However, by December 1987 it had again increased to 15.2 million dwt.

35. Table 20 shows the 13 largest laid-up fleets by flag of registry as at mid-November 1987. It is evident that in a number of countries the laid-up tonnage amounts to a significant part of the national fleet.

Table 19

Tanker tonnage engaged in oil storage, 1981-1987

(Capacity in thousand deadweight tons)

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
June 1987	38	7 001	32	8 428	70	15 429
December 1987	42	6 773	27	8 440	69	15 213

Source: John I. Jacobs PLC, World tanker fleet review (London), various issues.

Table 20

Major laid-up fleets by flag country as at mid-November 1987

(Ships of 300 grt and over)

	Laid-up tonnage (thousand dwt)	Total fleet of the country (thousand dwt)	Share of the laid-up tonnage in the total fleet of the country (per cent)
Liberia	4 269.1	97 957.9	4.3
United States	3 508.5	29 111.2	12.0
Greece	2 615.8	42 775.9	6.1
France	822.2	8 406.7	9.8
India	629.5	10 890.8	5.8
Japan	592.3	54 669.4	1.1
Italy	349.2	12 178.4	2.9
Brazil	337.9	10 437.9	3.2
Panama	325.2	70 435.8	0.5
Cyprus	294.6	27 322.9	1.1
United Kingdom	260.2	11 676.5	2.2
Argentina	137.2	2 853.3	4.8
Algeria	136.8	1 043.0	13.1

Source: Based on Institute of Shipping Economics and Logistics, Bremen, Shipping Statistics, No. 12, December 1987 (p. 14) and on data supplied by the Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.

Chapter IV

SHIPBUILDING

A. Ship prices

36. Representative newbuilding prices for the years 1980 and 1983-1987 are shown in table 21. In 1987 the prices for new large-size, small and medium-size bulk carriers, medium-size tankers, general cargo ships, LPG carriers and 1,600 TEU full containerships indicate a certain recovery as compared with the previous year, prices for handy size tankers remained at the 1986 level, while prices for 250,000 dwt tankers, LNG carriers and 1,200 TEU ro/ro ships declined as compared with the previous year. The biggest increase in prices for newbuildings concerns 75,000 m^3 LPG carriers, 30,000 dwt and 70,000 dwt bulk carriers (28.2 per cent, 19.7 per cent and 17.6 per cent increase over the previous year's figure respectively). The increase in prices for small and medium-size dry bulk carriers in 1987 may be attributed to the high level of demolition of bulk carriers in 1986, accompanied by an improvement in seaborne trade of some commodities (grain, bauxite/aluminia) in 1987 which led to an increase in demand for this type of ship. The demand for tankers in the world market also remained relatively high, and shipowners widely reactivated tankers from laid-up and purchased second-hand ships. On the whole, the prices for tankers did not undergo any significant change as compared with the previous year. Thus, prices for handy-size tankers were at the level of 1984, those for medium-size tankers which were in bigger demand increased by 3.2 per cent and those for VLCC and ULCC decreased by 3.9 per cent.

Table 21

Representative newbuilding prices, 1980 and 1983-1987
(Millions of dollars)

Type and size of vessel	1980	1983	1984	1985	1986	1987	Percentage change 1986/1987
30 000 dwt bulk	16.7	14.8	13.9	11.3	11.7	14.0	+19.7
32 000 dwt tanker	18.7	23.3	18.0	17.5	18.0	18.0	-
70 000 dwt bulk	23.6	22.3	17.8	14.0	15.3	18.0	+17.6
80 000 dwt tanker	28.3	30.0	24.2	22.0	25.0	25.0	-
120 000 dwt bulk	32.2	32.0	27.7	26.5	24.2	25.0	+3.3
250 000 dwt tanker	75.0	72.5	57.0	47.0	51.0	49.0	-3.9
125 000 m^3 LNG	200.0	200.0	200.0	200.0	158.0	150.0	-5.1
75 000 m^3 LPG	77.0	55.4	48.9	44.1	42.9	55.0	+28.2
1 200 TEU ro/ro	43.7	40.0	28.0	28.0	28.0	26.6	-5.0
15 000 dwt general cargo ship	13.9	13.2	12.8	12.8	14.2	15.0	+5.6
1 600 TEU full containership	31.5	28.8	22.9	21.1	20.9	23.0	+10.0

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

37. Newbuilding prices for 1,600 TEU full containerships and 15,000 dwt general cargo ships increased by 10 per cent and 5.6 per cent respectively as compared with the previous year, while prices for 1,200 TEU ro/ro carriers and 125,000 m^3 LNG carriers were 5 per cent and 5.1 per cent below those of 1986.

38. It may be noted that practically all representative newbuilding prices recorded in 1987, even those which showed a significant improvement as compared with 1986, were still much lower than those of 1983 (with the exception of general cargo ships). The decrease in newbuilding prices for practically all types of ships during the last few years can be attributed mostly to the existing imbalance between supply and demand in world shipping.

39. Table 22 shows the changes in second-hand prices for selected types of vessel during the period 1985-1987. The increase in demand for dry bulk and tanker tonnage led to a sharp increase in prices for second-hand dry bulk carriers and tankers in 1987 as compared with 1986. 10/ The most noticeable increase was in second-hand prices for dry bulk carriers. Thus, during the period from August 1986 to August 1987, prices for 5 and 10-year-old 27,000 dwt dry bulk carriers rose by 118.2 per cent and 183.3 per cent respectively. At the same time prices for 35,000 dwt dry bulk carriers increased by 126.7 per cent and 163.9 per cent respectively and those for

Table 22

Second-hand ship prices, 1985-1987
(as at end August)
(Millions of United States dollars and percentages)

	1985	1986	1987	Percentage change 1985/1986	Percentage change 1986/1987
5 years old					
125 000 dwt tanker	n.a.	11.0	17.5	n.a.	+59.1
75 000 dwt tankers	6.0	11.5	15.0	+91.7	+30.4
60 000 dwt bulk carrier	6.0	6.75	11.5	+12.5	+70.3
35 000 dwt bulk carrier	4.0	3.75	8.5	-6.3	+126.7
27 000 dwt bulk carrier	2.75	2.75	6.0	-	+118.2
17 000 dwt multipurpose	2.5	3.25	5.0	+30.0	+53.8
10 years old					
250 000 dwt VLCC	3.8	10.0	14.5	+163.2	+45.0
125 000 dwt VLCC	n.a.	8.0	12.0	n.a.	+50.0
75 000 dwt tanker	3.25	6.75	8.75	+107.7	+29.6
60 000 dwt bulk carrier	3.25	2.8	7.0	-13.8	+150.0
35 000 dwt bulk carrier	2.0	1.8	4.75	-10.0	+163.9
27 000 dwt bulk carrier	1.7	1.5	4.25	-11.8	+183.3
17 000 dwt multipurpose	1.5	1.6	2.75	+6.7	+71.9

Source: Hill Samuel Shipping Holding (London), World Trade Review and Outlook. Developments in Trade and Effects on the Shipping Market, September 1986, p. 19, September 1987, p. 17.

60,000 dwt dry bulk carriers increased by 70.3 per cent and by 150.0 per cent respectively. Prices for second-hand tankers also showed a significant although smaller increase which fluctuated from 29.6 per cent for a 10-year-old 75,000 dwt tanker to 59.1 per cent for a 5-year-old 125,000 dwt tanker. Second-hand prices for 5 and 10-year-old 17,000 dwt multipurpose cargo ships also showed a significant increase. On the whole, second-hand prices for dry bulk carriers and tankers followed the pattern of newbuilding prices for these types of ship, as shown in table 21.

B. Tonnage on order

40. Table 23 summarizes the trends of world tonnage on order during the period 1985-1987 and the status at the end of the third quarter of 1987. Total tonnage on order showed a significant decrease (9.1 per cent) between September and December 1986 but subsequently remained at about the same level during 1987. As at 30 September 1987, it stood at 29.1 million dwt.

41. The overall trend towards a steady decrease of tonnage on order, which has remained a characteristic feature of the maritime industry for at least the last four years, seemed to level off during 1987 at about 30 million dwt.

42. The increase in orders for newbuildings in the second and third quarters may be largely attributed to the significant and probably to some extent speculative growth of tanker tonnage on order, which increased from September 1986 to September 1987 by 41.3 per cent or 4.5 million dwt and amounted to 15.4 million dwt.

43. At the same time dry bulk carriers on order showed a significant decrease as compared with September 1986, amounting to 7.6 milliion dwt or 49.3 per cent of the previous year figure. As at 30 September 1987 dry bulk carriers represented 26.1 per cent of the total world tonnage on order as compared with 48.1 per cent a year before, while the share of tankers increased to 52.9 per cent (34.1 per cent in September 1986). The tonnage of other ships on order increased slightly during this period from 5.7 million dwt to 6.1 million dwt. Tankers are expected by many experts to lead the orderbook in 1988 too, as many larger tankers, in particular, are considered to be reaching the age of replacement.

44. Attention might be drawn to the fact that, as at 30 September 1987, VLCCs and ULCCs amounted to 5.4 million dwt or 35.2 per cent of the tanker tonnage on order. During the last quarter their number increased further by 10 ships or by 2.6 million dwt (VLCC of 250,000-280,000 dwt). 11/

45. The distribution of newbuilding orders among country groupings (by countries of registry) as at 30 September 1987 shown in table 24 indicates that the combined total deadweight of developed market-economy countries and open-registry countries represented 67.8 per cent of the total tonnage on order. By comparison, developing and socialist countries accounted for 19.4 per cent and 11.2 per cent respectively. Newbuilding orders amounting to 1.6 per cent of the total figure as at 30 September were unallocated.

46. Developed market-economy countries and open-registry countries had the largest portion of orders for all types of newbuildings as at 30 September 1986. These groups of countries also accounted for 77.7 per cent of the deadweight tonnage of all tanker newbuilding orders, all orders for

Table 23

World tonnage on order at the end of each quarter, 1985, 1986 and 1987
(Millions of dwt and percentage change)

Tonnage on order as at	All ships in millions of dwt	Percentage change	Tankers in millions of dwt	Percentage change	Dry bulk carriers (inc. combined carriers) in millions of dwt	Percentage change	Other ships in millions of dwt	Percentage change
31 March 1985	43.6		9.3		26.3		8.1	
		-4.3		+4.6		-6.9		-5.7
30 June 1985	41.8		9.7		24.4		7.6	
		-3.8		+4.7		-8.1		-0.9
30 September 1985	40.2		10.2		22.5		7.5	
		-7.0		-8.5		-6.3		-7.2
31 December 1985	37.4		9.3		21.0		7.0	
		-7.7		-3.0		-10.0		-6.8
31 March 1986	34.5		9.0		18.9		6.5	
		-5.3		-		-8.1		-3.3
30 June 1986	32.7		9.0		17.4		6.3	
		-2.1		+21.4		-11.5		-9.5
30 September 1986	32.0		10.9		15.4		5.7	
		-9.1		+4.8		-20.8		-5.7
31 December 1986	29.0		11.4		12.2		5.4	
		-4.6		+8.4		-19.7		+2.3
31 March 1987	27.6		12.3		9.8		5.5	
		+5.0		+19.1		-11.7		+3.1
30 June 1987	29.0		14.7		8.7		5.7	
		+0.3		+4.6		-11.7		+7.6
30 September 1987	29.1		15.4		7.6		6.1	

Source: Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.

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

Table 24

World tonnage on order as at 30 September 1987
(Thousands of dwt)

Countries of registry	All ships	Tankers 150 000 dwt and over	Tankers under 150 000 dwt	Ore/oil and OBO carriers	Other bulk carriers	Full container ships	Part container ships	Ro/ro cargo ships	Other ships
World total	29 120	5 421	9 956	526	7 113	2 304	26	860	2 913
Developed market-economy countries	7 758	1 262	1 283	-	2 755	1 049	26	339	1 044
Open-registry countries	12 000	4 006	5 405	526	867	342	-	186	667
Subtotal	19 758	5 268	6 688	526	3 622	1 391	26	525	1 711
Socialist countries, total	3 266	153	1 088	-	882	237	-	161	743
of which:									
in Eastern Europe	2 508	153	818	-	687	145	-	147	557
in Asia	757	-	270	-	195	92	-	14	186
Developing countries, total	5 638	-	2 076	-	2 533	398	-	173	459
of which:									
in Africa	21	-	-	-	-	-	-	19	2
in America	1 881	-	852	-	850	23	-	46	109
in Asia	3 680	-	1 223	-	1 682	375	-	107	293
in Europe	55	-	-	-	-	-	-	1	54
in Oceania	-	-	-	-	-	-	-	-	-
Unallocated	458	-	104	-	76	277	-	-	-

Source: Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.

Note: Owing to rounding, the totals do not always add up.

ore/oil and OBO carriers, 50.9 per cent of other bulk carriers, 60.4 per cent of full containerships, and 61.0 per cent of ro/ro cargo ships.

47. Developing countries had a 13.5 per cent share in newbuilding orders for tankers (in dwt), a 35.6 per cent share for other bulk carriers, a 17.3 per cent share for full containerships, and a 20.1 per cent share for ro/ro ships. Socialist countries of Eastern Europe and Asia accounted for 8.1 per cent of newbuilding orders for tankers, 12.4 per cent of orders for other bulk carriers, 10.3 per cent of orders for full containerships, and 18.7 per cent of orders for ro/ro cargo ships. Developing and socialist countries had no ore/oil or OBO carriers on order.

C. Deliveries of newbuildings

48. Data on tonnage of newbuildings delivered in the first three quarters of each year during the period 1985-1987 are presented in table 25. The total

Table 25

Deliveries of newbuildings, 1985-1987 a/
(Number of ships and thousands of grt/dwt)

Type of ship		1985	1986	1987
Tankers	Number	105	92	82
	Grt	1 494	2 028	1 976
	Dwt	2 508	3 458	3 376
Bulk/oil carriers	Number	8	5	5
	Grt	310	183	439
	Dwt	554	292	854
Ore and bulk carriers	Number	268	147	81
	Grt	6 847	4 853	2 872
	Dwt	11 876	8 547	5 077
General cargo ships b/	Number	186	136	69
	Grt	1 132	853	458
	Dwt	1 565	1 143	578
Other ships	Number	837	797	854
	Grt	3 654	3 533	3 320
	Dwt	3 189	3 156	2 358
Total	Number	1 404	1 177	1 091
	Grt	13 437	11 450	9 065
	Dwt	19 692	16 596	12 243

Source: Information provided by the Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.

a/ The figures in this table refer to the period January-September for each year.

b/ Vessels of 2,000 grt and over.

deadweight of vessels delivered by shipyards in the first three quarters of 1987 decreased by 26.2 per cent as compared with the corresponding period of the previous year, and the number of vessels was 7.3 per cent less. By vessel type there was an increase in deliveries of bulk/oil carriers only (192.5 per cent above the figures for the first three quarters of 1986), while deliveries of tankers decreased by 2.4 per cent as compared with the corresponding period of 1986. However, this latter figure was 36.6 per cent higher than tanker deliveries in the first three quarters of 1985. Deliveries of ore and bulk carriers and deliveries of general cargo ships decreased by 40.6 per cent and 49.4 per cent respectively. Miscellaneous types of vessels, as shown under "Other ships", declined by 25.3 per cent in deadweight deliveries as compared with the corresponding period of 1986. The distribution of newbuildings delivered in the first three quarters of 1987 by vessel types was as follows: tankers - 27.6 per cent (as compared with 20.8 per cent during the corresponding period of 1986); bulk/oil carriers - 7.0 per cent (1.8 per cent in 1986); ore and bulk carriers - 41.5 per cent (51.5 per cent in 1986); general cargo ships - 4.7 per cent (6.9 per cent in 1986), other ships - 19.2 per cent (19.0 per cent in 1986).

49. New deliveries by country groupings - according to countries of build - are presented in table 26. Figures based on January to September deliveries

Table 26

Distribution of deliveries of newbuildings by groups of countries of build, 1985-1987 a/
(Thousands of grt) b/

Country grouping	1985	1986	1987
Developed market-economy countries	9 740 (72.9)	7 178 (62.4)	5 994 (67.2)
Developing countries	2 506 (18.8)	3 052 (26.6)	1 927 (21.6)
Socialist countries	877 (6.6)	943 (8.2)	691 (7.8)
Other, unallocated	233 (1.7)	321 (2.8)	301 (3.4)
World total	13 355 (100.0)	11 494 (100.0)	8 914 (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/ As for table 25, this table is based on the period January to September (there remains a slight statistical discrepancy in the total tonnages as compared to those shown in table 25).

b/ Percentage shares of the world total are indicated in brackets.

in terms of grt show that the share of developed market-economy countries in 1987 newbuildings increased to 67.2 per cent, while the share of developing countries decreased to 21.6 per cent (as compared with 26.6 per cent for the first three quarters of 1986). At the same time the share of socialist countries of Eastern Europe and Asia decreased slightly from 8.2 per cent in 1986 to 7.8 per cent in 1987.

D. Demolition of ships

50. As shown in table 27, the total volume of tonnage sold for demolition in 1987 amounted to 16.3 million dwt, which means a 47.8 per cent decrease from the previous year's figure. This is also the lowest volume sold for demolition in any single year since 1981. The sharp reduction in demolition in 1987 could be mostly attributed to a certain improvement of the tonnage balance situation, an increase in freight rates and the consequent expectations of shipowners that this upward trend would continue.

Table 27

Broken-up tonnage trends, 1980-1987

	1980	1981	1982	1983	1984	1985	1986	1987
Tonnage sold for breaking a/ (million dwt)	10.0	14.6	28.3	32.7	29.2	41.7	31.2	16.3
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

a/ Source: Fearnleys, Review, various issues.

51. Data on tonnage sold for breaking by type of vessel during the period 1980-1987 are presented in table 28. Demolition of all types of vessels showed a significant reduction in 1987 as compared with the previous year. Thus, the volume of tanker tonnage sold for breaking decreased during this period by 46.7 per cent and stood at the lowest level since the beginning of the 1980s, and that of dry bulk carriers decreased by 48.7 per cent, though it was only 17 per cent below the 1985 figure and much higher than for other years since 1980. In 1987 the volume of combined carriers sold for demolition amounted only to 32.9 per cent of the previous year figure.

52. Bulkers (including combined carriers) remained the main large group of vessels sold for demolition in 1987, accounting for 79.8 per cent of all tonnage demolished. However, their share during the last few years has been decreasing (86.9, 89.4 and 85.1 per cent in the years 1984 to 1986 respectively).

Table 28

Tonnage reported sold for breaking by type of vessel, 1980-1987
(Thousand dwt and percentage shares)

	Thousands of dwt								Percentage shares							
	1980	1981	1982	1983	1984	1985	1986	1987	1980	1981	1982	1983	1984	1985	1986	1987
Tankers	7 951	12 904	23 253	24 348	19 822	26 794	12 306	6 549	79.6	88.4	82.2	74.5	67.9	64.3	39.4	40.1
Combined carriers	71	251	1 683	2 022	1 516	3 794	2 889	950	0.7	1.7	5.9	6.2	5.2	9.1	9.3	5.8
Dry bulk carriers	349	323	1 097	2 651	4 024	6 673	11 365	5 539	3.5	2.2	3.9	8.1	13.8	16.0	36.4	33.9
Other dry cargo ships	1 622	1 117	2 271	3 677	3 836	4 414	4 654	3 310	16.2	7.7	8.0	11.2	13.1	10.6	14.9	20.2
Total	9 993	14 593	28 304	32 698	29 198	41 675	31 214	16 348	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Fearnleys, Review, various issues.

53. As in previous years, tankers represented the major quantity of tonnage sold for breaking, although their share in the total amount of tonnage sold for demolition has significantly decreased during the last few years (from 88.4 per cent in 1981 to 40.1 per cent in 1987). The share of dry bulk carriers sold for breaking in 1987 was 33.9 per cent, and this share increased rapidly during the period 1980-1985. The share of combined carriers in the total tonnage sold for breaking was 5.8 per cent, while that of other dry cargo ships sold for breaking increased significantly and in 1987 reached its highest level in the 1980s, i.e. 20.2 per cent.

54. In spite of a certain improvement in the market situation in 1987 and the general decrease of laid-up tonnage, the amount of laid-up tanker tonnage and combined carrier tonnage which would not appear to have any significant prospect of being reactivated (i.e. which was expected to be sold in the future for scrapping directly from lay-up) remained almost at the level of the previous year. As shown in table 29, the estimated volume of tanker and combined carrier tonnage laid-up and idle which was unlikely to trade again at mid-September 1987 amounted to 4.6 million dwt as compared with 4.8 million dwt a year before. As in the previous years, this tonnage consisted mostly of ULCC and VLCC (78.3 per cent).

Table 29

Tankers and combined carriers laid up and idle and estimated as tonnage unlikely to trade again, 1984-1987
(As at mid-September)

	1984		1985		1986		1987	
	000 dwt	%	000 dwt	%	000 dwt	%	000 dwt	%
10- 24,999	181	1.0	211	1.1	93	1.9	95	2.1
25- 49,999	312	1.7	531	2.7	157	3.3	176	3.9
50- 99,999	1 593	8.5	339	1.7	131	2.7	221	4.8
100-199,999	1 400	7.4	660	3.4	160	3.3	498	10.9
over 200,000	15 275	81.4	17 826	91.1	4 258	88.8	3 579	78.3
Total	18 761	100.0	19 567	100.0	4 799	100.0	4 569	100.0

Source: E.A. Gibson, Shipbrokers Ltd., London. Monthly bulletins, various issues.

55. Changes in demolition prices in 1986 and 1987 are shown in table 30. A serious decrease in the amount of tonnage sold for demolition in 1987 could be considered the main reason for a remarkable rise in scrap prices, as the demand of scrap yards exceeded the supply of ships offered for demolition. Demolition prices showed a constant increase during 1987, and practically all monthly prices were above those of 1986. Thus, the annual average price in all three main markets was significantly higher than in 1986, with the 1987 average in the Far East market 34.8 per cent higher than a year before, in the Pakistan/India region - 34.9 per cent higher and in South Europe - 16.4 per cent higher.

56. Taiwan Province of China remained the main shipbreaking centre. Its share of the demolition market increased from 48 per cent in 1986 to 54 per cent in 1987. 12/

Table 30

Demolition prices in 1986-1987
(Dollars per LDT)

Month	Market					
	Far East		Pakistan/India		South Europe	
	1986	1987	1986	1987	1986	1987
January	125.0	135.0	100.0	112.5	77.5	70.5
February	122.5	132.5	100.0	115.0	70.0	70.0
March	127.5	137.5	100.0	115.0	70.0	77.5
April	122.5	148.5	100.0	117.5	65.0	77.5
May	127.5	148.5	102.5	117.5	75.0	77.5
June	127.5	159.0	102.5	117.5	75.0	77.5
July	126.0	160.0	97.5	130.0	75.0	77.5
August	107.5	175.0	100.0	145.0	65.0	80.0
September	112.5	185.0	100.0	155.0	65.0	85.0
October	122.5	230.0	107.5	175.0	65.0	95.0
November	135.0	200.0	112.5	175.0	67.5	95.0
December	135.0	200.0	112.5	190.0	70.5	95.0
Annual average	124.3	167.6	102.9	138.8	70.0	81.5

Source: Institute of Shipping Economics, Bremen, Shipping Statistics, various issues.

Chapter V

FREIGHT MARKETS

A. Freight rates of main cargo sectors

57. As shown in table 31, the annual average freight rate indices in the dry cargo and tanker sectors in 1987 showed a significant upward movement as compared with the previous year. This was largely the result of an increase in international seaborne trade in dry bulk cargoes, as well as a somewhat more balanced supply/demand relationship for a number of ship types and size categories. In 1987 (except for January), almost all monthly dry cargo tramp trip charter indices and all quarterly dry cargo tramp time charter indices were above the corresponding figures for 1986. As a result, the annual averages were respectively 10.1 per cent and 54.4 per cent higher than in the previous year. Moreover, in 1987 both annual average dry cargo tramp charter indices were at the highest level since 1981.

58. The trends in the dry bulk carriers freight market in 1987 can be illustrated by reference to the pattern of grain trade from the United States (Gulf of Mexico) to Japan (cargo sizes of 50,000-55,000 tons). Freight rates for this cargo at the beginning of the year stood at about $13.65 per ton. During the next five months they increased steadily and in May amounted to $18.25 per ton. However, in June they decreased to $15.20 per ton and in July to $14.45 per ton. The following month saw an upswing to $17.00 per ton, with a fall again in September ($16.05 per ton). The October recovery of freight rates to $17.65 per ton started a new continuous upward tendency. In December freight rates achieved their highest level of $19.60 per ton. Thus, they were 43.6 per cent above the level for the corresponding period of the previous year. In this particular trade all monthly freight rates in 1987 were above those in 1986. As a result, the annual average rate was $16.30 per ton as compared to $10.20 per ton in 1986, $13.60 per ton in 1985 and $15.00 per ton in 1984. 13/

59. The tramp time charter rates in the dry bulk sector also reflected the general situation of the dry cargo freight market. An analysis by vessel size shows that a 12-month period fixture for a 60,000 dwt bulker amounted, at the beginning of the year, to $2.35/dwt/month. A steady increase in freight rates started from March ($2.70/dwt/month), with the highest level of $3.45/dwt/month recorded in May. There was then a slight decrease in June to $3.20/dwt/month, followed by a steady increase up to the end of the year, when the December freight rates stood at the highest level of $4.50/dwt/month, which is 91.5 per cent higher than the January figure. The average rate for this vessel size in 1987 was 61.9 per cent higher than in 1986 and 23.6 per cent higher than in 1985. Handy-size (30,000 dwt) and large-size dry bulk carriers also showed a substantial increase in freight rates. The increase of average rates from 1986 to 1987 amounted to 34.8 per cent and 46.4 per cent respectively. 14/

Table 31

Freight rate indices, 1985-1987
(Monthly or quarterly figures)

Freight rate indices	Liner freight rates a/ (1980 = 100)			Dry cargo tramp time charter b/ (1976 = 100)			Dry cargo tramp trip charter c/ (July 1965 to June 1966 = 100)			Tanker freight indices c/ VLCC/ULCC			Medium-size crude carriers			Small crude and product carriers			Handy size dirty			Handy size clean		
Period	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987
January	168	144	121				170	166	164	34	32	33	53	64	87	81	84	127	104	128	197	117	134	204
February	172	139	121	115	92	107	172	152	166	36	26	30	53	56	66	93	76	106	120	128	161	117	156	175
March	171	135	123				171	157	167	30	27	27	55	59	61	78	96	89	111	149	128	120	158	167
April	161	136	123				177	158	175	35	29	32	54	54	71	73	91	110	109	132	126	120	143	150
May	164	135	123	116	85	131	172	158	172	25	31	37	54	74	74	74	99	104	112	163	148	117	154	148
June	163	134	124				166	153	166	23	50	39	49	79	74	67	98	112	105	129	128	112	168	172
July	156	131	124				161	151	169	22	38	54	43	68	79	62	97	102	107	159	142	109	154	152
August	153	128	124	91	88	141	161	148	177	26	46	69	47	81	80	72	110	109	113	142	144	102	149	147
September	155	128	123				158	163	178	34	38	41	59	71	69	87	101	93	115	133	127	112	146	169
October	150	127	121				166	161	182	31	23	47	60	50	77	83	90	105	119	143	140	120	137	179
November	148	127	116	102	95	176	165	164	189	40	26	48	76	58	83	104	90	101	142	137	150	151	141	176
December	146	126	115				164	161	184	42	29	42	78	67	78	97	99	109	138	134	184	166	152	170
Annual average	159	133	122	106	90	139	167	158	174	32	33	42	57	65	75	81	94	105	116	140	148	122	149	167

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

a/ Liner index compiled by the Ministry of Transport of the Federal Republic 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 paragraph 65 for certain comments regarding this index.)

b/ Compiled and published on a quarterly basis by the General Council of British Shipping.

c/ Compiled and published by Shipping News International (Oslo). 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.

60. The highest and lowest rates recorded during 1987 (together with comparisons for 1986) for single voyages in certain leading dry cargo trades which are of particular interest to developing countries are summarized below:

Commodity	Route	Freight rate range			
		1987		1986	
		$US/ton			
		High	Low	High	Low
Grain	United States (Gulf of Mexico)/China	26.95	23.50	17.75	-
Grain	United States (Gulf of Mexico)/Venezuela	19.50	10.00	11.00	6.50
Sugar	Queensland/Japan	17.00	11.00	12.95	12.00
Fertilizers	Aqaba/West Coast India	15.00	9.50	13.80	7.75
Fertilizers	United States (Gulf of Mexico)/West Coast India	33.00	-	21.00	19.75
Ore	Brazil/Japan	9.50	4.70	7.00	4.35
Ore	Brazil/Continental Europe	8.10	3.00	4.50	2.70
Ore	West Africa/Continental Europe	5.80	2.20	3.85	2.97

Sources: Lloyd's List, London, 5 January 1987, 11 January 1988.

61. Both high and low freight rates for almost all dry bulk commodities presented above showed an increase as compared to the previous year, with the most significant increase shown for ores from Brazil to Japan (+80 per cent for high rates), for grain from the United States to Venezuela (+77.2 per cent and 53.8 per cent for high and low rates respectively) and from the United States to China (+51.8 per cent), and for fertilizers from the United States to India (+57.1 per cent). Low rates for sugar from Queensland to Japan and for ores from West Africa to Continental Europe decreased (8.3 per cent and 25.9 per cent below the level of 1986).

62. High demand for tanker tonnage in 1987 caused an increase in freight rates in most oil trades. The annual average indices were higher than in the previous year, though much lower than for the dry cargo sector. Thus, the annual average for VLCC/ULCC in 1987 was 27.3 per cent above the 1986 level, while for medium-size crude and small crude and product carriers' annual average indices increased by 15.4 per cent and 11.7 per cent respectively. The average handy-size clean tankers index increased in 1987 by 12.1 per cent as compared with 1986. With respect to the monthly indices for individual tonnage groups, a downward trend in tanker freight rates is observed in the first quarter of the year which results mainly from the existence of large stocks of crude oil in the developed market-economy countries. Starting from April when the stocks needed replenishment, the rates began to increase and thus in summer-month indices achieved their highest level. By the end of August falling oil prices and higher levels of storage in the developed market-economy countries exerted a downward pressure on rates which subsequently levelled off in the last quarter of 1987.

63. Average worldscale rates for the main crude oil trades for 1987, shown in table 32, confirm the above-mentioned trends in the tanker freight market. After an upswing in January and a temporary decrease in February and March, the upward tendency continued and in August most rates were at their highest

level. In September the rates went down, although they were above those of February/March. In the November-December period another recovery of the rates was recorded in three main trades where the rates stood at a very high level as compared to the corresponding period of the previous year. On the whole, the annual fluctuation of rates followed the previous year's pattern, though practically all the average worldscale prices taken for individual months were higher and in some cases significantly higher than those for the corresponding period of the previous year.

Table 32

Average worldscale rates for crude oil movements in 1986-1987

	Persian Gulf to west		Persian Gulf to east		Mediterranean Sea to Med/UK/Continent		Caribbean Sea to US Atlantic Coast	
	1986	1987	1986	1987	1986	1987	1986	1987
January	39.86	39.85	38.66	52.46	69.47	88.30	83.34	121.17
February	29.83	51.43	32.83	41.26	61.19	68.37	74.90	83.16
March	42.36	30.82	39.00	37.15	69.96	74.80	98.01	71.10
April	35.21	41.65	37.53	55.58	62.15	84.25	85.71	95.88
May	43.31	43.41	49.13	51.61	88.51	93.41	88.27	95.29
June	53.49	46.51	56.58	55.08	95.20	84.20	88.12	92.99
July	41.08	58.59	46.21	69.52	71.65	93.20	86.49	96.97
August	50.75	70.27	60.88	84.59	84.52	88.67	99.01	114.17
September	43.61	44.43	50.39	57.28	82.07	82.52	84.71	87.70
October	28.08	47.46	31.49	57.09	56.97	84.88	72.02	106.03
November	31.89	51.50	33.25	59.62	65.71	92.15	76.35	107.76
December	35.85	47.95	36.88	62.65	71.78	109.33	81.22	120.58

Source: Howard Houlder Chartering (London), Lloyds' List, (London), 8 January 1987, 7 January 1988.

64. Freight rates in individual tanker trades recorded substantial changes during 1987. Thus worldscale spot rates for 90,000 dwt dirty tankers from the Persian Gulf to West Europe were reported to be 80 in January 1987, 92 in July, 89 in September and 94 by the year end. 15/

65. The liner freight rate indices shown in table 31 are compiled by the Ministry of Transport of the Federal Republic of Germany and are based on the foreign trade of that country. Consequently, the indices may not be truly representative of trends for this sector of the world shipping industry. Nevertheless, it is considered that they provide a general indication of such trends. It should be borne in mind that this index is also seriously influenced by changes of currency rates of the deutsche mark versus the United States dollar. At the beginning of 1987 liner freight indices were at a very low level, during the spring-summer months they experienced a marginal improvement (+1.6 per cent to +2.4 per cent), and this was followed by a general decrease in the fourth quarter of the year. Moreover, all 1987 monthly indices were lower than those for the corresponding months of the previous year. Thus, the annual average for 1987 was 8.3 per cent lower than the 1986 annual average.

B. Estimates of global freight costs

66. Table 33 shows estimates of total freight costs in world trade as the ratio of ocean freight to the total c.i.f. value of imports by groups of countries. Globally, total freight costs in 1986 were estimated at $105.6 billion, which is 2.7 per cent more than in 1985. At the same time the value of international trade increased by 10 per cent. Consequently, the proportion of freight costs in the total value of world trade decreased insignificantly, i.e. by 0.38 per cent, and amounted to 5.34 per cent in 1986. For developing countries, however, and especially those in Africa and Oceania, this ratio continued to be more than double that for developed market-economy countries, i.e. 9.11 per cent as against 4.44 per cent. The differences in the ratio of ocean freight to the total c.i.f. value of imports by groups of countries can be partly attributed to the following factors: developed market-economy countries are substantial importers by sea of bulk cargoes, for which freight rates are relatively low; furthermore, 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 attributed to the fact that those countries generally import goods by sea over longer distances and may be using more relatively expensive liner services.

Table 33

Estimates of total freight costs in world trade a/ by groups b/ of countries, 1980, 1985 and 1986

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 a percentage of import value
1980	1. World total	123 264	1 856 834	6.64
	2. Developed market-economy countries	78 286	1 425 979	5.49
	3. Developing countries - total	44 978	430 855	10.44
	of which: in Africa	10 432	77 757	13.42
	in America	10 929	123 495	8.85
	in Asia	21 979	211 089	10.41
	in Europe	1 320	16 037	8.23
	in Oceania	318	2 477	12.84
1985	1. World total	102 803	1 797 643	5.72
	2. Developed market-economy countries	68 523	1 423 860	4.81
	3. Developing countries - total	34 280	373 783	9.17
	of which: in Africa	6 847	62 051	11.03
	in America	6 249	73 844	8.46
	in Asia	19 845	222 814	8.91
	in Europe	1 074	12 919	8.31
	in Oceania	265	2 155	12.30
1986	1. World total	105 602	1 978 271	5.34
	2. Developed market-economy countries	70 953	1 598 130	4.44
	3. Developing countries - total	34 649	380 141	9.11
	of which: in Africa	6 900	62 260	11.08
	in America	6 801	79 538	8.55
	in Asia	19 604	223 327	8.78
	in Europe	1 053	12 641	8.33
	in Oceania	291	2 375	12.25

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

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

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

Chapter VI

MULTIMODAL TRANSPORT AND TECHNOLOGICAL DEVELOPMENTS

A. Multimodal transport

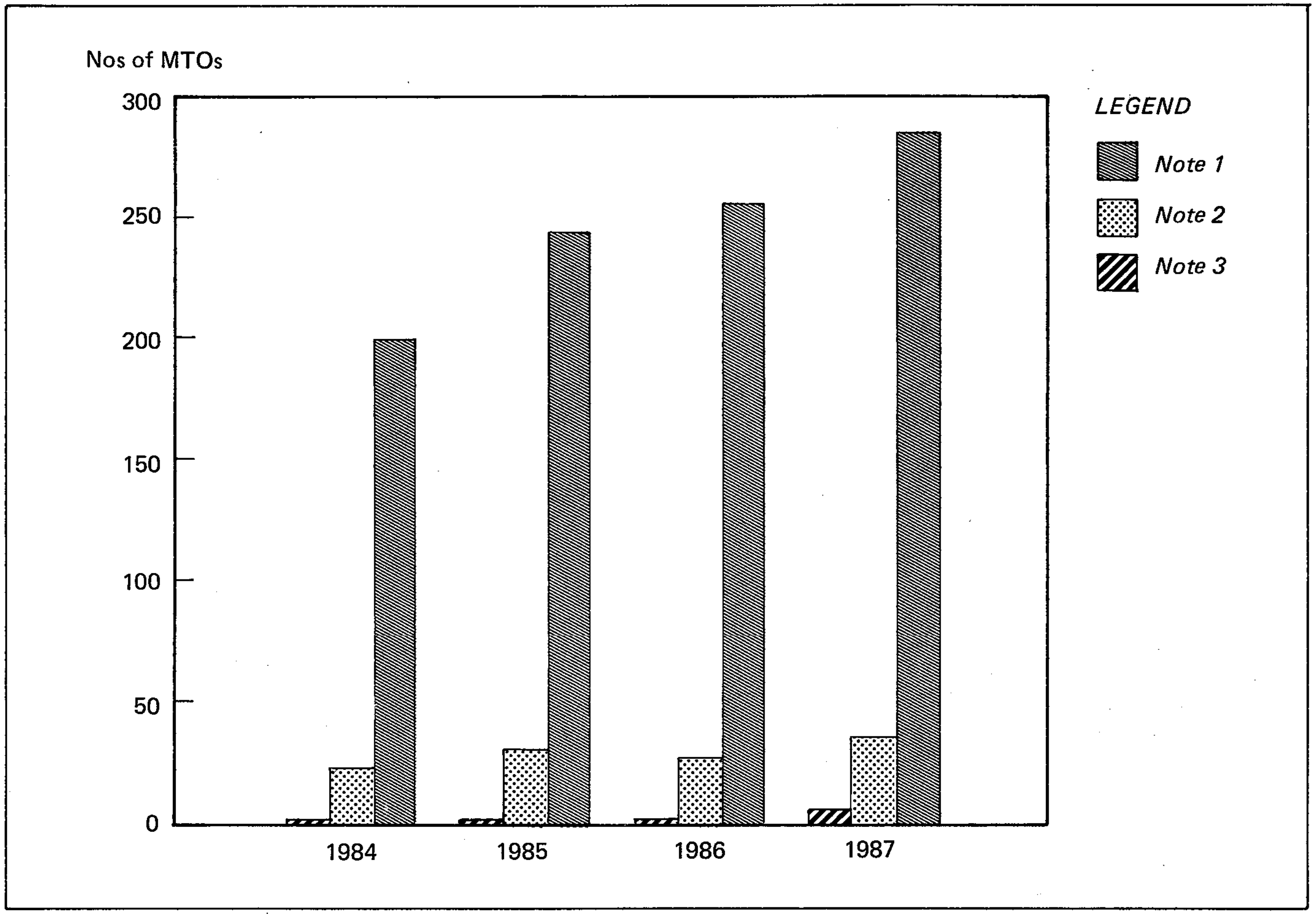
67. While seaborne trade statistics allow a fairly accurate assessment of the developments in this trade, the situation is much less satisfactory when it comes to statistics covering international multimodal transport. Consequently, it is far more difficult to quantify developments in multimodal transport. Nevertheless, it can be said with certainty that during the last 12 months multimodal transport has continued to expand, with an increasing number of companies operating as combined transport operators (CTOs), non-vessel operating common carriers (NVOCCs) or non-vessel operating multimodal transport operators (NVO-MTOs), offering door-to-door transport to an increasing number of destinations. According to Containerization International Yearbook, this number grew from 225 in 1984 to 327 in 1987. Graphs 1 and 2 show the development.

68. Although it is clear that this list is far from complete (a recent list of Japanese NVO-MTOs 16/ set their number alone at 123 in 1987, or 94 more than the Japanese NVO-MTOs listed in the Containerization International Yearbook, 1987 edition), it nevertheless gives an indication of the increase in the number of companies offering multimodal transport services. The graphs also show that, while NVO-MTOs have developed faster in East Asia than in other regions of the developing world, the overwhelming dominance of NVO-MTOs from developed countries is evident. In spite of the fact that NVO-MTOs from developing countries have increased in number by almost 57 per cent, they only amount to 11 per cent of all NVO-MTOs listed, up just 1 per cent from 1984. Numbers do not, however, tell the whole story. Some socialist countries have only one NVO-MTO which handles the entire multimodal transport tonnages of the country in question.

69. In addition to the door-to-door services offered by CTOs, NVOCCs and NVO-MTOs, an increasing number of shipowners from both developed and developing countries have also been offering door-to-door services as vessel-operating MTOs (VO-MTOs). A new development is that some major railways are also developing into NVO-MTOs. This has so far particularly been the case in the United States where mergers and the competitive climate in general has furthered the trend.

70. Another ongoing development, also not easily quantifiable, is the increasing demand by shippers for intermodal, single rate movements with single carrier responsibility, in other words the type of multimodal transport services offered by MTOs under the United Nations Convention on International Multimodal Transport of Goods, and the corresponding need for shippers'/consignees' physical distribution requirements or "logistics" to be managed on a comprehensive basis in their respective trades. "Logistics" has been defined by the Council of Logistics Management as: "the process of planning, implementing and controlling the efficient, cost-effective flow and storage of raw materials, in-process inventory, finished goods, and related information from point of origin to point of consumption for the purpose of conforming to customers requirements". This development has led large multimodal transport operators, particularly VO-MTOs, to upgrade their operations by expanding the services they offer to include air and land

Graph 1
DEVELOPMENT OF NVO-MTOs

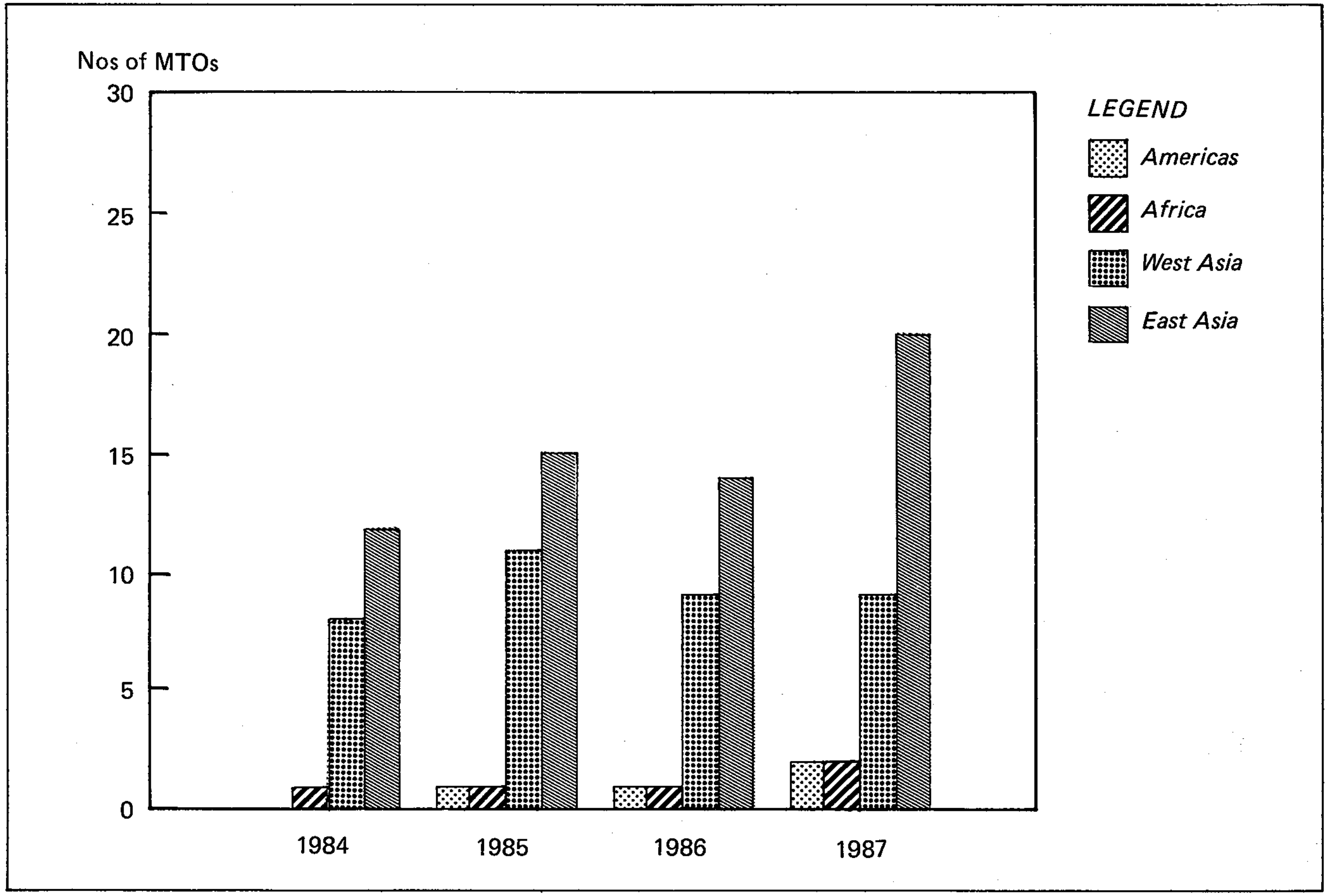


Note 1: Socialist countries of eastern Europe.

Note 2: Developing countries.

Note 3: Developed market-economy countries.

Graph 2
DEVELOPMENT OF NVO-MTOs IN DEVELOPING REGIONS



Source: Containerization International Yearbook, 1984-1987.

transport, as well as freight forwarding operations, and to invest in data processing and information systems technology. These improved organizational and managerial procedures tend to be production-oriented rather than market-oriented. A greatly expanded branch office network by VO-MTOs and much closer day-to-day co-operation with their users, including on-line access by shippers/consignees to the carriers' cargo-tracing data systems, has changed the relationship between transport users and transport providers to a level of complementarity where the two work almost as a single unit providing total quality control over the cargoes and their movements from the shipper's factory to the consignee's factory or retail sales outlet.

71. A third development in the infrastructure of transport systems is the growth of transport interface points for multimodal and multiservice freight services. Such interface points may be inland clearance depots (ICDs) as defined in the 1986 edition of the Review of Maritime Transport 17/ or they may be distribution centres located near main freight-generating centres and communication nodes. These interface points have three basic roles: (1) to allow the transfer from one mode to another; (2) to allow, during the transfer, the offering of complementary services such as: intermediate storage, re-conditioning, devanning and re-vanning of loads, etc.; and (3) concentration, in an appropriate place, of much of the necessary information for the optimal management of transport.

72. The growth of such interface points can be linked to the increasing use of railways as a means of inland transport for multimodal transport container traffic. The year 1987, for example, saw an almost explosive growth of the use of double-stacked rail services in the United States. While the number of companies offering "land-bridge services" remained static at 35 between 1986 and 1987, 18/ the number of VO-MTOs serving trades between the western Pacific rim and the west coast of the United States offering double-stack train services in the United States more than doubled. Table 37 in the 1986 edition of the Review of Maritime Transport listed 22 weekly departures of double-stacked trains from United States west-coast ports with a capacity of 4,550 FEUs; in 1987, the number of departures increased to 48, with a weekly capacity of 9,500 FEUs (see table 34), an increase of 118 per cent in the number of departures and of 109 per cent in the FEU capacity. The annual FEU capacity is 494,000 FEUs, of which the largest carrier accounts for 46 per cent. However, preliminary estimates 19/ show that only about 450,000 FEUs are expected to have moved in 1987. It is estimated that this will increase to about 525,000 FEUs in 1991.

73. Some of the VO-MTOs listed in the table do not in fact operate their own double-stacked trains, but subcontract with some of the major railways that themselves run regular double-stack train services as common carriers. The number of such services by railways comes to about 10-12 per week, with a carrying capacity of about 1,500 FEUs.

74. The real development of double-stack train services is, however, far more dramatic - one of the carriers has branched out into domestic management of double-stack trains and is running a total of 114 trains weekly. This amounted to about 300,000 domestic FEUs plus about 275,000 international FEUs in 1987 according to one newspaper report, up from 180,000 FEUs and 225,000 FEUs respectively in 1986.

Table 34

Operation of double-stack trains from the West coast of the United States of America

VO-MTO	Route (from west coast to inland points)	Frequency per week	FEU Capacity	Railway
APL	Los Angeles/Chicago	5	1 400	UP
	Los Angeles/Chicago/New York	2	560	UP
	Los Angeles/Atlanta	3	840	SP
	Los Angeles/Memphis	3	580	SP
	Oakland/Chicago	1	280	UP
	Seattle/Chicago	2	540	UP
	Seattle/Chicago/New York	1	270	UP
	Sub-total (Nos. of trains)	17	4 430	
SLS	Long Beach/Chicago/New York	1	280	SP/BN/CSX
	Long Beach/Kansas/Chicago	1	280	SP/BN
	Long Beach/Houston/Nola/Memphis/Atlanta	2	560	SP/CSX
	Tacoma/Chicago	3	630	BN/CSX
	Tacoma/Chicago/New York	1	210	BN/CSX
	Sub-total (Nos. of trains)	8	1 960	
K Line	Long Beach/Chicago/New York	1	200	UP
	Portland/Chicago/Columbus & New York	1	150	UP
	Seattle/Chicago/Columbus & New York	1	150	UP
	Long Beach/Houston,Dallas,Nola,Atlanta	1	120	SF/UP
	Sub-total (Nos. of trains)	4	620	
Maersk	Tacoma/Chicago/New York	2	560	UP
NYK	Los Angeles/Chicago-Cincinnati/New York (separated in St. Louis)	2	280	SP/CSX/CONR
	Seattle/Chicago/New York	1	150	BN/CONR
	Los Angeles/Dallas/Houston/Nola/Memphis	2	100	ATSF/BN/KCS
	Sub-total (Nos. of trains)	5	530	
OOCL	Long Beach/Chicago-Houston/New Orleans (separated in El Paso)	1	230	SP
	Long Beach/Chicago/New York	1	100	SP
	Sub-total (Nos. of trains)	2	330	
MOL	Los Angeles/Chicago-Columbus/New York (separated in St. Louis)	1	240	SP
	Sub-total (Nos. of trains)	1	240	

Table No. 34 (continued)

Operation of double-stack trains from the West coast of the United States of America

VO-MTO	Route (from west coast to inland points)	Frequency per week	FEU Capacity	Railway
Evergreen	Los Angeles/Chicago	1	150	SP/BN
	Los Angeles/New York	1	50	SP/BN/CONR
	Sub-total (Nos. of trains)	2	200	
Hanjin	Seattle/Chicago/New York	1	200	BN/CONR
HJCL	Seattle/Chicago/New York	1	200	BN/CONR
YS Line	Seattle/Chicago/New York	1	50	BN/CONR
	Long Beach/Chicago/Columbus/New York/ US Gulf (separated in Columbus)	1	80	ATSF/CONR/ Dal/KSC
	Sub-total (Nos. of trains)	2	130	
J Line	Los Angeles/Chicago/Columbus/New York	1	60	SP/SOO
	Los Angeles/Chicago	1	40	SP
	Sub-total (Nos. of trains)	2	100	
NOL	Seattle/Chicago/New York	1	100	BN/CONR
Thirteen VO-MTOs		48	9 500	

Source: Advice from carriers and various news reports.

Abbreviations:

UP - Union Pacific Railroad
SP - Southern Pacific Railroad
BN - Burlington Northern Railroad
CSX - CSX Corporation
CONR - CONRAIL
ATSF - Atchison Topeka and Santa Fe Railroad
SOO - SOO Line Railroad

75. The United States remains the only country where double-stacked train services are operated, although a few other countries have studied the possibility of operating such trains also. Unit train services where dedicated single-stacked trains operate on fixed schedules between a port and one or more inland clearance depots (ICD) are, however, in use in several countries. As an indication of the growth of such unit train services, table 35 shows the development in three developing countries.

76. Another major multimodal transport route, the trans-Siberian container service, or the Siberian landbridge (SLB) as it is commonly known, has undergone some changes during the last year. From April 1987, the organization responsible for the operation of the SLB service, Sojuztransit (SOTRA), introduced the so-called "general agency system" under which it entered into a contract with only one NVOCC designated as a general agent in each country. Other NVOCCs wishing to engage in the SLB from now on have to conclude arrangements with the general agent and operate within its framework.

77. The SLB is at the moment not operating at full capacity. The port of Vostochny, the Pacific gateway of the SLB, has an annual capacity of 300,000 TEUs, but in 1986 a total of only 94,160 TEUs were carried. 20/ Graph 3 shows the development of TEU volumes by the SLB. 21/ The ratio of westbound to eastbound TEU volumes is about four to one, showing a considerable imbalance. The Far East/Europe to Europe/Far East traffic ratio is, for example, about two to one. In addition to this quantitative imbalance, there is an imbalance in 40' and 20' container traffic: westbound cargoes are hauled mainly in 40' containers and eastbound cargoes in 20' containers. As a result, the container inventory problem is one of the biggest economic issues confronting SLB operations. Another is the transit time. It is at present reported to be about 16 days, making the total Far East/Europe transit time approximately equivalent to that of the all-water route, though the rail time is expected to be reduced to about 12 days within three to four years.

Table 35

Block train movements of containers in three selected developing countries

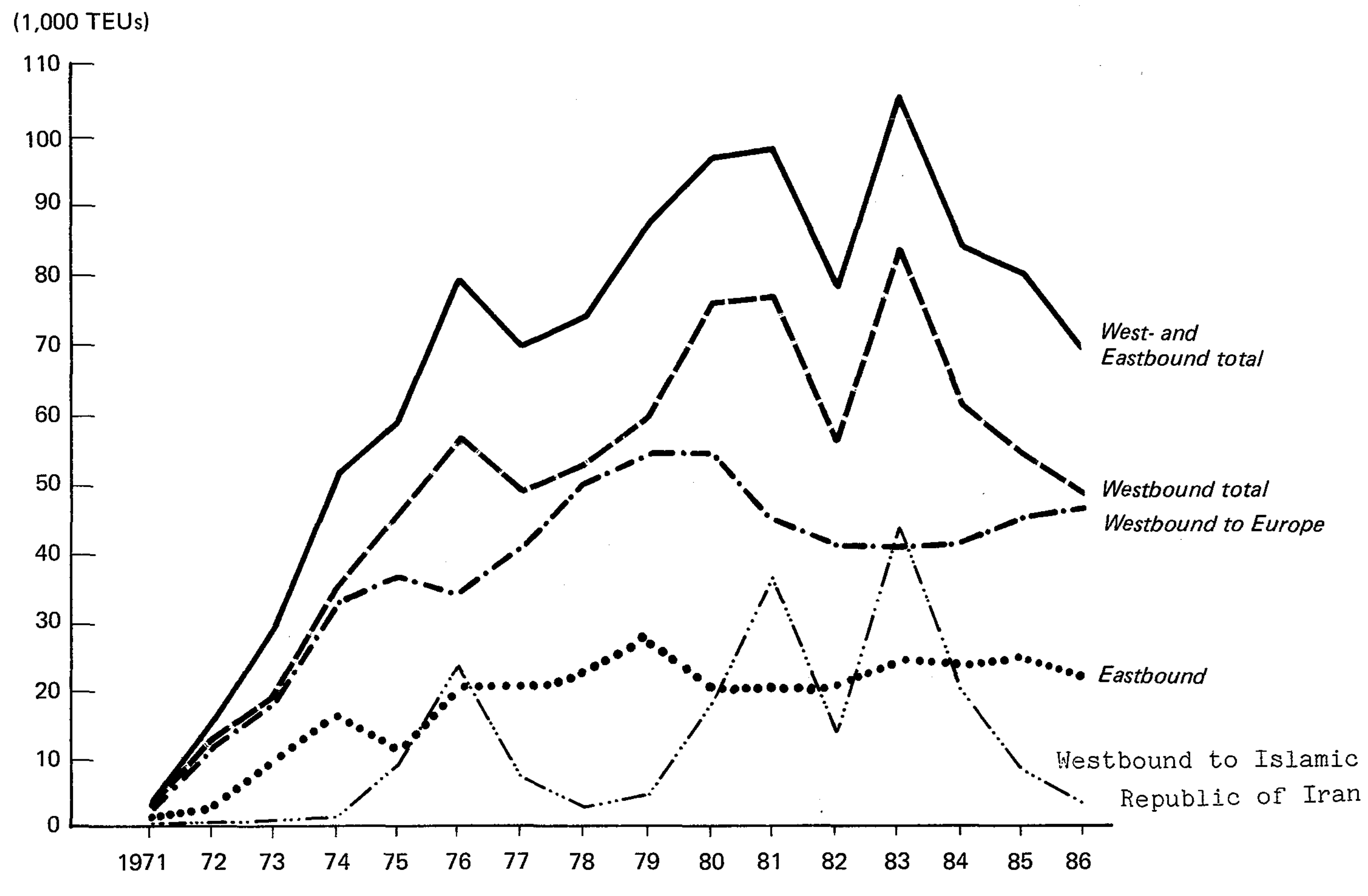
Country	TEUs		
	1985	1986	1987
India	10 571	18 597	25 318
Kenya	8 049	18 400	16 476 a/
Malaysia	0	207 b/	3 289

Source: Information supplied to UNCTAD.

a/ Up to September only.

b/ October-December only.

Graph 3
DEVELOPMENT OF TEU VOLUMES ON THE SIBERIAN LANDBRIDGE, 1971-1986



Source: Shipping and Trade News, (Tokyo) Japan, 11 December 1987, p. 27.

Source: Shipping and Trade News (Tokyo), 11 December 1987, p. 27.

B. Technological developments

78. International trade is continuously affected by technological developments related to transport. Four striking features of such developments are: (1) data processing; (2) physical distribution software; (3) standardization of containers and (4) sea-air multimodal services.

Data processing and information systems

79. Over the past 10 years, there has been strong growth in the tasks related to the management of the necessary information for the optimization of transport. The improvement in the performance of transport systems and equipment realized by transport operators is to a large extent the result of new techniques in data processing and data transmission. Optimization and simulation softwares are being developed to manage and trace containers, to organize pre- and post-transport operations, and to co-ordinate container repair schedules. So-called expert systems are increasingly being used by transport operators to distribute expertise amongst widely spread staff that is required, at short notice, to take multiple decisions with varying and fluctuating parameters. Other means allow information to be processed by merging the information chain with the transport chain. This is, for example, the case with systematic bar-coding of shipments, which makes it possible to direct, trace and locate them without delay.

80. These developments in information management are related to developments in transport operations. For example, the French railways (SNCF) have developed an information system which allows it to manage the dispatch of its wagons according to three different operating speeds. In a limited number of marshalling yards, individual wagons are grouped according to the time-constraints imposed by shippers. Container block trains are composed by giving first priority to high-tariffed "urgent" wagons, which are then complemented with "normal" wagons and, if space is left, with "slow" wagons that benefit from a reduced tariff. The transport of non-urgent goods is therefore much cheaper, and the transport of urgent goods is performed under conditions where the level of service is at least equal or superior to that offered by road hauliers.

Physical Distribution Software, 1986 Edition 22/

81. At the request of the Council of Logistics Management, a consultancy firm prepared, for the sixth consecutive year, a survey on Physical Distribution Software. This survey was divided into four parts, three parts dealing with the United States market, covering software for mainframe, mini and micro computers, and the fourth part dealing with the international market.

82. The software packages were classified into 13 areas:

- Order processing;
- Inventory control;
- Inventory planning and forecasting;
- Stock/pallet location (warehouse control);
- Labour performance;
- Material handling;
- Transportation analysis;
- Traffic routing and scheduling;

- Freight rate maintenance and audit;
- Vehicle maintenance;
- Physical distribution system modelling;
- Distribution requirements planning;
- Special services.

83. Out of the 748 packages surveyed, 582 referred to the United States market (142 for mainframe, 200 for mini and 240 for micros) and 166 referred to the international market. Most of the 748 packages have applications in one of three functional areas: order processing, inventory control, and transportation planning and control. Many of the packages have applications in more than one function. The multifunction packages are usually modular so that the software can be purchased one function at a time or as an integrated package. The most common multifunction combination is order processing and inventory control. Table 36 summarizes the results of this survey.

Developments in standardization of containers and related activities

84. The trend towards increasing standard container dimensions and ratings and the phenomenon of so-called dimensional deregulation has attracted special attention owing to the commercial and technical consequences for the transport industry as a whole.

85. The old 8' high container is no longer used by the major carriers in the American trades, and the trend in their new purchases is towards the 9'06" box. According to some estimates, the number of this type of containers now in operation is about 100,000.

Table 36

Functional areas of software by market origin

Function	Domestic	International
Order processing	244	136
Inventory control	288	127
Inventory planning and forecasting	184	51
Stock/pallet location (warehouse control)	104	95
Labour performance	60	
Material handling	49	
Transportation analysis	172	
Traffic routing and scheduling	91	
Freight rate maintenance and audit	89	
Vehicle maintenance	42	
Physical distribution system modelling	76	
Distribution requirements planning	42	14
Special services	30	
Total	1 471	424

Source: Arthur Andersen and Company, Stamford, Connecticut, 1987.

86. When the 8' high container was still in common usage, containers with a height of 8'06" were called "high cube" boxes. This label has now been transferred to a new type of container that is both higher and longer than the standard 40' container. These new "high cube" boxes are 9'06" high and 45' long and are increasingly used in the Pacific trades. Apart from American MTOs, several European, Japanese and other Far-Eastern MTOs are introducing or planning the introduction of "high cube" containers in their traffic. About 5 per cent of the container trade between the United States and Japan now moves in this type of container. In trades serving Hong Kong, Taiwan Province of China, the Republic of Korea and Singapore, where there are no restrictions on the circulation of these containers, the share of cargo moved in "high cubes" ranges from 13 to 42 per cent. Forty-five foot containers are also being used in trade between the United States and Europe. However, in Europe their use is restricted to ports because of road limitations, in particular relating to bridge and tunnel clearance problems.

87. In domestic United States transport operations, one of the major United States VO-MTOs introduced, in 1985, a 48' long container with a cross section of 8'06" x 9'06". Such containers have a volume up to 45 per cent greater than the standard 40' container and are designed to be used in double-stack train operations. Although these "super large" containers are still utilized exclusively in the domestic United States' markets, negotiations have begun between American VO-MTOs and some Far-Eastern ports to work out infrastructure problems in order to allow their use in trades between the Far East and the United States.

88. This proliferation of larger and heavier containers has led to different measures, particularly in European countries, to enable inland transport and ports to handle these containers. These measures include the use of special rolling stock, as well as work to increase gabarits.

89. The new high-cube containers have, in the United States, caused the port of Oakland to enter into a joint venture with the Union Pacific Railroad (UP) and American President Lines (APL) to enlarge 15 railroad tunnels through the Sierras so that they can accommodate double-stack trains carrying high-cube containers. The port, APL and UP are each contributing $US 5 million towards the cost of the project. At the same time, in some countries (Australia, Japan) measures have been taken to allow the circulation of high-cube containers in the hinterland on a restricted network of roads.

90. The trend towards bigger and heavier containers was considered by the International Organisation on Standardization (ISO) Technical Committee 104 (TC 104) "Freight Containers" which met in June 1987, in Ottawa, Canada. The proposal to consider the adoption, within the ISO series 1 standards, of 2.9 m (9'06") high containers and the increase in the maximum gross mass for series 1B (30') and IC (20') type containers up to 30,480 kg was adopted, and the task was assigned to Sub-Committee 1 of TC 104. According to some opinions expressed in TC 104, future international standards should include containers 9'06" high, 45' long and 8'06" wide.

91. Consequently, TC 104 entrusted its working group with the task of developing a standard for a new series of containers. According to the mandate given to the group, this standard should:

- Take full advantage of road width limits of 2.6 m (8'06");

- Permit a height of up to 2.9 m (9'06");

- Allow the upper limit and intermediate sizes of container lengths to be optimized.

92. The most disturbing consequence of this move is that the horizontal geometry of this new series of containers will be different from that of existing standard containers and that containers of the new series will not be compatible with existing systems based principally on present ISO standards for containers in relation to dimension and ratings.

93. The average cargo weight per TEU increased from about 9.5 tonnes in 1978 to about 11.5 tonnes in 1983, 23/ or by about 21 per cent. In the new version of the International Standard 668, "Series 1 Freight Containers - Classification, Dimension and Ratings", which is now under consideration by the ISO Council, the present dimensions of the series 1 freight containers are maintained, while the maximum gross mass of the 20' container is upgraded from 20 to 24 tons or by 20 per cent. This new version of the ISO 668 container contains "a warning" in which attention is drawn to the fact that numbers of non-ISO containers exist which have similar length and width dimensions to ISO series 1 containers but have ratings and/or heights in excess of those defined in the ISO standard. They are not intermodal world-wide and their operation may require special arrangements.

94. Typical containers requiring such arrangements are:

- Those having similar characteristics to 1AA but having an external height of 2.9 m (9'06");

- Those having similar dimensional characteristics to ICC but rated to 30,480 kgs (67,200 lbs.)

Sea-air multimodal services

95. Among the types of multimodal transport services expanding rapidly are those combining sea and air transport (plus a short delivery trip by road). This kind of multimodal service is provided primarily by NVOCCs. Although sea-air multimodal transport services tend to originate and terminate in developed countries, interface points are often located in developing countries, and a growing number of developing countries are also utilizing this multimodal combination in their export promotion. Statistical material is still scant, but table 37, which shows the growth of sea-air multimodal transport from Japan to various destinations, illustrates the growth of this type of multimodal transport services.

96. The introduction of freight or combi aircraft with high capacities has contributed to the development of this type of service, providing the possibility of carrying large-sized cargoes. Aircraft used in the sea-air services from Japan to Europe via the Soviet Union are capable of transporting 20' maritime containers, thus allowing true door-to-door transport shipments. This is, however, the exception rather than the rule. Sea-air multimodal transport services differ from most other multimodal transport services in that cargoes are not normally delivered to the consignees in the containers in which they were stuffed at the point of origin. Devanning normally takes place at the interface point where the mode changes from sea to air.

Table 37

Sea-air cargoes from Japan
(Unit-tons)

Destinations	1985	1986	1987 (estimates)
Europe via N. America	12 553 (64.0)	24 978 (74.4)	
Europe via S.E. Asia	2 271 (11.6)	2 223 (6.6)	
Europe via USSR	1 830 (9.3)	1 478 (4.4)	
Europe (total)	16 654 (84.9)	28 679 (85.4)	30 800 (80.0) a/
Latin America	1 977 (10.1)	3 104 (9.2)	4 600 (11.9)
Other destinations	970 (5.0)	1 826 (5.4)	3 100 (8.1)
Total	19 601	33 599	38 500

Source: Shipping and Trade News, Tokyo, 11 December 1987, pp. 22 and 30.

Note: Figures in parentheses denote percentage shares.

a/ Including 2,100 tons to the United States and Canada.

97. Demand for sea-and-air combinations changes according to marketing conditions and environments and, especially, customers' needs. In some cases, it reflects flaws in port operations at the end of a trade which force NVOCCs to design more efficient routing for their cargo; in other cases, the increasing use of the "just-in-time" concept and the "zero inventory" formula by industrial sectors creates conditions for the further development of this variety of multimodal transport services. Interface points for the transfer from sea to air must be chosen with the utmost care, since efficient transfers are a prerequisite for successful sea-air multimodal transport.

98. Cargoes moved by sea-air service from Japan, mainly destined for Europe, are transhipped from sea to air at points on the North American Pacific coast (Los Angeles, San Francisco, Seattle), in the far east of the Soviet Union (Vostochny and Vladivostock) or in south-east Asia (Hong Kong, Bangkok, Singapore).

C. UNCTAD's contribution to multimodal transport and technological development

Pilot project for a reference library for multimodal transport container tariff rules

99. As was reported in the Review of Maritime Transport, 1986 (TD/B/C.4/309), the UNCTAD secretariat was requested to establish a pilot project for a reference library for multimodal transport tariff rules. The inauguration of the pilot project by the end of 1987 was widely publicized. The library is designed to allow users of multimodal container tariffs to consult existing tariffs in trades at various stages of containerization in order for such users to develop similar tariff rules themselves. This will promote uniformity of tariffs and thus facilitate easy reference to tariffs by both shippers and carriers.

100. Access to the reference library is public. Potential users of the reference library include established or new carriers, shippers and consignees, freight forwarders and governmental organizations interested in tariff-rule issues. It is hoped that the same organizations, on a voluntary basis, will also provide additional examples of tariff rules for inclusion in the reference library. The secretariat will react promptly to all inquiries, sending examples of tariff rules to interested parties. The reference library does not deal with the tariff rates themselves, but only with the tariff rules, since it is the object of the reference library to assist with the standardization of tariff rules to the greatest possible extent.

101. While for the time being access to and retrieval from the reference library will be possible only by non-electronic means, it was agreed, at the thirteenth session of the Committee on Shipping, to test the possibility of electronic access to the reference library over the next 18 months. The pilot project for the reference library will operate so that the secretariat can report on its use to the fifteenth session of the Committee on Shipping.

MULTISHIP computer programmes

102. Development of the MULTISHIP programmes continued. In 1987 a new version of Model II (Version 5C) was released. Model II combines the concepts of the pure port-to-port model with a potent inland transport optimization programme. In 1988 an improved version which accepts a total of 20 ports and the use of master-leased containers will be released.

UNCTAD MT-Workshops

103. The year under review saw a strong upsurge in deliveries of the UNCTAD-developed workshops on multimodal transport. Nine Workshops were delivered, with a total of 132 participants from 16 countries. This was two deliveries more than planned. Deliveries were made in: Alexandria, Egypt, and Bangalore, India, in English; in Casablanca, Morocco, Douala, Cameroon, and Sousse, Tunisia, in French, and in Guatemala City, Guatemala, and Lázaro Cárdenas, Mexico, in Spanish. In 1988, a total of nine deliveries are planned: Penang, Malaysia; Tampico, Mexico; San José, Costa Rica; Bogota, Colombia, between May and July, and Kigali, Rwanda; Dakar, Senegal; India, Kenya and Nigeria in the autumn. It is expected that, by the end of 1988, more than 400 government officials and executives of transport-related companies will have participated in the UNCTAD Multimodal Transport Workshops.

Commercial risk factor in container terminal management

104. Since the 1985 study on "Rights and duties of container terminal operators and users" (UNCTAD/ST/SHIP/6) drew attention to the commercial risk for developing countries inherent in the provision and operation of container terminals, further developments have underlined the significance and extent of this risk factor. The introduction of round-the-world services and the subsequent demise of the United States Lines first generated a climate of excessive competition, then underscored the fragility of most container terminals' commercial future and financial position. The emphasis that operators of round-the-world services placed on the hub-port concept only magnified the negative consequences of the United States Lines' failure. In the implementation phase, this emphasis triggered off unprecedented underbidding of handling rates and led to important new investments in container facilities.

105. The validity of the round-the-world concept was not and is not necessarily called into question by the collapse of one service. As a matter of fact, the overall tendency towards concentration in shipping and the related size polarization of operators continues unabated. Hence the ports' and container terminals' potential clientele will in future consist increasingly of a restricted number of mammoth operators controlling the largest traffic flows and a variable number of smaller and medium-sized container lines sharing the residual cargoes. Simultaneously, the transshipment, load-centre and feeder concepts have gained further in popularity, actually boosting the total number of container movements in ports without a proportionate increase in container traffic.

Container statistics

106. Container moves have increased much more than seaborne traffic in general. About 3 million TEUs moved in 1970. In 1985 the figure was 28 million TEUs, and it is estimated that it will grow to 38 million TEUs in 1990 and 57 million TEUs in the year 2000.

107. Global production of containers increased considerably in 1987, but did not reach the 1985 levels. Almost 80 per cent were produced in Asia. Graph 4 shows production over the period 1983-1987.

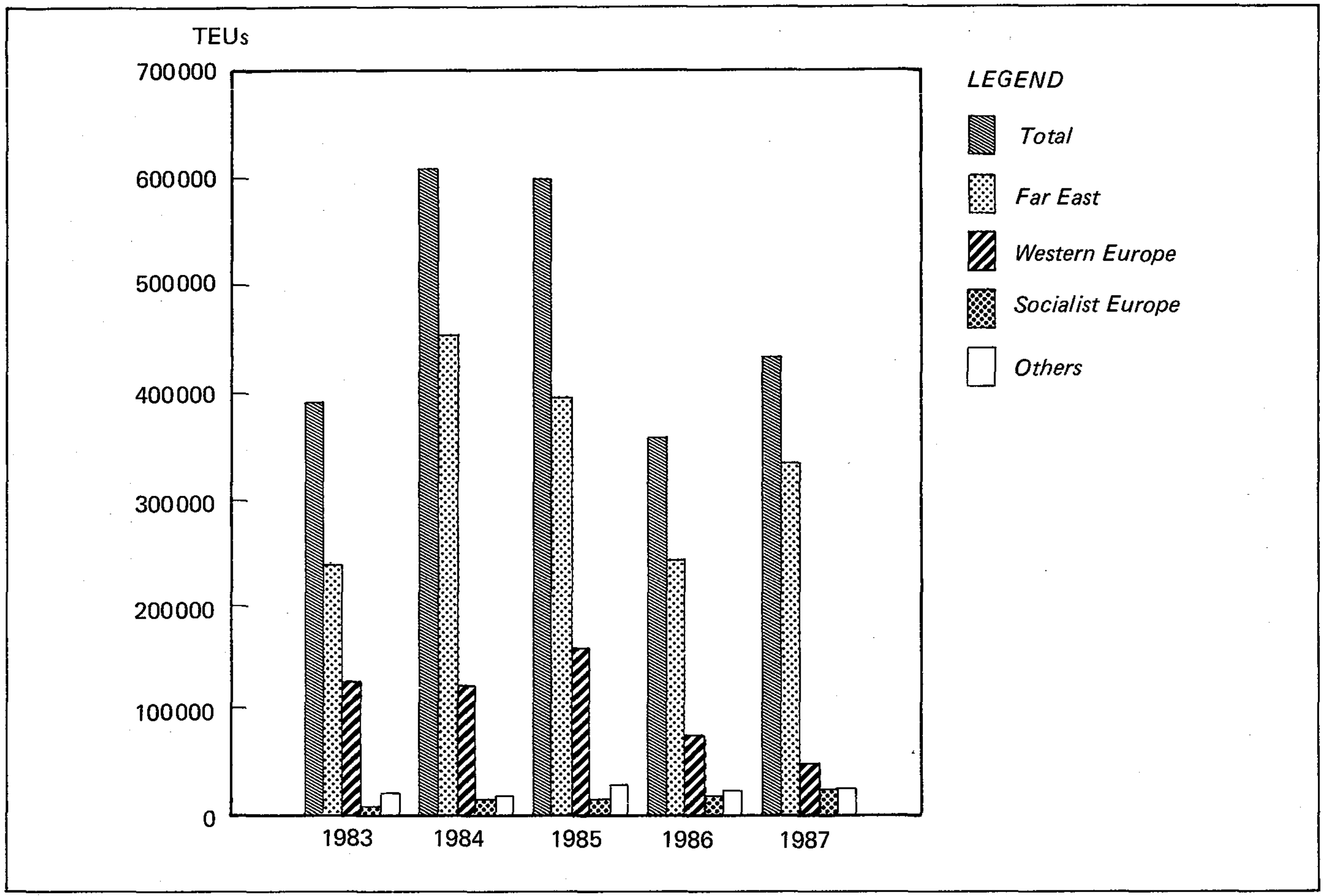
108. Several production facilities in Western Europe and Japan were closed down in 1987, resulting in a theoretical decline in capacity of about 250,000 TEUs. A significant proportion of the new constructions in 1987 was considered to relate to replacement demand, with the remainder being added to the world-wide container population which is now estimated to exceed 5 million TEUs.

Development of transport statistics

109. It was mentioned above that the exact magnitude of growth of multimodal transport is difficult to assess owing to the lack of transport statistics showing numbers of containers moving on combined or MT documents. Furthermore, it is uncertain how many of the containers, which are covered by house-to-house MT document or bills of lading, actually reach their intended destination intact without being opened and the cargo devanned.

110. These shortcomings make it difficult for Governments to assess correctly the development of multimodal transport and the consequential need for infrastructure improvements to cope with increased container traffic. There is first of all a need for better transport statistics so that countries can see exactly how many containers actually move inland from ports, and how many of them do so on MT documents or combined bills of lading. To alleviate this lack of transport statistics, the Shipping Division, in co-operation with the UNCTAD Data Processing and Information Systems Service and the Automated System for Customs Accounting and Statistical Data Acquisition, Control and Management (ASYCUDA) team is developing a computerized transport statistical package that will be offered to developing countries. This package, which will be based on internationally agreed standards and Customs procedures, will offer countries the possibility of processing details of data of cargo, containers and vessels.

Graph 4
CONTAINER PRODUCTION
1983-1987



Source: Containerization International Yearbook, various issues, and Cargo System, January 1988, pp. 22-25.

111. The use of additional transport data provided by regional and national systems will enable port authorities, shipowners and government agencies to generate comparable data, identify trends, monitor activities and, most importantly, plan future transport projects. For example:

- Government departments: transport statistics can be used to analyse the role of shipping/ports within the national economy. Specifically, the data can be used for capital budget/allocation decisions that are related to infrastructure investments and for monitoring the effect of shipping "invisibles" on the balance of payments. Also, a maritime information system would be useful to Freight Study Units that often work on national maritime policy, providing foreign trade organizations with data for freight negotiations, route analysis studies, and the promotion of transport services;

- Development agencies: maritime statistics are essential for developing export marketing strategies, supporting fleet development planning, and identifying short-/long-term trends in the direction and composition of foreign trade;

- National transport authorities: the statistical data generated would make it possible to analyse trends in inland transport patterns for use in investment planning for infrastructure improvements;

- Port authorities: statistical data and other tools are used for development/planning, improving port operations, calculating efficiency indicators, and/or measuring the effect of import/export trade on interior transport modes. Specific data input/output would identify ship characteristics, vessel call frequency, port time, cargo flow/mix, port performance indicators, etc. Invoices for port dues on ships and cargo would be accurately and rapidly prepared;

- Shipping companies: National flag carriers can use maritime data for fleet investment decisions and for marketing. For the former, cargo data can enable managers to determine the most appropriate size/type vessels for a given trade, forecast trends, establish service requirements and develop efficient schedules. For the latter (marketing), shipping information may enable carriers to identify marketing trends, new sales opportunities, competitive positions, and pricing tactics.

112. The system will be designed to maintain a high degree of modularity and flexibility. The project will allow for an appropriate training component for national staff with a view to securing efficiency and continuous development. Moreover, the project will ensure the introduction of advanced technology in a regional scheme which would otherwise prove to be costly if introduced separately by individual countries.

ECE work on a new TIR Carnet for multimodal transport

113. The ECE Group of Experts on Customs Questions affecting Transport, at its fifty-ninth session, approved a new model for the TIR Carnet for multimodal transport as prepared by the IRU. This new carnet was introduced in September 1987. Although it has not yet found general use within the industry, its introduction should further facilitate door-to-door transport services in Contracting States to the TIR Convention.

Chapter VII

OTHER DEVELOPMENTS

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

114. During 1987, one more State (Belgium) became a Contracting Party to the United Nations Convention on a Code of Conduct for Liner Conferences, which came into force on 6 October 1983. Thus, at the end of 1987, the total number of States Contracting Parties to the Convention stood at 69. 24/

115. In accordance with the provisions of article 52 of the Convention, a Review Conference "to review the working of the Convention, with particular reference to its implementation, and to consider and adopt appropriate amendments" is scheduled to be held in Geneva from 31 October to 18 November 1988. The UNCTAD secretariat has been providing assistance to Governments, on request, with regard to the preparations for the Review Conference, as well as with regard to the implementation of the Convention.

B. United Nations Convention on International Multimodal Transport of Goods

116. The United Nations Convention on International Multimodal Transport of Goods, 25/ which was adopted by consensus on 24 May 1980 by the United Nations Conference of Plenipotentiaries, was opened for signature in New York from 1 September 1980 to 31 August 1981 and remained open for accession thereafter. It will enter into force 12 months after 30 States have become Contracting Parties by definitive signature, ratification or accession. By January 1988, five countries - Chile, Malawi, Mexico, Rwanda and Senegal - had ratified or acceded to the Convention, while three countries - Morocco, Norway and Venezuela - had signed the Convention subject to ratification.

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

117. This Convention, 26/ which was adopted on 30 March 1978 by a conference of plenipotentiaries, was opened for signature in New York from 31 March 1978 to 30 April 1979 and has remained open for accession since then. It will enter into force 12 months after 20 States have become Contracting Parties by definitive signature, ratification or accession. By January 1988 11 countries, namely Barbados, Chile, Egypt, Hungary, Lebanon, Morocco, Romania, Senegal, Tunisia, Uganda and the United Republic of Tanzania, had ratified or acceded to the Convention.

D. United Nations Convention on Conditions for Registration of Ships

118. 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. 27/ The Convention will enter into force 12 months after the date on which not less than 40 States, the combined tonnage of which amounts to at least 25 per cent of world tonnage stipulated in annex III to the Convention, have become Contracting Parties to it.

119. By the end of January 1988, the Convention had been ratified by Côte d'Ivoire and Mexico, while the following 11 States had signed the Convention subject to ratification, acceptance or approval: Algeria, Bolivia, Cameroon, Czechoslovakia, Egypt, Indonesia, Libyan Arab Jamahiriya, Morocco, Poland, Senegal, USSR.

E. Ad hoc Intergovernmental Group of Senior Officials on Co-operation among Developing Countries in Shipping, Ports and Multimodal Transport

120. The Intergovernmental Group was convened in response to resolution 60 (XII) of the Committee on Shipping and met in Geneva from 21 to 25 September 1987. 28/ This was the first intergovernmental meeting convened by UNCTAD solely to discuss the problems of establishing and strengthening co-operation among developing countries in shipping, ports and multimodal transport.

121. At the conclusion of the meeting, resolution 1 (I) was unanimously adopted in which the Group identified the main areas of co-operation among developing countries in the field of maritime transport, made recommendations to the Governments of developing countries with a view to extension of mutual co-operation and gave guidance to the UNCTAD secretariat for its future work on this subject. It was also recommended that the Committee on Shipping, at its thirteenth session, should consider reconvening the Group at an appropriate time in order to provide guidance and to exchange views with regard to developments and progress made in co-operation among developing countries in shipping, ports and multimodal transport and maritime legislation, to identify specific areas of activity where co-operation can be established or strengthened in specific groups of countries or subregions, and to make appropriate recommendations to the countries concerned regarding possible co-operation. (See next section for action taken by the Committee on Shipping in this respect).

F. UNCTAD Committee on Shipping

122. The UNCTAD Committee on Shipping held its thirteenth regular session in Geneva from 14 to 22 March 1988. 29/ The Committee considered, as a major item on its agenda, the question of the prolonged imbalance between supply and demand in ocean shipping and the elaboration of practical measures to be taken in order to bring about a balanced situation in the shipping industry. Members of the Committee considered that, on the whole, there were signs of improvement in the situation, although States were urged to intensify measures to bring about a more balanced situation in world shipping and shipbuilding. The Committee requested the UNCTAD secretariat to continue to monitor developments in this respect and report thereon at its next session. The Committee also considered a large number of issues relating to international maritime policy and international co-operation in ocean shipping.

123. The Committee adopted two resolutions and one decision in which it *inter alia* requested the Secretary-General of UNCTAD to convene during 1989 a group of experts in order to propose an appropriate framework and modalities of inter-regional co-operation in the field of shipping services. Its next session will be devoted primarily to the consideration of issues of maritime transport and problems arising from development of co-operation among developing countries in the field of maritime transport and problems of multimodal transport.

G. UNCTAD Model Clauses on Marine Hull and Cargo Insurance

124. Pursuant to the recommendation of the Committee on Shipping, the Trade and Development Board, at the second part of its thirty-third session, endorsed the UNCTAD non-mandatory Model Clauses on Marine Hull and Cargo Insurance, as proposed by the Rapporteur of the Working Group on International Shipping Legislation which had adopted the Model Clauses, and instructed the UNCTAD secretariat, having assured the correspondence of the text in all languages, to circulate this version to the commercial parties concerned.

125. The model clauses thus adopted are a truly international legal basis governing the rights and duties of parties to insurance contracts involving international seaborne trade. The model clauses have maintained a degree of national market flexibility without losing the need for and the benefits gained from international uniformity. The UNCTAD secretariat has also been requested to prepare explanatory material in order to promote the use of the model clauses.

H. Maritime liens and mortgages - Joint Intergovernmental Group of Experts on Maritime Liens and Mortgages and Related Subjects

126. A Joint Intergovernmental Group of Experts on Maritime Liens and Mortgages and Related Subjects has been established by UNCTAD and IMO with a mandate to examine the subject of maritime liens and mortgages, including the possible consideration of:

(a) The review of the maritime liens and mortgages Conventions and related enforcement procedures, such as arrest;

(b) The preparation of model laws or guidelines on maritime liens, mortgages and related enforcement procedures, such as arrest;

(c) The feasibility of an international registry of maritime liens and mortgages.

127. The Joint Intergovernmental Group has met three times. Following a general debate on a number of fundamental issues at the previous sessions, the Joint Intergovernmental Group at its third session, which was held in Geneva from 30 November to 11 December 1987, carried out an article-by-article examination of the draft articles for a possible convention on maritime liens and mortgages. The draft articles cover such issues as: recognition and enforcement of mortgages; hypothèques and charges; ranking and effects of mortgages, hypothèques and charges; priority of maritime liens; extinction of maritime liens; rights of retention; effects of forced sale.

128. At the fourth session, to meet in London from 16 to 20 May 1988, the Joint Intergovernmental Group will have a revised text of the draft articles for consideration.

I. Maritime fraud

129. Pursuant to the request of the Committee of Shipping at its twelfth session, the UNCTAD secretariat has closely monitored the progress made in the establishment of the Maritime Fraud Prevention Exchange (MFPE) by attending the preparatory meetings of the founder members. The MFPE is being

established by the relevant organizations at the request of the Committee on Shipping in order to facilitate access to shipping information and to provide a service to the international shipping community. The progress report on the MFPE is being submitted to the thirteenth session of the Committee on Shipping in March 1988. The Committee on Shipping at its twelfth session also requested the UNCTAD secretariat to monitor the work done on the subject of sea waybills by the relevant international organizations. In doing so, the secretariat observed notable developments in this area, which are being reported to the thirteenth session of the Committee on Shipping. In addition, pursuant to a request from the Ad hoc Intergovernmental Group to Consider Means of Combating All Aspects of Maritime Fraud, including Piracy, the UNCTAD secretariat has prepared a comparative study of the various standards applied, at the national and international level, to shipping agents by various professional associations which relate to education and expertise, professional conduct and reputation, as well as financial responsibility of shipping agents. The UNCTAD secretariat has also prepared a set of Draft Minimum Standards which could be used as non-mandatory minimum standards for all those involved in agency business.

J. Trends among shippers' organizations

130. Shippers from developed as well as developing countries are becoming increasingly organized. They tend not only to co-ordinate their actions within their respective national boundaries to negotiate fairly with transport and terminal operators, but also to stimulate regional and international collaboration to protect their interests in the international transport area. One of the most noteworthy issues is the common stand taken by a number of shippers' councils all over the world to request their respective Governments to take the necessary action to expedite the entry into force of the Convention on International Transport of Goods by Sea (the Hamburg Rules). To further this aim, a world association of shippers' councils has been created.

Notes

1/ Based on Institute of Shipping Economics and Logistics (Bremen), Shipping Statistics, No. 9, 1987, p. 22.

2/ Philippines, Hong Kong, Singapore, Republic of Korea, India, Brazil, Iran (Islamic Republic of), Yugoslavia, Saudi Arabia, Kuwait (in order of importance).

3/ Indonesia, Argentina, Malta, Malaysia, Egypt, Iraq, Libyan Arab Jamahiriya, Venezuela, Cuba, United Arab Emirates.

4/ Surplus tonnage is defined as tonnage which is not fully utilized owing to slow steaming, lay-up status, or lying idle for reasons other than lay up (i.e. casualty, storage, under repair, etc.). For the calculation of surplus tonnage in the dry bulk and tanker sectors, a proportion of the total combined carrier fleet has been allocated to either dry bulk or oil trades according to an analysis of trading patterns, and the estimated surplus in each sector has been calculated accordingly.

5/ Lloyd's List (London), 21 January 1987 and 19 December 1987.

6/ Estimates given at a symposium on European Community Shipping (Institut Méditerranéen des Transports Maritimes, 8-11 October 1987).

7/ See table 19 and Lloyd's Shipping Economist (London), December 1987, p. 36.

8/ Ibid.

9/ John I. Jacobs plc, World tanker fleet review (London), July-December 1987, p. 25.

10/ The upward tendency in second-hand prices for dry bulk carriers and tankers was confirmed by estimates made on the basis of annual average prices for second-hand ships in 1986-1987 provided in other sources.

Table

Indicative second-hand prices, 1986 and 1987
(Millions of dollars)

Type and size of vessel	Age in years	1986	1987 (est)	Percentage change 1986/1987
30 000 dwt bulk	5	3.6	6.3	+75.0
32 000 dwt tanker	8	5.9	8.2	+39.0
70 000 dwt bulk	5	6.4	11.8	+84.4
80 000 dwt tanker	8	8.6	11.5	+33.7
120 000 dwt bulk	5	10.3	16.2	+57.3
250 000 dwt tanker	8	9.2	12.5	+35.9
75 000 m^3 LPG	3	11.9	21.0	+76.5
1 200 TEU ro/ro	5	14.8	10.6	-28.4
15 000 dwt general cargo ship	5	3.3	3.6	+9.1
1 600 TEU full containership	5	14.0	14.0	-

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

The above table indicates also that prices for second-hand five-year-old 1,200 TEU ro/ro carriers generally followed the prices for ro/ro newbuildings shown in table 21, though the decline in prices was more significant, while prices for three-year-old 75,000 m^3 LPG carriers increased by 76.5 per cent as compared with 28.2 per cent, growth of newbuilding prices for these type of ships.

11/ Lloyd's List (London), 18 January 1988.

12/ Fearnleys (Oslo), Review 1987, p. 19.

13/ Fearnleys (Oslo), Review 1986, p. 37, Review 1987, p. 36.

14/ Fearnleys (Oslo), Review 1987, p. 37.

15/ Fearnleys (Oslo), Review 1987, p. 36.

16/ Shipping and Trade News (Tokyo), Part II, 11 December 1987, pp. 34-59.

17/ Review of Maritime Transport, 1986 (United Nations publication, Sales No. E.87.II.D.6), para. 76.

18/ Containerisation International Yearbook 1987 (London), pp. 307-309.

19/ American Shipper, September 1987, p. 38.

20/ Supplement to Lloyd's Maritime Asia 1987, Part Two, p. 33.

21/ Shipping and Trade News (Tokyo), 11 December 1987, p. 27.

22/ Physical Distribution Software, 1986 Edition, Arthur Andersen and Company, Stamford, Connecticut, 1987.

23/ Kowan Niyaku, vol. 32, No. 5, p. 508.

24/ Algeria; Bangladesh; Barbados; Belgium; Benin; Bulgaria; Cameroon; Cape Verde; Central African Republic; Chile; China; Congo; Costa Rica; Côte d'Ivoire; Cuba; Czechoslovakia; Denmark; Egypt; Ethiopia; Finland; France; Gabon; Gambia; German Democratic Republic; Germany, Federal Republic of; Ghana; Guatemala; Guinea; Guyana; Honduras; India; Indonesia; Iraq; Jamaica; Jordan; Kenya; Kuwait; Lebanon; Madagascar; Malaysia; Mali; Mauritius; Mexico; Morocco; Netherlands; Niger; Nigeria; Norway; Pakistan; Peru; Philippines; Republic of Korea; Romania; Saudi Arabia; Senegal; Sierra Leone; Sri Lanka; Sudan; Sweden; Togo; Trinidad and Tobago; Tunisia; Union of Soviet Socialist Republics; United Kingdom (also on behalf of Gibraltar and Hong Kong); United Republic of Tanzania; Uruguay; Venezuela; Yugoslavia; Zaire.

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

26/ 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).

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

28/ The report of the Intergovernmental Group is contained in document TD/B/C.4/311.

29/ The Committee's report is contained in document TD/B/C.4(XIII)/Misc.2.

Annex I

CLASSIFICATION OF COUNTRIES AND TERRITORIES

Code 1 -	Canada	United States of America
Code 2 -	Japan	
Code 3 -	Australia	New Zealand
Code 4 -	Austria (L)	Italy
	Belgium	Monaco
	Denmark	Netherlands
	Faroe Islands	Norway
	Finland	Portugal
	France	Spain
	Germany, Federal Republic of	Sweden
	Gibraltar	Switzerland (L)
	Greece	Turkey
	Iceland	United Kingdom of Great Britain and Northern Ireland
	Ireland	
	Israel	
Code 5 -	South Africa	
Code 6 -	Albania	Poland
	Bulgaria	Romania
	Czechoslovakia (L)	Union of Soviet Socialist Republics
	German Democratic Republic	
	Hungary (L)	
Code 7 -	China	Viet Nam
	Democratic People's Republic of Korea	
Code 8 - 8.1	<u>Northern Africa</u>	
	Algeria	Morocco
	Egypt	Tunisia
	Libyan Arab Jamahiriya	

8.2 Western Africa

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

8.3 Eastern Africa

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 Caribbean and North America

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
Turks and Caicos Islands
United States Virgin Islands

9.2 Central America

Belize
Costa Rica
El Salvador
Guatemala
Honduras
Mexico
Nicaragua
Panama

9.3 South America - Northern seaboard

Guyana
French Guyana
Netherlands Antilles
Suriname
Trinidad and Tobago
Venezuela

9.4 South America - Western seaboard

Chile	Ecuador
Colombia	Peru

9.5 South America - Eastern seaboard

Argentina	Falkland Islands (Malvinas) a/
Bolivia (L)	Paraguay (L)
Brazil	Uruguay

Code 10-10.1 Western Asia

Bahrain	Lebanon
Cyprus	Oman
Democratic Yemen	Qatar
Iran (Islamic Republic of)	Saudi Arabia
Iraq	Syrian Arab Republic
Jordan	United Arab Emirates
Kuwait	Yemen

10.2 Southern and Eastern Asia

Bangladesh	Malaysia
Bhutan	Maldives
Brunei Darussalam	Pakistan
Burma	Philippines
Democratic Kampuchea	Republic of Korea
Hong Kong	Singapore
India	Sri Lanka
Indonesia	Thailand
Macau	

Code 11 - Malta Yugoslavia

Code 12 -

American Samoa	Papua New Guinea
Christmas Island (Australia)	Samoa
Fiji	Solomon Islands
French Polynesia	Tonga
Guam	Tuvalu
Kiribati	Vanuatu
Nauru	Wake Island
New Caledonia	

Notes

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

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

- Socialist countries of Eastern Europe and Asia: Codes 6 and 7

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

<u>of which</u>:

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

In certain tables, where appropriate, five open-registry countries are recorded as a separate group. The composition of this group was revised in 1981. The group comprises Bahamas, Bermuda, Cyprus, Liberia and Panama.

<u>a</u>/ 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, 1985 and 1986
(Million tons)

Area b/	Year	Goods loaded				Goods unloaded			
		Petroleum		Dry cargo	Total all goods	Petroleum		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
	1985	0.7	22.2	439.7	462.6	151.0	70.4	201.8	423.2
	1986	0.6	23.6	425.0	449.2	184.4	88.5	204.7	477.6
Japan	1970	-	0.3	41.6	41.9	170.4	30.4	235.1	435.9
	1985	-	0.4	93.4	93.8	196.0	59.9	347.4	603.3
	1986	-	0.4	87.2	87.6	202.6	70.7	324.7	597.9
Australia and New Zealand	1970	-	1.3	92.3	93.6	18.8	2.9	15.4	37.1
	1985	5.7	1.1	227.3	234.1	3.7	8.5	19.7	31.9
	1986	6.9	1.0	238.3	246.2	1.8	6.9	17.8	26.5
Europe	1970	28.6	82.3	244.8	355.6	621.0	100.4	469.0	1 190.4
	1985	151.3	91.3	438.3	680.8	406.6	157.6	672.6	1 236.8
	1986	168.9	85.7	445.8	700.4	391.7	164.2	687.6	1 243.6
South Africa	1970	-	-	13.2	13.2	8.8	2.6	6.2	17.6
	1985	-	-	69.8	69.8	17.5	0.3	8.9	26.7
	1986	-	-	71.8	71.8	18.0	0.3	8.2	26.5
Subtotal: developed market-economy countries	1970	29.3	89.2	699.9	818.3	892.4	239.9	895.7	2 028.0
	1985	157.7	115.0	1 268.4	1 541.1	774.8	296.7	1 250.4	2 321.9
	1986	176.4	110.7	1 268.1	1 555.2	798.5	330.6	1 243.0	2 372.1
Socialist countries of Eastern Europe and Asia									
Socialist countries of Eastern Europe (excluding USSR)	1970	0.2	3.4	34.8	38.5	10.8	3.0	29.2	43.0
	1985	0.1	9.5	49.0	58.6	25.4	1.0	57.2	83.6
	1986	-	14.5	52.6	67.1	28.4	1.0	58.5	87.9

Annex II (continued)

Area b/	Year	Goods loaded: Petroleum: Crude	Goods loaded: Petroleum: Products	Goods loaded: Dry cargo	Goods loaded: Total all goods	Goods unloaded: Petroleum: Crude	Goods unloaded: Petroleum: Products	Goods unloaded: Dry cargo	Goods unloaded: Total all goods
USSR	1970 1985 1986	38.0 64.9 65.0	22.9 48.9 50.3	46.0 40.3 40.3	106.9 154.1 155.6	2.5 6.7 7.3	- 0.6 0.6	11.9 69.8 72.5	14.4 77.1 80.4
Socialist countries of Asia	1970 1985 1986	- 30.0 38.0	0.1 6.2 6.8	13.3 24.3 25.6	13.4 60.5 70.5	5.4 2.9 3.1	0.4 1.4 1.3	24.4 72.4 73.0	30.2 76.7 77.5
Subtotal: socialist countries of Eastern Europe and Asia	1970 1985 1986	38.2 95.0 103.0	26.4 64.6 71.6	94.1 113.6 118.5	158.9 273.2 293.2	18.7 35.0 38.8	3.4 3.0 2.9	65.5 199.4 204.0	87.6 237.4 245.8
<u>Developing countries and territories</u>									
Northern Africa	1970 1985 1986	221.4 145.9 144.9	5.6 30.2 29.7	28.3 37.4 40.6	255.4 213.5 215.3	9.9 56.5 56.3	5.9 4.3 40.2	17.9 56.2 56.5	33.8 117.0 117.1
Western Africa	1970 1985 1986	60.5 92.4 96.8	1.0 3.1 3.2	61.5 49.4 50.6	123.0 144.9 150.5	3.6 3.8 4.1	4.0 2.8 2.9	14.8 27.4 27.1	22.4 34.0 34.1
Eastern Africa	1970 1985 1986	- - -	1.2 0.7 0.6	16.1 6.8 6.1	17.3 7.5 6.7	5.5 5.4 4.9	2.6 2.5 2.1	8.3 10.9 9.4	16.4 18.8 16.4
Caribbean and North America	1970 1985 1986	- 9.1 9.9	1.4 8.6 9.5	28.4 22.9 22.6	29.8 40.6 42.0	23.5 27.2 28.4	4.5 8.8 9.2	11.2 16.0 16.7	39.2 52.0 54.3
Central America	1970 1985 1986	- 59.7 61.3	3.7 4.7 5.6	11.9 13.3 13.5	15.6 77.7 80.4	6.0 3.7 3.6	5.5 2.6 2.7	6.5 14.1 14.0	18.0 20.4 20.3
South America: Northern Seaboard	1970 1985 1986	131.1 48.0 47.1	11.8 22.2 20.7	36.0 18.0 18.2	278.9 88.2 86.0	63.1 0.6 0.5	3.0 1.6 1.6	6.7 19.3 21.0	72.9 21.5 23.1
South America: Western Seaboard	1970 1985 1986	4.6 13.1 16.0	1.6 4.6 7.7	29.8 27.7 28.3	35.9 45.4 51.9	4.1 3.1 3.5	1.5 1.1 1.0	5.9 13.1 12.1	11.5 17.3 16.5

Annex II (continued)

Area b/	Year	Goods loaded				Goods unloaded			
		Petroleum		Dry cargo	Total all goods	Petroleum		Dry cargo	Total all goods
		Crude	Products			Crude	Products		
South America:	1970	0.1	1.1	54.3	55.5	18.8	1.0	19.8	39.6
Eastern	1985	0.4	6.1	178.2	184.7	28.5	2.0	25.3	55.8
Seaboard	1986	0.4	6.5	184.3	191.2	25.2	1.9	26.1	53.2
Western Asia	1970	588.7	65.6	3.3	658.6	0.1	1.0	13.1	14.2
	1985	369.6	66.5	18.0	454.1	8.8	5.3	93.1	107.2
	1986	387.4	70.7	21.0	479.1	15.0	6.6	107.0	128.6
Southern and	1970	35.0	23.7	89.3	148.0	54.7	23.3	61.9	139.9
Eastern Asia	1985	78.4	62.6	155.4	296.4	112.4	29.9	248.8	391.1
(n.e.s.)	1986	80.0	72.0	158.3	310.4	118.6	31.0	267.8	417.4
Developing	1970	—	—	—	..	—	0.3	0.7	1.0
countries in	1985	..	0.9	5.9	6.8	7.4	2.1	16.0	25.5
Europe	1986	—	1.0	6.7	7.7	7.9	2.2	16.3	26.4
Oceania	1970	—	0.2	9.5	9.7	0.6	1.6	2.9	5.1
(n.e.s.)	1985	—	0.3	7.9	8.2	—	2.0	3.1	5.1
	1986	—	0.3	8.1	8.4	—	2.0	3.2	5.2
Subtotal:	1970	1 041.4	216.9	368.4	1 627.7	189.9	54.2	169.7	414.0
developing	1985	816.6	210.5	540.9	1 568.0	257.4	65.0	543.3	865.7
countries	1986	843.8	227.5	558.3	1 629.6	268.0	67.4	577.2	912.6
World total c/	1970	1 110.0	330.0	1 165.0	2 605.0	1 101.0	302.0	1 127.0	2 530.0
	1985	1 069.3	390.1	1 922.9	3 382.3	1 067.2	364.7	1 993.1	3 425.0
	1986	1 123.2	409.8	1 945.0	3 478.0	1 105.3	400.9	2 024.3	3 530.5

Source: Compiled on the basis of data communicated to the UNCTAD secretariat by the Statistical Office of the United Nations.

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 trade (in dry cargo) amounted to 42 million tons in 1970, 30 million tons in 1985 and 31 million tons in 1986.

b/ See annex I for the composition of groups.

c/ Figures rounded to the nearest million.

Annex III

MERCHANT FLEETS OF THE WORLD BY FLAG OF REGISTRATION, a/ GROUPS OF COUNTRIES AND TYPES OF SHIPS, b/ IN GRT AND DWT, AS AT 1 JULY 1987
(dwt figures are shown in parentheses)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
World total e/	397 683 845 (632 347 935)	122 200 752 (236 276 748)	128 325 641 (227 407 639)	69 775 614 (97 662 057)	21 088 933 (23 077 915)	56 292 905 (47 923 576)
Developed market-economy countries and territories						
Australia	2 404 559 (3 701 273)	675 412 (1 164 970)	1 172 964 (2 020 792)	149 507 (192 868)	107 116 (111 498)	299 560 (211 145)
Austria	193 513 (337 855)	-	127 823 (232 715)	65 690 (105 140)	-	-
Belgium	2 268 383 (3 653 840)	117 155 (192 274)	1 350 136 (2 507 695)	147 297 (210 326)	176 322 (194 391)	477 473 (549 705)
Canada	1 213 811 (935 815)	179 515 (279 179)	254 711 (479 341)	20 786 (9 568)	16 083 (14 022)	742 716 (153 154)
Denmark	4 873 465 (6 961 068)	1 739 707 (3 379 437)	250 928 (456 280)	728 400 (849 973)	1 043 803 (1 117 881)	1 110 627 (1 157 497)
Finland	1 122 249 (1 400 594)	417 283 (776 898)	69 872 (112 710)	259 568 (337 318)	-	375 526 (173 668)
France	5 371 273 (8 406 743)	2 451 042 (4 820 236)	857 678 (1 492 679)	668 097 (860 869)	634 046 (687 399)	760 410 (545 560)
Germany, Federal Republic of	4 317 616 (5 659 148)	155 296 (292 856)	402 142 (618 279)	1 300 006 (2 055 139)	1 712 539 (1 974 091)	747 633 (718 783)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Gibraltar	2 827 098 (5 293 273)	1 817 226 (3 633 639)	715 639 (1 262 621)	192 785 (295 861)	-	101 448 (101 152)
Greece	23 559 852 (42 775 945)	9 125 291 (18 333 783)	10 556 411 (19 287 617)	2 759 338 (4 230 258)	168 744 (236 161)	950 068 (688 126)
Iceland	173 618 (150 987)	1 039 (1 430)	-	57 010 (97 586)	-	115 569 (51 971)
Ireland	153 637 (162 870)	3 754 (6 438)	-	52 217 (83 034)	18 385 (26 156)	79 281 (47 242)
Israel	514 815 (612 579)	991 (1 897)	42 074 (69 590)	129 228 (175 032)	335 407 (364 798)	7 115 (1 262)
Italy	7 817 353 (12 178 384)	2 565 738 (4 654 341)	2 792 286 (4 954 565)	960 189 (1 299 075)	251 597 (274 830)	1 247 543 (995 573)
Japan	35 932 177 (54 669 378)	10 601 519 (19 676 737)	12 611 376 (22 698 828)	4 124 910 (5 492 035)	2 035 301 (1 875 273)	6 559 071 (4 926 505)
Netherlands	3 908 231 (5 122 867)	499 099 (844 286)	318 396 (550 763)	1 425 119 (2 140 108)	527 232 (515 717)	1 138 385 (1 071 993)
New Zealand	334 193 (371 258)	73 496 (116 670)	26 040 (42 153)	92 778 (90 379)	71 851 (74 879)	70 028 (47 177)
Norway	6 359 349 (9 656 957)	2 619 931 (5 011 592)	1 084 743 (1 927 660)	555 866 (772 465)	58 716 (42 162)	2 040 093 (1 903 078)
Portugal	1 048 197 (1 702 913)	533 113 (1 005 052)	286 295 (477 465)	83 194 (120 535)	7 191 (10 280)	138 404 (89 581)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
South Africa	533 092 (570 373)	20 978 (33 305)	87 809 (169 999)	13 028 (14 268)	284 777 (274 454)	126 500 (78 347)
Spain	4 949 387 (8 387 475)	2 082 539 (4 316 846)	1 060 149 (1 958 200)	780 848 (1 242 806)	103 820 (143 630)	922 031 (725 993)
Sweden	2 269 541 (2 402 531)	325 428 (600 141)	133 793 (213 391)	957 710 (1 080 241)	87 884 (71 660)	764 726 (437 098)
Switzerland	354 614 (579 899)	799 (1 132)	284 381 (478 948)	52 865 (69 692)	-	16 569 (30 127)
Turkey	3 336 093 (5 516 139)	838 048 (1 507 022)	1 419 368 (2 495 623)	866 004 (1 383 116)	-	212 673 (130 378)
United Kingdom	8 504 605 (11 676 489)	2 731 599 (4 937 720)	1 492 450 (2 674 831)	863 765 (1 242 581)	1 353 637 (1 284 003)	2 063 154 (1 537 354)
United States of America	16 121 303 (23 262 197)	6 723 395 (13 840 185)	685 680 (1 314 891)	1 834 353 (1 807 258)	3 284 258 (3 494 304)	3 593 617 (2 805 559)
Subtotal:	140 462 024 (216 148 850)	46 299 393 (89 428 066)	38 083 144 (68 497 636)	19 140 558 (26 257 531)	12 278 709 (12 787 589)	24 660 220 (19 178 028)
Open-registry countries						
Bahamas	9 105 182 (15 695 840)	5 221 840 (10 148 487)	2 104 985 (3 705 582)	779 337 (1 077 647)	49 367 (67 025)	949 653 (697 099)
Bermuda	1 925 297 (3 131 539)	895 403 (1 680 431)	432 476 (745 745)	188 262 (253 355)	33 994 (33 731)	375 162 (418 277)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Cyprus	15 650 207 (27 322 868)	4 855 396 (9 522 409)	6 788 183 (11 847 800)	3 348 232 (5 182 187)	248 820 (327 646)	409 576 (442 277)
Liberia	51 412 029 (97 957 869)	27 342 130 (56 674 864)	16 787 828 (31 718 014)	1 940 998 (2 687 693)	786 669 (911 965)	4 554 404 (5 965 333)
Panama	43 254 716 (70 435 824)	8 861 570 (17 665 476)	17 732 891 (31 035 633)	9 019 825 (13 146 549)	2 585 441 (3 076 274)	5 054 989 (5 511 892)
Subtotal:	121 347 431 (214 543 940)	47 176 339 (95 691 667)	43 846 363 (79 052 774)	15 276 654 (22 347 431)	3 704 291 (4 416 641)	11 343 784 (13 035 427)
Socialist countries of Eastern Europe and Asia						
Socialist countries of Eastern Europe						
Albania	56 133 (79 940)	–	–	54 894 (79 940)	–	1 239 (–)
Bulgaria	1 551 176 (2 302 919)	440 860 (766 199)	619 996 (982 642)	342 020 (444 744)	19 097 (18 282)	129 203 (91 052)
Czechoslovakia	156 791 (230 363)	–	75 072 (120 091)	81 719 (110 272)	–	–
German Democratic Republic	1 494 039 (1 880 002)	35 860 (63 257)	362 256 (577 795)	798 378 (1 027 062)	59 267 (64 520)	238 278 (147 368)
Hungary	77 377 (109 444)	–	–	77 377 (109 444)	–	–

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Poland	3 469 670 (4 728 355)	289 198 (511 881)	1 550 933 (2 498 602)	1 201 924 (1 440 051)	-	427 615 (277 821)
Romania	3 263 823 (4 893 328)	383 720 (699 760)	1 589 649 (2 615 320)	1 017 480 (1 380 386)	-	272 974 (197 862)
Union of Soviet Socialist Republics	25 232 091 (28 555 746)	4 207 143 (6 512 183)	3 534 766 (5 696 942)	7 656 774 (9 830 660)	727 429 (741 996)	9 105 979 (5 773 965)
Subtotal:	35 301 100 (42 780 097)	5 356 781 (8 553 280)	7 732 672 (12 491 392)	11 230 566 (14 422 559)	805 793 (824 798)	10 175 288 (6 488 068)
Socialist countries of Asia						
China	12 341 477 (18 484 230)	1 685 324 (2 707 081)	4 142 575 (7 032 950)	5 296 790 (7 434 079)	494 911 (683 490)	721 877 (626 630)
Democratic Peoples' Republic of Korea	406 647 (603 049)	58 761 (115 801)	54 188 (83 568)	245 859 (371 932)	-	47 839 (31 748)
Viet Nam	360 470 (537 838)	40 614 (70 693)	14 200 (23 706)	276 709 (429 916)	-	28 947 (13 523)
Subtotal:	13 108 594 (19 625 117)	1 784 699 (2 893 575)	4 210 963 (7 140 224)	5 819 358 (8 235 927)	494 911 (683 490)	798 663 (671 901)
Subtotal socialist countries of Eastern Europe and Asia:	48 409 694 (62 405 214)	7 141 480 (11 446 855)	11 943 635 (19 631 616)	17 049 924 (22 658 486)	1 300 704 (1 508 288)	10 973 951 (7 159 969)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Developing countries and territories of Africa						
Algeria	892 553 (1 043 030)	124 100 (204 682)	57 494 (93 910)	207 503 (299 920)	-	503 456 (444 518)
Angola	91 712 (125 292)	2 052 (3 036)	-	69 565 (109 933)	-	20 095 (12 323)
Benin	4 665 (4 760)	-	-	3 104 (4 550)	-	1 561 (210)
Cameroon	57 871 (71 802)	-	-	48 268 (66 709)	-	9 603 (5 093)
Cape Verde	14 579 (22 092)	-	-	11 594 (20 301)	-	2 985 (1 791)
Comoros	1 795 (2 814)	-	-	1 335 (2 413)	-	460 (401)
Congo	8 458 (10 840)	-	-	-	-	8 458 (10 840)
Côte d'Ivoire	118 952 (149 337)	789 (1 170)	-	102 329 (132 977)	-	15 834 (15 190)
Djibouti	3 051 (2 650)	-	-	1 780 (2 300)	-	1 271 (350)
Egypt	1 074 192 (1 515 156)	94 429 (158 096)	369 398 (607 096)	482 930 (667 350)	-	127 435 (82 614)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Equatorial Guinea	6 412 (6 700)	–	–	6 412 (6 700)	–	–
Ethiopia	73 456 (94 142)	1 317 (2 200)	–	69 598 (88 150)	–	2 541 (3 792)
Gabon	23 843 (29 276)	347 (262)	–	19 326 (26 462)	–	4 170 (2 552)
Gambia	3 878 (5 098)	–	–	2 538 (3 952)	–	1 340 (1 146)
Ghana	142 421 (143 029)	965 (1 167)	–	75 126 (98 549)	–	66 330 (43 313)
Guinea	7 179 (2 927)	–	–	210 (185)	–	6 969 (2 742)
Guinea-Bissau	4 070 (2 846)	–	–	1 301 (1 340)	–	2 769 (1 506)
Kenya	7 872 (4 841)	–	–	–	–	7 872 (4 841)
Libyan Arab Jamahiriya	816 570 (1 447 491)	708 030 (1 343 253)	–	62 989 (81 935)	–	45 551 (22 303)
Madagascar	64 162 (82 242)	8 863 (13 859)	–	45 668 (62 618)	–	9 631 (5 765)
Malawi	424 (300)	424 (300)	–	–	–	–

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Mauritania	29 644 (13 878)	–	–	299 (721)	–	29 345 (13 157)
Mauritius	162 749 (240 721)	–	96 898 (179 085)	35 749 (52 668)	–	30 102 (8 968)
Morocco	418 451 (579 852)	10 077 (19 069)	92 339 (162 910)	87 994 (120 822)	4 608 (10 071)	223 433 (266 980)
Mozambique	35 957 (28 990)	885 (1 620)	–	10 159 (17 721)	–	24 913 (9 649)
Nigeria	593 582 (855 026)	223 136 (436 029)	–	319 460 (389 122)	–	50 986 (29 875)
Sao Tome and Principe	1 488 (1 172)	–	–	495 (180)	–	993 (992)
St. Helena	3 640 (2 829)	490 (565)	–	–	–	3 150 (2 264)
Senegal	46 448 (35 991)	1 422 (1 860)	–	10 803 (16 776)	–	34 223 (17 355)
Seychelles	3 233 (2 491)	–	–	–	–	3 233 (2 491)
Sierra Leone	8 756 (3 382)	499 (1 307)	–	–	–	8 257 (2 075)
Somalia	17 896 (18 852)	–	–	11 856 (14 447)	–	6 040 (4 405)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Sudan	96 699 (127 655)	832 (1 222)	–	93 082 (125 609)	–	2 785 (824)
Togo	59 690 (92 082)	–	–	58 813 (92 002)	–	877 (80)
Tunisia	285 483 (449 685)	131 836 (259 350)	37 230 (58 572)	48 140 (56 788)	–	68 277 (74 975)
United Republic of Tanzania	31 551 (32 888)	3 682 (5 652)	–	12 702 (19 707)	–	15 167 (7 529)
Uganda	5 091 (8 600)	–	–	5 091 (8 600)	–	–
Zaire	56 393 (75 932)	–	–	42 299 (61 189)	–	14 094 (14 743)
Subtotal:	5 274 866 (7 336 691)	1 314 175 (2 454 699)	653 359 (1 101 573)	1 948 518 (2 652 696)	4 608 (10 071)	1 354 206 (1 117 652)
Developing countries and territories of America						
Anguilla	3 705 (5 524)	–	–	3 079 (4 768)	–	626 (756)
Antigua	51 875 (102 701)	–	–	46 372 (94 692)	4 999 (7 959)	504 (50)
Argentina	1 901 026 (2 853 308)	585 323 (963 317)	457 126 (800 644)	612 777 (872 244)	40 061 (45 309)	205 739 (171 794)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Barbados	8 348 (8 639)	–	–	3 986 (8 574)	–	4 362 (65)
Belize	620 (805)	–	–	620 (805)	–	–
Bolivia	13 824 (22 155)	–	–	13 824 (22 155)	–	–
Brazil	6 324 059 (10 437 858)	1 882 280 (3 426 401)	2 894 027 (4 988 692)	1 050 321 (1 416 074)	86 973 (111 978)	410 458 (494 713)
Cayman Islands	706 160 (1 050 639)	193 495 (316 608)	183 957 (314 723)	198 620 (296 630)	12 297 (14 931)	117 791 (107 747)
Chile	546 745 (824 869)	582 (820)	277 633 (521 915)	139 586 (199 129)	3 245 (4 550)	125 699 (98 455)
Colombia	423 631 (597 376)	8 035 (12 309)	91 861 (173 451)	313 147 (402 857)	–	10 588 (8 759)
Costa Rica	14 781 (13 636)	–	–	6 275 (10 978)	–	8 506 (2 658)
Cuba	966 288 (1 291 122)	68 184 (103 315)	61 907 (100 039)	670 972 (927 502)	–	165 255 (160 266)
Dominica	1 724 (2 475)	–	–	1 621 (2 475)	–	103 (–)
Dominican Republic	43 560 (70 825)	674 (1 635)	11 171 (19 356)	27 323 (44 676)	–	4 392 (5 158)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Ecuador	421 361 (588 224)	156 776 (281 493)	–	224 238 (277 922)	–	40 347 (28 809)
El Salvador	3 819 (3 318)	–	–	–	–	3 819 (3 318)
Falkland Islands f/	6 907 (4 125)	–	–	537 (630)	–	6 370 (3 495)
Grenada	550 (829)	–	–	550 (829)	–	–
Guatemala	4 694 (6 450)	–	–	4 217 (6 450)	–	477 (–)
Guyana	22 310 (20 406)	125 (200)	–	9 649 (12 886)	–	12 536 (7 320)
Haiti	512 (170)	–	–	–	–	512 (170)
Honduras	506 374 (741 691)	58 070 (102 304)	24 770 (42 050)	375 441 (571 229)	8 393 (10 656)	39 700 (15 452)
Jamaica	13 118 (18 540)	–	–	8 044 (13 365)	3 442 (5 110)	1 632 (65)
Mexico	1 532 485 (2 172 957)	535 511 (905 688)	327 704 (533 774)	136 570 (186 756)	–	532 700 (546 739)
Montserrat	711 (1 016)	–	–	711 (1 016)	–	–

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Nicaragua	12 739 (16 976)	–	–	10 595 (16 976)	–	2 144 (–)
Paraguay	41 670 (49 224)	2 935 (3 880)	–	32 668 (41 836)	–	6 067 (3 508)
Peru	788 171 (1 036 162)	197 044 (336 764)	160 061 (268 269)	266 010 (370 152)	–	165 056 (60 977)
Saint Kitts and Nevis	556 (641)	–	–	300 (550)	–	256 (91)
Saint Lucia	2 092 (2 530)	–	–	1 632 (2 388)	–	460 (142)
Saint Vincent and the Grenadines	699 947 (1 132 838)	93 345 (166 104)	406 079 (687 103)	183 576 (260 906)	–	16 947 (18 725)
Suriname	11 457 (13 706)	–	–	7 884 (11 165)	1 343 (1 771)	2 230 (770)
Trinidad and Tobago	18 527 (12 491)	–	–	3 196 (4 510)	–	15 331 (7 981)
Turks and Caicos Islands	3 469 (4 269)	890 (1 580)	–	1 334 (2 406)	–	1 245 (283)
Uruguay	144 394 (218 115)	77 161 (144 267)	–	29 515 (37 633)	8 488 (12 470)	29 230 (23 745)
Venezuela	999 195 (1 418 050)	458 900 (743 378)	85 569 (142 095)	300 940 (419 206)	497 (1 180)	153 289 (112 191)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Virgin Islands (British)	8 179 (8 493)	818 (997)	-	4 857 (6 627)	-	2 504 (869)
Subtotal:	16 249 583 (24 753 153)	4 320 148 (7 511 060)	4 981 865 (8 592 111)	4 690 987 (6 548 997)	169 738 (215 914)	2 086 845 (1 885 071)
Developing countries and territories of Asia						
Bahrain	43 833 (51 975)	3 308 (5 333)	11 627 (20 003)	5 150 (8 478)	-	23 748 (18 161)
Bangladesh	410 721 (574 558)	49 592 (82 851)	-	321 975 (475 274)	-	39 154 (16 433)
Brunei Darussalam	352 276 (343 647)	636 (820)	-	-	-	351 640 (342 827)
Burma	239 261 (363 286)	2 935 (4 713)	79 694 (164 770)	123 434 (165 366)	-	33 198 (28 437)
Democratic Kampuchea	3 558 (3 839)	-	-	998 (1 481)	-	2 560 (2 358)
Democratic Yemen	12 278 (13 216)	1 886 (3 185)	-	2 643 (4 234)	-	7 749 (5 797)
Hong Kong	8 034 668 (13 470,976)	1 057 437 (1 942 181)	5 748 006 (10 080 503)	385 165 (502 294)	436 797 (475 532)	407 263 (470 466)
India	6 725 776 (10 890 782)	1 792 132 (3 121 091)	3 151 665 (5 398 105)	1 379 606 (2 013 778)	1 339 (1 840)	401 034 (355 968)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Indonesia	2 120 531 (2 963 181)	630 421 (1 079 405)	128 832 (187 465)	904 853 (1 339 370)	59 648 (74 825)	396 777 (282 116)
Iran, Islamic Republic of	3 976 873 (7 222 831)	2 346 894 (4 708 533)	1 079 668 (1 813 334)	404 404 (552 755)	-	145 907 (148 209)
Iraq	1 002 236 (1 683 083)	768 214 (1 424 120)	-	100 146 (138 995)	-	133 876 (119 968)
Jordan	32 884 (47 710)	-	25 948 (43 832)	-	-	6 936 (3 878)
Kuwait	2 087 856 (3 183 610)	1 225 043 (2 091 439)	-	296 171 (450 845)	153 059 (163 243)	413 583 (478 083)
Lebanon	460 876 (729 538)	25 183 (40 856)	115 769 (200 837)	261 807 (407 898)	1 946 (1 543)	56 171 (78 404)
Malaysia	1 688 523 (2 388 253)	240 906 (407 450)	378 154 (643 913)	391 286 (597 154)	190 507 (225 238)	487 670 (514 498)
Maldives	100 200 (159 852)	3 098 (5 568)	42 897 (72 260)	48 323 (75 827)	-	5 882 (6 197)
Oman	25 321 (16 399)	432 (542)	-	11 773 (6 535)	-	13 116 (9 322)
Pakistan	394 407 (565 696)	43 429 (89 937)	-	328 576 (465 140)	-	22 402 (10 619)
Philippines	8 681 227 (14 827 666)	745 716 (1 435 853)	6 388 210 (11 369 644)	1 121 712 (1 691 085)	19 930 (30 922)	405 659 (300 162)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Qatar	306 443 (460 938)	111 736 (206 505)	–	94 908 (149 701)	85 594 (91 537)	14 205 (13 195)
Republic of Korea	7 214 070 (11 452 759)	952 680 (1 812 475)	4 139 854 (7 327 825)	892 331 (1 330 681)	358 712 (378 430)	870 493 (603 348)
Saudi Arabia	2 692 044 (4 588 299)	1 619 911 (3 085 491)	192 863 (348 590)	380 742 (558 172)	67 109 (75 650)	431 419 (520 396)
Singapore	7 098 116 (11 924 578)	2 160 503 (4 176 504)	2 464 890 (4 405 806)	1 104 917 (1 678 554)	621 384 (749 167)	746 422 (914 547)
Sri Lanka	594 491 (908 456)	98 050 (181 533)	255 888 (432 913)	221 298 (285 676)	–	19 255 (8 344)
Syrian Arab Republic	63 077 (93 205)	–	–	58 504 (87 946)	–	4 573 (5 259)
Thailand	510 991 (758 442)	62 432 (113 715)	16 124 (26 739)	349 240 (537 749)	31 863 (42 664)	51 332 (37 575)
United Arab Emirates	732 013 (1 159 928)	395 651 (695 006)	8 586 (14 407)	133 048 (211 396)	122 738 (148 893)	71 990 (90 226)
Yemen	199 909 (414 590)	192 673 (406 640)	–	5 293 (7 950)	–	1 943 (–)
Subtotal:	55 804 459 (91 261 293)	14 530 898 (27 121 746)	24 228 675 (42 550 946)	9 328 303 (13 744 334)	2 150 626 (2 459 484)	5 565 957 (5 384 783)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Developing countries of Europe						
Malta	1 725 984 (2 852 641)	312 472 (607 142)	882 458 (1 487 933)	457 141 (693 273)	25 447 (26 869)	48 446 (37 424)
Yugoslavia	3 164 893 (4 939 928)	316 543 (536 885)	1 368 501 (2 338 524)	1 354 066 (1 969 629)	49 329 (64 675)	76 454 (30 215)
Subtotal	4 890 877 (7 792 569)	629 015 (1 144 027)	2 250 959 (3 826 457)	1 811 207 (2 662 902)	74 776 (91 544)	124 920 (67 639)
Developing countries and territories of Oceania						
Fiji	35 324 (32 398)	4 933 (7 473)	-	15 770 (15 993)	-	14 621 (8 932)
Kiribati	3 332 (2 841)	-	-	1 836 (1 626)	-	1 496 (1 215)
Nauru	65 777 (92 878)	-	36 976 (59 321)	27 853 (33 557)	-	948 (-)
Papua New Guinea	36 346 (44 891)	1 892 (3 267)	-	18 297 (27 453)	-	16 157 (14 171)
Solomon Islands	6 387 (5 350)	-	-	2 430 (3 331)	-	3 957 (2 019)

Annex III (continued)

	Total	Oil tankers	Bulk carrier c/	General cargo d/	Container ships and lighter carriers	Others
Tonga	18 295 (23 429)	-	-	14 555 (20 771)	-	3 740 (2 658)
Tuvalu	526 (458)	-	-	353 (250)	-	173 (208)
Vanuatu	540 088 (982 189)	248 485 (506 154)	208 184 (346 696)	63 093 (108 518)	-	20 326 (20 821)
Samoa	26 087 (34 751)	-	-	24 930 (34 325)	-	1 157 (426)
Subtotal:	732 162 (1 219 185)	255 310 (516 894)	245 160 (406 017)	169 117 (245 824)	-	62 575 (50 450)
Subtotal developing countries and territories:	82 951 947 (132 362 891)	21 049 546 (38 748 426)	32 360 018 (56 477 104)	17 948 132 (25 854 753)	2 399 748 (2 777 013)	9 194 503 (8 505 595)
Other unallocated	4 512 749 (6 887 040)	533 994 (961 734)	2 092 481 (3 748 509)	360 346 (543 856)	1 405 481 (1 588 384)	120 447 (44 557)

Notes

Source: Lloyd's Register of Shipping - Statistical tables, 1987 (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 of America and Canada and the United States Reserve Fleet.

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

d/ Including passenger/cargo.

e/ Excluding estimates of the United States Reserve Fleet and United States and Canadian Great Lakes fleets, which amounted respectively to 2.7 million grt (3.4 million dwt), 1.4 million grt (2.5 million dwt) and 1.8 million grt (2.6 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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