

The background features a stylized illustration of a ship's hull in dark blue and white, with a large, bold number '1' in green and yellow above it. The scene is set against a light yellow sky and a light green sea. The overall style is modern and graphic.

World maritime trade lost momentum in 2018, with volumes expanding at 2.7 per cent, below the historical averages of 3.0 per cent and 4.1 per cent recorded in 2017. Total volumes are estimated to have reached 11 billion tons, an all-time high, according to UNCTAD records. UNCTAD is projecting 2.6 per cent growth in 2019 and an annual average growth rate of 3.4 per cent for the period 2019–2024. However, the outlook remains challenging, given the heightened uncertainty regarding trade policy and wide-ranging downside risks clouding the horizon.

In 2018, world merchandise trade growth decelerated at an unexpected rate, and tariffs on trade between China and the United States of America escalated amid mounting trade tensions and a proliferation of national trade-restrictive measures. Apart from trade policy crosscurrents, geopolitics and sanctions, environmental concerns, fuel economics and tensions involving the Strait of Hormuz – a strategic maritime chokepoint – were in the headlines.

Other forces at work continued to slowly reshape the maritime transport landscape. A new normal, contrasting with the historical perspective, appears to be taking hold. This trend is characterized by overall moderate growth in the global economy and trade, a supply chain restructuring in favour of more regionalized trade flows, a continued rebalancing of the Chinese economy, a larger role of technology and services in value chains and logistics, intensified and more frequent natural disasters and climate-related disruptions, and an accelerated environmental sustainability agenda with an increased awareness of the impact of global warming.

A transition to the new normal calls for an improved understanding of the main issues at stake, better planning, and flexible and forward-looking-policies that can effectively anticipate change and enable appropriate response measures that take into account the heterogenous nature of developing countries as a group and their varied local conditions and needs.

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## INTERNATIONAL MARITIME TRADE AND PORT TRAFFIC

# WORLD MARITIME TRADE AND PORT TRAFFIC

## Maritime trade growth down



Maritime trade volumes **+2.7%**  
below the 4.1% in 2017

Volumes **11 billion tons**

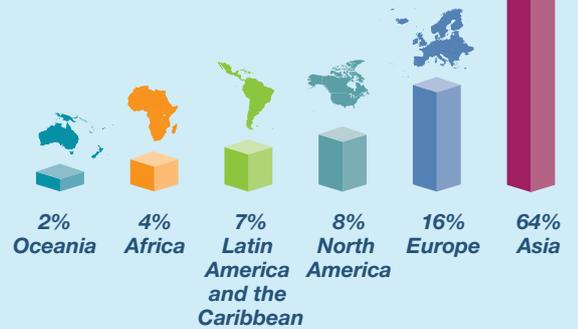


## Port traffic growth down

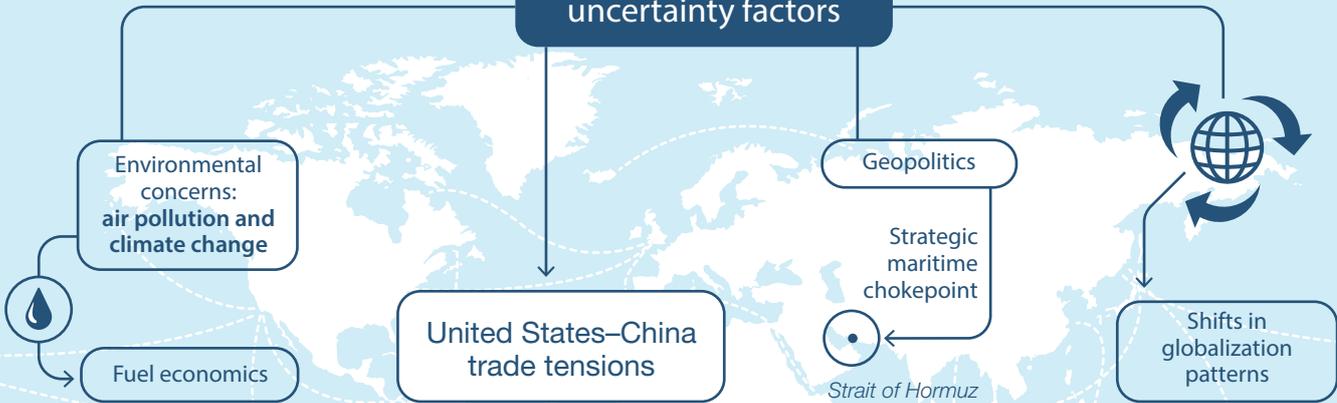
An estimated **793.26 million TEUs** were handled in container ports worldwide

Global container port traffic **+4.7%**  
down from 6.7% in 2017

## Container port traffic by region



## Trends and uncertainty factors



## Maritime trade outlook, 2019-2024

**+2.6%** growth in 2019

**+3.4%** annual average growth 2019-2024



## A. TRENDS IN MARITIME TRADE FLOWS

The present chapter considers developments shaping global demand for maritime transport and services. More specifically, sections A and B review trends in the global economy, merchandise trade, maritime cargo flows and container port cargo-handling activity. Section C discusses the outlook for maritime trade, puts forward some considerations and highlights potential action areas for policymakers and stakeholders in maritime transport.

### 1. Global economic growth in 2018 and 2019

Global economic growth dipped in 2018 and is expected to decline further in 2019. After reaching 3.1 per cent in 2017, growth in world gross domestic product (GDP) remained steady but edged down to 3.0 per cent in 2018, below the historical average recorded between 1994 and 2008 (table 1.1). Fiscally induced growth in the United States helped to somewhat offset weak performance in Argentina, China, the Islamic Republic of Iran, Japan, Turkey and the European Union.

Global growth slowed down abruptly during the fourth quarter of 2018, reflecting in part recessions in some emerging economies and weakness in industrial sectors across many regions. Global industrial production – a leading indicator of demand for maritime transport services – decelerated to 3.1 per cent, down from 3.6 per cent in 2017.<sup>1</sup> In addition to country- and sector-specific factors, high policy uncertainty arising from trade tensions between China and the United States generated strong downward pressure on global growth.

In developing economies, GDP growth slowed to an estimated 4.2 per cent in 2018, while growth in the least developed countries fell short of meeting the targets set under the Sustainable Development Goals. In the developed countries, except for the United States, GDP growth decelerated from 2.3 per cent in 2017 to 2.2 per cent in 2018. Elsewhere, in countries with economies in transition, GDP growth improved from 2.1 per cent in 2017 to 2.8 per cent in 2018.

Industrial production figures and surveys of purchasing managers suggest that the slower momentum is likely to continue in 2019. UNCTAD projects global GDP growth to further decline in 2019.

Region or country	1994–2008	2017	2018 <sup>a</sup>	2019 <sup>b</sup>
<b>World</b>	<b>3.3</b>	<b>3.1</b>	<b>3.0</b>	<b>2.3</b>
<b>Developed countries</b>	<b>2.6</b>	<b>2.3</b>	<b>2.2</b>	<b>1.6</b>
<i>of which:</i>				
United States	3.2	2.2	2.9	2.2
European Union (28)	2.5	2.5	2.0	1.3
Japan	1.1	1.9	0.8	0.8
<b>Developing countries</b>	<b>5.1</b>	<b>4.4</b>	<b>4.2</b>	<b>3.5</b>
<i>of which:</i>				
Africa	4.6	2.6	2.8	2.8
East Asia	8.1	6.2	5.9	5.4
<i>of which:</i>				
China	9.7	6.9	6.6	6.1
South Asia	5.7	6.3	6.0	4.1
<i>of which:</i>				
India	6.6	6.9	7.4	6.0
South-East Asia	4.2	5.2	5.0	4.5
Western Asia	4.3	2.8	2.3	0.7
<b>Latin American and the Caribbean</b>	<b>2.9</b>	<b>1.0</b>	<b>0.8</b>	<b>0.2</b>
<i>of which:</i>				
Brazil	2.9	1.1	1.1	0.6
<b>Transition economies</b>	<b>4.1</b>	<b>2.1</b>	<b>2.8</b>	<b>1.4</b>
<i>of which:</i>				
Russian Federation	3.9	1.6	2.3	0.5
<b>Least developed countries</b>	<b>6.0</b>	<b>4.3</b>	<b>4.4</b>	<b>4.6</b>

Source: UNCTAD secretariat calculations, based on data from UNCTAD, 2019a, the *Trade and Development Report 2019: Financing a Global Green New Deal*.

<sup>a</sup> Partly estimated.

<sup>b</sup> Forecast.

### 2. Disappointing growth in global merchandise trade

In tandem with developments in global output, global merchandise trade growth (imports and exports) fell to 2.8 per cent in 2018, an unexpected performance contrasting with an increase of 4.5 per cent in 2017 (table 1.2). World merchandise exports increased by 2.5 per cent, while imports expanded by 3.1 per cent. Trade between China and the United States is estimated to have declined by over 15.0 per cent since September 2018, following the second round of tariff hikes. This has also had an impact on global value chains in East Asia and other trading partners (United Nations, 2019a).

The slowdown was broad-based, reflecting weaker import demand in both developed and developing countries, although some regions were more strongly affected than others. The reduced pace reflects

<sup>1</sup> J Osterhaus, Director, Oxford Economics, "GDP and merchandise trade forecasts and models", personal communication (email and discussion) with the UNCTAD secretariat, 26 and 27 June and 1 July 2019.

the downside pressure on export orders and global manufacturing activity. Global capital goods production, which is highly trade-intensive, slowed in Europe and developing Asia. While also trending downward, growth in import demand outpaced that of exports.

Aside from the United States–China tariffs, trade restrictions introduced by other countries have also weighed heavily on international trade. In 2018, import restrictions and tariff increases were also put in place as retaliatory actions, or as measures aimed at reducing current account vulnerabilities, for example those relating to Egypt, Indonesia, the Islamic Republic of Iran, Pakistan, Sri Lanka and Turkey. The growing use of anti-dumping and countervailing duties and safeguards hindered trade even further (World Bank, 2019).

With the exception of the United States, developed countries recorded a slowdown in their export and import demand. Export growth in developing countries

waned as volumes expanded at 2.9 per cent, down from 5.2 per cent in 2017. Their import demand decreased to 4.0 per cent, down from 6.8 per cent in 2017, reflecting a slowdown in China and East Asia, as well as negative growth in Western Asia, where a weaker oil price environment, geopolitical tensions and political unrest contributed to constrain trade. Overall, slower trade growth in Asia and Europe has been a major drag on global trade due to their large share in world imports, 36.3 per cent and 38 per cent, respectively (UNCTAD, 2019b).

### 3. International maritime trade

Maritime transport remains the backbone of globalized trade and the manufacturing supply chain, as more than four fifths of world merchandise trade by volume is carried by sea. However, growth in international maritime trade fell slightly in 2018, owing to softer economic indicators amid heightened uncertainty and the build-up of wide-ranging downside risks. This decline reflects developments in the world economy and trade activity. Volumes increased at 2.7 per cent, below the historical average of 3.0 per cent from 1970–2017 and 4.1 per cent in 2017. Nonetheless, total volumes reached a milestone in 2018, when they achieved an all-time high of 11 billion tons – the first time on UNCTAD record (tables 1.3 and 1.4). Dry bulk commodities, followed by containerized cargo, other dry bulk, oil, gas and chemicals, contributed the most to this growth.

Figure 1.1 shows the structure of international maritime trade over the years. In 2018, major dry bulk commodities – iron ore, grain and coal – accounted for more than 40.0 per cent of total dry cargo shipments, while containerized trade and minor bulks accounted for 24.0 per cent and 25.8 per cent, respectively. Remaining volumes were made of other dry cargo, including break bulks.

Tanker trade shipments (oil, gas and chemicals), accounted for 29.0 per cent of total maritime trade volume, down from 55 per cent nearly five decades earlier. This is consistent with the ongoing shift in the maritime trade structure that is largely rooted in the 1980s. The decade saw a decrease in tanker trade of 6.2 per cent, reflecting the constrained petroleum consumption in main consumer countries that followed the oil shocks of the 1970s. Over the same period, major bulks, including iron ore, grain and coal, increased by more than half. Containerized cargo expanded at the fastest rate, with volumes rising at an annual average rate of 8.0 per cent between 1980 and 2018. The compositional shift in world maritime trade was further emphasized by the development of pipeline trade and the rise of manufactures trade, propelled by fragmented global production processes and international division of labour since the mid-1990s.

While UNCTAD carries no data on cargo ton-miles, estimates by Clarksons Research indicate that, once

**Table 1.2** Growth in volume of merchandise trade, 2016–2018 (Annual percentage change)

Volume of exports			Countries or regions	Volume of imports		
2016	2017	2018		2016	2017	2018
1.3	4.1	2.5	<b>World</b>	1.2	4.8	3.1
1.0	3.3	2.1	<b>Developed countries</b> <i>of which:</i>	2.2	3.1	2.5
2.3	6.0	2.7	Japan	0.8	2.8	2.0
-0.2	4.0	4.1	United States	0.5	4.0	5.3
1.1	3.6	1.6	European Union	3.1	2.6	1.5
0.0	4.5	4.1	<b>Transition economies</b> <i>of which:</i>	5.8	13.0	3.9
-0.3	4.2	4.3	Commonwealth of Independent States	5.1	14.1	3.3
2.0	5.2	2.9	<b>Developing countries</b>	-0.4	6.8	4.0
0.5	3.7	-0.6	Africa	-5.4	-0.4	4.5
0.1	6.1	6.3	Sub-Saharan Africa	-10.4	1.1	2.1
2.5	3.0	2.5	Latin America and the Caribbean	-6.0	5.2	5.9
1.3	6.5	3.3	<b>East Asia</b> <i>of which:</i>	1.7	6.9	4.6
1.4	7.1	4.1	China	3.7	8.9	6.4
5.7	5.8	2.5	<b>South Asia</b> <i>of which:</i>	1.3	11.5	2.8
2.7	6.6	4.3	India	-1.8	11.7	3.1
2.6	8.9	4.6	South-East Asia	2.4	9.5	6.8
2.5	-1.2	2.0	Western Asia	-1.7	2.5	-4.1

Source: UNCTAD secretariat calculations, based on data from UNCTAD, 2019a, *Trade and Development Report 2019: Financing a Global Green New Deal*.

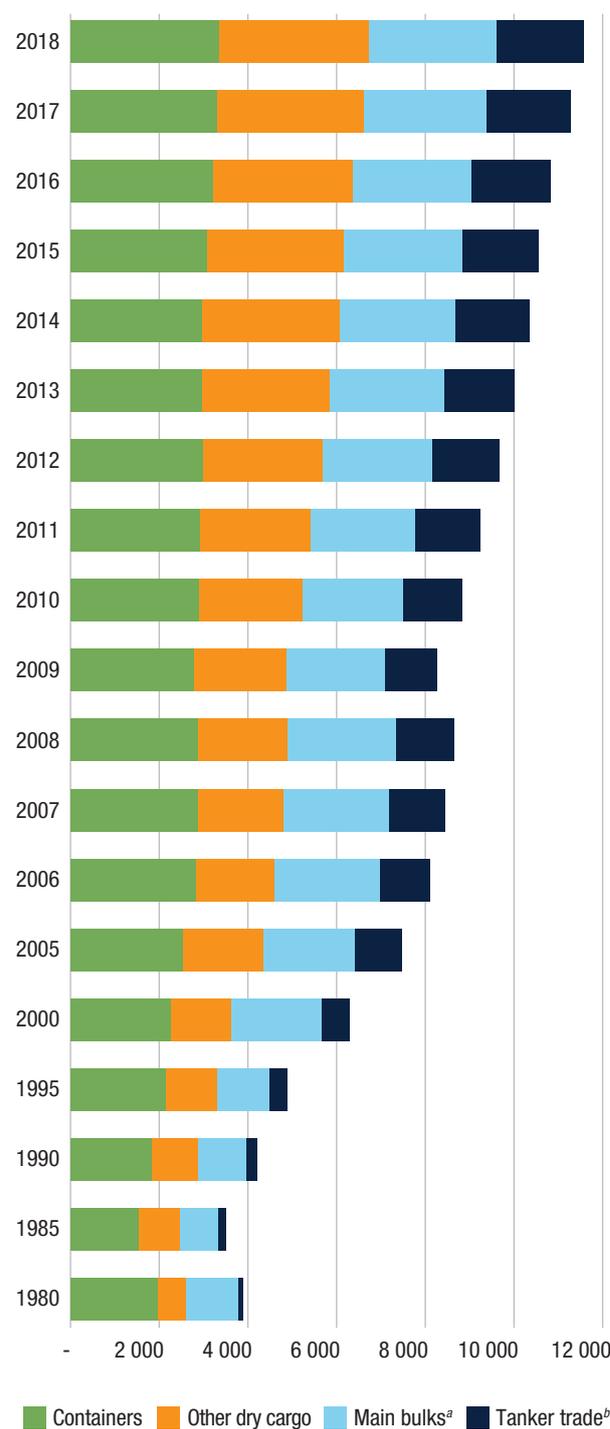
adjusted for distance travelled, maritime trade expanded at a slightly faster pace than tons alone. Volumes grew by about 3.3 per cent, and total cargo ton-miles were estimated at 58,812 billion (figure 1.2). Growing Asian import demand from the Atlantic (i.e. United States and West Africa), in particular, crude oil and gas exports from the United States, underpinned this performance. The shale revolution and the removal of the ban on crude oil exports propelled the United States to the position of a world exporter of oil and gas and changed the global tanker and gas trade landscape.

Year	Tanker trade <sup>a</sup>	Main bulks <sup>b</sup>	Other dry cargo <sup>c</sup>	Total (all cargoes)
1970	1 440	448	717	2 605
1980	1 871	608	1 225	3 704
1990	1 755	988	1 265	4 008
2000	2 163	1 186	2 635	5 984
2005	2 422	1 579	3 108	7 109
2006	2 698	1 676	3 328	7 702
2007	2 747	1 811	3 478	8 036
2008	2 742	1 911	3 578	8 231
2009	2 641	1 998	3 218	7 857
2010	2 752	2 232	3 423	8 408
2011	2 785	2 364	3 626	8 775
2012	2 840	2 564	3 791	9 195
2013	2 828	2 734	3 951	9 513
2014	2 825	2 964	4 054	9 842
2015	2 932	2 930	4 161	10 023
2016	3 058	3 009	4 228	10 295
2017	3 146	3 151	4 419	10 716
2018	3 194	3 210	4 601	11 005

Sources: Compiled by the UNCTAD secretariat based on data supplied by reporting countries, as posted on government and port industry websites, and data provided by specialist sources. Dry cargo data for 2006 onwards were revised and updated to reflect improved reporting, including more recent figures and a better breakdown by cargo type. Since 2006, the breakdown of dry cargo into main bulks and dry cargo other than main bulks is based on various issues of *Shipping Review and Outlook*, produced by Clarksons Research. Total maritime trade figures for 2018 are estimated based on preliminary data or on the last year for which data were available.

<sup>a</sup> Crude oil, refined petroleum products, gas and chemicals.  
<sup>b</sup> Iron ore, grain, coal, bauxite/alumina and phosphate. Since 2006, main bulks include iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under other dry cargo.  
<sup>c</sup> Minor bulks, containerized trade and residual general cargo.

**Figure 1.1** International maritime trade, by cargo type, selected years (Million tons loaded)

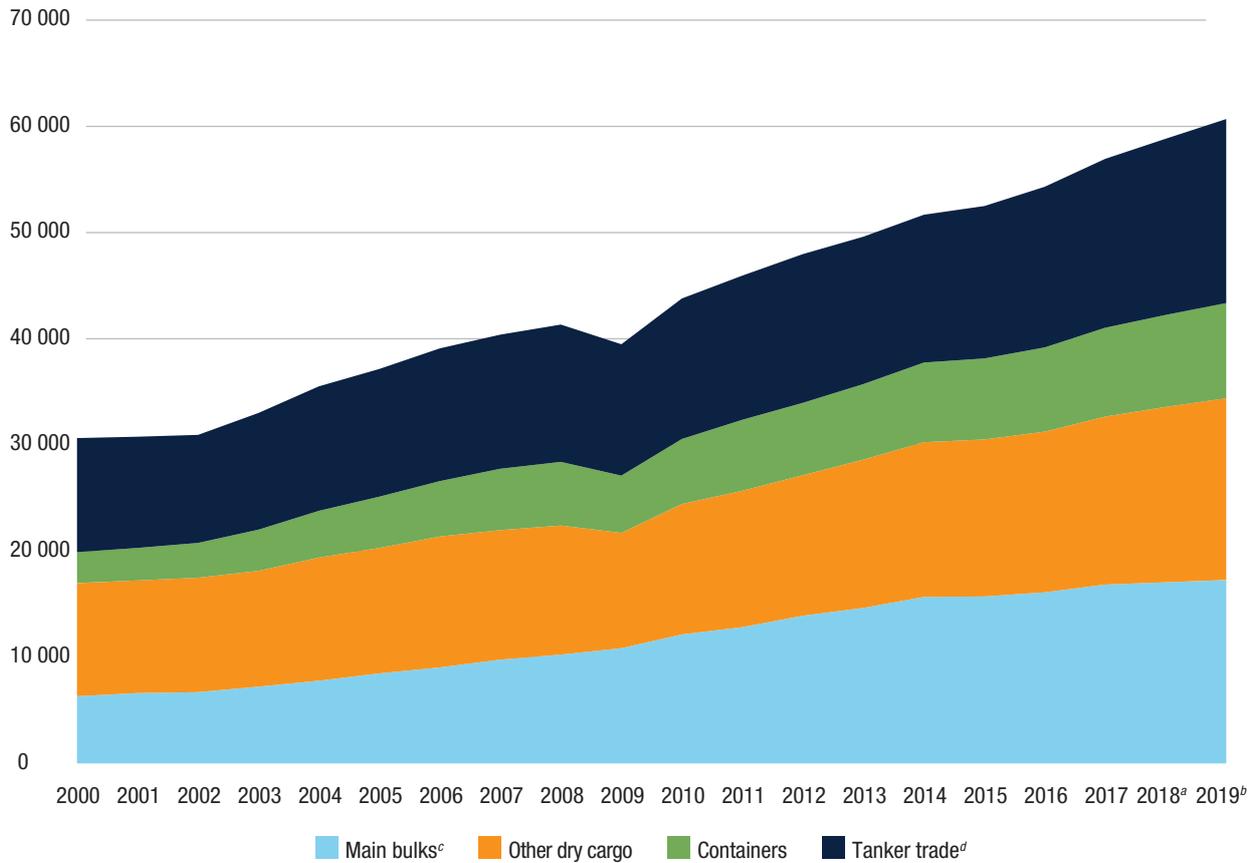


Sources: *Review of Maritime Transport*, various issues. From 2006 to 2018, the breakdown by cargo type is based on data from Clarksons Research, 2019a, *Shipping Review and Outlook*, spring.

Note: From 1980 to 2005, figures for main bulks include iron ore, grain, coal, bauxite/alumina and phosphate. In 2006, the category was modified to include iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under other dry cargo.

<sup>a</sup> Iron ore, grain, coal, bauxite/alumina and phosphate. In 2006, the category was modified to include iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under other dry cargo.  
<sup>b</sup> Crude oil, refined petroleum products, gas and chemicals.

**Figure 1.2** International maritime trade in cargo ton-miles, 2000–2019  
(Estimated billion ton-miles)



Source: UNCTAD secretariat calculations, based on data from Clarksons Research, 2019a, *Shipping Review and Outlook*, spring.

Note: Given methodological differences, containerized trade data in tons sourced from Clarksons Research are not comparable with data in TEUs sourced from MDS Transmodal.

<sup>a</sup> Estimated.

<sup>b</sup> Forecast.

<sup>c</sup> Iron ore, grain, coal, bauxite/alumina and phosphate. In 2006, the category was modified to include iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under other dry cargo.

<sup>d</sup> Crude oil, refined petroleum products, gas and chemicals.

UNCTAD pays particular attention to developing countries' participation in world trade, consistently checking where the cargo is loaded and unloaded, that is, who generates the trade and where it goes. Figure 1.3 (a) features the share of developing countries in international maritime trade in terms of goods loaded and unloaded between 1970 and 2018. Developing countries have been the main exporting countries, with nearly two thirds of maritime trade originating in their territories. The 1980s showed a decline in this trend, reflecting oil trade developments that followed the oil shocks of the 1970s. Developing countries did not figure prominently in view of the colonial trade patterns whereby as marginal players, they exported raw materials and imported mainly consumer goods.

In 2018, developing countries continued to account for most global maritime trade flows, both in terms of exports (goods loaded) and imports (goods unloaded). These countries loaded an estimated 58.8 per cent in 2018 and unloaded 64.5 per cent of this total

(figure 1.3 (a)). Since 2000, the contribution of developing countries to maritime trade has shifted, reflecting their growing role as major exporters of raw materials, as well as major exporters and importers of finished and semi-finished goods. Participation in containerized trade, however, has been concentrated in Asia, notably in China and neighbouring countries. Other developing regions did not contribute equally, a reflection of their varying degrees of integration into global value chains and manufacturing networks. Figure 1.3 (b) paints an entirely different picture when China is not included in the grouping.

By contrast, developed countries saw their share of both types of traffic decline over time, hovering at around one third in terms of goods loaded and unloaded, respectively. The share of transition economies remained relatively smaller. A total of 6.5 per cent of world maritime trade volumes were loaded in these economies' ports and less than 1.0 per cent was unloaded in their territory.

**Table 1.4 International maritime trade, 2017–2018**  
(Type of cargo, country group and region)

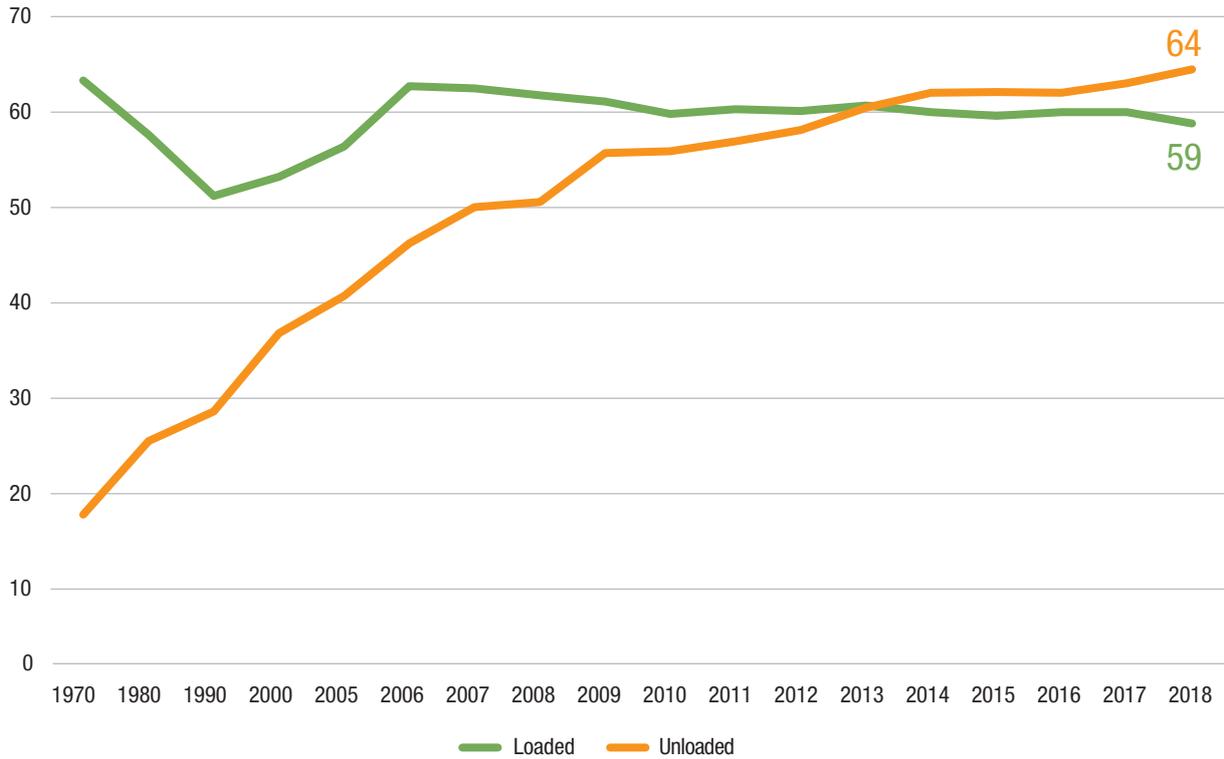
Country group	Goods loaded					Goods unloaded			
	Year	Total	Crude oil	Other tanker trade <sup>a</sup>	Dry cargo	Total	Crude oil	Other tanker trade <sup>a</sup>	Dry cargo
<b>Millions of tons</b>									
World	2017	10 716.2	1 874.6	1 271.6	7 570.1	10 702.3	2 033.7	1 289.4	7 379.2
	2018	11 005	1 886.2	1 308.1	7 810.7	11 002.2	2 048.5	1 321.8	7 631.9
Developed economies	2017	3 709	152.7	491.2	3 065.1	3 795	979.1	494.7	2 321.2
	2018	3 821.7	157.7	511.2	3 152.7	3 822.9	946.5	495.8	2 380.5
Transition economies	2017	694.4	206.8	41.6	445.9	81.4	0.3	4.6	76.4
	2018	713.3	203.8	39.6	469.9	86.5	0.3	4.8	81.3
Developing economies	2017	6 312.8	1 515	738.8	4 059	6 825.9	1 054.3	790	4 981.6
	2018	6 469.9	1 524.7	757.3	4 188	7 092.8	1 101.6	821.2	5 170
Africa	2017	740.9	291.3	70.4	379.1	496.8	40.5	93.8	362.6
	2018	767.2	289.3	73.8	404	516.3	42.5	93.9	380
America	2017	1 371.8	225.2	71.9	1 074.7	617.2	47.5	141.4	428.2
	2018	1 403.7	219.3	78.3	1 106.1	652.5	51.8	149	451.8
Asia	2017	4 192	996.9	595.6	2 599.5	5 696.9	965.4	549.4	4 182.1
	2018	4 290.7	1 014.4	604.1	2 672.1	5 908.3	1 006.5	572.5	4 329.3
Oceania	2017	8.1	1.6	0.8	5.7	14.9	0.8	5.4	8.7
	2018	8.4	1.6	1.0	5.8	15.6	0.8	5.8	9
Country group	Goods loaded					Goods unloaded			
	Year	Total	Crude oil	Other tanker trade <sup>a</sup>	Dry cargo	Total	Crude oil	Other tanker trade <sup>a</sup>	Dry cargo
<b>Percentage share</b>									
World	2017	100	17.5	11.9	70.6	100	19	12.1	69
	2018	100	17.1	11.9	71	100	15.5	11.6	72.9
Developed economies	2017	34.6	8.1	38.6	40.5	35.5	48.1	38.4	31.5
	2018	34.7	8.4	39.1	40.4	34.7	46.2	37.5	31.2
Transition economies	2017	6.5	11	3.3	5.9	0.8	0	0.4	1
	2018	6.5	10.8	3	6	0.8	0	0.4	1.1
Developing economies	2017	58.9	80.8	58.1	53.6	63.8	51.8	61.3	67.5
	2018	58.8	80.8	57.9	53.6	64.5	53.8	62.1	67.7
Africa	2017	6.9	15.5	5.5	5	4.6	2	7.3	4.9
	2018	7	15.3	5.6	5.2	4.7	2.1	7.1	5
America	2017	12.8	12	5.7	14.2	5.8	2.3	11	5.8
	2018	12.8	11.6	6	14.2	5.9	2.5	11.3	5.9
Asia	2017	39.1	53.2	46.8	34.3	53.2	47.5	42.6	56.7
	2018	39	53.8	46.2	34.2	53.7	49.1	43.3	56.7
Oceania	2017	0.1	0.1	0.1	0.1	0.1	0	0.4	0.1
	2018	0.1	0.1	0.1	0.1	0.1	0	0.4	0.1

Source: Compiled by the UNCTAD secretariat based on data supplied by reporting countries, as posted on government and port industry websites, and data provided by specialist sources. Dry cargo data for 2006 onwards were revised and updated to reflect improved reporting, including more recent figures and a better breakdown by cargo type. Total maritime trade figures for 2018 are estimated based on preliminary data or on the last year for which data were available.

Note: For longer time series and data prior to 2017, see UNCTADstat Data Centre at <http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=32363>.

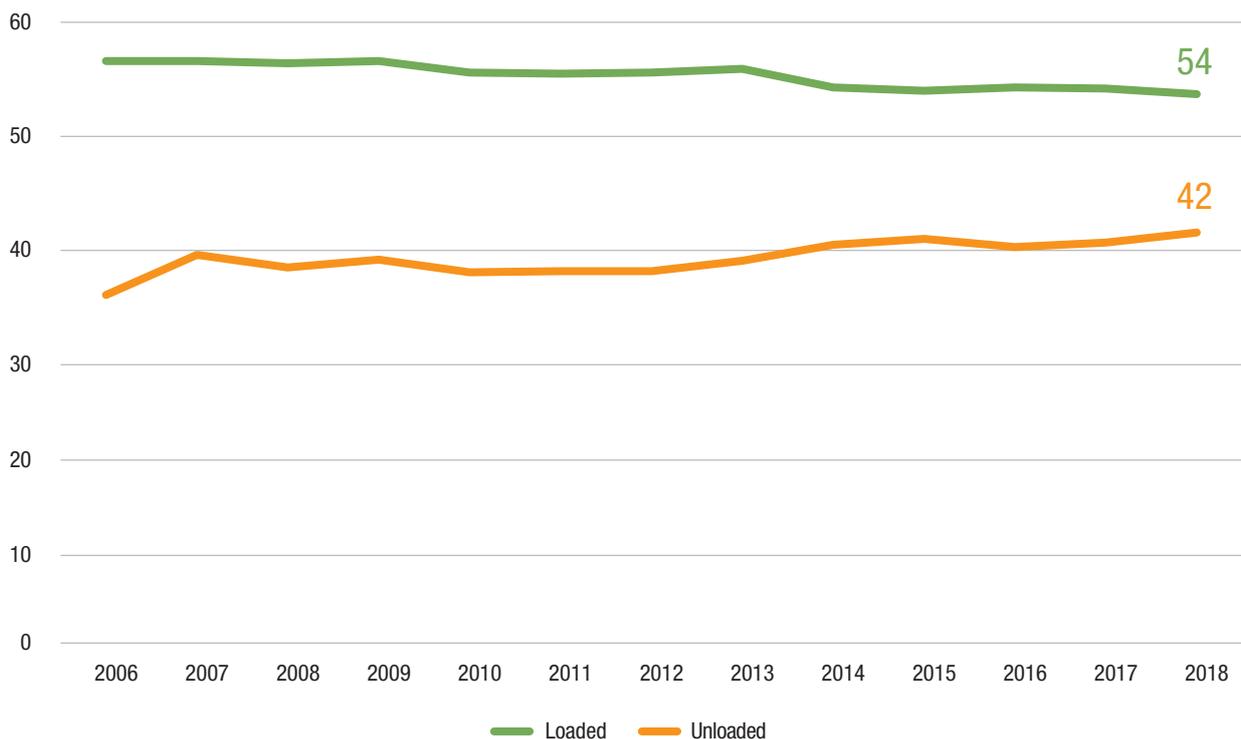
<sup>a</sup> Refined petroleum products, gas and chemicals.

**Figure 1.3 (a) Participation of developing countries in international maritime trade, selected years**  
(Percentage share in total tonnage)



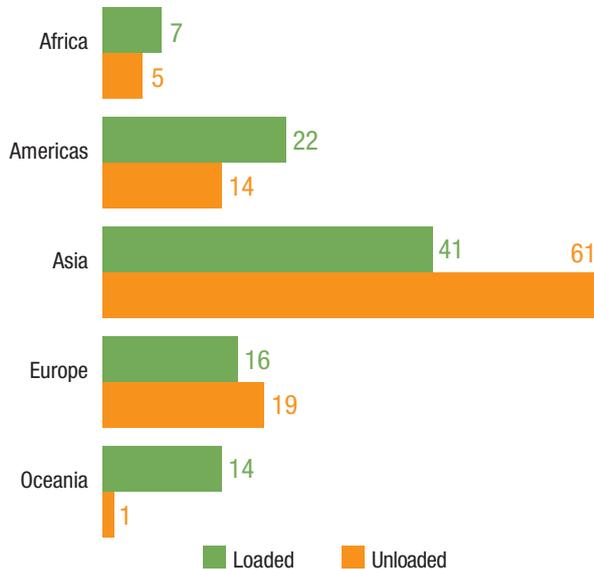
Sources: UNCTAD secretariat calculations, based on data from the *Review of Maritime Transport*, various issues, and table 1.4 of this report.

**Figure 1.3 (b) Participation in international maritime trade of developing countries other than China, selected years**  
(Percentage share in total tonnage)



Sources: UNCTAD secretariat calculations, based on data from the *Review of Maritime Transport*, various issues, and table 1.4 of this report.

**Figure 1.4 International maritime trade by region, 2018**  
(Percentage share in world tonnage)



Sources: Compiled by the UNCTAD secretariat based on data supplied by reporting countries, as posted on government and port industry websites, and data provided by specialist sources.

Note: Estimated figures are based on preliminary data or on the last year for which data were available.

Figure 1.4 highlights the regional distribution of global maritime trade. In 2018, 41 per cent of the total goods loaded in 2018 originated in Asia and 61 per cent of total goods unloaded were received in this same region. Over the years, the participation of Africa declined, particularly in terms of goods loaded, reflecting the reduced importance of traditional African exporters of liquid and dry bulk cargoes. This was only partly compensated for by alternative raw material sources from Africa, not by Africa becoming more active in exporting goods with more value added and goods that are generally carried in containers, including manufactured goods and processed food or industrial products. The relative decline of Latin American countries as a source of trade volumes is equally notable. In contrast, Asian countries have experienced a large increase in intraregional trade mostly based on manufactures trades and reflecting fragmented production processes. Parts are generally manufactured in multiple locations across Asia and assembled in another location. This was not observed in Africa and only to a limited extent in Latin America, due to in part to the similarities in factor endowments in the region and to limitations in infrastructure and shipping services (UNCTAD, 2018).

#### 4. Slowdown in key market segments of maritime trade

In tandem with the world economy and trade, and further shaped by country-specific trends, most notably in China, growth slowed down across nearly all cargo

segments except for minor bulks, gas and refined petroleum product trades.

After strong growth in 2017, tanker trade dwindled in 2018. The geographical dispersion of trade in oil in East Asia continued in 2018. Exports were concentrated less on traditional exporters from Western Asia and included suppliers from the Atlantic basin (Angola, Brazil, Canada, Nigeria and the United States). As shown in table 1.5, global tanker trade increased by 1.5 per cent in 2018, hampered by fewer crude oil shipments. A sharp decline in oil trade growth was partly offset by rapidly expanding gas trade (liquefied natural gas and liquefied petroleum gas).

**Table 1.5 Tanker trade, 2017–2018**  
(Million tons and annual percentage change)

	2017	2018	Percentage change 2017–2018
Crude oil	1 874.6	1 886.2	0.6
Other tanker trade of which:	1 271.6	1 308.1	2.9
Liquefied natural gas	292	318	8.9
Liquefied petroleum gas	90	97	7.8
<b>Total tanker trade</b>	<b>3 146.2</b>	<b>3 194.3</b>	<b>1.5</b>

Sources: UNCTAD secretariat calculations, derived from table 1.4 of this report. Figures for liquefied natural gas and liquefied petroleum gas are derived from Clarksons Research, 2019b, *Seaborne Trade Monitor*, Volume 6, No. 6, June 2019.

Note: Tanker trade includes crude oil, refined petroleum products, gas and chemicals.

UNCTAD estimates that world trade in crude oil was 1.9 billion tons in 2018, following an increase of less than 1.0 per cent. Growth was partly limited by declining imports into Europe and the United States and a slowdown in import demand in China, owing to refinery capacity constraints suffered earlier during the year. To put things in perspective, in China, crude oil imports increased by about 15.6 per cent in 2016, 9.2 per cent in 2017 and 7.3 per cent in 2018 (Clarksons Research, 2019c). Disruptions on the supply side involving the Islamic Republic of Iran and the Bolivarian Republic of Venezuela, as well as supply cuts led by the Organization of the Petroleum Exporting Countries, weighed on crude oil shipments. However, trade in ton-miles recorded stronger growth.

Trade in refined petroleum products was held up by falling imports from Brazil and South-East Asia and the drawing on stocks in some regions. However, firm import demand in Mexico and expanding shipments from Western Asia and the United States helped offset the negative trend somewhat (Clarksons Research, 2018a). An overview of global players in the oil and natural gas sector is presented in table 1.6.

World oil production		World oil consumption	
Western Asia	33	Asia and the Pacific	36
North America	22	North America	23
Transition economies	15	Europe	15
Developing America	9	Western Asia	9
Africa	9	Developing America	9
Asia and the Pacific	8	Transition economies	4
Europe	4	Africa	4
Oil refinery capacities		Oil refinery throughput	
Asia and the Pacific	35	Asia and the Pacific	36
North America	21	North America	22
Europe	15	Europe	15
Western Asia	11	Western Asia	11
Transition economies	8	Transition economies	8
Developing America	8	Developing America	5
Africa	2	Africa	3
World natural gas production		World natural gas consumption	
North America	26	North America	24
Transition economies	22	Asia and the Pacific	21
Western Asia	18	Transition economies	16
Asia and the Pacific	16	Western Asia	16
Europe	6	Europe	12
Developing America	6	Developing America	7
Africa	6	Africa	4

Source: UNCTAD secretariat calculations, based on data published in *British Petroleum (BP) Statistical Review of World Energy 2019*, June 2019.

Note: Oil includes crude oil, shale oil, oil sands and natural gas liquids (the liquid content of natural gas where this is recovered separately). The term does not include liquid fuels from other sources such as biomass and coal derivatives.

Gas trade continued its bullish growth, supported by growing supply capacity and ongoing environmental and energy policy shifts. Liquefied natural gas shipments totalled 318 million tons in 2018, reflecting an increase of 8.9 per cent (table 1.5) (Clarksons Research, 2019b). Demand growth originated mostly in Asia, bolstered by ongoing energy policy shifts and rising export capacity in Australia and the United States. In China, liquefied natural gas imports increased by over 40.0 per cent in 2018, partly supported by the growing importance of its environmental agenda (Clarksons Research, 2019c). Key exporters included Qatar, the largest liquefied natural gas supplier, Australia, Malaysia and the United States.

Liquefied petroleum gas shipments picked up speed and increased by 7.8 per cent, up from 2.2 per cent in 2017 (Clarksons Research, 2019b). Strong import demand in India and Europe and expanding supply

from the United States and Western Asia underpinned this performance. On the export side, shipments from the United States to Asia expanded, benefiting from growing production and pricing dynamics. Additional support was provided by growing supply in Western Asia as a result of petrochemical capacity expansion in the region (Clarksons Research, 2019a).

### Major bulks

Trade in dry bulks supported maritime shipments in 2018 but trends varied by commodity, and some underlying risks became more apparent. Growth in dry bulks (major and minor bulks) trade expanded by 2.6 per cent in 2018, down from 4.0 per cent in 2017. Backed by robust growth in coal, trade in major dry bulks (iron ore, coal and grain) grew at 1.9 per cent in 2018 (table 1.7), down from 4.7 per cent in 2017. Risks to trade in dry bulks began materializing in 2018 as major bulks<sup>2</sup> – the mainstay of maritime trade in volume for more than two decades – came under pressure. Trade in major dry bulks increased steadily for almost two decades at an average annual rate of 5.9 per cent. The one exception was in 2015, characterized by weak growth.

	2017	2018	Percentage change 2017–2018
Major bulks <sup>a</sup> of which:	3 151	3 210	1.9
Iron ore	1 473	1 476	0.2
Coal	1 202	1 263	5.1
Grain	476	471	-1.1
Minor bulks of which:	1 947	2 020	3.7
Steel products	392	390	-0.5
Forest products	365	378	3.6
<b>Total dry bulks</b>	<b>5 098</b>	<b>5 230</b>	<b>2.6</b>

Source: UNCTAD secretariat calculations, based on Clarksons Research, 2019d, *Dry Bulk Trade Outlook*, Volume 25, No. 6, June.

<sup>a</sup> Iron ore, coal (steam and coking) and grains (wheat, coarse grain and soybean).

Some negative trends unfolded in 2018. Growth in iron ore shipments nearly came to a halt as import demand in China contracted. Coal trade expanded at 5.1 per cent but remained, nevertheless, under pressure due to the growing concerns about coal's environmental footprint and the emphasis on diversifying the energy mix in major importing countries such those of the European Union, where coal imports contracted by about 5.8 per cent in 2018. As trade in iron ore and coal represents

<sup>2</sup> Detailed figures on dry bulk commodities are derived from Clarksons Research, 2019d, *Dry Bulk Trade Outlook*, Volume 25, No. 6, June.

28.2 per cent and 24.1 per cent, respectively, of global dry bulk trade, which in turn accounts for nearly half of global maritime trade, any pressure on these sectors does not bode well for shipping or demand for maritime transport services in general. These developments underscore the issue of overreliance on a limited number of commodities and trade markets to support maritime trade. Risks associated with the overreliance of maritime transport on China, as well as iron ore and coal, have been building for the past few years.

In China, maritime imports of major bulk commodities were estimated at 1.4 billion tons, or 43.5 per cent of global maritime major bulk trade in 2018. After two decades of consistent growth, maritime iron ore imports in that country – 71.0 per cent of global iron ore trade – contracted by close to 1.0 per cent in 2018. Supply-side constraints in Australia and Brazil – which together accounted for some 83.0 per cent of the global market in 2018 – rising scrap use for steel industry in China and the use of existing iron ore inventories have limited the demand for iron ore imports in China. Other exporters, in order of magnitude are South Africa, Canada, Sweden and India, which contribute only smaller shares to global iron ore trade. An overview of global players in the dry bulk commodities trade sector is presented in table 1.8.

With regard to trade in coal, growth was supported by import demand into China, which accounted for an estimated 19.0 per cent of world coal maritime imports in 2018. Growing emphasis on environmental and safety policies and a supply-side reform programme in China resulted in limiting domestic production and favouring imports, factors that affected the country's appetite for foreign coal. In 2018, robust import demand in China (+8.8 per cent) was further supported by large volumes shipped into India (+12.8 per cent). Indonesia and Australia remained the leading global coal exporters, with a combined market share of 63.0 per cent in 2018. Indonesia increased shipments by 9.3 per cent, while exports from Australia increased at less than half this rate.

Negative trends, for example, tariffs and limited shipments from suppliers such as Argentina, weighed on trade in global grains in 2018. In China, it is estimated that imports of soybeans declined by 8.3 per cent in 2018, despite record shipments from Brazil. Brazil increased its total grain exports by approximately 10.0 per cent. At the same time, total maritime grain exports from the United States fell by 1.4 per cent in 2018, reflecting the rapid drop in soybean exports to China.

The performance of the global dry bulk trade sector underscored the central role of China and the challenges associated with an overreliance on it as the main market. Consequently, any shift however small, in the demand for imports in China, including as a result of trade tensions with the United States, can have a marked impact on global maritime trade patterns (see C. Outlook and policy considerations).

## Minor bulks

Reflecting trends in the steel production sector and a slowdown in the global economy, minor bulk trade grew at an accelerated rate of 3.7 per cent in 2018, up from 2.8 per cent in 2017 (table 1.7). China is an important import market, representing roughly 20 per cent of the market in 2018. Much of the expansion resulted from growth in metals and minerals, including nickel ore, manganese ore, cement and bauxite trade, which in recent years has seen growing shipments from Guinea to China. In 2018, Guinea consolidated its position as the leading world exporter of bauxite.

**Table 1.8 Major dry bulks and steel: Producers, users, exporters and importers, 2018**  
(World market shares in percentage)

Steel producers		Steel users	
China	51	China	49
India	6	United States	6
Japan	6	India	6
United States	5	Japan	4
Republic of Korea	4	Republic of Korea	3
Russian Federation	4	Germany	2
Germany	2	Russian Federation	2
Turkey	2	Turkey	2
Brazil	2	Italy	2
Other	18	Mexico	1
		Other	23
Iron ore exporters		Iron ore importers	
Australia	57	China	71
Brazil	26	Japan	8
South Africa	4	Europe	7
Canada	3	Republic of Korea	5
Sweden	2	Other	9
India	1		
Other	7		
Coal exporters		Coal importers	
Indonesia	33	China	19
Australia	30	India	18
Russian Federation	11	Japan	15
United States	8	European Union	11
Colombia	6	Republic of Korea	11
South Africa	6	Taiwan Province of China	5
Canada	2	Malaysia	3
Other	4	Other	18
Grain exporters		Grain importers	
United States	26	East and South Asia	45
Brazil	23	Africa	14
Russian Federation	11	Western Asia	14
Ukraine	9	South and Central America	12
Argentina	9	European Union	10
European Union	7	Other	3
Canada	6		
Australia	4		
Other	5		

Sources: UNCTAD secretariat calculations, based on data from the World Steel Association (2019a), Global crude steel output increases by 4.6% in 2018, 25 January; World Steel Association (2019b), *World Steel Short-range Outlook April 2019*, 16 April; Clarksons Research, 2019d, *Dry Bulk Trade Outlook*, Volume 25, No. 6, June.

### Other dry cargo: Containerized trade

In 2018, global containerized trade unfolded amid great uncertainty, ranging from the implications of the new IMO 2020 regulation imposing a sulphur cap on bunker fuels (see chapters 2 and 4), trade frictions, trends in China, weakness in consumer markets and unfavourable developments in the world economy. Together, these factors put a brake on containerized trade, with volumes expanding at a relatively much slower rate than in 2017.

Volumes as measured in 20-foot equivalent units (TEUs) increased at 2.6 per cent in 2018, down from 6 per cent in 2017, bringing the total to 152 million TEUs (figure 1.5). This range of growth is a dramatic change compared with the double-digit growth rates of the 2000s and less than half the 5.8 per cent average annual growth rate recorded over the past two decades.

A large share of globalized containerized trade continues to be carried across the major East–West containerized trade arteries, namely Asia–Europe, the Trans-Pacific and the Transatlantic (figure 1.6). However, with 60 per cent of global containerized trade occurring on non-mainlane trade routes (other routes), secondary routes involving developing countries’ trade are increasingly important. Of these other routes, intraregional flows, dominated by intra-Asian movements, account for the largest proportion, followed, in descending order, by the non-mainlane or secondary East–West trade routes

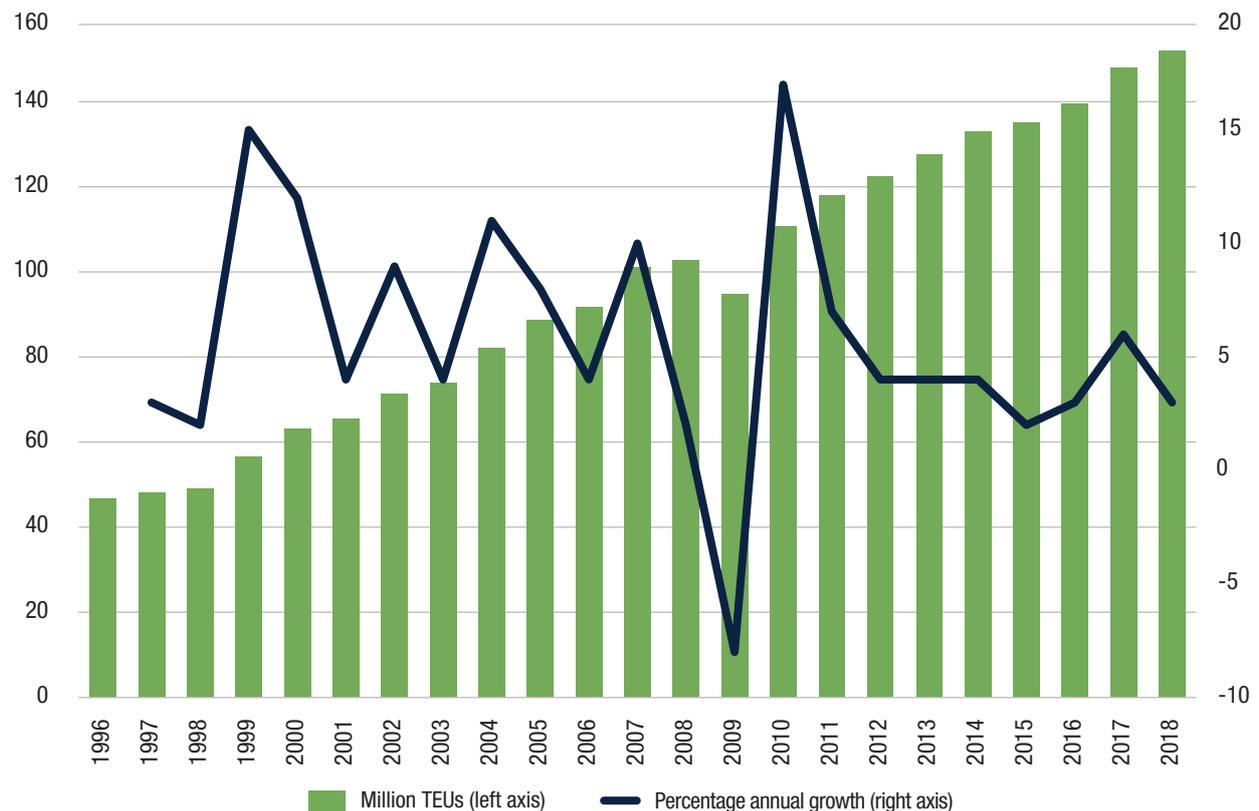
(for example, the Eastern Asia–South Asia–Western Asia routes), South–South and North–South trade routes.

The year 2018 was a mixed year for container shipping. Trade continued to grow on the major East–West trade lanes, with volumes expanding by 4.8 per cent, down from 5.7 per cent in 2017 (tables 1.9 and 1.10; figure 1.7). Trans-Pacific trade remained the busiest trade route, accounting for 28.2 million TEUs, followed by the Asia–Europe route (24.4 million TEUs) and the Transatlantic route (8.0 million TEUs).

The rapid 5.4 per cent growth observed on the Trans-Pacific route is supported by a 7.0 per cent surge in volumes on the peak leg, reflecting the frontloading by importers in the United States ahead of the potential introduction of additional tariffs on Chinese goods. By April 2019, shipments from China to the United States had dropped by 6.0 per cent year over year (JOC.com, 2019a), a significant contraction, given the share of Chinese exports in Trans-Pacific trade. By contrast, exports to the United States from neighbouring South-East Asian countries increased by nearly one third, compared with the same period in 2018.

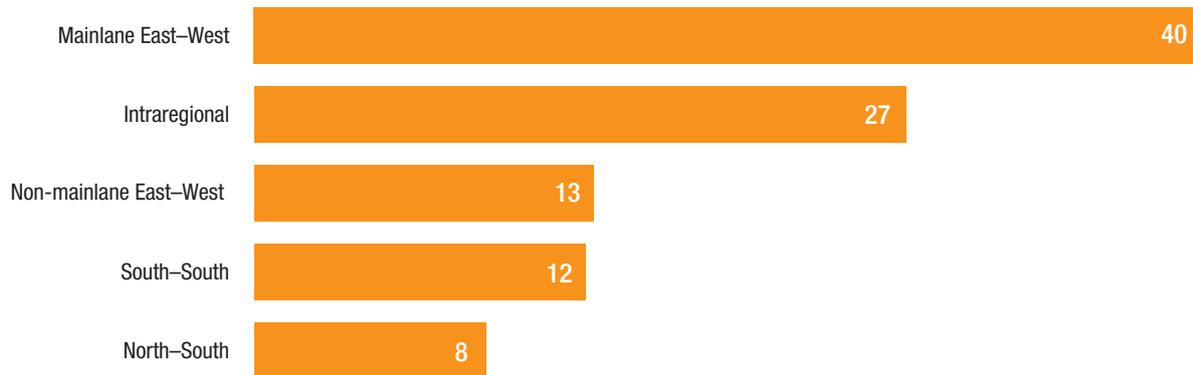
Preparing for the slowdown and due to high inventory levels built up during the frontloading phase, operators on the Trans-Pacific route have started implementing blank sailings (JOC.com, 2019a). Another wave of frontloading cannot be excluded. Several shippers are

**Figure 1.5 Global containerized trade, 1996–2018**  
(Million 20-foot equivalent units and annual percentage change)



Source: UNCTAD secretariat calculations, based on data from MDS Transmodal, World Cargo Database, May 2019.

**Figure 1.6 Global containerized trade by route, 2018**  
(Market shares, in percentage)



Source: UNCTAD secretariat calculations, based on data from MDS Transmodal, World Cargo Database, May 2019.

rushing again to speed up shipments before tariffs are applied to the remaining \$300 billion in United States imports of Chinese goods.

Eastbound and westbound Asia–Europe trade increased by 3.6 per cent, reflecting weaker European import demand and other developments affecting the route. Backhaul eastbound volumes from Europe and westbound volumes on the Trans-Pacific routes were affected by the ban on waste imports into China (Clarksons Research, 2018b). While waste products have been shipped to alternative destinations in neighbouring countries, a growing number of these countries, including Malaysia and the Philippines, are taking a stand and demanding that nations take back their waste (BBC News, 2019). Concerns include the limited processing capacity and the sustainability aspects of waste recycling. This development will likely undermine volumes on the return trip on Asia–Europe and Trans-Pacific containerized trade routes. Elsewhere

on the Transatlantic route, growth reached 6.4 per cent, reflecting firm import demand in the United States.

Containerized trade volumes on other routes increased at 1.3 per cent in 2018, down from 6.2 per cent in 2017 (table 1.10). Negative growth on the non-mainlane East–West trade routes (i.e. Western Asia and Indian subcontinent trades with Europe, North America and East Asia), reflect to a large extent contractions across the Western Asia–East Asia route, as well as the Western Asia–North America route. Limited growth on North–South routes – Oceania, sub-Saharan Africa and Latin American trade with Europe and North America – exposed the weakened import demand in Latin American countries.

Intraregional trade growth fell sharply, caused by negative growth on both the Western Asia–South Asia and intra-Latin America trade routes. Growth on the South–South trade routes (Oceania, Western Asia, East Asia, sub-Saharan Africa and Latin America) was constrained by negative growth in Western Asia and Latin America.

**Table 1.9 Containerized trade on major East–West trade routes, 2014–2018**  
(Million 20-foot equivalent units and annual percentage change)

	Trans-Pacific			Asia–Europe			Transatlantic		
	Eastbound	Westbound	Trans-Pacific	Eastbound	Westbound	Asia–Europe	Eastbound	Westbound	Transatlantic
	East Asia–North America	North America–East Asia		Northern Europe and Mediterranean to East Asia	East Asia to Northern Europe and Mediterranean		North America to Northern Europe and Mediterranean	Northern Europe and Mediterranean to North America	
2014	16.2	7.0	<b>23.2</b>	6.3	15.4	<b>21.8</b>	2.8	3.9	<b>6.7</b>
2015	17.5	6.9	<b>24.4</b>	6.4	15.0	<b>21.5</b>	2.7	4.1	<b>6.9</b>
2016	18.3	7.3	<b>25.6</b>	6.8	15.4	<b>22.2</b>	2.7	4.2	<b>7.0</b>
2017	19.5	7.3	<b>26.8</b>	7.1	16.5	<b>23.6</b>	3.0	4.6	<b>7.6</b>
2018	20.9	7.4	<b>28.2</b>	7.0	17.4	<b>24.4</b>	3.1	4.9	<b>8.0</b>
<b>Annual percentage change</b>									
2014–2015	7.9	-2.0	<b>4.9</b>	1.4	-2.6	<b>-1.4</b>	-2.4	5.6	<b>2.2</b>
2015–2016	4.4	6.6	<b>5.1</b>	6.3	2.5	<b>3.6</b>	0.4	2.9	<b>1.9</b>
2016–2017	6.7	-0.5	<b>4.7</b>	4.1	6.9	<b>6.0</b>	7.9	8.3	<b>8.1</b>
2017–2018	7.0	0.9	<b>5.4</b>	-1.3	5.7	<b>3.6</b>	5.8	6.8	<b>6.4</b>

Source: UNCTAD secretariat calculations, based on data from MDS Transmodal, World Cargo Database, May 2019.

**Table 1.10 Containerized trade on mainlane East–West routes and other routes, 2016–2019**  
(Million 20-foot equivalent units and annual percentage change)

	2016	2017	2018	2019 <sup>a</sup>
	<b>TEUs</b>			
Mainlane East–West routes	54 845 031	57 950 975	60 721 427	63 710 784
Other routes of which:	84 802 064	90 097 054	91 236 532	96 744 144
Non-mainlane East–West	18 530 451	19 609 905	19 463 013	20 517 827
North–South	11 396 198	11 995 463	12 131 139	12 691 808
South–South	17 178 486	18 475 650	18 927 033	21 191 690
Intraregional	37 696 928	40 016 036	40 715 347	42 342 819
<b>World total</b>	<b>139 647 095</b>	<b>148.048 029</b>	<b>151 957 959</b>	<b>160 454 928</b>
	<b>Percentage change</b>			
	2016	2017	2018	2019 <sup>a</sup>
Mainlane East–West routes	4.07	5.7	4.8	4.9
Other routes (non-mainlane) of which:	3.05	6.2	1.3	6.0
Non-mainlane East–West	3.43	5.8	-0.8	5.4
North–South	-0.05	5.3	1.1	4.6
South–South	0.25	7.6	2.4	12.0
Intraregional	5.19	6.2	1.8	4.0

Source: UNCTAD secretariat calculations, based on data from MDS Transmodal, World Cargo Database, May 2019.

Notes: Non-mainlane East–West: Trade involving East Asia, Europe, North America and Western Asia and the Indian subcontinent.

North–South: Trade involving Europe, Latin America, North America, Oceania and sub-Saharan Africa.

South–South: Trade involving East Asia, Latin America, Oceania, sub-Saharan Africa and Western Asia.

<sup>a</sup> Forecast.

In 2018, containerized trade patterns emerged against other trends shaping the liner shipping market. These ranged, among others, from intensified efforts by the shipping industry to embrace digitization as a means of promoting efficiencies and generating greater value across global supply chains (Lloyd's Loading List, 2019a; Lloyd's Loading List, 2019b), to consolidation and vertical integration. While consolidation among major operators remains a key theme in the sector, consolidation activity has involved smaller, regional operators (Clarksons Research, 2019e). There are also signs that carriers are considering vertical integration by taking greater control of inland logistics and aiming to provide integrated service offerings and generate more value. This marks a shift from the approach adopted in the 2000s, when shipping interests were outsourcing such operations to focus on their core business. Some of the largest carriers, including Maersk (Lloyd's Loading List, 2019c) and China COSCO Shipping, are planning to expand their presence to inland terminals, warehouses, customs brokerage and logistics to tap additional business opportunities. They aim to reposition themselves as wider solution providers with strong, long-lasting relationships with customers (Christensen et al., 2019). It was reported that up to 80 per cent of Maersk's earnings currently comes from container shipping and the plan is to achieve a 50:50 split between ocean and non-ocean services in the next few years (Lloyd's Loading List, 2019d).

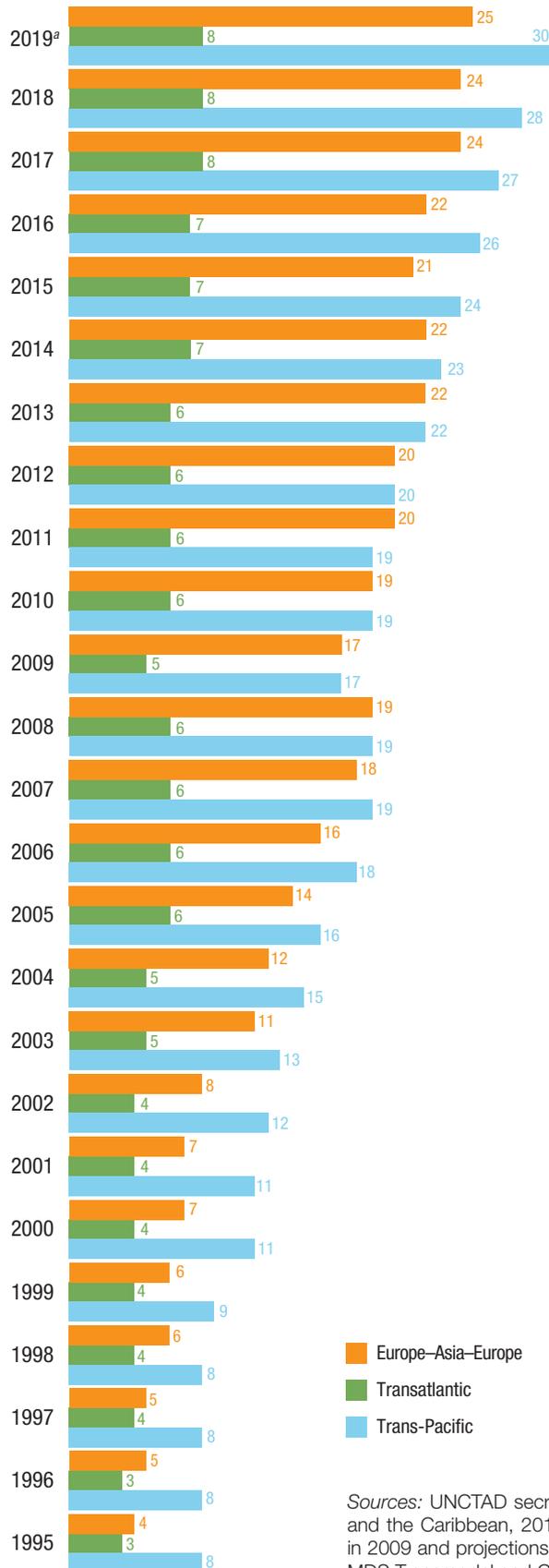
## B. CONTAINER PORT-CARGO HANDLING

### 1. Global port container throughput slows in 2018

As shown in table 1.11, global container port throughput increased by 4.7 per cent in 2018, down from 6.7 per cent in 2017. In 2018, 793.26 million TEUs were handled in container ports worldwide, reflecting an additional 35.3 million TEUs over 2017, an amount equivalent to the port cargo-handling activity of Singapore, the second leading global container hub in 2018. Growth was supported by traffic on the intra-Asian trade routes, firm consumer demand in the United States and frontloading on the Trans-Pacific route.

The central role of Asia in global trade and shipping is also emphasized by trends in global container port-handling activity. In 2018, the region continued to account for nearly two thirds (figure 1.8) of such activity. Volumes handled increased by 4.4 per cent. With a total of 260.8 million TEUs recorded in 2018, China, including Hong Kong, China and Taiwan Province of China, accounted for over half of the regional total. The maintenance of the Government's ban of waste material imports is likely to increase the incidence of empties in the overall traffic handled by ports.

**Figure 1.7** Containerized cargo flows on major East–West container trade routes, 1995–2019  
(Million 20-foot equivalent units)



■ Europe–Asia–Europe  
■ Transatlantic  
■ Trans-Pacific

*Sources:* UNCTAD secretariat calculations, based on Economic Commission for Latin America and the Caribbean, 2010, International maritime transport in Latin America and the Caribbean in 2009 and projections for 2010. Figures from 2009 onward are derived from data provided by MDS Transmodal and Clarkson Research.

<sup>a</sup> Forecast.

**Table 1.11** World container port throughput by region, 2017–2018  
(20-foot equivalent units and annual percentage change)

	2017	2018	Annual percentage change 2017–2018
Africa	30 398 569	30 940 898	1.8
Asia	488 852 650	510 513 120	4.4
Europe	119 359 397	125 888 633	5.5
Latin America and the Caribbean	48 863 196	51 669 025	5.7
North America	58 510 434	61 352 043	4.9
Oceania	12 003 344	12 896 887	7.4
<b>World total</b>	<b>757 987 590</b>	<b>793 260 606</b>	<b>4.7</b>

*Sources:* UNCTAD secretariat calculations, based on data collected by various sources, including Lloyd's List Intelligence, Dynamar B.V., Drewry Maritime Research, as well as information posted on the websites of port authorities and container port terminals.

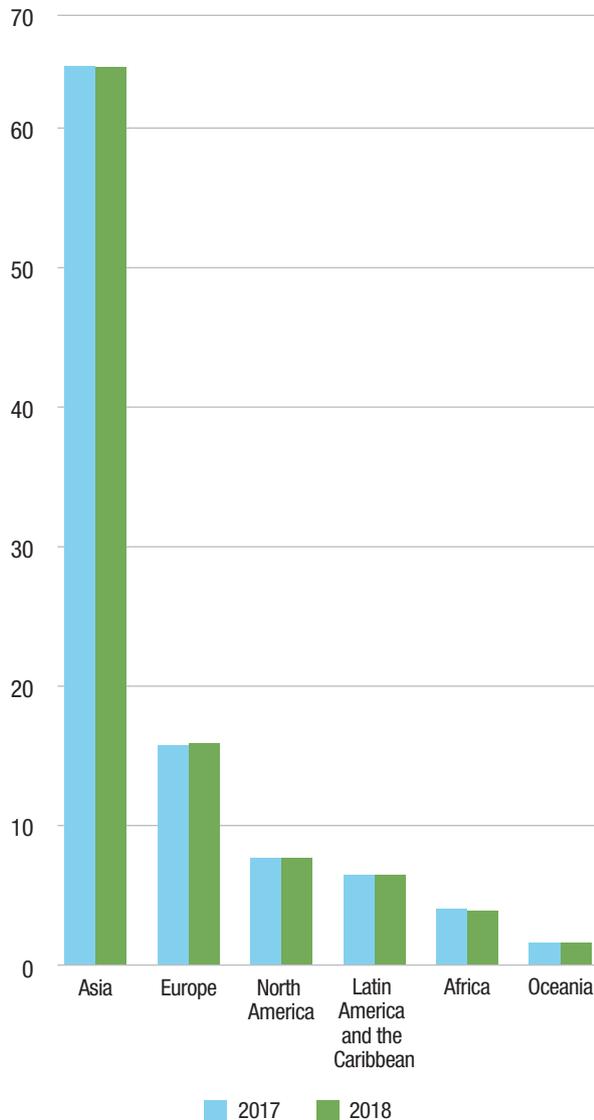
*Note:* Data are reported in the format available. In some cases, country volumes were estimated based on secondary source information and reported growth rates. Country totals may conceal the fact that minor ports may not be included. Therefore, in some cases, data in the table may differ from actual figures.

Other regions accounted for 16 per cent (Europe), 8 per cent (North America), 6 per cent (Latin America and the Caribbean), 4 per cent (Africa) and 2 per cent (Oceania) of container port-handling activity. These shares reflect to a large extent countries' participation levels in global manufacturing networks and supply chains.

## 2. Global container port-handling and trade tensions

Asian container ports expanded at a rate of 4.4 per cent, falling short of performance in 2017, where throughput had risen by 7.6 per cent. Ports in China reported 4.2 per cent growth in 2018 (table 1.11). Rapid growth in South-East Asian ports continued, reflecting positive economic performance in countries of the Association of Southeast Asian Nations (ASEAN). Joint ventures of PSA International with the shipping lines seem to have benefited the port of Singapore, as its volumes increased by 8.7 per cent, more than double that of 2017 (3.1 per cent; table 1.12). In 2018, Ocean Network Express (ONE) followed the Mediterranean Shipping Company, CMA CGM, Pacific International Lines and China COSCO Shipping in establishing joint venture terminals in Singapore. Overall, however, Asian container

**Figure 1.8** World container port throughput by region, 2017–2018  
(Percentage share in total 20-foot equivalent units)



Source: UNCTAD secretariat calculations, based on table 1.11 of this report.

port handling has been affected by constrained growth in Western Asia, a region hampered by sanctions, political tensions and disruptions caused by weather events such as *Cyclone Mekunu* in May 2018.

Supported by trade between China and the European Union, container port throughput in Europe grew steadily at 5.5 per cent, down from 7.2 per cent in 2017. Volumes handled at Rotterdam and Antwerp ports increased rapidly, benefiting from increased imports and transshipments, respectively, and route adjustments made by shipping alliances in Antwerp (Shanghai International Shipping Institute, 2019). Container cargo-handling in ports in North America increased by 4.9 per cent, up from 3.9 per cent in 2017. This rate also reflects the distortion caused by frontloading in late 2018. In Africa, container port throughput improved over that of 2017,

expanding at a rate of 1.8 per cent in 2018. However, activity was limited by negative developments in the three largest economies of sub-Saharan Africa: South Africa, Nigeria and Angola.

As shown in table 1.12, container cargo handling remains concentrated in certain major ports. Combined throughput at the world's top 20 container terminals increased reached 347.8 million TEUs in 2018, accounting for 43.8 per cent of the world's total. Apart from the contraction in volumes suffered by Dubai, Hong Kong, China and Hamburg, growth at individual ports varied between a low of 0.4 per cent in Klang and a high of 8.7 per cent in Singapore. Shanghai remained the busiest container port worldwide, with volumes expanding by 4.4 per cent, adding more than 2 million TEUs to container port traffic in Shanghai in 2018. Only five ports outside Asia are featured among the 20 leading container ports, namely, Antwerp, Hamburg, Los Angeles, Long Beach and Rotterdam.

With regard to megaships and their implications for container port cargo handling, some observers maintain that the challenges are "past their worst", although there are still some hurdles to be cleared by ports and their customers (Lloyd's Loading List, 2019e). It is argued that terminals have improved their management of ultra large container ship handling but problems remain when ships arrive in port off schedule. Pressure on port-handling capacity is compounded by the combined effects of volume peaks resulting from mega-sized ships and reduced service frequency. This is causing disruption to liner operations on the landside at ports (Lloyd's Loading List, 2019f). That said, the cascading of larger vessels to secondary routes and regional trades with smaller ports will continue to bring its own share of challenges. Larger vessel sizes and fewer but longer ship calls put increasing pressure on container terminals.

According to some observers, however, growth in container ship sizes is not a concern at this stage. This trend appeared to be reinforced, as noted above, by the growing interest of leading carriers in deepening their involvement in inland operations and logistics. By expanding activities beyond the port gate into the wider supply chain, carriers and ports alike aim to diversify sources of revenue and increase their proximity to shippers and the cargo (JOC.com, 2019b).

Another key development with implications for port-cargo handling relates to the impact of trade tensions. Given that imports from China are becoming more expensive, carriers expect volumes and demand to fall on the Trans-Pacific route. As a result, carriers have already started to decrease capacity on this major shipping route with blank sailings by skipping ports (see discussion below on the impact of tariff escalation).

**Table 1.12** Leading 20 global container ports, 2018  
(20-foot equivalent units, annual percentage change)

	Throughput 2018	Annual percentage change 2017–2018
Shanghai	42 010 000	4.4
Singapore	36 600 000	8.7
Ningbo-Zhoushan	26 350 000	6.9
Shenzhen	25 740 000	2.1
Guangzhou	21 920 000	7.6
Busan	21 660 000	5.5
Hong Kong, China	19 600 000	-5.6
Qingdao	19 320 000	5.5
Tianjin	16 000 000	6.2
Dubai	14 950 000	-2.9
Rotterdam	14 510 000	5.7
Klang	12 030 000	0.4
Antwerp	11 100 000	6.2
Xiamen	10 700 000	3.1
Kaohsiung	10 450 000	1.8
Dalian	9 770 000	0.6
Los Angeles	9 460 000	1.3
Tanjung Pelepas	8 790 000	6.4
Hamburg	8 780 000	-0.2
Long Beach	8 070 000	3.7

Source: Shanghai International Shipping Institute, 2019, *Global Port Development 2018*, April.

## C. OUTLOOK AND POLICY CONSIDERATIONS

### 1. Prospects of world maritime trade, 2019–2024

According to UNCTAD projections, international maritime trade will increase by 2.6 per cent in 2019 and will continue rising at a compound annual growth rate of 3.4 per cent over the 2019–2024 period. These figures are based on the estimated income elasticity of maritime trade over the 2006–2018 period and the latest growth in GDP forecast by the International Monetary Fund for 2019–2024.

Projected growth falls within the range of some existing forecasts (table 1.13) and is consistent with historical trends whereby maritime trade increased at an annual average growth rate of 3.4 per cent between 2006 and 2018. Containerized and dry bulk trades are expected to grow at a compound annual growth rate of 4.5 per cent and 3.9 per cent, respectively, over the 2019–2024 period. Tanker trade (combined crude

oil, refined petroleum products, gas and chemicals) is projected to grow by 2.2 per cent during the same period.

Uncertainty remains an overriding theme in the current maritime transport environment, and estimated growth is subject to the realization of forecasted GDP growth and its underlying assumptions. Growth will also be affected by trends in some market segments that had suffered some setbacks in early 2019. These include disruptions to iron ore trade caused by *Cyclone Veronica* in Australia and the severe disruption caused by the Vale dam incident in Brazil. Grain and containerized trades will remain at the forefront of current trade tensions. Crude oil shipments from the Atlantic basin to Asia are expected to support tanker volumes, while sanctions affecting the Islamic Republic of Iran and the Bolivarian Republic of Venezuela, as well as effective compliance with production cuts by the Organization of the Petroleum Exporting Countries, are likely to put pressure on tanker trade. Overall, the outlook for global maritime trade growth will be affected by the degree and speed at which some of these trends unfold.

### 2. Downside risks and uncertainty

Although not entirely new, a range of existing downside risks intensified and became apparent in 2018. Trade tensions and growth in protectionism topped the list, followed by the decision of the United Kingdom of Great Britain and Northern Ireland to leave the European Union (Brexit). Its impact is more likely to be political – and the impact on global maritime trade is likely to be relatively small. Other risks were the economic transition in China, geopolitical turmoil, natural disasters and disruptions to shipping routes and supply chains, as well as the transition to lower sulphur bunker fuels and low-carbon shipping. These forces were influential in 2018 and can be expected to exert further pressure on maritime transport and trade in the near and longer terms.

#### Trade tensions and tariff escalation

Escalating tariffs and heightened trade tensions in 2018 and 2019 contrast sharply with past trends, whereby trade liberalization and multilateralism had been mainstreamed into the global trading framework. United States tariffs are matched by retaliatory tariff increases on United States exports by Canada, China and the European Union and by other countries bringing disputes to the World Trade Organization (see table 1.14).

While trade tensions have had an impact on some sectors, overall business sentiment and consumer confidence, as well as support measures (stimulus spending and direct subsidies), may have helped offset much of the direct negative impacts on China and the United States. The moderated impact may also reflect the share of bilateral trade between the two countries. Although these are the two biggest traders in the world, their bilateral trade accounted for only 3.2 per cent of

	Growth	Years	Seaborne trade flows	Source
	Compound annual growth (Percentage)			
UNCTAD	3.4	2019–2024	Seaborne trade	<i>Review of Maritime Transport 2019</i>
	4.5	2019–2024	Containerized trade	
	3.9	2019–2024	Dry bulk	
	2.2	2019–2024	Tanker trade	
Lloyd's List Intelligence	3.1	2019–2026	Seaborne trade	Lloyd's List Intelligence research, 2017
	4.6	2017–2026	Containerized trade	
	3.6	2017–2026	Dry bulk	
	2.5	2017–2026	Liquid bulk	
	Annual growth			
UNCTAD	2.6	2019	Seaborne trade	<i>Review of Maritime Transport 2019</i>
Clarksons Research	2.3	2019	Seaborne trade	<i>Seaborne Trade Monitor</i> , June 2019
UNCTAD	1.5	2019	Tanker trade	<i>Review of Maritime Transport 2019</i>
Clarksons Research	2.6	2019	Liquid bulk	<i>Seaborne Trade Monitor</i> , June 2019
UNCTAD	3.2	2019	Containerized trade	<i>Review of Maritime Transport 2019</i>
Lloyd's List	3.0–4.0	2019	Containerized trade	<i>DynaLiners Monthly</i> , March 2019
Maersk Line	2.5–3.5	2019	Containerized trade	<i>DynaLiners Monthly</i> , April 2019
COSCO	4.5	2019	Containerized trade	<i>DynaLiners Monthly</i> , May 2019
Hapag-Lloyd	4.0	2019	Containerized trade	<i>DynaLiners Monthly</i> , May 2019
IHS Markit	4.8	2019	Containerized trade	<i>DynaLiners Monthly</i> , May 2019
Dynamar	3.5	2019	Containerized trade	<i>DynaLiners Monthly</i> , April 2019
Clarksons Research	3.6	2019	Containerized trade	<i>Container Intelligence Monthly</i> , May 2019
UNCTAD	3.1	2019	Dry bulk	<i>Review of Maritime Transport 2019</i>
Clarksons Research	1.3	2019	Dry bulk	<i>Dry Bulk Trade Outlook</i> , June 2019

Source: UNCTAD secretariat calculations, based on forecasts published by the institutions and data providers indicated.

global merchandise trade in 2017. This is dwarfed by the size of intraregional trade, especially in Asia, Europe and North America (UNCTAD, 2019c).

However, the impact can be significant on all countries if tariffs and retaliatory measures are scaled up and prolonged. They will likely compress global volumes, divert trade flows and disrupt global value chains operations, while increasing costs to producers and consumers in China, the United States and other countries.

With regard to maritime trade volumes, gauging the precise actual impact is a complex exercise, given the uncertainty over the sensitivity of demand to tariff-impacted pricing and the potential for trade and volume substitution. Also, exposure varies by cargo type and market segment (table 1.14). Less than 2.0 per cent of global maritime trade by volume (metric tons) is estimated to be subject to tariffs, including when taking into account tariffs enacted in May and June 2019. The direct impact of tariffs through 2019 is estimated to be a reduction of 0.2 per cent in maritime trade in tons and

0.4 per cent lower in ton-miles (Clarksons Research, 2019f).

Trade in grain, notably soybean, and in steel products remain the most affected. Trade in dry bulks is expected to be marginally affected, although the January 2019 disruption in iron ore supply in Brazil is likely to have a greater impact. The impact on iron ore, crude oil, oil products, liquefied petroleum gas, liquefied natural gas and chemicals is expected to be limited. Following a temporary boost to Trans-Pacific container flows due to the rush to build inventories and ship cargoes ahead of the announced additional tariffs, the May 2019 tariffs are expected to affect containerized trade on the Trans-Pacific route the most. However, a knock-on effect on intra-Asian volumes is also likely. In terms of distance-adjusted maritime trade, the impact is also expected to be negative but marginal, as some United States exports are directed towards Europe (e.g. liquefied petroleum gas) and as China increases its purchases from other exporters (liquefied natural gas and grain).

Table 1.14 Tariffs and their estimated impact on international maritime trade, 2018–2019 (Million tons)			
	United States tariffs	Retaliatory action	Estimated impact
Round 1	United States introduces tariffs on imports of washing machines and solar panels	China applies tariffs to imports of United States sorghum Tariffs enforced between 17 April and 18 May 2018, then cancelled	Approximately 1 million tons Approximately 5 million tons of grain [now cancelled] Approximately 1 million tons of containers
Round 2	United States introduces tariffs on imports of steel and aluminum	Canada, China, India, Mexico and European Union introduce or propose tariffs	Approximately 33 million tons 22 million tons of steel products 3 million tons of containers 5 million tons of minor bulks 2 million tons of coal 1 million tons of grain
Round 3	United States introduces tariffs of 25 per cent on \$34 billion of annual imports from China, followed by tariffs on a further \$16 billion of imports from China	China introduces tariffs of 25 per cent on \$34 billion of annual imports from the United States, followed by tariffs on a further \$16 billion of imports from the United States	Approximately 72 million tons 40 million tons of grain 19 million tons of containers 4 million tons of minor bulks 3 million tons of coal 3 million tons of liquefied petroleum gas 1 million tons of oil products 1 million tons of chemicals 0.4 million tons of vehicles
Round 4	United States introduces 10 per cent import tariffs on \$200 billion of imports from China  Tariff increased to 25 per cent on 10 May 2019	China introduces 5–10 per cent import tariffs on \$60 billion of annual imports from the United States  Tariff increased to 5–25 per cent on 1 June 2019	Approximately 66 million tons 46 million tons of containers 15 million tons of minor bulks 2 million tons of liquefied natural gas 2 million tons of chemicals 1 million tons of oil products 1 million tons of iron ore
Round 5	United States threatens to introduce tariffs on the remaining \$325 billion of imports from China	China expected to retaliate	Approximately 19 million tons
Round 6	United States considers the introduction of tariffs on imports of cars	European Union preparing a list of products to apply retaliatory tariffs; other countries could also retaliate	Approximately 5 million tons Approximately 5 million tons of vehicles Products affected by retaliatory action not yet announced

Source: UNCTAD secretariat calculations, based on Clarksons Research, 2019f, *Tariffs and the Shipping Context: Assessing the Impact*, Update No. 7, May.

Note: Proposed tariffs are based on official policy announcements, with affected products listed in detail. Possible tariffs are based on informal announcements. Estimated maritime trade affected is based on announcements as of 15 May 2019. The estimate of total trade that is affected by the tariffs is based on 2017 trade data, that is to say, 2017 data are used as the last year before any impacts from these tariffs were realized.

Some sectors are reported to have faced increases in cost of inputs and uncertainty in investment plans, thereby affecting production networks, which are based on vertical specialization and interconnected value chains (United Nations, 2019b). There are already some signs of relocation of manufacturing facilities. Whether these trends can be attributed entirely to the tariff hikes is yet to be confirmed, as increased labour costs in China and automation may have been contributing factors. A report by the European Chamber of Commerce in Beijing found that 25 per cent of European companies with activities in China were affected by the trade tensions and that some 10 per cent of European companies were moving or considering moving their factories away from China to destinations such as Eastern Europe and South-East Asia (Lloyd's Loading List, 2019g). A survey

by the American Chamber of Commerce in China and Shanghai found that over 40 per cent of United States manufacturing businesses located in China are considering relocating facilities or have already done so. Of those which left, destinations of choice were South-East Asia (25 per cent) and Mexico (10.5 per cent). Only 6 per cent are reported to be considering shifting operations to the United States (JOC.com, 2019c). Together, these factors are putting pressure on trade volumes and demand for maritime transport services. This is especially relevant to East Asian countries such as Viet Nam that are more integrated into the supply chains of trade between China and the United States (United Nations, 2019b).

Supply chain restructuring implies a potential shift in routing, shipping networks and configuration, service

levels and frequency, port call coverage and connectivity. For example, relocating production to other East Asian countries or diverting trade to these countries would result in changes to shipping schedules and port calls. In the foreseeable future, China will remain the main container export hub, as any alternative markets will not be able to readily and without additional cost replicate the scale of the factory experience in China.

Trade diversion and substitution could also occur. Drewry Maritime Research calculates that a 10 per cent increase in United States import prices of goods from China would result in a 6 per cent decline in TEU volume from China to the United States over time, assuming that all other factors are held constant. With tariffs of 25 per cent, the potential TEU contraction would be around 15 per cent for that leg alone (Drewry Maritime Research, 2019a). United States importers will probably consider rerouting products through Taiwan Province of China and Viet Nam, resulting in some trade substitution.

There will be potential winners and losers. Those countries standing to lose will be mainly those supplying raw materials and semi-finished goods to China. UNCTAD estimates that over 80 per cent of the trade affected by United States and Chinese tariffs will be picked up by other countries – with the European Union set to make the biggest gains through increased exports (UNCTAD, 2019c). The study estimates that of the \$250 billion in Chinese exports subject to United States tariffs since September 2018, about 82 per cent will be captured by firms in other countries. About 12 per cent will be retained by Chinese firms, and only about 6 per cent will be captured by United States firms. Further, of the approximately \$85 billion in United States exports subject to tariffs imposed by China, about 85 per cent will be captured by firms in other countries. Canada, Japan and Mexico are expected to attract over \$20 billion in trade. Other countries such as India, Pakistan, the Philippines and Viet Nam would capture less of this trade but would still benefit.

These findings are partially supported by the conclusions of another report (Bloomberg, 2018), which expects countries in Asia to be the biggest beneficiaries of product or sourcing substitution. Their findings are more bullish on Argentina, Chile, China, Malaysia, Taiwan Province of China and Viet Nam, than Europe (Lloyd's Loading List, 2019h). CMA CGM also argues that South-East Asian countries will improve their volumes and gain from the bilateral trade tensions (JOC.com, 2019a). Relocating manufacturing operations to South-East Asia could benefit maritime trade and the deployment of smaller vessels. Countries in Eastern Asia do not have the same capabilities as China and will, therefore, require increased trade in intermediate inputs and result in further fragmentation of production. Benefits to shipping from increased intra-Asian trade will depend on the configuration of the new networks.

There remain other concerns, including the possibility that the United States may introduce a global tariff

of 25 per cent on cars and automotive parts, which would affect automotive imports from major trading partners. Another concern is the potential imposition of additional tariffs on the aircraft and food industries by the United States on the European Union. Any tariffs will have an impact on key East–West containerized trade routes, including the Trans-Pacific and the Transatlantic routes. In terms of ports, Baltimore, Los Angeles/Long Beach and the Port of New York/New Jersey would be exposed the most. With regard to sourcing countries, China, Germany and Japan will be affected, given their important role in the automotive parts and finished vehicles manufacturing and trade (Drewry Maritime Research, 2019b).

On the upside, however, some developments may help offset some of the pressure. Together, the Belt and Road Initiative of China, continued growth in developing economies and opportunities that may arise from changes in the world energy mix, and other factors could help support continued expansion in global maritime flows. Shipping could also benefit from further trade liberalization deals. The recent entry into force of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, the Agreement between the European Union and Japan for an Economic Partnership and the Agreement Establishing the African Continental Free Trade provide some support (Economist Intelligence Unit, 2019). The conclusion of the Agreement between the United States of America, the United Mexican States and Canada as a replacement of the North American Free Trade Agreement and efforts to revitalize the multilateral trading system are also expected to diffuse some of the uncertainty about trade policy and to underpin trade growth. An example in this respect is the 13-group member initiative led by Canada and launched in October 2018 with a view to reforming the World Trade Organization and safeguarding its dispute-settlement mechanism. The members include Australia, Brazil, the European Union, Japan and the Republic of Korea.

### Accelerating environmental and regulatory agenda

In recent years, environmental sustainability has become a priority on the global policy agenda. Accordingly, a wave of environmentally driven regulation is affecting shipping market dynamics and putting pressure on the maritime transport industry to deliver on the environmental and social responsibility imperative. In this context, a main issue of concern to industry in 2018 was the pending entry into force on 1 January 2020 of the IMO regulation calling for a new 0.5 per cent global sulphur cap on fuel content (see chapters 2 and 4). Therefore, fuel economics and environmental sustainability moved to the centre stage of the debate in 2018. Compliance with the new regulation has implications for shipping in the form of adjustment costs. Approaches to compliance include investing in

environmental equipment, particularly scrubbers, low-sulphur fuels and vessels powered by liquefied natural gas.

Low sulphur and cleaner new fuels are expected to come at a premium, which shipping operators are likely to pass on to their customers through the supply chain. Some observers expect the new IMO regulation to raise the industry's fuel bill by some 50 per cent in 2020. In particular, container shipping is expecting a \$10–\$15 billion increase in fuel costs (Drewry Maritime Research, 2019a). Shippers are concerned about liner proposals to pass on costs to customers (Lloyd's Loading List, 2019i), although in principle they agree to be charged higher prices if the increase is justified with a credible and trusted mechanism, as well as transparency regarding the applied bunker adjustment factor formula.

For maritime trade, the global sulphur cap could initially have a positive impact on refined petroleum products and crude oil trade volumes as refineries increase their throughput to generate low sulphur-compliant fuels and as demand for different types of crude (sweet and heavy crude oil) changes. The new regulation is expected to increase demand for sweeter crudes that are produced in Brazil, the North Sea and the United States, and boost shipments of sour crudes from, among others, Western Asia to the United States, where refinery capabilities are more adequate for the processing of this grade of crude. One estimate puts the potential increase in tanker demand and trade at 1 per cent (Clarksons Research, 2019g).

Any discussion on fuel economics is also linked to the debate on carbon emission control. One approach being considered at IMO with a view to decarbonizing shipping relates to the setting of mandatory speed restrictions on ships. While supported by a group of stakeholders, including 120 shipping companies, none of which represent the container shipping market, the proposal was rejected by container carriers. The latter maintain that imposing mandatory speed limits would undermine technological advances necessary for decarbonizing shipping and could jeopardize the broader objective of climate change mitigation (JOC.com, 2019d). It is argued that, while there were some marginal gains to be had from further lowering ships' sailing speeds – in terms of fuel consumption and cost – a thorough analysis of the pros and cons of the proposal was still required (Lloyd's Loading List, 2019j). See chapters 2 and 4 for a detailed discussion.

### **Disruptions to maritime transport operations networks show need for resilience-building**

The year 2018 underscored the growing importance of building resilience in supply chains, including maritime transport. Any shock to such systems, resulting in disruptions such as delays, congestion or closure of

shipping routes and maritime nodes, including canals, chokepoints and ports, cause inefficiencies and increase the costs of logistics and trade.

In addition to trade protectionism, geopolitical flash points have major implications for maritime trade and shipping. Currently, Western Asia is a geopolitical hotspot affected by tensions involving the Islamic Republic of Iran and some Western Asian countries. The newly imposed sanctions on the Islamic Republic of Iran and incidents involving attacks on tankers (Ratner, 2018) sailing through the Strait of Hormuz in mid-2019 have heightened the concerns about disruptions to oil supply, as well as to containerized trade flows on the East–West containerized trade route linking Asia to Europe. With tensions still running high, container carrier costs are rising, and it is reported that container lines are applying surcharges for cargoes transiting through the region (Lloyd's Loading List, 2019k).

About one third of global oil trade by sea passes through the Strait of Hormoz. This is estimated to be about twice as much as the entire oil production of the United States today (CNN Business, 2019). About 28 per cent of global liquefied natural gas shipments transit through the Strait annually (Ratner, 2018). There are limited alternative oil pipeline routes that could be relied upon to bypass the Strait. Any disruption would entail serious implications for oil supply, maritime trade and oil prices, especially when global oil stocks are low.

Climate change and damage caused by extreme weather events, such as droughts, floods and changes in sea and water levels, undermine the functioning of shipping and port operations and disrupt supply chain operations (see chapter 4). The rising number of hurricanes and typhoons resulting in ports closures in recent years is a case in point. The top container gateway in Bangladesh closed for 72 hours due to a tropical cyclone, causing a backlog of containers at the port and at support inland facilities (JOC.com, 2019e). In addition, low rainfall caused drought in Panama, which required the authorities to impose draft restrictions on ships passing through the Canal. This, in turn, resulted in disruption to smooth passage (JOC.com, 2019f). Similarly, the Rhine river and other inland waterways in Europe experienced the negative effects of severe drought in 2018 (JOC.com, 2019f).

### **Structural shifts in globalization patterns**

Overlapping with trade tensions, supply chain disruptions and an accelerated environmental agenda, some structural forces are unfolding in parallel with the potential to deeply influence the outlook. The following section highlights relevant developments that may signal a transition towards a new normal, whereby growth rates of the magnitude seen over a decade ago are more than likely a thing of the past and globalization

as it is known today has undergone significant change since the 1970s.

The *Review of Maritime Transport 2016* questioned whether the slowdown observed in merchandise trade since the 2009 Great Recession had resulted mainly from cyclical factors (weaker GDP growth and macroeconomic cycles) or whether it could be an indication of deeper structural forces such as the ending of globalization. Three parallel drivers of change were noted, namely the limited growth in vertical specialization and the global fragmentation of production, reflecting maturing value chains in China and the United States; the change in the composition of global demand, with slow recovery in investment goods that are more trade intensive than government and consumer spending; and a shift in the composition of consumer demand away from tradeable goods to services. It was argued that these three forces were contributing to create a new normal, whereby the high levels of trade growth of the late 1990s and early 2000s, and the era of high trade-to-GDP ratios would be difficult to replicate and maintain under the new conditions.

Downward pressure on global economic and trade growth and uncertainty triggered by growing trade policy tensions may have exposed trends that support the argument of a structural shift in the nature of globalization with potentially important implications for, inter alia, merchandise trade, supply chains, shipping networks, ship sizes, maritime cargo flows and port-call patterns.

A recent study analysing the dynamics of global value chains in 23 industries reveals that subtle trends have been developing over time. These include falling trade intensity in goods-producing value chains and a growing importance of trade in services and its rapid expansion (McKinsey Global Institute, 2019). Increasingly, a smaller share of goods produced is traded across borders. Between 2007 and 2017, exports declined from 28.1 per cent to 22.5 per cent of gross output in goods-producing value chains. Further, global value chains are becoming more knowledge intensive, with low-skilled and low-cost labour becoming less important for production. It is estimated that less than 20 per cent of trade in global goods is now driven by labour cost arbitrage (McKinsey Global Institute, 2019). Finally, goods-producing value chains, in particular those relating to the automotive, computer and electronics industries, are becoming more regionally concentrated, reflecting efforts to locate closer to demand and consumption markets.

Underpinning these shifts is the rise of technological advances such as digital platforms, the Internet of things, automation and artificial intelligence; in some cases, they could compress trade in goods and promote trade in services.

At their core, the structural shifts that are redefining globalization patterns reflect the growing demand in

developing countries as they increasingly consume their own products and tend to reduce their imports of intermediate goods and invest in improved and more comprehensive domestic supply chains. More specifically, these shifts are closely linked with the changing role of China as the engine that has propelled growth in maritime trade over the past two decades. China has experienced robust economic growth over the past 40 years, when annual GDP growth averaged close to 10 per cent, but since 2010, the growth rate has been decreasing. The country's spectacular performance has been instrumental in driving maritime trade volumes, and its heavy reliance on capital investment and infrastructure development for its growth has fuelled demand for maritime transport services for many years.

Relating the expansion of overall imports into China to the performance of world maritime trade is revealing. Annual imports of all types of cargo into China grew by 1,510 million tons (equivalent to 49 per cent of growth in world imports) between 2008 and 2018 (Clarksons Research, 2019c). Therefore, nearly half of global maritime trade expansion over the past decade was attributed to China. In 2018, maritime imports into China accounted for about a quarter of maritime trade and half of dry bulk commodity trade. China is also a key player in containerized trade, given its role as the factory of the world.

Because of the importance of China, the outlook for maritime trade is highly dependent on developments taking place in the Chinese economy. In recent years, China has embarked on a reform agenda that promotes a transition towards a more sustainable economic growth model. Shifting the economy away from investment and manufacturing towards consumer spending and services is indicative of an economy that is maturing. The concern, however, is that the central role of China in driving maritime trade exposes the vulnerability of this trade to developments in that country.

With China cutting excess capacity in the steel and coal industries, the implications for maritime trade and demand for shipping and ports are of strategic importance. Its import demand supporting heavy industries – iron ore, coal and minor bulks – can be expected to moderate. Although the Belt and Road initiative could generate some additional dry bulk cargo flows (Hellenic Shipping News, 2018) and support containerized cargoes in the medium to the long term, it is uncertain whether the added volumes would offset the reduced import demand from China. A related development is the diminishing role of China as the Asian export powerhouse of low-cost manufacturing. As previously noted, China has become more self-reliant and increasingly requires less imported inputs for production. This shift is altering the demand for intermediate goods and weighing on intra-East Asian containerized trade flows. More recently, trade policy risks have underscored this trend.

### 3. Conclusions

The face of maritime transport is changing, reflecting a shift to a new normal. This is characterized by a moderation in global economic and trade growth, the expanding regionalization of supply chains and trade patterns, a continued rebalancing of the Chinese economy, a larger role of technology and services in value chains and logistics, intensified and more frequent natural disasters and climate-related disruptions, and an accelerated environmental sustainability agenda with an increased awareness of the impact of global warming in particular. Such developments call for improved planning, adequate response measures, and flexible and forward-looking transport policies that anticipate change.

In addition to the demand side, the new normal also entails some new trends on the supply side. Carriers have seemingly abandoned the quest for ever bigger ships and are increasingly eyeing growth prospects associated with the landside of operations. Ports and shipping interests appear to be focusing more attention on expanding activities to inland logistics and tapping potential underlying sources of revenue. Efforts by carriers to emerge as freight integrators and recent moves by some major global container lines to acquire regional carriers (e.g. Maersk's acquisition of Hamburg Süd or CMA CGM's purchase of the logistics company Containerships) could be indicative of industry efforts to adapt to changing conditions. Given the regionalization of trade flows and the trend towards restructuring supply chains, the new normal – despite the potential challenges – could generate opportunities, especially for developing countries striving to integrate more effectively into global trading networks.

Bearing in mind the special needs of developing countries, in particular those of small islands developing States and landlocked developing countries, it is recommended that the following actions be taken:

- Closely monitor demand side risks and assess their implications for maritime transport and trade of developing countries, including vulnerable economies such as small island developing States and landlocked developing countries.
- Favour measures that help boost economic growth, support trade, strengthen resilience and foster environmental sustainability.
- Revitalize trade growth and promote the participation of developing countries in global value chains, bearing in mind changes in globalization patterns, including regionalization and the reduced importance of low-skilled and low-cost labour as a factor of production.
- Encourage product and market diversification to better cope with adverse trade shocks, including the impacts of heightened tariffs and trade tensions. This is particularly relevant for commodity-dependent economies, including small island developing States and landlocked developing countries.
- Adopt a coordinated and multilateral approach to resilience building, including by addressing the risks of natural disasters and the impacts of climate change, especially in vulnerable areas such as small island developing States and delta regions.
- Promote better planning methods and approaches to ensure more flexibility when dealing with uncertainties and rapid shifts in production, trade and shipping patterns. Improved planning may involve scenario planning to inform port investment decisions, among other priorities.
- Foster policies that anticipate potential disruptions and associated response measures that are tailored to countries' developmental challenges and needs.

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