UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT
Geneva

REVIEW OF MARITIME TRANSPORT, 2006

Report by the UNCTAD secretariat

UNITED NATIONS

New York and Geneva, 2006

NOTE

The *Review of Maritime Transport* is a recurrent publication prepared by the UNCTAD secretariat since 1968 with the aim of fostering the transparency of maritime markets and analysing relevant developments. Any factual or editorial corrections that may prove necessary, based on comments made by Governments, will be reflected in a corrigendum to be issued subsequently.

*

* *

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

*

* *

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

*

* *

UNCTAD/RMT/2006

UNITED NATIONS PUBLICATION

Sales No. E.06.II.D.7

ISBN 92-1-112699-1

ISSN 0566-7682

CONTENTS

LIST OF TABLES, FIGURES AND BOXES

Figure

Box

ABBREVIATIONS AND EXPLANATORY NOTES

Abbreviations

ASEAN	Association of South-East Asian Nations
BAF	bunkering adjustment factor
bcm	billion cubic metres
CAN	Community of Andean Nations
c.i.f.	cost, insurance and freight
COMESA	Common Market for Eastern and Southern Africa
DMECs	developed market-economy countries
dwt	deadweight tons
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
FDI	foreign direct investment
FEU	40-foot equivalent unit
f.o.b.	free on board
GCC	Gulf Cooperation Council
GDP	gross domestic product
grt	gross registered tons
IICL	Institute of International Container Lessors
IMF	International Monetary Fund
IMO	International Maritime Organization
LDC	least developed country
ldt	light displacement ton
LNG	liquefied natural gas
LPG	liquefied petroleum gas
mbpd	million barrels per day
MCCA	Central American Common Market
MERCOSUR	Common Market of the South
NAFTA	North American Free Trade Agreement
n.e.s.	not elsewhere specified
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
TEU	20-foot equivalent unit
THC	Terminal Handling Charges
ULCC	ultra-large crude carrier
UNCTAD	United Nations Conference on Trade and Development
VLCC	very large crude carrier
WS	Worldscale
WTO	World Trade Organization

Explanatory notes

- All references to dollars ($) are to United States dollars, unless otherwise stated.
- "Tons" refers to metric tons, unless otherwise stated.
- Because of rounding, details and percentages presented in tables do not necessarily add up to the totals.
- Two dots (..) indicate that data are not available or are not separately reported.
- A hyphen (-) signifies that the amount is nil or less than half the unit used.
- In some tables, the data shown for earlier years have been revised and updated and therefore differ from those shown in previous issues of the *Review*. This relates in particular to the distribution of world tonnage according to country groups, specifically the classification of major open-registry countries. Up until the 1994 edition of the *Review*, the majority of the tables included four countries and one territory in this group, namely the Bahamas, Bermuda, Cyprus, Liberia and Panama, while some tables also included Malta and Vanuatu. In 1995, Malta and Vanuatu were included in all tables referring to major open-registry countries. This reclassification primarily affected the share of developing countries in Europe in total world tonnage. As in the previous edition of the *Review of Maritime Transport,* coverage of open-registry countries covers nine countries and three territories. Separate data for six of them, namely the Bahamas, Bermuda, Cyprus, Liberia, Malta and Panama, are provided, while data for the other four countries and two territories, namely Antigua and Barbuda, the Cayman Islands, Gibraltar, Luxembourg, Saint Vincent and the Grenadines, and Vanuatu, are shown together in one group.
- In the tables and the text, the term *countries* refers to countries, territories or areas.

INTRODUCTION

The *Review of Maritime Transport* is an annual publication prepared by the UNCTAD secretariat of the United Nations Conference on Trade and Development. Its purpose is to identify the main developments in world maritime transport and to provide relevant statistical data. It focuses on developments concerning maritime activities in developing countries as compared with other groups of countries. It also highlights the correlation between the development of global trade and maritime transport activities in general. Regional developments in sub-Saharan Africa are the subject of this year's special chapter.

SUMMARY OF MAIN DEVELOPMENTS

Development of the world economy and seaborne trade

- In 2005, world output grew by 3.6 per cent, which was about one fifth lower than in 2004 (when it grew by 4.1 per cent). The developed market-economy countries experienced growth of 2.7 per cent, while developing countries recorded an average increase of 6.2 per cent. For 2006, growth forecasts for world output are cautiously conservative, at around 3.6 per cent.

- The volume of world merchandise exports grew by 6.0 per cent, compared with 9.5 per cent in 2004. This growth reflects the resilience of economic performance in China and some developed countries.

- The total OECD industrial production index increased by 2.2 per cent, this increase reflecting the performance of the United States, Japan and, to a lesser extent, European OECD countries.

- World seaborne trade (goods loaded) recorded another consecutive annual increase, reaching a record high of 7.11 billion tons. The annual growth rate was 3.8 per cent, below the 5.3 per cent increase for 2004. Global maritime trade growth is likely to continue to grow during 2006.

- Total maritime activities measured in ton-miles increased to 29,045 billion ton-miles, compared with 27,635 billion ton-miles in 2004.

Development of the world fleet

- The world merchant fleet expanded to 960.0 million deadweight tons (dwt) at the beginning of 2006, a remarkable 7.2 per cent increase, and the highest since 1989, when world merchant fleet started the recovery of the 1980s slump. Newbuilding deliveries increased to 70.5 million dwt, and tonnage broken up and lost was a modest 6.3 million dwt, which left a net gain of 64.2 million dwt.

- The fleets of oil tankers and dry bulk carriers, which together make up 72.9 per cent of the total world fleet, increased by 5.4 per cent and 7.9 per cent respectively. There was a 13.3 per cent increase from 98.1 to 111.1 million dwt in the container ship fleet and a 7.5 per cent increase from 22.5 to 24.2 million dwt in the liquefied gas carriers fleet.

- The average age of the world fleet dropped marginally to 12.2 years, with almost 27.1 per cent of the fleet 20 or more years old. General cargo vessels had the highest average age (17.5 years) and container vessels the lowest (9.4 years).

- Registration of ships by developed market-economy countries and major open-registry countries accounted for 26.9 and 45.0 per cent of the world fleet respectively. Open registries increased their tonnage by 6.9 per cent; two thirds of this beneficially owned fleet is owned by market-economy and developing countries. Developing countries' share reached 22.7 per cent, or 218.3 million dwt, of which 171.6 million dwt is registered in Asia.

World fleet productivity and supply and demand

- The main operational productivity indicators for the world fleet — tons carried per dwt and thousands of ton-miles per dwt — reached 7.4 and 30.3 respectively. Both figures represented marginal decreases from the previous year.

- World total surplus tonnage increased marginally in 2005 to 7.2 million dwt, or 0.7 per cent of the world merchant fleet — the same as the previous year. The surplus capacity in the tanker sector remained modest at 4.5 million dwt, while overcapacity in the dry bulk sector fell to 2.0 million dwt.

Freight markets

- The year 2005 was a mixed one for the tanker market. Although the overall volume of seaborne crude oil trade increased by 4.5 per cent, the average freight indices for four of the five categories of tankers were below those recorded in 2004, which was a good year for tanker owners. However, only two of those five indices actually came down during 2005. Freight indices for VLCC/ULCC, Suezmax and Aframax tonnage increased during 2005 by 86.2, 40.6 and 27.6 per cent respectively.

- In 2005, seaborne shipments of the main bulks, particularly iron ore and coal, increased by 7.2 per cent. The balance between supply and demand resulted in lower rates for both time and trip charters, with annual average index decreases of 20.0 per cent and 12.2 per cent respectively.

- Again, by the end of 2005, freight rates evolution on the main containerized routes — trans-Pacific, transatlantic and Asia–Europe — was mixed when compared with rates prevailing at the end of 2004. On the transpacific and Asia–Europe routes the dominant directions, from Asia to North America and Europe, witnessed a drop in rates of 2.3 and 7.0 per cent respectively. But there were gains of 10.1 and 7.3 per cent in the other directions of these routes. Rates on the transatlantic route increased by 20.2 per cent (westwards) and by 18.6 per cent (eastwards).

Total freight costs in world trade by groups

- World total freight payments as a proportion of total import value stood at 3.6 per cent in 2004. The freight factor was 3.1 per cent for developed market-economy countries compared with 2.9 per cent in 2003, while for developing countries it was 5.9 per cent lower than the 6.1 per cent recorded in 2003. There were decreases in the freight factor for developing countries in Africa (9.9 per cent, compared with 10 per cent in 2003), Asia (6.5 per cent, compared with 6.7 per cent in 2003) and Oceania (15.4 per cent, compared with 15.6 per cent in 2003). But developing countries in America and Europe saw the freight factor increase to 4.3 per cent (4.1 per cent in 2003) and 2.8 per cent (2.6 per cent in 2003) respectively

Port development

- World container port traffic continued to expand at the rate of 12.6 per cent in 2004, reaching 336.9 million TEUs. Ports of developing countries and territories handled 137.0 million TEUs, or 40.7 per cent of the total. In 2004, there were 56 developing countries and territories with annual throughputs above 100,000 TEUs. In 2005, the top 20 world container ports handled 186.1 million TEUs.

Trade and transport efficiency

- In December 2005, in the Ministerial Declaration of the World Trade Organization meeting in Hong Kong (China), the Ministers reaffirmed the mandate and modalities for negotiations on trade facilitation contained in annex D of the "July Package".

- The size of the world container fleet grew by 9.0 per cent during 2005 to reach 21.6 million TEUs. Sea carriers' share in this total reached 55 per cent owing to extensive procurement during the year.

Review of regional developments

- During the period 2003–2005, the economic performance of countries in Sub-Saharan Africa remained below the one recorded by developing economies as a whole. Although some countries recorded annual increases in GDP above the target deemed appropriate for achieving the United Nations Millennium Development Goal of halving poverty by 2015, the vast majority failed to reach that target. In 2004 sub-Saharan African countries accounted for 45.5 per cent of African exports and 41.1 per cent of imports, with the balance being covered by South Africa and countries of North Africa. The increase in trade was been particularly good in oil-producing countries of West and Central Africa.

- In 2005 the total tonnage of the African merchant fleet, including the open registry of Liberia, reached 98,563 thousand dwt, or 10.3 per cent of the world fleet. Without the Liberian open registry the total tonnage of the African merchant fleet reached 5,537 thousand dwt, or 2.1 per cent of the world fleet. Sub-Saharan African countries have been increasing their share in the African fleet without open registry — it increased from 33 per cent in 2002 to 41.7 per cent in 2005. The African fleet without open registry is evenly spread between different types of vessels, the exception being containerized tonnage, which totalled only 3.4 per cent in 2005. The average age of this fleet is 20.5 years, considerably older than the world average.

- Public and private partnerships have been established in several countries to modernize and expand existing port and rail infrastructure. By connecting national networks, the latter might ease access to seaports for landlocked countries in East and Southern Africa. Containerized international sea freight of sub-Saharan African countries is heavily imbalanced in favour of imports and focuses on Europe. Recent developments, however, might work in expanding traffic to North America and the Far East, notably China.

Box 1

Vessel and registry groupings used in the *Review of Maritime Transport*

As in the previous year's *Review*, five vessel groupings have been used throughout most shipping tables in this year's edition. The cut-off point for all tables, based on data from Lloyd's Register – Fairplay, is 100 gross registered tons (grt), except those tables dealing with ownership, where the cut-off level is 1,000 grt. The groups aggregate 20 principal types of vessel category, as noted below.

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

The following guidelines are offered by Lloyd's Register – Fairplay for the tables in this year's *Review* relating to fleet development.

Major open-registry countries and territories

Ships in this group fly the flag of the Bahamas, Bermuda, Cyprus, Liberia, Malta or Panama.

Approximate vessel size groups referred to in the *Review of Maritime Transport*, according to generally used shipping terminology

Crude oil tankers	
ULCC	300,000+ dwt
VLCC	150,000–299,999 dwt
Suezmax	100,000–149,999 dwt
Aframax	50,000– 99,999 dwt
Dry bulk carriers	
Cape-size	80,000 dwt plus
Panamax	50,000–79,999 dwt
Handymax	35,000–49,999 dwt
Handy-size	20,000–34,999 dwt

Source: Lloyd's Register – Fairplay.

Chapter 1

DEVELOPMENT OF INTERNATIONAL SEABORNE TRADE

The first chapter provides an overview of the demand for global maritime transport services, together with background information on the world economic situation and a review and forecast of developments in world seaborne trade.

A. WORLD ECONOMIC BACKGROUND

1. World output

General

Preliminary data available for 2005 indicate that growth of world output reached 3.6 per cent, about one fifth lower than the 4.1 per cent finally recorded for 2004. This good result, which is better than the ones recorded in 2002 and 2003 (see table 1), reflected the fact that economic growth was a feature in virtually all regions of the world, albeit at a different pace.

Economic growth for developed countries slowed down to 2.7 per cent, less than the 3.1 per cent recorded the previous year. The economic performance of the United States was good, particularly during the later part of the year, with sustained domestic demand in spite of continuing increases in real interest rates that resulted in output growth of 3.5 per cent for the year. The Japanese economy continued its expansion and matched the previous year's good growth rate of 2.7 per cent. Economic growth in the European Union was sluggish and only 1.6 per cent was recorded in 2005, about a third less than the previous year. This, however, was uneven, with the 10 new members recording a remarkable 4 per cent growth, while output growth for the large Western members was considerably lower than that recorded the previous year, and in the case of Italy there was no growth at all.

The economic growth of developing countries reached 6.2 per cent, almost double the world average but lower than the good 7.0 per cent growth recorded in 2004. The Commonwealth of Independent States and developing countries of Asia recorded high growth rates of 6.8 and 7.2 per cent respectively. For the former the result was due to higher export earnings, which stimulated public and private expenditure. The performance of China and India was particularly good, as these countries recorded output growth of 9.9 and 7.1 per cent respectively. Developing countries of Latin America, Africa and the Middle East recorded economic growth of between 4 and 5 per cent. Overall, developing countries excluding China recorded output growth of 5.3 per cent, double that achieved by developed countries.

Prospects

Forecasts of world economic output growth for 2006 predict that the world economy will expand by about 3.6 per cent and continue to grow modestly for the next few years.

Table 1

World economic growth, 2002–2005 [a]

(Percentage change over previous year)

Regions/groupings [b]	2002	2003	2004	2005 [c]
World	1.8	2.7	4.1	3.6
Developed countries	1.2	2.0	3.1	2.7
of which:				
United States	1.6	2.7	4.2	3.5
Japan	0.1	1.8	2.3	2.7
European Union	1.2	1.2	2.5	1.6
of which:				
Germany	0.1	-0.2	1.6	0.9
France	1.2	0.9	2.3	1.2
Italy	0.4	0.3	1.2	0.0
United Kingdom	2.0	2.5	3.2	1.7
Developing countries	3.8	5.1	7.0	6.2
Developing economies, excluding China	2.6	3.9	6.2	5.3

Source: UNCTAD secretariat calculations based on UNCTAD, *Handbook of Statistics 2006*; IMF, *World Economic Outlook*, April 2006; JP Morgan, *Global Data Watch*; Economic Intelligence Unit (EIU), Country *Forecast*; and OECD, *Economic Outlook No. 78*.

[a] Calculations are based on GDP in constant 1995 dollars.

[b] Region and country groups correspond to those defined in the UNCTAD *Handbook of Statistics, 2005*.

[c] Preliminary.

2. Merchandise trades

Recent developments in international trade

During 2005 the volume of world exports expanded by 6.0 per cent (see table 2) after the remarkable 9.0 per cent recorded the previous year. The slowdown was particularly pronounced during the first months of the year, but a recovery was apparent by late June onwards, in spite of high oil and commodity prices and doubts about the persistence of strong demand in the Chinese market. The sustained performance of the US economy ensured the pace of trade growth for the year.

Among developed countries export volumes expanded particularly well in North America, which recorded 6.0 per cent export growth based on the recovery of US agricultural shipments, while the performance of countries in the European Union was less impressive at 3.5 per cent. The export performance of those countries was dissimilar, and better for the 10 new members, which recorded 4.0 per cent growth in export volumes. Export increases for developing countries in Africa and the Middle East, Asia and Latin America were still better at 7.5, 9.5 and 10.0 per cent respectively. The highest export increase, well above 20 per cent, was again recorded by China.

The preliminary figures available for growth in import volumes indicate double-digit growth for countries of the Commonwealth of Independent States, which recorded 16.5 per cent growth. There was also double-digit import growth for developing countries of Central and South America and of Africa and the Middle East, which recorded 14.0 and 12.0 per cent growth respectively. China trailed closely behind with 11.5 per cent growth in imports. Overall, developed countries fared less impressively with the performance in North America,

Table 2

Growth in the volume of merchandise trade by geographical region, 2003–2005

Exports			Countries/regions	Imports		
2003	2004	2005		2003	2004	2005
5.0	9.5	6.0	**World**	n.a.	n.a.	n.a.
3.0	8.0	6.0	**North America**	5.5	10.5	6.5
0.9	7.0	3.5	**European Union (25)**	1.8	6.0	2.5
n.a.	7.0	7.5	**Africa and Middle East**	n.a.	13.5	12.0
4.5	12.5	10.0	**Latin America**	1.6	18.5	14.0
n.a.	14.0	9.5	**Asia**	11.1	14.0	7.5
n.a.	10.5	1.0	**Japan**	n.a.	7.0	2.5
n.a.	24.0	25.0	**China**	n.a.	21.5	11.5
n.a.	13.0	4.5	**Commonwealth of Independent States**	10.9	16.0	16.5

Source: WTO News — World Trade 2005 — Press Release, 11 April 2006, and World Trade 2004 — Press Release, 14 April 2005.

which recorded 6.5 per cent import growth, being considerably better than that of European countries and Japan, which achieved 3.0 and 2.5 per cent growth respectively.

Trends in imports and exports

For 2006, prospects for export growth are based on the acceleration of the economic activity of European Union economies, as the potential for further acceleration of the US economy and the main economies of the Far East is deemed to be limited. In spite of uncertainties concerning the prices of commodities and their supply, it is expected that exports could grow by about 7 per cent this year.

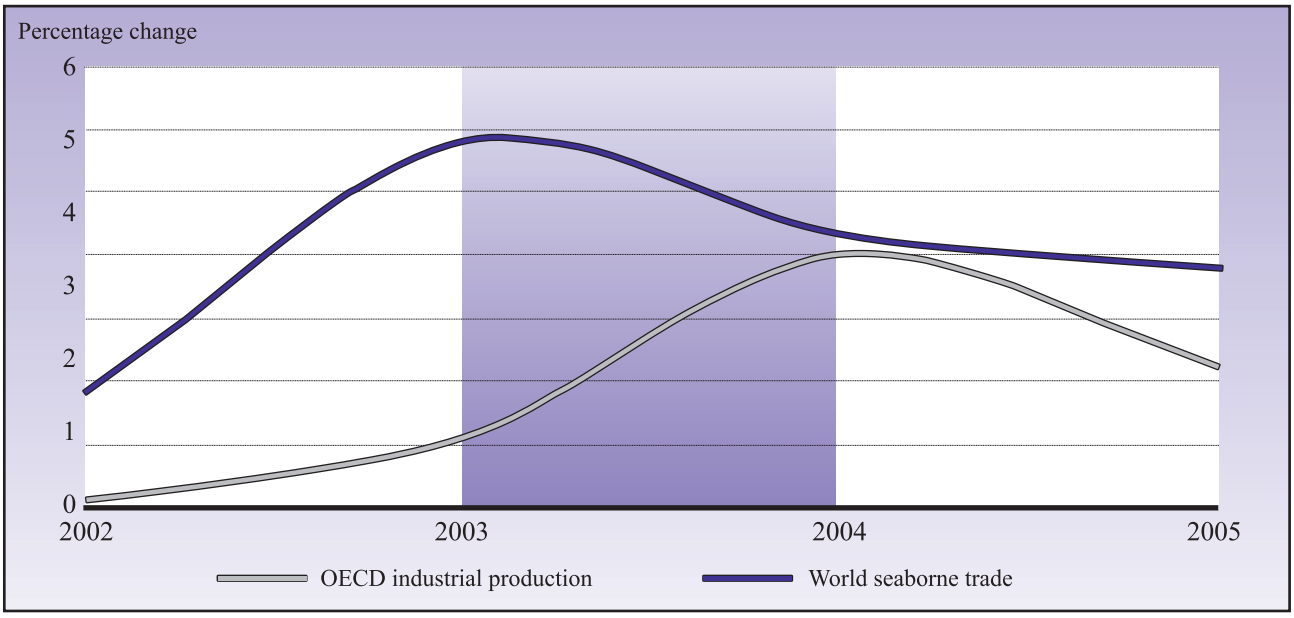
3. OECD countries' industrial output

The industrial production index (2000 = 100) for OECD countries, another fundamental indicator for the global maritime transport sector, averaged 105.6 in 2005; this represented a 2.2 per cent increase over the average of the previous year, when the index increased by 4.0 per cent (see figure 1).

The results for 2005 were due to increases in industrial activity in some of the major economies, particularly during the last quarter of the year. In the United States the index was steady at 104.0 during the first half of the year, and later accelerated to reach 105.7 during the last quarter of the year. The average index was 104.5 — an increase of 3.4 per cent for the year and above the 2.5 per cent recorded by neighbouring Canada. The industrial output for the other member of NAFTA, Mexico, actually contracted. The index for Japan fluctuated at around 101.0 for most of the year and jumped to 103.9 during the fourth quarter. The performance of the Republic of Korea was remarkable: after a lacklustre first half of the year when it stood at 129.5, the index increased to 133.6 in the third quarter and to 140.9 in the last quarter. Over the year this country achieved a 6.2 per cent increase in industrial output. In Europe performance was mixed. The average index for the year for some Western countries was steady (in France at 101.6) or decreased (in Italy from 96.2 to 95.4), while in other countries there was a good increase (in Germany from 102.6 to 106.0). Eastern European countries performed well. The average annual index increased by 4.0 per cent in Poland from 124.8 to 129.9 and by 6.0 in the Czech Republic from 135.6 to 143.8. In these two countries the increase in industrial activity was steady during the year. The OECD outlook for 2006 points to a steady production level.

Figure 1

Annual change in OECD industrial production and world seaborne trade, 2002–2005



Source: OECD, *Main Economic Indicators,* April 2006.

B. WORLD SEABORNE TRADE

1. Overall seaborne trade

World seaborne trade increased considerably in 2005, reaching 7.11 billion tons of loaded goods. The annual growth rate, calculated with the provisional data available for 2005, reached 3.8 per cent, as shown in table 3 and figure 2.

The breakdown of world seaborne loaded goods by continent was as follows: Africa's share of world exports was 8.5 per cent, while that of Europe reached 21.8 per cent. Asia was by far the continent with the largest share of the world tonnage of seaborne loaded goods — 38.8 per cent. America's share was the second largest at 22.1 per cent, while Oceania's share reached 8.8 per cent of world seaborne loaded goods. The breakdown for selected trading blocs was as follows: European Union (EU), 14.8 per cent; Gulf Cooperation Council (GCC), 15.0 per cent; North American Free Trade Association (NAFTA), 10.1 per cent; Association of South-East Asian Nations (ASEAN), 6.6 per cent; Common Market of the South (MERCOSUR), 7.0 per cent; and Common Market of Eastern and Southern Africa (COMESA), 1.5 per cent.

Forecasts for 2006 indicate that annual growth rates will probably be slightly lower than those of the previous year, while the distributions of world tonnage by continent and for selected trading blocs are expected to fluctuate marginally.

2. Seaborne trade in tankers

General developments

In 2005, total world shipments of tanker cargoes reached 2.42 billion tons, after increasing by 4.5 per cent during the year. About 76.7 per cent of this tanker trade was in crude oil, with the remainder as petroleum products. The share of tanker shipments in overall world seaborne trade decreased slightly to 34.1 per cent.

Crude oil production

In 2004 crude oil production[1] averaged 80.3 million barrels per day (mbpd) — an increase of 4.5 per cent over the previous year and the second increase in annual

Table 3

Development of international seaborne trade, selected years[a]

(Goods loaded)

Year	Tanker cargo		Dry cargo				Total (all goods)	
			Total		*of which* main bulk commodities[b]			
	million tons	% change	million tons	% change	million tons	% change	million tons	% change
1970	1 442		1 124		448		2 566	
1980	1 871		1 833		796		3 704	
1990	1 755		2 253		968		4 008	
2000	2 163		3 821		1 288		5 983	
2002	2 139		3 981		1 352		6 120	
2003	2 226	4.1	4 274	7.4	1 475	9.1	6 500	6.2
2004	2 318	4.1	4 528	5.9	1 587	7.6	6 846	5.3
2005[b]	2 422	4.5	4 687	3.5	1 701	7.2	7 109	3.8

Source: Estimated by the UNCTAD secretariat on the basis of annex II and data supplied by specialized sources.

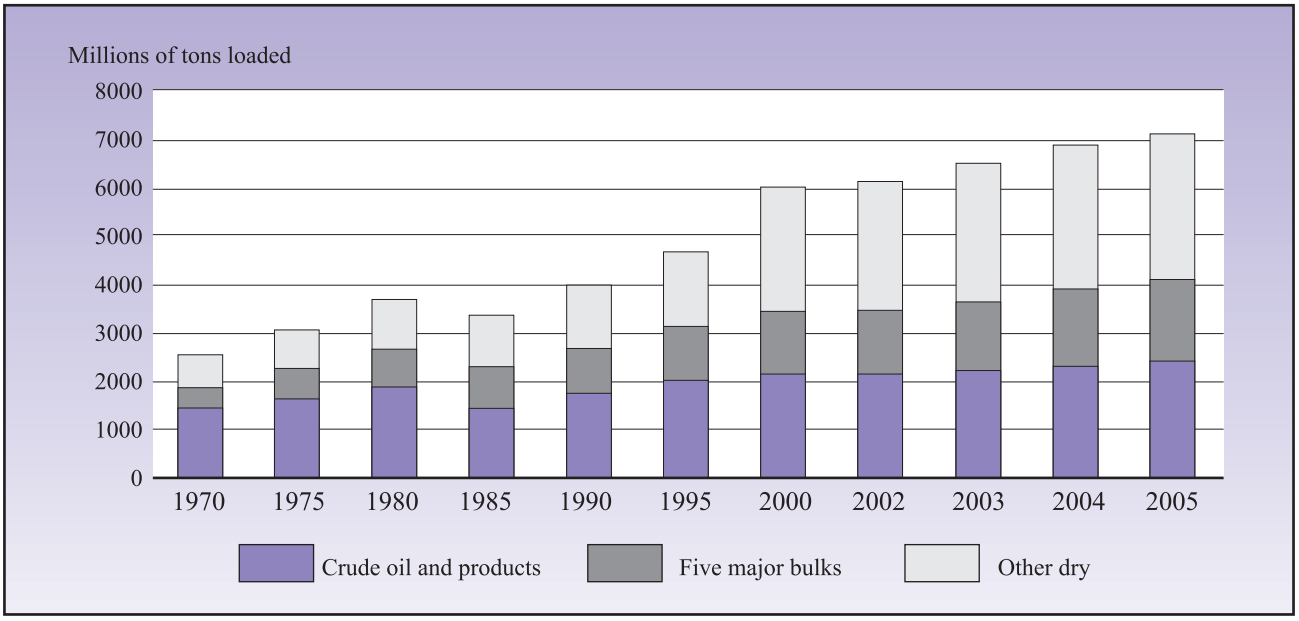
[a] Includes international cargoes loaded at ports of the Great Lakes–St. Lawrence system for unloading at ports of the same system.

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

[c] Estimates.

Figure 2

International seaborne trade for selected years



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

output since 2000. Oil production in OECD countries, notably the United States, Mexico, Norway and oil-producing countries within the EU, decreased by 1.9 per cent to 20.7 mbpd, and this group therefore reduced its market share to 25.8 per cent.

OPEC countries increased their production by 7.7 per cent to 33.0 mbpd, the highest figure in the previous 10 years. Accordingly, their market share went up from 39.6 per cent in 2003 to 41.1 per cent of world oil production in 2004. The remaining oil-producing countries, namely the Russian Federation, China, Brazil and a number of small producers, increased their average production by 5.6 per cent to 26.6 mbpd. The market share of these countries, therefore, increased marginally to 33.1 per cent.

Among OECD major producers, US production decreased by 2.1 per cent to 7.2 mbpd (the corresponding market share was 8.5 per cent) while that of Mexico increased by 1.0 per cent to 3.8 mbpd (4.9 per cent). Norway's production dropped to 3.2 mbpd (2.1 per cent decrease), lower than the figure for the European Union countries, which decreased to 2.5 mbpd (7.6 per cent decrease). Most of the decrease in output for these countries was due to falling production in the United Kingdom (by 10.0 per cent), which nevertheless maintained its lion's share, 2.0 mbpd.

The output of the largest producer, Saudi Arabia, averaged 10.6 mbpd, an increase of 3.7 per cent over the previous year. Its market share increased marginally to 13.1 per cent. The oil output of three large OPEC producers in the Middle East — the Islamic Republic of Iran, the United Arab Emirates and Kuwait — also recorded single-digit expansion growth of 2.3, 5.2 and 8.7 per cent to reach 4.1, 2.7 and 2.4 mbpd respectively. Their market shares were 5.2, 3.3 and 3.1 per cent respectively. The best output increase in the same region was that of Iraq, whose production went up by 50.8 per cent to 2.0 mbpd. OPEC African producers recorded good production increases. Nigeria reached 2.5 mbpd production after increasing it by 10.8 per cent. The two producers from North Africa — Algeria and the Libyan Arab Jamahiriya — reached 1.9 and 1.6 mbpd production levels after increasing levels by 5.0 and 8.4 per cent respectively. Elsewhere, Venezuela increased production by 13.8 per cent to 3.0 mbpd, but this was still below the annual output achieved in the period 1996–2002. Indonesia's output dropped, for the third consecutive year, by 4.5 per cent to 1.1 mbpd. The share of OPEC producers outside the Middle East reached 30 per cent in 2004.

Amongst the other oil-producing countries the output performance of the Russian Federation was good: an increase of 8.9 per cent to 9.3 mbpd, equivalent to a market share of almost 12 per cent of world production. Brazilian production dropped by less than 1 per cent to 1.5 mbpd, while that of China expanded by 2.9 per cent to 3.5 mbpd. The corresponding market shares were 2.0 and 4.5 per cent respectively. Some recent small producers recorded impressive increases in output — Equatorial Guinea raised output by 41 per cent and Viet Nam by 17.8 per cent to reach the same level of 0.4 mbpd.

During 2005 crude oil production level was pushed up by steady demand. In January OPEC started to cut production over quota levels by 1 mbpd but left those levels unchanged at 27 mbpd. As demand increased, in March and June the production quota level rose by 0.5 mbpd. Then in September statements were made to assure the market that up to 2 mbpd additional were available in case of need. Stoppages for various reasons affected production output in several countries: early in the year strikers seeking community development in the Niger Delta affected Shell operations in Nigeria; by July Chevron's activities in Angola had been affected by a wage dispute; in August a fire on a BP oil platform in the North Sea curtailed output; and the following month the hurricane season in the Caribbean severely affected production in the Gulf of Mexico. Demand is often matched with production through strategic crude oil reserves available in some countries: in May, India decided to build up such a reserve to cover the country's needs for two weeks; and in September a small share of the 700 million barrels in the US strategic reserve was used to cope with shortages due to the hurricane season.

Despite production increases, prices moved up for most of the year. The price band mechanism whereby production levels were harmonized with prices within a predetermined band price was suspended in January. In June, the meeting of the G8 noted the highly volatile nature of global crude oil prices. Also in that month the OPEC basket price of seven crude oil prices was replaced by another one made up of 11 crude oil prices. There was an upward evolution of this basket price over the year — it started at around $40 per barrel, reached a ceiling of $57 per barrel during the summer and slipped back to over $50 per barrel at the end of the year.

Countries took steps to boost oil production, which in many cases was offshore. Investment in the UK offshore oil industry increased to a seven-year high of almost $18.8 billion to extend the productive life of existing wells and probe new ones. About 82 exploration drillings were made during the year, almost a quarter more than the previous year. In April eight operators in Indonesia, which had surrendered rights for operating 30 marginal oil fields, were given incentives to develop them and boost the country's production above the 1 mbpd level, but by mid-year the country was already a net importer of crude oil. The new US energy bill approved in August waived some federal royalties for oil and gas producers drilling in depths of more than 400 metres in the Gulf of Mexico. The peace agreement reached in Sudan led to a $400 million deal to develop the Southern Thar Jath oil fields with a consortium involving Malaysian and Indian companies. Algeria passed a law to speed up the tendering process for new oil fields. Late in the year in Brazil, the deployment of the latest floating production and storage-offloading vessel in the $1.95 billion Albacora Leste project would make the country self-sufficient.

Refinery developments

World refineries' throughput reached 73.7 mbpd in 2004, an increase of 3.4 per cent over the previous year. Refineries in the United States increased throughput by just above 1 per cent and those in Mexico and Canada practically maintained steady throughputs. These countries represented little more than a quarter of world throughput. Europe and the Russian Federation recorded increases slightly below the world average at 3.1 per cent and accounted for 28.5 per cent of world throughput. The highest increase in output was recorded for Chinese refineries, whose output reached 5.5 mbpd after growing 13.4 per cent. This is equivalent to 7.4 per cent of world output. Output from refineries in Latin America increased by 9.1 per cent to reach 5.4 mbpd. Outputs from refineries in the Middle East, Africa and Australia were maintained or contracted minimally during 2004. These regions accounted for 12.3 per cent of world output. Throughput from Japanese refineries recorded a drop of 2 per cent to 4 mbpd and retained a 5.5 per cent market share.

During 2005 US refining activity was badly affected by the hurricane season in the Caribbean. Along the coast in the Gulf of Mexico Katrina closed down 14 refineries with output of 2.2mbpd, while Rita affected 16 refineries. Refining capacity was reduced by 15 per cent for several weeks. Accidents such as the one in Texas City in May, which left 15 dead and many injured, also affected refining capacity. Elsewhere militant unions closed five of six refineries operated by Total in France for a few days in the same month. Expanded refining capacity for crude oil and new facilities for refined products were underway in Fujian (China) under the $3.5 billion agreement involving ExxonMobil, Saudi Aramco and Sinopec.

Natural gas production

In 2004 production of natural gas reached 2,691.6 billion cubic metres[2] (bcm), an increase of 2.8 per cent over 2003. This production is equivalent to 2,422.4 million tons of oil or 50.4 mbpd. Major producers are the Russian Federation with 589.1 bcm and the United States with 542.9 bcm, which together account for 42.1 per cent of total production. Lesser producers are Canada with 182.8 bcm, the United Kingdom with 95.9 bcm, the Islamic Republic of Iran with 85.5 bcm, Algeria with 82.0 bcm, Indonesia with 73.3 bcm and Saudi Arabia with 64.4 bcm. Other producers are scattered in the Middle East, Latin America and Asia, often obtaining natural gas as a result of oil production. About a fifth of natural gas production is exported, mainly by pipelines, which carry around three quarters of all exports.

In early 2005 Sinopec started production of the Kela 2 gas field in the Tarim Basin, the largest producing area in China. Late in the year ExxonMobil started operation of the Sakhalin 1 gas oil field, consolidating the position of the Russian Federation as the largest producer of natural gas in the world. Consolidation in the industry was apparent with the $13.1 billion purchase of Sibneft, an oil company, by Gazprom, the largest natural gas producer in the world, the resulting company accounting for about 10 per cent of Russian oil production. Gazprom also entered into an asset swap with Shell which this allows Gazprom to take a 25 per cent share in its Sakhalin 2 project in exchange for access to the huge Zapolyarnoye-Neocomian gas fields. In Europe, flexibility in gas production and distribution was apparent when the United Kingdom entered into agreements with Belgium to make reverse use of a pipeline, and with Norway for cooperation in construction and operation of future pipelines. Elsewhere the Islamic Republic of Iran and India entered into a 25-year agreement whereby the former will supply 250 billion cubic feet of natural gas per year to the latter.

Crude oil shipments

In 2005, crude oil seaborne shipments increased by 4.1 per cent to 1.86 billion tons (see table 4). Major loading areas continued to be the developing countries in Western Asia with 934.5 million tons, in West Africa with 196.3 million tons, in North Africa with 130.2 million tons and around the Caribbean with 247.6 million tons. The main discharging areas were located in developed market-economy countries in North America with 537.7 million tons, in Europe with 438.4 million tons and in Japan with 215.0 million tons. Developing countries in South and East Asia took 307.3 million tons during 2005. The major events of the year were the steady flow of Russian exports, which totalled 132.3 million tons, and Chinese imports, which totalled 115.3 million tons. In early 2006 Mauritania made its first ever shipment of crude oil; the 1 million barrel shipment came from the Chingetti field and had China as its destination.

Crude oil exports shipments from the Caucasus started to flow using new routes. In mid-2005, the first shipments started from the Mediterranean port of Ceyhan (Turkey), the destination end point for the 1,770-km pipeline originating in Baku (Azerbaijan), and reduced the environmental risks posed by the transit of tankers through the Dardanelles. In another measure to avoid using the latter the Russian Federation, Bulgaria and Greece agreed to build the 285 km Trans-Balkan Oil Pipeline from Bourgas (Bulgaria) to Alexandroupoulis (Greece) at an estimated cost of $800 million.

Oil flows from the Russian Federation shipped in the Baltic increased ship-to-ship transfer of cargoes from Aframax to VLCC tankers in the North Sea for onward carriage to the Far East and the Caribbean. These transfer activities also take place at the discharging end off China and the Caribbean, where about 150 operations take place every month. An updated version of the

Table 4

World seaborne trade[a] in selected years, by types of cargo and country groups[b]

Country group	Year	Goods loaded				Goods unloaded			
		Oil		Dry cargo	Total all goods	Oil		Dry cargo	Total all goods
		Crude	Products[c]			Crude	Products[c]		
		Trade in millions of tons							
World total	1970	1 109.0	232.0	1 162.0	2 504.0	1 101.0	298.0	1 131.0	2 529.0
	1980	1 527.0	344.0	1 833.0	3 704.0	1 530.0	326.0	1 823.0	3 679.0
	1990	1 287.0	468.0	2 253.0	4 008.0	1 315.0	466.0	2 365.0	4 126.0
	2000	1 664.7	497.8	3 820.6	5 983.2	1 728.2	541.7	4 003.4	6 273.3
	2002	1 630.0	508.6	3 981.0	6 119.6	1 695.6	539.5	4 089.9	6 325.0
	2003	1 695.4	530.9	4 273.7	6 500.0	1 754.5	536.8	4 306.4	6 597.7
	2004	1 783.4	534.2	4 527.9	6 845.5	1 807.8	557.1	4 528.5	6 893.4
	2005	1 856.6	565.3	4 686.8	7 108.7	1 853.5	572.6	4 695.9	7 122.0
		Percentage share of trade by country groups							
World total	1970	42.6	12.7	44.7	100.0	43.5	11.9	44.6	100.0
	1980	41.2	9.3	49.5	100.0	41.6	8.9	49.5	100.0
	1990	32.1	11.7	56.2	100.0	31.9	10.8	57.3	100.0
	2000	27.8	8.3	63.9	100.0	27.5	8.6	63.8	100.0
	2002	26.6	8.3	65.1	100.0	26.8	8.5	64.7	100.0
	2003	26.1	8.2	65.7	100.0	26.6	8.1	65.3	100.0
	2004	26.1	7.8	66.1	100.0	26.2	8.1	65.7	100.0
	2005	26.1	8.0	65.9	100.0	26.0	8.0	65.9	100.0

Table 4 (continued)

Country group	Year	Goods loaded				Goods unloaded			
		Oil		Dry cargo	Total all goods	Oil		Dry cargo	Total all goods
		Crude	Products [c]			Crude	Products [c]		
		Percentage share of trade by country groups							
DMECs	1970	2.0	27.1	60.0	31.1	80.4	79.6	79.1	79.9
	1980	6.3	25.5	64.7	37.0	72.0	79.5	67.8	70.5
	1990	13.4	32.6	63.4	43.8	72.5	81.4	61.7	67.3
	2000	5.2	22.2	60.6	42.0	68.3	52.0	60.4	61.8
	2002	5.5	23.1	57.4	40.7	67.7	50.9	58.7	60.4
	2003	5.6	21.9	54.7	39.2	68.2	51.3	57.7	60.0
	2004	5.4	21.9	54.2	38.9	67.5	50.9	56.6	59.0
	2005	5.2	21.5	54.0	38.7	66.9	50.5	55.6	58.2
Central and Eastern Europe [d]	1970	3.4	8.0	6.9	5.6	1.2	1.0	3.8	2.3
	1980	3.6	14.6	5.2	5.4	2.3	0.4	6.0	4.0
	1990	4.6	11.8	3.8	5.0	2.6	0.3	5.8	4.1
	2000	5.5	8.9	4.1	4.9	0.5	0.4	1.9	1.4
	2002	5.6	8.2	4.4	5.0	0.6	0.6	1.6	1.3
	2003	6.9	8.3	4.1	5.2	0.6	0.6	1.5	1.2
	2004	7.0	8.3	4.0	5.1	0.6	0.6	1.5	1.2
	2005	7.1	7.9	3.9	5.0	0.6	0.6	1.5	1.2
Socialist countries of Asia [e]	1970	-	-	1.2	0.5	0.5	0.1	2.0	1.2
	1980	1.4	1.7	1.0	1.2	1.4	1.6	4.0	2.7
	1990	2.7	0.9	2.0	2.0	0.3	0.3	3.4	2.1
	2000	1.0	1.1	6.5	4.6	4.1	4.1	7.2	6.1
	2002	1.1	2.1	7.3	5.2	4.1	4.7	9.1	7.4
	2003	1.1	2.3	8.6	6.1	4.9	5.5	10.4	8.5
	2004	1.2	2.7	9.5	6.8	5.7	6.1	11.6	9.6
	2005	1.2	2.9	10.2	7.3	6.2	6.6	12.4	10.3
Developing countries	1970	94.6	64.9	31.9	62.8	17.9	19.4	15.1	16.6
	1980	88.7	58.2	29.0	56.3	24.3	18.5	22.3	22.8
	1990	79.6	54.7	30.8	49.2	24.6	18.0	29.1	26.5
	2000	88.3	67.8	28.7	48.6	27.2	43.6	30.5	30.7
	2002	87.8	66.5	30.9	49.0	27.6	43.8	30.6	30.9
	2003	86.3	67.5	32.6	49.5	26.2	42.6	30.4	30.3
	2004	86.5	67.1	32.4	49.2	26.2	42.4	30.4	30.3
	2005	86.5	67.6	32.0	49.0	26.3	42.4	30.5	30.4
of which: **Africa**	1970	25.5	2.4	9.1	15.2	1.7	4.7	3.6	2.9
	1980	19.0	1.5	5.6	10.8	4.0	2.9	4.7	4.2
	1990	24.1	7.6	4.3	11.2	5.6	2.3	4.3	4.5
	2000	17.9	6.9	1.6	6.6	3.2	3.2	3.3	3.3
	2002	17.9	6.8	1.6	6.4	2.9	3.2	3.4	3.2
	2003	17.7	6.8	1.5	6.2	2.9	3.1	3.2	3.1
	2004	17.5	6.9	1.5	6.1	2.9	3.0	3.2	3.1
	2005	17.6	6.6	1.4	6.1	2.9	3.0	3.1	3.1

Table 4 (continued)

Country group	Year	Goods loaded				Goods unloaded			
		Oil		Dry cargo	Total all goods	Oil		Dry cargo	Total all goods
		Crude	Products [c]			Crude	Products [c]		
		Percentage share of trade by country groups							
Americas	1970	12.2	35.4	13.8	16.0	10.5	5.6	4.4	7.2
	1980	12.4	28.4	13.2	14.3	13.3	4.9	5.4	8.7
	1990	13.3	11.9	13.2	13.1	5.7	3.8	4.0	4.5
	2000	15.2	18.8	10.5	12.5	5.5	9.9	5.3	5.7
	2002	15.6	18.4	11.1	12.9	5.6	9.8	4.2	5.1
	2003	14.7	19.7	12.8	13.8	5.5	9.0	4.6	5.2
	2004	14.8	18.7	12.5	13.6	5.4	9.0	4.5	5.1
	2005	15.0	21.0	12.3	13.7	5.6	9.1	4.5	5.2
Asia	1970	56.9	27.0	8.1	31.3	5.5	8.5	6.7	6.4
	1980	57.3	28.1	9.7	31.0	6.9	9.8	12.0	9.7
	1990	42.2	34.9	12.6	24.7	12.6	10.9	19.9	16.6
	2000	54.9	41.6	16.2	29.1	18.1	29.0	21.5	21.2
	2002	54.0	40.8	17.7	29.3	18.6	29.3	22.6	22.1
	2003	53.7	40.6	17.9	29.1	17.4	29.0	22.2	21.5
	2004	53.9	41.0	18.0	29.1	17.6	28.9	22.4	21.6
	2005	53.7	39.6	17.8	28.9	17.5	28.8	22.5	21.7
Europe	1970	-	-	-	-	-	0.1	0.1	-
	1980	-	-	-	-	-	0.2	-	-
	1990	-	0.2	0.3	0.2	0.7	0.5	0.8	0.7
	2000	0.0	0.4	0.4	0.3	0.4	0.4	0.3	0.3
	2002	0.0	0.5	0.4	0.3	0.4	0.4	0.3	0.3
	2003	0.0	0.4	0.4	0.3	0.4	0.4	0.3	0.3
	2004	0.0	0.4	0.4	0.3	0.4	0.4	0.2	0.3
	2005	0.0	0.4	0.4	0.3	0.4	0.4	0.2	0.3
Oceania	1970	-	0.1	0.8	0.4	-	0.5	0.3	0.2
	1980	-	0.2	0.5	0.2	0.1	0.7	0.2	0.2
	1990	-	0.1	0.4	0.2	-	0.5	0.1	0.2
	2000	0.2	0.0	0.1	0.1	0.0	1.1	0.1	0.2
	2002	0.3	0.0	0.1	0.1	0.0	1.1	0.1	0.2
	2003	0.2	0.0	0.0	0.1	0.0	1.1	0.1	0.2
	2004	0.2	0.0	0.0	0.1	0.0	1.1	0.1	0.2
	2005	0.2	0.0	0.0	0.1	0.0	1.1	0.1	0.2

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by reporting countries and other specialized sources.

[a] Includes international cargoes loaded at ports of the Great Lakes–St. Lawrence system for unloading at ports of the same system.

[b] See annex I for the composition of these groups, and note d thereto regarding the recording of trade of landlocked countries. Since 1986, the former Yugoslavia, previously included among the "developed market-economy countries", has been included in the group of "developing countries in Europe".

[c] Includes liquefied natural gas (LNG), liquefied petroleum gas (LPG), naphtha, gasoline, jet fuel, kerosene, light oil, heavy fuel oil and others.

[d] Includes the former Soviet Union in data for 1970 and 1980.

[e] Estimates.

Transfer Guide of the International Chamber of Shipping and the Oil Companies International Marine Forum was issued early in the year to provide for good operational practices that reduce environmental mishaps.

Further north on the Barents and White Seas plans to boost shipments of crude oil from Murmansk with a $2.5 billion investment were under way. The tapping of oil deposits located further east involved the developing of export terminals in Indiga, Varandey and Dikson on the Kara Sea by several companies, probably using double-action tankers instead of ice-class tankers and ice-breaker escorts.

Elsewhere crude oil shipments were hampered by natural catastrophes, cargo shortages and piracy incidents. The LOOP, the only US facility for unloading VLCC tankers, was closed for two weeks owing to Katrina hurricane, strikes in producing fields in Ecuador and guerrilla activity against pipelines in Colombia reduced shipments for brief periods, and pirates were reported by some tankers calling at Basra (Iraq).

Petroleum product shipments

The global trade in petroleum products increased by 5.8 per cent in 2005 to 565.3 million tons. The pattern and volume of shipments were similar to those of past years, with shipments of Russian petroleum products from Baltic ports in small tankers continuing to have an impact in other countries. During the last quarter of the year there was an increase in the shipments of products to North America because of the damage done to refineries in the Gulf of Mexico during the hurricane season In a separate development, the setting up of Petrocaribe, an oil company sponsored by Venezuela to supply island countries of the Caribbean with petroleum products, is poised to increase shipments in this area.

LNG shipments

LNG shipments increased by 5.4 per cent during 2004 to reach 178.0 bcm of natural gas. This is about 6.6 per cent of the world production. The largest importing area is located in the Far East, where major importers continued to be Japan with 77.0 bcm and the Republic of Korea with 29.9 bcm. Supplies came from Indonesia (33.5 bcm), Malaysia (27.7 bcm), Qatar (24.1 bcm) and Australia (12.2 bcm). The increased supply from the Persian Gulf is highlighted by the impressive 25 per cent increase in exports from Qatar.

Across the Mediterranean, Algerian exports reached 25.8 bcm of which 6.7 bcm went to France and 6.6 bcm went to Spain. Nigeria supplied the European market with 10.7 bcm and to a lesser extent Turkey with 1.0 bcm and the United States with 0.4 bcm. The largest share of the 14.0 bcm exports from Trinidad also went to the US market. This market also takes almost 0.7 bcm from the Middle East (Qatar and Oman) and 3.4 bcm from Algeria.

LNG shipments started to arrive in importing countries. In the United States, the first shipment arrived from Trinidad in March at the innovative offshore terminal built by El Paso, located 116 miles off the Louisiana coast in the Gulf of Mexico. A few months later, the first Russian gas shipment arrived at a terminal in Maryland. Across the Atlantic, the United Kingdom received its first delivery of LNG for over 20 years at the Isle of Grain terminal, near London, from Algeria. Egypt exported its first ever shipment from Damietta to Spain, with other destinations including the United States. Future shipments will be also using submarine pipelines: in May, Italy and Algeria agreed to increase the capacity of the Transmed pipeline by a quarter to 33.5 billion cubic feet per year; and in September the Russian Federation and Germany agreed to build the 750-mile Northern Europe Gas Pipeline (NEGP) under the Baltic Sea.

3. Dry cargo shipments

General developments

In 2005, overall dry cargo shipments increased by 3.5 per cent, reaching 4.69 billion tons (see table 3). The five dry-bulk trades, namely iron ore, coal, grains, bauxite/alumina and rock phosphate, actually recorded a good 7.2 per cent increase to reach 1.70 billion tons. The remaining dry cargo trades, minor bulks and liner cargoes, increased at the slower rate of 1.50 per cent to 2.99 billion tons. The share of dry cargo shipments in world seaborne trade was 65.9 per cent of total goods loaded during the year.

World crude steel production

World crude steel production in 2005 increased by 5.9 per cent to reach 1,129.4 million tons, compared with 1066.5 million tons in 2004. This was only the second year ever that steel production surpassed the 1 billion tons mark. Undoubtedly the major event of the year was the continuation of the remarkable expansion of Chinese

steel production, up by 24.6 per cent, to reach 349.4 million tons. This was the fourth year in which production expanded by more than 20 per cent, and China accounts today for 30.9 per cent of world crude steel production. Production of crude steel in Asia increased by 14.8 per cent to 583.8 million tons, reflecting the small contraction of Japanese production — by 0.2 per cent — to reach 112.5 million tons. Other important Asian producers recorded increases in output: India's production increased by a remarkable 16.7 per cent while that of the Republic of Korea expanded by a minimum of 0.3 per cent, reaching 38.1 and 47.7 million tons respectively.

In other regions and countries changes in output for 2005 were mixed. In North America production contracted by 5.8 per cent to 93.9 million tons in the United States, by 4.5 per cent to 15.6 million tons in Canada and by 2.7 per cent to 16.3 million tons in Mexico. Production also contracted by 3.6 per cent in the 25 countries of the European Union to reach 186.4 million tons — the largest falls were in Luxembourg and Poland, down by 18 per cent, but some countries managed to expand their modest outputs, including Greece (17.6 per cent), and Austria and Slovenia (3.1 per cent). Among the largest producers Italy was the best performer, with production increasing by 2.2 per cent to 29.1 million tons. Production levels in countries of the Commonwealth of Independent States (the former Soviet Union) were almost steady at 112.9 million tons — a minimum contraction of 0.3 per cent. The Russian Federation, the largest producer, expanded steel production by 0.9 per cent to 66.1 million tons, but Ukraine's and Kazakhstan's production contracted by 0.3 to 38.6 million tons and by 17.3 per cent to 4.5 million tons respectively. Among other European countries the steel production of Serbia and Montenegro increased by an impressive 10.2 per cent to 1.3 million tons, about four times the production in Turkey, which grew by 2.4 per cent to 21.0 million tons.

In the Middle East crude steel production increased by 7.3 per cent to 14.7 million tons, with the largest producer, the Islamic Republic of Iran, recording an 8.3 per cent increase to 9.4 million tons. Steel production in Africa also expanded by 5.7 per cent to reach 17.4 million tons. South Africa's production was steady at 9.5 million tons, while production in Egypt and the Libyan Arab Jamahiriya grew by 15.4 and 22.7 per cent for a combined output of 6.8 million tons. Australia's steel production expanded by 4.6 per cent and offset the 3.7 per cent contraction in New Zealand to yield a combined output of 8.6 million tons. Steel production in South America, however, contracted by 1.2 per cent to 45.3 million tons — a contraction of 3.9 per cent led to an output of 31.6 million tons for the largest producer, Brazil, which could not be offset by output expansion of lesser producers such as Argentina, Venezuela, Colombia and Peru.

In the same year, world pig iron production, another useful indicator for predicting dry bulk trades, increased by a healthy 8.3 per cent to 781.1 million tons.

World steel consumption

Forecast apparent steel consumption for 2005 was 998 million tons, 3.0 per cent above the 2004 level. The main increase was expected in China, an increase of 10.3 per cent to 300 million tons, and this pointed to a decelerated rate of increase, which for several years exceeded 20 per cent. However, the Chinese annual consumption increase was larger than Latin America's annual consumption. Other promising regions for expanded apparent steel demand were the Middle East and Africa, where countries would expand by 3 per cent on average for a combined demand of 49 million tons. Demand was expected to grow at the slightly lower rate of 2 per cent for CIS countries, resulting in a total apparent steel consumption of 45 million tons. Steady apparent steel consumption was expected in South America to be 33 million tons as most economies recovering from the 2002 slump run out of steam. In the major consumer centres of Europe and North America demand was expected to contract by 1 per cent to 190 million tons and by 4 per cent to 149 million tons respectively.

During 2005 the high prices reached by steel over the past year started to impact on consumers. The European benchmark steel price plunged by a third during the first half of the year to $397.50 per ton. Also, spot prices for hot-rolled steel coil dropped from $650 to $517 per ton during the first ten months of the year. Chinese steel mills also reported a sharp fall in domestic prices and sought exports as an alternative, with authorities mentioning measures against overproduction. Overall, the highly fragmented steel makers faced steep increases in raw materials — iron ores increased by 71.5 per cent, while coking coal was up by 20 per cent — and diminished prices for their output. Nevertheless, an attempt to launch the process of concentration was made by Mittal — the largest steel maker, accounting for about 7 per cent of world output — with its unsuccessful bid

for Arcelor, a large European steel maker. At the end of the year China set up iron ore import licences that dampened spot demand from India, and early in 2006 iron ore price increases were expected to be around 10 to 20 per cent.

Iron ore shipments

The booming production of steel was reflected in the 9.3 per cent increase in iron ore shipments during 2005, which totalled 645 million tons. Australia and Brazil, which account for almost 70 per cent of world exports, recorded growth of 14.5 and 8.3 per cent to 237 and 222 million tons respectively. India recorded an export increase of 10 per cent to 75 million tons. Exports from South Africa were steady at 27 million tons. Lesser exporters such as Canada, Sweden, Mauritania and Peru recorded single-digit export increases. The largest importer was, by far, China with 263 million tons — an increase of more than 50 million tons over the previous year. Japan and 15 countries of the European Union imported 135.7 and 117.6 million tons respectively, with marginal volume changes from the previous year, upward for the former and downwards for the latter. These countries accounted for more than three quarters of world shipments. Imports by the Republic of Korea were steady at about 40 million tons. Imports into the Americas, the Middle East and Africa reached 15.6, 14.0 and 6.9 million tons respectively.

Strong demand and high prices, up to $65 per ton, for iron ore triggered a wave of investments in this highly concentrated mining industry. Australian exporters BHP Billiton and RTZ announced $2.2 billion and $1.8 billion investments in the Pilbara region, including mines, ore transport to the coast and port development. A $1.3 billion project comprising a 462 km low-pressure underground pipeline and a new port to export 15 million tons of ore per year was announced in Brazil. Mittal announced a $900 million investment in Liberia comprising mine, transport and port to reduce dependence on third party suppliers to its steel mills. In Australia, strong demand and high prices also triggered a decision to charge 5.6 per cent royalties for mine expansions or green-field developments in comparison with the 3.7 per cent in force for existing operations.

Coal shipments

Coal shipments increased by 4.9 per cent in 2005 and reached an all-time record of 682 million tons. As in previous years, thermal coal made up 70 per cent of world coal trade, and in 2005 shipments grew at a rate of 3.4 per cent to reach 491 million tons. Shipments of coking coal increased at a slightly slower rate to 191 million tons.

Australia, by far the largest exporter of coking coal, was relegated to second place as an exporter of steam coal by Indonesia. Total Australian exports for the year were estimated at 234 million tons, or about one third of world exports. Indonesian exports were close to 120 million tons, or about 18 per cent of world exports. Other exporters of thermal coal such as China, South Africa and Colombia recorded export volumes of 73, 66 and 57 million tons respectively.

The main importers were countries of the EU and Japan, with about 27 and 26 per cent of world imports respectively. The share of thermal coal in their coal imports varies from three quarters of the total for EU countries to about 60 per cent for Japan. Other importers are the Republic of Korea and Taiwan Province of China, with about 10 per cent each. Elsewhere, thermal coal imports into Chile decreased by almost 10 million tons, while imports of coking coal into Brazil increased by about 25 per cent to 11 million tons in 2005.

Prospects for coal trade are good. Exports of coking coal from Eastern Siberia to Japan are poised to increase in line with contracts signed at the end of the year. Logistics improvements to reap the full potential of export terminals were the subject of decision makers' attention during 2005: in South Africa and Australia investments were announced in the railways systems supplying these terminals. Moreover, exports of steam coal would benefit from decreased congestion in Australian terminals and expansion of the South African terminal at Richards Bay.

Grain shipments

World grain shipments are believed to have reached 274 million tons in 2005, an increase of 3.4 per cent over the previous year's 265 million tons, almost equally split between wheat and coarse grains, such as maize, barley, soybeans, sorghum, oats and rye. In 2004, the main loading areas were North America and the east coast of South America, which accounted for 46 and 15 per cent of world exports respectively. During that year the largest exporter, the United States, decreased shipments by almost 4 per cent. Traditional importers such as Japan, the Republic of Korea and countries in the European Union kept imports steady, but a number

of other countries recorded substantial import increases. Countries in the Middle East increased their imports by almost 10 per cent, with Iraq's imports increasing by more than 40 per cent. Countries in Central America increased their imports by 13 per cent, while those in South America kept them steady. African countries recorded a 17 per cent increase in grain imports during 2004.

The 2005 bumper wheat crop in several countries of the European Union led to a wheat export subsidy to preclude the build-up of stockpiles. Elsewhere the trade in genetically modified varieties of coarse grains required ad hoc measures in order to proceed smoothly. Owing to a poor crop in Brazil, feed-grain demand required negotiation before genetically-modified Argentinian grain could be accepted. In Japan six US shipments of genetically-modified corn containing one unauthorized variety were refused. About half of the US corn shipments to Japan follow tests and procedures to ensure quality but also involve some delays and additional costs.

Prospects for this trade, particularly for coarse grains, were good in line with the increased demand for poultry and meat consumption in the Far East. However, in early 2006 fears about spreading "bird flu" in China led to a considerable drop for soya imports owing to soft demand for animal feed.

Other bulk shipments

During 2005 shipments of bauxite and alumina, the primary inputs for the aluminium industry, are estimated to have increased by 4.5 per cent to reach 70 million tons in equal shares. Bauxite shipments from West Africa were about half of the world total and were destined for EU and Eastern European countries. Alumina exports will also be exported from this region after the commissioning of the new Kamsar project in Guinea. Bauxite and alumina exports from Jamaica went over the 10 million ton mark, with all bauxite shipments going to the United States market. A large export scheme was underway in Guyana to supply a minimum of 2 million tons of bauxite to Europe for 10 years. Exports of bauxite and alumina from Australia, the world's largest, increased marginally during the year, with about half destined for Asian countries.

During 2005, consolidated primary aluminium production increased by 6.8 per cent to 31.2 million tons. The expansion in production was impressive in China, which recorded an increase of 17.5 per cent to 7.7 million tons and in other countries in East and South Asia, whose production expanded by 13.3 per cent to 3.1 million tons. Countries in other regions expanded their production at single-digit rates, with North American production expanding by 5.3 per cent to 5.4 million tons. In all other regions the expansion was modest: 1.6 per cent in Africa, 1.5 per cent in Latin America and 1.3 per cent in Western, Central and Eastern Europe. Oceania recorded a meagre 0.3 per cent output expansion.

Shipments of rock phosphate stood at 30 million tons in 2005. The major exporter accounting for about one third of world exports continued to be Morocco, which shipped about 12 million tons. Exports from other countries in Africa, such as Togo, added about a third to this total. About 7 million tons were shipped from the Middle East, notably from Jordan. Countries in the Far East (i.e. China) imported about 10 million tons during 2005.

The minor dry bulks, a heterogeneous mix of merchandise, were believed to have reached 950 million tons in 2005, about 3.7 per cent above the estimates recently released for the previous year. Shipments of steel and forest products are estimated to be slightly above 386 million tons, with the trade of the former increasing more rapidly than that of the latter. Agriculture-related trades, including sugar, rice, tapioca and meals (oilseeds and soy), and fertilizers (phosphates, potash, sulphur and urea), accounted for more than 250 million tons. The volume and direction of sugar trades might be contingent on decisions to be made by countries in connection to WTO rulings. In April the WTO ruled that subsidized sugar exports from the European Union violated the 1.3 million tons per year export subsidy limit imposed in 1995. When soon afterwards the EU decided to cut subsidies and production quotas drastically, some African, Caribbean and Pacific developing sugar-producing countries estimated that they would lose more than $400 million in annual revenues. In September the EU decided to increase exports by almost 2 million tons, thus angering major sugar-producing countries such as Brazil, Australia and Thailand, which feared that prices would collapse in the world markets. Shipments of a number of minerals (cokes, non-ferrous ores, metals, salt, cement, etc.) are estimated at about 250 million tons. Overall forecasts for these minor bulk cargoes indicate a similar volume of shipments for 2006, with agricultural trades fluctuating in the short term and industrial goods being affected by long-term investment decisions.

4. Liner shipments of containerized cargoes

The balance of 2.04 billion tons of dry cargoes is increasingly being carried in containers along the liner trade routes. In some regions, specialized unitized services such as ro-ro, reefer and cars coexist with traditional stand-alone general cargo services, with some of the latter serving to back up the main container trades. Although most container routes are mature, during 2005 there was scope for growth and traffic expanded at double-digit rates on several routes, with the total estimated to be close to 100 million TEU. Shipments of containerized cargoes differ from the other dry bulk cargoes in the increased use of trans-shipment to reach destinations, which complements the direct calls of larger vessels. Containers flow along east–west (trans-Pacific, Europe–Far East and transatlantic), north–south and regional routes.

On the largest east–west route, the trans-Pacific, the total flow was estimated to have reached 18.1 million TEUs in 2005. Container flows on the dominant leg, Asia to North America, reached 13.8 million TEUs, while in the opposite westbound direction the flow was less than half, at 4.3 million TEUs. As a result, the past imbalance of container flows continued and repositioning of empty containers remained a major concern for carriers. The Asia–Europe route was estimated to have carried 15.7 million TEUs during 2005. Again there was a gap between flows in the westward direction originating in Asia, which reached 10.0 million TEUs, and those flows heading eastward, which were estimated at 5.7 million TEUs. However, flow imbalance was less pronounced than that existing across the Pacific. On the transatlantic route, the smallest of the east–west ones, container flow was estimated to have reached 5.2 million TEUs. As flows on the dominant leg from Europe to North America reached 3.8 million TEUs and those in the opposite direction reached 1.8 million TEUs, the flow imbalance was less acute. Overall traffic flows on these three east-west routes almost reached 40 million TEUs, with empty repositioning being an important feature on all of them.

North–south routes are articulated around major production and consumption centres of Europe, the Far East and North America and link those centres with developing countries. In 2005, north–south routes were believed to have carried up to 17 million TEUs and flows expanded and contracted in line with economic conditions prevailing at both ends. Container flows in the routes linking Europe to West Africa and Oceania were believed to have reached 0.8 and 0.7 million TEUs respectively. Flows were roughly evenly distributed between southward and northward directions. Container flows between Europe and Central and South America were about four times larger — 2.8 million TEUs — and also more imbalanced, as flows heading southward reached almost 0.8 million TEUs. Container flows between North America and Central and South America were larger still — about 4.0 million TEUs — and similarly imbalanced, as southward flows were estimated at 1.5 million TEUs. Container flows between Asia and Oceania were believed to have reached 1.6 million TEUs but were well balanced. For the regional route from North-East Asia to South-East Asia container flows were believed to have reached 7.2 million TEUs in 2005.

In June 2005 the Panama Canal, a main gateway for liner and bulk shipping, started to apply the first of the toll increases announced the previous year. The Canal was operating at more than 90 per cent capacity and work on upgrading this capacity, within the limits of the existing infrastructure, was under way and expected to cater for estimated demand up to 2012. A number of technical studies aimed at expanding existing infrastructure continued during 2005, with the Panama Canal Authority announcing the results in April 2006. A third set of locks able to cope with 12,000 TEU capacity containerships is proposed to be built at a cost of $5.25 billion for completion in 2014. Funding for expansion would come from the revenues and monies raised in the capital markets by the Authority, with the Government planning a referendum before proceeding with the plan.

During 2005 countries and groups of countries reached agreements and were affected by WTO decisions concerning the smoothing out of trade differences. The surge of Chinese shipments during the first half of the year following the end of the quota regime led to an agreement with the EU limiting the import growth of textiles and apparel. But during July and August a large stock, in excess of the agreement, built up and goods accumulated in EU borders. The matter was solved in September by counting half of the goods against next year's quota. The WTO decision in March declaring illegal the US subsidies for cotton production and exports was followed one month later by a decision against subsidized EU sugar exports and the EU was asked to abide by the 1.2 million tons export limit of 1995. A few months later an EU proposal to impose a tariff on bananas imported from Latin America was deemed unfair by WTO.

5. World shipments by country groups

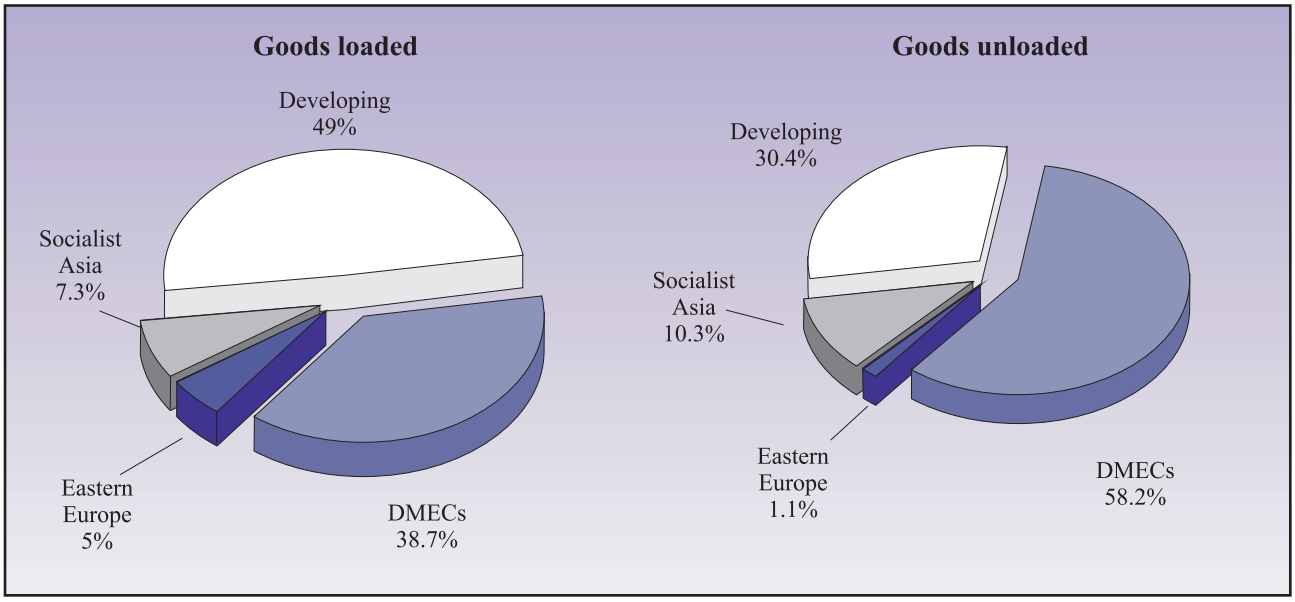
The breakdown of the 7.05 billion tons of world seaborne trade by major cargo segments and country groups is shown in table 4 and figure 3. The share of developed market-economy countries in goods loaded and unloaded in 2005 was 38.7 per cent and 58.2 per cent respectively of the world total. For those countries crude oil and petroleum products accounted for 5.2 and 21.5 per cent of total world exports, while imports accounted for 66.9 per cent for crude oil and 50.5 per cent for petroleum products. Further breakdowns in terms of regional groupings can be found in annex II. Among market-economy countries, Europe remains the most important exporter of crude oil and petroleum products, with a total of 105.3 million tons (4.3 per cent of the world total). North America is the largest importer of crude oil and petroleum products with 681.9 million tons (28.1 per cent) closely followed by Europe with 542.9 million tons (22.4 per cent) and Japan with 247.5 million tons (10.2 per cent).

In the dry bulk segment, the share of global shipments by developed market-economy countries decreased to 54.0 per cent for exports and to 55.6 per cent for imports. Again, annex II gives an insight into regional distribution of these shipments. Europe remains the largest dry cargo market for exports and imports, with 1,065.1 million tons (22.7 per cent of world exports) and 1,514.9 million tons (32.2 per cent of world imports) respectively. Two countries in North America (United States and Canada) and two in Oceania (Australia and New Zealand) were also large exporters of dry shipments, with shares of 10.7 per cent and 12.9 per cent respectively. This underlines their important shares in shipping the three major dry bulk commodities — iron ore, coal and grain.

During 2005 the share of developing countries in total seaborne exports was 49.0 per cent, while their share of seaborne imports was 30.4 per cent. Over the last few years these percentages seem to be fairly stable. The trade structure for developing countries sharply contrasts with that of developed market-economy

Figure 3

World seaborne trade by country groups
(Percentage share in tonnage, 2006)



Source: Compiled by the UNCTAD secretariat on the basis of data supplied by reporting countries and other specialized sources.

countries. The developing countries' combined share in crude oil and petroleum products exports represented 86.5 per cent and 67.6 per cent respectively. For imports, the shares were 26.3 per cent for crude oil and 42.4 per cent for petroleum products. In the dry cargo sector, the share of developing countries' exports reached 32.0 per cent of world exports, while their share of world imports increased marginally to 30.5 per cent.

Regional variations among groups of developing countries were related to their GDP. Developing countries in Asia had the largest shares in exports and imports, reaching 28.9 per cent and 21.7 per cent of world exports and imports respectively. The share of developing countries in Latin America was 13.7 per cent of world exports and 5.2 of world imports. The shares for African countries were about half of the share for America: 6.1 per cent of world exports and 3.0 of world imports. The shares for developing countries in Europe (0.3 per cent of world exports and imports) and Oceania (0.1 per cent of world exports and 0.2 per cent of imports) were considerable smaller.

In specific trades there were also considerable variations. The shares of Asian developing countries in world exports of crude oil were 53.7 per cent and in petroleum products 39.6 per cent. This reflects the importance of Middle East oil producers and refining activity in the Far East. The share of African developing countries in exports of crude oil (17.6 per cent) was higher than that of developing countries in America (15.0 per cent). For exports of petroleum products, however, the opposite was true — 6.6 per cent for developing countries in Africa and 21.0 per cent for those in Latin America. Again for exports of dry cargoes, Asian developing countries claimed the largest share (17.8 per cent), followed by American developing countries with 12.3 per cent and African developing countries with 1.4 per cent.

For imports of crude oil, the share of developing countries in Asia was 17.5 per cent of the world total. The shares for developing countries in America and Africa were 5.6 per cent and 2.9 per cent respectively. For imports of petroleum products, the corresponding shares for developing countries in Asia, America and Africa were 28.8 per cent, 9.1 per cent and 3.0 per cent. Imports of crude oil into developing countries in Europe reached 0.4 per cent of world imports, on a par with the percentage for imports of petroleum products. Developing countries in Oceania showed negligible imports of crude oil, in line with the scant refining capacity in the region, while the share of world petroleum products imports was 1.1 per cent.

The share of socialist countries in Asia in world exports for 2005 was 7.3 per cent and reached 10.3 per cent for world imports. These percentages reflect the important role of trade in the economic development of China and its high rates of economic growth. The trade of countries of Central and Eastern Europe (including the former USSR) achieved its largest share for exports, 5.0 per cent, as a result of shipments of crude oil and petroleum products from the Black and Baltic Seas. Seaborne imports for these countries reached 1.2 per cent of the world total, and these imports were complemented by other imports carried overland from other European countries.

6. Demand for shipping services

Table 5 provides data on total demand for shipping services in terms of ton-miles. World seaborne trade for 2005 reached 29 045 billion ton-miles, after growing by 5.1 per cent. As cargo transported increased by 3.8 per cent, the average transport distance increased during the year.

Increased demand for haulage of crude oil and oil products resulted in ton-miles for these commodities increasing by 4.2 per cent, somewhat less than the 6.2 per cent increase of the previous year. This is an indication of crude oil supplies moving longer distances, for instance from sources in the Barents, Baltic and Black Seas to destinations in Europe and North America and from West Africa to the Far East, notably China. For all dry cargoes the ton-miles also increased by 5.7 per cent, while tonnage transported increased by 3.5 per cent. For the five main dry bulks, ton-miles increased by 6.8 per cent, as against a 7.2 per cent increase in cargo volume, which indicates increased vessel utilization. For the remaining dry cargoes, minor bulks and liner cargo, supply lines were extended, as their ton-miles increased by 4.7 per cent to 8,730 billion ton-miles while cargo increased by 1.5 per cent. This implies longer distances between cargo origins and destinations and the lasting effect of relocated industries in the Far East.

Table 5

World seaborne trade in ton-miles, selected years
(Billions of ton-miles)

Year	Oil			Iron ore	Coal	Grain [a]	Five main dry bulks	Other dry cargoes	World total
	Crude	Products	Crude plus products						
1970	5 597	890	6 487	1 093	481	475	2 049	2 118	10 654
1975	8 882	845	9 727	1 471	621	734	2 826	2 810	15 363
1980	8 385	1 020	9 405	1 613	952	1 087	3 652	3 720	16 777
1985	4 007	1 150	5 157	1 675	1 479	1 004	4 480	3 428	13 065
1990	6 261	1 560	7 821	1 978	1 849	1 073	5 259	4 041	17 121
2000	8 180	2 085	10 265	2 545	2 509	1 244	6 638	6 790	23 693
2002	7 848	2 050	9 898	2 731	2 549	1 241	6 879	7 395	24 172
2003	8 390	2 190	10 580	3 025	2 810	1 273	7 454	7 810	25 844
2004	8 910	2 325	11 235	3 415	2 965	1 325	8 065	8 335	27 635
2005	9 270	2 435	11 705	3 720	3 140	1 380	8 610	8 730	29 045

Source: Fearnleys, *Review 2005*.

[a] Includes wheat, maize, barley, oats, rye, sorghum and soya beans.

Chapter 2

STRUCTURE AND OWNERSHIP OF THE WORLD FLEET

This chapter reviews the supply-side dynamics of the world maritime industry. The information and data comprehensively cover the structure and ownership of the world fleet. The chapter also reviews deliveries and demolition of ships, tonnage on order, newbuilding prices and markets for second-hand tonnage.

A. STRUCTURE OF THE WORLD FLEET

1. Principal types of ship

Comparative time-series data on the world fleet for 2004, 2005 and 2006 are provided in figure 4 and table 6. The world merchant fleet stood at 960 million deadweight tons (dwt) on 1 January 2006. This represents a 7.2 per cent increase over the start of 2005, at which time the world fleet had expanded by 4.5 per cent over the tonnage in 2004. The most recent growth rate is the highest since the beginning of 1989, when the world merchant fleet started to expand after the contraction of the 1980s. Newbuilding deliveries represented 70.5 million dwt, while 6.3 million dwt were broken up and lost. The result was a net gain of 64.2 million dwt in 2005.

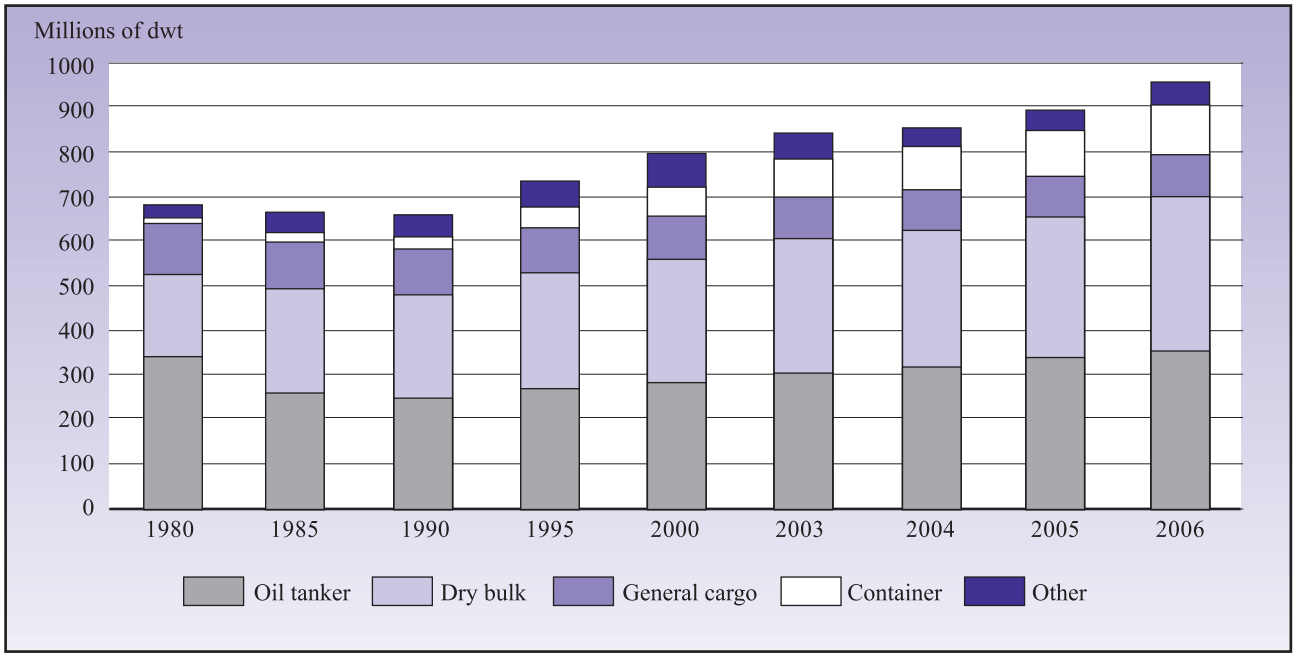
The tonnage of oil tankers in 2005 increased by 5.4 per cent and that of bulk carriers by 7.9 per cent. These two types of ships represented 72.9 per cent of total tonnage, a slight decrease from 73.3 per cent in 2004. The fleet of general cargo ships increased by 4.5 per cent in 2005, reversing the trend of previous years; this category now represents 10 per cent of the total world fleet. In terms of deadweight tonnage, the fleet of containerships increased by 13 million dwt, or 13.3 per cent, and now represents 11.6 per cent of the total world fleet. This growth rate reflects the increasingly prominent share of manufactured goods being traded in containers. The deadweight tonnage of liquid gas carriers (mainly LNG and LPG carriers) continued to increase for another year and at a good rate, while that of ferries/passenger ships did so at the modest rate of 1.1 per cent.

2. The world containership fleet

The world fleet of fully cellular containerships continued to expand substantially in 2005 in terms of both number of ships and their TEU capacity; by the beginning of 2006 there were 3,494 ships with a total capacity of 8,120,465 TEUs, an increase of 8.9 per cent in the number of ships and 13.3 per cent in TEU capacity over the previous year (see table 7). Ship sizes also continued to increase, with average carrying capacity per ship growing from 2,235 TEUs in 2005 to 2,324 TEUs in 2006, reflecting the commissioning of larger ships to achieve economies of scale. The trend towards large containerships continued, with the largest containership ordered being of 10,000 TEU official nominal capacity, while it is believed that mega ships currently ordered by Maersk Line will have a capacity of 13,640 TEU. Meanwhile, the second half of 2005 witnessed the entry into service of another of the largest containerships afloat — the 9,200 TEU *MSC Bruxelles*; and in early 2006 the 9,500 TEU *Cosco Guangzhou* went into

Figure 4

World fleet by principal types of vessel, selected years



Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

service. In 2005, containerships ranging from 4,000 to 7,499 TEUs represented 17 per cent of the containership fleet — existing fleet and newbuildings, while the share of containerships of 7,500 TEUs and over was 2.3 per cent.

3. Age distribution of the world merchant fleet

Table 8 provides data on the average age distribution of the world merchant fleet by both ship types and groups of countries and territories. The average age of the total world fleet in 2005 dropped marginally to 12.2 years. By type of ship, the average age of tankers slightly decreased to 10 years in 2005. The share of tanker tonnage 15 years and older decreased to 26.7 per cent in 2005 from 27.4 per cent in 2004, even after a decreasing level of scrapping activities, which in 2005 was only 5.7 million dwt (compared with 7.8 million dwt in 2004). The average age of the dry bulk carrier fleet was 13.1 years in 2005, slightly lower than that of the previous year, while containerships continued to be the youngest fleet in 2005, with an average age of 9.4 years (the same as the previous year). This trend is reflected in the share of tonnage between 0 and 4 years of age — 32.2 per cent, the highest among all categories of ships.

By country grouping, the fleet age of developed market-economy countries in 2005 was the lowest, at 10.3 years (10.5 years in 2004). These countries have continued the last few years' trend of lowering the average age of their fleet. Also in this group, the average age of tankers decreased slightly to 8.2 years in 2005, as compared with 8.5 years in 2004. This reflects the European Union's continued preference for new tonnage, which is motivated by environmental concerns and active participation in IMO for the adoption and implementation of instruments to promote safe and environment-friendly shipping. The major open-registry countries had the second lowest average age of all ships (11.7 years in 2005 versus 11.8 years in 2004). The average age of all ships registered in developing countries (excluding major

Table 6

World fleet size by principal types of vessel, 2004–2006[a]

(Beginning-of-year figures, in thousands of dwt)

Principal types	2004	2005	2006	Percentage change 2005/2006
Oil tankers	316 759	336 156	354 219	5.4
	37.0	*37.5*	*36.9*	
Bulk carriers	307 661	320 584	345 924	7.9
	35.9	*35.8*	*36.0*	
Ore/bulk/oil	12 110	9 695	7 817	-19.4
	1.4	*1.1*	*0.8*	
Ore/bulk	295 551	310 889	338 107	8.8
	34.5	*34.7*	*35.2*	
General cargo ships	94 768	92 048	96 218	4.5
	11.1	*10.3*	*10.0*	
Containerships	90 462	98 064	111 095	13.3
	10.6	*10.9*	*11.6*	
Other types of ships	47 324	48 991	52 508	7.2
	5.5	*5.5*	*5.5*	
Liquefied gas carriers	20 947	22 546	24 226	7.5
	2.4	*2.5*	*2.5*	
Chemical tankers	8 004	8 290	8 919	7.6
	0.9	*0.9*	*0.9*	
Miscellaneous tankers	947	1 001	1 261	26.0
	0.1	*0.1*	*0.1*	
Ferries and passenger ships	5 561	5 589	5 649	1.1
	0.6	*0.6*	*0.6*	
Other	11 865	11 565	12 453	7.7
	1.4	*1.3*	*1.1*	
World total	856 974	895 843	959 964	7.2
	100.0	*100.0*	*100.0*	

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Percentage shares are shown in italics.

open-registry countries) was 13 years in 2005, almost the same as the previous year. For this group, the average age of general cargo ships was 18.6 years, while that of containerships increased slightly to 9.6 years. The average age of tonnage registered in the socialist countries of Asia dropped by a full year to 15.8 years in 2005. The countries of Central and Eastern Europe continued to have the oldest fleet (20.7 years in 2005 versus 20.5 years in 2004), with ships built 15 years ago or more representing over 90 per cent of the total fleet and bulk carriers constituting the oldest class of ships at 22.9 years.

Table 7

Distribution of the world fleet and TEU capacity of fully cellular containerships, by country groups, in 2004, 2005 and 2006[a]

(Beginning-of-year figures)

Flags of registration by groups of countries	Number of ships			TEU capacity and percentage shares		
	2004	2005	2006	2004	2005	2006
World total	3 054	3 206	3 494	6 437 218	7 165 352	8 120 465
	100.0	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Developed market-economy countries	824	897	1 009	2 147 550	2 520 415	2 902 207
	27.0	*28.0*	*28.9*	*33.4*	*35.2*	*35.7*
Major open-registry countries	1 224	1 255	1 351	2 922 805	3 112 131	3 479 947
	40.1	*39.1*	*38.7*	*45.4*	*43.4*	*42.9*
Total developed market-economy and major open-registry countries	2 048	2 152	2 360	5 070 355	5 632 546	6 382 154
	67.1	*67.1*	*67.5*	*78.8*	*78.6*	*78.6*
Countries in Central and Eastern Europe (including former USSR)	35	34	27	26 813	26 014	15 297
	1.1	*1.1*	*0.8*	*0.4*	*0.4*	*0.2*
Socialist countries of Asia	136	117	131	153 727	182 607	238 282
	4.5	*3.6*	*3.7*	*2.4*	*2.5*	*2.9*
Developing countries	779	848	921	1 115 019	1 251 358	1 420 783
	25.5	*26.5*	*26.4*	*17.3*	*17.5*	*17.5*
of which:						
Africa	9	11	12	9 131	10 469	11 857
	0.3	*0.3*	*0.3*	*0.1*	*0.1*	*0.1*
America	282	314	328	361 472	399 964	416 970
	9.2	*9.8*	*9.4*	*5.6*	*5.6*	*5.1*
Asia	488	523	581	744 416	840 925	991 956
	16.0	*16.3*	*16.6*	*11.6*	*11.7*	*12.2*
Europe	0	0	0	0	0	0
	0.0	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Oceania	0	0	0	0	0	0
	0.0	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Other, unallocated	56	55	55	71 304	72 827	63 949
	1.8	*1.7*	*1.6*	*1.1*	*1.0*	*0.8*

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Percentage shares are shown in italics.

Table 8

Age distribution of the world merchant fleet, by types of vessel, as of 1 January 2006

(Percentage of total dwt)

Country grouping	Types of vessel	0–4 years	5–9 years	10–14 years	15–19 years	20 years and over	Average age (years) 2005 [a]	Average age (years) 2004 [a]
World total	All ships	24.2	21.2	16.8	10.6	27.1	12.2	12.3
	Tankers	31.6	22.0	19.7	12.4	14.3	10.0	10.3
	Bulk carriers	19.7	21.6	16.6	10.2	32.0	13.1	13.0
	General cargo	8.6	13.9	10.6	9.6	57.4	17.5	17.5
	Containerships	32.1	28.3	17.3	8.2	14.0	9.4	9.4
	All others	18.2	14.5	11.2	8.8	47.3	15.3	15.6
Developed market-economy countries	All ships	28.2	27.8	17.3	9.2	17.5	10.3	10.5
	Tankers	36.3	29.2	18.2	8.8	7.4	8.2	8.5
	Bulk carriers	18.7	27.3	19.4	8.9	25.7	12.2	12.3
	General cargo	14.6	22.6	15.1	10.6	37.1	14.2	14.0
	Containerships	31.6	32.7	14.9	9.8	10.9	8.9	9.0
	All others	19.9	18.9	13.2	9.5	38.4	13.9	14.2
Major open-registry countries	All ships	26.3	21.5	17.3	10.0	25.0	11.7	11.8
	Tankers	32.7	21.5	21.1	12.0	12.6	9.7	10.2
	Bulk carriers	22.2	21.7	16.2	9.6	30.3	12.7	12.6
	General cargo	9.9	18.0	11.8	9.5	50.7	16.4	16.4
	Containerships	35.3	25.8	16.2	7.7	15.0	9.3	9.2
	All others	20.1	15.3	10.7	5.8	48.1	15.1	15.5
Subtotal	All ships	27.0	23.8	17.3	9.7	22.2	11.1	11.3
	Tankers	34.3	24.9	19.9	10.6	10.4	9.1	9.5
	Bulk carriers	21.4	23.1	17.0	9.4	29.1	12.5	12.5
	General cargo	11.8	19.8	13.1	10.0	45.3	15.5	15.5
	Containerships	33.7	28.9	15.6	8.6	13.2	9.1	9.1
	All others	20.0	17.1	12.0	7.7	43.2	14.5	14.9
Countries of Central and Eastern Europe	All ships	2.9	4.4	4.8	13.8	74.1	20.7	20.5
	Tankers	9.4	13.3	7.9	15.3	54.0	17.4	18.3
	Bulk carriers	0.7	1.8	0.2	1.1	96.2	23.0	22.9
	General cargo	1.6	1.8	5.6	16.4	74.7	21.2	20.8
	Containerships	0.0	1.4	0.0	10.3	88.3	22.6	18.1
	All others	1.9	4.0	5.8	22.8	65.5	20.3	20.0
Socialist countries of Asia	All ships	21.8	6.0	12.9	8.4	50.9	15.8	16.8
	Tankers	35.9	6.7	18.6	7.9	30.9	12.0	13.4
	Bulk carriers	11.8	6.5	10.1	10.1	61.6	18.1	18.4
	General cargo	5.0	4.8	5.4	6.9	78.0	20.6	20.9
	Containerships	45.1	3.6	19.4	7.3	24.7	10.5	12.3
	All others	35.9	6.7	18.6	7.9	30.9	12.0	13.4
Developing countries (excluding open-registry countries)	All ships	21.1	18.7	17.3	13.2	29.6	13.0	13.1
	Tankers	26.6	18.5	19.8	16.7	18.3	11.4	11.5
	Bulk carriers	17.9	20.6	17.4	13.1	31.0	13.4	13.3
	General cargo	7.7	10.1	9.1	8.6	64.6	18.6	18.6
	Containerships	28.2	29.9	21.8	6.3	13.8	9.6	9.3
	All others	16.7	9.5	9.1	9.2	55.5	16.7	16.9

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] To calculate the average age, it has been assumed that the ages of vessels are distributed evenly between the lower and upper limits of each age group. For the 20-years-and-over age group, the mid-point has been assumed to be 23.5 years.

4. Delivery of newbuildings

Newbuilding activities reached the highest level ever recorded in terms of deadweight tons, with deliveries totalling 70.5 million dwt in 2005 (see table 9), an impressive increase over 2004 deliveries (49.4 million dwt). The total number of ships delivered increased by 16.5 per cent to 2,129 units from 1,827 units in 2004. This high level of delivery was attributed mainly to tanker deliveries of 30.7 million dwt, up 3.1 million dwt as compared with 2004. The number of tankers delivered reached 475 units in 2005 (301 units in 2004), with the average size of 64,632 dwt being lower than the one the previous year; this is due to the replacement of small tankers in the world tanker fleet. Up to September 2005, 19 VLCCs, 19 Suezmax and 41 Aframax ships had been delivered. Deliveries of bulk carriers increased by 9.1 million dwt in 2005 — a growth rate of about 65.5 per cent. The number of bulk carriers delivered reached 313 units in 2005 (264 units in 2004), with the average size of 73,482 dwt being higher than the one the previous year; this was due to the entry into service of larger carriers in the world bulk carrier fleet. Up to September 2005, 37 Cape-size, 50 Panamax, 66 Handymax and 42 Handysize ships had been delivered. Newbuildings for other types of ships, including general cargo ships and containerships, increased less in number than in deadweight tonnage — to 1,341 units and 16.8 million dwt in 2005. Up to September 2005, 160 containerships and 22 general cargo ships had been delivered.

5. Demolition of ships

Trends in the tonnage, types and average age of broken-up ships are shown in tables 10, 11 and 12. In 2005, total tonnage sold for demolition decreased by 42.7 per cent compared with the previous year to 6.3 million dwt,

Table 9

Deliveries of newbuildings, selected years

Year	Oil tankers [a]		Combined carriers [a]		Dry bulk carriers [a]		Others [b]		Total	
	No. of vessels	Million dwt	No. of vessels	Million dwt	No. of vessels	Million dwt	No. of vessels	Million dwt	No. of vessels	Million dwt
1980	99	7.0	4	0.4	135	4.7	548	6.0	786	18.0
1985	72	3.9	10	0.7	339	14.7	529	5.0	95	25.0
1990	81	8.7	0	0.0	119	9.6	523	4.0	723	23.0
1997	69	7.5	3	0.3	299	18.8	696	10.2	1 067	36.8
1998	120	12.6	0	0.0	217	11.6	704	11.1	1 041	35.3
1999	161	19.1	4	0.4	195	13.0	585	8.4	940	40.5
2000	154	20.8	0	0.0	188	13.1	1 202	10.5	1 544	44.4
2001	112	14.4	0	0.0	310	21.0	1 048	9.8	1 470	45.2
2002	182	23.4	0	0.0	226	14.1	1 131	11.5	1 539	49.0
2003	281	29.4	2	0.2	161	11.2	1 263	8.4	1 707	49.2
2004	301	27.6	0	0.0	264	13.9	1 262	7.9	1 827	49.4
2005 [c]	475	30.7	0	0.0	313	23.0	1 341	16.8	2 129	70.5

Source: Compiled by the UNCTAD secretariat on the basis of data from Fearnleys, *Review*, various issues.

[a] Vessels over 10,000 dwt.

[b] Sea-going, cargo-carrying vessels of over 1,000 gross registered tons (grt).

[c] Provisional.

Table 10

Broken-up tonnage trends, 2000–2005

Broken-up tonnage	2000	2001	2002	2003	2004	2005
Tonnage sold for breaking (million dwt)	22.2	27.8	30.5	25.6	11.0	6.3
Broken-up tonnage as a percentage of the total world fleet	2.7	3.4	3.6	3.0	1.2	0.7

Sources: Compiled by the UNCTAD secretariat on the basis of data supplied by Fearnleys, *Review*, various issues, and Lloyd's Register – Fairplay.

Table 11

Tonnage reported sold for breaking, by types of vessel, 2000–2005

(Millions of dwt and percentage shares)

Years	Million dwt						Percentage share					
	Tankers	Combined carriers	Bulk carriers	Others	Total	World fleet	Total	Tankers	Combined carriers	Bulk carriers	Others	Total
2000	13.5	1.0	4.6	3.1	22.2	808.4	2.7	60.9	4.3	20.8	14.0	100.0
2001	15.7	0.8	8.1	3.2	27.8	825.7	3.4	56.5	2.7	29.1	11.7	100.0
2002	18.1	1.6	5.9	4.9	30.5	844.2	3.6	59.3	5.2	19.3	16.1	100.0
2003	18.4	0.5	3.3	3.4	25.6	857.0	3.0	71.9	2.0	12.9	13.3	100.0
2004	7.8	0.5	0.5	1.8	10.6	895.8	1.2	73.6	4.7	4.7	17.0	100.0
2005	5.7	0.0	0.3	0.3	6.3	960.0	0.7	90.5	0.0	4.8	4.7	100.0

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Fearnleys, *Review*, various issues.

Table 12

Average age of broken-up ships, by type, from 2000 to 2005[a]

(Years)

Year	Tankers	Dry bulk carriers	Containerships	General cargo ships
2000	26.9	25.9	25.7	27.3
2001	28.0	26.7	26.9	27.4
2002	28.3	26.6	26.0	28.2
2003	29.3	26.5	25.5	29.3
2004	29.5	27.3	30.5	32.9
2005	31.5	28.1	30.6	31.9

Source: Compiled by the UNCTAD secretariat on the basis of data in Institute of Shipping Economics and Logistics (2006), *Shipping Statistics and Market Review*, Jan./Feb., table I-1.3.2.

[a] Ships of 300 grt and over.

equivalent to 0.7 per cent of worldwide total deadweight tons, as compared with 1.2 per cent in 2004. Break-up of tankers accounted for the largest share of total demolition, while no containerships or combined carriers were sold for break-up in 2005. The volume of tankers sold for demolition decreased to 5.7 million dwt as compared with the previous year (7.8 million dwt). There was only one ULCC/VLCC demolition sale in 2005, while 3 units were sold in 2004. Sales of Suezmax ships stood at 2 units in 2005, while those of Aframax ships decreased from 25 units in 2004 to 16 units in 2005. In the smaller category of crude oil tankers, demolition also decreased: 17 units were sold for scrap in 2005, while 38 units were sold in 2004. The average age of tankers sold for demolition was up slightly to 31.5 years in 2005. The tonnage of dry bulk carriers sold for scrap decreased to 0.3 million dwt in 2005. One Cape-size, 2 Handymax and 5 Handysize units were sent for demolition in 2005. No Panamax or combined carriers tonnages were sent for break-up. The average age of all dry bulk carriers broken up was 28.1 years in 2005, almost a year more than the previous year. Containerships also had a slightly extended trading life in 2005, but general cargo vessels were sold sooner to breakers at an average age of 31.9 years as compared with the previous year (32.9 years).

Despite the record prices offered by some ship breakers — in Bangladesh prices frequently topped $400/light displacement ton (ldt) — demolition volumes decreased in 2005 owing to the favourable freight rates, which encouraged owners to keep their vessels. Demolition volumes did not increase even with the coming into force, in April 2005, of MARPOL Regulation 13G, which applies to all single-hull tankers over a certain size and carrying specified oil cargoes. In the next few years there is scope for the impact of this regulation to become apparent. By July 2005, 14 countries and the EU had notified the IMO of the phasing-out of single-hull tankers, with other countries still reserving their decision on the acceptance of these vessels after 2010. In the event of full compliance, some envisage a capacity crunch scenario for the scrapping industry because about 700 rather than the usual 150 tankers would need to be demolished annually.

In 2005 Bangladesh, the star performer from the previous year, continued to exert greater control over the market by acquiring the majority of available tonnage and making arrangements for ensuring good resale prices to steel makers. Similar countries were India, China and Pakistan, although with decreased activity. In India the number of demolition yards active in Alang was around 20 to 30, the potential number of yards being 180. Less than a handful of yards were reported to be operational in Pakistan, where the Government introduced tax incentives to encourage scrapping activity. Chinese yards were reported to be dormant throughout the year and breakers looked for alternative sources of income as they were unable to secure tonnage in view of the high prices maintained in other countries.

B. OWNERSHIP OF THE WORLD FLEET

1. Distribution of world tonnage by country groups

The total world fleet continued to expand in 2005, increasing by 7.2 per cent to 960 million dwt (see figure 5 and table 13). The tonnage of developed market-economy countries grew at a rate lower than that of the total world fleet — 6.9 per cent (from 241.7 million dwt to 258.4 million dwt). This might reflect some incentives applied in the EU countries to attract tonnage such as the introduction of tonnage taxes and the relaxation of manning requirements for ships registered in national second registers. The tonnage of major open-registry countries increased marginally in 2005, by 27.9 million dwt to 431.9 million dwt. Over two thirds of these beneficially-owned fleets are owned by developed market-economy countries. The share of the world fleet registered in developing countries has continued to increase, rising by 16 million dwt (7.9 per cent) in 2005 to 218.3 million dwt. The fleet of Asian developing countries expanded by 15.7 million dwt (10.1 per cent) to 171.0 million dwt, accounting for 78.6 per cent of the developing countries' total fleet. The fleets of developing countries of Africa and America stood at 5.4 and 36.7 million dwt respectively. Modest gains were recorded by the fleets of developing countries in Europe and Oceania, reaching 1.7 and 2.7 million dwt respectively. The fleets of the socialist countries in Asia increased by 10.7 per cent, reaching 37 million dwt, while the fleets of countries of Central and Eastern Europe dropped marginally to 14.4 million dwt.

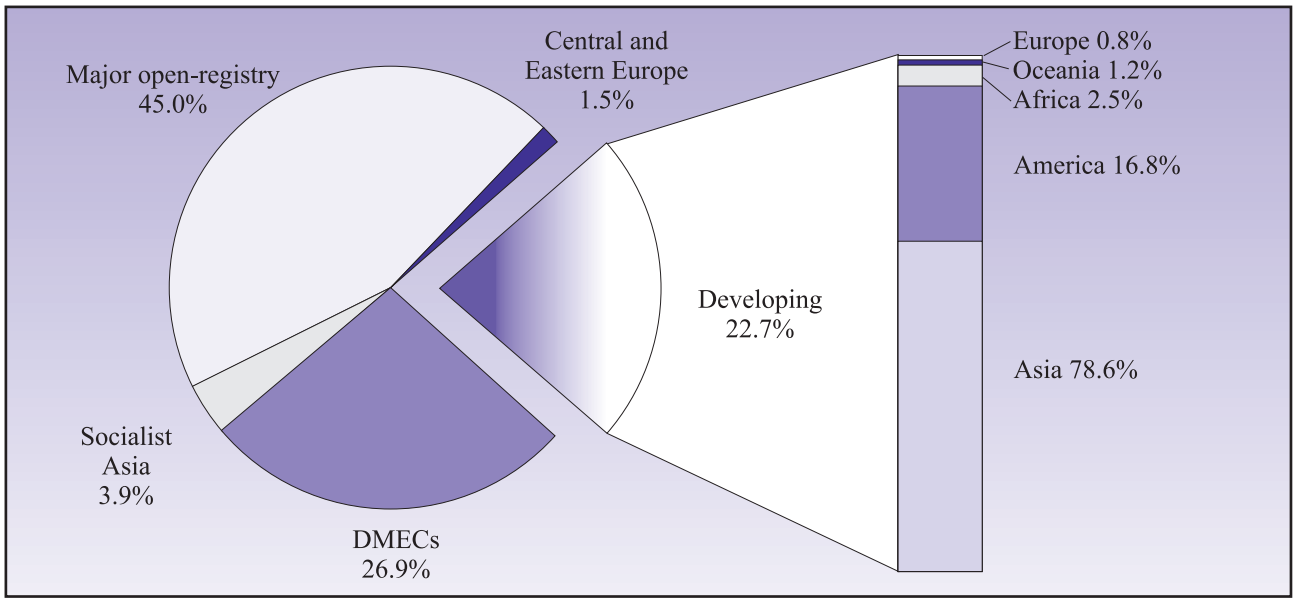
2. Distribution of world tonnage by types of ship and by country groups

Table 14 provides more detailed data on fleet distribution by types of ship and country groups for 1970, 1980, 1990, 2000, 2004 and 2005. Despite the relatively lower volume of tanker tonnage reported sold for break-up in comparison with 2004, the share of oil tankers in the

Figure 5

World tonnage, by country groups, as of 1 January 2006

(Percentage distribution of dwt)



Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

total world fleet decreased by 0.6 per cent in 2005. There was a 0.2 per cent increase in bulkers' share of the total world fleet, which reached 36 per cent. The share of general cargo ships in the world fleet continued to decrease, falling to 10 per cent, while that of containerships continued its upward trend, reaching 11.6 per cent. The share of other types of ships stood at 5.5 per cent. In 2005, the share of developed market-economy countries in the oil sector was slightly lower than the previous year and dropped to 31.2 per cent. Conversely, the share of open-registry countries reached 43.4 per cent. This marginal increase in comparison with the previous year (43.2) reflects owners' tendency to register tanker tonnage under major open registries. Developing countries maintained the upward trend of the previous year and increased their share to 22.4 per cent in 2005. The proportion of Asian developing countries increased by 0.8 per cent in 2005 to 19.3 per cent of the world tanker fleet, while that of developing countries of America decreased to 2.5 per cent.

In the dry bulk carrier sector, the tonnage share of developed market-economy countries in the total world fleet increased marginally by 0.5 per cent in 2005 to 19.4 per cent, approximately one third its 1970 share. Major open-registry countries reduced their share to 52.6 per cent in 2005, as compared with 52.9 per cent in 2004 (24.1 per cent in 1970). The share of developing countries decreased to 22.8 per cent. The share of countries in Central and Eastern Europe remained steady at 0.9 per cent, while that of socialist countries in Asia increased slightly from 4.3 per cent in 2004 to reach 4.4 per cent in 2005.

In the sector of general cargo ships, developed market-economy countries decreased their share to 21.4 per cent of the world fleet, while open-registry countries' share decreased marginally to 32.1 per cent. Developing countries actually increased their share from 29.6 in 2004 to 30.9 per cent in 2005, with increases recorded in Asian countries and Oceania. General cargo ships continued to be the largest of the five principal types of ship for developing countries.

Developed market-economy countries increased their share of containership deadweight tonnage in 2005 by

Table 13

Distribution of world tonnage (dwt) by groups of countries of registration, 1980, 1990, 2004, 2005 and 2006[a]

(Beginning-of-year figures)

Flag of registration by group of countries	Tonnage and percentage shares [b] in millions of dwt				
	1980 [c]	1990 [d]	2004	2005	2006
World total	682.8	658.4	857.0	895.8	960.0
	100.0	*100.0*	*100.0*	*100.0*	*100.0*
Developed market-economy countries	350.1	219.0	230.4	241.7	258.4
	51.3	*33.3*	*26.9*	*27.0*	*26.9*
Major open-registry countries	212.6	224.6	399.5	404.0	431.9
	31.1	*34.1*	*46.6*	*45.1*	*45.0*
Countries of Central and Eastern Europe (including former USSR)	37.8	44.3	15.7	14.5	14.4
	5.5	*6.7*	*1.8*	*1.6*	*1.5*
Socialist countries of Asia	10.9	22.1	29.9	33.4	37.0
	1.6	*3.4*	*3.5*	*3.7*	*3.9*
Developing countries	68.4	139.7	181.4	202.3	218.3
	10.0	*21.2*	*21.2*	*22.6*	*22.7*
of which:					
Africa	7.2	7.3	5.7	5.6	5.4
Americas	21.8	25.5	36.0	36.7	36.7
Asia	39.1	89.5	136.0	155.9	171.6
Europe	0.2	13.8	1.2	1.5	1.7
Oceania	0.1	3.6	2.4	2.6	2.7
Other, unallocated	3.0	8.7	0.0	0.0	0.0
	0.4	*1.3*	*0.0*	*0.0*	*0.0*

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Excludes the US Reserve Fleet and the US and Canadian Great Lakes fleets, which in 2006 amounted to 3.9, 1.8 and 1.5 million dwt respectively.

[b] Percentage shares are shown in italics.

[c] Mid-year figure.

[d] End-of-year figure.

Table 14

Percentage shares of world tonnage, by types of vessel and country groups, in 1970, 1980, 1990, 2000, 2004 and 2005 [a] [b]

	Year	Total dwt		Oil tankers	Bulk carriers [c]	General cargo	Container ships	Other ships
		Million dwt	Percentage of world total	Percentage share by vessel type [d]				
World total	1970	326.1	100.0	39.4	20.2	30.2	0.9	9.3
	1980	682.8	100.0	49.7	27.2	17.0	1.6	4.5
	1990	358.4	100.0	37.4	35.6	15.6	3.9	7.5
	2000	808.4	100.0	35.3	34.8	12.7	8.6	8.6
	2004	895.8	100.0	37.5	35.8	10.3	10.9	5.5
	2005	960.0	100.0	36.9	36.0	10.0	11.6	5.5
Developed market-economy countries	1970	211.9	65.0	63.9	69.2	65.6	99.0	61.3
	1980	350.1	50.3	52.5	52.7	43.4	74.3	50.4
	1990	219.0	33.3	37.3	29.5	23.1	46.5	45.2
	2000	203.4	25.2	30.0	16.9	19.6	34.4	37.6
	2004	241.7	27.0	32.2	18.9	22.2	34.6	37.4
	2005	258.4	26.9	31.2	19.4	21.4	35.2	39.9
Open-registry countries	1970	70.3	21.6	26.4	24.1	7.6	1.0	3.6
	1980	212.5	31.1	36.2	31.7	20.8	13.5	17.0
	1990	224.6	34.1	41.6	33.2	26.2	21.1	24.2
	2000	392.2	48.5	50.8	55.0	36.5	40.6	38.2
	2004	404.0	45.1	43.2	52.9	32.4	43.9	33.4
	2005	431.9	45.0	43.4	52.6	32.1	43.0	33.7
Central and Eastern Europe	1970	20.5	6.2	4.6	2.1	12.0	-	28.8
	1980	37.8	5.5	2.8	4.2	12.6	2.9	19.2
	1990	44.3	6.7	3.2	6.1	15.5	3.2	10.9
	2000	16.3	2.0	1.0	1.4	6.3	0.6	3.7
	2004	14.5	1.6	0.9	0.9	6.2	0.4	4.7
	2005	14.4	1.5	0.8	0.9	6.1	0.2	4.3
Socialist countries of Asia	1970	1.2	0.4	0.1	-	1.1	-	0.3
	1980	10.9	1.6	0.6	1.6	4.7	0.1	1.3
	1990	22.1	3.4	1.1	3.6	8.5	4.2	2.2
	2000	26.1	3.2	1.4	4.0	7.6	2.6	1.8
	2004	33.5	3.7	2.0	4.3	9.6	3.1	2.4
	2005	37.0	3.9	2.2	4.4	9.5	3.4	2.3
Developing countries	1970	20.5	6.3	4.7	4.3	12.6	-	5.9
	1980	68.4	10.0	7.7	9.2	17.6	7.6	12.0
	1990	139.7	21.2	16.3	25.6	26.2	16.0	17.4
	2000	157.0	19.4	16.1	20.7	27.1	18.7	17.3
	2004	202.3	22.6	21.8	22.9	29.6	18.0	22.1
	2005	218.3	22.7	22.4	22.8	30.9	18.1	19.8

Table 14 (continued)

	Year	Total dwt		Oil tankers	Bulk carriers [c]	General cargo	Container ships	Other ships
		Million dwt	Percentage of world total	Percentage share by vessel type [d]				
of which:								
Africa	1970	1.1	0.3	0.2	-	1.3	-	0.7
	1980	7.1	1.0	1.1	0.1	2.3	..	2.1
	1990	7.3	1.1	1.0	0.5	2.3	0.2	2.9
	2000	6.0	0.7	0.5	0.4	1.7	0.2	1.8
	2004	5.6	0.6	0.5	0.4	1.3	0.1	2.3
	2005	5.4	0.6	0.4	0.4	1.3	0.1	2.3
America	1970	8.7	2.7	2.8	1.4	4.3	-	2.5
	1980	21.8	3.2	2.3	3.3	5.6	0.1	3.7
	1990	25.5	3.9	3.0	3.8	6.2	1.4	4.7
	2000	34.1	4.2	2.7	3.5	9.6	5.1	4.5
	2004	36.7	4.1	2.6	3.2	10.5	5.5	5.6
	2005	36.7	3.8	2.5	2.8	10.3	5.1	4.6
Asia	1970	10.7	3.3	1.7	2.9	6.9	-	2.6
	1980	39.1	5.7	4.3	5.7	9.8	2.7	5.7
	1990	89.5	13.6	10.7	17.6	13.7	13.5	9.1
	2000	115.7	14.3	12.9	16.5	15.5	13.3	10.9
	2004	155.9	17.4	18.5	18.6	17.0	12.4	12.9
	2005	171.6	17.9	19.3	18.9	18.5	12.8	11.6
Europe	1970	-	-	-	-	-	-	-
	1980	0.2	-	-	-	0.1	-	-
	1990	13.8	2.1	1.4	2.8	3.2	0.6	0.4
	2000	1.0	0.1	0.0	0.3	0.2	0.0	0.0
	2004	1.5	0.2	0.1	0.3	0.2	0.0	0.1
	2005	1.7	0.2	0.2	0.3	0.2	0.0	0.1
Oceania	1970	-	-	-	-	-	-	-
	1980	0.2	-	-	-	0.1	-	-
	1990	3.6	0.5	0.2	0.9	0.8	0.3	0.3
	2000	0.2	0.0	0.0	0.0	0.1	0.0	0.1
	2004	2.6	0.3	0.0	0.4	0.6	0.0	1.2
	2005	2.7	0.3	0.0	0.4	0.7	0.0	1.2
Unallocated	1970	1.7	0.5	0.3	0.3	1.1	-	0.1
	1980	3.0	0.4	0.2	0.6	0.9	1.6	0.1
	1990	8.7	1.3	0.5	2.0	0.5	9.0	0.1
	2000	13.4	1.7	0.7	1.9	2.9	3.1	1.3
	2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay. See annex III(b) for details.

[a] Excludes the US Reserve Fleet and the US and Canadian Great Lakes fleets.

[b] Fleet data in dwt up to 1990 were calculated as of 1 July and from 1991 onwards as of 1 January.

[c] Ore and bulk carriers, including combined ore/oil and ore/bulk/oil carriers.

[d] Percentages for 1970 were calculated on the basis of grt.

0.6 per cent to reach 35.2 per cent. The share of major open-registry countries decreased by 0.9 per cent, reaching 43 per cent. The share of developing countries stood at 18.1 per cent, with the share of Asian developing countries increased to 12.8 per cent and that of developing countries in America decreased marginally to 5.1 per cent. African developing countries maintained their share of the previous year, 0.1 per cent.

3. Fleet structure of main country groups

Table 15 provides data on the structure of the merchant fleet of the main country groups as of 1 January 2005. Developed market-economy countries' tonnage in tankers increased in 2005 by 2.2 million dwt to 110.6 million dwt, but the share of the group's total fleet decreased to 42.8 per cent as compared with 44.9 per cent in 2004. The share of dry bulk carriers increased to 26 per cent, equivalent to an increase of 6.5 million dwt. General cargo ships' and containerships' share of their fleet registered opposite movements, down to 8 per cent for the former and up to 15.2 per cent for the latter, as compared with 8.5 and 14 per cent respectively in 2004. Major open-registry countries increased their total fleets by 27.9 million dwt. The greatest proportion of their fleets was in the oil tanker and dry bulk carrier sectors, which together accounted for 77.7 per cent of their fleet at the beginning of 2006. The share of oil tankers increased in 2005 by 8.5 million dwt and reached 153.6 million dwt, or 35.6 per cent of the group's total fleet, while the share of dry bulk carriers increased by 12.2 million dwt to 42.1 per cent as compared with 42 per cent the previous year. The share of general cargo ships increased in 2005 by 1.1 million dwt, accounting for 7.2 per cent of the group's total fleet, slightly down from 7.4 per cent in 2004. The containership fleet of these countries expanded in 2005 by 4.8 million dwt to 11.1 per cent of their total fleet (up from 10.7 per cent in 2004).

A high proportion of oil tankers and dry bulk carriers continue to characterize developing countries' tonnage distribution. The share of oil tankers and dry bulk carriers represented 36.3 and 36.1 per cent respectively in 2005. In absolute terms, these countries' 2005 tonnage in oil tankers and dry bulk carriers was 79.3 million dwt and 78.8 million dwt as compared with 110.6 million dwt and 67.1 million dwt for developed market-economy countries. The share of general cargo ships in this group increased in 2005 to 29.7 million dwt in comparison with

Table 15

Structure of the merchant fleets of the main country groups as of 1 January 2006[a]

(Millions of dwt and percentage shares)

	World fleet		Developed market-economy countries		Open-registry countries		Developing countries		Central and Eastern Europe		Socialist countries of Asia	
	Million dwt	%	Million dwt	%	Million dwt	%	Million dwt	%	Million dwt	%	Million dwt	%
Total fleet	960.0	100.0	258.4	100.0	431.9	100.0	218.3	100.0	14.4	100.0	37.0	100.0
Oil tankers	354.2	36.9	110.6	42.8	153.6	35.6	79.3	36.3	2.9	19.9	7.8	21.1
Bulk carriers	345.9	36.0	67.1	26.0	181.9	42.1	78.8	36.1	3.1	21.6	15.1	40.7
General cargo ships	96.2	10.0	20.6	8.0	30.9	7.2	29.7	13.6	5.9	40.9	9.1	24.7
Containerships	111.1	11.6	39.2	15.2	47.8	11.1	20.1	9.2	0.3	1.9	3.8	10.3
Other ships	52.5	5.5	21.0	8.1	17.7	4.1	10.4	4.8	2.3	15.8	1.2	3.2

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Ships of 100 grt and over, excluding the US Reserve Fleet and the US and Canadian Great Lakes fleets.

27.2 million dwt in 2004, while containerships increased in tonnage by 2.5 million dwt and in percentage terms to 9.2 per cent in 2005 from 8.7 per cent the previous year. In the countries of Central and Eastern Europe, general cargo ships were relatively dominant, accounting for 40.9 per cent in 2005, as compared with 39.8 per cent in 2004. On the other hand, containerships slightly decreased to 0.3 million dwt, or around 1.9 per cent of the total. The socialist countries of Asia continued to have a predominant share of both dry bulk carriers and general cargo ships. The absolute tonnage of these types of ship increased in 2005 to 15.1 million dwt and 9.1 million dwt respectively. However, their shares of the total decreased to 40.7 per cent (from 41.6 per cent in 2004) for dry bulk carriers and 24.7 per cent (from 26.3 per cent in 2004) for general cargo ships. The absolute tonnage of containerships increased in 2005 to 3.8 million dwt, or 10.3 per cent (compared with 9 per cent in 2004).

C. REGISTRY OF SHIPS

1. The 35 most important maritime countries and territories

The 35 most important maritime countries as at 1 January 2006 are ranked in table 16 according to deadweight tonnage registered and controlled. During 2005, these 35 countries and territories controlled 95.17 per cent of the world merchant fleet (the same level as the previous year). Greece and Japan were still at the top of the list. Cyprus and Ukraine, ranked 31st and 32nd in 2004, were replaced in 2005 by new entrants, Croatia and Israel, which occupied respectively, the 33rd and 34th places. The rankings of 16 other countries or territories changed. Taiwan Province of China, Canada, the Philippines, Singapore and Turkey moved up by one place, while Sweden moved up by three places and Belgium, Kuwait and the United Arab Emirates by four places. Other countries moved down by one place (the Islamic Republic of Iran and Saudi Arabia), two places (Spain and the United Kingdom), three places (Brazil and Malaysia) and five places (France).

During 2005, these 35 most important maritime countries and territories continued to register tonnage under foreign flags. The total tonnage registered under foreign flags in 2005 increased to 577.1 million dwt, representing 66.9 per cent of the 35 countries' total fleet, as compared with 523.3 million dwt or 65.6 per cent in 2004. Developing countries and territories continued their recent trend towards registering their tonnage under foreign flags. In 2005, the 14 developing countries and territories listed in the table — including Hong Kong (China) but excluding Taiwan Province of China — had 46 per cent of their total tonnage registered under foreign flags. In spite of the general trend towards flagging out among developing countries, differences among individual countries remain. The foreign registries of Saudi Arabia and Hong Kong (China) amounted to 91.4 and 59.1 per cent respectively, while India, the Islamic Republic of Iran, Thailand and the Philippines made less use of foreign flag registers, which accounted respectively for only 9.2, 9.5, 14.3 and 19.3 per cent of their fleets. For developed market-economy countries, the share of foreign-registered tonnage increased to 73.8 per cent in 2005. In some countries, the opposite trend could be at work. For instance, in 2005, Germany raised total tonnage to 71.5 million dwt (57.9 million dwt the previous year), while its foreign flag fleet decreased from 84.4 to 81.7 per cent.

2. Open registries

The tonnage distribution of the six major open-registry countries by principal types of ship is shown in table 17, together with the corresponding totals for six minor open-registry countries. The total tonnage registered as at 1 January 2006 in the six major registries increased by 7.2 per cent to 391.2 million dwt from 364.8 million dwt the previous year, during which the tonnage increased by less than 2 per cent. Panama continued to head the list with an expansion of 16.8 million dwt. This registry allows for dual registry (i.e. a foreign vessel bareboat chartered for a period of up to two years can be registered in the country for the same period without losing its previous registration), discounts in registration fees and tax holidays on profits accruing from vessels' operations. Liberia's fleet also expanded by 10.6 per cent. In May 2005 detention figures released under the Paris Memorandum of Understanding placed that country at the top of the list of the 10 best-performing flags. This registry has contracted international security specialists to train its own network of security auditors and plans similar action to implement the International Safety Management Code and other quality-related measures. The combined tonnage of Panama and Liberia amounts to 71.4 per cent of the total tonnage of the six major open-registry countries.

Two other major open-registries — the Bahamas and Malta— also expanded their fleets by 11.2 and 5.3 per cent respectively, while the fleets of Cyprus and Bermuda

Table 16

The 35 most important maritime countries and territories as of 1 January 2006[a]

Country of domicile [b]	Number of vessels			Deadweight tonnage				
	National flag[c]	Foreign flag	Total	National flag	Foreign flag	Total	Foreign flag as a percentage of total	Total as a percentage of world total
Greece	709	2 318	3 027	47 466	115 928	163 394	70.95	18.02
Japan	707	2 384	3 091	11 763	119 940	131 703	91.07	14.52
Germany	420	2 366	2 786	13 120	58 397	71 516	81.66	7.89
China	1 763	1 130	2 893	29 832	35 656	65 488	54.45	7.22
United States	625	1 054	1 679	10 172	36 755	46 927	78.32	5.18
Norway	732	933	1 665	13 658	31 738	45 397	69.91	5.01
Hong Kong, China	292	371	663	17 973	25 870	43 843	59.01	4.84
Republic of Korea	638	355	993	12 696	16 977	29 672	57.21	3.27
Taiwan Province of China	109	444	553	4 772	19 618	24 389	80.44	2.69
Singapore	467	287	754	14 695	8 285	22 980	36.05	2.53
United Kingdom	370	409	779	8 961	12 334	21 295	57.92	2.35
Denmark	316	428	744	9 228	10 328	19 556	52.81	2.16
Russian Federation	1 670	487	2 157	6 803	9 889	16 692	59.25	1.84
Italy	543	159	702	10 192	4 297	14 490	29.66	1.60
India	366	40	406	12 511	1 264	13 774	9.17	1.52
Switzerland	26	346	372	791	10 968	11 759	93.28	1.30
Belgium	69	134	203	5 902	5 657	11 559	48.94	1.27
Saudi Arabia	60	74	134	977	10 387	11 364	91.40	1.25
Turkey	436	365	801	6 793	3 497	10 290	33.98	1.13
Iran (Islamic Republic of)	156	23	179	8 894	936	9 830	9.52	1.08
Malaysia	249	76	325	5 454	4 179	9 633	43.38	1.06
Netherlands	515	207	722	4 520	4 288	8 808	48.69	0.97
Canada	216	140	356	2 540	4 007	6 548	61.20	0.72
Sweden	159	183	342	1 692	4 684	6 375	73.47	0.70
Indonesia	591	120	711	3 822	2 408	6 231	38.65	0.69
Kuwait	40	29	69	3 682	1 361	5 043	26.99	0.56
Philippines	275	37	312	4 052	971	5 023	19.33	0.55
France	164	126	290	2 208	2 655	4 863	54.60	0.54
Brazil	135	12	147	2 590	2 164	4 755	45.52	0.52
United Arab Emirates	46	140	186	557	3 942	4 499	87.62	0.50
Spain	75	235	310	871	3 225	4 096	78.73	0.45
Thailand	278	40	318	2 741	457	3 198	14.30	0.35
Israel	20	52	72	868	1 828	2 697	67.80	0.30
Croatia	73	37	110	1 684	979	2 663	36.77	0.29
Australia	45	35	80	1 375	1 253	2 628	47.68	0.29
Total (35 countries)	13 355	15 576	28 931	285 855	577 123	862 978	66.88	95.17
World total	15 576	17 238	32 814	303 768	602 985	906 753	66.50	100.00

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Vessels of 1,000 grt and above, excluding the US Reserve Fleet and the US and Canadian Great Lakes fleets.

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

[c] Includes vessels flying the national flag but registered in territorial dependencies or associated self-governing territories. For the United Kingdom, British flag vessels are included under the national flag, except for Bermuda (listed in table 17 as an open-registry territory).

Table 17

Tonnage distribution of open-registry fleets[a] as of 1 January 2006

Flag	Oil tankers		Bulk carriers		General cargo		Container ships		Others		Total		Total as of 1.1.2005
	Number	*Thousand dwt*	*Number*	*Thousand dwt*	*Number*	*Thousand dwt*	*Number*	*Thousand dwt*	*Number*	*Thousand dwt*	*Number*	*Thousand dwt*	*Thousand dwt*
Panama	680	51 136	1 507	100 037	1 271	12 287	599	22 431	503	8 817	4 560	194 708	177 866
Liberia	459	45 187	236	15 765	156	2 660	406	15 853	159	5 016	1 416	84 483	76 372
Bahamas	199	22 911	204	11 288	359	5 513	65	2 068	260	4 748	1 087	46 528	41 835
Malta	192	11 533	363	16 513	304	2 787	51	1 397	47	408	957	32 637	30 971
Cyprus	80	5 382	306	16 539	213	2 047	125	3 092	28	189	752	27 250	31 585
Bermuda	13	2 005	13	1 647	13	173	24	747	31	995	94	5 568	6 206
Subtotal	1 623	138 154	2 629	161 788	2 316	25 468	1 270	45 589	1 028	20 173	8 866	391 172	364 836
Saint Vincent and the Grenadines	19	505	83	4 059	248	2 133	14	89	68	172	432	6 958	6 857
Antigua and Barbuda	4	14	29	745	574	2 905	276	4 980	18	100	901	8 744	8 383
Cayman Islands	45	1 665	32	1 705	43	644			16	267	136	4 282	4 040
Luxembourg	12	176	1	49	5	42	6	105	18	166	42	537	794
Vanuatu			26	1 321	14	231	1	29	110	393	151	1 974	1 879
Gibraltar	21	394	1	3	100	582	12	177	12	74	146	1 230	1 281
Total	1 724	140 908	2 801	169 669	3 300	32 005	1 579	50 969	1 270	21 344	10 674	414 896	388 069
Total six major open registers as of 1 January 2005	1 629	131 632	2 688	159 506	3 286	31 439	1 479	46 213	1 224	19 280	10 306	388 069	
Total six major open registers as of 1 January 2004	1 604	131 630	2 663	155 126	3 422	32 296	1 384	42 343	1 220	18 528	10 293	379 923	
Total six major open registers as of 1 January 2003	1 538	134 277	4 286	145 514	2 527	27 794	1 007	31 817	1 005	16 680	8 563	356 081	

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Ships of 1,000 grt and above. This table is not fully comparable with tables 13 and 15, which list ships of 100 grt and above as the base.

actually contracted. During 2005, Bermuda decreased its fleet by 10.3 per cent to 5.6 million dwt, which is lower than tonnages registered under Saint Vincent and the Grenadines and Antigua and Barbuda. Cyprus decreased its fleet by 13.7 per cent to 27.2 million dwt and, in 2005, became the fifth register, after Liberia, Panama, the Marshall Islands and Croatia, to sign a reciprocal agreement with the United States allowing for the boarding or detention in international waters of Cypriot-flagged ships suspected of carrying weapons of mass destruction. Analysis by type of ship for the six major registries indicated that tankers maintained their share of the total deadweight at 35.3 per cent level (35.2 per cent the previous year), while dry bulk carriers slightly decreased their share to 41.3 per cent. For the six major open registries, the combined tonnage of these two types of ships accounts for 76.7 per cent of the total deadweight and 74.8 per cent when the minor registries are included. General cargo ships (3,300 ships) accounted for 30.9 per cent of the total number of ships, followed by dry bulk carriers (2,801 ships or 26.2 per cent of the total).

3. Nationality of vessels

Table 18 indicates the participation of nationals in the registry of a number of open and international registers for the three most recent years. The data compare the total tonnage registered in the listed countries of registry with the tonnage registered and owned by nationals of these countries. The 20 countries or territories of registry have been divided into three groups: six major open registers, six minor open registers and eight international registers. In open registers, the share of tonnage owned by nationals of open-registry countries is minimal, well below 5 per cent.

It is worth noting that for some international registers, nationals of the country or territory of the registry have a significant share of the tonnage registered, as is the case in Denmark, Norway, Hong Kong (China) and Singapore. For other international registers, nationals of a country that has privileged relationship with the territory of registry have a relatively important share of the tonnage registered in such registers. This is the case in respect of the United Kingdom with the Isle of Man (36.6 per cent), the United States with the Marshall Islands (32.7 per cent), France with the French Antarctic Territory — the Kerguelen Islands — (28.6 per cent) and the Netherlands with the Netherlands Antilles (41.5). Thus in international registers, the share of tonnage owned by nationals of the countries in which the international register is based or nationals of countries having a privileged relationship with the territory of registry ranges from about 30 per cent to over 90 per cent. Countries and territories with the highest share — Denmark, Norway and Hong Kong (China) — were respectively ranked twelfth, sixth and seventh on the list of the 35 most important maritime countries in 2005.

Fiscal and regulatory issues are paramount in establishing these international registers, often by reference to approaches made by other countries. In May 2005 France set up a French International Register (RIF) to replace the French Antarctic Territory, which will be phased out in the next two years. RIF allows for certain tax exemptions, prescribes the minimum number of crew with French or EU nationality and provides for levels of crew wages and working conditions. In Japan calls were made during the year to establish a second register that provides for tonnage tax analogous to that found elsewhere.

The true nationalities of the ships registered in the 12 open registries are analysed in table 19. In 2005, 35 countries or territories accounted for 90.5 per cent of the total tonnage of the 12 open-registry fleets (90.1 per cent the previous year). Ownership is particularly concentrated in 10 countries or territories (China, Greece, Germany Hong Kong (China), the Republic of Korea, Japan, Norway, Switzerland, Taiwan Province of China and the United States), which control 77 per cent of the deadweight of ships registered in these open-registry countries, while the top five countries or territories (China, Germany, Greece, Japan and the United States) control 61.7 per cent. Japan was ranked first in 2005 with the largest share (23.2 per cent) of the open-registry fleets. Japan also had the largest foreign-flag ownership, representing 119.9 million dwt or 19.9 per cent of total world foreign-flag tonnage, followed by Greece with 115.9 million dwt or 19.2 per cent of total tonnage. The two countries' combined foreign-flag tonnage accounted for 39.1 per cent of total world tonnage under foreign flags.

Table 19 also provides an overview of how, in 2005, the 35 countries distributed their tonnage among the open registries. Overall, the share of the six major open registers stood at 94.3 per cent, while that of the minor open registers amounted to 5.7 per cent, slightly lower that the previous year (5.9 per cent).

Table 18

Tonnage owned by nationals of, and registered in, the country or territory of registry in the total fleet of the most important open and international registers, as of 1 January[a]

(Thousands of dwt)

Country or territory of registry	Total tonnage registered in country of registry			Participation of nationals of country of registry and of nationals of countries having privileged relationship with country of registry					
				in tonnage of registered fleet			in percentage of registered fleet (%)		
	2004	2005	2006	2004	2005	2006	2004	2005	2006
Six major open registers									
Panama	168 710	177 866	194 708	0	0	0	0.0	0.0	0.0
Liberia	74 083	76 372	84 483	0	0	0	0.0	0.0	0.0
Bahamas	42 552	41 835	46 528	0	0	0	0.0	0.0	0.0
Malta	35 348	30 971	32 637	0	0	0	0.0	0.0	0.0
Cyprus	31 706	31 583	27 250	1 062	459	0	3.3	1.5	0.0
Bermuda	5 446	6 206	5 568	0	0	0	0.0	0.0	0.0
Six minor open registries									
Saint Vincent and the Grenadines	6 562	6 857	6 958	0	0	0	0.0	0.0	0.0
Antigua and Barbuda	7 306	8 383	8 744	0	0	0	0.0	0.0	0.0
Cayman Islands	4 086	4 040	4 282	0	0	0	0.0	0.0	0.0
Luxembourg	1 273	794	537	0	0	0	0.0	0.0	0.0
Vanuatu	1 785	1 879	1 974	0	0	0	0.0	0.0	0.0
Gibraltar	1 068	1 281	1 230	0	0	0	0.0	0.0	0.0
Total open registers	379 923	388 067	414 896	0	0	0	0.0	0.0	0.0
Eight international registers									
Singapore	36 486	40 934	47 999	11 704	12 424	14 695	32	30	31
Norwegian International Ship Registry (NIS)	24 007	21 265	19 399	19 873	12 396	12 075	83	58	62
Hong Kong (China)	34 468	43 957	44 843	15 376	17 246	17 973	45	39	40
Marshall Islands	31 625	38 088	42 106	11 018	10 828	13 748	35	28	33
Isle of Man	9 355	12 073	13 501	5 255	4 700	4 938	56	39	37
Danish International Ship Registry (DIS)	8 976	8 859	9 532	8 547	8 330	9 184	95	94	96
French Antarctic Territory	5 043	5 427	5 756	1 811	1 769	1 644	36	33	29
Netherlands Antilles	1 940	2 132	1 685	626	616	699	32	29	41

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Ships of 1,000 grt and above. This table is not fully comparable with tables 13 and 15, which list ships of 100 grt and above as the base.

D. SHIPBUILDING AND THE SECOND-HAND MARKET

1. Newbuilding orders

In 2005, 1,569 newbuilding contracts were placed for the six major ship types, a moderate increase of 13.3 per cent compared with the 20.5 per cent increase of the previous year (see table 20). In the tanker sector, the positive trend of the previous year was reversed with 518 orders, as compared with 547 orders placed in 2004. The peak was reached in February with 72 orders, followed by 56 and 49 orders in March and June respectively. In 2005, newbuilding orders for dry bulk carriers increased to 264, about 7.5 per cent up over orders during the previous year (246 contracts).

Newbuilding orders for containerships were also up by almost 27 per cent; there were 491 contracts in 2005 as compared with 387 in 2004. These newbuilding contracts continued to reflect the recent trend towards post-Panamax containerships. In 2005, it was reported that 20 operating owners had ordered 150 containerships with a capacity of over 4,000 TEUs. Orders by non-operating owners totalled 24 containerships with a total capacity of 122,000 TEUs.

The newbuilding orders for general cargo ships increased by an impressive 74 per cent in 2005 to 221 contracts, compared with 127 units in 2004. Orders for passenger ferries decreased slightly to 75 contracts (90 the previous year).

2. Tonnage on order

World tonnage on order, by groups of countries of registry and by principal types of ship, is shown in table 21. World tonnage on order at the beginning of 2006 stood at 226.4 million dwt, representing a substantial increase of 81.6 per cent over the previous year. Tonnage on order by developed market-economy countries amounted to 58.9 million dwt, accounting for 26 per cent of the total world tonnage on order, as compared with 35.4 million dwt or 28 per cent at the beginning of 2005. Major open-registry countries had 121.8 million dwt or 53.7 per cent of world tonnage on order, as compared with 69.7 million dwt or 56 per cent at the beginning of the previous year. The share of Central and Eastern European countries in 2005 stood at 1.3 million dwt or 0.5 per cent of the world total on order. The tonnage on order of the socialist countries in Asia had more than doubled in 2005 as compared with the previous year, ending the year with 9.9 million dwt or 4.3 per cent of the world total on order.

The tonnage on order of developing countries more than doubled over the previous year, reaching 34.5 million dwt or 15.2 per cent of the total world tonnage on order at the beginning of 2006. Tonnage on order by Asian developing countries has also more than doubled, reaching 30.4 million dwt at the beginning of 2006 and accounting for 87.8 per cent of the developing countries' total tonnage on order. African newbuilding orders reached 140 thousand dwt at the beginning of 2006, while those of developing countries in America reached 3,641 thousand million dwt.

In 2005, oil tanker orders increased by 57.2 per cent to 70.7 million dwt, accounting for 31.2 per cent of the world total on order. Developing countries had 13.7 million dwt on order, representing 19.3 per cent of the total tankers on order, with Asian developing countries representing 13.3 million dwt or 97 per cent of the developing countries' total. The tonnage of dry bulk carriers on order at the beginning of 2006 had doubled since 2005, reaching 66.6 million dwt and accounting for 29.4 per cent of the world total on order. For this type of ship, developed market-economy countries and major open-registry countries accounted for 16 and 67 per cent respectively, representing a combined share of 8.3 per cent. The volume of containerships on order in 2005 stood at 50.8 million dwt, representing 22.5 per cent of the world total on order. For containerships on order, developed market-economy countries accounted for 30.9 per cent, while major open-registry countries amounted to over 58.4 per cent. At the beginning of 2005, containership orders of developing countries more than doubled to 6.8 million dwt, or 13.3 per cent of the total containerships on order. Asian developing countries had 4.9 million dwt or 73.1 per cent of the developing countries' total on order.

3. Prices of newbuildings and second-hand tonnage

Table 22 indicates newbuilding prices for the main types of ship. In 2005, prices of newbuildings fluctuated significantly according to the size and type of ship and variations were of a lower magnitude as compared with 2004. Relatively moderate price increases were recorded for tankers, ranging from a low of 3.6 per cent to a high of 14.3 per cent. In 2005, prices did not reach the highs

Table 19

True nationality of major open-registry fleets as of 1 January 2006

Country or territory of domicile	Panama			Liberia			Bahamas			Malta			Cyprus		
	No. of vessels	000 dwt	%	No. of vessels	000 dwt	%	No. of vessels	000 dwt	%	No. of vessels	000 dwt	%	No. of vessels	000 dwt	%
Greece	541	23 698	11.2	242	16 400	17.6	223	11 873	22.9	489	24 521	66.4	339	16 169	53.3
Japan	1 932	97 542	46.2	98	5 373	5.8	52	2 149	4.1	2	55	0.1	17	320	1.1
Germany	29	3 516	1.7	537	22 300	24.0	18	949	1.8	60	1 641	4.4	228	6 060	20.0
China	396	13 844	6.6	52	3 227	3.5	8	224	0.4	15	238	0.6	10	277	0.9
United States	131	1 688	0.8	92	3 590	3.9	151	9 422	18.1	4	48	0.1	8	68	0.2
Norway	73	956	0.5	42	3 333	3.6	277	8 209	15.8	55	441	1.2	15	701	2.3
Hong Kong (China)	154	11 109	5.3	23	1 364	1.5	9	1 261	2.4	2	23	0.1	1	19	0.1
Republic of Korea	281	15 805	7.5	0	0	0.0	0	0	0.0	6	142	0.4	1	62	0.2
Taiwan Province of China	287	9 181	4.3	68	5 650	6.1	0	0	0.0	0	0	0.0	0	0	0.0
Singapore	68	1 717	0.8	33	3 747	4.0	9	331	0.6	0	0	0.0	1	30	0.1
United Kingdom	43	1 106	0.5	30	1 108	1.2	76	1 373	2.6	3	90	0.2	20	978	3.2
Denmark	32	569	0.3	5	165	0.2	63	801	1.5	5	151	0.4	2	47	0.2
Russian Federation	10	123	0.1	70	6 064	6.5	7	45	0.1	58	792	2.1	62	1 367	4.5
Italy	15	183	0.1	18	1 142	1.2	11	389	0.7	25	574	1.6	1	2	0.0
India	17	495	0.2	2	218	0.2	0	0	0.0	0	0	0.0	1	31	0.1
Switzerland	219	8 052	3.8	10	280	0.3	8	413	0.8	26	500	1.4	6	98	0.3
Belgium	10	202	0.1	0	0	0.0	11	149	0.3	14	95	0.3	1	9	0.0
Saudi Arabia	3	93	0.0	24	6 562	7.1	16	2 795	5.4	0	0	0.0	0	0	0.0
Turkey	33	189	0.1	2	122	0.1	10	234	0.5	109	1 663	4.5	0	0	0.0
Iran (Islamic Republic of)	5	81	0.0	0	0	0.0	0	0	0.0	11	194	0.5	2	148	0.5
Malaysia	17	84	0.0	0	0	0.0	12	82	0.2	0	0	0.0	0	0	0.0
Netherlands	34	292	0.1	16	191	0.2	33	1 643	3.2	6	37	0.1	17	124	0.4
Canada	3	43	0.0	4	225	0.2	10	347	0.7	17	63	0.2	1	13	0.0
Sweden	8	72	0.0	10	402	0.4	13	644	1.2	3	21	0.1	2	9	0.0
Indonesia	51	659	0.3	1	79	0.1	4	109	0.2	0	0	0.0	0	0	0.0
Kuwait	2	108	0.1	1	42	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Philippines	15	296	0.1	0	0	0.0	1	28	0.1	0	0	0.0	0	0	0.0
France	12	304	0.1	2	104	0.1	35	999	1.9	6	59	0.2	0	0	0.0
Brazil	6	1 100	0.5	4	779	0.8	0	0	0.0	0	0	0.0	0	0	0.0
United Arab Emirates	63	1 009	0.5	9	894	1.0	13	965	1.9	4	120	0.3	5	395	1.3
Spain	43	338	0.2	0	0	0.0	12	938	1.8	1	4	0.0	6	262	0.9
Thailand	11	57	0.0	0	0	0.0	0	17	0.0	0	0	0.0	0	0	0.0
Israel	7	119	0.1	5	428	0.5	0	0	0.0	25	808	2.2	3	49	0.2
Croatia	3	7	0.0	6	332	0.4	1	44	0.1	9	357	1.0	2	12	0.0
Australia	3	71	0.0	3	362	0.4	3	95	0.2	0	0	0.0	0	0	0.0
Subtotal (35 countries)	4 557	194 708	92.2	1 409	84 483	90.8	1 086	46 528	89.6	955	32 637	88.3	751	27 250	89.9
Others	2 262	16 413	7.8	237	8 543	9.2	267	5 394	10.4	263	4 305	11.7	240	3 066	10.1
Total	6 847	211 121	100.0	1 646	93 026	100.0	1 353	51 922	100.0	1 218	36 942	100.0	991	30 316	100.0

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

Table 19 (continued)

Bermuda			Six minor open registries			Subtotal			Total foreign-flag fleet		Country or territory of domicile
No. of vessels	000 dwt	%	No. of vessels	000 dwt	%	No. of vessels	000 dwt	%	No. of vessels	000 dwt	
2	88	1.0	119	3 797	14.2	1 955	96 546	21.1	2 318	115 928	Greece
0	0	0.0	27	857	3.2	2 128	106 296	23.2	2 384	119 940	Japan
1	22	0.3	961	9 550	36.9	1 834	44 038	9.6	2 366	58 397	Germany
0	0	0.0	109	1 858	7.0	590	19 668	4.3	1 130	35 656	China
26	360	4.2	183	1 534	5.8	595	16 710	3.6	1 054	36 755	United States
5	58	0.7	52	364	1.4	519	14 062	3.1	933	31 738	Norway
9	1 244	14.5	5	73	0.3	203	15 093	3.3	371	25 870	Hong Kong (China)
0	0	0.0	0	0	0.0	288	16 009	3.5	355	16 977	Republic of Korea
0	0	0.0	4	18	0.1	359	14 849	3.2	444	19 618	Taiwan Province of China
0	0	0.0	6	103	0.4	117	5 928	1.3	287	8 285	Singapore
9	903	10.5	44	718	2.7	225	6 276	1.4	409	12 334	United Kingdom
0	0	0.0	36	594	2.2	143	2 327	0.5	428	10 328	Denmark
0	0	0.0	35	363	1.4	242	8 754	1.9	487	9 889	Russian Federation
0	0	0.0	35	766	2.9	105	3 056	0.7	159	4 297	Italy
0	0	0.0	7	125	0.5	27	869	0.2	40	1 264	India
0	0	0.0	28	577	2.2	297	9 920	2.2	346	10 968	Switzerland
0	0	0.0	28	259	1.0	64	714	0.2	134	5 656	Belgium
0	0	0.0	0	0	0.0	43	9 450	2.1	74	10 387	Saudi Arabia
0	0	0.0	26	110	0.4	180	2 318	0.5	365	3 497	Turkey
0	0	0.0	2	5	0.0	20	428	0.1	23	936	Iran (Islamic Republic of)
0	0	0.0	1	90	0.3	30	256	0.1	76	4 180	Malaysia
3	820	9.6	27	151	0.6	136	3 258	0.7	207	4 288	Netherlands
20	688	8.0	9	281	1.1	64	1 660	0.4	140	4 007	Canada
13	1 048	12.2	21	539	2.0	70	2 735	0.6	183	4 684	Sweden
0	0	0.0	0	0	0.0	56	847	0.2	120	2 408	Indonesia
0	0	0.0	0	0	0.0	3	150	0.0	29	1 361	Kuwait
0	0	0.0	16	307	1.2	32	631	0.1	37	971	Philippines
1	7	0.1	22	265	1.0	78	1 738	0.4	126	2 655	France
0	0	0.0	0	0	0.0	10	1 879	0.4	12	2 164	Brazil
0	0	0.0	4	50	0.2	98	3 433	0.7	140	3 942	United Arab Emirates
0	0	0.0	1	9	0.0	63	1 551	0.3	235	3 225	Spain
0	0	0.0	0	0	0.0	11	74	0.0	40	457	Thailand
2	196	2.3	2	196	0.7	44	1 796	0.4	52	1 828	Israel
0	0	0.0	12	130	0.5	33	882	0.2	37	979	Croatia
2	134	1.6	3	36	0.1	14	698	0.2	35	1 253	Australia
93	5 568	64.9	1 825	23 725	90.1	10 676	414 899	90.5	15 576	577 122	Subtotal (35 countries)
42	3 014	35.1	1 043	2 934	9.9	4 354	43 669	9.5	1 662	25 863	Others
135	8 582	100.0	2 868	26 659	100.0	15 058	458 568	100.0	17 238	602 985	Total

Table 20

Newbuilding contracts placed for the main types of ship[a] during 1996–2005

Year	Tankers		Bulk carriers		Combined carriers		General cargo ships		Container vessels		Passenger ferries		Total [b]	
	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt	No.	Thousand dwt
1996	274	13 875	271	14 250	-	-	257	2 107	292	6 978	144	155	1 238	37 365
1997	428	32 516	282	17 983	2	220	299	2 701	166	3 618	96	149	1 273	57 187
1998	280	21 922	166	11 835	0	0	333	2 488	178	5 975	117	231	1 074	42 451
1999	206	16 822	346	23 934	-	-	162	1 323	170	7 183	116	348	1 000	49 610
2000	446	41 865	344	20 081	-	-	255	2 534	373	15 025	136	308	1 554	80 121
2001	550	34 260	165	9 496	-	-	142	1 222	180	6 564	101	80	1 138	51 622
2002	447	23 979	275	20 799	-	-	136	1 593	135	6 223	111	131	1 104	52 725
2003	456	-	193	-		-	91	-	325	-	94	-	1 159	-
2004	547	-	246	-		-	127	-	387	-	90	-	1 397	-
2005														
Jan	33	-	7	-	0	-	12	-	27	-	5	-	84	-
Feb	72	-	14	-	0	-	7	-	55	-	14	-	162	-
Mar	56	-	60	-	0	-	30	-	12	-	3	-	161	-
Apr	37	-	41	-	0	-	20	-	44	-	13	-	155	-
May	38	-	31	-	0	-	5	-	43	-	1	-	118	-
June	49	-	15	-	0	-	5	-	59	-	4	-	132	-
July	36	-	12	-	0	-	16	-	58	-	10	-	132	-
Aug	35	-	10	-	0	-	23	-	59	-	6	-	133	-
Sept	46	-	41	-	0	-	14	-	27	-	6	-	134	-
Oct	47	-	17	-	0	-	24	-	29	-	3	-	120	-
Nov	33	-	2	-	0	-	38	-	60	-	6	-	139	-
Dec	36	-	14	-	0	-	27	-	18	-	4	-	99	-
Total	518		264				221		491		75		1 569	

Source: Compiled by the UNCTAD secretariat. Figures up to 2002 are based on data from Institute of Shipping Economics and Logistics, *Shipping Statistics and Market Review,* Jan./Feb. 2004, table II-1.1.1.1. Figures for 2003 onwards are based on data published in Institute of Shipping Economics and Logistics, *Shipping Statistics and Market Review.* Those for 2005 correspond to the January/February 2006 issue, from monthly data provided by Baird Publications (Australia).

[a] Ships of 300 grt and over.

[b] Total does not include data on newbuilding contracts for other types of ship.

Table 21

World tonnage on order as of 1 January 2006

(Thousands of dwt)

Country groups of registry	Total	Oil tankers	Bulk carriers	General cargo	Container ships	Other ships
World total	226 387	70 697	66 612	5 082	50 850	33 146
Developed market-economy countries	58 878	17 384	10 667	1 548	15 745	13 534
Major open-registry countries	121 759	34 958	44 645	1 533	25 852	14 771
Countries of Central and Eastern Europe	1 317	773	21	236	139	148
Socialist countries of Asia	9 920	3 847	2 987	224	2 313	549
Developing countries, total	34 513	13 735	8 292	1 541	6 801	4 144
of which:						
Africa	140	1	0	0	0	139
Americas	3 641	251	288	840	1 826	436
Asia	30 364	13 316	7 854	697	4 975	3 522
Europe	368	167	150	4	0	47
Oceania	0	0	0	0	0	0

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

Table 22

Representative newbuilding prices in selected years[a]

(Millions of dollars)

Type and size of vessels	1985	1990	1995	2000	2003	2004	2005	Percentage change 2004/2005
30–50,000 dwt bulk carrier	11	24	25	20	22	30	28	-6.7
32-45,000 dwt tanker	18	29	34	29	30	38	43	13.2
70-74,000 dwt bulk carrier	14	32	29	23	25	35	35	0.0
80-105,000 dwt tanker	22	42	43	41	41	56	58	3.6
170,000 dwt bulk carrier	27	45	40	40	47	61	59	-3.3
250-280,000 dwt tanker	47	90	85	76	75	105	120	14.3
125-138,000 m^3 LNG	200	225	245	165	155	190	205	7.9
75,000 m^3 LPG	44	78	68	60	59	77	89	15.6
15,000 dwt general cargo	12	24	21	19	16	20	18	-10.0
2,500 TEU full containership	26	52	50	35	38	42	42	0.0

Source: Compiled by the UNCTAD secretariat on the basis of data from *Lloyd's Shipping Economist*, various issues.

[a] From 1995 on, prices correspond to the large vessel size.

of the previous year but remained well above the historical average. Prices for bulk carriers decreased, with pronounced losses being recorded by Handymax and Cape-size ships. Newbuilding prices for Panamax dry bulk carriers and 2,500-TEU cellular containerships remained stable and registered no variation as compared with the previous year. Price increases of 15.6 and 7.9 per cent were observed for LPG and LNG gas carriers. In general, the downward trend of shipbuilding prices during the year reflected decreased ship ordering in the wake of more modest forecasts for international trade growth.

Consistent with the trend characterizing prices for newbuildings, variations in second-hand prices indicated in table 23 for tankers and bulk carriers depart from the previous year in that some price increases were less pronounced and others even contracted. Handymax and Panamax dry bulk carriers recorded losses of 6.7 and 17 per cent respectively, while Cape-size bulk carriers recorded a 20 per cent gain.

Overall, sale and purchase activities continued in both newbuilding and second-hand markets in 2005 despite the high prices of newbuildings and second-hand vessels. This is probably due to prevailing high freight rates and the positive earnings environment. Second-hand transactions for tanker tonnage amounted to 27.3 million dwt in 2005 — almost 40 per cent down for the corresponding figure for 2004. For dry bulk carriers, second-hand transactions reached 23.2 million dwt, albeit 15 per cent lower than tha corresponding figure for 2004.

Table 23

Second-hand prices for five-year-old ships, 2000–2005

(As of year's end, in millions of dollars)

Vessel	2000	2001	2002	2003	2004	2005	Percentage change 2004/2005
40,000 dwt tankers	27	26	24	28	40	42.5	6.3
80-95,000 dwt tankers [a]	39	33	30	38	57	60.7	6.5
130-150,000 dwt tankers [a]	50	43	42	48	74	73	-1.3
250-280,000 dwt tankers [a]	71	60	53	75	107	116	8.4
45,000 dwt dry bulk carrier	15	12	15	21	30	28	-6.7
70,000 dwt dry bulk carrier	16	14	17	28	41	34	-17.0
150,000 dwt dry bulk carrier	25	22	26	41	57	68.4	20.0

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Fearnleys, *Review 2005*.

[a] Prices correspond to the larger vessels in the range.

Chapter 3

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

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

A. OPERATIONAL PRODUCTIVITY

The main indicators of operational productivity for the world fleet in tons and ton-miles per deadweight ton (dwt) are shown in figure 6 and table 24. Tons of cargo carried per deadweight ton (dwt) in 2005 decreased slightly to 7.4, while thousands of ton-miles performed per deadweight ton decreased to 30.3. The marginal decrease in productivity measured in tons of cargo carried per deadweight ton (dwt) reflects the faster rate of fleet expansion relative to the cargo carried. The decrease in productivity, measured in ton-miles per dwt, also resulted from fleet expansion, which outweighed growth in seaborne trade and distance travelled.

Table 25 provides supplementary data on operational productivity in terms of cargo carried per dwt by type of vessel. Productivity in terms of tons carried per dwt for oil tankers stood at 6.7, while that for dry bulk and combined carriers decreased marginally from 5.1 to 5.0 and from 8.8 to 8.4 tons per dwt respectively. The cargo volumes carried per dwt of the residual fleet also decreased from 12.3 to 11.5 tons per dwt.

Indicative data on ton-miles performed by oil tankers, dry bulk carriers, combined carriers and the residual fleet are provided in table 26. The thousands of ton-miles per dwt of oil tankers stood at 32.4 in 2005, while the corresponding figures for dry bulk and combined carrier decreased from 25.7 to 25.2 and from 43.1 to 41.1 respectively. The productivity of the residual fleet measured in ton-miles per dwt also decreased from 34.9 to 33.6.

B. SUPPLY AND DEMAND IN WORLD SHIPPING

1. Surplus tonnage

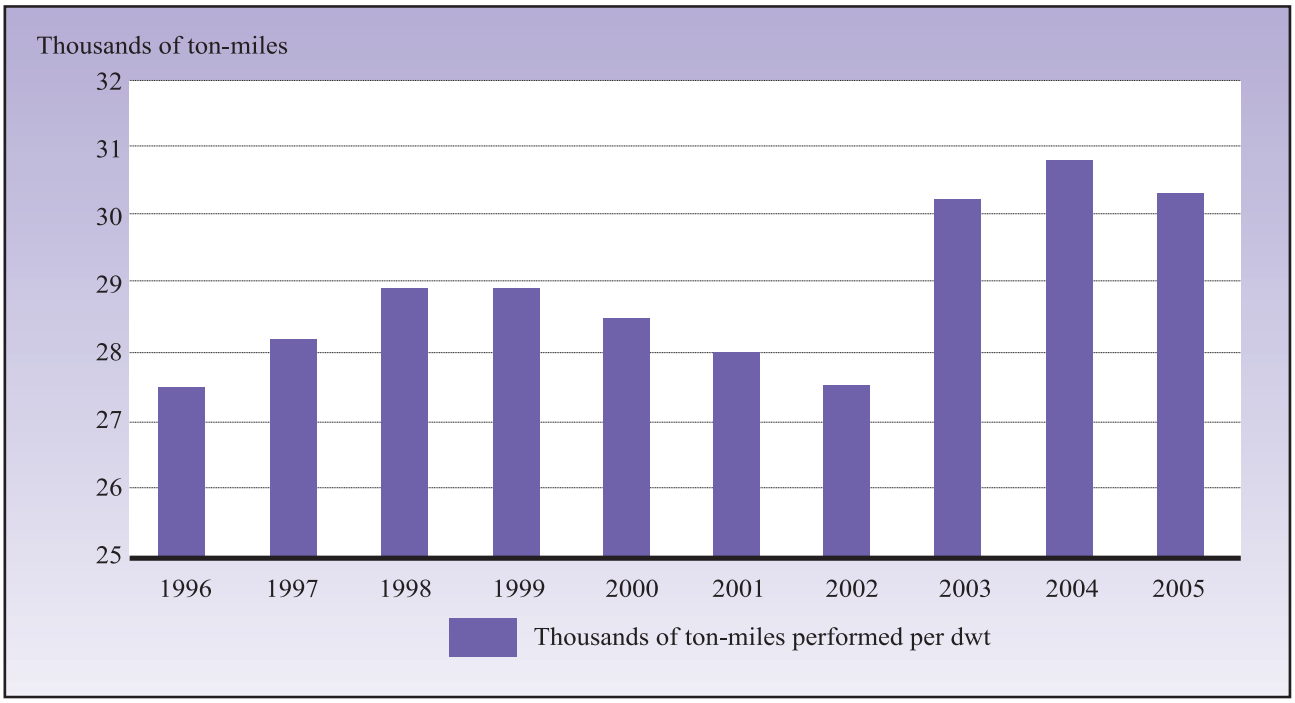
A summary of the balance of tonnage supply and demand for selected years appears in table 27. The total surplus tonnage in 2005 was slightly above that of the previous year — 7.2 million dwt. This was largely due to the high level of vessel commissioning over the last year. The share of surplus tonnage as a percentage of the total world merchant fleet stood at a low of 0.7 per cent.

2. The supply and demand mechanism by type of vessel

Tonnage supply in the oil tanker sector increased in 2005 by 14.6 million dwt to 312.9 million dwt as newbuildings delivered outweighed tonnage scrapped, laid up or lost (see table 28 and figure 7). Overcapacity increased marginally to 4.5 million dwt or 1.4 per cent of the total

Figure 6

Ton-miles performed per deadweight ton (dwt) of total world fleet, 1996–2005



Source: UNCTAD calculations.

Table 24

Cargo carried and ton-miles performed per deadweight ton (dwt) of the total world fleet, selected years

Year	World fleet (million dwt)	Total cargo (million tons)	Total ton-miles performed (thousands of millions of ton-miles)	Tons carried per dwt	Thousands of ton-miles performed per dwt
1990	658	4 008	17 121	6.1	26.0
1995	735	4 651	20 188	6.3	27.5
2000	808	5 871	23 016	7.3	28.5
2004	896	6 846	27 635	7.6	30.8
2005	960	7 109	29 045	7.4	30.3

Sources: World fleet: Lloyd's Register – Fairplay (mid-year data for 1990, year-end data for all other years shown); total cargo carried: UNCTAD secretariat; ton-miles: Fearnleys *Review*, various issues. Data compiled by the UNCTAD secretariat.

Table 25

Estimated productivity of tankers, bulk carriers, combined carriers[a] and the residual fleet,[b] selected years

(Tons carried per dwt)

Year	Tons of oil carried by tankers of over 50,000 dwt (millions)	Tons carried per dwt of tankers	Tons of dry cargo carried by bulk carriers of over 18,000 dwt (millions)	Tons carried per dwt of bulk carriers	Tons of oil and dry bulk cargo carried by combined carriers of over 18,000 dwt (millions)	Tons carried per dwt of combined carriers	Tons carried by the residual fleet (millions)	Tons carried per dwt of the residual fleet
1970	1 182	8.6	403	8.4	97	6.8	800	6.3
1980	1 564	4.8	396	2.9	282	5.8	1 406	8.3
1990	1 427	6.0	667	3.3	203	6.3	1 680	9.1
2000	2 073	7.3	1 255	4.6	122	7.9	2 533	10.5
2004	2 248	6.7	1 571	5.1	85	8.8	2 941	12.3
2005	2 373	6.7	1 684	5.0	65	8.4	2 986	11.5

Sources: Compiled by the UNCTAD secretariat on the basis of data from Fearnleys, *Review,* various issues; *World Bulk Trades* and *World Bulk Fleet*, various issues; and other specialized sources.

[a] Tankers, bulk carriers and combined carriers (ore/bulk/oil) indicated in table 6.

[b] The residual fleet refers to general cargo, container and other vessels included in table 6.

Table 26

Estimated productivity of tankers, bulk carriers, combined carriers[a] and the residual fleet,[b] selected years

(Thousands of ton-miles performed per dwt)

Year	Ton-miles of oil by tankers (thousands of millions)	Ton-miles per dwt of tankers	Ton-miles of dry bulk cargo by dry bulk carriers (thousands of millions)	Ton-miles per dwt of bulk carriers	Ton-miles of oil and dry bulk cargo by combined carriers (thousands of millions)	Ton-miles per dwt of combined carriers	Ton-miles of the residual fleet (thousands of millions)	Ton-miles per dwt of the residual fleet
1970	6 039	43.8	1 891	39.4	745	52.5	1 979	15.7
1980	9 007	27.6	2 009	14.5	1 569	32.4	4 192	24.8
1990	7 376	30.8	3 804	18.8	1 164	36.0	4 777	26.0
2000	9 840	34.5	6 470	23.9	593	38.5	6 837	28.3
2004	10 898	32.4	7 984	25.7	418	43.1	8 349	34.9
2005	11 471	32.4	8 524	25.2	320	41.1	8 730	33.6

Sources: Compiled by the UNCTAD secretariat on the basis of data from Fearnleys, *Review,* various issues; *World Bulk Trades* and *World Bulk Fleet*, various issues; and other specialized sources.

[a] Tankers, bulk carriers and combined carriers (ore/bulk oil) indicated in table 6.

[b] The residual fleet refers to general cargo, container and other vessels included in table 6.

Table 27

Tonnage oversupply in the world merchant fleet, selected years
(End-of-year figures)

	1990	2000	2002	2003	2004	2005
			Million dwt			
World merchant fleet	658.4	808.4	844.2	857.0	895.8	960.0
Surplus tonnage [a]	63.7	18.4	21.7	10.3	6.2	7.2
Active fleet [b]	594.7	790.0	822.5	846.7	889.6	952.8
			Percentages			
Surplus tonnage as percentage of world merchant fleet	9.7	2.3	2.6	1.2	0.7	0.7

Sources: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay and *Lloyd's Shipping Economist*, various issues.

[a] Average annual estimates. Surplus tonnage is defined as tonnage that is not fully utilized because of slow steaming or lay-up status, or because it is lying idle for other reasons.

[b] World fleet minus surplus tonnage.

Table 28

Analysis of tonnage surplus by main type of vessel, selected years[a]
(Average annual figures in millions of dwt)

	1990	2000	2002	2003	2004	2005 [b]
World tanker fleet	266.2	279.4	267.7	286.0	298.3	312.9
Total tanker fleet surplus [c]	40.9	13.5	19.1	6.0	3.4	4.5
Share of surplus fleet in world tanker fleet (%)	15.4	4.8	7.1	2.1	1.1	1.4
World dry bulk fleet	228.7	247.7	258.8	297.5	325.1	340.0
Dry bulk fleet surplus [d]	19.4	3.8	2.2	3.6	2.1	2.0
Share of surplus fleet in world dry bulk fleet (%)	8.2	1.5	0.9	1.2	0.6	0.6
World conventional general cargo fleet	63.6	59.3	57.3	43.4	43.6	45.0
Conventional general cargo fleet surplus	2.1	1.1	0.4	0.7	0.7	0.7
Share of surplus fleet in world conventional general cargo fleet (%)	3.3	1.8	0.7	1.6	1.6	1.6
World unitized fleet	37.5	83.6	98.6	120.9	131.0	136.9
World unitized fleet surplus	0.5	0.0	0.0	0.0	0.0	0.0
Share of surplus fleet in world unitized fleet (%)	1.3	0.0	0.0	0.0	0.0	0.0

Source: Compiled by the UNCTAD secretariat on the basis of data from *Lloyd's Shipping Economist*, various issues.

[a] Aggregates for all sectors shown in this table are averages for the years indicated and therefore differ from the world figures in table 27. This table excludes tankers and dry bulk carriers of less than 10,000 dwt and conventional general cargo/unitized vessels of less than 5,000 dwt.

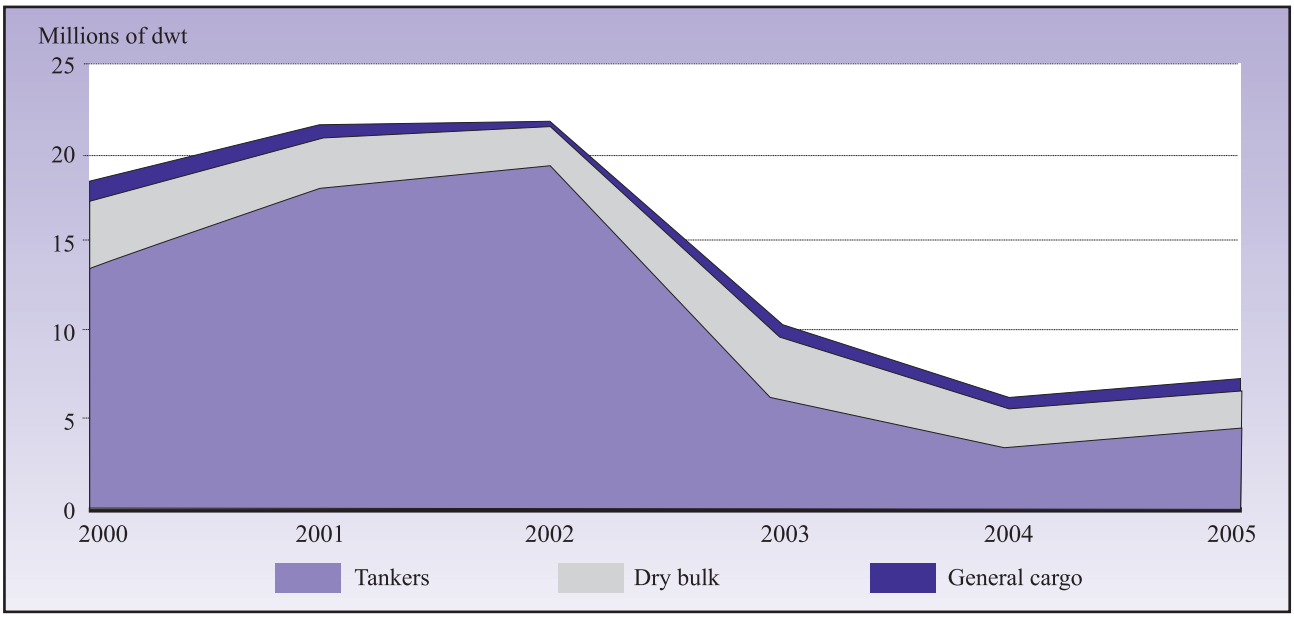
[b] Data for 2005 correspond to figures up to October 2005 as compiled in December 2005.

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

[d] Unitized fleet here includes fully cellular container ships, partly cellular container ships, ro-ro ships and barge carriers.

Figure 7

Trends in surplus capacity by main vessel types, selected years



Source: Compiled by the UNCTAD secretariat on the basis of data from *Lloyd's Shipping Economist*, various issues.

world tanker fleet. In 2005, the total dry bulk fleet supply increased by 14.9 million dwt to 340 million dwt. Overtonnage for this type of vessel reached 2.0 million dwt, equivalent to 0.6 per cent of the dry bulk fleet. For the conventional general cargo fleet, overcapacity stood at the same level as in the previous year, with supply exceeding demand by only 0.7 million dwt or 1.6 per cent of the world fleet of this sector. The surplus tonnage of general cargo vessels has been under 1 million dwt for the last few years.

C. COMPARISON OF CARGO TURN-OVER AND FLEET OWNERSHIP

The correlation between cargo volume generated by different country groups and their fleet ownership is summarized in table 29. Developed market-economy countries generated 48.7 per cent of world seaborne trade in 2005, compared with 53.7 per cent in 1980. Over the same period, the tonnage share of the fleet of developed market-economy countries fell, from about 51.3 per cent in 1980 to about 26.9 per cent in 2005. However, in addition to tonnage under national flags, there is the tonnage of vessels owned by nationals of particular countries but registered under foreign flags, and the two together bring the share of developed market-economy countries to about 60 per cent of the world fleet. The share of developing countries in world cargo turnover has remained at about 40 per cent. Their tonnage owned and registered under national flags increased from 10 per cent of the world fleet in 1980 to 22.7 per cent at the beginning of 2005. Tonnage beneficially owned by developing countries has expanded to nearly one fifth of the total beneficially registered tonnage, with the total tonnage owned by developing countries thus rising to about 30 per cent of the world fleet. The share of world cargo turnover generated by the countries of Central and Eastern Europe remained at about 3 per cent in 2005, unchanged from the levels of previous years but significantly less than the 4.7 per cent of 1980. These countries' fleet position also declined from 5.5 per cent to less than 2 per cent in 2005. The socialist countries in Asia increased their share in world trade to 8.9 per cent in 2005, while they improved their share in world tonnage from 1.6 per cent in 1980 to 3.9 per cent in 2005. In addition, these countries have a small share of their fleet registered in the open registries and the two together bring the share of this group of countries to about 8 per cent of the world fleet.

Information on the fleet ownership of the major trading nations appears in table 30. The major trading nations

Table 29

Comparison between total cargo turnover and fleet ownership, by country group, in 1970, 1980, 1990, 2000 and 2004–2005

Country grouping	Year	Total of goods loaded and unloaded (million tons)	Percentage of world total	Merchant fleet (million dwt)	Percentage of world total
Developed market-economy countries	1970	2 812	54.8	282.2	86.5
	1980	3 965	53.7	350.1	51.3
	1990	4 529	55.7	219.0	33.3
	2000	6 391	52.1	203.2	25.1
	2004	6 731	49.1	241.7	27.0
	2005	6 890	48.7	258.4	26.9
Major open-registry countries	1970	a	a	70.3	21.6
	1980	a	a	212.6	31.1
	1990	a	a	224.6	34.1
	2000	a	a	384.7	47.6
	2004	a	a	404.0	45.1
	2005	a	a	431.9	45.0
Developing countries	1970	2 075	40.4	20.5	6.3
	1980	2 926	39.6	68.4	10.0
	1990	3 065	37.7	139.7	21.2
	2000	4 834	39.4	157.0	19.4
	2004	5 426	39.6	202.3	22.6
	2005	5 577	39.4	218.3	22.7
Countries of Central and Eastern Europe (including former USSR)	1970	264	4.8	21.7	6.7
	1980	346	4.7	37.8	5.5
	1990	236	2.9	44.3	6.7
	2000	377	3.1	16.3	2.0
	2004	428	3.1	14.5	1.6
	2005	439	3.1	14.4	1.5
Socialist countries of Asia	1970	44	0.9	1.2	0.4
	1980	146	2.0	10.9	1.6
	1990	168	2.1	22.1	3.4
	2000	654	5.3	26.1	3.2
	2004	1 127	8.2	33.5	3.7
	2005	1 254	8.9	37.0	3.9
World total [b]	1970	5 134	100.0	326.1	100.0
	1980	7 383	100.0	682.8	100.0
	1990	8 133	98.3	658.4	100.0
	2000	12 257	100.0	808.4	100.0
	2004	13 711	100.0	896.0	100.0
	2005	14 160	100.0	960.0	100.0

Source: As per annexes II and III(b).

[a] All goods loaded and unloaded are included in the volume of developing countries.

[b] Including unallocated tonnage indicated in annex III(b).

Table 30

Maritime engagement of 25 major trading nations
(As at the beginning of 2006)

Country/territory	Percentage share of world trade generated, in terms of value	Percentage share of world fleet in terms of dwt
United States	12.5	10.1
Germany	8.3	7.5
China	6.7	7.1
Japan	5.3	14.1
France	4.5	1.0
United Kingdom	4.2	3.9
Netherlands	3.6	1.2
Italy	3.5	1.7
Canada	3.2	0.7
Belgium	3.1	1.3
Hong Kong (China)	2.8	7.9
Republic of Korea	2.6	3.3
Spain	2.2	0.6
Mexico	2.1	0.1
Singapore	2.0	5.9
Taiwan Province of China	1.8	2.5
Russian Federation	1.8	1.9
Malaysia	1.2	1.2
Austria	1.2	0.0
Switzerland	1.2	1.2
Sweden	1.1	0.7
Australia	1.1	0.4
Thailand	1.1	0.5
India	1.0	1.5
Brazil	0.9	0.6
Total	78.9	76.9

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by the World Trade Organization.

are also major owners of tonnage; this reflects the fact that maritime transport serves as a trade enabler and is taken into account when trade promotion policies are being devised. Maritime capabilities and ownership of substantial tonnage, in particular, are instrumental in the growth of national trade. The table also highlights the similarities and differences among the shipping services of the leading trading nations. Major trading countries such as Japan, China (including Hong Kong), the Republic of Korea and Singapore are outstanding among the nations with maritime services for cross trades. Other major trading nations are major importers or users of shipping services while maintaining a relevant ownership position and, to a lesser extent, a national flag position. The United States, Germany, France and the United Kingdom fall into this group. In 2005 the United States generated 12.5 per cent of world trade while owning 10.1 per cent of world tonnage, with only about one fourth of such tonnage flying the national flag. Similarly, France generated over 4 per cent per cent of world trade as compared with a tonnage ownership position of 1 per cent, with the national flag having a share of one half of this percentage.

Chapter 4

TRADE AND FREIGHT MARKETS

This chapter describes conditions and trends in trade and freight markets, covering the major liner and bulk cargo sectors; it gives liner freight rates as a percentage of commodity prices; and it estimates freight payments and freight costs as a percentage of import value in world trade.

A. CRUDE OIL AND PETROLEUM PRODUCTS SEABORNE FREIGHT MARKET

1. Seaborne trade in crude oil and petroleum products

During 2005, tanker freight rates fluctuated in response to OPEC decisions to adjust production levels to counter overproduction and to boost those levels to compensate for production shortages elsewhere. Continuing demand from major consumer countries and China and production stoppages in Africa and in the Gulf of Mexico due to the severe hurricane season also affected those rates.

In 2006, the demand for shipments of crude oil and oil products is likely to be affected by OPEC decisions related to production levels and export volumes from the Russian Federation, as well as by the strength of demand in Western Europe, North America, Japan and China.

2. Tanker freight rates

Overall, the year 2005 was a mixed one for tanker owners. As table 31 indicates, three of the five freight indices collected for vessels engaged in transporting crude oil and petroleum products went up during the year. The index for VLCC/ULCC went up from 80 to 149 and the indices for Capesize and Aframax tankers ended the year at 257 after starting at 170 and 210 respectively. The index for handy-sized tankers dropped from 307 to 286 and the decrease of the index for clean tankers was more pronounced — from 322 to 284. With the exception of the index for Capesize tonnage all the indices for December 2005 were lower than those prevailing in the corresponding month of the previous year.

Average freight indices for 2005 in four categories of tankers, except clean tonnage, were below the corresponding averages for 2004. For VLCC/ULCC the average of 100 recorded for the year was about one third down from the average of the previous year. For Suezmax and Aframax tonnage the averages were 157 and 191 respectively, about one fifth lower than the averages for the previous year. Handy-size tonnage recorded an average index of 271 for 2005, about 5 per cent less than the one for the previous year. Only clean tonnage recorded a modest increase in the average index, from 283 to 287 in 2005.

Table 31

Tanker freight indices, 2004–2006
(Monthly figures)

	Lloyd's Shipping Economist					Baltic Tanker	
	>200	120-200	70-120	25-70	clean	Dirty Index	Clean Index
2004							
October	195	285	355	320	263	2 081	1 063
November	276	342	374	433	390	2 974	1 780
December	216	240	268	378	367	2 689	1 753
Average	144	195	229	287	283	1 779	1 225
2005							
January	80	170	210	307	322	1 812	1 588
February	135	165	181	233	267	1 401	1 303
March	96	162	195	255	289	1 587	1 304
April	85	124	157	212	274	1 308	1 276
May	75	137	191	271	253	1 331	1 157
June	61	126	157	267	253	1 235	1 030
July	83	108	144	248	243	1 194	1 127
August	69	107	133	190	211	1 099	981
September	82	120	154	244	350	1 104	1 290
October	109	186	249	376	385	1 532	1 815
November	179	225	269	358	312	2 174	1 801
December	149	257	257	286	284	2 147	1 296
Average	100	157	191	271	287	1 494	1 331
2006							
January	112	163	193	314	342	1 945	1 565
February	116	168	176	267	282	1 672	1 378
March	86	127	163	204	225	1 098	979
April	63	108	133	208	213	985	818
May	79	132	158	217	241	1 090	1 118

Source: Executive summary in *Lloyd's Shipping Economist*, several issues; Baltic Tanker indices reported for the first working day of the month; indices reported by *Lloyd's Ship Manager* (which were discontinued in March 2004).

Very large (VLCC) and ultra large (ULCC) crude carriers

During the first quarter of 2005 all rates slid from the extraordinarily high levels reached during the last quarter of the previous year. At the beginning of the year, the corresponding rates from the Persian Gulf to Japan, the Republic of Korea, Europe and the Caribbean/East Coast of North America were WS74, WS70, WS71 and WS67 respectively. In the following month they doubled on all routes and then gently fell to the original levels by May. Two fixtures illustrate the extent of rate improvements during February on the route to Japan. Early in the month Idemitsu chartered *Takayama* at WS120 to take 250,000 tons of crude oil with delivery during the second week of March. By the end of February Cosmo had chartered the *Pacific Ruby* to take 255,000 tons at WS149 with delivery one week later. For deliveries to the Republic of Korea the February rates were good too: Hyundai chartered *Bandaisan* to take 262,000 tons at WS165 for delivery in mid-March. A similar picture emerged regarding the routes heading westward during the same month. CSSA chartered *Front Champion* to take a parcel of 280,000 tons for WS130 with destination UK/Continent, while Irving Oil

secured *Amantea* at WS112 to take 290,000 tons to the East Coast of North America.

During June rates collapsed, reaching only WS57 on all routes except the one to the Caribbean and the East Coast of North America, where rates were even worse at WS54. Early June fixtures to Japan and the Republic of Korea illustrate the depressed rate levels. Two companies, Idemitsu and Jomo, chartered the tankers *Suzuka* and *Asian Jewel* to take 250,000 tons parcels to Japan at WS57, while LGCaltex chartered the *New Vitality* and another, unspecified vessel to take two parcels of 265,000 tons to the Republic of Korea also at WS57. The same freight was paid by Engen to secure the *Shinko Landes* for South Africa, and tankers bound for the Red Sea fetched only WS50 — this rate was paid by Hellenic for the *TI Africa* to carry 275,000 tons and also by Tupras for the *Iran Najim* to carry 290,000 tons. This low rate was also agreed by SinoChem to charter the *Oriental Venture* to carry 260,000 tons to China, and on the routes to the Caribbean Royal Dutch Shell secured the *Formosa Petrochallenger* to take 274,000 tons, while KPC chartered the *Amantea* to carry 280,000 tons. Rates for Northern European destinations were marginally better at WS55, which was the rate paid by Royal Dutch Shell for the *Arosa* to take 280,000 tons.

Rates recovered modestly during July, the improvement being better on the routes to the east, at around WS90, with rates to the west still at around WS75. Then rates collapsed again in August in the low WS60s but started to improve in September, and in October they were around WS100 for the routes to the east and above WS90 for those to the west. Rates peaked in November, reaching WS167 for destinations in Japan and WS185 for those in the Republic of Korea, and then eased by the end of the year, recording for those destinations averages of WS126 and WS137 respectively. A similar trend was observed for destinations in North-West Europe and in the Caribbean and East Coast of North America. For those destinations the November rates were WS156 and WS139, while those of December were WS122 and WS113 respectively. For destinations in China rates eased slowly: Unipec chartered two vessels — the *Hebei Mountain* and the *Grand Explorer* — to take 265,000 tons parcels at WS190 and WS197 respectively at the end of the year.

In January 2006 rates deteriorated further, dropping by more than 12 per cent for destinations in the east and by more than 20 per cent for those in the west. Already during the last weeks of December rates had eased considerably — during the third week of that month Repsol chartered the *Universal Brave* for delivery in mid-January to take 278,900 tons from Kharg Island to Spain at only WS102. In mid-January Vela chartered six vessels to take 285,000 tons parcels from Ras Tanura to the Gulf of Mexico at rates fluctuating between WS75 and WS90. Although low the rates of January 2006 were about 30 per cent higher than those recorded in January 2005.

In the following months rates on all routes deteriorated further, reaching a low of WS55 in April for voyages originating in the Persian Gulf and destined for Japan and the Republic of Korea, and WS60 for destinations in Western Europe. By way of example, NITC chartered *Seaking* in April to carry 285,000 tons from the Persian Gulf to the UK/Continent at WS57, while in May, NGT chartered *Tataki* to carry 235,000 tons to Japan at WS68. Rates slightly recovered in June hitting the WS100 mark on all routes with the exception of destinations in North West Europe where an average rate of WS80 prevailed. The rates were WS101, WS102 and WS114 for destinations in Japan, Republic of Korea and Gulf of Mexico respectively. Representative fixtures of this month are the charter of *Effie Maersk* by Royal Dutch Shell to carry 270,000 tons at WS80 from the Persian Gulf to the UK/Continent and that of *Pacific Crystal* by NGT to carry 255,000 tons from the Persian Gulf to Japan at WS112.

Suezmax tanker tonnage

Rate fluctuation for Suezmax tonnage reflected the particular conditions that prevailed on the routes served by those vessels. Rates from West Africa started the year at WS184 for destinations in Europe but then dropped for most of the year and were almost halved by August when they reached WS98. The lowest fixtures were probably the ones secured by CSSA, which chartered the *SFC Caucasus* to take 130,000 tons to UK/Continent destinations at only WS90, and by BP Amoco, which secured the *Yannis P* to take a similar parcel to Trieste (Italy) for the same rate. By October, however, average rates had more than doubled, reaching WS200. There were several fixtures for 130,000 ton parcels above this rate. Petrogal agreed to WS205 to secure the *Astro Perseus* for destination in Portugal, Addax chartered the *Astro Phoenix* at WS215 for destination UK/Continent and Eni paid WS220 for the *Nikator* for destination in Lavera (France). The average rates for November and December were WS230 and

WS227 respectively, this being an indication that rates were good and firm until the end of the year. However, in January 2006 rates contracted by a quarter to WS164 with the trend being definitely downwards — at the end of January Petroplus chartered the *Katherine Knudsen* for WS122 to take 130,000 tons to Lavera (France), and for a similar rate CSSA secured the *Sonangol Kizomba* to take a similar parcel to destinations in the UK/Continent.

Rates from West Africa to destinations in the Caribbean/US East Coast started the year at WS151 and improved until March, when they stood at WS161. Representative fixtures for carrying a 130,000 ton parcel that month were Royal Dutch Shell's to secure the *Janet* at WS170 and Conoco's for WS140 to charter the *Kamlesh*. During the subsequent months rates went downhill until August, when they bottomed at WS105. But by October they had almost doubled at WS199 and continued to increase right to the end of the year, with the average December rate being WS244. During that month there were signs of a weakening market. Sun Oil chartered the *Dakota* to take 130,000 tons to Philadelphia at the beginning of the month at WS267 and three weeks later secured *Sonangol Luanda* at WS222 for a similar parcel and destination. Rates contracted in January 2006 by about 30 per cent on this route.

For trades across the Mediterranean and from that area to North-West Europe the rates started the year at WS191 and WS183 respectively. In subsequent months these rates followed a similar trend, definitely downwards, with the lowest point reached in July, at WS102, for the route to North-West Europe, and in August, at WS107, for the route across the Mediterranean. The recovery was simultaneous and WS207 was reached by October on those routes. Some representative fixtures of this month were the WS180 agreed by Tamoil to secure the *Seaprince* to take 130,000 tons from the Libyan Arab Jamahiriya to the UK/Continent and the WS210 paid by Repsol to charter the *Iran Susangero* to take a similar parcel from Sidi Kerir (Egypt) to Spain. The rates on those routes boomed until the end of the year with average rates for November and December being WS237 and WS285. By late December, Clearlake chartered the *Cape Bata* and the *Sea Spirit* to take two 130,000 ton parcels from Novorossiysk (Russian Federation) to Mediterranean destinations for WS300, while Newton secured the *Iran Sarvestan* for WS295 to take 140,000 tons from Supsa (Georgia) to the same destination.

In January 2006 rates dropped on all routes. From West Africa to destinations in Northern Europe and the Caribbean/East Coast of North America the corresponding rates for January were WS167 and WS164. The average rate prevailing in the same month for Suezmax tonnage trading across the Mediterranean was WS178.

Rates on all routes fluctuated during February through May with a clear declining trend and a minor recovery in June. The lowest average rate of WS119 was observed in April on the route across the Mediterranean. The corresponding rates for destinations across the Mediterranean and from West Africa to Europe and the Caribbean/East Coast of North America were WS137, WS145 and WS129 respectively. A representative fixture is the chartering in late of June of *ISI Olive* by CSSA to carry 130,000 tons to the UK/Continent at WS155. In the same month, CSSA chartered *Wilmina* to carry 130,000 tons from Algeria to destinations in the Mediterranean at WS120.

Aframax tanker tonnage

This tonnage is deployed for trading from North-West Europe, the Caribbean, the Mediterranean and Indonesia. Routes from North-West Europe are for trading across the region and to destinations in the Caribbean and on the East Coast of North America. Freight rates for these routes started the year at WS200 and WS240 respectively. The following months were volatile, with low rates being followed by high ones, but overall a declining trend was apparent until the summer months when WS122 and WS140 were reached. Afterwards, rates were sluggish with a good recovery in October when rates reached WS222 and WS263 respectively. Representative fixtures for this month were those of Exxon Mobil, which chartered the *Catherine Knudsen* for WS230 to take a 80,000 ton parcel from the North Sea to the UK/Continent, and Koch, which chartered the *Fucsia* to take a similar parcel from the Continent to the East Coast of North America at WS205.

Routes from the Caribbean link destinations in the area and on the East Coast of North America. Fluctuations in the freight rates on this route mirrored those recorded in North-West Europe. The year started at WS241 and the up-and-down pattern was prevalent until August, when the lowest point was reached at WS135; recovery took place in September and was better in October, when WS222 was reached. Two representative fixtures were

those of Conoco, which agreed to WS235 to secure the *Eagle Auriga* to take 70,000 tons to a destination in the Gulf of Mexico, and Vitol, which agreed to WS180 for the *Minerva Lisa* to take a similar parcel from Mamonal (Colombia) to the East Coast of North America. Rates peaked in November at WS347 and eased in December to WS235.

For the routes across the Mediterranean and from there to North-West Europe volatility was also present, and showed a modest upward trend for the latter, from January to May. Rates at the beginning of the year were WS210 and WS196 for those routes and by May they were WS206 and WS208 respectively. Typical fixtures during that month included those from the Black Sea — one made for the *Aegean Legend* at WS230 to carry 80,000 tons from Novorossiysk to a Mediterranean destination for Royal Dutch Shell; and another for the *Eagle Columbus* at WS200 to take a similar parcel for Vitol from Batumi to the UK/Continent. During the following weeks, rates were downwards until July when they bottomed at WS138 across the Mediterranean and at WS137 for destinations in North-West Europe. Afterwards, freight rates recovered and peaked in November at WS294 and WS293 for those routes with a modest correction the following month to WS271 and WS257 respectively.

Rates for the routes from Indonesia to the Far East started the year at WS58 and were moved upwards until March, when they peaked at WS259. During that month Exxon chartered the *Platres* and CSK chartered the *Valiant* for WS242 and WS285 respectively to carry 80,000 ton parcels to Japan; and the *Esperanza* was chartered by SKS for to take a similar parcel to Ulsan (Republic of Korea) for WS245. The following months witnessed a deterioration of rates to June, when the lowest point of WS112 was reached. Then rates recovered modestly until September and in October they were at WS226 with the last two months being exceptionally good, reaching WS337 and WS335 respectively. Representative fixtures were those of Hyundai in mid-December, which secured the *New Argosy* to take 80,000 tons to Daesan (Republic of Korea) for WS335, and LG Caltex, which chartered the *Esperanza* to take a similar parcel to Yosu (Republic of Korea) for WS340.

The start of 2006 witnessed a rate correction on all these routes. For trades across the Mediterranean and across North-West Europe they were WS195 and WS149 in January, dropping by 28 and 42 per cent respectively from the previous month. For trades from the Caribbean to the East Coast of North America the corresponding rates actually increased modestly to average WS241 for that month.

Throughout the following months rates continued to decline on all routes. From January through June rates on trades across the Mediterranean and North-West Europe and trades from the Caribbean to the East Coast of North America and from Indonesia to the Far East declined by over 20 per cent, 17 per cent, 23 per cent and 40 per cent, respectively. For each of these routes and, following the same order, rates in June were WS154, WS123, WS186 and WS152. The extent of this decline is illustrated by some fixtures concluded during that period. For example, in April, CSSA hired *Anna Knutsen* to carry 80,000 tons at WS90 for destinations across North-West Europe, while *New Assurance* was chartered by China Oil to carry 80,000 tons from Indonesia to Dalian at WS135. In the following month, Sempra chartered *NS Concord* to carry 70,000 tons at WS180 across the Caribbean and OMV chartered *Nordmark* to carry 80,000 tons from Tartous (Syria) to Trieste (Italy) at WS130.

Handy-size tanker tonnage

Average dirty spot rates for Handy-size tonnage trading from the Caribbean to North America's Gulf and East Coast started the year at WS364, but the following months were volatile and lacklustre. The drop in rates to WS196 in April had been preceded and was followed by monthly averages rates of WS267 and WS270 respectively. Similarly, the lowest average rate — in August at WS184 — was in between two monthly averages of WS240 for July and WS243 for September. In October average rates flared to WS407 after hurricanes battered the US coastline. Some fixtures were well above the average: Valero chartered the *Georgis Nikolos* for WS460 to take 50,000 tons from Aruba to a US destination in the Gulf of Mexico and Citgo agreed to WS435 to charter the *Nedas* for to take a similar parcel from Bajo Grande (Venezuela) to a US destination. The last two months of the year witnessed rates easing to WS314 in November and to WS235 in December.

Vessels of similar capacities trading in the Mediterranean and from there to the Caribbean and the East Coast of North America recorded less acute rate fluctuations. In particular, rates across the Mediterranean were above the WS200 mark for most of the period from January to September: in January WS222 had been recorded and

only in April and August were rates low — at WS191 and WS174 respectively. The last quarter was particularly good, with monthly averages above the WS300 mark: WS358 in October and WS323 and WS327 for November and December respectively.

Rates for tankers trading from the Mediterranean to destinations in the Caribbean and on the East Coast of North America, however, did have a declining trend: in January rates were at WS291 and for most of the time they were below the WS250 mark, with the lowest month being August at WS182. For those routes from the Mediterranean October witnessed a jump in rates to WS363 for destinations across the Atlantic Ocean, and this even improved in November when the average for the month reached WS365. The following month witnessed a reduction to WS286.

Representative fixtures across the Mediterranean during the peak month of October were those of Newton, which chartered the *Pearl* for WS375 to take 43,500 tons from Greece to a Mediterranean destination and two weeks later agreed to WS500 for securing the *Maersk Richmond* to take 30,000 tons from Lavera (France) to another destination in the Mediterranean. Representative fixtures for destinations in the Caribbean and on the East Coast of North America during the last quarter were those of Vitol in December. This charterer secured the *Lauren* at WS315 and two weeks later the *Halki* at WS290 to take 44,000 tons parcel from the Mediterranean to the East Coast of North America.

Elsewhere rates were also reflecting this buoyancy in the Mediterranean during the last quarter of the year. In October, Litasco chartered the *Baltic Captain I* for WS360 to take 30,000 tons from St. Petersburg (Russian Federation) to the Canary Islands (Spain).

In January 2006 rates weakened on some of these routes. Average rates for trades from the Caribbean dropped modestly to WS267. The corresponding rates for trades across the Mediterranean and from there to Caribbean destinations actually increased to WS342 and WS303 respectively.

During the following months rates declined further on all routes, with the sharpest decline affecting trades across the Mediterranean. Rates declined by an impressive 42 per cent from January through June with the lowest average rates of WS 165 found in March. Rates for May and June were WS205 and WS200 respectively. Other routes showed a similar declining trend throughout the same period 13 per cent for trades originating in the Caribbean and destined to the East Coast of North America and 21 per cent for those originating in North West Europe and destined to the Caribbean/East Coast of North America. Chartering activity reflecting this trend includes the hiring of *Theodoros IV* in mid-May to carry 43,500 tons across the Mediterranean at WS210.

All clean carriers

The rates for large clean carriers in the range of 70,000 to 80,000 dwt and those in the range of 50,000 to 60,000 dwt trading from the Persian Gulf to Japan were for most of the year in a downward trend. Average monthly rates for these two tanker sizes started the year at WS320 and WS344 respectively and during the following months rates were well below those averages. For both sizes the weakest month was June, when average rates were WS173 and WS196 respectively. Only in October was there a rate improvement. Larger tankers recorded WS374 average rates, while those in the range of 50,000 to 60,000 dwt fetched WS437. The extent of the improvement between the months of June and October for the largest size of tanker can be gauged by the charters made by Vitol to take a 75,000 ton parcel from the Persian Gulf to Japan: in June it agreed to WS165 for securing the *Oriental Green* while in October the rate was WS320 for engaging the *Rainier Spirit*. A similar trend was apparent for tankers in the range of 50,000 to 60,000 dwt: Hanwah chartered the *Difko Birtha* in June at WS210 to take 55,000 tons to Japan, while in October Projector agreed to WS440 to secure the *Altius* for a similar parcel to the same destination. Rates agreed for destinations in the Republic of Korea mirrored those for Japan for both sizes of tankers — in October Vitol chartered the *Emerald Hill* to take a 55,000 ton parcel to a destination in the Republic of Korea/southern Japan at WS425. After October, the rates went down from WS369 to WS298 for tankers in the range of 70,000 to 80,000 dwt and the corresponding rates for tankers in the range of 50,000 to 60,000 dwt were WS300 and WS316 respectively.

Over the year the time charter equivalent for a 55,000 dwt tanker moved down from $54,500 per day in January to only $31,000 per day in August, rebounding up to $67,100 per day in October to end the year at $45,900 per day.

Freight rates for tankers in the range 35,000–50,000 dwt trading from the Caribbean to the Gulf and East Coast of North America also recorded a downward and shorter

trend — from January to August the average rates moved from WS314 to WS202. In September there was a good recovery to WS356, and rates then eased somewhat in October to WS323. Representative fixtures for this tanker size were those made by Hess during the year for carrying 40,000 ton parcels from St Croix to the East Coast of the United States: in January the rate agreed was WS330 for the *Kriton*, in August the rate was WS145 for the *Elka Bene* and one month later it was WS285 for the *Kriti Atki*. Those were the best months as the averages for November and December were WS252 and WS248 respectively.

Smaller tankers in the range 25,000–35,000 dwt trading out of Singapore to East Asian destinations started the year at WS372 and slipped during the following months, with May and June going below the WS300 mark. The latter was the weakest month when average rates were only WS213. In that month Royal Dutch Shell chartered the *Ocean Moonbeam* to take 30,000 tons to Pasir Gudang (Malaysia) for $110,000 and the *Bright Pacific* to take a similar parcel to Hong Kong (China) for $280,000. Sinopec agreed to WS200 for the *Da Qing 455* to take another 30,000 ton parcel to Northern China. Rates to other destinations were in line with the rates just mentioned — two fixtures to take 30,000 ton parcels to the East Coast of India were agreed for $280,000. Then average rates for this tanker size recovered slowly with a good burst in September to WS471, which was sustained in October when WS585 was reached. The following two months were less impressive, with averages reaching WS454 and WS398 respectively.

In January 2006 rates for most vessel sizes and routes improved. Larger tankers in the range 50,000– 60,000 dwt trading from the Persian Gulf to Japan had rates up by 12 per cent to WS355. A similar increase was recorded by smaller tankers in the range 25,000–35,000 dwt trading from Singapore, which recorded rates of WS438. Similar small tankers trading from the Caribbean to the East Coast of North America recorded even better rate increases, about 29 per cent, to WS384.

During the following months, rates declined significantly for large tankers, including the 70,000 to 80,000 dwt trading from the Persian Gulf to Japan. In some cases, the monthly variations in rates for both sizes of ships can be over 40 per cent. The rates for June were WS180 for those in the range of 70,000 to 80,000 and WS225 for tankers ranging from 50,000 to 60,000 dwt representing respectively 39 per cent and 37 per cent decline rates from January to June. A good example highlighting this trend is the chartering at the end of June of *Gulf Stream* by MBK to carry 50,000 tons from the Persian Gulf to Japan at WS212 and the fixture of *Alonissos* by VITOL to carry 80,000 tons on the same route at WS155. Rates for trades by small tankers in the 25,000 to 35,000 range from the Caribbean to the East Coast of North America and from Singapore eastward also declined over the same period but stood close to the WS300 mark. In June, the rates were WS292 for trades originating in the Caribbean and destined to the East Coast of North America and WS298 for eastward movements from Singapore. A representative fixture is the chartering of *Alexandra Park* in early June by BP Amoco to carry 30,000 tons from Singapore to North China.

Tanker-period charter market

Chartering activity was above the 1 million dwt level for most of the year with the exception of January, June and December, when only 0.6, 0.8 and 0.7 million dwt respectively were chartered. The peak months were March, April, October and November when 1.9, 1.8, 2.2 and 1.8 million dwt respectively were reported chartered. In March, 76.0 per cent of the charters were for more than two years and 87.0 per cent corresponded to VLCC/ULCC and Suez-max tonnage almost in the same proportions. In July, 71.4 per cent of the charters were for durations of between six to 12 months, with 38.0 per cent being Suez-max tonnage and 26.7 per cent Aframax vessels. In October, 65.5 per cent of the charters were for less than one year and 41.5 per cent for VLCC/ULCC tonnage and one third for Aframax tonnage. In that month the charter rate for a 5-year old VLCC was $52,000 per day. Overall total chartering activity reached 17.5 million dwt in 2005, slightly lower than the 18.2 million dwt reached during 2004.

Over the year VLCC/ULCC tonnage accounted for about 33 per cent of the chartering activity, with smaller tankers of less than 80,000 dwt capacity accounting for a further 15 per cent. Larger tankers fared particularly well in September, when they accounted for 73.6 per cent of the tonnage chartered during that month with rates of $52,000 per day. Short-term charters of up to one year accounted for about half of the chartering activity, with long-term charter of over two years having a share of 36 per cent.

Chartering activity in January 2006 was double that of the previous year, and accounted for 1.1 million dwt, with about half of it being long-term charters.

Chartering grew faster in February and March totaling 1.8 million dwt and 2.6 million dwt respectively. April saw a reduction in the number and/or the size of ships chartered since the total charter activity measured by sized slipped to 1.8 million, of which long-time charters represented 80 per cent. Chartering activity grew again in the following months achieving 2.2 million dwt, 3.6 million dwt and 2.4 million dwt in May, June and July respectively. With the exception of May, long-term charters dominated the chartering transactions.

B. THE DRY BULK SHIPPING MARKET

1. Dry bulk trade

Large Cape-size vessels are engaged on the iron ore routes from Australia to the Far East and from Brazil to the Far East and Europe. During the year the sustained high demand for iron ore in China and the congestion afflicting loading and unloading ports pushed up demand for these vessels in the Pacific. Panamax vessels were deployed on several routes, including the transatlantic coal and iron ore routes from the East Coast of North America and Canada respectively and those from South Africa. Panamax tonnage was also deployed on iron ore and coal routes within Asia, such those originating in India, China and Indonesia, and within Europe originating in Sweden. Some Panamax tonnage was deployed from the United States Gulf and the east coast of South America for carrying grain.

Smaller vessels, such as Handy-size ones, were employed for carrying grain to several destinations, notably those having ports with restricted drafts. These vessels were also used on bauxite, alumina and rock phosphate routes.

2. Dry bulk freight rates

The freight rates for all sectors and sizes of dry bulk carriers finished the year 2005 at levels below those prevailing at the beginning of it. The Baltic Dry Index recorded a 46.4 per cent drop to 2,407 with the lowest month being July, in which it barely reached 1,804. The average Baltic Dry Index for 2005 was 3,253, about 27 per cent less than the average recorded for the previous year. The rate deterioration was more pronounced for Panamax tonnage, as shown by the almost 31 per cent reduction in the corresponding Baltic Panamax Index, than for Capesize vessels, for which the corresponding Index contracted by less than a quarter.

As shown in table 32, the dry cargo tramp time-charter decreased during the year to 320 — a contraction of 36.6 per cent over the year. The dry cargo tramp trip-charter went down to 332 by the end of the year and recorded a drop of 51 per cent from the level of the beginning of the year. The average time-charter index for 2005 was 100 points lower than that of the previous year, while the average trip-charter index of 469 points was 65 points lower than that of the previous year. The averages recorded for 2005, however, were well above the averages recorded for 2003.

The weakening rates accompanied by rising owners' expenses. For instance, average bunker prices for IFO 180 in Singapore went up from $190 in January to $288 per ton in December. Also, some events during the year heralded changes in future expenses (i.e. labour and insurance) of shipowners and ship-operators (see box 2).

Dry bulk time-charter (trips)

Some representative fixtures concluded for vessels of different sizes in typical routes illustrate the evolution of rates during 2005. At the beginning of the year Cape-size tonnage was chartered for round trips over the transatlantic and the Singapore–Japan to Australia routes at rates of $74,950 and $63,875 per day respectively. Rates went up soon afterwards and peaked in April over the transatlantic route at $82,400 per day and in February on the route to Australia at $72,750 per day. During the following months rates went down and bottomed in July for the two routes at $31,700 and $24,200 per day respectively. There was a recovery during the last quarter, with October rates about double those of the summer at $55,300 and $47,800 per day respectively. These rates then eased over the last two months, and the average rates for December were $32,500 per day over the transatlantic route and $34,500 per day on the Singapore/Japan to Australia route.

The slide of freight rates continued in January 2006 when owners were receiving $27,970 per day over the transatlantic route and $25,840 per day on the route to Australia. These rates were less than half of those prevailing in the corresponding month of the previous year.

In the following months, rates in the transatlantic route improved with erratic monthly fluctuations. In May the lowest rate of $29,180 per day was recorded and by June, the rate achieved was $33,370 per day —19 per

Table 32

Dry cargo freight indices, 2003–2005
(Monthly figures)

Period	Dry cargo tramp time-charter [a] (1972 = 100)			Dry cargo tramp trip-charter [b] (1985 = 100)		
	2003	2004	2005	2003	2004	2005
January	263	536	506	185	553	677
February	259	585	481	156	613	715
March	272	579	530	151	451	565
April	292	519	507	203	558	624
May	310	439	440	230	533	552
June	292	385	373	304	401	412
July	307	416	313	273	478	342
August	307	458	290	276	562	285
September	317	471	328	294	514	352
October	409	499	379	337	503	391
November	448	538	346	309	544	376
December	489	592	320	360	701	332
Annual average	331	501	401	257	534	469

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

[a] Compiled by Maritime Research and published by Institute of Shipping Economics and Logistics (ISL) in *Shipping Statistics and Market Review*.

[b] Compiled by *Lloyd's Shipping Economist* and published by ISL in *Shipping Statistics and Market Review*.

cent higher than January. Rates for Singapore/Japan to Australia trips also improved but also fluctuated up and down during the January-June period. The highest earnings were achieved in May and amounted to $37,440 per day. In June, ships trading on this route secured $32,090 per day — 24 per cent increase as compared with January. Representative fixtures concluded during this month for these routes include the chartering of *Golden Wind* to carry 170,082 tons from Japan/Western Australia/China for $30,000 per day and the hiring of *Cecilia* by SKS to carry 170,565 tons over the Transatlantic route for $31,500 per day.

The evolution of freight rates for Panamax tonnage followed a similar trend. Vessels chartered at the beginning of the year for round trips from Northern Europe to the east coast of South America fetched $36,800 per day while rates for those vessels trading from the Far East to Australia were at $31,300 per day. Rates improved during the following weeks and peaked in March for both routes at $42,225 and $37,500 per day respectively. The following months' rates collapsed to $11,100 per day in July for the Far East to Australia route and, one month later, for the Northern Europe to east coast of South America route at $14,250 per day. The recovery of the last quarter started in October when rates to Australia fetched $18,250 per day while those to the east coast of South America stood at $22,850 per day. The remaining weeks of the year witnessed a deterioration of the recovery, and rates for December were $16,500 per day on the Continent to east coast of South America route and $19,000 per day on the Far East to Australia route.

Further deterioration of rates was recorded for January 2006. The rates on the transatlantic route to the east coast of South America were $14,380 per day and on the Far East to Australia route they were only marginally better — $16,800 per day. This rate decreased further in February to a low of $13,620 and bounced back in the following months reaching a high of $20,540 per day in June. In the Far East to Australia it was only marginally better-$16,800 per day in January, but improved in the following months fetching $21,880 per day in June. The chartering in late June of *Alabama* by Bunge to carry 71,002 tons from Amsterdam to the

Box 2

Seafarers supply and demand study, and insurance issues

The BIMCO/ISF Manpower 2005 Update was completed in December. This study is the most comprehensive assessment of global supply and demand for seafarers and has been published every five years since 1990. This year the study indicated that the discrepancy between the supply of and demand for officers had narrowed. In the 2000 Update the supply of officers was put at 404,000 with a shortfall relative to demand of 16,000 or 4 per cent. The corresponding figures for 2005 are 466,000 with a shortfall relative to demand of only 10,000 or 2.1 per cent. OECD countries remain an important source of supply of officers, with Eastern Europe and, to a much lesser extent, Asian countries having increasing importance. Ratings, however, were still in vast oversupply: in 2000 their supply was estimated at 821,000 with a surplus of 222,000, or 27.0 per cent, and in 2005 the supply was put at 721,000 with a surplus of 135,000, or 18.7 per cent. These figures, however, were less robust as there were doubts concerning the exact number of ratings available for international service and not only for domestic service. Countries of East, South-East and South Asia are the major suppliers of ratings worldwide. By 2015 it is estimated that the shortfall of officers will rise to 5.9 per cent while the ratings surplus will increase to 21.6 per cent.

In February 2006 the 94th ILO Maritime Session was convened to consolidate into a single convention the several conventions and recommendations adopted over the years, and to establish conditions for seamen's work. The new maritime labour Convention was adopted with overwhelming support from more than 100 countries. It is expected to provide a "bill of rights" for the more than 1.2 million seafarers engaged in merchant ships while allowing a sufficient degree of national discretion to deliver those rights with transparency and accountability. The overall objective is to achieve quality shipping, which is crucial for the global economy. Fishing and traditional (i.e. dhows and junks) vessels are not included in the convention. An extended presentation of this convention is made in Chapter 6, section B.2.).

Insurers and reinsurers were affected by the natural catastrophes in several regions of the world. Munich Re estimated the global insurance industry's losses at $75 billion, with Hurricane Katrina accounting for $45 billion. Some marine insurers took measures to cover the extra exposure — UK P&I Club, which insures about 105 million GT, reported a net deficit of $13 million by February 2005 and decided to purchase extra cover. Nevertheless, competition in the marine hull insurance kept premium increases at a modest level. Some London underwriters raised premiums by only 6 per cent across the board in their portfolios.

Calls were made for the United States to maintain its role of reinsurer for acts of terrorism in line with the Terrorism Insurance Act, which is due to expire in 2007. In mid-2005, the Joint War Committee of the London insurance market declared the Malacca Strait a war-risk area. This followed repeated piracy incidents over the last few years in the area. Although the committee is purely advisory, the declaration allows insurers to issue seven-day notice of cancellation of terms of existing policies and seek additional premiums.

Piracy flared up in other areas too. Repeated incidents took place in the Horn of Africa using Somalia as a springboard. In August nine incidents were reported in two weeks by the International Maritime Bureau, with some attacks taking place 120 miles from the coast. In November a Thai cargo ship carrying sugar from Brazil to Yemen was hijacked, with the crew of 22 taken hostage for ransom. In January 2006, a US warship seized an armed dhow and rescued the captive crew of the cargo ship.

East Coast of North America for $20,000 per day illustrates the trend characterizing the transatlantic route. During the same period, MOL chartered *Torm Marta* to carry 69,638 tons over the Japan/Australia/Singapore/ Japan route for $21,000 per day.

Handymax tonnage chartered for Far East to Australia round trips secured $24,500 per day in January 2005 and rate gains were made until March when rates fetched $27,000. Then rates moved downwards until July when they reached only $12,660, but the trend was slightly reversed in the following months and by September rates were $17,825 per day, still lower than those prevailing at the beginning of the year. The following weeks were disappointing and the year ended with rates at $15,950 per day, that is less than half the rates prevailing in the corresponding month of the previous year.

A modest rebound of rates of about 2 per cent was recorded in January 2006 when rates for Far East to Australia round trips fetched $16,280 per day. With the exception of February, which saw a slight decline in rates, the performance of Handymax ships trading on this route improved gradually throughout the following months reaching a high of $22,680 per day in June.

Handy-size tonnage chartered for trips from Northern Europe to the west coast of Africa started the year with rates at $19,000 per day, with improvements recorded over the following weeks until April when rates fetched $23,000 per day. The following month that rate remained unchanged and only slackened from June to bottom in August at $16,500 per day. During the following two months freight rates stood at $18,000 per day but started to collapse in November to end the year at only $14,000 per day. This rate was lower than the rates reached in the corresponding months of 2004 and 2003. In January 2006 rates went down further to $12,600 per day.

Dry bulk time-charter (periods)

Estimates of rates for chartering vessels for a 12-month period and prompt delivery indicate that the good rates levels of the beginning of the year moved downwards during the first half of the year but recovered late in the year. Five-year-old Cape-size vessels of 170,000 dwt and above were fetching $60,000 per day in January 2005 and only $35,000 per day in August; they made a slight recovery in October to $46,500 per day to slide to $36,000 per day in December. Smaller vessels in the range 150,000 to 170,000 dwt with ages between 5 and 10 years started the year at $50,000 per day and dropped to $29,000 per day in August before recovering to $38,000 per day in October and collapsing to $27,000 per day in December.

Freight rates for 5-year old Panamax vessels in the range 70,000 to 75,000 dwt started at $38,500 per day in January and dropped to $20,000 per day in August before rebounding to $22,500 per day in October. The following weeks witnessed the collapse of rates and the year ended at $18,000 per day. A similar pattern was followed by 15-year old vessels in the range 60,000 to 65,000 dwt, whose rates went down from $30,000 to $16,000 per day in August before recovering to $17,500 per day in October and finally collapsing to $14,000 per day in December.

Rate improvement for a 10-year old Handymax tonnage was modest, from $23,500 per day in January to $26,000 per day in March. The following month saw depressed rates, which bottomed in August at $15,500 per day, and a minimum improvement during the last quarter of the year before they collapsed in December at $14,500 per day. Rates for 5-year old vessels of this size were almost steady during the first half of the year from $29,000 per day in January to $25,000 per day in June. Afterwards, rates went down to about $17,000 per day during most of the second half of the year and eased somewhat in December to $16,250 per day. Handy-size tonnage aged about 15 years also recorded similar rate increases: $14,500 per day in January to only $9,500 per day in August, then steady to November and easing in December to $9,000 per day.

All rates were further reduced in January 2006. Five-year-old Cape size vessels fetched $34,000 per day while Panamax tonnage of the same age reached $17,800 per day. These rates were less than half the ones corresponding to the same month of the previous year. Fifteen-year-old Panamax vessels were recorded at $12,500 per day. Modest losses were also recorded for 10-year old Handymax and 15-year-old Handy-size vessels at $14,000 and $12,100 per day respectively.

Rates for 5-years old Cape size vessels fluctuated up and down throughout the following months, but stood above the $30,000 per day mark. In June, these vessels earned $36,000 per day—a rate about 6 per cent higher than the one earned in the beginning of the year. Rates for Panamax vessels of the same age eased slightly but grew beyond the January levels and reached $18,900 per day. Fifteen years old Panamax vessels followed the same trend and earned $14,300 per day in June, an increase of about 15 per cent as compared with January. Improvements have been recorded for Handymax and

Handysize tonnage especially in June. Vessels of all ages in the former category earned about $20,000 while 15-years old 35,000-37,000 dwt Handysize vessels earned $15,400 per day. In late June, BHP-Billiton chartered *Bulk Patriot* to carry 70,003 tons at $18,000 per day. During the same period, Cargill paid $36,000 per day for the use of *CSK Grandeur* to carry 170,170 tons.

Dry bulk trip-charters

Over the year rates for Cape-size tonnage were good. Iron ore freight rates from Brazil to China started the year at $36.85 per ton and stood atover the $30.00 per ton level until June when rates collapsed to only $20.70 per ton. Over the following months rates gently recovered and reached $31.15 per ton in October but then contracted, ending the year at $23.55 per ton. The evolution of coal rates from Richards Bay (South Africa) to Western Europe was less impressive — rates started at $19.45 ton in January and improved over the $20 per ton level until April, and from that month until October they went over the $20 per ton with the lowest point reached in August at only $11.20 per ton. By December this rate was $11.90.

Again, the performance of rates for Panamax tonnage engaged in grain trading between North America Gulf and Western Europe was good during the first half of the year. Rates had started the year at $37.15 per ton and only went below the $30 per ton mark in June; the following weeks witnessed further rate weakening to bottom in August at $20 per ton. By October rates were at $24.35 per ton then collapsed, and by December they were at $20.95 per ton. The rate evolution for Handy-size tonnage transporting scrap from the US West Coast to the Republic of Korea was lacklustre. Rates started at $63.65 per ton in January and dropped to below the $50 per ton level from July to end the year at $38.15 per ton.

In January 2006 all these rates declined by less than 10 per cent. Cape-size tonnage carrying iron ore from South America to China fetched $22.00 per day while that transporting coal from South Africa to Europe fetched $11.15 per day. Panamax rates for taking grain across the Atlantic were $19.40 per ton and scrap was taken across the Pacific to the Republic of Korea for $37.30 per ton.

Rates for Cape-size vessels transporting iron ore improved slightly in February and March growing at a rate of about 10 per cent, but went back to January levels in April and May only to recover in June. In this month, Cape-size vessels were earning $24.10 per ton. For example, in early June, COSCOS chartered *Cologny* to carry 150,000 tons of iron ore from Guayacan (Chile) to Xingang (China) at $24.25 per ton. Similar evolution was recorded for other cargoes. For instance, vessels carrying coal from South Africa to China recorded positive growth fetching $13.00 per ton in June. In the third week of June, BHP-Billiton chartered *Swiss Marine Vessel* to carry 150,000 tons of coal from Richards Bay to Rotterdam at $12.85 per ton. Rates for Panamax vessels engaged in grain trade between North America and the rest of the world recorded moderate losses but recovered in June and earned $22.00 per ton — over 13 per cent increase as compared with January. Rates for ships carrying scrap from the United States to the Republic of Korea depressed slightly during the February–May period, but marginally improved in June fetching $38.70 per ton.

C. THE LINER SHIPPING MARKET

1. Development in liner markets

General developments

The impact of containerization in liner trades is larger than that implied by the size and growth of the fully cellular containership fleet analysed in table 7 of chapter 2. Total seaborne container carrying capacity during 2005 rose by 1.0 million TEUs to reach 10.4 million TEUs — an increase of 10.6 per cent. Fully cellular containerships increased their share of this total by almost 2 per cent to 78.5 per cent at the beginning of 2006, totalling 8.1 million TEUs. The share of general cargo ships reached 15.3 per cent. Single-deck vessels accounted for 1.0 million TEUs — 9.5 per cent — while multi-deck ships added 0.6 million TEUs — about 5.8 per cent. During the year single-deck tonnage and multi-deck tonnage stood at the same levels as the previous year. Ro-ro cargo and ro-ro passenger ships accounted for 0.27 million TEUs lower than the level of the previous year, with their share in total container carrying capacity being 2.8 per cent. Bulk carriers maintained their container carrying capacity at 0.20 million TEUs, with their share in the total decreasing to 1.9 per cent. The balance of about 1 per cent was TEU carrying capacity available in reefer, tanker, specialized and passenger vessels.

Moreover, the growth of the fully cellular containership fleet mentioned in chapter 2 continued at an accelerated pace. As indicated in table 33, additions to the fleet during 2005 totalled 955,000 TEUs and there was no reporting

Table 33

Growth of the world cellular container fleet
(In thousands of TEU at the beginning of the year)

Year	Broken up TEUs	Additional TEUs	Fleet TEUs	Orders TEUs
2004	30	622	6 437	1 995
2005	--	778	7 165	1 652
2006	--	955	8 120	4 259

Source: UNCTAD secretariat on the basis of *Containerisation International*, issue February 2004, p. 19; issue February 2005, p. 16; issue January 2006, p. 18; and Clarkson *CIM*, January 2006, p. 15.

of broken-up tonnage, which is understandable in the light of the good freight rates achieved by most categories of containerships. Growth of the cellular fleet reached an all-time high, with 4,259,000 TEUs being on order at the end of the year.

During 2005 the ordering of large vessels continued notably during the first half of the year. At the end of the year 75.4 per cent of the order book comprised 531 cellular containerships over a 3,000 TEU capacity, of which 320 ships exceeded a 5,000 TEU capacity. This tonnage was to be delivered almost evenly over 2006–2008. Ordering of post-Panamax vessels stopped in July when owners shifted their attention to smaller vessels by ordering 55 of them. Ordering of these smaller vessels continued during the next months, but the high level of the order book and increased shipyard prices progressively lowered ordering levels and by November only 14 vessels had been ordered — a three-year low. By the end of the year the third of eight 9,200 TEU capacity containerships ordered by MSC was commissioned and started to operate on the Asia–Europe route. These are the largest containerships afloat and have impressive dimensions (length of 336.7 m, beam of 45.6 m, draft of 27.2 m), a good speed (25 knots) and a capacity (107,849 GT, 109,600 dwt) that includes 700 reefer plugs.

The push for bigger vessels kept alive the question of their deployment. The largest ones would be restricted to the main east–west mainline routes because of the volumes required to fill such vessels and because of port accessibility. Therefore, these very large vessels call exclusively at few and very large trans-shipment hubs and load centres at both ends of the route. The implementation of security initiatives in a number of major ports also works in favour of calls in a reduced number of ports. Post-panamax vessels being displaced from the major routes are now being deployed onto secondary ones where the question of port accessibility is becoming topical in some countries.

Concentration in liner shipping

The concentration process of recent years is resulting in increased carrying capacity being deployed by the biggest liner operators. (These are also the largest owners of cellular containership tonnage and complement their fleets by chartering tonnage from other owners, notably German financial companies.) As table 34 indicates, for the dates in September 2005 and September 2004 the top ten operators of containerships increased their carrying capacity by 12.4 per cent to 4.6 million TEUs — 49.2 per cent of the world's total containership carrying capacity. Similarly, the share of the top 20 liner operators increased by 12.1 per cent to 6.6 million TEUs — 71.0 per cent of the world's total container carrying capacity. A clear reflection of the momentum being gained by industry consolidation is the absence of any single entry in the list of the top 20 operators. Six carriers maintained their position in the list, among them the top two — A.P. Moller Group and MSC — which together account for 18.4 per cent of the world's total containership carrying capacity. The remaining fourteen operators shifted places in the table. The biggest gain was recorded by CSAV (up by 4 places) followed by China Shipping and Hamburg Sud (up by 3 places each), Hapag Lloyd (up by 2 places) and P&O Nedlloyd, COSCO and K Line (up by 1 place). The biggest loser was CP Ships (down by 5 places), followed by Hanjin/DSR-Senator and NYK (down by 2 places) and Evergreen, MOL and Hyundai (down by 1 place each).

Table 34

Leading 20 service operators of containerships at mid-September 2005 on the basis of number of ships and total shipboard capacity

(TEUs)

Ranking	Operator	Country/territory	No. of ships in 2005	TEU capacity in 2005	TEU capacity in 2004
1	A.P. Moller Group	Denmark	399	1 005 554	900 509
2	MSC	Switzerland	264	713 808	618 025
3	P&O Nedlloyd	UK/Netherlands	165	490 435	426 996
4	Evergreen	Taiwan Province of China	150	450 927	437 618
5	CMA-CGM Group	France	192	426 994	373 191
6	NOL/APL	Singapore	106	322 520	295 321
7	China Shipping	China	108	304 788	236 079
8	COSCO	China	116	299 961	253 007
9	Hanjin/DSR-Senator	Republic of Korea/Germany	77	296 938	284 710
10	NYK	Japan	107	287 137	265 192
Subtotal			**1 684**	**4 599 062**	**4 090 648**
11	OOCL	Hong Kong (China)	68	236 018	216 527
12	CSAV	Chile	88	231 419	190 143
13	MOL	Japan	72	226 105	213 195
14	K Line	Japan	74	219 560	195 750
15	Hapag Lloyd	Germany	57	215 694	186 610
16	Zim	Israel	90	210 407	196 420
17	Hamburg-Sud	Germany	86	191 333	131 713
18	Yang Ming	Taiwan Province of China	68	189 939	168 006
19	CP Ships Group	Canada	76	179 209	196 317
20	Hyundai	Republic of Korea	37	142 257	139 243
Total top 20			**2 400**	**6 641 003**	**5 924 572**
World fleet estimated at 1 July 2005 and 2004			**-----**	**9 355 000**	**8 835 000**

Source: UNCTAD secretariat, compiled from *Containerisation International*, November 2005, p. 65; *Containerisation International Yearbook,* p. 8; and *Shipping Statistics and Market Review*, October 2005, p. 23.

Note: All subsidiaries are consolidated.

Concentration gained impetus during 2005. The $2.9 billion takeover of P&O Nedlloyd announced by A.P. Moller was followed by a $2.0 billion bid by Hapag Lloyd to acquire CP Ships and by the $0.6 billion offer of CMA-CGM Group to purchase Bollore's shipping interest comprising Delmas-OTAL-Setramar. As regulators take some time to review and clear these transactions, table 34 does not include the resulting ranking, which will consolidate A. P. Moller in the top position with a 16 per cent of world's total containership carrying capacity. The corresponding estimated shares for Hapag Lloyds and CMA-CGM were 4.2 and 4.9 per cent respectively. Some of the effects of these transactions were the withdrawal of P&O Nedlloyd from more than a dozen conferences and consortia and the reorganization of services for the carriers involved in the transactions, encompassing the reduction of agencies and the shifting of terminals in several regions.

Comparison of 2003 and 2004 financial results for some of the above carriers suggests increased profitability for shipping lines. Return on sales increased from 15.5 to 17.7 per cent for A.P. Moller and from 1.4 to 6.0 per cent for P&O Nedlloyd. The three Japanese carriers' return on sales increased from single to double digits — MOL from 9.2 to 14.6 per cent; NYK from 6.6 to 10.0 per cent; and K Line from 9.7 to 13.6 per cent. Elsewhere a similar picture emerged — Zim reported return-on-sales increases from 4.9 to 7.0 per cent and CSAV from 3.1 to 3.9 per cent.

A number of carriers provide services on several routes forming part of conferences, alliances and/or agreements, which imply some degree of agreement on operational and marketing issues, notably pricing and number of sailings. Traditionally, regulators of many countries have provided anti-trust exemption to carriers participating in these agreements on the understanding that the benefits are larger than the disadvantages. During 2005 the European Commission completed its review of the regulatory system for liner shipping and, in December, published a formal proposal to repeal Regulation 4056/86, which provides block-exemption to sea carriers from some rules of competition law. It also announced a proposal for guidelines to be followed by sea carriers, which might include a price index for major routes and volume data exchange in a new industry forum. Soon after, Japan questioned the wisdom of having different legal requirements at each end of the trading route. In a separate development the Singapore Competition Commission issued a 5-year block exemption order, starting 1 January 2006, from competition law for consortium, conference and discussion agreements.

2. Freight level of containerized services

Chartering of containerships

Global liner shipping market developments are best reflected in movements of the containership charter market. This market is largely dominated by German owners, and more particularly by members of the Hamburg Shipbrokers' Association (VHSS), who control some 75 per cent of all container ship charter tonnage available in the free market. Since 1998, the association[3] has published the "Hamburg Index", provides a market analysis of containership time charter rates with a minimum of three months. The year 1997 was chosen as the reference year because it was the last year when a remunerative rate level could be achieved. Since July 2002, rates have been published for two types of gearless vessels of up to 500 TEU capacity, two types of gearless/geared vessels of over 2,000 TEU capacity and six types of geared vessels of up to 1,999 TEU capacity. The development of time charter rates is reflected in table 35.

The average time charter rates for almost all types of containerships rose in 2005, the exception being geared containerships in the range 1,600–1,999 TEU capacity and geared/gearless containerships in the range 2,300–3,400 TEU capacity, whose rates decreased by 1.6 per cent to $15.81 per 14-ton slot per day and by 0.9 per cent to $13.04 per 14-ton slot per day, respectively. For the other ship categories the higher average rate increases corresponded to smaller vessels. Thus geared and gearless ships in the range 300–500 TEU capacity recorded 31.4 and 30.0 per cent increases to fetch $29.23 and $28.26 per 14-ton slot per day respectively; and geared vessels in the range 200-299 TEU capacity performed similarly well — up by 30.9 per cent to $35.35 per 14-ton slot per day. Gearless vessels of the latter capacity recorded a slightly lower increase in rates — 26.7 per cent to $31.71 per 14-ton slot per day. Geared vessels in the 600–799 TEU capacity range sailing at less than and over 18 knots recorded lower but still significant rate increases — up by 20.5 and 19.5 per cent to fetch $23.70 and $21.96 per 14-ton slot per day respectively. Finally, geared containerships in the 1,000–1,299 TEU capacity range and geared/gearless vessels in the 2,000–2,299 TEU capacity range recorded very similar rate increases of about 18 per cent to reach $22.58 and $16.35 per 14-ton slot per day respectively.

There was a downward evolution of the monthly time charter rates for vessels of almost all types and sizes. Geared vessels in the range 300–500 TEU capacity were the exception as their rates actually went up by 1.1 per cent during the year to reach $26.49 per 14-ton slot per day in December 2005. All other monthly rates peaked during the first half of the year and ended up in December well below the initial rates for the year. The most impressive rate reductions were about a third and affected geared vessels with capacities in the following ranges — 600-799 TEUs, 1,000–1,299 TEUs and 1,600–1,999 TEUs. Larger vessels above the 2,000 TEU capacity fared much better with rate reductions being around 13 per cent to end up the year over $12 per 14-ton slot per day. For most vessel categories December rates were good in comparison with those reached in many months over the last four years. Nevertheless, the extent of the rate fall was significant, as shown by the

Table 35

Containership time charter rates

($ per 14-ton slot per day)

Ship type	Yearly averages							
	1997	1999	2000	2001	2002	2003	2004	2005
Gearless								
200-299	21.8	16.70	15.71	15.74	16.88	19.57	25.02	31.71
300-500	16.8	13.96	14.52	14.72	15.14	17.48	21.73	28.26
Geared/gearless								
2,000-2,299	9.7	6.92	10.65	7.97	4.90	9.75	13.82	16.35
2,300-3,400[a]					5.96	9.29	13.16	13.04
Geared								
200-299	22.0	17.23	17.77	17.87	17.01	18.93	27.00	35.35
300-500	17.2	12.76	14.60	14.90	13.35	15.55	22.24	29.23
600-799[b]					9.26	12.25	19.61	23.70
600-799[c]					9.11	12.07	18.37	21.96
1,000-1,299	12.5	8.24	11.87	8.78	6.93	11.62	19.14	22.58
1,600-1,999	10.5	7.54	10.35	7.97	5.67	10.04	16.08	15.81

Ship type	Monthly averages for 2005												Monthly averages for 2006					
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
Gearless																		
200-299	30.70	33.61	35.27	35.96	33.43	33.75	30.89	29.89	29.76	27.69	29.61	29.98	27.18	26.75	28.33	26.08	28.72	28.60
300-500	28.06	29.62	29.01	30.52	31.85	28.74	26.18	26.79	31.51	26.25	25.97	24.66	22.13	23.94	17.04	17.04	20.17	21.79
Geared/gearless																		
2,000-2,299	14.25	15.94	15.75	17.36	17.36	17.23	17.23	17.23	17.23	17.23	17.23	12.13	9.88	10.92	10.73	10.86	10.55	10.98
2,300-3,400[a]	13.93	13.93	13.64	13.51	13.51	13.51	12.80	12.80	12.80	12.01	12.01	12.01	12.01	9.88	9.88	10.92	10.35	8.87
Geared																		
200-299	35.62	33.42	34.61	35.93	35.93	37.31	36.82	34.91	36.82	33.29	35.13	32.72	19.13	32.37	30.94	28.75	31.10	28.67
300-500	26.19	28.83	30.01	30.78	30.78	33.21	29.32	29.32	29.32	26.81	26.66	26.49	28.12	23.23	20.69	21.47	19.75	23.47
600-799[b]	22.78	25.39	27.34	25.81	25.81	25.43	25.43	25.43	25.43	25.43	15.33	15.33	16.08	17.60	15.85	17.30	18.22	17.00
600-799[c]	23.09	23.70	22.91	22.63	22.63	22.43	23.53	23.53	23.53	20.81	17.86	16.86	16.86	17.05	17.08	15.98	17.80	18.41
1,000-1,299	24.75	24.87	25.31	25.87	25.87	25.85	20.45	22.73	20.45	17.77	14.94	16.31	15.04	15.54	14.42	15.46	15.89	15.91
1,600-1,999	18.89	17.69	17.69	15.83	15.83	16.40	15.64	16.82	15.64	14.86	12.39	13.14	12.32	10.67	10.99	12.25	13.19	13.91

[a] This category was created in 2002. Data for the first half of the year correspond to cellular vessels in the range 2,300–3,900 TEUs sailing at 22 knots minimum.

[b] Sailing at 16–18 knots.

[c] Sailing at over 18 knots.

November fixture for the 1687 TEU *Buxlagoon*, which was chartered for six months at $14 200 per day — this was $7,000 lower than the rate it obtained 18 months ago.

Freight rates in main routes

By the end of 2005 the level of freight rates in only one, the transatlantic, of the three main containerized routes was clearly above the levels that prevailed at the end of 2004 (see table 36). On this route freight rates increased by 20.2 per cent to $1,769 per TEU in the dominant westward direction, while the increase of rates for boxes heading east was 18.6 per cent to $983 per TEU. For the two other routes connecting Asia, notably the Far East, with North America and Europe the freight rates dropped in the dominant legs of Asia–North America by 2.3 per cent to $1,878 per TEU, and Asia–Europe by 7 per cent to $1,769 per TEU. However, there were freight rates increases in the opposite legs of these two routes: the increase was larger, 10.1 per cent to $815 per TEU, for boxes going from North America to Asia than the one for boxes going from Europe to Asia, 7.3 per cent to $825 per TEU.

Table 36

Freight rates (market averages) on the three major liner trade routes 2004–2006
($ per TEU)

	Trans-Pacific		Europe-Asia		Transatlantic	
	Asia–United States	United States–Asia	Europe–Asia	Asia–Europe	United States–Europe	Europe–United States
2004						
First quarter	1 850	802	733	1 686	778	1 437
Change (%)	-2.2	-1.0	-2.8	1.4	-6.7	-2.2
Second quarter	1 863	819	731	1 738	788	1 425
Change (%)	0.7	2.1	-0.3	3.1	1.3	-0.8
Third quarter	1 946	838	735	1 826	810	1 436
Change (%)	4.6	2.3	0.5	5.1	2.8	0.8
Fourth quarter	1 923	806	769	1 838	829	1 471
Change (%)	-1.1	-3.8	4.6	0.6	2.3	2.4
2005						
First quarter	1 867	800	801	1 795	854	1 514
Change (%)	-2.9	-0.7	-4.2	-2.3	3.0	2.9
Second quarter	1 845	781	821	1 794	872	1 611
Change (%)	-1.2	-2.4	2.5	0	2.1	6.4
Third quarter	1 906	815	815	1 778	918	1 691
Change (%)	3.3	4.3	-0.7	-0.9	5.3	5.0
Fourth quarter	1 878	815	825	1 709	983	1 769
Change (%)	-1.5	0	1.2	-3.9	7.0	4.6
2006						
First quarter	1 836	818	793	1 459	985	1 832
Change (%)	-2.2	0.3	-3.9	-14.6	0.2	3.6

Notes: Information from six of the trades' major liner companies. All rates are all-in, including the inland intermodal portion, if relevant. All rates are average rates of all commodities carried by major carriers. Rates to and from the United States refer to the average for all three coasts. Rates to and from Europe refer to the average for Northern and Mediterranean Europe. Rates to and from Asia refer to the whole of South-East Asia, East Asia and Japan/Republic of Korea.

During 2005 there was a steady freight rate increase in both directions of the transatlantic route. In the dominant westward direction only the first quarter recorded a modest 2.9 per cent increase in rates, which was followed by a good 6.4 per cent increase during the second quarter of the year; during the second half of the year rate increases were also good — around 5 per cent in each quarter. In the opposite direction, North America–Europe, the first half of the year witnessed quarterly freight rate increases of 3.0 and 2.1 per cent respectively; the acceleration came during the second half of the year, in which quarterly increases of 5.3 and 7.0 per cent were recorded.

On the trans-Pacific route, where cargo flows are the largest of the three main routes, freight rate evolution during 2005 was disappointing, particularly on the dominant leg Asia–North America. In this direction rates contracted during the first, second and fourth quarters of the year, the exception being the third quarter, when rates increased by 3.3 per cent to $1,906 per TEU. However, this freight rate was slightly lower than the ones recorded during the second half of 2005. Freight rate evolution in the opposite direction, North America to Asia, was marginally better: rates contracted during the first half of the year and then increased by 4.3 per cent to $815 per TEU during the third quarter and stayed there right to the end of the year. Early in the year the Trans-Pacific Stabilization Agreement applied surcharge increases for boxes originating in Asia — for example, the bunker surcharge for 40' boxes went up from $455 to $590, while the inland fuel surcharge applicable to rail, intermodal or truck moves also went up from $158 to $222 per 40' box. During the third quarter the Westbound Trans-Pacific Stabilization Agreement started to impose a diesel levy to cover substantial increases in fuel expenses for export-related truck movements in North America.

The dominant westward leg of the Asia–Europe route freight rate evolution was the most disappointing. Rates collapsed during three quarters while held their ground during the second at $1,794 per TEU. By comparison the evolution in the Europe–Asia leg was bright, with the second and fourth quarters recording freight rate increases of 2.5 and 1.2 per cent to $821 and $825 per TEU respectively. By mid- year the Far East Freight Conference started to apply for the first time a peak season surcharge of $110 per TEU and raised rates proportionally more for low-value commodities such as waste products (i.e. paper, plastics, scrap) as the pressure for prompt reposition containers to the Far East increased.

The issue of terminal handling charges (THC) was raised for the Federation of ASEAN Shippers' Council in September. This body estimated that ASEAN companies spent $1.5 billion per year in this and other surcharges and said it would seek a simple ocean tariff structure that includes THC and other surcharges. Two months later in Indonesia reductions in stevedoring charges, from $93 to $70 per TEU, and THC, from $150 to $95 per TEU, were announced in exchange for eliminating corruption. The measure followed corruption inquiries by the Ministry of Transport in the major ports of the country and negotiations with foreign carriers to reduce THC, and was intended to boost the competitiveness of exporters. It was also welcomed by the Asian Shippers' Council but perplexed industry executives, who questioned the logic of it in a commercial matter between carriers and shippers. In India a draft maritime trade practices code to achieve fairer commercial relations between carriers and shippers was under consideration. In early 2006 the Ministry of Communications of China ruled that the current THC system is uncompetitive, with the China Shippers' Council expressing the understanding that THC are part of the freight rate and cannot be separated.

3. Supply and demand in respect of main liner services

During 2005 the demand for containerized services continued to expand. All the estimates of the cargo flows in the three major containerized routes based on the figures for the first nine months of 2004 indicated in table 37 showed increases. In fact, these aggregates may mask some intraregional trades and trans-shipment activity. Nevertheless, the aggregates point out to the persistent expansion of traffic from the Far East, notably from mainland China, to North America and Europe, as well as mature trade across the Atlantic.

In the trans-Pacific trade, 2005 witnessed a continuation of the booming trade of the previous years, particularly in the eastward direction. The steady flow of industrial and consumer goods from relocated factories in mainland China and other Asian countries, together with the appreciation of the US dollar, resulted in a double-digit increase for trade heading eastward. However, cargo volumes in the opposite direction did not expand at the same rate and container imbalances became more pronounced even though cargo flows in both directions are now evenly distributed along the year. Overall supply matched very closely demand with vessel utilization reported as being above 90 per cent eastbound. This

Table 37

Estimated cargo flows in major trades routes
(Millions of TEU)

Year	Trans-Pacific		Asia-Europe		Transatlantic	
	Asia–USA	USA–Asia	Asia–Europe	Europe–Asia	USA–Europe	Europe–USA
2004	12.4	4.2	8.9	5.2	1.7	3.2
2005	13.9	4.3	9.9	5.6	1.8	3.3
% change	12.1	2.4	11.2	7.7	5.9	3.1

Source: Compiled by UNCTAD secretariat from *Containerisation International,* October 2005, p. 5.

increase in supply was achieved through the replacement of smaller vessels by larger ones — in one service of the New World Alliance 5,000 TEU containerships replaced all 3,000 TEU ones and China Shipping did the same by using 4,000 TEU instead of 2,500 TEU containerships in another service. Fears of the repetition of congestion in ports in California resulted in additional calls in northern ports along the coast, and this boosted vessel demand. Also, about a fifth of the capacity was deployed in the extended all-water route through the Panama Canal to reach destinations along the East Coast of North America, where many of the distribution centres of major US retailers are located. The same destinations along the East Coast were reached by relaying across the Atlantic Asian cargoes carried by the Far East — Europe services using the Suez Canal.

The transatlantic route recorded single-digit trade increases. Trade flows in the dominant leg to the East Coast of North America increased less than those in the opposite direction so that the need for repositioning empties diminished, although it was still significant. Overall, a better match of supply with demand was achieved over the year with the 10 per cent capacity reduction resulting from redeployment of some of the vessels to the routes to the Far East. Ship utilization of about 95 per cent westbound and 80 per cent eastbound was estimated for the year. Some shippers indicated difficulties in securing slots for westbound cargoes, but additional capacity started to be deployed late in the year as new vessels entered trade in the Far East routes and ships were brought back to the transatlantic one.

On the Europe–Asia route trade flows increased faster and at double-digit rates in the westbound direction. Increased demand on this route was more pronounced during the second half of 2005 and contributed to the acute box imbalance generated by lighter cargoes heading west and heavy ones moving east. About 60 per cent of the westbound cargo of the Far Eastern Freight Conference (FEFC) originated in China and sea-carriers' service loops increased coverage of the country by adding ports of call. By the end of the year there were about 34 service loops serviced by 275 vessels, of which 212 were post-Panamax vessels, including 35 with over 8,000 TEU capacity. The first of the largest containerships afloat, the MSC *Pamela* of 9,200 TEUs, was deployed in mid-2005 on this route while other lesser carriers, such as PIL and Wan Hai, were using 3,000 TEU capacity vessels. As table 38 indicates, FEFC's share of deployed capacity dropped to 61.9 per cent, which means that the share of non-conference carriers such as Hanjin, China Shipping, Evergreen, Cosco and others expanded. Hanjin-led services have a capacity similar to that of CMA-CGM/Norasia and others while China Shipping-led services deploy a capacity larger than that of K Line and Yang Ming.

In the secondary North–South and regional routes increased trade flows were also good and boosted previously incipient flows on lesser routes. Container traffic flowing between North-East and South-East Asia was up by 10.1 per cent southbound but only 4.3 per cent northbound — the dominant leg. The extensive trans-shipment activity in South-East Asia continued albeit with limited increases in ship capacity because the high levels reached by chartered tonnage precluded feeder carriers expanding their services substantially. The traffic from Asia to Australia–New Zealand also increased by double digits but was absorbed by existing services, notably those of three major consortia using 2,000 TEU containerships. Some relayed cargo moving from Europe to Australia–New Zealand used this route via trans-shipment in South-East Asia. The northbound

Table 38

Percentage capacity share for the Europe–Far East trade

Operator	Mid-2005	Mid-2004
Grand Alliance	22.2	23.6
Maersk Sealand	12.5	14.5
New World Alliance	10.7	11.9
CMA CGM / Norasia and others	9.7	5.6
K Line and Yang Ming	6.8	7.5
TOTAL	61.9	63.1

Source: UNCTAD secretariat from *Lloyd's Shipping Economist*, September 2005, p. 9.

return of empties, however, became a concern with some carriers arranging ad hoc sailings for empties and other carriers resorting to the deck loading of them on bulk carriers.

The traffic from Asia to South Africa performed even better, up by 21 per cent in 2005 after growing by 30 per cent in the previous year when about 325,000 TEUs moved south. About two thirds of this trade originated in China, which shipped consumer goods in standard high-cube 40' boxes; northbound cargo was heavier, pulp and chemicals, and moved in 20' boxes, and this resulted in considerable repositioning of empty containers. Congestion in Durban, the destination for most of imports, increased ship demand and during the year an estimated 65,000 TEU capacity was added by sea carriers — MSC launched a new service using six 2,500 TEU ships. Moreover, ship capacity deployed on this route was complemented by that assigned to the routes Asia–East Coast of South America and Asia–West Coast of Africa, to which independent pendulum services operated. In particular, the former route was significant as exports from Brazil to Asia were estimated at 400,000 TEUs in 2005.

Container traffic between Europe and the Caribbean and South America expanded during 2005 to reach 2.8 million TEUs. The dominant northbound leg increased at a lower rate, 4.1 per cent, than that having its origin in Europe, which increased by 6.7 per cent to reach 0.8 million TEUs. Shipping services such as Eurosal and Carol reorganized their schedules to reach destinations along the West Coast of South America with 2,500 TEU capacity ships, and this resulted in additional capacity available for Caribbean destinations too. Also, lesser carriers using 1,000 TEU ships upgraded their specialized services linking different destinations in Europe with the Caribbean islands and eased the imports of relayed Asian goods across the Atlantic into the latter.

4. Liner freight index

Table 39 indicates the developments of liner freight rates on cargoes loaded or discharged by liners at ports in the Antwerp/Hamburg range for the period 2003–2005. The average overall index for 2005 went up by 6 points from the 2004 level to reach 104 points (1995 base year 100), reflecting the improved rates in both the homebound and outbound trade. The average homebound index increased by 3 points to 97 over the year. The monthly figures indicate steady rate improvements during the second half of the year and reflect increased volumes from the Far East and, to a much lesser extent, across the Atlantic. In the outbound trade, the average level in 2005 increased by 8 points to reach 110 points. Again the second half of the year was better than the first one, with the last quarter being particularly good. These rates reflected some alleviation of the heavy trade imbalance in the Europe–Far East route.

5. Liner freight rates as percentage prices for selected commodities

Table 40 provides data on freight rates of liner services as a percentage of market prices for selected commodities and trade routes in certain years between

Table 39

Liner freight indices, 2003–2005
(Monthly figures: 1995 = 100)

Month	Overall index			Homebound index			Outbound index		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
January	96	93	96	91	88	89	101	98	101
February	96	93	95	91	88	88	100	98	102
March	101	96	95	94	92	88	107	101	102
April	107	100	98	100	96	91	114	104	105
May	99	99	103	92	96	97	105	103	108
June	101	99	108	90	95	101	111	103	114
July	103	100	108	97	97	102	107	103	115
August	104	100	106	99	97	100	109	102	111
September	104	100	106	99	98	100	108	102	112
October	102	100	109	96	96	102	107	104	116
November	100	96	111	96	90	104	105	101	118
December	96	94	110	92	89	103	100	100	117
Annual average	101	98	104	95	94	97	106	102	110

Source: UNCTAD secretariat on the basis of the Liner Index of Germany's Federal Statistical Office. Monthly weighted assessments of freight rates on cargoes loaded or discharged by liners of all flags at ports of the German coastal range.

Table 40

Ratio of liner freight rates to prices of selected commodities

Commodity	Route	Freight rate as percentage of price [a]					
		1970	1980	1990	2003	2004	2005
Rubber	Singapore/Malaysia–Europe	10.5	8.9	15.5	8.3	7.5	8.0
Jute	Bangladesh–Europe	12.1	19.8	21.2	29.0	27.6	30.5
Cocoa beans	Ghana–Europe	2.4	2.7	6.7	3.3	3.7	4.0
Coconut oil	Sri Lanka–Europe	8.9	12.6	n.a.	11.5	10.1	12.7
Tea	Sri Lanka–Europe	9.5	9.9	10.0	7.8	8.6	9.2
Coffee	Brazil–Europe	5.2	6.0	10.0	6.8	6.5	5.7
Coffee	Colombia (Atlantic)–Europe	4.2	3.3	6.8	3.9	2.3	3.1
Coffee	Colombia (Pacific)–Europe	4.5	4.4	7.4	4.8	2.6	4.1

Sources: UNCTAD secretariat on the basis of data supplied by the Royal Netherlands Shipowners' Association (data for 1970–1989) and conferences engaged in the respective trades (data for 1990–2005).

[a] C.i.f (cost, insurance and freight) prices are quoted for coffee (Brazil–Europe and Colombia–Europe) and coconut oil. For cocoa beans (Ghana–Europe) the average daily prices in London are quoted. For tea, the Kenya auction prices are quoted. Prices of the remaining commodities are quoted f.o.b. The freight rates include, where applicable, bunker surcharges and currency adjustment factors, and a tank cleaning surcharge (for coconut oil only). Conversion of rates to other currencies is based on parities given in the Commodity Price Bulletin, published by UNCTAD. Annual freight rates were calculated by taking a weighted average of various freight quotes during the year, weighted by their period of duration. For the period 1990–2005, the prices of the commodities were taken from UNCTAD's Commodity Price Bulletin (see UNCTAD website).

1970 and 2005. For rubber sheet, the increases in freight rates and BAF surcharges were higher than the average f.o.b price increases and resulted in an increased freight ratio of 8.0 per cent for 2005. The f.o.b price for jute increased by about 3.5 per cent while freight rates moved up by 14 per cent; this explains the increase in freight ratio to 30.5 per cent for 2005. There was a minimum price reduction of 1 per cent for cocoa beans shipped from Ghana but an 8 per cent increase in freight rates ,so that the freight ratio increased from 3.7 in 2004 to 4.0 in 2005. The c.i.f. price of coconut oil recorded a drop of 7 per cent in 2005 after the impressive increase of about 41 per cent in the previous year, which coupled with the 17 per cent increase in freight rates during 2005 resulted in a freight ratio of 12.7 per cent similar to that of 1980. The ratio of liner freight rate to f.o.b. price for tea increased from 8.6 to 9.2 per cent, owung to an almost 17 per cent increase in freight rates and a 9 per cent increase in prices during 2005. The price for coffee from Brazil to Europe rose by a remarkable 49 per cent in 2005 while freight rates did so at the slower rate of 4 per cent; this resulted in a decrease of the freight factor from 6.5 per cent in 2004 to 5.7 per cent in 2005. The price of Colombian coffee exported to Europe from Atlantic and Pacific ports improved substantially by about 39 per cent during 2005, while freight rates were doubled in these two routes respectively. As a result of these changes, the freight ratios increased to 3.1 and 4.1 per cent respectively.

D. ESTIMATES OF TOTAL FREIGHT COSTS IN WORLD TRADE

1. Trends in global import value and freight costs

International trade involves various services such as sourcing, production, marketing, transaction and transport and the related flow of information thereon. In the transport sector, table 41 provides estimates of total freight payments for imports and the percentage of total import value by country groups. In 2004, the world total value of import (c.i.f) increased by 20.3 per cent, while total freight paid for transport services increased by 16.7 per cent, reflecting the upward trend of freight rates that prevailed during that year. The share of global freight payments in import value stood at 3.6 per cent as in 2003. In 2000, the share of freight costs in import value stood at 3.6 per cent, slightly lower than the 3.7 per cent recorded in 1990. The regional comparison indicates that freight costs incurred in the imports of developed market-economy countries continue to be lower than those incurred in the imports of developing countries, with the difference between the two groups fluctuating slightly. For 2004, the total value of imports by developed market-economy countries increased by 17.0 per cent while total freight costs increased by 22.8 per cent; thus freight cost as a percentage of import value increased to 3.0 per cent (2.9 per cent in 2003) as compared with 5.9 per cent (6.1 per cent in 2003) for developing countries. This difference is mainly attributable to global trade structures, regional infrastructure facilities, logistics systems, and the more influential distribution strategies of shippers of developed market-economy countries.

2. Regional trends

Total freight costs of developing countries increased by only 1.2 per cent in 2004. Within this group, African developing countries recorded a marginal decrease in freight costs from 10.0 per cent in 2003 to 9.9 per cent in 2004. This is a reflection of sustained improvements in terminal handling that offset insufficient infrastructure facilities and inadequate management practices, specifically for transit transport, and low productivity of inland transport.

Developing countries in Asia accounted for 67.5 per cent of import value and 61.5 per cent of freight payments of all developing countries in 2004 as compared with 66.4 and 65.4 per cent respectively for 2003. The freight factor of this region has fluctuated at around 6.5 per cent since 1990.

Developing countries in America had their freight cost ratio increased to 4.3 per cent in 2004 as against 4.1 per cent in 2003. Similarly, developing countries in Europe for 2004 had a modest increase in freight ratio to 2.8 per cent, up from 2.6 per cent in 2003.

Small island developing countries in Oceania continued to record the highest freight ratios of all countries: 15.4 per cent in 2004 against 15.6 per cent in 2003. The long distance from major trading partners, low cargo volumes, high trans-shipment and feeder costs also contribute to the high levels of freight costs for these island developing countries.

Table 41

Estimates of total freight costs for imports in world trade,[a] by country groups
(Billions of dollars)

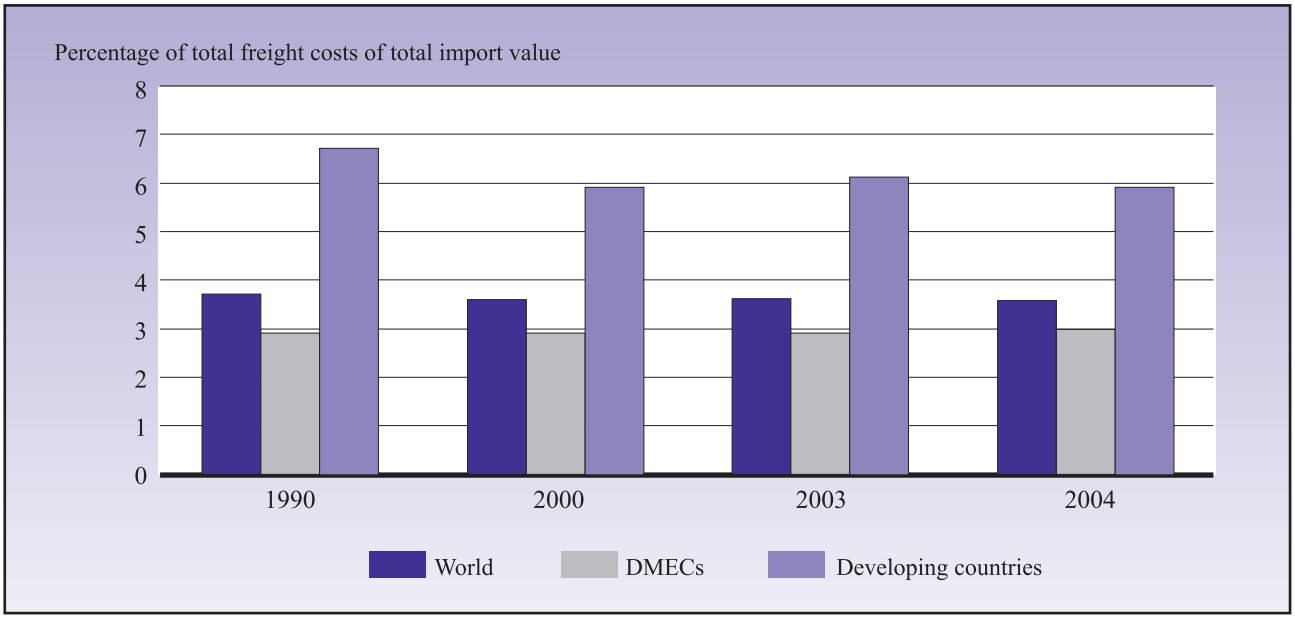
Year	Country group	Estimate of total freight costs imports	Value of imports (c.i.f)	Freight costs as a percentage of import value
1990	World total	108.4	3 610.7	3.7
	Developed market-economy countries	65.2	2 622.7	2.9
	Developing countries-total	38.1	683.4	6.7
	of which in:			
	Africa	7.6	85.2	9.4
	America	6.1	132.5	5.1
	Asia	22.7	434.7	6.9
	Europe	1 4	26.0	6.9
	Oceania	0.3	5.0	12.3
2000	World total	203.8	6 633.0	3.6
	Developed market-economy countries	119.9	4 483.9	2.9
	Developing countries-total	68.6	1 457.0	5.9
	of which in:			
	Africa	8.2	100.4	9.8
	America	16.1	389.2	4.2
	Asia	43.6	941.8	6.5
	Europe	0.5	20.2	2.8
	Oceania	0.2	5.4	15.8
2003	World total	232.0	7 684.8	3.6
	Developed market-economy countries	128.4	5 067.1	2.9
	Developing countries-total	74.9	1 586.5	6.1
	of which in:			
	Africa	10.1	128.3	10.0
	America	14.8	365.8	4.1
	Asia	49.0	1 053.3	6.7
	Europe	0 8	32.3	2.6
	Oceania	0.2	6 .8	15.6
2004	World total	270.8	9 244.7	3.6
	Developed market-economy countries	157.7	5 928.4	3.0
	Developing countries-total	75.8	1 945.2	5.9
	of which in:			
	Africa	9.9	151.5	9.9
	America	18.1	432.4	4.3
	Asia	46.6	1 314.1	6.5
	Europe	1.0	39.5	2.8
	Oceania	0.2	7.5	15.4

Source: UNCTAD secretariat estimates based on merchandise imports data from the *UNCTAD Handbook of Statistics 2005* (table 1.1) and on freight and insurance data from the IMF *Balance of Payments Statistics on CD-ROM* (January 2006).

[a] Data in this table are not comparable with those published in previous issues of this publication owing to changes in sources and methodology. World totals include all countries, but regional aggregates for imports and their freight costs during recent years might be distorted because of slow reporting by some countries. Estimates of freight costs derived from balance-of-payments data are generally considered somewhat lower than actual freight costs. Estimates of freight costs as a percentage of import value are weighted averages.

Figure 8

Estimates of total freight costs for imports in world trade, by country groups



Source: Table 41.

Chapter 5

PORT DEVELOPMENT

This chapter covers container port throughput for developing countries, improving port performance, institutional changes in ports, and security and safety issues.

A. CONTAINER PORT TRAFFIC

Table 42 gives the latest available figures on reported world container port traffic in developing countries and territories for the period from 2002 to 2004. The world growth rate for container port throughput (number of movements measured in TEUs) increased by an impressive 12.6 per cent in 2004. This is an increase of about half over the growth of the previous year, which reached 8.2 per cent, and reflects the continuing expansion of liner traffic during 2004. The throughput for 2004 reached 336.9 million TEUs, an annual increase of 37.6 million TEUs, from the level reached in 2003 of 299.3 million TEUs.

The rate of growth for developing countries and territories was 12.8 per cent with a throughput of 137.0 million TEUs, which corresponds to 40.7 per cent of world total throughput. The rate of growth was lower than that reached in 2003 — a remarkable 15.5 per cent — when developing countries' throughput was 121.5 million TEUs. There were 20 countries with double-digit growth in 2004 and 2003 out of a total of 56 with annual throughputs over 100,000 TEUs. Those countries were Malaysia, the United Arab Emirates, Brazil, Thailand, Saudi Arabia, Oman, Panama, Sri Lanka, Argentina, the Islamic Republic of Iran, the Bahamas, Pakistan, Guatemala, Honduras, Uruguay, Kenya, the United Republic of Tanzania, Sudan, Qatar and Togo. The growth rate in developing countries is uneven from year to year, owing sometimes to strong trade fluctuations, as is the case with trans-shipment, and sometimes owing to improved reporting of data or lack of data for some years.

Preliminary figures for 2005 are available for the leading 20 ports of the world handling containers, and the results are set out in table 43. Container throughput in those ports reached 186.1 million TEUs after recording double-digit growth rate in the previous two years. There were 14 ports of developing countries and territories and socialist countries of Asia on the list, with the remaining six located in market-economy countries. Of the latter, 3 were in Europe and 3 in the United States. Fourteen ports were located in Asia, 8 in China, 4 in South-East Asia and 1 in East and West Asia, respectively. Chinese ports accounted for 47 per cent of 2005 world throughput.

Singapore regained the top position after six years with a good 8.2 per cent growth rate, while Hong Kong (China) was displaced into second position on account of its modest 2.3 per cent growth rate increase. Mainland Chinese ports continued to record particularly good results: Shanghai and Shenzhen recorded outstanding

Table 42

Container port traffic of 56 developing countries and territories in 2004, 2003 and 2002
(TEUs)

Country or territory	2004	2003	2002	Percentage change 2004–2003	Percentage change 2003–2002
Hong Kong (China)	21 984 000	20 449 000	19 144 000	7.5	6.8
Singapore	21 311 000	18 441 000	16 986 010	15.6	8.6
Republic of Korea	14 299 364	13 049 534	11 719 502	9.6	11.3
Malaysia	11 264 389	10 210 145	8 751 567	10.3	16.7
United Arab Emirates	8 661 636	6 955 202	5 872 244	24.5	18.4
Indonesia	5 566 596	5 176 982	4 539 884	7.5	14.0
Brazil	5 058 622	4 230 474	3 570 255	19.6	18.5
Thailand	4 855 827	4 232 685	3 799 093	14.7	11.4
India	4 266 910	3 916 814	3 208 384	8.9	22.1
Philippines	3 673 301	3 468 471	3 324 796	5.9	4.3
Saudi Arabia	3 185 699	2 440 327	1 958 566	30.5	24.6
Oman	2 515 546	2 264 826	1 415 498	11.1	60.0
Panama	2 428 762	1 991 659	1 344 785	21.9	48.1
Sri Lanka	2 220 573	1 959 354	1 764 717	13.3	11.0
Mexico	1 905 944	1 693 791	1 564 541	12.5	8.3
Malta	1 515 423	1 347 539	1 288 775	12.5	4.6
Chile	1 473 542	1 250 126	1 167 876	17.9	7.0
Egypt	1 422 236	1 579 530	1 336 044	-10.0	18.2
Jamaica	1 360 623	1 137 798	1 065 000	19.6	6.8
Argentina	1 251 895	1 025 055	554 796	22.1	84.8
Iran (Islamic Republic of)	1 220 700	1 090 212	805 864	12.0	35.3
Bahamas	1 184 800	1 057 879	860 000	12.0	23.0
Pakistan	1 101 535	787 559	227 000	39.9	246.9
Colombia	1 073 081	995 203	960 723	7.8	3.6
Venezuela	920 884	582 769	780 657	58.0	-25.3
Guatemala	817 260	713 181	360 161	14.6	98.0
Costa Rica	734 088	669 259	602 568	9.7	11.1
Peru	695 577	627 011	631 757	10.9	-0.8
Côte d'Ivoire	670 000	612 546	579 055	9.4	5.8
Ecuador	564 093	521 550	500 471	8.2	4.2
Morocco	560 682	517 549	n.a.	8.3	n.a.
Honduras	555 489	470 567	413 843	18.0	13.7
Dominican Republic	537 317	480 650	541 932	11.8	-11.3
Nigeria	512 610	588 478	n.a.	-12.9	n.a.
Uruguay	423 343	333 871	292 962	26.8	14.0
Kenya	404 352	330 748	278 059	22.3	18.9
Lebanon	389 876	305 933	298 876	27.4	2.4
Ghana	383 020	391 113	n.a.	-2.1	n.a.
Jordan	358 723	302 927	277 307	18.4	9.2
Senegal	331 191	281 330	n.a.	17.7	n.a.

Table 42 (continued)

Country or territory	2004	2003	2002	Percentage change 2004–2003	Percentage change 2003–2002
Yemen	318 901	155 717	388 436	104.8	-59.9
Cyprus	298 109	255 021	233 400	16.9	9.3
Mauritius	290 118	381 474	198 177	-23.9	92.5
United Republic of Tanzania	260 000	204 000	178 154	27.5	14.5
Cuba	259 328	216 587	214 760	19.7	0.9
Angola	235 411	210 031	n.a.	12.1	n.a.
Sudan	205 511	156 607	129 093	31.2	21.3
Bahrain	193 112	175 870	155 037	9.8	13.4
Reunion	193 008	170 092	162 636	13.5	4.6
Qatar	190 286	164 137	118 183	15.9	38.9
Togo	184 998	166 441	84 783	11.1	96.3
Djibouti	159 359	244 287	178 405	-34.8	36.9
Slovenia	153 347	126 237	114 863	21.5	9.9
Guam	140 803	148 158	140 990	-5.0	5.1
Guadeloupe	116 042	110 073	118 013	5.4	-6.7
Madagascar	105 100	94 867	n.a.	10.8	n.a.
Total	136 963 942	121 460 246	105 202 498	12.8	15.5
Other reported [a]	698 709	2 591 745	1 861 831	-73.0	39.2
Total reported [b]	137 662 651	124 051 991	107 064 329	11.0	15.9
World total	336 858 116	299 280 432	276 552 859	12.6	8.2

Source: Derived from information contained in *Containerisation International Yearbook 2006* and from information obtained by the UNCTAD secretariat directly from terminal operators and port authorities.

[a] Comprises developing countries and territories where less than 95,000 TEUs per year were reported or where a substantial lack of data was noted.

[b] Certain ports did not respond to the background survey. While they were not among the largest ports, total omissions can be estimated at 5 to 10 per cent.

increases of 23.8 and 18.7 per cent respectively. The three following ports managed to keep their positions in the list after posting mixed results for traffic growth: Busan, which recorded a modest increase; Kaoshiung, which recorded a drop; and Rotterdam, which recorded a double-digit increase. Hamburg and Dubai overtook Los Angeles, which moved from 8th to 10th position on account of its meagre 2.2 per cent traffic growth compared with the double-digit traffic growth recorded by the other two ports. Of the 10 remaining ports, Ningbo and Tianjin recorded advances of two places each, while Long Beach and Qingdao moved upwards by one place each. Other ports went down on the list — Tanjung Pelepas (down by three places), New York (by two places) and Antwerp, Port Klang and Laem Chabang (by one place each). The new entry, Guangzhou, moved straight up to 18th place.

These top 20 ports accounted for 49.4 per cent of world container port traffic for 2004 (48.1 per cent in 2003).

B. IMPROVING PORT PERFORMANCE

For 2005, major world ports reported record traffic throughputs. Shanghai reported 443 million tons of cargo, overtaking Singapore, which reached 423 million tons. The latter, however, retained the top position for shipping tonnage with 1.15 billion GT after an annual increase of

Table 43

Top 20 container terminals and their throughput, 2005–2003
(Millions of TEUs and percentage change)

Port	Millions of TEUs			Percentage change	
	2005	2004	2003	2005/2004	2004/2003
Singapore	23.19	21.33	18.41	8.72	15.86
Hong Kong (China)	22.43	21.93	20.82	2.28	5.33
Shanghai	18.04	14.57	11.37	23.82	28.14
Shenzhen	16.20	13.65	10.70	18.68	27.57
Busan	11.84	11.43	10.37	3.59	10.22
Kaoshiung	9.47	9.71	8.81	-2.47	10.22
Rotterdam	9.30	8.30	7.10	12.05	16.90
Hamburg	8.05	7.03	6.14	14.51	14.50
Dubai	7.62	6.43	5.15	18.51	24.85
Los Angeles	7.48	7.32	6.61	2.19	10.74
Long Beach	6.71	5.78	4.66	16.09	24.03
Antwerp	6.48	6.06	5.44	6.93	11.40
Quingdao	6.31	5.14	4.24	22.76	21.23
Port Klang	5.54	5.24	4.80	5.73	9.17
Ningbo	5.19	4.00	2.77	29.75	44.40
Tianjin	4.81	3.81	3.01	26.25	26.58
New York	4.80	4.45	4.04	7.87	10.15
Guangzhou	4.68	3.31	2.76	41.39	19.93
Tanjung Pelepas	4.17	4.02	3.50	3.73	14.86
Laem Chabang	3.81	3.62	3.18	5.25	13.84
Total top 20	186.12	167.13	143.88	11.36	16.16

Source: Containerisation International, March 2006, p. 67.

10.5 per cent. In Europe, Rotterdam posted a 5 per cent increase in cargo traffic to 369 million tons and the 46 Spanish public ports reported a record 440.8 million tons. Also during the year, productivity records were reported in Busan (Republic of Korea) at one HPH-managed container terminal. In June, 182 boxes per hour were handled on a vessel using four cranes and twin-lifting devices, and a new record was reported in October when 260 boxes per hour handled on the *KMTC Shanghai*.

The drive for better productivity was responsible for the use of automated straddle carriers at the Fisherman Island container terminal in Brisbane (Australia). The terminal operator, Patrick, and the equipment manufacturer, Kalmar, had been testing the system since 2000, and it was finally commissioned in December 2005. The 25-hectare terminal, encompassing three berths, operates permanently with 14 unmanned straddle carriers in all weather conditions. Striving for better productivity involved changing commercial practices and regulations in the Russian Federation. Domestic rail tariffs applicable to cargoes moving to seaports on the Baltic were increased in line with those tariffs applicable to cargo going across borders to ports of the Baltic States. It was also decided to eliminate some taxes affecting cargo-handling services provided in Russian ports as well as to make allowances for leasing out terminals on long-term basis. Dealing with vested interests and reorganizing the port system of the country were deemed necessary by Indonesian authorities in search of improved port performance. After it had been calculated that illegal fees doubled the exporting costs per container in the main port of the country, Tanjung Priok, it was decided that

publishing the names of those to blame was the first step to be taken, with remedial measures to follow. Also, 25 hub ports were designated to cater for international trade under the management of commercial companies (i.e. Pelindo) with a large number of national and regional ports, under the jurisdiction of local authorities, focusing on domestic traffic.

During 2005 measures were taken in several ports that by and large successfully precluded a repetition of the congestion they had experienced during the previous year. Employers at the ports of Los Angeles and Long Beach agreed, in consultation with the International Longshore and Warehouse Union (ILWU), to hire up to 5,000 casual workers to work in terminals of those ports. Also, the availability of an 18,000-strong roster of persons interested in doing dock work instilled confidence that terminals would be able to serve shipping adequately. Operational measures implemented in those ports during the second half of the year were the reduction of free transit storage time for import containers from five to four days and for export containers from seven to six days, as well as the setting up of the PierPass system whereby about 40 per cent of port-related road traffic would be conducted during the night and at weekends.

The measures included land transport too. One large tracking company with operations in several ports of the US West Coast addressed the scarcity of truck drivers due to the prevalence of low wages by offering health benefits and hiring unionized drivers — the first time in 24 years that the Teamsters union had reached a collective bargaining agreement. Moreover, the two major railroads, Union Pacific and Burlington Northern Santa Fe, deployed additional rolling stock and personnel to serve the main ports of the West Coast.

On the US East Coast, a complementary measure to increase space availability in terminal yards in Hampton Roads was adopted; this reduced the considerable terminal space taken up by chassis belonging to individual sea-carriers by forcing them to set up a chassis pool. The sharing of chassis by sea-carriers reduced inventories and contributed to reducing truck turnaround and maintenance, and also resulted in greater utilization of equipment.

In Southampton (United Kingdom) a mandatory vehicle booking scheme reduced vehicle dwell-time at the terminal to less than 30 minutes. The scheme comprises a $2 booking fee, waived in the case of transports made during off-peak hours, and a $47 penalty for lorry late-arrival. Extending the surface and providing additional equipment improved the terminal layout in this port. In another UK port, Felixstowe, about 400 additional workers were added soon after the commissioning of new facilities. An industry-wide effort was made in the United Kingdom to produce a Best Practice Guide describing how each party involved in the movements of goods from ships to destination could adopt operational measures that counter congestion. The Guide, however, clearly recognized that those measures were not intended to replace the additional port capacity required by the country in the medium term.

Port users were willing to try alternatives to avoid congestion. In the United States, MOL was doubling terminal capacity in Oakland, on the West Coast, as well as building a terminal in Jacksonville, on the East Coast, for developing “all-water” services to Asia. Savannah, located further north along the East Coast, reported steady traffic increases during the year as a result of Asian imports flowing into the distribution centres of major US retailers, which are located around the port. Across the Atlantic Ocean, the innovative but largely unused Ceres-Paragon terminal, in Amsterdam, finally secured two service strings of the Grand Alliance, with NYK ships calling twice a week.

Strikes impaired the ability of some ports to improve their performance. During the first half of the year night and weekend work was disrupted in Le Havre by staff concerned over their collective agreement. In late September a 12-day strike affected Marseille, causing the cancellation of 155 ship calls with 1,750 workers laid off. The estimated losses for 1,200 companies amounted to at $150 million. The status of the crane drivers, currently port authority staff, which is being called into question by those container terminal operators building new terminals in those two ports, figured prominently in the background to this industrial action. Also in September, concerns about privatization plans resulted in a one-day strike at Peruvian ports. In November, terminals in Sydney and Melbourne closed for a shift amid protests by workers against proposed industrial relations legislation. In the Republic of Korea, ports closed for half a day over the proposed government plan to end the monopoly of dock work held by the union.

Industrial action by others also affected performance in several ports during 2005. In May, truck drivers in Mombasa (Kenya) blockaded the port gates to oppose a regulation instructing them to book their loading days in advance so that no more than 210 trucks were serviced

per day. In June, about 1,500 workers employed by road transporters in charge of moving containers between the yard and the container freight station in Mumbai (India) stopped work. They were seeking to protect their jobs by modifying tender conditions issued by the port authority for leasing out that operation to a single company. The following month, a 6-week strike by about 1,000 independent truck owners and 46 trucking companies paralysed the port of Vancouver (Canada). Protesters were seeking higher revenues to offset increased fuel bills. In August, Customs officers in Santos (Brazil) reduced their work-time by half over a four-week period to oppose their proposed merger with other federal officers.

The operational performance of some ports was badly hit by natural disasters. The 2005 hurricane season in the Caribbean was exceptionally destructive, with hurricanes Katrina and Rita battering cities and ports in the Gulf of Mexico. Damage sustained by the port of New Orleans as a result of Katrina was severe, and surveys carried out soon after the disaster indicated that to recover 75 per cent of the port capacity would take three to four months. Immediate rehabilitation measures focused on supplying generators and lodging workers and their families on vessels. Next came the issuance of cleaning and rehabilitation contracts. Several shipper logistics chains were totally disrupted by the devastation wrought by Katrina to several ports — 20 per cent of the reefer containers for carrying bananas were stuck in badly hit Gulfport. Reconstruction costs were estimated at $1,700 million by the US Maritime Administration. Traffic was diverted to other ports and preparedness was heightened in Houston and other Texan ports when hurricane Rita approached a few weeks later. It hit Beaumont, Port Arthur and Lake Charles and caused severe outages in Houston. The damage sustained by transport infrastructure was dwarfed by that estimated for the offshore oil industry — $5 billion was estimated for Katrina and $3 billion for Rita. Some weeks later hurricane Beta battered port facilities along the Caribbean coast of Nicaragua. The TT Club suggested insurance premium increases of around 25 per cent and increased reliance on reserves for hurricane-prone facilities. Elsewhere, poor visibility caused by extensive forest fires in Indonesia led to temporary suspension of activities in Port Klang (Malaysia) and heavy rain caused the collapse of a berth loaded with salt in Cochin (India).

During the year decisions were taken to continue to increase capacity in the Le Havre–Hamburg port range. In March, the Dutch authorities finally approved the deepening of the Scheldt. This will allow dredging to proceed from 2007 so that 13.1 metres draft, independent of the tides, will be available for shipping heading to Antwerp. Another investment to improve the connectivity of this port to the Ruhr area — the Iron Rhine (a railway line crossing Dutch territory) — is still under consideration. The importance of railways for having access to the hinterland was underlined by Bremen's alarm at the negotiations for DB (the German national railway company) to have a stake in HHLA, the operator of the port of Hamburg. In that port the global operator Eurogate received approval for developing a 1.4 million TEU/year terminal from 2006. In July, a new 1.4 million TEU/year terminal at Deuganckdock in Antwerp (left bank of Scheldt) was commissioned. This terminal operated by Antwerp Gateway, with P&O Nedlloyds as the leading shareholder, would have a final capacity of 3.5 million TEU/year when completed at a cost of more than $600 million. Another section of the same dock operated by PSA was commissioned at the end of the year. Eventually, Deuganckdock will double Antwerp's container handling capacity from 6 to 13 million TEU/year.

Over the year Rotterdam proceeded with plans for developing Maasvlakte 2, which will add 1,000 hectares for containers, chemical industry and distribution activities and add 12 kilometres of berths to the existing port. The investment of about $2.0 billion is already behind schedule and is expected to take over when current investments in Euromax made by ECT and P&O Nedlloyds, adding 1.5 million TEU/year in the existing port, become saturated around the end of the decade.

Development of new port capacity proceeded unabated in the Far East. In China, the new seaport of Yangshan opened for business in November to serve Shanghai and the Yangtze River Delta region. The port has four berths with a capacity of 2.2 million TEU and is sited on a couple of islands located in the Hangzhou Bay. The seaport is linked to the mainland by a 32-km six-lane causeway and its investors are Shanghai International Port Group (SIPG) and Shanghai Port Container, with the latter being the operator too. Sixteen container-shipping services to Europe operated by Maersk Sealand, OOCL, APL, Hapag Lloyd and CMA CGM were moved from Waigaoqiao river terminals, close to Shanghai, to the new port. Development of river terminals, such as Jiangying in Jiuansu Province, could reduce export costs by $124 per TEU, and these terminals are seen as a complement to the new seaport. The second phase of development, with a similar size and capacity, is estimated to cost $800 million and be completed by 2007,

with some global operators being invited to participate as investors, namely HPH, APM Terminals and Cosco Pacific. When completed in 2020 this port is expected to have a capacity of 20 million TEUs and to offer full protection from heavy weather and the side-effects of typhoon seasons.

In Hong Kong (China), Modern Terminals invested $154 million to upgrade its berths to receive 12,500 TEU containerships. In Kaohshiung (Taiwan Province of China), the announced $2.8 billion expansion plan, for which private investors are expected to contribute half of that amount, would add 2.5 million TEUs/year by 2008. This plan follows the renewals of leases by sea-carriers such as Maersk Sealand, Hyundai Marine and Yang Ming. Further north, Qingdao was contacting investors, among them PSA, to fund the $3 billion expansion that will be doubling capacity to 12 million TEU/year over the next five years; and Cosco and China Shipping were considering their participation in the $3.5 billion expansion of Tianjin. The new port of Busan North (Republic Korea) funded by Dubai Port International and Samsung was commissioned in early 2006, two years ahead of schedule to benefit from the booming international and regional trade; it also benefited from tax holidays for cargo passing through it estimated at $20 per box. This port also issued a tender for a further 4-berth expansion. In southern China, a $1.2 billion strategic cooperation plan was agreed between Cosco and the provincial island administration of Hainan to create a maritime hub for port, logistics, shipping and ship-repair activities. Further south, ICTSI, a global operator from the Philippines, reported a $60 million investment in Manila to boost capacity by 0.4 to 2.0 million TEUs in the wake of the recovery by the country's trade from its recent slump.

In India, expansion of container terminal capacity was under way in Jawaharlal Nehru Port Trust (JNP), with Maersk reconverting an old bulk facility into a third container terminal for the harbour area. By mid-2006, this will add 1.5 million TEU/year to the already overstretched terminals of JNP and P&O Ports-operated Nhava Sheva. JNP plans for expansion looked bright after clearance from several administrative instances and firm offers from the Japan Bank of International Cooperation and Citibank. The deepening and widening of the access channel to the port with an estimated budget of $182 million, a dedicated railway line to New Delhi, an eight-lane highway to the hinterland and the 22.5 km Mumbai Trans Harbour sea bridge figured among the projects. Around a quarter of the latter was to be financed by the Government, with the balance to be financed by tolls to be collected by the contractor selected to build and operate the facility. Also in the year the Government approved the construction of a second container terminal in Chennai, although the operator of the existing single terminal of the port questioned the need for a second terminal. Elsewhere in the country there were calls for developing the Azhikkal port in Kerala State on the grounds of balanced economic regional developments as well as for sound commercial reasons.

Expansion of container port capacity was also under way in Malaysia and Oman. In Klang, Westport operator completed its ninth berth to serve vessels with sizes in the range of 8,000 to 9,000 TEUs and added 1 million TEU/year to reach a total capacity of 5 million TEU/year. In Tanjung, construction by Pelepas of two more berths for completion in 2006, to reach a total of ten, was under way. In Salalah approval for building two additional 18-metre draft berths together with a 2.85 km breakwater was given. Construction was to start immediately on this $262 million joint-venture investment, which will increase port capacity by 1 million TEU/year to 4 million TEU/year by 2008. A complementary investment of $94 million was to be made by the port operator for procurement of equipment. In Sohar, the second phase of this industrial port was under way. This included a refinery to produce 340,000 tons of propylene, power and desalination plants, a steel mill and plant to produce 1.2 million tons of urea per year. The infrastructure provided by the Government, namely breakwaters, entrance channel and harbour basin with a draft of 16 m and 1.8 km of quay-wall, was already completed.

Investment in hub ports was also significant. CMA CGM, the operator of Malta Freeport, decided to speed up its $47 million investment in equipment to accommodate ships of up to 12,000 TEUs in size, including 4 gantry cranes able to reach 22 boxes across; an additional pavement of 7 ha and a new gate were also included in the plan. Freeport (Bahamas) is already deep enough to receive the largest vessels afloat and aims to become a distribution centre too — it agreed to lease 20 ha to a Chinese group for which goods could be stocked and showcased. In Panama, HPH was investing $200 million for the expansion of Cristobal and Balboa at both ends of the Panama Canal, with 16-metre draft berths to be provided at both ports. Plans for a mega-hub to be located on the Pacific coast of Panama not far from the entrance of the Canal were unveiled by the Government. The largest alternative would provide 7.5 million TEU terminal capacity for an investment of $947 million,

which will include a 112 hectare land reclamation. Lesser alternatives, such as the one providing 4.6 million TEU capacity, offer minor savings of about $50 million in the total investment. The plan calls for private investors to undertake the project, with the Government providing land access and transport links. Elsewhere, a call for serving Scandinavia and Baltic countries from a hub to be developed in Scapa Flow (Orkney Islands, Scotland) was made, and, more specifically, the port of Gdansk (Poland) obtained $217 million to develop a 0.5 million TEU container terminal in addition to the 0.2 million TEU one being built by HPH in the neighbouring port of Gdynia. In this port Baltic Container Terminal is already in operation and poised to expand capacity by up to 0.8 million TEU.

In South America the bulk of the investments came from Brazil, triggered by the "Reporto" law enacted at the end of 2004. This law temporarily suspended taxes on manufactured products, provided that they are imported into the country before end 2007. By mid-2005 about $100 million worth of port equipment had been ordered by port authorities and operators. Two operators in Santos accounted for $32 million and procurement by operators based in Suape, Rio Grande do Sul and Paranagua was estimated at $16 million each. In a separate development, private investors — the local group Batistella and the sea-carrier Hamburg Sud — decided to build the port of Itapoa in São Francisco do Sul Bay to cater for shipments of reefer cargo such as meat, poultry and fruit mainly from the states of Parana and Santa Catarina. Currently, these cargoes are exported from the ports of São Francisco do Sul and also Itajai, where Maersk Sealand bought a 50 per cent stake in the container terminal Teconvi. Investment in the new port of Itapoa, which will be ready by mid-2006 with a 16 m draft and 0.3 million TEU/year capacity, was $100 million, with the Inter-American Development Bank having a share of 50 per cent. A 30 km road to connect the port with the Brazilian network was built by the state of Santa Catarina. In Buenos Aires (Argentina), two operators — Exolgan and P&O-owned TRP — commissioned post-Panamax gantry cranes during the second half of the year, but the first 5,500 TEU vessel to arrive in that port was able to call only at the latter.

C. INSTITUTIONAL CHANGE

During the year countries adopted different institutional arrangements for commercial ports. In Port of Spain (Trinidad) bids for a 5-year contract for managing the container terminal were received during the second half of the year and in early 2006 Portia, a subsidiary of Mersey — the operator of Liverpool — was awarded the contract. In Taomasina (Madagascar) the 20-year contract to operate and develop the Easter section of the port was won by ICTSI. In Mersin (Turkey), PSA together with a local group paid $755 million to win the tender for operating the port for 36 years. In Progreso (Mexico) a Spanish operator from Barcelona started to operate in the port under a 20-year concession. In Callao (Peru) the tender for building and operating the first container terminal at the south end of the port was issued. In Israel, the national port authority was replaced by a company in charge of port assets and their development. The company owns real estate of Eliat, Ashod and Haifa ports, where separate operating companies were established. In Colombia, implementation of the landlord model in Buenaventura, Barranquilla and Santa Marta was heralded by the opening of discussions with the large number of operators active in these ports for the purpose of generating further investments. The operating model was retained in South Africa, where plans for attracting private companies to operate terminals in Durban and Coega were shelved.

Controversies between port authorities and global terminal operators cropped up or disappeared at different times in different countries. Early in the year the Tariff Authority for Major Ports (TAMP), which regulates major ports in India, ruled that revenues earned by private terminal operators be brought into line with revenues earned by similar State-operated facilities. This affected one operator that five years ago had been authorized to charge tariffs 16 per cent higher than those of the State-run facility. By mid-year, the shipping ministry of India had formulated draft guidelines that would allow domestic companies to participate in tenders for container terminals and quote up to 5 per cent below the highest bid to match that bid. The guidelines also defined an Indian entity as a company in which Indian residents have a majority shareholding and requested that winning bidders retain the shareholder pattern for the duration of the contract. At the end of the year, two Chinese global operators were banned from bidding for a terminal in Mumbai for security reasons. In Panama, pending issues were solved with HPH, with this company agreeing to compensate the Government for fixed rental payments not paid during the last three years, owing to a controversial decree enacted by the previous administration, and to pay $102 million for infrastructure received under the 50-year lease. For the future, HPH would pay a $9 per TEU fee, similar to the one in force with two other operators.

Merger and acquisitions activity of global terminal operators proceeded unabated. As a result, the 2004 list of the top four global operators — HPH, PSA, APM Terminals and P&O Ports, with a combined throughput of 135 million TEU, about one third of world traffic — is set to change owing to events in late 2005. DP World, a global terminal operator from Dubai, pursued its aggressive expansion plan in November by offering $5.7 billion to purchase P&O Ports. A few weeks later some of the investors making the offer together with DP World reduced their bid exposure, and Temasek, the parent company of PSA, was reported to be increasing its share ownership in P&O Ports. Temasek made an offer for P&O Ports about 6 per cent higher than that of DP World, but the latter further raised its bid by almost 11 per cent and, in late January 2006, finally took over P&O Ports for $6.8 billion. In February there was strong opposition to the transaction in the United States because of security concerns, since about twenty P&O Port terminals were located on the US mainland. The opposition subsided when DP World indicated its willingness to transfer those terminals to a US entity.

The following weeks witnessed separate developments in several countries. In the United Kingdom, Australian investors made a $554 million offer for PD Ports, the owner of Tees port, and another investor, Peel, made an unspecified offer for Mersey Docks and Harbour Co., the owner of Liverpool and other, lesser UK ports. In Australia, terminal operator Patrick was acquired by Toll Holdings for $4.2 billion; the latter is a logistics conglomerate, the largest in Australia, with interests in South-East Asia. In late April came the most remarkable transaction — PSA purchased 20 per cent of HPH worldwide assets for $4.4 billion.

In addition to the outright merger and acquisition activity, these global operators also entered into agreements concerning specific ports, which might also involve shipping lines. In June 2005, HPH confirmed that it had sold a 20 per cent stake in HIT terminal in Hong Kong (China)to PSA for $925 million. A month later and in the same port a spillover agreement between DP World with HPH and Wharf Group, another operator, entered into force. Under the agreement excess DP World traffic could be handled in facilities operated by the other companies.

Agreements of global operators with shipping lines concerned stakes in the terminals or service agreements stating the services to be rendered to vessels in the terminals. An example of the former is the 10 per cent stake of CMA CGM in Antwerp Gateway ceded by Cosco and P&O Nedlloyds, which were left with 20 per cent each, with the ownership balance being for P&O Ports and Duisport with 42.5 and 7.5 per cent respectively. The winning consortium for the Tangier Mediterranean Terminal announced in October provides another example. In this case, the operator Eurogate/Contship sided with sea-carriers MSC and CMA CGM, with a minority stake kept for a local company. Service agreements sought by sea- carriers seemed to become more significant in time and coverage — K Line was on record as seeking a 20-year service agreement with PSA spanning all its world terminals. This seemed to be an alternative to the dedicated terminal model pursued by other carriers: during the year MSC secured dedicated terminals in Valencia (Spain) and set up a joint venture with PSA to operate a 3-berth terminal in Singapore. The former Prime Minister of Singapore said that ports were not longer competing against other ports but against port/shipping alliances.

Some saw merit in the merging or cooperation of neighbouring port authorities. In Canada there was a call for Vancouver to be merged with four other ports. In the Strait of Gibraltar closer cooperation between Algeciras, Gibraltar and Tangier was advocated. The challenge facing individual port authorities when dealing with sea-carriers was illustrated elsewhere. The Piraeus Port Authority was deemed to have abused its dominant position by giving a 10-year contract to a large sea-carrier that had squeezed a lesser one out of business, the latter having eventually gone bankrupt. As a result, the port authority was given a fine equivalent to 3 per cent of its annual turnover by the Competition Commission. The Port of Los Angeles settled a claim by sea-carrier China Shipping by paying $22.2 million. The claim covered delays in commissioning a terminal in time and retrofitting the vessels to use shore-side electricity instead of diesel engines when docked. Environmental issues were at the root of this: the delays stemmed from legal action started by environmental groups that argued that all environmental audits had to be completed before construction was authorized, while the use of shore-side electricity was a measure to reduce air pollution in the urban area.

In countries of Western Europe, there was a widespread feeling that delays and costs related to the planning and approval process for port development were excessive. The Maasvlakte 2 expansion in Rotterdam would be delayed for at least 18 months because of questions raised in an administrative court about the environmental impact

of the project. Similarly, the cost of the planning process — that is, the cost of public inquiries, official planning submissions and legal fees — for twelve projects in several countries amounted to $700 million, with the bill for the Dibden Bay project (United Kingdom) alone being $82 million. The delays and costs were badly affecting the provision of additional capacity in the next few years, which was badly needed as it was estimated that the occupancy rate for container terminals in the region was already well above 70 per cent. A prominent shipowner made a forceful appeal to industry representatives to become more visible and convince authorities of the need for further and speedy investment. In Germany, the port of Hamburg submitted a proposal that deadlines be set for the legal proceedings to be filed by interested parties, and that the number of authorities concerned with the approval process be reduced.

Against the background of increased urgency for additional container capacity in Europe, the UK procedure for approving port development schemes showed strain. With the rejection of the ABP scheme for Dibden Bay on environmental grounds, there were three schemes left for consideration: HPH-sponsored developments of phase 3 in Felixstowe and Bathside Bay, and in Harwich, and the London Gateway promoted by P&O Ports. These schemes would add 6.8 million TEUs per year to the existing port capacity. The London Gateway was given preliminary approval in September 2005, and the other schemes received approval during the first months of 2006. There were controversial points in this ad hoc process of approval. Some parties stressed the uncomfortable position of all these schemes when compared with those in other European ports benefiting from government funds for developing infrastructure. Others questioned the wisdom of southern-biased development schemes to the detriment of poorer northern UK regions. Still others noted the difficulty in asking operators to fund rail and road infrastructure to make their port schemes viable if beneficiaries of such infrastructure would also be third parties. In the meantime, the ports of Liverpool, Teeside and Bristol were preparing their own development plans. The latter plan was particularly ambitious in calling for an investment of $543 million to service 12,000 TEU containerships in a 1.5 million TEU per year facility. The port policy review started by the Government in 2005 was due to be completed during 2006 after exhaustive consultation with the parties concerned.

During most of 2005 the Transport Commission of the EU Parliament and interested industry bodies scrutinized the proposed EU directive on port services. There were complaints that this second version of the proposed directive had been prepared without taking stock of the rebuttal of the previous one in 2003, and efforts were made to prepare an amended version that overcome objections to the main controversial points: the right of self-handling by shipowners and the tendering procedures for facilities were among them. In November, an amended version was put to vote in the Transport Commission, although some wondered whether it would be better to withdraw it; after a confused vote it was decided to refer the un-amended version to the plenary of the Parliament. The proposed directive on port services was finally rejected by an overwhelming majority of the EU Parliament in January 2006.

The issue of government funding for infrastructure was given consideration in Canada. The amendments to the 1998 Marine Act paved the way for direct funding by the Federal Government for major infrastructure projects. In October a contribution of $492 million was announced for the elimination of road, rail and border bottlenecks caused by expanded Asian trade through the port of Vancouver. In the United States, the lack of funding led to the proposal by California of a $30 fee per TEU to improve rail infrastructure, air quality and port security, but this was postponed indefinitely because of strong opposition to trade replacing the public sector in providing investments. In Germany the bill for constructing the JadeWaser port increased by 22 per cent owing to the higher cost of steel and other materials.

D. SECURITY CHARGES IN PORTS

Security charges continued to be levied in several ports during 2005. For instance, Patrick Corp., an Australian port operator applied a levy of $3.70 per container, starting on 1 January 2005, to pay for extra guards, fencing, lighting and closed circuit TV cameras. In March, three terminal operators in Shenzhen (China) started to apply a $6 per laden TEU security charge; later, Modern Terminals, one of the operators in Hong Kong (China), announced a levy of $6.40 per laden container as from May 2005. A $2.50 security levy per 20' box passing through Chinese ports was announced in mid-2006. The levy is to be uniform for all ports and last for three years.

Chapter 6

TRADE AND TRANSPORT EFFICIENCY

This chapter provides information on recent developments in the fields of transport, trade facilitation and multimodal transport, together with information on the status of the main maritime conventions.

A. NEGOTIATIONS ON TRADE FACILITATION AT THE WTO

Since 2004, the members of the World Trade Organization (WTO) have been negotiating clarifications of, and improvements to, Articles V, VIII and X of GATT. Article V deals with transit issues, Article VIII with import- and export-related fees and formalities, and Article X with transparency of trade regulations. In July 2004, in the "July Package" and its Annex D, WTO members agreed to the modalities to be followed for the launching of negotiations on trade facilitation.[4]

Specific proposals related to information and communication technologies

Many of the technical proposals that were tabled in the WTO's Negotiating Group on Trade Facilitation (NGTF) during 2005 and early 2006 dealt with information and communication technologies (ICTs). As regards electronic documents and the electronic submission of data, it is stated that "in order to reach a set of common forms and electronic documents, the harmonization of import documents and the data required for release of goods using existing international standards under the WTO Customs Valuation Agreement, the HS Convention, the UN Layout Key Guidelines and the WCO Kyoto Convention etc., is essential".[5] Also, "The data set developed within the WCO data model, UN EDIFACT (UN Electronic Data Interchange for Administration, Commerce and Transport) and the UN Layout Key could be identified as basic reference points/standards".[6] Other proposals state that "in cases where Goods declarations and other supporting documents are lodged electronically and authenticated by electronic signatures or electronic procedures, no other original of these documents shall be requested"[7] and that "Automated and Electronic Data Interchange (EDI) based electronic systems should be introduced to replace paper-based procedures across customs and ultimately all other agencies involved in import and export administration".[8]

As regards Internet publication of trade regulations, the proposals made at the WTO include the establishment of "mechanisms ensuring the publication and availability of information on customs procedures to all Members in readily and promptly accessibly official media, including, where possible, in electronic form".[9] Similarly, it is suggested that information "should be made available by the publishing Member for access by any interested parties through electronic means at no cost or at a charge commensurate with the cost of services rendered" and that "Each Member should notify the other Members through the Secretariat the means to access the

information published electronically".[10] The Internet publication is interpreted as "an available method for Members to meet current publication obligations under Article X of GATT 1994".[11]

Concerning automation, one proposal suggests "Automation of customs and other agency import/export procedures, with the possibility of electronic submission of customs and other declarations, and automated payment of duties and other fees and charges". The same proposal also includes "Automated payment of duties and other fees and charges".[12] Another proposal states that "If or when automatization is put in place, in cases where physical documentation is required under manual procedures, the Customs should normally accept copies and not only accept/request originals of documents, except in clearly defined circumstances. With automated transmission of documents it is always difficult, if not impossible, to identify an original document if it is printed out or a photocopy is made."[13]

Other ICT-related proposals relate to the electronic single window. "The use by Members of an electronic 'single window' for submitting, once only and to a single authority, all documentation and data relating to import/export procedures is highly important for the smooth running of trade, since it increases inter-agency coordination, allows more efficient use of public and private resources, and enhances the performance of government agencies."[14] "A single window does not necessarily imply the implementation and use of high-tech information and communication technology (ICT), although facilitation can be enhanced if relevant ICT technologies are identified and adopted."[15]

In the context of transit trade, a proposal stated that "As a general rule, identification of these goods is ensured by sealing. In addition to this classic function of seals, electronic seals have been developed to provide for the detection and tracking of trucks."[16]

The Hong Kong (China) Ministerial Conference

In the WTO Ministerial Declaration, adopted on 18 December 2005 in Hong Kong (China), Ministers reaffirmed the mandate and modalities for negotiations on trade facilitation contained in Annex D of the July Package. Ministers further endorsed recommendations contained in the report of the NGTF. They recommended that WTO Members be mindful of the overall deadline for finishing the negotiations and the resulting need to move into focused drafting mode early enough after the Hong Kong Ministerial Conference so as to allow for a timely conclusion of text-based negotiations on all aspects of the mandate.[17]

Since the beginning of 2006, a large number of proposals made in the NGTF have effectively summarized issues covered by previous proposals. Many of these recent proposals were tabled by groups of countries, which had previously presented the relevant topics separately. Negotiations have thus in large part become "text-based", that is the NGTF is entering into the discussion of specific wording on some of the technical issues. By mid-2006, the total number of proposals tabled exceeded one hundred.

Special and differential treatment, technical assistance and capacity building

Several proposals made in the NGTF during the first half of 2006 dealt with the issue of "special and differential treatment".[18] Annex D of the July Package states that the results of the negotiations shall take fully into account the principle of special and differential treatment for developing and leastdeveloped countries. The extent and the timing of entering into commitments shall be related to the implementation capacities of developing and least developed Members. A mechanism proposed in the NGTF that aims at making the mandate of Annex D operational consists of four main phases: (1) capacity self-assessment; (2) notification; (3) capacity development; and (4) confirmation of capacity acquisition and compliance with the obligation.[19] Through this mechanism it is hoped to ensure that least developed WTO Members will be required to undertake commitments only to the extent consistent with their individual development, financial and trade needs or their administrative and institutional capabilities.

In Annex D it is also recognized that the provision of technical assistance and support for capacity building is vital for developing and least developed countries because it will enable them to fully participate in and benefit from the negotiations. Relevant international organizations, including the IMF, OECD, UNCTAD, WCO and the World Bank, are invited to undertake a collaborative effort in this regard. Since 2005, UNCTAD, the World Bank and WTO, in cooperation with each other and with the IMF, OECD and WCO, have been organizing capacity-building events to accompany the negotiating process. The United Nations regional commissions are also organizing seminars and undertaking studies related to the WTO negotiations in their respective regions.[20]

This mandate of Annex D endorses the NGTF's recommendation that relevant international organizations be invited to continue to assist Members in the process of identifying individual Members' trade facilitation needs and priorities as well as the cost implications of possible measures, the important contributions already made by them being duly recognized, and be encouraged to continue and intensify their work more generally in support of the negotiations.

Suspension of negotiations

In July 2006 "because of persistent differences", the WTO General Council supported the recommendation of the WTO Director-General to suspend the Doha Round of Trade Negotiations which, therefore, led to the discontinuation of the meetings of the Negotiating Group on Trade Facilitation. WTO members did not actually take a formal decision to suspend the talks, but instead, the General Council Chair simply "took note" of the Director-General's remarks. This means that it would be possible to restart the negotiations without a separate formal decision to do so, with each member having a veto over their resumption.

B. LEGAL ISSUES AFFECTING TRANSPORTATION: AN OVERVIEW OF RECENT DEVELOPMENTS RELATING TO MARITIME AND GLOBAL SUPPLY CHAIN SECURITY, AND TO SEAFARERS

1. Maritime and global supply chain security

Maritime and global supply chain security continues to remain high on the international agenda, and several international organizations are continuing their work to develop standards and recommended practices in these areas. Important international developments in the field include those described below.

In January 2006, a high-level **Ministerial Conference on International Transport Security** was held in Japan.[21] The conference recognized inter alia the serious threat to international maritime transport posed by acts of terrorism, and the continued need to address vulnerabilities. In that connection, it welcomed the activities undertaken by relevant international organizations, particularly the International Maritime Organization and the World Customs Organization,[22] and invited those organizations to consider, in cooperation, the development of appropriate measures to enhance the security of the maritime transport of containers in the international supply chain. In addition, IMO was invited to undertake a study and, as necessary, make recommendations for enhancing the security of ships other than those already covered by SOLAS Chapter XI-2 and the ISPS Code.[23] States were urged to ensure the continued compliance of their port facilities with the requirements of SOLAS Chapter XI-2 and the ISPS Code. Furthermore, it was resolved to share best practices in the implementation of those instruments, to continue to provide assistance and support for capacity building, and further promote international cooperation in the education and training of officers.

In relation to international supply-chain security, a major development was the unanimous adoption in June 2005 of *The Framework of Standards to Secure and Facilitate Global Trade*[24] *(SAFE Framework)* by the Council of the **World Customs Organization**.[25] The SAFE Framework rests on two "pillars", namely Customs-to-Customs Network arrangements and Customs-to-Business partnerships, and consists of four core elements:

1. The Framework harmonizes the advance electronic cargo information requirements concerning inbound, outbound and transit shipments.

2. Each country that joins the Framework commits itself to employing a consistent risk management approach to address security threats.

3. The Framework requires that at the reasonable request of the receiving nation, based on a comparable risk-targeting methodology, the sending nation's Customs administration will perform an outbound inspection of high-risk containers and cargo, preferably using non-intrusive detection equipment such as large-scale X-ray machines and radiation detectors.

4. The Framework defines the benefits that Customs will provide to businesses that meet minimal supply-chain security standards and best practices.

The *SAFE Framework* relies on modern Customs principles contained in the revised Kyoto Convention,[26] which entered into force in February 2006, such as risk management based on advance electronic information, use of modern technology and a partnership with trade. It is based on existing supply-chain security and facilitation initiatives and programmes already in place at national levels, for example and in particular, in the United States.

Implementation of the Framework is intended to help Customs authorities to enhance their risk-assessment and risk-management capabilities and adopt an intelligence-based selective approach to targeting closed containers for inspection, primarily on the basis of advance electronic information provided by economic operators involved in the international supply chain. It is designed to improve Customs authorities' abilities to detect and deal with high-risk consignments before their arrival, and thus increase efficiency in the administration of goods by reducing their clearance and release time.

The *SAFE Framework* establishes the concept of the "Authorized Economic Operator" (AEO), who is involved in the trade supply chain and is approved as meeting certain criteria broadly outlined in the standards of the Customs-to-Business pillar of the Framework (Annex 2). Such operators should be entitled to participate in simplified and rapid procedures for the provision of minimum information. Detailed implementation requirements for the *SAFE Framework*, including those for cargo security and for AEOs, are being drawn up by the WCO.

As of June 2006, 135 WCO members had expressed their intention to implement the Framework. Many of those members will require capacity building. In order to assist developing countries in particular in the implementation of the *SAFE Framework*, the WCO's Directorate for Capacity Building has recently launched a major capacity-building programme, known as COLUMBUS, under which diagnostic missions are conducted, a needs assessment is carried out and an action plan is developed, with a view to identifying donors that are willing to fund projects to enable Customs Administrations to become *SAFE Framework* compliant.[27] At present, it is not possible to adequately assess the trade-related impacts of the implementation of the new global supply-chain security framework. Much will depend on whether SMEs, particularly in developing countries, will be able to comply with the requirements, such as those related to the use of electronic communication and modern technology and those related to AEO recognition, and on whether mutual recognition of the AEO status can effectively be achieved.

The idea of a voluntary framework for the recognition of "secure operators" is also under discussion at the level of the **European Union**. Recently, a Communication[28] was issued by the European Commission, containing a proposal for an EC Regulation to introduce a voluntary security scheme under which operators in the supply chain would increase their security performance in exchange for incentives, such as fast-track treatment both inside the EU and at external borders, and obtain "secure operator" status. For this purpose, member States might either avail themselves of existing systems or procedures or create a specific system for supply-chain security. The scheme would cover intermodal transport and follow previous terrorism legislation in the field of maritime transport and ports. To obtain "secure operator" status, an operator would have to implement a security management system and demonstrate that it covers areas such as protection of buildings, access control and personnel procedures. As with the requirement of the WCO *SAFE Framework*, each member State would have to recognize the "secure operator" status conferred by another member State.

It should be noted that the **International Maritime Organization** (IMO) has begun to consider proposals for integrating, into international legislation,[29] appropriate cargo security procedures based on or compatible with the standards of the WCO's *SAFE Framework* Thus, key elements of the WCO standards may in due course become part of the international law for maritime cargo transports, such as the 1965 *Convention on Facilitation of International Maritime Traffic* (FAL), as amended, and the 1974 *Safety of Life at Sea Convention* (SOLAS), as amended.

Amendments to SOLAS, which were adopted by the IMO in 2002, including in particular the *International Ship and Port Security* (ISPS) *Code*, continue to represent the most important international set of rules for the security of ships and port facilities.[30] The ISPS Code entered into force on 1 July 2004, and the IMO's Maritime Safety Committee (MSC) has issued a number of guidance circulars to assist in the implementation of and compliance with the requirements of ISPS Code.[31] Most recently, at its 81st session in May 2006, the MSC adopted a further set of guidance circulars,[32] notably the following:

- MSC.1/Circ.1192, *Guidance on voluntary self-assessment by SOLAS Contracting Governments and by port facilities;*[33]
- MSC.1/Circ.1193*, Guidance on voluntary self-assessment by Administrations and for ship security;*
- MSC.1/Circ.1194, *Effective implementation of SOLAS chapter XI-2 and the ISPS Code.*

In relation to the ISPS Code, it should also be noted that the **UNCTAD** secretariat is in the process of conducting a large-scale survey that seeks to establish the experiences and views of parties directly affected by the new maritime security regime, especially as regards costs related to the implementation of the ISPS Code. These parties include Governments, shipowning and operating companies engaged in international transport, and ports serving such ships. The results of the survey are expected to be available by the end of 2006.[34]

With regard to other relevant developments at **IMO**, it is also worth drawing attention to progress in relation to the introduction of *Long-Range Identification and Tracking Systems* (LRIT). By way of background, it should be recalled that it is already a special mandatory SOLAS requirement[35] for certain categories of ships to be equipped with *Automated Identification Systems* (AIS). AIS are shipboard automatic electronic reporting devices that communicate basic information regarding the ship's identity, position, course and speed to other AIS transponders and shore-based facilities. The AIS currently used are capable of transmitting information up to a range of around 50 nautical miles offshore. In order to extend significantly the tracking capabilities of SOLAS Contracting Governments, the introduction of LRIT has been proposed.

After extensive discussions,[36] the MSC adopted in May 2006 new regulations for the LRIT, to be included in SOLAS chapter V (Safety of Navigation), together with associated performance standards and functional requirements.[37] The MSC also approved the establishment of an ad hoc Working Group on Engineering Aspects of LRIT.

LRIT will be a mandatory requirement for ships engaged in international voyages, more particularly passenger ships (including high-speed craft), cargo ships (including high-speed craft) of 300 gross tonnage and upwards, and mobile offshore drilling units. The SOLAS regulation establishes a multilateral agreement for sharing LRIT information among Contracting States on the identity, location, date and time of the position of ships for security and search and rescue purposes. It maintains the right of flag States to protect information about ships flying their flag, as appropriate, while permitting coastal States access to information about ships navigating up to 1,000 nautical miles off their coasts.[38] While AIS is a broadcast system, data derived through LRIT will be available only to recipients who are, according to the regulation, entitled to receive the information.[39] Safeguards concerning the confidentiality of data have been built into the relevant regulatory provisions. The regulation provides for a phased-in implementation schedule for ships constructed before its expected entry into force date of 1 January 2008, as well as some exemptions for ships operating exclusively in certain areas and already fitted with AIS.

Efforts are also being made at **IMO** to incorporate security-related provisions into other international legal instruments, such as the 1978 *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers* (STCW Convention) and the STCW Code.[40]

Finally, it should be noted that amendments to the 1988 *Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation* (SUA Convention)[41] and its 1988 Protocol[42] were adopted on 14 October 2005 under the auspices of IMO. Once widely and uniformly implemented by IMO States Parties, the 2005 SUA Protocols[43] will provide a legal basis for the arrest, detention and extradition of persons in the event of a terrorist attack against shipping. The main amendments effected by the 2005 Protocols include the following:

- A broadening of the list of offences already contained in the 1988 SUA Convention and its Protocol. The offences listed shall be made punishable by each State Party by appropriate penalties that take into account their gravity.

- Inclusion in the 1988 SUA Convention of provisions covering cooperation and procedures to be followed if a State Party desires to board on the high seas a ship flying the flag of another State Party, when the requesting party has reasonable grounds to suspect that an offence under the Convention has been or is about to be committed. The authorization of the flag State is required before such boarding.

- Inclusion in the 1988 SUA Convention of a provision to the effect that none of the offences should be considered a "political offence" for purposes of extradition, and of a provision dealing with conditions under which a person detained may be transferred to another State Party.[44]

The Protocols were opened for signature on 14 February 2006 and will remain open for signature

until 13 February 2007. Thereafter they will remain open for accession. Seventy-one States signed the Final Act of the Conference.[45]

2. Seafarers

A workforce of nearly 1.2 million seafarers, many of them from developing countries, work in the world's shipping industry. One important function of the regulatory environment in which seafarers operate is its ability to ensure both the safety and the fair treatment of seafarers.[46] In this context, attention should be drawn to an important new international convention recently been agreed on under the auspices of the **International Labour Organization**.

In order to update and consolidate the more than 65 international labour standards which had been developed over the course of the previous 80 years, a new consolidated *Maritime Labour Convention* was adopted at the end of the 10th maritime session of the ILO International Labour Conference, held from 7 to 23 February 2006. The Convention covers most commercial shipping at the global level[47] and may be considered a major legal instrument, likely to become a "one stop" point of reference on labour standards for the maritime industry. It represents a comprehensive codification of responsibilities and rights with regard to labour and social matters in the maritime sector, and "will be an effective global response for a truly global industry".[48]

The Convention comprises three distinct but related parts, namely the *Articles*, the *Regulations* and the *Code*. The *Articles* and *Regulations* set out the core rights and principles and the basic obligations of States ratifying the Convention. The *Code* contains details for the implementation of the *Regulations*. It comprises Part A (mandatory Standards) and Part B (non-mandatory Guidelines).

The *Regulations* and the *Code* are organized into general areas under five Titles:

- Title 1: Minimum requirements for seafarers to work on a ship;
- Title 2: Conditions of employment;
- Title 3: Accommodation, recreational facilities, food and catering;
- Title 4: Health protection, medical care, welfare and social security protection;
- Title 5: Compliance and enforcement.

As clarified by the Explanatory Note to the *Regulations* and *Code* of the Maritime Labour Convention,[49] the Convention has three underlying purposes, namely:

- *"to lay down (in its Articles and Regulations) a firm set of rights and principles";*
- *"to allow (through the Code) a considerable degree of flexibility in the way Members implement those rights and principles"; and*
- *"to ensure (through Title 5) that the rights and principles are properly complied with and enforced".*

A number of fundamental rights and principles are set out in Article III of the Convention and must be respected by each Contracting State through the provision of its law and regulation. They include:

> *"(a) freedom of association and the effective recognition of the right to collective bargaining;*
>
> *(b) the elimination of all forms of forced or compulsory labour;*
>
> *(c) the effective abolition of child labour; and*
>
> *(d) the elimination of discrimination in respect of employment and occupation".*

Seafarers' employment and social rights are regulated separately in Article IV of the Convention, which provides that "*every seafarer has the right to a safe and secure workplace that complies with safety standards*"; "*a right of fair terms of employment; decent working and living conditions on board ship*"; and "*a right to health protection, medical care, welfare measures and other forms of social protection*".

Contracting States are required to ensure, within the limits of their jurisdiction, that the seafarers' employment and social rights are fully implemented "*through national laws or regulations, through applicable collective bargaining agreements or through other measures or in practice*".[50]

Other detailed compliance and enforcement provisions are set out in Article V and in Title 5 of the Convention.[51] Contracting States are required inter alia "*to establish a system for ensuring compliance with the Convention,*

including regular inspections, reporting, monitoring and legal proceedings under the applicable laws".[52] Ships that are larger than 500 GT and engaged in international voyages or voyages between foreign ports are required to carry a *Maritime Labour Certificate* and a *Declaration of Maritime Labour Compliance*.[53]

The Convention will enter into force after it has been ratified by 30 ILO member States with a total share of at least 33 per cent of world tonnage. The Convention is considered to be an important contribution to high-quality shipping, representing the "fourth pillar" of the international maritime regulatory regime, next to the three key IMO Conventions, namely the International Convention for the Safety of Life at Sea (SOLAS), the Standards of Training, Certification and Watchkeeping Convention (STCW) and the International Convention for the Prevention of Pollution from Ships (MARPOL).[54]

C. PRODUCTION AND LEASING OF CONTAINERS

Over the past three years, the container fleet has expanded at an average rate of 9.6 per cent (see table 44). From the 16.4 million TEU container fleet at the end of 2002, the fleet was expected to reach 21.6 million TEUs at the end of 2005. The rate of expansion was particularly high during 2004, when it reached an impressive 10.4 per cent, and slowed down during 2005 to 9.0 per cent. Fleet ownership is broadly split between container lessors and sea carriers. By the end of 2005, the container fleet owned by lessors was expected to reach 9.8 million TEUs, which represented about 45 per cent of the world fleet.

During the past two years sea carriers increased their container fleets at a rate faster, over 10 per cent, than that of lessors, in line with the impressive commissioning of new containerships during the period. During 2003, however, lessors expanded their container fleets slightly faster than sea carriers — the former fleet expanded at 9.6 per cent while the latter did so at 9 per cent.

Box prices also explain the paucity of procurement of new boxes by lessors. The price of dry freight containers increased by over 50 per cent during 2004 owing to an increase in prices of steel and timber, and increased further during the first half of 2005. The price of a general-purpose 20' dry box reached $2,050 by the end of 2004 and $2,300 in June 2005. Similarly, a 40' high cube reefer box fetched $18,600 at the end of 2004, which price was maintained during the first quarter of 2005 and eased slightly to $18,400 by the end of June 2005. Box prices were high owing to expensive materials — Corten steel reached $700 per ton in late 2004 and only started to decrease in late 2005 when it reached $500 per ton — a two-year low. This impacted on box prices (see figure 9), which during the second half of 2005 started a downhill trend for all types of containers. Prices for general-purpose containers dropped by a quarter while those for reefers did so at a modest rate of 5 per cent.

Lessors' demand for containers also slumped during the second half of 2005 because of weakened lease prices.

Table 44

World container fleet

(In thousand TEUs)

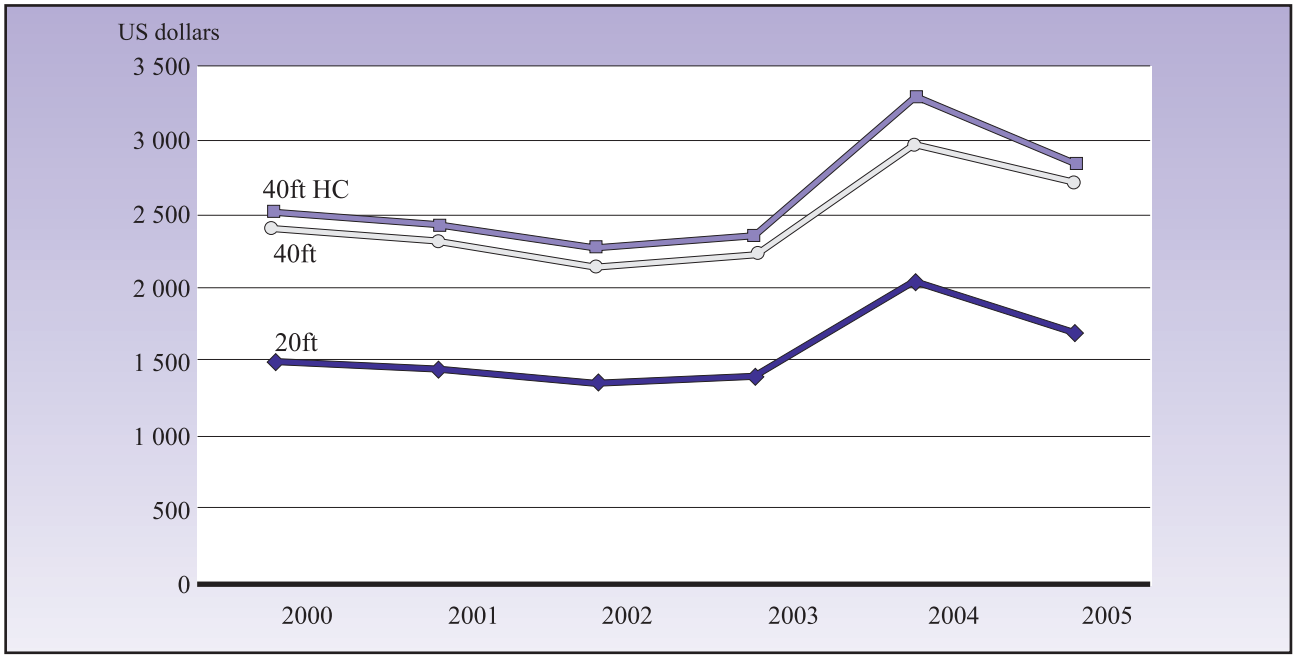
End of the year	World fleet	Lessor fleet	Sea carrier fleet
2002	16 425	7 635	8 790
2003	17 955	8 370	9 585
2004	19 830	9 105	10 725
2005	21 620	9 755	11 865

Source: *Containerisation International*, September 2005, p. 61

Figure 9

Evolution of prices of new containers

(In US dollars)



Source: UNCTAD secretariat, with data from *Containerisation International,* several issues.

The average container lease rate for a 20' general-purpose container dropped to less than $1 per day during the first quarter of 2005 and the downward trend continued during the year up to the first quarter of 2006, when it reached $0.57 per day. There was a drop in lease rates of about a third during 2005 for all types of containers, with the drop being less pronounced for reefer containers.

In 2005 container production decreased by 16.2 per cent (see table 45). Of the 2.48 million TEUs manufactured in 2005, almost 90 per cent corresponded to dry freight boxes. In spite of this production drop, manufacturers accumulated stocks of about 0.8 million TEUs by the third quarter of the year owing to the drop in orders from discouraged lessors facing diminished lease prices. As a result, the production cuts were concentrated during the second half of the year. China dominated box production — the CIMC Group alone was responsible for 51 per cent of world production in the year. Singamas Holdings, another Chinese manufacturer, was responsible for about 20 per cent of world production. Chinese container manufacturers have plenty of spare capacity to increase production in the short term.

D. INLAND TRANSPORT DEVELOPMENTS

Rail and road transport

During 2005 intermodal traffic in the US rail network increased by 8 per cent and the improved financial situation of railroad companies triggered investments to boost services to ports along the West Coast. Union Pacific and BNSF added 700 and 200 locomotives respectively, with substantial hiring of 5,500 and 1,500 workers also taking place to expand the workforce badly dented by early retirements during the previous year. Moreover, block trains were extended by up to 7,500 ft before they proceeded to the hinterland, although this prompted a mixed response by port authorities, which feared terminal congestion. Moreover, Canadian Pacific decided to invest $128 million to expand its rail network to Vancouver. Overall, these measures contributed to preventing congestion from developing along the West Coast of North America during the year. Further capacity was under construction further north — CN announced $20 million upgrades of its rail network to match

Table 45

Container production

(In thousand TEUs)

Container types	Production 2004	Production 2005
Dry freight	2 720	2 212
Integral reefer	145	160
Tank containers	12	12
Regional types	83	96
Total	2 960	2 480

Source: Containerisation International, January 2006, p. 59.

investment in the container terminal to be commissioned by Port Rupert (Canada) in 2007.

Some investments were also made to serve destinations along the East Coast of North America. Norfolk Southern decided on capital investments of $1.5 billion to upgrade infrastructure and services: although this coast represents only 45 per cent of the freight carried by the company, its traffic is growing at a faster rate than that of the West Coast.

During the second half of the year agreement was reached on enacting the US Highway Bill, which will fund transportation investments of about $286 billion for the period 2004–2009. The bill, which had been delayed since 2003 for several reasons, is deemed crucial for funding projects that cope with growth of merchandise traffic, such as the Chicago rail hub.

Also during 2005, rail companies in the European Union continued to consolidate their cross-border services as a result of the 2003 partial liberalization — about 70 per cent of the rail freight network — and ahead of the full liberalization of cross-border traffic in 2006. Railion, formerly Deutsche Bahn Cargo, which had previously merged with the Dutch and Danish rail-cargo companies to become the largest rail-freight company in Europe, established an Italian subsidiary and a partnership with the SNCF (the French company), as well as a 20 per cent stake in the Swiss rail-cargo company. It is now believed to be responsible for 40 per cent of transalpine freight. The SNCF plans to establish a left of the Rhine transalpine freight route to compete with the one going through Germany. A group of five private carriers — Rail4Chem — was established and started complete train freight services from Rotterdam to the Czech Republic, with six grain trains running per week. In Spain plans to fund transport infrastructure, including railways, costing $275 billion during the next ten years, in partnership with the private sector, were announced.

Although there are still shortcomings in the European railway network, such as different power, rail gauges and signalling systems, as well as different operating and security systems, steps taken by Governments and rail companies are progressively overcoming them. Moreover, a memorandum of understanding concerning the interoperability of the European network with the Russian rail system was agreed within the framework of the Russian Federation–EU Transport Dialogue in October 2005.

Plans for the establishment of an Asian international intermodal network as set forth by the Ministerial Conference on Infrastructure held in Seoul (Republic of Korea) in November 2001 got under way — a meeting to develop an Intergovernmental Agreement on the Trans-Asian Railway (TAR) Network took place in Bangkok, hosted by ESCAP, in November 2005. The network is expected to be a catalyst for further railway development across Asia that would accommodate a growing share of demand for land and transit transport across the region that has recently been spurred by China's relatively high economic growth. The final text of the Agreement will be presented for adoption in April 2006.

The TAR Agreement identifies and includes existing railway lines of international importance in member countries, namely Armenia, Azerbaijan, Bangladesh, Cambodia, China, the Democratic People's Republic of

Korea, Georgia, India, Indonesia, the Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, the Lao People's Democratic Republic, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, the Republic of Korea, the Russian Federation, Singapore, Sri Lanka, Tajikistan, Thailand, Turkey, Turkmenistan, Uzbekistan and Viet Nam. It also aims to establish a seamless rail network that would allow efficient, reliable and economical movement of goods and passengers.

The issue of connecting Europe and Asia and its impact on development was discussed at a meeting organized by UNECE, UNESCAP and 16 countries of the Euro-Asian region in July 2005 to agree on the main road, rail and inland water transport routes. The meeting was organized as part of a wider project on capacity building for developing interregional transport linkages which is funded by the UN Development Account. The project identifies the interregional transport linkages between Europe and Asia and then focuses on preparing analytical studies on transit times and costs along the selected routes, implementing international transport agreements and conventions and strengthening national bodies responsible for the formulation and implementation of national transport development and facilitation plans. It also disseminates information on the progress made and lessons learned on specific routes and facilitates institutional networking among those involved in Euro-Asian transport development.

Meanwhile the 2005 results of the Trans-Siberian Railway were not encouraging as traffic between the Far East and Europe dropped by 17 per cent to less than 90,000 TEUs. Several reasons were cited for this situation: cargo losses in transit, Customs delays in processing paperwork and rolling stock deficiencies. Moreover, the announcement of 30 per cent tariff increases from 2006 prompted vociferous complaints from freight forwarders in the Russian Federation and the Republic of Korea.

Elsewhere, the Saudi Land-bridge Project moved ahead in August 2005 at the time of the pre-qualification stage for the build-operate-transfer concession. The project will rail link ports in the Persian Gulf with those on the Red Sea across the Saudi Arabian peninsula and includes a large distribution and logistics centre in Riyadh. The estimated cost of the contract is $2.5 billion, to be awarded during 2006. More than 1,000 km of new track is to be laid, with upgrades to existing lines covering an additional 120 km.

E. PROVIDERS OF LOGISTICS SERVICES

In addition to sea and land transport, shippers require other services to trade internationally, such as air transport, warehousing, freight forwarding, consolidation and/or splitting of consignments, and electronic tracking of consignments. Some or all of these services are provided by logistics companies, or third-party logistics providers (3P) as they are sometimes called, which are now powerful players in international transport. Each of the following companies — Nippon Express, Kuehne & Nagel, Schenker, DPL and Panalpina — were reported to have moved more than 0.5 million TEUs during 2004 on behalf of shippers. In the same year companies among the top ten providers of logistics services worldwide reported revenues of above $4 billion per company, with the top two companies reporting revenues of $14.8 and $11.1 billion respectively. Major liner shipping companies have subsidiaries focusing on the same business and often serving primarily the parent sea carrier.

Expansion of these providers of logistics services has been under way over the few last years, mainly through the acquisition of lesser competitors. During 2005 in Europe, Kuehne & Nagel took over ACR Logistics for $525 million and DPL took over Exel for $6 billion. Freight forwarding features prominently among the activities undertaken by these companies and is usually the one undertaken in developing countries, often in competition with local companies.

F. STATUS OF CONVENTIONS

There are a number of international conventions affecting the commercial and technical activities of maritime transport. Box 3 gives the status of international maritime conventions adopted under the auspices of UNCTAD as of 1 August 2006. Comprehensive and updated information about these and other relevant conventions is available on the United Nations website at *www.un.org/law*. This site also provides links to, inter alia, a number of organizations' sites, which contain information on the conventions adopted under the auspices of each organization. Those organizations are the following: the International Maritime Organization (*www.imo.org/home.html*), the International Labour Organization (*www.ilo.org*) and the United Nations Commission on International Trade Law (*www.uncitral.org*).

Box 3

Contracting States parties to selected conventions on maritime transport as of 1 August 2006

Title of convention	Date of entry into force or conditions for entry into force	Contracting States
United Nations Convention on a Code of Conduct for Liner Conferences, 1974	Entered into force 6 October 1983	Algeria, Bangladesh, Barbados, Belgium, Benin, Bulgaria, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chile, China, Congo, Costa Rica, Côte d'Ivoire, Cuba, Czech Republic, Democratic Republic of the Congo, Denmark, Egypt, Ethiopia, Finland, France, Gabon, Gambia, Germany, Ghana, Guatemala, Guinea, Guyana, Honduras, India, Indonesia, Iraq, Italy, Jamaica, Jordan, Kenya, Kuwait, Lebanon, Liberia, Madagascar, Malaysia, Mali, Mauritania, Mauritius, Mexico, Morocco, Mozambique, Netherlands, Niger, Nigeria, Norway, Pakistan, Peru, Philippines, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia, Sierra Leone, Slovakia, Somalia, Spain, Sri Lanka, Sudan, Sweden, Togo, Trinidad and Tobago, Tunisia, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, Uruguay, Venezuela, Zambia **(80)**
United Nations Convention on the Carriage of Goods by Sea, 1978 (Hamburg Rules)	Entered into force 1 November 1992	Albania, Austria, Barbados, Botswana, Burkina Faso, Burundi, Cameroon, Chile, Czech Republic, Egypt, Gambia, Georgia, Guinea, Hungary, Jordan, Kenya, Lebanon, Lesotho, Liberia, Malawi, Morocco, Nigeria, Paraguay, Romania, Saint Vincent and the Grenadines, Senegal, Sierra Leone, Syrian Arab Republic, Tunisia, Uganda, United Republic of Tanzania, Zambia **(32)**
International Convention on Maritime Liens and Mortgages, 1993	Entered into force 5 September 2004	Ecuador, Estonia, Monaco, Nigeria, Russian Federation, Spain, Saint Vincent and the Grenadines, Syrian Arab Republic, Tunisia, Ukraine, Vanuatu **(11)**
United Nations Convention on International Multimodal Transport of Goods, 1980	Not yet in force — requires 30 contracting parties	Burundi, Chile, Georgia, Lebanon, Liberia, Malawi, Mexico, Morocco, Rwanda, Senegal, Zambia **(11)**
United Nations Convention on Conditions for Registration of Ships, 1986	Not yet in force — requires 40 contracting parties with at least 25 per cent of the world's tonnage as per annex III to the Convention	Albania, Bulgaria, Côte d'Ivoire, Egypt, Georgia, Ghana, Haiti, Hungary, Iraq, Liberia, Libyan Arab Jamahiriya, Mexico, Oman, Syrian Arab Republic **(14)**
International Convention on Arrest of Ships, 1999	Not yet in force — requires 10 contracting parties	Algeria, Bulgaria, Estonia, Latvia, Liberia, Spain, Syrian Arab Republic **(7)**

Source: For official status information, see *www.un.org/law/*.

Chapter 7

REVIEW OF REGIONAL DEVELOPMENTS: SUB SAHARAN AFRICA

This chapter reviews and analyses the global and intraregional maritime trades in Africa since 2003 with a focus on sub-Saharan countries. It also covers developments in transport and related services, in particular for landlocked countries.

A. ECONOMIC BACKGROUND

There are 53 countries in the 30.3 million square km of Africa with an estimated population of 885 million at mid-2004. These countries could broadly be grouped into three, along the following geographical lines: the 5 countries (Algeria, Egypt, Libyan Arab Jamahiriya, Morocco and Tunisia that correspond to Code 8.1 of Annex I) located along the north coast of the continent make up the first group; the second is South Africa (Code 5 of Annex I), embracing a large portion of the southern tip of the continent, which is often regarded as a single group; and the remaining 47 countries located in between, which are collectively referred to as sub-Saharan African countries (closely corresponding to Codes 8.2 and 8.3 of Annex I), make up the third group.

Sub-Saharan African countries are a diverse group with widely differing needs on account of their geographical situation. There are 24 coastal countries (C), 16 landlocked countries (LLC) and 7 insular countries (I) located in the Atlantic and Indian Oceans. In economic terms, however, many of these countries share common features. Thirty-four of the sub-Saharan African countries are classified as least developed countries (LDCs) — that is, they have low economic and social welfare indicators. In fact, these countries make up the majority of the forty-nine LDCs in the world.

Table 46 presents the geographical and economic denomination of sub-Saharan African countries, together with their average increase in GDP for the period 1995–2004 and the corresponding average annual increases in GDP from 2001 to 2004 and the GDP estimate for 2005. The same economic data are included for other developing economies of Africa, developing economies and developed economies.

The economic performance for developing economies in Africa remains below that recorded by developing economies as a whole. During the period 2000–2004, only in 2001 was the average annual GDP increase for African countries above the corresponding increase for developing economies. For the other years and the expectations for 2005 the disparities are significant and in favour of developing economies. Awareness that the situation needs to be corrected was evident in larger forums such as the G8 and the African Union.

A number of steps were taken towards reducing the gap in future years. The New Partnership for Africa's Development (NEPAD), which has identified

Table 46

Real GDP of developing countries of sub-Saharan Africa
(Annual percentage change)

Country/regional grouping	Type of country		Annual percentage change					
	Geographical	Economic	1995–2004	2001	2002	2003	2004	2005
Sub-Saharan African countries								
(a) West Africa								
Benin	C	LDC	5.2	5.0	6.4	5.5	2.7	3.9
Burkina Faso	LLC	LDC	5.3	5.7	4.6	8.0	4.8	3.5
Cape Verde	I	DC	7.1	4.7	4.9	5.3	5.5	6.3
Côte d'Ivoire	C		1.5	0.0	0.0	0.0	1.7	1.0
Gambia	C	LDC	4.8	5.8	-3.2	6.7	7.1	4.7
Ghana	C		4.4	4.2	4.5	5.2	5.2	5.8
Guinea	C	LDC	3.7	3.8	4.2	1.2	2.6	3.0
Guinea-Bissau	C	LDC	-1.9	0.2	-7.2	0.6	1.0	2.3
Liberia	C	LDC	-	-	-	-	-	-
Mauritania	C	LDC	4.4	4.3	3.3	4.9	4.6	5.4
Mali	LLC	LDC	5.0	12.1	4.3	6.0	4.5	6.4
Niger	LLC	LDC	3.3	7.1	3.0	5.3	0.9	4.2
Nigeria	C		3.9	3.1	1.5	10.7	4.0	3.9
Senegal	C	LDC	5.0	5.6	1.1	6.3	6.1	5.7
Sierra Leone	C	LDC	0.2	5.4	6.3	6.5	6.8	7.5
Togo	C	LDC	1.6	0.2	4.3	2.0	3.8	3.0
(b) Central Africa								
Angola	C	LDC	6.5	5.2	13.0	5.3	11.2	14.7
Burundi	LLC	LDC	1.0	2.2	4.5	-0.5	5.4	5.0
Cameroon	C		5.0	5.3	6.5	4.5	4.8	2.8
Central African Republic	LLC	LDC	1.1	0.3	-0.6	-7.5	2.3	2.2
Chad	LLC	LDC	6.4	8.7	9.7	11.9	31.0	5.9
Congo	C		2.8	2.9	5.4	0.8	4.0	9.2
Democratic Republic of the Congo	LLC	LDC	-1.4	-1.1	3.1	5.6	6.3	6.6
Equatorial Guinea	I	LDC	30.5	65.6	20.9	10.2	13.6	0.2
Gabon	C		-0.4	1.9	-0.1	1.0	1.5	2.2
Rwanda	LLC	LDC	7.6	6.7	9.3	0.7	3.8	4.0
Sao Tome and Principe	I	LDC	3.2	4.0	4.1	4.5	6.5	3.2
(c) Southern Africa								
Botswana	LLC		5.9	8.5	2.2	6.7	4.5	3.8
Lesotho	LLC	LDC	2.3	3.2	3.5	3.3	3.0	0.8
Malawi	LLC	LDC	2.6	-4.1	1.8	4.4	4.9	2.1
Mozambique	C	LDC	8.6	13.1	8.7	7.9	8.4	7.7
Namibia	C		3.2	0.6	2.5	3.7	3.5	3.6
Swaziland	LLC		2.8	1.8	3.6	2.2	1.5	2.0
Zambia	LLC	LDC	3.0	4.9	3.3	4.3	3.5	5.0
Zimbabwe	LLC		-3.3	-2.7	-4.4	-10.4	-5.0	-7.1

Table 46 (continued)

Country/regional grouping	Type of country		Annual percentage change					
	Geographical	Economic	1995–2004	2001	2002	2003	2004	2005
(d) Greater Horn and East Africa								
Djibouti	C	LDC	1.7	1.9	2.6	3.5	4.1	3.2
Eritrea	C	LDC	1.1	9.2	0.7	3.0	1.8	0.8
Ethiopia	LLC	LDC	4.2	7.7	1.6	-3.9	11.6	7.3
Kenya	C		1.4	1.1	1.1	1.7	2.3	4.7
Somalia	C	LDC	-	-	-	-	-	-
Sudan	C	LDC	5.2	6.4	6.5	6.1	7.3	8.0
Uganda	LLC	LDC	6.2	6.4	4.7	6.3	5.9	5.9
United Republic of Tanzania	C	LDC	6.7	6.2	7.2	7.1	6.3	6.9
(e) African countries of the Indian Ocean								
Comoros	I	LDC	0.9	2.3	2.3	2.1	1.8	2.8
Madagascar	I	LDC	2.7	6.0	-12.7	9.6	6.0	6.3
Mauritius	I		5.1	5.3	1.7	4.2	4.5	3.6
Seychelles	I		2.2	-1.9	0.3	-5.4	-2.0	-2.8
Countries along the northern coast of Africa								
Algeria	C		3.5	2.1	4.0	6.9	4.5	4.8
Egypt	C		4.3	3.2	3.1	4.1	4.8	4.8
Libyan Arab Jamahiriya	C		2.0	3.3	-0.2	5.6	2.8	4.3
Morocco	C		3.5	6.3	3.2	5.2	3.5	1.0
Tunisia	C		4.9	4.9	1.7	5.6	5.8	5.0
South Africa	C		2.8	2.7	3.6	2.8	3.7	4.3
Sub-Saharan Africa			3.5	3.8	3.5	4.0	4.7	4.1
Developing economies of Africa			3.6	3.7	3.3	4.6	4.6	4.5
Developing economies			4.1	2.8	3.9	5.0	6.4	6.4
Developed economies			2.5	1.2	1.2	2.0	3.1	2.5

Source: UNCTAD *Handbook of Statistics 2005,* table 7.2. Data for 2005 are from the IMF Weo database.

infrastructure as one of the major parameters for economic growth and poverty reduction, established the NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF) and nominated the African Development Bank as the lead agency for technical support. By 2004, two power-interconnection projects, one oil pipeline and one telecommunication project were thus approved. Then, in mid-2005, agile funding mechanisms were put in place with the conversion of NEPAD-IPPF into a untied multi-donor facility for supporting local governments and bodies in formulating viable infrastructure projects and attracting public–private investment partnerships. Also in mid-2005, but in a separate development, the debt of 18 countries to multilateral funding institutions was written off. About $40 billion was involved in this decision, with the majority of beneficiaries being African countries, namely Benin, Burkina Faso, Ethiopia, Ghana, Madagascar, Mali, Mauritania, Mozambique, Niger, Rwanda, Senegal, Uganda, the United Republic of Tanzania and Zambia.

The economic performance of individual countries, however, might fluctuate from year to year for a number of reasons, such as natural disasters, domestic or international political instability (7 of the 16 peacekeeping missions of the United Nations are located in sub-Saharan African countries), displacement of populations due to this instability, the sequel to armed conflict in or with neighbouring countries, price fluctuations for the main export commodities and annual levels of foreign investment, notably for oil exploration and extraction. Over the last few years, crisis control measures, improved domestic governance and a favourable international environment seem to have smoothed out previous wild fluctuation of annual growth output in most countries.

Several of these factors affected economic performance of countries in West Africa, whose overall performance for the period 2001–2004 was encouraging (12 out of 15 countries recorded a positive annual percentage output change), despite the effect of the appreciation of the euro that adversely affected Franc-Zone countries. In particular, the results for Ghana seem to indicate an accelerating trend. The $590 million offshore West Africa gas pipeline, linking the Delta region in Nigeria to Takoradi in Ghana, started to be built in 2005 to provide enough energy for Ghana and its neighbours, and follows the harsh fuel price increases of 90 per cent in 2003. The locust plague that destroyed large tracts of cultivated land in the region and destroyed up to one third of Mali's grain production of 2004 was partially responsible for the meagre positive result for Niger during that year and caused localized pockets of severe malnutrition in the country. The lowest 2004 growth for Benin occurred against a background of rising inflation and border closures by Nigeria. The high output increases for Sierra Leone from 2002 onwards were indicative of a recovery from the severely deteriorated economy of the previous years. After the dismal result for 2002, Nigeria, the largest economy in sub-Saharan Africa, managed to record good growth increases in spite of violence in the north and south of the country and strikes in the vital oil industry. Single-year contraction of output was recorded in two countries. The least encouraging was that of Guinea-Bissau for 2002, which seems to indicate that crisis bottomed in that year; the weak growth the following year coincided with elections to restore civilian rule and was followed by a more encouraging result for 2004. Domestic political turmoil was responsible for the 2000, 2002 and 2003 negative results for Côte d'Ivoire. Despite clashes with foreign peacekeeping forces, there was a recovery in 2004 and the forecast for 2005 is also positive. Normalization was still a prospect in Liberia, where even data have not been collected for many years.

In Central Africa 7 of the 11 countries recorded positive annual output increases for all years during the period 2001–2005. The ending of the war in Angola and increases in oil production explain the double-digit result for 2004 and the forecast for 2005. In the latter year, that country signed nine cooperation agreements with China, including for the development of a refinery and telecommunications networks as well as for long-term oil and gas supply to China. The impressive annual percentage output growth for Chad and Equatorial Guinea are due to oil and oil-related activities. In 2004 the oil pipeline for exporting Chad's oil from the Doba Basin through Cameroon's port was fully operating, and the oil bonanza in Equatorial Guinea was felt in the plans to build a new airport and capital for the country, as well as a gas-powered energy plant. The 2003 peace arrangements to end the war in Congo and set up a two-year transitional Government did not prevent sporadic clashes in eastern regions during the following years and even upset neighbouring Rwanda and Burundi, but have allowed positive growth since 2004. The stability achieved in the Congo since May 2003, when the fighting in the Pool region ended, made possible the 2004 agreements for mining magnesium using environmentally friendly brine well technology and building magnesium and aluminium smelters in Kouilou along the Atlantic coast. The project was subsequently delayed when plans to build a dam were added to provide energy originally scheduled to be supplied from a neighbouring country. The relatively modest annual percentage output growth for Sao Tome and Principe is set to increase with offshore oil production. This country agreed with Nigeria on an offshore joint development zone and the transparent splitting of the proceeds in accordance with an agreed proportion.

In Southern Africa, good harvests and increased investment in many countries explain the almost positive annual output growth until 2004 and the positive forecast for 2005. Most countries continued their steady economic growth, despite inflation in Malawi in 2004, with landlocked Botswana ranking first among African countries in terms of governance for that year. The exception to this favourable outlook is Zimbabwe, whose economy has contracted over the last five years and is now a net grain importer.

In East Africa and the Greater Horn, good performers were the Sudan, Uganda and the United Republic of Tanzania.

The demand for power for the expanding economy of the United Republic of Tanzania was responsible for the commissioning in late 2004 of the Songas power project. This provides natural gas power to the capital through a processing plant on Songo island and a 225 km pipeline to Dar-es-Salaam. Also, the country prepared plans for economic development around Lake Victoria, notably for using waters for irrigation, but this was deemed to threaten the livelihood of countries along the Nile river. After negotiations it was agreed to update the 1903 treaty before undertaking any action. In Sudan prospects for increased oil production were increased with the agreement to end the armed conflict in the south of the country in May 2004. Although unrest was reported in the western provinces during the following months, joint-venture plans with Indian partners were under way for expanding refineries in Khartoum and Port Sudan, and for the construction of a pipeline for export of oil products and a new port. Civil unrest is still affecting northern regions of Uganda, whose southern provinces benefit from substantial donor disbursements. In that region single-year negative results were recorded for Eritrea in 2000 and Ethiopia in 2003. Those countries maintained the truce despite Ethiopia's rejection of the ruling by the International Court of Justice, which in 2004 assigned to Eritrea a hotly contested town. The drought that affected 15 million people was responsible for the contraction of the Ethiopian economy during 2003. The bumper crop of the following year did not reach all the country, with populations living close to the northern Somali border being badly affected by a local drought, which led to the decision to resettle them to better areas of the country. Also in 2004, Eritrea had to resort to food aid because of a plague of locusts, while an attempt was being made to develop recently discovered gold and copper mines. Somalia was still unsettled, even though it had agreed to a transitional Government based in Kenya, and like Liberia was basically an informal economy. In Kenya the Government elected in 2003 was engaged mostly in improving transparency in the economy.

The economic performance of island countries in the Indian Ocean was affected by cyclones, as was the case twice in Madagascar in 2004, and by structural problems in Seychelles.

Relying on the overall positive annual GDP growth rate for African countries could be misleading, especially in the light of the UN Millennium Development Goal of halving poverty by 2015. As shown in table 47, in the figures for 2004 and the estimates for 2005, the majority of countries have annual growth rates of less than 7 per cent — the growth target deemed necessary for meeting that goal.

Table 47

Number of countries with positive annual GDP rates in 2004 and 2005

Range of GDP annual growth rate	2004	2005
From 0.0 to 3.9 per cent	20	22
From 4.0 to 6.9 per cent	23	21
More than 7 per cent	8	6
Total	51	49

B. TRADE STRUCTURE

During the period 1990–1999 the value of exports from Africa increased by 10.5 per cent to reach $116.6 billion, and the value of imports rose by 29.1 per cent to $128.1 billion. Over the last five years exports increased by 56.0 per cent to $231.7 billion, while imports rose by 58.6 per cent to $204.8 billion. The figures are shown in table 48. This difference is mainly due to the increases in prices for export commodities, notably crude oil. Overall, the share of Africa in world trade is modest and seems to be stable. In 1994 it stood at 2.2 per cent of the value of exports and 2.4 per cent for imports. Ten years later, in 2004, the corresponding values are 2.5 per cent for exports and 2.2 per cent for imports. Preliminary figures for 2005 seem to indicate a continuation of this trend.

The breakdown of the trade of the three major groups of countries on the continent is shown in table 49. In 2004, sub-Saharan African countries accounted for 45.5 per cent of African exports and 41.4 per cent of imports; for countries in North Africa the share of exports, 34.6 per cent, was higher than that of imports, 31.7 per cent; and South Africa accounted for 19.9 per cent of exports and 27.0 per cent of imports. These shares have been broadly stable over the period.

The destination of African exports by value is indicated in table 50. For 2004, Europe, notably the European Union, was the market for about 40 per cent of African exports, while North America was the destination for about 18 per cent. The share for Japan, China and other Asian countries was about 15 per cent, which is roughly the same share for exports to the Middle East, Latin America and other countries. Intra-Africa markets account for the balance of African exports — about 10 per cent.

The breakdown of African exports to the European Union for 2004 is as follows: crude oil, gas and petroleum products accounted for 43.7 per cent of total exports, with 32.1 per cent corresponding to manufactures and 16.2 per cent to agricultural products. The corresponding percentages for African exports to North America are 76.0, 14.3 and 3.1 per cent respectively. Also in 2004,

Table 48

Merchandise trade of Africa

Year	Billion of $		Percentage annual growth		World share in % for	
	Exports	Imports	Exports	Imports	Exports	Imports
1990	105.5	99.2			3.1	2.8
1991	99.8	94.7	-5.4	-4.5	2.9	2.7
1992	96.9	100.6	-2.9	6.2	2.6	2.7
1993	93.0	98.4	-4.0	-2.2	2.5	2.6
1994	96.8	106.1	4.1	7.8	2.3	2.5
1995	111.5	126.5	15.2	19.2	2.2	2.5
1996	125.0	125.1	12.1	-1.1	2.4	2.3
1997	127.3	132.3	1.8	5.8	2.4	2.4
1998	105.4	132.5	-17.2	0.2	2.0	2.4
1999	116.6	128.1	10.6	-3.3	2.1	2.2
2000	148.5	129.1	27.4	0.8	2.4	2
2001	137.9	134.0	-7.1	3.8	2.4	2.2
2002	140.1	136.6	1.6	1.9	2.2	2.2
2003	175.1	162.8	25.0	19.2	2.4	2.2
2004	231.7	204.8	32.3	25.8	2.6	2.3

Source: UNCTAD secretariat from WTO *International Trade Statistics 2002,* Appendix Tables A4 and A5, and WTO *International Trade Statistics* 2005, Appendix Table A2.

Table 49

Composition of African trade by blocs

Year		Billions of dollars				Percentage			
		All Africa	Sub-Saharan Africa	Northern Africa	South Africa	Sub-Saharan Africa	Northern Africa	South Africa	
2002	Exports	140.1	62.3	48.1	29.7	44.4	34.3	21.2	100.0
	Imports	136.8	56.8	50.7	29.3	41.5	37.1	21.4	100.0
2003	Exports	175.2	76.5	62.2	36.5	43.7	35.5	20.8	100.0
	Imports	162.8	70.0	52.7	40.1	43.0	32.4	24.7	100.0
2004	Exports	231.7	105.4	80.2	46.0	45.5	34.6	19.9	100.0
	Imports	204.8	84.8	64.8	55.2	41.4	31.7	27.0	100.0

Source: UNCTAD secretariat from WTO *International Trade Statistics 2005*, Appendix — Trade by Region and Selected *Countries*, Tables A6 and A7.

Table 50

Destination of African exports in term of value

Destination markets for exports	Billion of dollars			Percentages		
	2002	2003	2004	2002	2003	2004
Exports to world	140.1	175.1	231.7	100.0	100.0	100.0
European Union	65.9	78.3	90.7	47.0	44.7	39.1
North America	20.9	31	43.2	14.9	17.7	18.6
Japan	4.2	4.8	7.0	3.0	2.7	3.0
China	4.5	7.2	13.5	3.2	4.1	5.8
Other Asian countries	12.5	14	18.2	9.0	8.0	7.9
Latin America	2.9	3.7	6.8	2.0	2.1	2.9
Middle East	2.6	2.9	3.3	1.9	1.7	1.4
Intra-Africa	15.5	18.9	23.1	11.1	10.8	10.0
Others	11.0	14.3	25.9	7.9	8.2	11.2

Source: UNCTAD secretariat from WTO *International Trade Statistics* 2005, Appendix Table A2.

the share of fuels in African exports to China was 64.7 per cent while the share of manufactures and agricultural products was 16.3 per cent each. For the same year the share of fuels in exports to Japan was much lower, 43.7 per cent, while the shares for manufactures and agricultural products were 16.3 per cent each.

Exports from sub-Saharan Africa to the United States increased from $13.9 billion in 2002 to $29.9 billion in 2004. Oil-exporting countries accounted for most of the increase between these years: Nigerian exports almost trebled to $16.2 billion in 2004, while those of Equatorial Guinea more than doubled to $1.2 billion and Angolan ones increased by a third to $4.5 billion. Small oil producers recorded more impressive increases — Chad from $5.7 million to $756 million and the Congo from $182.1 million to $857.6 million. Diversification of sub-Saharan African exports to the US market is being actively promoted as a result of the African Growth and Opportunity Act (AGOA) of 2000, whereby African consumption products are procured by major US

retailers. The potential for increased agricultural exports, however, seems to be also contingent on WTO rulings. In early 2005 that organization ruled against US subsidies to domestic cotton producers and, in welcoming the ruling, four West African cotton-producing countries reiterated their call for the total elimination of these subsidies. Overall, the share of sub-Saharan Africa exports to the United States accounted for 28.4 per cent of the total and dwarfed the share of imports from that country — only 6.4 per cent of the total $5.4 billion recorded for 2004.

Table 51 shows the main African trading groups and their shares of export and import within the group and with the rest of Africa. Overall, trading within the group and with the rest of Africa remains low and undiversified. UEMOA ranks first in terms of intra-group exports (14.2 per cent), followed by ECOWAS (9.4 per cent) and SADC (9.3 per cent). Trade with the rest of Africa remains modest, with UEMOA ranking first in terms of exports (16.1 per cent), followed by CEPGL (12.5 per cent) and MRU (6.2 per cent). The share of imports of these groups with the rest of Africa amounted to 38.1 per cent for CEPGL, 16.2 per cent for ECCAS, 14.1 per cent for CEMAC and 13.4 per cent for UEMOA. In 2004, the trade of those groups with the rest of the world was more substantial — on average, over 85 per cent of the trade is destined for or originates outside Africa.

C. MARITIME TRANSPORT

In 2005 the African merchant fleet, including open registers (i.e. Liberia), totalled 98,563 thousand dwt, that is 10.3 per cent of the world fleet (see table 52). The African fleet without open registers totalled 5,537 thousand dwt; this is equivalent to 2.1 per cent of the fleet of developing countries and 0.6 per cent of the world fleet. There is a long-term decrease in shares of African fleets in the world fleets: the one including open registers decreased from 24.3 to 10.7 per cent between 1980 and 2000, while the one without open registers decreased from 1.1 to 0.8 per cent during the same period.

In 2005, the merchant fleet of countries in North Africa (Algeria, Egypt, Libyan Arab Jamahiriya, Morocco and Tunisia) and South Africa totalled 3.229 million dwt, which is equivalent to 58.3 per cent of the African merchant fleet without major open registry. The balance corresponded to the merchant fleet of sub-Saharan African countries. These countries, however, have increased their tonnage from 1.773 million to 2.308 million dwt in the last three years and their share in the African merchant fleet, without major open registry, increased from 33 per cent in 2002 to 41.7 per cent in 2005. The largest increase has been in countries of the Indian Ocean, which more than doubled their tonnage during the period.

The African merchant fleet without major open registry is evenly spread between different types of vessels, the exception being the very low level of containerized cellular tonnage that accounts only for only 3.4 per cent of the total.

By the end of 2005 the average age of the merchant fleet of African developing countries, including major open registry, was 11.8 years and was therefore lower than the average age of the world merchant fleet, which was 12.2 years (see table 53). However, the average age of this fleet without taking into account major open registry was much older — 20.5 years. In both cases containerships were the youngest, recording 6.9 and 12.3 years respectively, while general cargo ships were the oldest with 17.3 and 22.1 years respectively. Comparison of the 2005 average age with the ages indicated in the same table for 2002 is not possible, since for that year the average age corresponds to that of the African sub-Saharan fleet only. For individual countries, however, fleet age comparisons between 2005 and 2002 are indeed possible.

The most recent estimates for the total of goods loaded and unloaded in African ports fluctuates around 860 million tons per year, with the share of sub-Saharan countries being above a third, namely 300 million tons. Hence the continent accounts for 6.1 per cent of the worldwide loaded and unloaded cargo, while sub-Saharan Africa accounts for almost 2.1 per cent of that total.

There is a considerable imbalance in the total cargo moved by sub-Saharan countries since loaded goods average 230 million tons per year, while the figure for unloaded ones, being less than a third of that total, is 70 million tons. The bulk of loaded cargo estimated at almost 200 million tons is crude oil from oil- exporting countries of West Africa, notably Nigeria, Gabon, Angola and recently Equatorial Guinea. Most of the balance is dry bulk cargo, bauxite from Guinea and iron ore from Mauritania, which fluctuates at around 15 million tons per year. The remaining tonnage of loaded cargo and

Table 51

Africa trade of main African trading groups in 2004

	Share of exports (percentage)		Share of imports (percentage)	
	Intra-group	**Rest of Africa**	**Intra-group**	**Rest of Africa**
Economic Community of the Great Lakes Countries (CEPGL): Burundi, Democratic Republic of the Congo, Rwanda	1.2	12.5	1.0	38.1
Common Market for Eastern and Southern Africa (COMESA): Angola, Burundi, Comoros, Democratic Republic of the Congo, Egypt, Ethiopia, Eritrea, Djibouti, Kenya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, Zimbabwe	6.2	5.3	4.3	8.5
Economic Community of Central African States (ECCAS): Angola, Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Rwanda, Sao Tome and Principe	1.0	2.8	2.4	16.2
Economic Community of West African States (ECOWAS): Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	8.2	4.3	9.4	3.6
Mano River Union (MRU): Guinea, Liberia, Sierra Leone	0.4	6.2	0.1	5.0
Southern African Development Community (SADC): Angola, Botswana, Democratic Republic of the Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia, Zimbabwe	8.8	3.4	9.3	2.4
Economic and Monetary Community of Central Africa (CEMAC): Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon	1.2	2.5	3.3	14.1
West African Economic and Monetary Union (UEMOA): Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, Togo	14.2	16.1	9.5	13.4
Arab Maghreb Union (UMA): Algeria, Libyan Arab Jamahiriya, Mauritania, Morocco, Tunisia	2.4	1.3	3.1	1.4

Source: UNCTAD secretariat estimates based on data from the International Monetary Fund and UN DESA; UNCTAD *Handbook of Statistics 2005*, table 1.4 ("Intra-trade of regional or trade groups").

Table 52

African fleet
(In thousand dwt)

	Year	Total	Tanker	Dry bulk	General cargo	Container ships	Other
World total	1980	682 768	339 324	185 652	115 824	11 243	30 725
	1990	658 377	245 936	234 659	102 676	25 955	49 151
	2000	808 377	285 442	281 655	102 653	69 216	69 412
	2002	844 234	304 396	300 131	97 185	82 793	59 730
	2005	959 964	354 219	345 924	96 218	111 095	52 508
African fleet with open registers	1980	165 622	108 085	45 295	7 540	798	3 903
	1990	106 494	57 877	31 677	7 515	2 230	7 195
	2000	86 383	38 189	23 432	6 356	8 011	10 395
	2002	82 422	38 634	20 769	5 421	11 569	6 030
	2005	98 563	51 219	20 913	4 298	16 710	5 423
African fleet without open registers	1980	7 644	3 615	549	2 573	241	667
	1990	7 268	2 406	1 040	2 095	226	1 501
	2000	6 321	1 572	1 257	1 735	428	1 329
	2002	5 406	1 215	1 337	1 447	139	1 269
	2005	5 537	1 527	1 275	1 270	189	1 275
Liberia	1980	157 978	104 470	44 746	4 967	557	3 236
	1990	99 226	55 471	30 637	5 420	2 004	5 694
	2000	80 062	36 617	22 175	4 621	7 583	9 066
	2002	77 016	37 419	19 432	3 974	11 430	4 761
	2005	93 026	49 692	19 637	3 028	16 521	4 148
North Africa	1980	4 820	3 093	262	967	1	498
	1990	5 415	1 952	1 040	1 276	10	1 137
	2000	4 309	981	1 236	1 062	92	938
	2002	3 575	490	1 186	896	108	895
	2005	3 115	588	1 054	570	154	749
South Africa	1980	839	63	287	190	240	59
	1990	299	1	0	0	216	82
	2000	368	5	0	0	262	101
	2002	59	4	0	0	30	25
	2005	114	10	0	0	30	74
Sub-Saharan Africa	1980	1 985	459	0	1 416	0	110
	1990	1 554	453	0	819	0	282
	2000	1 644	586	21	673	74	290
	2002	1 773	721	151	551	2	349
	2005	2 308	929	221	701	5	452
West Africa	1980	1 309	277	0	966	0	66
	1990	1 102	439	0	451	0	212
	2000	877	529	0	164	0	184
	2002	871	594	0	99	0	178
	2005	825	487	13	82	0	242

Table 52 (continued)

	Year	Total	Tanker	Dry bulk	General cargo	Container ships	Other
Central Africa	1980	362	141	0	191	0	30
	1990	155		0	121	0	34
	2000	305	17	16	222	5	45
	2002	214	23	29	101	2	60
	2005	225	75	29	61	0	60
East Africa	1980	181	26	0	148	0	7
	1990	146	10	0	120	0	16
	2000	232	23	0	195	0	14
	2002	235	31	0	185	0	19
	2005	207	24	0	153	0	30
Indian Ocean	1980	133	15	0	111	0	7
	1990	151	4	0	127	0	20
	2000	230	17	5	92	69	47
	2002	452	73	122	165	0	93
	2005	1 051	342	179	405	5	120

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register — Fairplay.

about 90 per cent of total unloaded cargo are general cargo, which is increasingly carried in containers. About one tenth of unloaded cargo is refined petroleum products such as gasoline.

General cargo is carried to a large extent by containerized shipping services. Also, there are general cargo back-up services to many ports as well as services for specific port ranges. For instance, dhow traffic is found in the Horn and East Africa, while other specialized traffics such as those of logs and timber are prevalent in West Africa.

Container traffic flow between Africa and Europe is the largest for the continent and in 2004 reached 3.3 million TEUs; the corresponding flow between Africa and North America was only one tenth of that amount. Moreover, the largest traffic flow is heavily imbalanced, with the northbound container flow being only one third of the total. Container traffic flows with Asia are expanding fast, in particular with sub-Saharan Africa. International transport for this subregion is dominated by two sea carriers, namely Delmas, a subsidiary of Bollore, and Maersk, with estimated shares of 30 and 25 per cent respectively. The balance is carried by a number of other, lesser sea carriers, including Gold Start Line from Hong Kong (China), which specializes in intra-Asia trade and is rapidly expanding into both coasts of sub-Saharan Africa. In late 2005 this line launched direct services from Chennai (India) to West African destinations via Réunion. However, the absorption of sub-Saharan Africa trade volumes by the world's top sea container carriers continued in 2005 with the purchase of all of Bollore's liner businesses by CMA-CGM for $600 million. Top sea carriers often make use of large hubs — for example, Maersk uses Algeciras (Spain) and Salalah (Oman), and MSC uses Las Palmas (Spain) — to cover this traffic. At the south end, in spite of Durban's congestion and sluggish productivity, this port is used by other carriers.

Table 54 indicates the traffic flow in the containerized route linking the West Coast of Africa and Europe. Actual figures are given for 2003 and 2004, while those for 2005 are forecasts only. Trade imbalance is a major feature of this route, with the southbound flow accounting for around 66 per cent of total traffic.

Along the East Coast and in the Indian Ocean the emergence of trans-shipment and the resulting measures to palliate the build-up of congestion were the main feature of recent years (see table 55). Trans-shipment

Table 53

Age distribution of African fleet
(Percentage of total dwt)

Country or grouping	Types of vessel	0-4 years	5-9 years	10-14 years	15-19 years	20 years and over	Average age at end 2005	Average age at end 2002
World total	All ships	24.2	21.2	16.8	10.6	27.1	12.2	12.6
	Tankers	31.6	22.0	19.7	12.4	14.3	10.0	11.6
	Bulk carriers	19.7	21.6	16.6	10.2	32.0	13.1	12.7
	General cargo	8.6	13.9	10.6	9.6	57.4	17.5	17.0
	Containerships	32.1	28.3	17.3	8.2	14.0	9.4	9.1
	Others	18.2	14.5	11.2	8.8	47.3	15.3	16.0
Merchant fleet of African developing countries, including major open-registry (see note)	All ships	23.5	21.0	20.8	12.5	22.3	11.8	10.8
	Tankers	25.6	17.9	23.8	16.7	16.0	11.2	10.8
	Bulk carriers	9.7	25.8	21.9	10.5	32.2	14.0	11.9
	General cargo	1.9	23.4	10.0	12.6	52.1	17.3	14.0
	Containerships	46.1	27.7	15.6	4.5	6.2	6.9	6.7
	Others	9.6	12.3	14.7	7.1	56.2	17.2	12.4
Merchant fleet of African developing countries without major open-registry (see note)	All ships	2.9	8.5	5.6	5.4	77.6	20.5	22.1
	Tankers	7.7	1.5	1.4	0.0	89.4	21.4	22.9
	Bulk carriers	0.6	22.1	15.1	0.0	62.2	18.0	21.8
	General cargo	0.8	1.8	1.9	10.7	84.7	22.1	21.3
	Containerships	0.0	54.8	8.8	17.7	18.7	12.3	23.5
	Others	2.6	3.8	4.1	9.4	80.1	21.2	20.5
Algeria	All ships	0.9	0.0	1.4	0.0	97.7	23.2	n.a.
	Tankers	0.0	0.0	14.6	0.0	85.4	21.8	n.a.
	Bulk carriers	0.0	0.0	0.0	0.0	100.0	23.5	n.a.
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	n.a.
	Containerships	-	-	-	-	-	-	n.a.
	Others	1.7	0.1	1.2	0.0	97.0	23.0	n.a.
Angola	All ships	0.0	5.0	0.0	6.6	88.5	22.3	21.7
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	13.4	86.6	22.6	23.0
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	8.1	0.0	4.3	87.6	21.9	19.3
Benin	All ships	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	-	-	-	-	-	-	0.0
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	0.0	0.0	100.0	23.5	23.5
Cameroon	All ships	0.0	2.0	0.0	0.9	97.2	23.1	21.0
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	24.8	0.0	10.6	64.6	18.7	20.6

Table 53 (continued)

Country or grouping	Types of vessel	0-4 years	5-9 years	10-14 years	15-19 years	20 years and over	Average age at end 2005	Average age at end 2002
Cape Verde	All ships	0.0	2.9	2.9	3.0	91.2	22.5	22.1
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	4.9	4.8	0.4	90.0	22.1	21.9
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	0.0	11.6	88.4	22.7	21.1
Comoros	All ships	0.0	0.0	0.0	2.3	97.7	23.3	23.4
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	General cargo	0.0	0.0	0.0	4.8	95.2	23.2	22.9
	Containerships	0.0	0.0	0.0	0.0	100.0	23.5	0.0
	Others	0.2	0.0	0.9	1.1	97.8	23.3	21.9
Congo	All ships	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	-	-	-	-	-	-	0.0
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	0.0	0.0	100.0	23.5	23.5
Congo, Democratic Republic of the	All ships	0.0	0.0	3.0	0.0	97.0	23.2	23.1
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	3.5	0.0	96.5	23.1	23.1
Côte d'Ivoire	All ships	0.0	0.0	0.0	1.1	98.9	23.4	23.5
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	-	-	-	-	-	-	0.0
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	0.0	1.5	98.5	23.4	23.5
Djibouti	All ships	0.0	2.7	0.0	0.0	97.3	23.1	21.6
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	14.5	0.0	0.0	85.5	21.1	18.7
Egypt	All ships	1.6	22.2	13.6	4.8	57.9	17.6	n.a.
	Tankers	0.2	0.0	0.2	0.0	99.6	23.4	n.a.
	Bulk carriers	0.0	38.1	26.0	0.0	35.9	14.2	n.a.
	General cargo	1.8	4.6	4.7	19.4	69.5	20.6	n.a.
	Containerships	0.0	100.0	0.0	0.0	0.0	7.0	n.a.
	Others	15.1	1.8	7.1	8.1	67.9	18.6	n.a.

Table 53 (continued)

Country or grouping	Types of vessel	0-4 years	5-9 years	10-14 years	15-19 years	20 years and over	Average age at end 2005	Average age at end 2002
Equatorial Guinea	All ships	0.0	5.9	0.0	29.7	64.3	20.6	22.1
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	24.2	0.0	0.0	75.8	19.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	0.0	40.5	59.5	20.9	21.6
Eritrea	All ships	0.0	1.4	0.5	0.0	98.0	23.2	23.1
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	12.8	4.8	0.0	82.5	20.8	20.0
Ethiopia	All ships	0.0	0.0	0.0	18.6	81.4	22.3	16.3
	Tankers	-	-	-	-	-	-	12.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	18.6	81.4	22.3	16.5
	Containerships	-	-	-	-	-	-	0.0
	Others	-	-	-	-	-	-	0.0
Gabon	All ships	0.0	9.5	0.0	18.9	71.6	20.7	19.5
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	14.1	0.0	12.9	73.0	20.3	18.7
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	6.3	0.0	29.5	64.1	20.5	19.5
Gambia	All ships	40.1	4.7	0.0	0.0	55.2	14.1	18.2
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	100.0	0.0	0.0	0.0	0.0	2.0	0.0
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	30.7	0.0	0.0	69.3	18.4	18.2
Ghana	All ships	0.0	0.2	0.6	10.4	88.7	22.7	23.0
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	22.8
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.3	0.8	13.5	85.4	22.5	23.0
Guinea	All ships	0.0	0.9	0.0	2.1	97.1	23.2	23.2
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.9	0.0	2.2	96.9	23.2	23.2

Table 53 (continued)

Country or grouping	Types of vessel	0-4 years	5-9 years	10-14 years	15-19 years	20 years and over	Average age at end 2005	Average age at end 2002
Guinea-Bissau	All ships	0.0	0.0	0.0	6.9	93.1	23.1	23.1
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	0.0	7.7	92.3	23.0	23.0
Kenya	All ships	5.0	0.9	10.1	11.3	72.7	20.4	20.7
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	76.9	0.0	23.1	14.7	14.7
	Containerships	-	-	-	-	-	-	0.0
	Others	12.0	2.1	2.1	27.1	56.8	18.6	19.5
Libyan Arab Jamahiriya	All ships	0.1	8.7	9.8	24.9	56.6	19.3	n.a.
	Tankers	0.0	67.6	0.0	0.0	32.4	12.3	n.a.
	Bulk carriers	-	-	-	-	-	-	n.a.
	General cargo	0.0	0.0	0.0	30.5	69.5	21.5	n.a.
	Containerships	-	-	-	-	-	-	n.a.
	Others	0.2	0.2	36.8	24.0	38.8	17.6	n.a.
Madagascar	All ships	0.0	0.6	6.2	2.5	90.7	22.5	22.3
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	5.4	0.0	94.6	22.9	23.0
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	3.1	15.5	12.2	69.3	20.4	19.1
Mauritania	All ships	0.0	5.1	0.2	15.2	79.4	21.6	20.7
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	5.2	0.3	15.7	78.8	21.6	20.6
Mauritius	All ships	11.0	5.1	30.9	8.7	44.3	16.2	14.4
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	100.0	0.0	0.0	0.0	0.0	2.0	4.0
	General cargo	0.0	23.0	0.0	31.8	45.2	17.6	14.9
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.3	45.5	2.9	51.2	18.0	19.1
Morocco	All ships	0.4	10.6	7.5	26.2	55.3	19.1	n.a.
	Tankers	0.0	51.5	48.5	0.0	0.0	9.4	n.a.
	Bulk carriers	-	-	-	-	-	-	n.a.
	General cargo	0.0	2.1	9.8	8.6	79.6	21.5	n.a.
	Containerships	0.0	30.5	14.6	29.2	25.7	14.9	n.a.
	Others	0.7	1.7	1.4	30.8	65.4	20.9	n.a.

Table 53 (continued)

Country or grouping	Types of vessel	0-4 years	5-9 years	10-14 years	15-19 years	20 years and over	Average age at end 2005	Average age at end 2002
Mozambique	All ships	0.0	32.4	1.9	10.1	55.6	17.3	15.3
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	7.5	92.5	23.0	22.6
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	52.7	3.2	11.8	32.4	13.7	10.8
Nigeria	All ships	0.7	1.7	1.1	0.1	96.4	22.9	23.1
	Tankers	0.0	1.3	1.3	0.0	97.4	23.1	23.5
	Bulk carriers	0.0	0.0	0.0	0.0	100.0	23.5	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	21.4
	Containerships	-	-	-	-	-	-	0.0
	Others	3.6	3.9	0.9	0.3	91.3	22.0	20.2
Sao Tomé and Principe	All ships	0.0	0.0	0.0	0.0	100.0	23.5	23.1
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	21.0
	Bulk carriers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	23.5
	Others	0.0	0.0	0.0	0.0	100.0	23.5	23.5
Senegal	All ships	1.4	1.5	0.0	8.3	88.8	22.4	22.2
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	19.3
	Containerships	-	-	-	-	-	-	0.0
	Others	1.6	1.7	0.0	9.3	87.5	22.3	22.4
Seychelles	All ships	78.8	6.0	0.3	2.6	12.2	5.4	10.9
	Tankers	100.0	0.0	0.0	0.0	0.0	2.0	2.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	16.3	11.6	0.0	72.1	19.5	19.1
	Containerships	-	-	-	-	-	-	0.0
	Others	1.8	29.7	0.0	14.2	54.4	17.3	16.3
Sierra Leone	All ships	0.0	0.0	0.1	7.2	92.7	23.0	22.9
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	27.2	72.8	21.7	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	1.0	25.9	73.2	21.7	20.7
Somalia	All ships	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	0.0	0.0	100.0	23.5	23.5

Table 53 (continued)

Country or grouping	Types of vessel	0-4 years	5-9 years	10-14 years	15-19 years	20 years and over	Average age at end 2005	Average age at end 2002
Saint Helena	All ships	0.0	51.6	0.0	0.0	48.4	15.0	23.5
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	-	-	-	-	-	-	0.0
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	51.6	0.0	0.0	48.4	15.0	23.5
Sudan	All ships	3.3	0.0	0.0	0.0	96.7	22.8	23.5
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	40.0	0.0	0.0	0.0	60.0	14.9	23.1
Togo	All ships	0.0	0.0	0.0	4.2	95.8	23.2	23.4
	Tankers	-	-	-	-	-	-	0.0
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	0.0	0.0	5.9	94.1	23.1	23.4
Tunisia	All ships	0.1	12.7	0.2	0.4	86.6	21.3	n.a.
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	n.a.
	Bulk carriers	0.0	0.0	0.0	0.0	100.0	23.5	n.a.
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	n.a.
	Containerships	-	-	-	-	-	-	n.a.
	Others	0.2	36.3	0.7	1.2	61.6	17.3	n.a.
United Republic of Tanzania	All ships	0.0	0.7	0.0	0.1	99.2	23.4	23.2
	Tankers	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Bulk carriers	-	-	-	-	-	-	0.0
	General cargo	0.0	0.0	0.0	0.0	100.0	23.5	23.5
	Containerships	-	-	-	-	-	-	0.0
	Others	0.0	16.2	0.0	2.0	81.8	20.7	21.5

Note: The fleet age at the end of 2002 is for sub-Saharan African countries only.

Table 54

Container traffic between the West Coast of Africa and Europe
(In thousands of TEUs)

Year	Southbound flow	Northbound flow
2003	534	278
2004	532	281
2005	556	286

Source: *Containerisation International*, September 2005, p. 5.

Table 55

Total and trans-shipment throughput in selected ports and years
(In thousands of TEUs)

Description	Dar-es-Salaam	Port Louis	Djibouti
2002 throughput	167	176	177
Trans-shipment	25	20	67
Trans-shipment percentage	15	11	38
2003 throughput	204	319	241
Trans-shipment	37	146	105
Trans-shipment percentage	18	46	44
2004 throughput	256	410	157
Trans-shipment	56	221	5
Trans-shipment percentage	22	54	3

Source: UNCTAD secretariat from PMAESA presentation to the World Bank Transport Forum, March 2005, Washington, DC.

featured prominently in Port Louis when several lines made agreements to use it as a hub, and as a result the share in the total throughput increased from 11 to 54 per cent in just two years. By 2004 berthing delays had shot up to 20 hours per ship and berth occupancy was above 80 per cent. This congestion made it necessary to take remedial measures, such as procuring additional handling equipment, revamping terminal operations and adopting the "berth window scheme". Although in the case of Djibouti the trans-shipment share was only 44 per cent, this was deemed unacceptable to the main customer, PIL, which moved back to Aden, so that by 2004 the trans-shipment share had gone down to only 3 per cent. A substantial share of the throughput of this port is transit cargo for landlocked Ethiopia. Trans-shipment traffic increased in Dar-es-Salaam from 15 per cent of the 2002 throughput to 22 per cent two years later, without adversely affecting the quality of service.

The development of trans-shipment cannot be seen in isolation from the involvement of specialized container terminal operators in cargo-handling activities. In Mauritius, there was a public-sector cargo- handling company, while HPH was operating in Dar and DPI in Djibouti.

Table 56 shows the top 20 African container ports for 2004 and their throughputs for that year and the previous one. These ports make up three quarters of the total container throughput for African ports. Sixteen of the 31 coastal and island countries are listed, with South Africa and Egypt having more than one entry — four and two ports respectively. Although many of the African ports recorded significant throughput increases in recent years, their total throughput in relation to the world's total remains modest at about 3.3 per cent.

Table 56

Top African container ports for 2004

2004 Rank	Port	Country	TEUs 2004	TEUs 2003	Percentage change
1	Durban	South Africa	1 717	1 511	13.6
2	Damietta	Egypt	1 263	955	32.2
3	Abidjan	Côte d'Ivoire	670	613	9.4
4	Cape Town	South Africa	570	533	6.9
5	Casablanca	Morocco	492	448	9.8
6	Lagos	Nigeria	444	486	-8.7
7	Mombasa	Kenya	404	331	22.3
8	Tema	Ghana	340	350	-2.9
9	Dakar	Senegal	331	281	17.7
10	Port Elizabeth	South Africa	323	274	17.6
11	Port Louis	Mauritius	290	381	-23.9
12	Dar-Es-Salaam	United Republic of Tanzania	260	204	27.5
13	Luanda	Angola	235	210	12.1
14	Port Sudan	Sudan	206	157	31.2
15	Port Reunion	Reunion	193	170	13.5
16	Lome	Togo	185	166	11.1
17	Djibouti	Djibouti	159	244	-34.8
18	Sokhna	Egypt	155	122	27.2
19	Toamasina	Madagascar	105	95	10.8
20	East London	South Africa	60	56	7.3
	Total top 20		8 402	7 587	10.7
	Total all African ports		11 239	9 661	16.3
	Top twenty share in African ports		74.8	78.5	

Source: *Containerisation International Yearbook, 2006.*

The largest share of Africa's container throughput is handled in terminals under the control of the public sector — 88.2 per cent and 83.9 per cent in 2003 and 2004 respectively. The share of global container terminal operators in the remaining share has continued to increase — from 5.4 per cent in 2003 to 11 per cent in 2004. For the latter year a breakdown by operator reveals the following shares — SSA Marine 2.3 per cent, DPI 2 per cent, APM Terminals 1.4 per cent, HPH 0.5 per cent and P&O Ports 0.2 per cent.

Further improved operational efficiency and investments continued to be sought by Governments through the landlord port model. This was apparent in West Africa with the concession, in March 2004, of the Vridi Container Terminal in Abidjan to SEDV (a subsidiary of Bollore) and, in 2005, of two container terminals in Lagos — in April the Apapa Terminal was awarded to Maersk and in September the Tin Can Island Terminal was awarded to Bollore associated with Gold Star Lines. Bollore's land-based transport businesses, such as port terminals, freight forwarding, ship agencies, and road and rail companies, were not divested to CMA-CGM and are important players in several ports of the region such as Douala (Cameroon), Cotonou (Benin) and Tema (Ghana).

The alternative approach was followed by South Africa during 2005. Ports in that country were adversely affected by lack of investment and militant labour opposition to changing the current institutional set-up. Transnet, the holding encompassing transport businesses at the national level, including ports, was authorized to invest up to $8.8 billion to rehabilitate railways and ports

over the next five years using reserves and loans from the capital markets.

An indication of freight rate evolution 2003–2005 is provided by the rate restorations announced by the Europe West Africa Trade Agreement (EWATA) during that period. The latter was established for sea carriers in late 1999 in accordance with EU Regulation 4056/86 and is responsible for a large share of the international traffic of sub-Saharan Africa. During 2003 there were rate restorations in April and October for southbound 20' containers of 350 euro each. In 2004 the rate restorations were for March and October for southbound 20' containers. The one in March fluctuated between 100 and 300 euros according to the port of destination, while the one in October was 200 euros for all ports. In October there were northbound rate restorations for conventional cargo of 7.50 euros per freight ton. During 2005, rate restorations were announced for January and July for southbound 20' containers of 150 and 250 euros respectively. Rate restorations for northbound conventional cargo were also made in those months for 5 and 12 euros per freight ton.

D. LINER SHIPPING CONNECTIVITY INDEX FOR AFRICAN COUNTRIES

Access to regular and frequent shipping services is an important trade enabler and a determining factor of nations' competitiveness. In 2004, the UNCTAD secretariat developed a measure specific to maritime containerized liner trade — the *Liner Shipping Connectivity Index* (LSCI) — to quantify this factor of countries' competitiveness. The LSCI is built up by taking nine elements into consideration and ranges from 100 to zero. Countries with a high index benefit from regular and frequent shipping services that place them at the centre of international trading activity, while those with a lower index are on the periphery of such activity. Therefore, the index measures the connectivity of a country to international trade. Box 4 describes the LSCI and the way in which it is elaborated.

Table 57 displays African countries 2004 and 2005 LSCI levels. The top three, and best connected countries, were Egypt, South Africa and Côte d'Ivoire, while Sao Tome and Principe, Eritrea and Somalia were the least connected African countries.

A number of countries, among them the top two, increased their index between 2004 and 2005. The LSCI for Egypt and South Africa moved up from 41 to 47 and from 27 to 29 respectively. Egypt benefits from the Suez Canal and, because of the recent commissioning of trans-shipment port facilities, also from additional port calls of vessels deployed on the booming Asia–Europe route. South Africa enjoys a broad cargo base from national and neighbouring countries' economies. Fourteen other African countries also improved their LSCI in 2005 (Angola, Cape Verde, Djibouti, Ghana, Guinea, Guinea-Bissau, Kenya, Mauritania, Seychelles, Sudan, Sao Tome and Principe, United Republic of Tanzania, Gambia and Tunisia), with Djibouti, Guinea-Bissau, Kenya and Mauritania recording the best performance. The LSCI growth of these countries is due to recent global trade growth and to improved shipping services brought about by port reform and private sector involvement in cargo handling. Concessions granted to global terminal operators, including operators affiliated to liner shipping companies, helped to improve performance and attracted not only parent liner shipping companies, but also other shipping lines as well. In other cases there were other factors at work. In Ghana, the index improvement was partly due to increased capacity deployed by shipping lines to cope with traffic diverted from neighbouring Côte d'Ivoire, while in Djibouti the index went up as a reflection of increased ship calls to cater for increased trade from landlocked Ethiopia.

Other countries witnessed a drop in the index. Côte d'Ivoire's LSCI dropped from 25 to 20 as a result of businesses lost to ports of neighbouring countries. Nevertheless, this country continued to rank high thanks to resilient local traffic and trans-shipment activity. Nine other countries saw their LSCI position deteriorate in 2005 (Comoros, Congo, Equatorial Guinea, Eritrea, Madagascar, Mauritius, Senegal, Somalia and Togo), with the sharpest declines recorded by Comoros, Eritrea, Madagascar and Somalia. The drastic decline of Mauritius's LSCI is due to the 2004 congestion that led some shipping companies, such as MOL and P&O Nedlloyd, to modify their schedules — the latter replaced the trans-shipment in Port Louis with a direct service from Singapore to Indian Ocean islands. Finally, 12 countries maintained their 2004 LSCI (Algeria, Benin, Cameroon, Democratic Republic of the Congo, Gabon, Liberia, Libyan Arab Jamahiriya, Morocco, Mozambique, Namibia, Nigeria and Sierra Leone).

The gap between the index recorded by countries at the top and at the bottom of table 57 should be put in perspective as it only refers to containerized shipping

Box 4

Liner Shipping Connectivity Index

The *Liner Shipping Connectivity Index* (LSCI) focuses on containerized traffic and is generated from data available from *Containerisation International Online* (www.ci-online.co.uk). It was calculated for the first time in July 2004 for 162 countries, and was updated in July 2005 to reflect annual changes in liner shipping services.

Nine factors, or variables, are considered in the LSCI calculation. Each pertains to ports of a given country: (1) the number of containerships deployed on the liner services from/to a country's ports; (2) the container carrying capacity deployed, measured in TEUs; (3) the per capita number of ships deployed; (4) the per capita container carrying capacity deployed; (5) the number of liner shipping companies servicing a country's ports; (6) the number of liner services provided by shipping lines; (7) the maximum size of vessels deployed; (8) the average size of vessels deployed; and (9) the average number of vessels operated per liner shipping company.

Each variable has been standardized to ensure all variables have the same maximum value of 100 and minimum value of 0. Obviously, LSCI is zero for landlocked countries. As a second step, the average value of each variable is calculated for each country and the highest average value is set to equal 100 in 2004, which is the base year.

A large number of ships and a large amount of carrying capacity deployed indicate that shippers of a given country have more opportunities to load their containerized exports and are better connected to foreign markets. By taking into account a country's population, it is possible to distinguish the special case of countries that are sparsely populated and have a weak national cargo base, but enjoy high liner shipping connectivity levels because of their position as trans-shipment centres. The larger the number of shipping companies serving the ports of a given country and the greater the number of liner services provided, the more connected to international markets is the country. The relevance of the size of vessels deployed by shipping lines relates to the economies of scale that could be reaped — the larger the size of vessels deployed, the more likely it is that traders of a given country would benefit from lower freight rates generated through economies of scale that accrue to shipping lines.

services. Nevertheless, on account of the predominance of extraregional trade in the total trade of the African countries and the high value implied by goods moving in containers, the index gives a good assessment of the ability of African countries to participate in the most rewarding segments of international trade.

E. INLAND TRANSPORT

The inland transport network in Africa is about 2.06 million km: the road network is paramount, while the rail network has a share of only 4 per cent. This share is slightly higher than that found in Latin America and in the United States, which are around 3.5 per cent. The density of the African road and rail transport networks, however, is considerably lower and accounts for only 65.0 and 2.7 km per sq. km of territory respectively, or about a tenth of the corresponding densities found in the United States. Moreover, only about a quarter of the road network is paved, the quality of the roads varying substantially from one country to another.

Transport corridors are an important feature of the international trade of sub-Saharan African countries since they connect landlocked countries with ports of coastal transit countries (see map). In West Africa seaports are linked to landlocked countries through several corridors. There are corridors linking Dakar (Senegal) to Bamako (1,250 km); Abidjan (Côte d'Ivoire) to Ouagadougou (1,176 km) and onwards to Bamako (74 km); Tema (Ghana) to Ouagadougou (990 km); Lomé (Togo) to Ouagadougou (990 km) and onwards to Bamako (1,081 km); Lomé (Togo) to Niamey (1,240 km)

Table 57

Africa's Liner Shipping Connectivity Index, 2004–2005

Country	Index 2005	Index 2004
Egypt	47	41
South Africa	29	27
Côte d'Ivoire	20	25
Ghana	19	18
Mauritius	19	25
Nigeria	18	18
Gabon	18	18
Togo	18	19
Senegal	18	19
Djibouti	18	15
Benin	17	17
Angola	16	15
Cameroon	16	16
Congo	16	18
Mauritania	15	10
Guinea	14	11
Namibia	14	14
Kenya	12	9
Seychelles	12	11
United Republic of Tanzania	12	11
Gambia	12	10
Liberia	11	11
Sierra Leone	11	11
Morocco	11	11
Algeria	11	11
Equatorial Guinea	11	12
Comoros	11	14
Sudan	10	9
Mozambique	10	10
Madagascar	10	12
Guinea-Bissau	9	4
Tunisia	9	8
Libyan Arab Jamahiriya	8	8
Cape Verde	6	4
Democratic Republic of the Congo	5	5
Sao Tome and Principe	4	3
Somalia	3	6
Eritrea	3	6

Source: UNCTAD Transport Newsletter No. 27, first quarter 2005, p. 4; UNCTAD Transport Newsletter No. 29, third quarter 2005, p. 7.

and Cotonou (Benin) to Niamey (1,060 km); the latter could be combined with rail transport. Rail links are found in two corridors, namely Dakar–Bamako (1,250 km) and Abidjan–Ouagadougou (1,249 km).

Traffic flows in these corridors fluctuate with events in coastal transit countries. Since the beginning of the decade domestic political turmoil has substantially reduced Abidjan's share in this transit traffic. In 2003 it stood at only 6 per cent (see table 58), and the difficulties in using land routes through Côte d'Ivoire have forced traffic to move through neighbouring Tema, which in 2003 recorded a 22 per cent share of this transit traffic. It also led to the $250 million plan to expand the small port of Takoradi to prevent congestion from reaching unmanageable levels in Ghana's ports.

In Central Africa, however, the Central African Republic and Chad rely on a single transit country — Cameroon. About 80 per cent of the road traffic to those two countries takes place on just two road corridors: the Douala–Ngaoundere–Bangui corridor (1,500 km) and the Douala–Ngaoundere–Ndjamena corridor (2,100 km). As the condition of the road on these corridors is poor, long delays affect the movement of goods — cargo travelling from Douala to Bangui takes five days in the dry season and up to 10 days in the rainy season. Other routes using other coastal countries such as Congo, Gabon and Nigeria are of lesser importance.

Further south, corridors are in the making since substantial railways upgrading is being planned and will be available in the medium term. The $2 billion loan made by China to Angola for developing infrastructure includes the rehabilitation of the Benguela railway, which goes across the country to link mineral-rich Congolese southern provinces with the port of Lobito. In a separate development Zambia signed a MOU with a private company to build a railway link to connect the new mines of Kansanshi and Lumwana in its north-western province to the Benguela line.

In East Africa road transport corridors are also dominant. It was estimated that only 25 per cent of containerized cargo uses the railway between Mombasa (Kenya) and the three landlocked countries of Uganda, Rwanda and Burundi, while for the Tanzanian corridor from Dar that share is 43 per cent. Nevertheless, efforts have been made to boost railway productivity in this region. During 2003 and 2004 tariffs for carrying a 20' container between Mombasa and Embakasi (the dry port close to Nairobi) were reduced by $60 to $390 and plans to run three block trains to Kampala (Uganda) in less than 54 hours were made. The share of railways is set to increase in the future as a result of investments to be made by private sector railway operators.

The concession process to engage these railway operators has been a protracted one in many countries owing to a number of factors, including the enactment of laws. In late 2003 it was decided that the three railways in East Africa (Kenya, Uganda and United Republic of Tanzania) would be privatized separately, although a joint process was under consideration. A retrenchment programme for the labour force was one of the problems to be solved ahead of the

Table 58

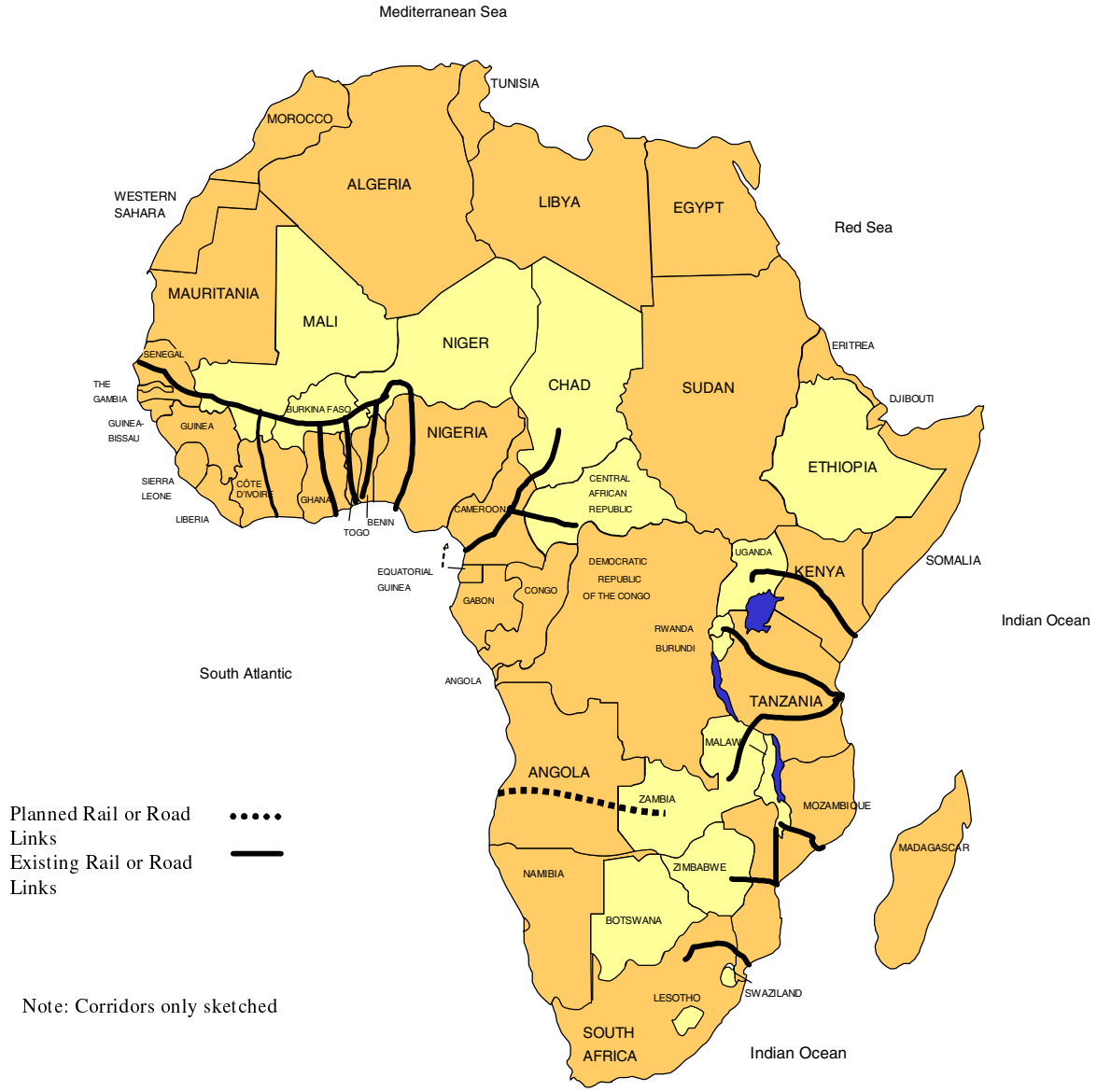
Transit traffic going through West African ports in 2003
(In thousands of metric tons)

Landlocked country	International trade	International trade going through different ports					
		Dakar	Abidjan	Tema	Takoradi	Lomé	Cotonou
Burkina Faso	1 126	Nil	28	330	29	703	37
Niger	1 083	Nil	Nil	78	30	175	800
Mali	1 584	653	177	423	97	221	14
Total	3 793	653	204	831	156	244	851
Percentage taken per port		17	6	22	4	29	22

Source: UNCTAD secretariat from Summary of Port Statistics — Michael Luguje, WMU dissertation entitled "A comparative study of import transit corridors of landlocked countries in West Africa", 2004.

Figure 10

Sub-Saharan Africa: selected inland transport corridors



process. With regard to the United Republic of Tanzania, about 9,100 workers were involved and it was estimated that the retrenchment would cost $41 million. In Kenya, it was necessary to amend the Railways Act. In mid-2004 a memorandum of understanding was signed by Kenya and Uganda on the modalities for the concession, having in view a single concessionaire for the line Mombasa (Kenya) to Kampala (Uganda) for 25 years. The total length involved was 1,920 km, out of the 2,064 km of the Kenya network, plus three sections in Uganda — 270 km on the Malaba– Kampala mainline, the Port Bell branch line and the 161 km line linking Tororo to Soroti. The duration of the concession was 25 years for freight and 7 for passenger trains. A large amount of time was allocated for attracting enough bidders and shareholding structure including local interests. In mid-2005 pre-qualified bidders submittted their offers, with two consortiums from India and South Africa being involved in the Tanzanian and the joint Kenya–Uganda tenders. The winner of the concession in Kenya and Uganda is expected to take over the line during the first half of 2006, while with regard to the United Republic of Tanzania the declared winner is waiting for the objection raised by another bidder to be resolved.

Further south, in Mozambique and Malawi there were other factors at work. The rehabilitation work on the line from Maputo (Mozambique) to the South African border was contingent on certification that the line was landmine-free, and this was received by the end of 2003. Then in 2005 there were negotiations with Spoornet, the South African rail operator, for contracting out the line. For the northern line from Nacala (Mozambique) to the Malawi border a joint venture was established in the late 1990s between CFM (the national railway company) and CDN, a consortium of other public and private local interests with a US railroad investor, and negotiations went on for a number of years, with the search for finance being the most difficult.

In the meantime, the railways of Malawi went on concession in 2000 and the winner was CEAR, an operator whose shareholders included those of the Mozambican joint venture. CEAR was set to run for 20 years the 707 km Malawi railway network, on which passengers and freight (i.e. fuels, maize, cement, etc.) move to the main markets of Lilongwe and Blantyre. Investors realized, however, that the potential of this network was large as it can work as a connector for the neighbouring countries of Mozambique and Zambia. Thus the ports of Nacala and Beira in Mozambique could serve Zambia through Malawi, provided that the 26 km rail link from Mchinji (Malawi) to Chipata (Zambia) is available.

In 2004, CDN obtained $29.6 million from a US federal funding institution to refurbish 77 km of line between Cuamba (Mozambique) and Entrelagos (Malawi) that will link the CEAR and CDN networks and give Malawi access to the sea at Nacala. This effectively launched the 15-year CDN concession in early 2005. In a separate development USAID awarded, in 2004, a grant to conduct a feasibility study for the line from Mchinji to Chipata, which is estimated to cost $30 million. Later in the same year the World Bank made a $110 million loan to CFM to refurbish 900 km of line connecting the port of Beira with the Malawi border.

Rehabilitation and upgrading, including divestiture, of other railways were at different stages of consideration during the period 2003–2005. In 2004, a study to divest the TAZARA railways running from Dar to landlocked Zambia was being conducted with a World Bank loan. In the same year, South African interests conducted a technical study of the line from Khartoum to Port Sudan as a prerequisite for procuring rolling stock. Also, the concession of the line from the port of Djibouti to Addis Ababa (Ethiopia) attracted half a dozen interested parties. In Swaziland, the legal framework for allowing leasing of the railways was approved in mid-2005 after commissioning of the upgraded 111 km line with Italian funding.

Moreover, improvement of the institutional framework and documentary procedures contributes to reaping the potential of existing corridors, as shown by the pilot technical assistance project undertaken by UNCTAD in the TransCaprivi Corridor linking Walvis Bay (Namibia) with Lusaka (Zambia).

F. AIR TRANSPORT

Air freight plays an important role in the competitiveness of African goods in world markets. In 2004, the 84 African cargo airports handled about 1.4 million tonnes of cargo, and this resulted in a 2 per cent share of cargo handled by world airports.

Table 59 lists the top 20 African airports for 2004 and the growth rate in cargo handled as compared with the previous year. Double-digit traffic growth was recorded for twelve airports, an indication of the dynamism of this traffic. Johannesburg airport was placed in the top

position with 262,523 tonnes of cargo, but traffic increased only by a modest 2.6 per cent. Europe is Africa's largest trade partner, representing about 70 per cent of total flows into and out of the region, and is still poised to expand following the enlargement of the EU.

G. TRANSPORT COSTS AND THEIR IMPACT ON THE IMPORT BILL

Cost factor for import trades

Table 60 provides estimates of total freight payments for imports, as well as freight costs as a percentage of total import value for various country groups. In 2004, the total freight costs of African developing countries as proportion of import value was 9.9 per cent, which is considerably higher than the average of 5.9 per cent for developing economies and almost treble the world average.

The regional average masks differences among trading areas. The cost factor for import trades for countries in North Africa is the lowest, reaching 8.8 per cent, and is followed by the freight factor for countries in Southern Africa and Central Africa, which recorded 9.0 and 9.5 per cent respectively. Countries in West Africa and in the Horn and East Africa reached 10.9 and 12.6 per cent respectively. The average freight factor for import trades for countries in sub-Saharan Africa reached 10.3 per cent.

Cost factor for import trades of selected landlocked countries

Landlocked developing countries in Africa continued to suffer from excessive transport costs, as table 61 indicates. High import transport costs inflated the consumer prices of imported goods and high transport costs for exports undermined their competitiveness in

Table 59

Top African cargo airports

Rank	Airport	Freight in tonnes	% increase from previous year
1	Johannesburg	262 523	2.6
2	Cairo	218 606	24.6
3	Nairobi	183 470	10.2
4	Kinshasa	70 861	37.3
5	Lagos	66 042	19.0
6	Entebbe	48 585	32.7
7	Casablanca	48 193	7.5
8	Accra	46 918	1.6
9	Brazzaville	43 994	100.9
10	St. Denis	32 305	8.8
11	Addis Ababa	26 033	24.6
12	Algiers	23 947	8.3
13	Tunis	21 516	3.0
14	Dakar	20 165	22.4
15	Lusaka	18 465	12.1
16	Mwanza	17 863	30.4
17	Luanda	17 158	3.1
18	Antananarivo	16 326	10.6
19	Libreville	14 400	8.7
20	Dar es Salaam	14 376	16.5

Source: Airports Council International 2004 (www.airports.org).

foreign markets. Transport costs are defined as the direct and indirect costs which are incidental to the transportation of goods from their point of loading to their destinations. The major elements accounting for the high freight costs for landlocked developing countries included inefficient transport facilities and their management, imbalanced trades, inadequate overall infrastructure and inefficient or cumbersome government regulations.

Table 60

Estimates of total freight costs on imports of African countries, 2004
(In billions of dollars)

Year	Country group	Estimate of freight cost of imports	Value of imports (c.i.f.)	Freight costs as percentage of import value
2004	World total	270.8	9 244.7	3.6
	Developed economies	157.7	5 928.4	3.1
	Developing economies	75.8	1 945.2	5.9
	of which in:			
	Africa	9.9	151.5	9.9
	of which:			
	North Africa	4.0	68.7	8.8
	Southern Africa	0.8	13.5	9.0
	West Africa	2.3	32.1	10.9
	Horn & East Africa	1.9	22.9	12.6
	Central Africa	0.9	14.3	9.5
	Sub-Saharan Africa	5.9	82.8	10.3

Source: Imports based on merchandise imports data from the *UNCTAD Handbook of Statistics 2005* (table 1.1); freight and insurance data from the IMF *Balance of Payments Statistics on CD-ROM* (January 2006); freight ratio estimated as weighted average based on size of economies. This table is not comparable with those found in previous issues of the *Review of Maritime Transport* owing to changes in sources and methodology.

Table 61

Estimates of freight costs on imports for selected African landlocked countries in selected years
(In millions of dollars)

Year	Country group	Estimate of freight cost of imports	Value of Imports (CIF)	Freight costs as percentage of import value
	Southern Africa			
2002	Malawi	101.0	695	14.5
2000	Zambia	108.6	993	10.9
	Western Africa			
2001	Burkina Faso	92.5	656	14.1
2003	Mali	275.8	1 130	24.4
2003	Niger	117.3	490	23.9
	Eastern Africa			
2003	Burundi	20.9	157	13.3
2004	Rwanda	61.0	284	24.1
2004	Uganda	288.3	1 657	17.4

Source: Imports based on merchandise imports data from the UNCTAD *Handbook of Statistics 2005* (table 1.1); freight and insurance data from the IMF *Balance of Payments Statistics on CD-ROM* (January 2006). This table is not comparable with those found in previous issues of the *Review of Maritime Transport* owing to changes in sources and methodology.

Notes

[1] The totals reported by BP Statistical Review of World Energy, June 2005, include crude oil, shale oil, oil sands and natural gas liquids (NGL) – the liquid content of natural gas when this is recovered separately.

[2] Measured at 15 degrees C and 1013 mbar.

[3] See website www.vhss.de/englisch/hax.html.

[4] The text and its Annexes are available on the WTO web site via www.wto.org/english/tratop_e/dda_e/draft_text_gc_dg_31july04_e.htm. For more detailed information and links to proposals, see the related topic in the Global Facilitation Partnership, www.gfptt.org/topics/wto.

[5] TN/TF/W/45.

[6] TN/TF/W/46.

[7] TN/TF/W/92.

[8] TN/TF/W/45.

[9] TN/TF/W/30.

[10] TN/TF/W/32.

[11] TN/TF/W/89.

[12] TN/TF/W/30.

[13] TN/TF/W/36.

[14] TN/TF/W/70.

[15] TN/TF/W/100.

[16] TN/TF/W/39.

[17] See http://www.wto.org/english/thewto_e/minist_e/min05_e/final_text_e.htm#tradfa for the Ministerial Declaration.

[18] See, in particular, proposals TN/TF/W/81, TN/TF/W/82 and TN/TF/W/95.

[19] TN/TF/W/81, available on the WTO website at http://docsonline.wto.org/DDFDocuments/t/tn/TF/W81.doc.

[20] See also the agenda of seminars and other events under www.gfptt.org.

[21] The Conference was held in Tokyo on 12 and 13 January 2006. The objective was to exchange views and information on international transport security in the aviation, land and maritime sectors, and to discuss the issues that should be addressed in an internationally coordinated and cooperative manner. For further information, see http://www.mlit.go.jp/english/.

[22] For further details, see *Ministerial Statement on Security in International Maritime Transport.*

[23] The reference relates to amendments to the *Safety of Life at Sea Convention* (SOLAS), 1974, which was adopted in 2002. For information on this, see the IMO website at www.imo.org. See also UNCTAD*, Review of Maritime Transport 2005*, p. 84.

[24] For more information see www.wcoomd.org.

[25] At that time, the WCO was composed of 166 member States. At the time of writing, that number had risen to 169.

[26] *International Convention on the Simplification and Harmonization of Customs Procedures (as amended),* June 1999.

[27] See the Speech by the Deputy Secretary General of the WCO at the 11th WCO Asia Pacific Regional Heads of Administration Conference, 4 April 2006, Beijing China (www.wcoomd.org).

[28] Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on enhancing supply chain security, *Proposal for a Regulation of the European Parliament and of the Council on enhancing supply chain security*, COM(2006), 79, 27 February 2006.

[29] See *Enhancement of security in cooperation with the WCO,* doc. MSC/81/5/4, 9 February 2006. See also *Measures to Enhance Maritime Security*, Report of the Working Group on Maritime Security (Part I), MSC 81/WP.5, of 17 May 2006. The Maritime Safety Committee (MSC), at its 81st session, in May 2006, discussed the carriage of closed transport units and of freight containers transported by ships and referred the matter to the Ship/Port Interface (SPI) Working Group of the Facilitation Committee for further consideration, including the development of draft amendments to the SOLAS Convention.

[30] For an overview over the responsibilities of Governments, port facilities and ship-owning and ship-operating companies under the ISPS Code, see UNCTAD, *Container Security: Major Initiatives and Related International Developments*, UNCTAD/SDTE/TLB/2004/1, paras. 80–86. See also *UNCTAD Review of Maritime Transport 2005*, p. 84.

[31] The MSC circulars are available on the IMO website (www.imo.org). See also UNCTAD, *Review of Maritime Transport 2005*, p. 87.

[32] Other circulars adopted include MSC.1/Circ.1188, *Guidelines on training and certification for port facility security officers*; MSC.1/Circ.1189, *Guidance on the provision of information for identifying ships when transmitting ship security alerts*; MSC.1/Circ.1190, *Interim scheme for the compliance of special purpose ships with the special measures to enhance maritime security*; and MSC.1/Circ.1191, *Further reminder of the obligation to notify flag States when exercising control and compliance measure.* A full list of all relevant circulars is included in MSC.1/Circ.1194.

[33] The Guidance circular is a revised version of MSC/Circ.1131.

[34] Information on results of another survey conducted by the International Transport Workers' Federation (ICFTU), bringing to the attention of the MSC, inter alia, problems experienced by seafarers in obtaining shore leave following the implementation of the ISPS Code, can be found in IMO document MSC 81/5/8, submitted for consideration at the 81st session of the MSC (10–19 May 2006).

[35] SOLAS chapter V/19.

[36] The issue of LRIT has been considered by the Maritime Safety Committee (MSC) and by the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR). For further information, see most recently the COMSAR Report to the Maritime Safety Committee (COMSAR 10/16, section 10, also published as an extract in document MSC 81/5/Add.1, and Annexes 17 and 18) and ***Measures to Enhance Maritime Security*** , Report of the Working Group on Maritime Security (Part II), MSC 81/WP.5/Add.1. See also the IMO website (www.imo.org).

[37] Resolutions MSC.202(81), MSC.210(81) and MSC.211(81).

[38] Note that it has been emphasized that the regulation "was not creating or affirming any new rights of States over ships beyond what was existing in international law, particularly UNCLOS, nor altering existing rights, jurisdictions, duties and obligations of States in connection with the law of the sea"; see the note by the Secretary-General for consideration by the Council at its 96th session, document C 96/7/Add.1 of 30 May 2006.

[39] While the costs arising for States seeking to receive LRIT information are, at this stage, not yet clear, some reference to various likely charges is provided in COMSAR 10/16 (MSC 81/5/Add 1), at para. 10.50.

[40] For an overview of other amendments to SOLAS and mandatory codes and guidelines adopted by the MSC at its 81st session in May 2006, see the IMO website (www.imo.org).

[41] *Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation,* 1988 (SUA Convention).

[42] *Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf,* 1988 (SUA Protocol).

[43] 2005 Protocol to the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, 1988 (SUA Convention); and 2005 Protocol to the Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf, 1988 (SUA Protocol).

[44] For further information, see the IMO website, www.imo.org

[45] The 2005 Protocol amending the SUA Convention requires adoption by 12 member States to enter into force. The 2005 Protocol to the SUA Protocol requires adoption by only 3 State Members, but its entry into force is contingent on the entry into force of the amendments to the SUA Convention.

[46] It is also worth noting that a Joint IMO/ILO Ad Hoc Expert Working Group on Fair Treatment of Seafarers (which met from 13 to 17 March 2006) has adopted a draft resolution with guidelines on the fair treatment of seafarers to be observed in the event of a maritime accident. They were adopted by the IMO Legal Committee at its 91st session in May 2006, and were transmitted to the ILO Governing Body for consideration and approval later this year. The objective of these guidelines is to ensure that seafarers are treated fairly following a maritime accident and during an investigation and detention by public authorities, and that detention is no longer necessary. For the text of the guidelines see IMO document LEG 91/12 of 9 May 2006.

[47] For definitions and scope of application, see Article II of the Convention. The Convention will apply to all ships engaged in commercial activities with the exception of fishing vessels and traditional ships (such as dhows and junks). The definition of ships also excludes ships "which navigate exclusively in inland waters or waters within, or closely adjacent to sheltered waters or areas where port regulations apply ". The Convention applies to all seafarers; these are defined as "any person who is employed or engaged or works in any capacity on board a ship" covered by the Convention.

[48] See International Labour Conference, 94th (Maritime) Session, 2006, Report II, Report of the Director-General on developments in the maritime sector, p. 8.

[49] International Labour Conference, 94th (Maritime) Session, 2006, Report I(1B) *Proposed Consolidated Maritime Labour Convention,* p.12.

[50] Article IV (5) of the Convention.

[51] There are, however, two main areas for flexibility in the implementation; see Articles VI (3) and (4) which allow effect to be given to detailed requirements of Part A of the Code through "*substantial equivalence*", as defined. See also the Explanatory Note to the Regulations and Code, International Labour Conference, 94th (Maritime) Session, 2006, Report I(1B), *Proposed Consolidated Maritime Labour Convention,* p. 12.

[52] Article V (2) of the Convention. See also Regulation 5.1.4 (Inspection and enforcement).

[53] Article V (3) of the Convention.

[54] See ILO Press Release ILO/06/07 of 23 February 2006.

Annex I

Classification of countries and territories [a] [b] [c] [d]

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

Code 8.2 *Western Africa*

Angola
Benin
Burkina Faso
Cameroon
Cape Verde
Congo
Côte d'Ivoire
Democratic Republic of the Congo
Equatorial Guinea
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau
Liberia
Mali
Mauritania
Nigeria
Saint Helena
Sao Tome and Principe
Senegal
Sierra Leone
Togo

Code 8.3 *Eastern Africa*

Burundi
Comoros
Djibouti
Eritrea
Ethiopia
Kenya
Madagascar
Malawi
Mauritius
Mozambique
Réunion
Seychelles
Somalia
Sudan
Uganda
United Republic of Tanzania
Zambia

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
Saint Kitts and Nevis
Saint Lucia
Saint Pierre and Miquelon
Saint Vincent and the Grenadines
Trinidad and Tobago
Turks and Caicos Islands
United States Virgin Islands

Code 9.2 *Central America*

Belize
Costa Rica
El Salvador
Guatemala
Honduras
Mexico
Nicaragua
Panama

Code 9.3 *South America – Northern seaboard*

French Guiana
Guyana
Netherlands Antilles
Suriname
Venezuela

Code 9.4 *South America – Western seaboard*

Chile
Colombia
Ecuador
Peru

Code 9.5 *South America – Eastern seaboard*

Argentina
Bolivia
Brazil
Falkland Islands (Malvinas) [e]
Paraguay
Uruguay

Code 10–10.1 *Western Asia*

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

Code 10.2 *Southern and Eastern Asia*

Bangladesh
Bhutan
Brunei Darussalam
Cambodia
Hong Kong (China)
India
Indonesia
Macao (China)
Malaysia
Maldives
Myanmar
Pakistan
Philippines
Republic of Korea
Singapore
Sri Lanka
Thailand

Code 11

Bosnia and Herzegovina
Croatia
Malta
Montenegro
Serbia
Slovenia
The former Yugoslav Republic of Macedonia

Code 12

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

Notes

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

[b] The following are groups of countries or territories used for presenting statistics in this *Review*:

Developed market-economy countries: Codes 1, 2, 3, 4 and 5
Countries of Central and Eastern Europe and Republics of the former Soviet Union: Code 6
Socialist countries in Asia: Code 7
Developing countries and territories: Codes 8, 9, 10, 11 and 12
of which:
In Africa: Codes 8.1, 8.2 and 8.3
In America: Codes 9.1, 9.2, 9.3, 9.4 and 9.5
In Asia: Codes 10.1 and 10.2
In Europe: Code 11
In Oceania: Code 12

[c] In certain tables, where appropriate, open-registry countries are recorded in a separate group. The group comprises the Bahamas, Bermuda, Cyprus, Liberia, Malta, Panama and Vanuatu.

[d] 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, landlocked countries do not figure in these tabulations. On the other hand, statistical tabulations on merchant fleets include data for landlocked countries that possess fleets.

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

Annex II

World seaborne trade [a] by country groups, 1970, 1980, 1990, 2000 and 2003-2005

(In millions of tons)

Area [b]	Year	Goods loaded			Total goods loaded	Goods unloaded			Total goods unloaded
		Oil		Dry cargo		Oil		Dry cargo	
		Crude	Products [c]			Crude	Products [c]		
Developed market-economy countries									
North America	1970	0.7	5.3	308.0	314.0	73.4	103.6	170.0	347.0
	1980	0.5	6.9	498.0	505.3	274.3	71.4	170.1	515.7
	1990	1.4	25.8	515.1	542.3	274.9	100.8	227.6	603.3
	2000	15.2	59.7	438.9	513.8	502.2	122.3	328.8	953.3
	2003	22.1	68.0	420.4	510.5	500.7	132.2	362.6	995.5
	2004	22.1	68.3	468.3	558.7	523.0	140.0	413.8	1 076.8
	2005	22.2	72.9	502.8	597.9	537.7	144.2	442.2	1 124.1
Europe	1970	28.6	82.3	244.8	355.7	621.0	100.4	469.0	1 190.4
	1980	95.7	79.3	387.4	562.3	585.5	145.1	680.5	1 411.1
	1990	162.1	124.2	482.2	768.5	446.8	172.7	763.2	1 382.7
	2000	59.9	44.5	1 103.3	1 207.7	419.6	103.4	1 494.7	2 017.7
	2003	62.7	41.4	1 057.5	1 161.6	433.7	103.3	1 498.7	2 035.7
	2004	63.2	41.6	1 059.9	1 164.7	434.1	103.5	1 499.9	2 037.5
	2005	63.5	41.8	1 065.1	1 170.4	438.4	104.5	1 514.9	2 057.8
Japan	1970	-	0.3	41.6	41.9	170.4	30.4	235.1	435.9
	1980	-	..	83.6	83.6	216.3	35.0	361.5	612.8
	1990	-	1.2	81.9	83.1	201.2	82.0	440.7	723.9
	2000	0.0	3.8	126.3	130.1	215.0	49.1	542.4	806.5
	2003	0.0	4.2	163.4	167.6	215.0	32.5	562.6	810.1
	2004	0.0	4.3	167.1	171.4	215.0	32.5	578.3	825.8
	2005	0.0	4.3	185.5	189.8	215.0	32.5	584.7	832.2
Australia and	1970	-	1.3	92.3	93.6	18.8	2.9	15.4	37.1
New Zealand	1980	-	1.5	148.4	150.0	9.8	6.6	13.5	29.9
	1990	9.2	1.5	266.3	277.0	8.6	7.2	18.1	33.9
	2000	10.7	2.5	514.7	527.9	32.1	6.7	30.0	68.8
	2003	10.9	2.7	546.7	560.3	32.4	6.7	38.8	77.9
	2004	11.0	2.7	593.7	607.4	32.7	6.8	46.1	85.6
	2005	11.2	2.8	604.4	618.4	33.1	6.8	47.9	87.8
South Africa	1970	-	-	13.2	13.2	8.8	2.6	6.2	17.6
	1980	-	0.1	68.9	69.0	15.0	1.0	9.7	25.7
	1990	-	-	82.5	82.5	21.9	0.3	9.6	31.8
	2000	0.0	0.0	133.3	133.3	11.4	0.0	20.1	31.6
	2003	0.0	0.0	148.6	148.6	15.4	0.9	23.7	40.0
	2004	0.0	0.0	163.4	163.4	15.4	0.9	23.4	39.7
	2005	0.0	0.0	171.6	171.6	15.3	0.9	23.5	39.7
Subtotal DMECs	1970	29.3	89.2	699.9	818.4	892.4	239.9	895.7	2 028.0
	1980	96.2	87.8	1 186.3	1 370.3	1 100.9	259.1	1 235.3	2 595.2
	1990	172.7	152.7	1 428.0	1 753.4	953.4	363.0	1 459.2	2 775.6
	2000	85.8	110.5	2 316.4	2 512.7	1 180.4	281.5	2 416.1	3 877.9
	2003	95.7	116.3	2 336.6	2 548.6	1 197.2	275.6	2 486.4	3 959.2
	2004	96.3	116.9	2 452.4	2 665.6	1 220.2	283.7	2 561.5	4 065.4
	2005	96.9	121.8	2 529.4	2 748.1	1 239.5	288.9	2 613.2	4 141.6

Annex II (continued)

Area [b]	Year	Goods loaded			Total goods loaded	Goods unloaded			Total goods unloaded
		Oil		Dry cargo		Oil		Dry cargo	
		Crude	Products [c]			Crude	Products [c]		
Countries of Central and Eastern Europe [d]	1970	38.2	26.3	80.8	145.3	13.3	3.0	41.1	57.4
	1980	55.0	50.2	95.6	200.8	35.5	1.3	108.6	145.4
	1990	58.6	55.3	85.2	199.1	34.2	1.3	137.2	172.7
	2000	91.8	44.2	156.0	292.0	8.0	2.0	75.5	85.5
	2003	116.9	43.9	177.3	338.1	10.2	3.1	66.2	79.5
	2004	124.3	44.4	178.9	347.6	10.3	3.1	66.8	80.2
	2005	132.3	44.9	181.0	358.2	10.5	3.2	67.4	81.1
Socialist countries of Asia [e]	1970	-	0.1	13.3	13.4	5.4	0.4	24.4	30.2
	1980	22.1	5.7	18.3	46.1	21.6	5.1	72.9	99.6
	1990	32.0	4.0	46.1	82.1	3.9	1.3	80.4	85.6
	2000	17.0	5.5	250.0	272.5	70.0	22.3	289.6	381.8
	2003	18.9	12.3	365.5	396.7	86.5	29.5	446.0	562.0
	2004	20.7	14.6	429.8	465.1	102.9	34.1	524.5	661.5
	2005	22.2	16.4	478.4	517.0	115.3	37.7	583.9	736.9
Developing countries and territories									
Northern Africa	1970	221.4	5.6	28.3	255.3	9.9	5.9	17.9	33.7
	1980	187.7	2.5	30.0	220.2	50.0	2.0	44.9	96.9
	1990	182.7	31.5	32.0	246.2	63.4	4.3	57.8	125.5
	2000	125.6	32.7	35.6	193.9	49.8	8.5	75.9	134.2
	2003	125.6	34.6	36.4	196.6	46.5	7.4	79.7	133.6
	2004	128.1	35.3	37.2	200.6	47.4	7.6	81.4	136.4
	2005	130.2	35.8	38.0	204.0	49.3	7.9	84.3	141.5
Western Africa	1970	60.5	1.0	61.5	123.0	3.6	4.0	14.8	22.4
	1980	102.6	1.9	66.8	171.3	4.3	5.5	30.8	40.6
	1990	127.1	3.4	55.2	185.7	4.0	3.2	27.7	34.9
	2000	173.0	1.8	19.9	194.7	4.0	4.1	38.4	46.5
	2003	175.3	1.5	19.6	196.4	3.3	4.0	39.4	46.7
	2004	184.8	1.6	20.3	206.7	3.6	4.1	40.9	48.6
	2005	196.3	1.6	19.6	217.5	3.7	4.2	42.1	50.0
Eastern Africa	1970	-	1.2	16.1	17.3	5.5	2.6	8.3	16.4
	1980	-	0.9	6.3	7.2	6.2	2.0	9.9	18.1
	1990	-	0.6	9.3	9.9	6.4	2.6	16.0	25.0
	2000	0.0	0.0	7.2	7.2	0.7	4.8	19.0	24.5
	2003	0.0	0.0	9.2	9.2	0.7	5.1	20.2	26.0
	2004	0.0	0.0	9.3	9.3	0.7	5.2	20.4	26.3
	2005	0.0	0.0	9.3	9.3	0.7	5.2	20.5	26.4
Subtotal: Developing countries in Africa	1970	281.9	7.8	105.9	395.6	19.0	12.5	41.0	72.5
	1980	290.3	5.3	103.1	398.7	60.5	9.5	85.6	155.6
	1990	309.8	35.5	96.5	441.8	73.8	10.1	101.5	185.4
	2000	298.6	34.5	62.7	395.8	54.5	17.4	133.3	205.2
	2003	300.9	36.1	65.2	402.2	50.5	16.5	139.3	206.3
	2004	312.9	36.9	66.8	416.6	51.7	16.9	142.7	211.3
	2005	326.5	37.4	66.9	430.8	53.7	17.3	146.9	217.9

Annex II (continued)

Area [b]	Year	Goods loaded			Total goods loaded	Goods unloaded			Total goods unloaded
		Oil		Dry cargo		Oil		Dry cargo	
		Crude	Products [c]			Crude	Products [c]		
Caribbean, Central and North America	1970	-	5.1	40.3	45.4	29.5	10.0	17.7	57.2
	1980	53.5	29.6	53.5	136.6	62.8	8.9	30.2	102.0
	1990	95.3	18.8	47.5	161.6	33.7	11.2	35.4	81.1
	2000	91.6	28.8	41.4	161.8	33.0	36.4	72.1	141.5
	2003	110.8	31.2	61.9	203.9	33.2	34.8	83.2	151.2
	2004	115.5	26.1	64.7	206.3	33.4	36.0	84.5	153.9
	2005	125.2	43.4	65.3	233.9	35.1	37.8	86.1	159.0
South America: Northern and eastern seaboard	1970	131.2	12.9	90.3	234.4	81.9	4.0	26.5	112.4
	1980	127.8	64.5	162.3	354.6	136.2	5.8	54.5	196.5
	1990	58.4	28.5	214.8	302.0	37.8	4.3	45.7	87.8
	2000	122.8	61.3	274.3	458.4	47.3	12.0	75.4	134.6
	2003	113.4	71.1	375.7	560.2	48.2	8.0	82.4	138.6
	2004	119.2	71.9	382.5	573.6	49.2	8.1	84.2	141.5
	2005	122.4	73.0	392.6	588.0	52.7	8.6	91.7	153.0
South America: Western seaboard	1970	4.6	1.6	29.8	36.0	4.1	1.5	5.9	11.5
	1980	7.6	3.4	26.7	37.7	4.9	1.4	13.7	20.1
	1990	17.4	8.2	36.0	61.6	3.5	1.3	14.4	19.2
	2000	39.3	3.4	84.4	127.1	15.1	5.3	64.0	84.4
	2003	24.7	2.1	108.6	135.4	15.6	5.3	32.4	53.3
	2004	29.7	2.1	118.1	149.9	15.7	5.8	34.1	55.6
	2005	30.2	2.2	119.9	152.3	15.9	5.9	34.6	56.4
Subtotal: Developing countries in America	1970	135.8	19.6	160.4	315.8	115.5	15.5	50.1	181.1
	1980	188.9	97.5	242.5	528.9	203.9	16.1	98.4	318.6
	1990	171.1	55.5	298.3	524.9	75.0	16.8	95.5	187.5
	2000	253.7	93.5	400.1	747.3	95.5	53.7	211.5	360.6
	2003	248.9	104.4	546.2	899.5	97.0	48.1	198.0	343.1
	2004	264.4	100.1	565.3	929.8	98.3	49.9	202.8	351.0
	2005	277.8	118.6	577.8	974.2	103.7	52.3	212.4	368.4
Western Asia	1970	588.7	65.6	3.3	657.6	0.1	1.0	13.1	14.2
	1980	800.6	54.5	12.3	867.4	8.6	4.9	54.9	68.4
	1990	463.9	74.8	30.5	569.2	15.6	7.1	107.0	129.7
	2000	854.7	105.7	63.3	1 023.7	7.0	8.7	121.7	137.4
	2003	848.9	108.7	70.3	1 027.9	9.4	8.6	129.5	147.5
	2004	899.1	111.7	72.7	1 083.5	9.5	8.9	130.0	148.4
	2005	934.5	113.9	72.7	1 121.1	9.9	9.3	140.6	159.8
Southern and Eastern Asia (n.e.s.)	1970	35.0	23.7	89.3	148.0	54.7	23.3	61.9	139.9
	1980	74.3	42.2	165.9	282.4	97.4	26.9	163.5	287.8
	1990	78.6	88.4	253.0	420.0	150.4	41.6	362.9	554.9
	2000	59.1	101.6	554.7	715.4	306.3	148.1	740.3	1 194.7
	2003	60.9	106.7	693.9	861.5	296.7	147.2	824.6	1 268.5
	2004	61.6	107.2	743.1	911.9	308.0	152.1	883.8	1 343.9
	2005	62.2	109.9	761.7	933.8	313.9	155.5	914.9	1 384.3

Annex II (continued)

Area [b]	Year	Goods loaded			Total goods loaded	Goods unloaded			Total goods unloaded
		Oil		Dry cargo		Oil		Dry cargo	
		Crude	Products [c]			Crude	Products [c]		
Subtotal: Developing countries in Asia	1970	623.7	89.3	92.6	805.6	54.8	24.3	75.0	154.1
	1980	874.9	96.7	178.2	1 149.8	106.0	31.9	218.5	356.2
	1990	542.5	163.2	283.5	989.2	166.0	48.7	469.9	684.6
	2000	913.8	207.3	618.0	1 739.1	313.3	156.8	862.0	1 332.1
	2003	909.8	215.4	764.2	1 889.4	306.1	155.8	954.1	1 416.0
	2004	960.7	218.9	815.8	1 995.4	317.5	161.0	1 013.8	1 492.3
	2005	996.7	223.8	834.4	2 054.9	323.8	164.8	1 055.5	1 544.1
Developing countries in Europe	1970 [f]	..	-	-	..	-	0.3	0.7	1.0
	1980 [f]	-	-	0.1	0.1	-	0.5	0.6	1.1
	1990	0.3	1.1	7.4	8.8	8.7	2.4	17.7	28.8
	2000	0.0	2.2	15.5	17.7	6.6	2.1	10.4	19.0
	2003	0.0	2.3	16.6	18.9	6.9	2.2	10.9	20.0
	2004	0.0	2.3	16.8	19.1	6.9	2.2	11.0	20.1
	2005	0.0	2.3	16.9	19.2	7.0	2.2	11.1	20.3
Developing countries in Oceania (n.e.s.)	1970	-	0.2	9.5	9.7	0.6	1.6	2.9	5.1
	1980	-	0.7	8.4	9.1	1.6	2.3	3.5	7.4
	1990	-	0.3	8.0	8.3	-	2.3	3.6	5.9
	2000	4.0	0.1	2.0	6.1	0.0	5.9	5.2	11.1
	2003	4.1	0.1	2.1	6.3	0.0	6.1	5.4	11.5
	2004	4.1	0.1	2.1	6.3	0.0	6.2	5.4	11.6
	2005	4.2	0.1	2.1	6.4	0.0	6.2	5.5	11.7
Subtotal: Developing countries	1970	1 041.4	116.9	368.4	1 526.7	184.9	54.2	169.7	413.8
	1980	1 354.1	200.2	532.3	2 086.6	372.0	60.3	406.6	838.9
	1990	1 023.9	255.6	693.7	1 973.0	323.5	80.3	688.2	1 092.0
	2000	1 470.1	337.6	1 098.2	2 905.9	469.8	235.9	1 222.3	1 928.1
	2003	1 463.7	358.3	1 394.3	3 216.3	460.5	228.7	1 307.7	1 996.9
	2004	1 542.1	358.3	1 466.8	3 367.2	474.4	236.2	1 375.7	2 086.3
	2005	1 605.2	382.2	1 498.1	3 485.5	488.2	242.8	1 431.4	2 162.4
World total	1970	1 108.9	232.5	1 162.4	2 503.8	1 101.0	297.5	1 130.9	2 529.4
	1980	1 527.4	343.9	1 832.5	3 703.8	1 530.0	325.8	1 823.3	3 679.1
	1990	1 287.2	467.6	2 253.0	4 007.4	1 315.0	445.9	2 365.0	4 125.9
	2000	1 664.7	497.8	3 820.6	5 983.2	1 728.2	541.7	4 003.4	6 273.3
	2003	1 695.2	530.8	4 273.7	6 499.7	1 754.4	536.9	4 306.3	6 597.6
	2004	1 783.4	534.2	4 527.9	6 845.5	1 807.8	557.1	4 528.5	6 893.4
	2005	1 856.6	565.3	4 686.9	7 108.8	1 853.5	572.6	4 695.9	7 122.0

Sources: Compiled by the UNCTAD secretariat on the basis of data supplied by reporting countries and specialized sources.

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

[b] See Annex I for the composition of groups.

[c] Including LNG, LPG, naphtha, gasoline, jet fuel, kerosene, light oil, heavy fuel oil and others.

[d] Including the former Soviet Union.

[e] Estimates.

[f] Yugoslavia was classified as a developing country in Europe from 1986 onwards. Data for 1970 and 1980 for this country were recorded under "Developed market-economy countries: Europe".

Annex III (a)

Merchant fleets of the world by flags of registration, [a] groups of countries and types of ship [b] as of 1 January 2006

(In thousands of grt)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
World total [d]	665 506	201 517	190 647	91 536	95 374	86 432
Developed market-economy countries/territories						
Australia	1 884	247	463	141	7	1 025
Austria	34	0	0	30	4	0
Belgium	4 059	1 600	1 216	79	322	841
Canada	2 742	531	1 068	115	16	1 012
Denmark	8 291	1 648	261	456	4 801	1 125
Finland	1 475	320	54	432	10	659
France	5 643	2 609	172	235	1 044	1 583
Germany	11 538	513	156	387	9 933	549
Gibraltar	1 144	322	3	524	212	83
Greece	30 773	16 291	10 341	367	1 934	1 839
Iceland	185	0	0	1	0	183
Ireland	367	6	61	115	5	180
Israel	741	16	0	4	712	9
Italy	11 597	3 267	1 735	2 226	824	3 545
Japan	12 758	2 533	2 575	1 921	425	5 305
Luxembourg	558	160	54	65	84	194
Netherlands	7 189	423	163	2 920	1 651	2 033
New Zealand	246	52	12	28	0	154
Norway	17 528	6 328	2 784	3 780	48	4 589
Portugal	1 238	519	100	263	38	318
South Africa	181	6	0	0	27	147
Spain	2 902	608	27	394	197	1 676
Sweden	3 739	535	33	2 090	0	1 080
Switzerland	480	8	291	64	112	4
Turkey	5 020	803	2 403	1 226	244	344
United Kingdom	19 538	5 709	2 931	1 774	5 103	4 021
United States	40 324	20 191	6 449	2 624	6 340	4 720
Subtotal	192 174	65 247	33 353	22 260	34 096	37 218
Major open-registry countries/territories						
Bahamas	38 382	13 785	7 329	6 198	2 070	9 001
Bermuda	7 402	1 206	1 852	242	731	3 371
Cyprus	18 935	3 329	10 481	1 915	2 725	485
Liberia	59 756	27 469	10 924	3 355	13 909	4 099
Malta	22 811	7 085	10 842	3 086	1 258	540
Panama	141 959	32 169	59 831	19 599	20 778	9 582
Subtotal	289 244	85 042	101 258	34 395	41 471	27 077

Annex III (a) (continued)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
Central and Eastern Europe and former USSR						
Albania	75	0	0	74	0	1
Azerbaijan	673	211	0	99	0	363
Bulgaria	894	21	645	134	66	27
Estonia	292	7	0	20	0	265
Georgia	1 084	33	384	540	9	118
Kazakhstan	43	15	0	8	0	21
Latvia	305	147	0	30	0	128
Lithuania	476	3	80	198	3	192
Poland	190	9	0	47	0	134
Romania	337	56	16	103	0	161
Russian Federation	8 337	1 383	763	3 074	142	2 974
Slovakia	211	3	42	166	0	1
Turkmenistan	48	6	3	17	0	22
Ukraine	1 147	29	100	601	34	383
Subtotal	14 111	1 923	2 032	5 111	255	4 790
Socialist countries of Asia						
China	22 286	4 291	8 478	4 892	3 049	1 575
Democratic People's Republic of Korea	1 257	69	171	904	23	90
Viet Nam	1 671	280	266	899	55	171
Subtotal	25 214	4 641	8 915	6 695	3 127	1 837
Developing countries/territories of Africa						
Algeria	829	28	173	87	0	541
Angola	54	3	0	10	0	41
Benin	1	0	0	0	0	1
Cameroon	55	39	0	2	0	14
Cape Verde	26	2	0	9	0	14
Comoros	602	130	105	292	4	70
Congo	4	0	0	0	0	4
Côte d'Ivoire	9	1	0	0	0	8
Djibouti	5	0	0	1	0	3
Egypt	1 130	203	432	293	48	153
Equatorial Guinea	40	0	0	5	0	36
Ethiopia	79	0	0	79	0	0
Gabon	13	1	0	4	0	9
Gambia	33	4	0	27	0	2
Ghana	115	3	0	12	0	100
Guinea	15	0	0	1	0	14
Guinea-Bissau	7	0	0	1	0	5
Kenya	20	5	0	3	0	13
Libyan Arab Jamahiriya	117	8	0	54	0	55

Annex III (a) (continued)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
Madagascar	33	5	0	15	0	14
Mauritania	52	0	0	0	0	51
Mauritius	75	0	6	17	0	53
Morocco	544	78	0	64	90	312
Mozambique	35	0	0	6	0	30
Nigeria	361	228	10	19	0	104
Saint Helena	2	0	0	0	0	2
Sao Tome and Principe	47	1	17	25	0	4
Senegal	42	0	0	1	0	40
Seychelles	104	68	0	4	0	32
Sierra Leone	75	40	0	10	0	25
Somalia	7	1	0	3	0	4
Sudan	16	1	0	12	0	3
Togo	21	0	0	4	0	16
Tunisia	169	46	17	3	0	103
United Republic of Tanzania	37	8	0	20	0	9
Subtotal	4 774	902	759	1 086	142	1 884
Developing countries/territories of America						
Anguilla	1	0	0	1	0	0
Antigua and Barbuda	7 206	19	616	2 465	4 021	85
Argentina	683	308	34	78	0	263
Barbados	546	160	188	125	0	74
Belize	1 595	81	206	898	27	385
Bolivia	152	94	4	27	2	25
Brazil	2 334	1 039	571	266	184	274
British Virgin Islands	17	0	0	1	0	16
Cayman Islands	2 763	1 090	1 027	522	0	125
Chile	908	250	189	174	17	278
Colombia	94	8	0	44	0	41
Costa Rica	5	0	0	0	0	5
Cuba	65	20	6	8	0	30
Dominica	540	375	21	115	5	23
Dominican Republic	10	0	0	5	0	5
Ecuador	275	168	0	2	0	105
El Salvador	7	0	0	0	0	7
Falkland Islands [e]	50	0	0	1	0	49
Grenada	3	0	0	1	0	2
Guatemala	6	0	0	0	0	5
Guyana	37	5	0	20	0	13
Haiti	1	0	0	1	0	0
Honduras	791	161	99	275	2	254

Annex III (a) (continued)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
Jamaica	139	2	99	34	0	3
Mexico	1 096	629	19	67	0	381
Nicaragua	6	1	0	0	0	4
Paraguay	44	3	0	37	1	4
Peru	227	15	0	25	0	187
Saint Kitts and Nevis	187	68	12	98	0	9
Saint Vincent and the Grenadines	5 892	314	2 444	2 526	110	497
Suriname	5	2	0	3	0	1
Trinidad and Tobago	39	4	0	3	0	32
Turks and Caicos Islands	1	0	0	0	0	1
Uruguay	90	8	0	7	0	76
Venezuela	1 060	557	154	37	3	309
Subtotal	26 875	5 379	5 689	7 865	4 370	3 571
Developing countries/territories of Asia						
Bahrain	312	81	58	3	96	74
Bangladesh	475	67	52	278	45	33
Brunei Darussalam	479	1	0	2	0	476
Hong Kong (China)	29 851	6 302	17 502	1 904	3 766	377
India	8 079	4 652	2 271	255	106	794
Indonesia	4 305	997	458	1 717	240	894
Iran (Islamic Republic of)	5 270	3 306	953	531	311	170
Iraq	142	30	0	40	0	71
Jordan	223	4	32	114	13	59
Kuwait	2 317	1 685	54	98	214	266
Lebanon	178	1	50	124	0	3
Malaysia	5 758	2 329	419	537	600	1 873
Maldives	87	8	0	70	0	9
Myanmar	436	3	246	157	0	29
Oman	19	0	0	2	0	17
Pakistan	398	215	36	130	0	17
Philippines	5 268	444	2 647	1 328	181	667
Qatar	570	275	0	39	178	78
Republic of Korea	9 250	955	5 090	1 057	1 179	968
Saudi Arabia	1 028	458	0	280	149	141
Singapore	30 823	15 633	6 220	2 838	4 321	1 810
Sri Lanka	178	9	0	106	43	21
Syrian Arab Republic	407	1	39	356	8	3
Thailand	3 026	360	1 009	1 250	220	187
United Arab Emirates	839	263	87	94	214	182
Subtotal	109 716	38 081	37 224	13 309	11 884	9 217

Annex III (a) (continued)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
Developing countries of Europe						
Croatia	1 129	288	576	134	0	131
Slovenia	1	0	0	0	0	1
Subtotal	1 131	288	576	134	0	132
Developing countries of Oceania						
Fiji	30	0	0	9	0	21
Kiribati	6	0	0	5	0	1
Papua New Guinea	81	4	4	60	0	14
Solomon Islands	8	0	0	2	0	6
Tonga	86	3	6	61	0	16
Tuvalu	231	6	23	157	4	42
Vanuatu	1 813	0	808	374	25	605
Subtotal	2 256	13	841	668	29	705
Developing total	144 751	44 664	45 089	23 062	16 427	15 510
Unallocated	11	0	0	11	0	0

Annex III (b)

Merchant fleets of the world by flags of registration, [a] groups of countries and types of ship [b] as of 1 January 2006

(In thousands of dwt)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
World total [d]	959 964	354 219	345 924	96 218	111 095	52 508
Developed market-economy countries/territories						
Australia	2 279	404	717	130	10	1 018
Austria	44	0	0	38	6	0
Belgium	6 503	3 033	2 375	39	338	718
Canada	3 054	888	1 631	100	17	419
Denmark	9 764	2 846	485	397	5 561	475
Finland	1 121	530	85	358	14	134
France	7 297	4 708	347	224	1 185	832
Germany	13 578	865	324	521	11 646	221
Gibraltar	1 418	498	3	627	266	25
Greece	52 136	27 741	21 395	437	2 194	370
Iceland	78	0	1	1	0	76
Ireland	306	9	98	142	7	50
Israel	874	24	0	5	840	5
Italy	12 074	5 374	3 235	1 422	897	1 147
Japan	15 100	4 723	4 635	2 105	439	3 197
Luxembourg	645	253	98	42	105	146
Netherlands	7 626	665	305	3 591	1 855	1 210
New Zealand	180	86	17	25	0	51
Norway	23 237	8 988	7 077	3 196	69	3 908
Portugal	1 527	957	170	192	44	163
South Africa	114	10	0	0	30	74
Spain	2 541	1 089	43	282	252	875
Sweden	2 235	841	47	1 176	0	171
Switzerland	791	9	529	90	158	5
Turkey	7 621	1 455	4 140	1 581	304	141
United Kingdom	25 548	7 954	7 590	1 660	5 774	2 570
United States	60 675	36 652	11 731	2 189	7 145	2 958
Subtotal	258 366	110 603	67 079	20 569	39 156	20 959
Major open-registry countries/territories						
Bahamas	51 922	25 275	12 918	6 621	2 356	4 753
Bermuda	8 582	2 327	3 579	229	747	1 699
Cyprus	30 316	5 899	18 544	2 379	3 330	164
Liberia	93 026	49 692	19 637	3 028	16 521	4 148
Malta	36 942	12 476	18 914	3 539	1 553	461
Panama	211 121	57 953	108 315	15 094	23 282	6 477
Subtotal	431 910	153 622	181 907	30 890	47 789	17 702

Annex III (b) (continued)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
Central and Eastern Europe and former USSR						
Albania	108	0	0	106	0	1
Azerbaijan	568	289	0	113	0	166
Bulgaria	1 308	30	1 037	147	78	16
Estonia	101	12	0	24	0	64
Georgia	1 502	55	630	740	13	63
Kazakhstan	47	25	0	9	0	12
Latvia	366	251	0	30	0	85
Lithuania	446	6	116	233	4	86
Poland	124	13	0	43	0	68
Romania	372	90	25	129	0	128
Russian Federation	8 006	2 029	1 081	3 387	143	1 366
Slovakia	299	4	60	234	0	1
Turkmenistan	42	8	3	15	0	14
Ukraine	1 132	48	160	679	34	211
Subtotal	14 420	2 864	3 112	5 891	271	2 282
Socialist countries of Asia						
China	32 774	7 234	14 353	6 536	3 718	932
Democratic People's Republic of Korea	1 733	115	283	1 259	26	49
Viet Nam	2 479	460	431	1 324	57	208
Subtotal	36 986	7 810	15 067	9 119	3 802	1 189
Developing countries/territories of Africa						
Algeria	882	47	288	108	0	438
Angola	43	4	0	12	0	26
Benin	0	0	0	0	0	0
Cameroon	79	69	0	3	0	6
Cape Verde	22	4	0	13	0	5
Comoros	811	225	171	368	5	42
Congo	1	0	0	0	0	1
Côte d'Ivoire	5	1	0	0	0	4
Djibouti	4	0	0	3	0	1
Egypt	1 616	345	740	341	58	133
Equatorial Guinea	26	1	0	6	0	19
Ethiopia	98	0	0	98	0	0
Gabon	8	1	0	4	0	4
Gambia	11	5	0	5	0	2
Ghana	89	5	0	15	0	68
Guinea	7	0	0	0	0	7
Guinea-Bissau	2	0	0	0	0	2
Kenya	17	8	0	2	0	7
Libyan Arab Jamahiriya	104	13	0	63	0	27

Annex III (b) (continued)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
Madagascar	32	7	0	18	0	6
Mauritania	25	0	0	1	0	24
Mauritius	72	0	8	15	0	49
Morocco	390	113	0	55	96	126
Mozambique	27	0	0	11	0	17
Nigeria	530	397	13	28	0	92
Saint Helena	1	0	0	0	0	1
São Tome and Principe	67	1	29	35	0	2
Senegal	18	0	0	2	0	16
Seychelles	136	110	0	4	0	22
Sierra Leone	101	76	0	14	0	11
Somalia	7	2	0	2	0	3
Sudan	17	1	0	14	0	1
Togo	15	0	0	4	0	11
Tunisia	124	70	26	3	0	25
United Republic of Tanzania	39	14	0	23	0	2
Subtotal	5 423	1 517	1 275	1 270	159	1 201
Developing countries/territories of America						
Anguilla	1	0	0	1	0	0
Antigua and Barbuda	9 466	29	907	3 233	5 196	101
Argentina	918	529	52	112	0	225
Barbados	784	249	311	163	0	60
Belize	1 731	129	315	1 091	28	168
Bolivia	212	155	7	37	2	11
Brazil	3 450	1 673	993	304	214	266
British Virgin Islands	11	0	0	1	0	10
Cayman Islands	4 387	1 789	1 798	645	0	155
Chile	1 074	426	319	106	21	203
Colombia	120	13	0	63	0	44
Costa Rica	1	0	0	0	0	1
Cuba	82	32	9	10	0	31
Dominica	868	663	35	151	8	11
Dominican Republic	7	0	0	6	0	1
Ecuador	357	293	0	3	0	61
El Salvador	2	0	0	0	0	2
Falkland Islands [e]	36	0	0	0	0	36
Grenada	1	0	0	1	0	0
Guatemala	4	1	0	0	0	4
Guyana	38	7	0	24	0	7
Haiti	1	0	0	1	0	0
Honduras	931	295	170	361	2	103

Annex III (b) (continued)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
Jamaica	198	3	171	23	0	0
Mexico	1 364	1 027	28	61	0	249
Nicaragua	3	1	0	1	0	1
Paraguay	49	4	0	42	2	1
Peru	149	27	0	37	0	85
Saint Kitts and Nevis	266	105	20	130	0	10
Saint Vincent and the Grenadines	8 524	550	4 436	3 206	136	197
Suriname	7	3	0	3	0	0
Trinidad and Tobago	16	4	0	0	0	12
Turks and Caicos Islands	0	0	0	0	0	0
Uruguay	57	11	0	9	0	38
Venezuela	1 614	965	257	48	3	341
Subtotal	36 729	8 983	9 827	9 874	5 612	2 433
Developing countries/territories of Asia						
Bahrain	396	154	85	4	100	53
Bangladesh	664	117	89	379	61	18
Brunei Darussalam	421	2	0	3	0	417
Hong Kong (China)	50 443	11 443	30 195	4 144	4 408	253
India	13 295	8 310	3 869	288	141	687
Indonesia	5 308	1 599	750	2 270	311	378
Iran (Islamic Republic of)	9 009	6 132	1 633	726	390	128
Iraq	175	51	0	55	0	69
Jordan	225	7	53	131	16	19
Kuwait	3 706	3 043	93	86	227	257
Lebanon	215	1	80	130	0	3
Malaysia	7 755	4 115	722	712	840	1 366
Maldives	118	18	0	95	0	5
Myanmar	645	5	433	194	0	14
Oman	11	1	0	2	0	8
Pakistan	652	388	66	184	0	14
Philippines	7 129	717	4 419	1 513	201	279
Qatar	795	482	0	52	193	67
Republic of Korea	14 347	1 682	9 316	1 371	1 367	611
Saudi Arabia	1 278	759	0	296	156	67
Singapore	48 562	28 130	11 576	2 525	5 274	1 058
Sri Lanka	222	15	0	142	53	11
Syrian Arab Republic	598	2	61	525	8	1
Thailand	4 591	638	1 664	1 849	299	140
United Arab Emirates	1 066	439	142	100	227	158
Subtotal	171 628	68 251	65 246	17 776	14 273	6 083

Annex III (b) (continued)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
Developing countries of Europe						
Croatia	1 741	549	1 002	157	0	33
Slovenia	0	0	0	0	0	0
Subtotal	1 741	549	1 002	157	0	33
Developing countries of Oceania						
Fiji	15	0	0	7	0	8
Kiribati	7	0	0	6	0	1
Papua New Guinea	95	7	5	77	0	6
Solomon Islands	5	0	0	2	0	4
Tonga	97	4	7	77	0	9
Tuvalu	310	9	36	242	4	19
Vanuatu	2 219	0	1 360	249	29	581
Subtotal	2 749	20	1 408	660	33	627
Developing total	218 270	79 320	78 758	29 737	20 077	10 376
Unallocated	12	0	0	12	0	0

Notes to Annex III

Source: Lloyd's Register–Fairplay.

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

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

[c] Including passenger/cargo.

[d] Excluding estimates of the United States Reserve Fleet and the United States and Canadian Great Lakes fleets, which amounted to respectively 3.7 million grt (3.9 million dwt), 0.9 million grt (1.8 million dwt) and 1.0 million grt (1.5 million dwt).

[e] 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).