

INTERNATIONAL TRADE WORKING PAPER

Harnessing Maritime Trade for Post-COVID Recovery and Resilience-Building in the Commonwealth

*Ganeshan Wignaraja, Brendan Vickers and
Salamat Ali*



The Commonwealth

International Trade Working Paper 2021/11

ISSN 2413-3175

© Commonwealth Secretariat 2021

By Ganeshan Wignaraja, Brendan Vickers and Salamat Ali

The authors are extremely grateful to Pabasara Kannangara, Hilary Enos-Edu and Kimonique Powell for efficient research assistance undertaken for this *Commonwealth International Trade Working Paper*. Sujeevan Pereira provided valuable comments and insights on the initial draft.

Please cite this paper as: Wignaraja, G, B Vickers and S Ali (2021), 'Harnessing Maritime Trade for Post-COVID Recovery and Resilience-Building in the Commonwealth' *International Trade Working Paper 2021/11*, Commonwealth Secretariat, London.

The International Trade Working Paper series promptly documents and disseminates reviews, analytical work and think-pieces to facilitate the exchange of ideas and to stimulate debates and discussions on issues that are of interest to developing countries in general and Commonwealth members in particular. The issues considered in the papers may be evolving in nature, leading to further work and refinement at a later stage. The views expressed here are those of the author(s) and do not necessarily represent those of the Commonwealth Secretariat.

For more information contact the Series Editor: Dr Brendan Vickers, b.vickers@commonwealth.int.

Abstract

This paper maps patterns of maritime trade in the Commonwealth with a view to exploring the effects of the pandemic and policy implications for post-COVID recovery and resilience-building in Commonwealth countries. The main findings are as follows. First, a significant presence in global coastlines, seaports and container traffic means that maritime trade is fundamental to Commonwealth countries' global and intra-Commonwealth trade. Second, the sudden onset of the pandemic led directly to a moderate decline in shipping and maritime trade as well as indirect falls in maritime support services. Third, the maritime industry and trade patterns have been rapidly adjusting to a new operating environment with some signs of recovery. Shifts in the demand and supply of goods following the pandemic injected a new momentum in shipping, raised container freight rates to historically high levels and created challenges for trade recovery in several developing countries. However, the outlook for the shipping sector has also been altered by pre-pandemic headwinds such as rising protectionism and increasing debate regarding nearshoring and the reconfiguration of supply chains. The paper concludes by suggesting that success in the new operating environment requires Commonwealth countries to build resilience by improving the quality of seaport infrastructure, logistics and transport networks, enhancing trade openness and trade facilitation, addressing maritime security threats and increasing the environmental sustainability of shipping operations.

JEL Classifications: F13, F18, R4

Keywords: maritime trade, shipping sector, logistics, transport

Contents

1. Introduction	5
2. Mapping the Commonwealth's ocean domain and maritime trade infrastructure	6
3. Implications of the COVID-19 pandemic for maritime trade	13
4. Addressing the challenges to maritime trade-led growth	16
5. Conclusion and the way forward	22
Notes	24
References and Bibliography	25
Annex tables	27

Abbreviations and Acronyms

CICT	Colombo International Container Terminals Ltd
EEZ	exclusive economic zone
GDP	gross domestic product
GHG	greenhouse gas
IMO	International Maritime Organization
LDC	least developed country
LNG	liquified natural gas
LPG	liquefied petroleum gas
LSCI	liner shipping connectivity index
MFN	most favoured nation
NSR	Northern Sea Route
SDGs	Sustainable Development Goals
SIDS	small island developing states
TEU	twenty-foot equivalent unit
TFA	Trade Facilitation Agreement
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

1. Introduction

Maritime trade is indispensable for global growth and prosperity – around 80 per cent of world trade by volume and more than 70 per cent by value is seaborne (UNCTAD, 2020). This includes raw materials, manufactured goods and components, food, energy and vital medical supplies. The maritime sector is also at the heart of trade and economic activity for the Commonwealth. This is partly attributable to favourable geography. Commonwealth member countries span all the world's major ocean basins, and the majority of the 54-member country grouping are coastal states or small island developing states (SIDS) with sea access. Furthermore, many Commonwealth countries have invested significantly in developing their port capacity, and this is reflected in a stellar performance historically. The Commonwealth has about one fifth of the world's major seaports, 18 of which are in the Lloyd's List of the top 100 container ports globally. Total container traffic through Commonwealth ports was about 140 million twenty-foot equivalent units (TEUs) in 2020 – an over three-fold increase since 2000 in spite of the slowdown recorded after the global financial crisis.

However, the unprecedented COVID-19 pandemic has severely affected maritime trade, shipping and seaports that connect Commonwealth countries to each other and to world markets. Global ship calls fell by 8.7 per cent in the first 24 weeks of 2020; the demand for container ships fell by 5.8 per cent; and cruise ships ceased operation in the initial stages of the pandemic. In a bid to safeguard the health of crew and passengers and to ensure business continuity, port operators and shipping companies adjusted their operations in line with virus containment measures. In some instances, port closures were ordered to avoid its further spread. The sector showed initial signs of recovery in the third quarter of 2020, suggesting a positive outlook for world trade. Despite this possible rebound, however, pre-pandemic headwinds (some of which were further exacerbated by the pandemic), a trade and diplomatic conflict between China and the United States, rising protectionism and shifting

debate around nearshoring and the reconfiguration of supply chains pose challenges to the outlook for maritime trade.

Keeping ships moving and ports operational is vital to global response efforts, especially in facilitating the supply of essential medicine and equipment (International Chamber of Shipping, 2020). While adjustment to the pandemic and learning to live with it may be in sight in many countries, the recent hike in freight rates, triggered by the shortage of containers and the increased demand for goods, is a cause for concern. If not addressed, this sharp rise in transport costs, which are a key component of trade costs, could delay and derail recovery efforts, especially in developing and vulnerable economies. Moreover, there is a need to enhance 'green' port operations to protect the marine environment and promote sustainable trade for the future.

Against this backdrop, this International Trade Working Paper focuses on recent patterns of maritime trade-led growth in the Commonwealth and explores the implications of the pandemic for shipping and seaborne trade. A unique feature of the research is the distilling of a variety of data sources to provide a comprehensive mapping of maritime trade patterns in the Commonwealth, looking at the situation of both large coastal states and SIDS. The mapping examines critical elements of the Commonwealth's role in global maritime trade, including presence in global coastlines, seaports and container traffic. It is structured as follows: section 2 maps the Commonwealth's ocean domain and the network of maritime trade; section 3 explores the implication of the pandemic on maritime trade flows; section 4 discusses ways to address the key challenges to maritime trade-led growth in the Commonwealth, which include rising freight rates, the quality of seaport infrastructure and logistics, trade openness and trade facilitation, maritime security threats and environmental sustainability; and section 5 provides policy recommendations to harness the power of maritime trade for recovery and resilience building.

2. Mapping the Commonwealth's ocean domain and maritime trade infrastructure

2.1 Commonwealth ocean domain

More than one third of the world's ocean lies within Commonwealth jurisdictions. The total marine area of the Commonwealth (30 per cent of the world, or 41,353,571 square kilometres – km²) exceeds its total land area (25 per cent of the world, or 31,264,880 km²). There are huge variations between the coverage of marine and land areas in various Commonwealth regions. Developing countries (23,239,019 km²) have more marine area than developed countries (18,114,552 km²). Among developing countries, the Pacific has the largest maritime area, followed by Africa and Asia. Expressing this concept as a ratio shows that the Commonwealth has a somewhat larger maritime area to land area ratio (1.3) when compared with the rest of the world (1.1). Developing countries have a larger ratio (1.8) than developed countries (1.0). The ratio for the Pacific region (20.5) is much higher than other Commonwealth regions.

Overall, the Commonwealth SIDS stand out with a maritime area to land area ratio of almost 20, on average (see Table 1). However, given the wide variations across countries such averages can be distorted. For instance,

four SIDS – Kiribati, Maldives, Seychelles and Tuvalu – have ratios in the thousands while some others, including Antigua and Barbuda, Barbados, Malta, Mauritius and Tonga, have ratios in the hundreds (see Table 2). Given their vast ocean geography, it is more appropriate to characterise them as Big Ocean Sustainable States or Big Ocean Stewardship States.² However, with limited capacity and resources, these island nations confront the challenge of effectively managing their maritime jurisdictions – their exclusive economic zone (EEZ). At the same time, this abundance of marine area means successful management of these resources can lead to greater prosperity and a more sustainable future. However, the ocean and its valuable resources are already under serious threat from climate change, rising sea levels, pollution (including plastics and oil spills, most recently around Mauritius) and over-fishing. The ocean is warming and becoming more acidic, causing coral bleaching and reducing biodiversity – worsening the health of marine and coastal ecosystems. As part of the global effort to tackle these challenges, especially to help achieve Sustainable Development Goal (SDG) 14 on 'Life below water', the

Table 1. Summary of marine area and land area in the Commonwealth (km²), by region and development level, June 2021

	Marine area (km ²)	Land area (km ²)	Ratio
	(1)	(2)	Col. (1)/(2)
World	138,222,540	127,343,220	1.1
Commonwealth	41,353,571	31,264,880	1.3
<i>Of which</i>			
Developed	18,114,552	18,201,423	1.0
Developing	23,239,019	13,063,457	1.8
<i>Of which</i>			
Africa	6,263,665	7,859,126	0.8
Asia	4,547,688	4,404,697	0.98
Caribbean	1,504,028	266,570	5.6
Pacific	10,923,638	533,064	20.5
SIDS	15,976,203	803,088	19.9
LDCs	7,508,162	3,178,396	2.4

Source: Authors' calculations using data from UNEP-WCMC (<http://data.unep-wcmc.org/datasets/3/>).

Note: Column (3) presents marine area to land area ratios.

Table 2. Top 10 ocean states in the Commonwealth

	Country	Marine area (km ²)	Land area (km ²)	Ratio
		(1)	(2)	Col. (1)/(2)
1	Tuvalu	731,900	42	17,426
2	Kiribati	3,459,130	1,033	3,349
3	Maldives	926,867	300	3,090
4	Seychelles	1,340,839	487	2,753
5	Tonga	668,055	767	871
6	Mauritius	1,280,068	2,062	621
7	Barbados	185,020	444	417
8	Antigua and Barbuda	108,492	455	238
9	Malta	55,697	325	171
10	St Vincent and the Grenadines	36,511	410	89

Source: Authors' calculations using data from UNEP-WCMC (<http://data.unep-wcmc.org/datasets/3>).

Note: Column (3) presents the marine area to land area ratios.

Commonwealth has adopted a Blue Charter to co-operate to solve ocean-related problems and meet commitments for sustainable ocean development.

2.2 Maritime trade and the Commonwealth

Maritime trade in goods has shaped the Commonwealth ocean economy throughout history (Stavridis, 2018), but this has been especially true during the last few decades of rapid globalisation and international integration of economies into the world trading system (Pandya et al., 2011). The crucial driving forces for the development of maritime trade in the Commonwealth are, inter alia, linkages between global gross domestic product (GDP) and trade,³ China's rise as a manufacturing and trading hub, commodity and labour costs, liberalisation of trade and investment barriers, falling information and communication costs and the relatively low costs of container shipping to transport goods across the world. Commonwealth-specific driving forces are also important, including the strategic location that many of its countries occupy along global shipping lanes, a network of efficient world class and sub-regional seaports and the 'Commonwealth effect' on trade flows (Commonwealth Secretariat, 2015).

Several Commonwealth countries are also world leaders in maritime shipping. In 2019, five of them accounted for 20 per cent of registered merchant vessels in the world: Singapore

(6.5 per cent), Malta (5.6 per cent), The Bahamas (3.9 per cent), the United Kingdom (2.3 per cent) and Cyprus (1.7 per cent).⁴ Others, especially some SIDS, maintain open registers to increase government revenues and provide flexibility to ship owners. This practice can reduce operating costs, assist in avoiding potentially burdensome regulations and allow the engagement of international crews.

2.2.1 Leading sea ports in Commonwealth countries

A network of well-connected seaports forms the backbone of an increasingly globalised Commonwealth maritime transport and international trading system. There were 184 major seaports across the Commonwealth in 2014, representing 22 per cent of the world's total.⁵ Commonwealth developed economies have the most seaports (63), followed by developing countries in Africa (39) and Asia (35), while the Caribbean and Pacific SIDS have similar numbers, with 24 and 23 seaports, respectively. The three European member countries – Cyprus, Malta and the United Kingdom – account for almost half of Commonwealth developed country seaports. In 2019, Commonwealth seaports accounted for 14 per cent of the world's ship arrivals with close to 630,000 vessels arriving at them. Of this total, around 81,000 were container ships. The developed countries account for two thirds of the total port calls, led by the United Kingdom with 158,231 port calls in 2020. The pandemic has dealt a hard blow to the industry, which saw a dramatic slowdown

in ship arrivals at least in the first two quarters of 2020. In this period, ship arrivals at Commonwealth ports declined by 12 per cent.

Maritime transport is extremely important for SIDS as their socio-economic prospects largely depend on their ability to connect to the rest of the world and access international markets. Commonwealth SIDS are collectively home to 50 of the most highly active seaports globally (or 28 per cent of the Commonwealth's total seaports). They are among the most open economies in the world and depend on international trade for growth, poverty reduction and employment generation. They also tend to be highly dependent on strategic imports such as food and fuel, so efficient ports and infrastructure are vital. However, the relative and – crucially – permanent physical isolation of SIDS from principal markets means they face excessively high trade costs, particularly in the Pacific. These include expensive sea-freight costs, low shipping connectivity including liner shipping connectivity, infrequent shipping

services, delays at ports and heavy reliance on indirect connections that often require several transshipment moves (UNCTAD, 2015).

Looking specifically at infrastructure, the cargo facilities at many SIDS ports are obsolete and in need of modernisation and development. As noted above, these small economies are dependent on continued access to cargo and passenger liners at the port. Without investment in port infrastructure, there is the risk of economic stagnation. It is necessary, therefore, to craft a realistic programme geared at developing the ports to match changing market requirements and to provide economic security.

Among SIDS, Singapore is the exception. It is one of the world's top transshipment ports and recorded just over 61,000 port calls by ships in 2019. More than half involved shipments of crude or refined oil products while a quarter were containers. The Port of Singapore has performed well despite the pandemic and is on track to achieve its targets around maritime decarbonisation and the promotion of

Table 3. Container traffic at Commonwealth ports featured on the Lloyd's List of the world's top 100 ports in 2020

	Container traffic (millions TEUs)			Share of container traffic (%)			Lloyd's List top 100	
	2000	2010	2019	2000	2010	2019	Port	Rank
All Commonwealth	44.3	99.9	143	100	100	100		
Of which in Top 100	43.0	90.1	90.5	97.0	90.2	90.5		
1 Singapore	17.1	29.1	38.0	38.6	29.2	26.6	Singapore	2
2 Malaysia	4.6	16.8	26.2	10.5	16.9	18.3	Port Klang Tanjung Pelepas	12 18
3 Sri Lanka	1.7	4.1	7.2	3.9	4.1	5.1	Colombo	24
4 India	2.5	8.9	17.1	5.5	8.9	11.9	Jawaharlal Nehru Mundra	33 37
5 United Kingdom	6.4	8.2	10.3	14.5	8.2	7.2	Felixstowe London Southampton	50 70 89
6 Canada	2.9	4.7	7.0	6.6	4.7	4.9	Vancouver Montreal	52 95
7 Bangladesh	0.5	1.3	2.7	1.0	1.4	1.9	Chittagong	58
8 Australia	3.5	6.4	8.3	8.0	6.4	5.8	Melbourne Sydney	63 76
9 South Africa	1.8	4.0	4.8	4.2	4.0	3.3	Durban	72
10 Malta	1.1	2.5	2.7	2.4	2.5	1.9	Marsaxlokk	73
11 Pakistan		2.1	3.4	0.0	2.2	2.4	Karachi	85
12 Jamaica	0.8	1.9	1.9	1.7	1.9	1.3	Kingston	99

Source: Lloyd's List 2020; Authors' calculations using UNCTADstat, 2021.

digitalisation and inter-modal connectivity. Singapore retained its position as the world's largest bunkering port in 2020, recording marine fuels sales of 49.8 million metric tons, a 5 per cent year-on-year increase.

Since the global financial crisis of 2008-2009, a core group of Commonwealth seaports has emerged as the leaders globally. There are the 18 seaports (10 per cent of the Commonwealth total number of seaports) that are included in the Lloyd's List of top 100 container ports worldwide in 2020 (see Table 3). These 18 ports have made a significant contribution to their respective national container traffic performance. In 2019, countries in which these ports are located collectively accounted for 143 million TEUs (just over 90 per cent of container traffic in the Commonwealth). This figure has

risen by around one third since the crisis from 91.2 million TEUs in 2010. However, the magnitude of pre-crisis expansion was even larger from a low base of 43.3 million TEUs in 2000.

Approximately 45 per cent (8) of the top Commonwealth seaports in the Lloyd's List are in Asia, while Africa and the Caribbean have only one each. Meanwhile, there are seven ports dispersed among the developed country members. The leading seaports in the Commonwealth include Singapore (ranked 2nd on the Lloyd's List), Malaysia's Port Klang (ranked 12th), Sri Lanka's Colombo Port (ranked 24th), India's Jawaharlal Nehru Port (ranked 28th) and the United Kingdom's Felixstowe Port (ranked 42nd). Singapore is currently constructing the new mega Tuas Port. When completed in 2040, this 'smart' seaport will be the world's largest

Box 1. Colombo Port's rise as a regional transshipment hub

The rise of Colombo Port in Sri Lanka over several decades to become a regional transshipment hub is a remarkable success story in the Commonwealth. The country is about 10 nautical miles off the main East-West maritime trade route, which sees some 60,000 ships passing through annually, and only 34 nautical miles off the southern coast of India. Currently, over 75 per cent of container traffic through Colombo Port is for transshipment purposes, and much of this trade comes from India and South-East Asia. Colombo Port's efficiency (in terms of vessel turn-around times, average waiting times and idle times) is better than those of major Indian ports (such as Mumbai and Kolkata) and Bangladesh's (Chittagong) ports (Dappe and Suarez-Aleman, 2016).

Colombo's transformation into an important container port in South Asia can be attributed to several factors (Wignaraja, 2019). The spread of containerised cargo technologies to Asia - which significantly reduced transport costs and improved turnaround times for shipping - and Sri Lanka's early adoption of economic reforms in 1977 helped Colombo to leverage its geographical advantage and embrace transshipment traffic. This move also attracted substantial support from India. Furthermore, the introduction of private sector operators increased capacity and consolidated Colombo Port as a regional transshipment hub in the late-1990s. Additionally, major investments to handle containerised cargo since the early 1980s has seen a deepening of the main channel to 15-18 meters to accommodate larger container ships as well as the development of four new container terminals. These are the Jaye Container Terminal (JCT), completed by 1997; the South Asia Gateway Terminal (SAGT), which became operational from about 2000; the Colombo International Container Terminals Ltd (CICT), in operation since 2013; and the East Container Terminal (ECT), which is an on-going project.

The CICT is noteworthy as it was established through an initial investment of US\$500 million in 2011 by China Merchant Port Holdings along with significant technology transfer from abroad into port operation and systems (see Wignaraja et al., 2020). This is the only state-of-the-art deep-water terminal in South Asia that can handle ultra large container carriers (ULCC) or up to 20,000+ TEU vessels. Commencement of CICT operations in 2014 was critical to Sri Lanka consolidating its position in regional transshipment trade over the last few years. With the geographical coverage of these services and high frequency of mainline liner service connections, CICT has helped the Colombo Port to be ranked as the 11th best-connected port in the world according to Drewry's Port Connectivity Index in 2018.⁶

Colombo Port demonstrated resilience in response to COVID-19. A strategic crisis management plan was implemented, which took into consideration all national and international health and safety measures, safeguarding the welfare of port employees and users alike (WPSP, 2020). As a result, it remained operational throughout the pandemic and is said to have earned the title of operating without delays. There was a 2.4 per cent increase in ship arrivals at Colombo Port as at May 2020. Looking beyond the crisis, there is a need for increased investments in port capacity to cope with an expected maritime trade recovery. In this vein, the announcement in March 2021 of a joint venture between India's Adani Ports and Sri Lanka's John Keels Holdings to develop the West Terminal in Colombo Port is a welcome move. There is also a need to implement complementary projects related to greater digitisation of port operations, promoting automation and cutting red tape pertaining to international trade.

Source: Commonwealth Secretariat

Box 2. Successful port development in two small states: Malta and Jamaica

Of the Commonwealth's 32 small states, 29 have ports and are actively engaged in maritime trade.⁷ While most of these ports are quite small and handle limited cargo, two small states – Malta (in Europe) and Jamaica (in the Caribbean) – seem to dominate the container traffic. In 2018, these two collectively accounted for 84 per cent of the total container traffic of small states and 5 per cent of the total Commonwealth traffic. Their ports handle a notable amount of cargo on a global scale: in 2019, they featured in the Lloyd's List of the world's top 100 container ports, ranking 52nd and 91st, respectively.

Malta has two commercial ports, Valletta Port and the Malta Freeport in the Marsaxlokk harbour. The Malta Freeport was established in 1988 and primarily engages in transshipment trade. Since being privatised in the early 2000s, the port has attracted roughly 250 million euros worth of investments (Hellenic Shipping News, 2020). It is also one of the largest free ports in the region and is serviced by many of the world's major shipping lines (Malta Profile, 2017).

During the COVID-19 outbreak the Maltese Government announced several measures as part of a financial package to help the economy. These included a temporary refund of 33 per cent of port charges for vessels that import goods to Malta and 10 per cent of container discharge fees, excluding transshipment. Cruise operations were affected in the initial days of the pandemic, but recently the Government has issued guidelines for a safe continuation of cruising in Valletta (Cruise Industry News, 2021).

Jamaica, on the other hand, has several major ports but the Port of Kingston is the largest. It is part of the Kingston harbour, which is the seventh largest natural harbour in the world and consists of an almost landlocked area of water, roughly 10 miles long and 2 miles wide, which is deep enough to accommodate large ships. The recent privatisation of the Kingston Container Terminal has allowed Jamaica to boost its transshipment trade, tapping into America's East-West and North-South container trade. To enhance its maritime trade offering, Jamaica is now developing a dry-docking facility for ship repair services.

Source: Commonwealth Secretariat

fully automated terminal and will double the current capacity to around 65 million TEUs of cargo.

2.2.2 Container traffic

This network of well-connected seaports has meant that the Commonwealth overall has gained from the growth of container traffic globally over several decades. The advent of containerisation in the mid-20th century altered the nature of maritime trade globally (Levinson, 2006; Cosar and Demir, 2018). The many advantages of shipping inside the box include a significant reduction in the unit cost of moving manufactured items over long distances, reduced capital costs to shipping firms, lower labour cargo handling at ports and reduced theft and breakage of cargo. Indeed, containerised cargo today is synonymous with maritime cargo and transport.

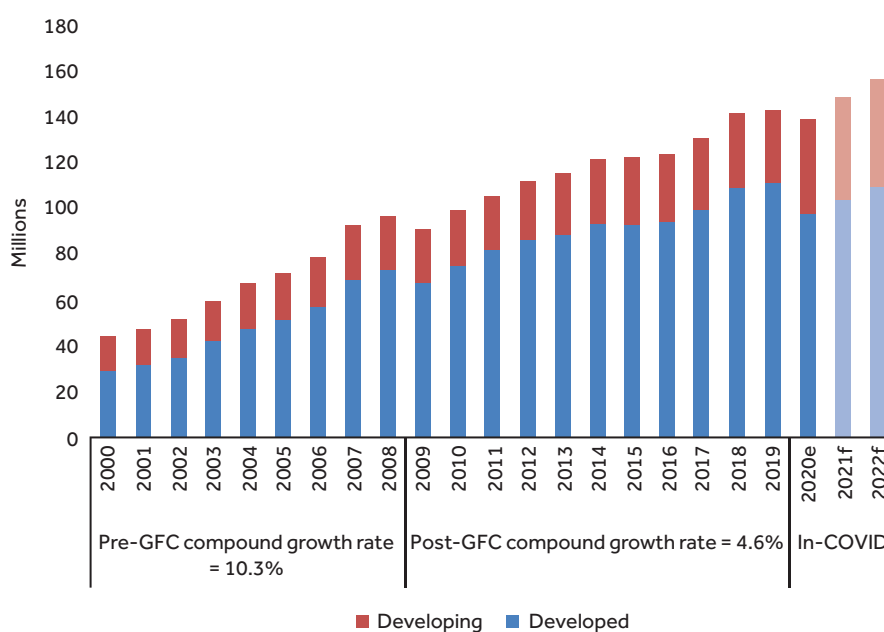
As Figure 1 shows, container traffic through Commonwealth seaports more than doubled from 43.3 million TEUs to 97 million TEUs between 2000 and 2008 in the period before the global financial crisis. It fell briefly to 91 million TEUs (2009) during the height of the crisis but recovered in 2010 and has since expanded at a more modest pace. By 2019, it reached 143 million TEUs, which is 18 per cent of global container traffic.⁸ In line with the global trend, Commonwealth countries' container traffic in

2020 dropped by around 4 per cent to 139.5 million TEUs. The COVID-19 pandemic also affected shipping-related services trade such as handling, loading, unloading and warehousing, which led to hundreds of empty containers stranded at various places (see section 3). Lower shipping volumes led to a drop in the container shipping index of the World Trade Organization (WTO) services trade barometer for the first quarter of 2020 (WTO, 2020).⁹

The global financial crisis represents a watershed in maritime trade in the Commonwealth, particularly in container traffic flows. The crisis seems to have altered such trade two ways. First, growth of container traffic through Commonwealth ports has slowed markedly since the crisis to 4.6 per cent annually in 2011–2019 compared with strong pre-crisis growth of 10.3 per cent annually in 2001–2008. The COVID-19 pandemic, slowing global economic growth, the unresolved China-United States trade conflict, Brexit and declining commodity prices are among the main sources of uncertainty that have dampened global and Commonwealth maritime trade at least in the short run.

The performance of container traffic varies across Commonwealth countries. The share of developing countries rose from 68 per cent to 76 per cent between 2000 and 2019 while that of developed countries fell from 32 per

Figure 1. Trends in container traffic in the Commonwealth (TEUs)



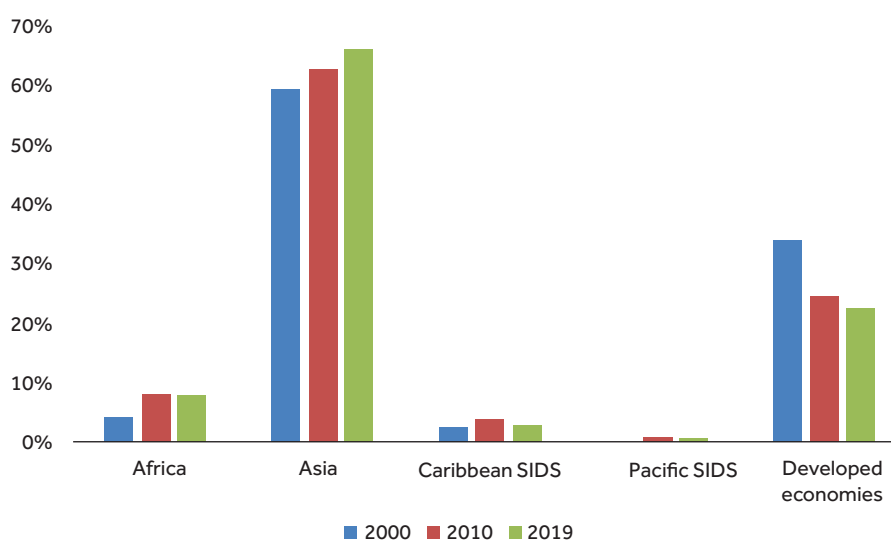
Source: Authors' calculations using UNCTADstat, 2021.

Notes: GFC = global financial crisis. Estimates for 2020 and forecast for 2021–2022 calculated from data extracted from Statista, 2021.

cent to 24 per cent over the same period (see Figure 2). After years of rapid growth, developing countries in Asia emerged as the key players in container traffic in the Commonwealth, accounting for over 60 per cent of the total in 2000. This is closely linked to the development of global value chain (GVC) trade in the region over several decades (see Lam and Yap, 2011; Wignaraja et al., 2018). Sub-Saharan

African countries accounted for about 4 per cent and those in the Caribbean for about 2 per cent. The second, since the global financial crisis, Asia's share of Commonwealth container traffic between 2010 and 2019 further increased from 63.8 per cent to 64.8 per cent. Meanwhile, Africa's share increased from 7.8 per cent to 8.1 per cent. The share of the Caribbean fell from 4 per cent to 3 per cent,

Figure 2. Share of Commonwealth container traffic by region (%)



Source: Authors' calculations using UNCTADstat.

Box 3. Container traffic in small states ports

The post-global financial crisis era has seen the rise of a few small states in container traffic in the Commonwealth, although most have negligible participation due to their structural characteristics.¹⁰ Drawing replicable lessons from the experiences of the more successful small states can help overcome the entry barriers to developing suitable ports and putting in place other requisite conditions to participate in container traffic-led growth.

Notwithstanding the data limitations and without considering the impact of COVID-19,¹¹ the available information suggests that container traffic through small states as a group increased from 7.8 million TEUs to 8.6 million TEUs between 2010 and 2018 (see Table A-1). As a share of the Commonwealth, that of small states fell from 7.7 per cent to 6.1 per cent over the same period. A significant part of the performance of small states can be attributed to the role played by Jamaica and Malta (see Box 2), which accounted for 21.4 per cent and 38.8 per cent, respectively, of the total TEUs of small states in 2018. It comes as little surprise, therefore, that Malta and Jamaica are included in the 18 Commonwealth's ports on the Lloyd's List of top container ports. Other notable small states players in container traffic in the Commonwealth include The Bahamas, Mauritius and Namibia.

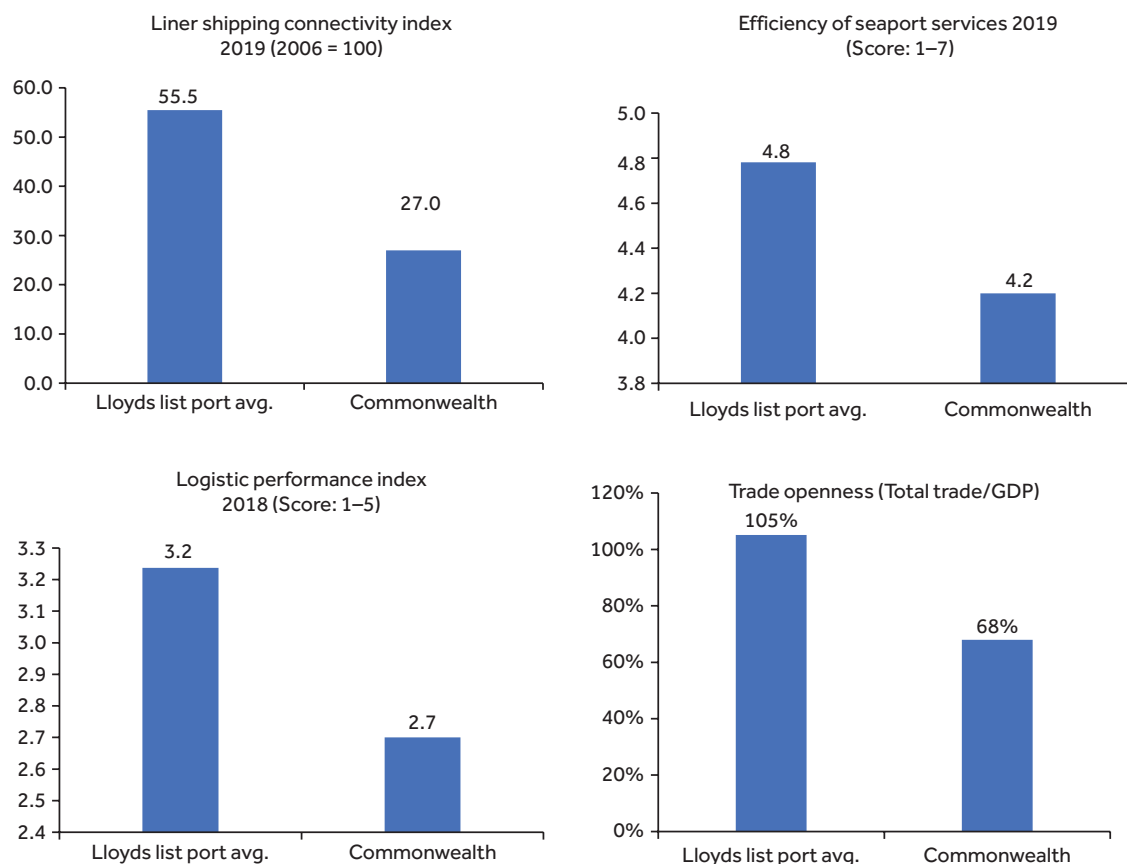
Source: Commonwealth Secretariat

while the Pacific SIDS have a negligible share of container traffic despite having 23 seaports. Given their small size and isolated geographic location, most Pacific SIDS are not connected to the main shipping routes: Port Vila (Vanuatu) receives one container ship about every three days, while Kiribati receives one ship about every 10 days (UNCTAD, 2019).

2.2.3 Maritime connectivity

Most ports in Commonwealth countries are reasonably well connected to the global shipping network, with some countries recording better liner shipping connectivity than others (Table 4). The average liner shipping connectivity index (LSCI) for the Commonwealth was 27.0 in 2019, but this average masks the

Figure 3. Performance indicators of Commonwealth ports, Lloyd's top 100



Source: Authors' calculations using UNCTADstat and World Bank, Doing Business Index.

fact that developed countries had a higher value (43.2) compared to developing countries (23.5). Moreover, within the developing Commonwealth, Asia (47.7) had a higher connectivity index than other regions. It is also notable that coastal LDCs (7.8) and SIDS (15.5), especially Pacific SIDS, lag behind the levels of liner connectivity seen in developed and developing countries.

The Commonwealth's 18 leading ports (in 12 countries) featured in the 2019 Lloyd's List are concentrated mostly in Asia. Bringing in significant amounts of container traffic, they account for close to 90 per cent of the total in the Commonwealth. This performance can be attributed to certain prominent factors of these countries, including port connectivity, port efficiency and quality of logistics but also the degree of trade openness. In terms of the LSCI, on average, these 12 countries fare better than the Commonwealth region, indicating higher degree of integration into the maritime network, which has allowed these ports to tap into key shipping routes over time (see Figure 3).

Similarly, in terms of efficiency of seaport services, the 12 countries scored an average of 4.8/7, compared to the Commonwealth average of 4.2/7. Well-developed infrastructure has allowed these ports to reduce the cost to trade and facilitate greater growth in container traffic. These countries also have better quality of logistics-related services such as trucking, forwarding and customer brokerages than the average Commonwealth country. Such logistics services are crucial as they provide the necessary support services commonly found in third-generation ports. Shippers and carriers often select ports based not only on their cargo servicing abilities but also on the profusion of ancillary services as this drives down the cost to transport.

While being above average across these indicators, it is also interesting to note that the leading Commonwealth countries are more open than the rest of the region. This is because the cost to trade has reduced a great deal due to globalisation and trade liberalisation and given that most international trade is by sea; ports continue to be a crucial node in the global shipping network (Willmsmeier and Hoffman, 2008).

3. Implications of the COVID-19 pandemic for maritime trade

The COVID-19 pandemic has had far-reaching consequences for the maritime industry in Commonwealth countries. Factory closures in the initial stages of the pandemic and the halt in international travel and transportation had ripple effects on container and cruise shipping. This led to a temporary suspension of operations by some shipping lines, disruption in key supply chains and alterations in port operations. These challenges were further compounded by the obstruction in the Suez Canal (see Box 5). The pandemic also adversely impacted the provision of shipping-related services such as freight forwarding, warehousing and transit and trans-shipment of cargoes. Moreover, significant disruption in logistics led to delays in border crossings and increases in port congestions. These factors, along with a shortage of empty containers and the unavailability of replacements for seafarers, caused disruptions in maritime trade.

Most shipping lines and seaports have adjusted their operations and altered their governance and communication practices in response to the pandemic. Despite this short- and medium-term success in overcoming the challenges, the shipping industry is also grappling with the adverse effects of a tariff war between China and the United States, rising protectionism and increasing debate around nearshoring and reconfiguration of supply chains, some of which issues have been amplified by the pandemic.

3.1 First-ordered effects: disruptions in supply chains

The onset of the pandemic led to a slowdown in container shipping activity and halting of cruise operations. Ship calls around the globe fell by 8.7 per cent in the first 24 weeks of 2020, with most of the decline occurring in week 12

when COVID-19 was declared a pandemic (UNCTAD, 2020). Port calls for all cargo ship types were affected, with roll on/roll off ships being the most affected. Roll on/roll off ship calls declined by 22.8 per cent in the second quarter of 2020. Liquefied petroleum gas (LPG)/liquefied natural gas (LNG) carriers were the least affected among cargo ships, with recorded declines of 2.3 and 3.2 per cent, respectively. Not only did cargo ship calls decline but many cargoes were left abandoned in ports where they were not needed as some ships were forced to change routes, skip port calls and dock in ports not originally intended. This has now led to a shortage in some goods and a hike in freight rates, discussed later in this section.

In addition to disruption of container traffic, the pandemic severely impacted passenger ships. Cruise shipping operations were temporarily suspended, with one in three passenger ship calls cancelled in the first and second quarter of 2020 (UNCTAD, 2020). In the Caribbean, for example, major cruise lines such as Carnival, Norwegian Cruise Line and Royal Caribbean suspended their operations until September 2020 (Gonzalez Moncada, 2020). In fact, many cruisers that were still in operation at the onset of the pandemic were prohibited from disembarking in some ports due to national virus containment measures and the outbreak of COVID-19 aboard. Canada, for example, banned all ships with more than 500 people from docking in its ports in mid-March. Australia and New Zealand also banned all ships arriving from foreign ports. Resulting from this, many cruise ships were left stranded at sea, in some instances for over a month. Passengers were forced to quarantine on board and many crew members were reportedly stuck aboard for a long time, manning vessels

until the industry resumed operations (UN News, 2020) (see Box 4).

The disruption in maritime transport also affected the operation of supply chains. Getting goods to customers proved to be difficult as ships reduced their capacity, cancelled scheduled sailing, re-routed vessels and, in some cases, suspended services. This limitation on transport of goods led to significant delays in delivery dates further compounding the challenges faced by supply chains in sourcing inputs for production. The fallout from the pandemic thus accelerated the debate regarding the implications of outsourcing production to distant locations and the potential for reconfiguring supply chains.

3.2 Crisis management and adaption of shipping activities to navigate the pandemic headwinds

The maritime sector quickly responded to the various challenges caused by the pandemic. The crisis management responses included adjustment in port operations, increasing communication with stakeholders and an upsurge in digitisation of port and logistic-related services. To support members in combating these challenges, the Commonwealth Secretariat in partnership with other multilateral organisations developed a repository of various facilitation measures (WTO TFAF, 2020).

Seaports in the Commonwealth and elsewhere adjusted their operations and altered their governance and communication practices in response to the pandemic. Certain activities were prioritised such as the delivery of essential goods, dubbed 'essential port activities'. 'fast lanes' were created for medical cargo, food items and other essential services

Box 4. The seafarers: unsung heroes of the pandemic

To prevent the spread of the virus, several ports and shipping companies have implemented measures that include restrictions on the movement of professional seafarers and marine personnel. This shortage of seafarers due to border restrictions and closure of air travel affected the operations of shipping liners in the short run. Seafarers and ship crew, most of whom hail from South Asia, are the unsung heroes of the shipping industry as they have made huge personal sacrifices throughout the pandemic. Large numbers of them were stuck in ships for many months, and they were unable to sign off after long tours of duty to go home. Others were prevented from returning to their ships, with dire implications for their earnings. The United Nations Conference on Trade and Development (UNCTAD), along with the International Labour Organization (ILO) and the International Maritime Organization (IMO), called for seafarers and other marine personnel to be classified as critical workers and to be exempted from travel restrictions, regardless of nationality.

Source: UN News, 2020

(oil production, fuel handling, etc.). These fast lanes gave priority to ships in the line-up transporting COVID-essential items and provided fast-track authorisations to trucks leaving the port (or heading to the port) to deliver essential goods. Adjustments were also made to enable the implementation of the required social distancing and sanitary protocols, such as the use of facemasks. Several port terminal operators reorganised their work to allow for longer shift changeover times due to both social distancing and need for cleaning equipment and operational vehicles (ship-to-shore cranes, vans, side and front loaders) used by workers before each shift change (UNCTAD, 2021).

Crisis management also involved coordinating with key stakeholders and increasing communications channels. To ensure that national emergency response measures were implemented, several ports engaged in active dialogue with public authorities. Communications among clients, terminals and the port community regarding the status of operations, response measures implemented, contingency measures and safety procedures, also increased. As a response to the pandemic, the Mombasa port in Kenya, for example, in a joint undertaking with the Northern Corridor¹² and the East Africa Community Secretariat, created an online platform for key stakeholders to meet and discuss issues related to trade and transport logistics in the Eastern and Central African region and to draft solutions on how best to facilitate trade. The meetings involved stakeholders from all the Northern Corridor Member States, who shared their experiences and exchanged views with respect to the challenges and opportunities arising from the pandemic (UNCTAD, 2021).

Digitisation has also been critical in ensuring business continuity in the maritime sector. Port Community Systems (PCS), Single Windows (SW) and other electronic exchange platforms have facilitated trade and cross-border logistics by simplifying administrative and regulatory processes during the pandemic. Digital documentation has also been utilised to limit human contact. In Jamaica, for instance, the Jamaica Single Window for Trade (JSWIFT) was tested for the first time during the pandemic. The system is meant to facilitate trade during times of crisis by replacing physical and manual processes with online processing and procedures (González Moncada, 2020).

3.3 Second-order effects: surge in containers demand and rise in freight rates

The easing of restrictions and lockdown measures in the latter half of 2020, coupled with anticipation of new waves of the pandemic, led to a surge in the demand for manufactured consumer goods. Whilst this signalled a positive outlook for world trade, it brought with it an added layer of complexity. Consumer goods are transported primarily through containerised trade, but there is a limited number of boxes in circulation. As many containers had been left stranded in ports where they were not needed at the outset of the pandemic, this led to a shortage. As UNCTAD (2021) reported, the increase in demand in the third quarter of 2020 was higher than expected, and repositioning of containers to ports where they were most needed had not been planned for. This container crisis was further exacerbated by the disruption across maritime supply chains as well as the recent obstruction of the Suez Canal (see Box 5). The latter led to significant delays in ships arriving at their destinations, thus exacerbating the already short supply of containers.

The challenges raised above triggered an increase in freight rates, which surged to a historic high at the end of 2020 to early 2021, ranging from a 63 per cent increase to a more than 400 per cent increase. The freight hike affected all regions, but container shortage has been greater on longer and thinner trade routes to developing regions, especially West Africa and the Caribbean, than on the main East–West routes, hence higher rates along these routes (UNCTAD, 2021). As shipping costs are a major component of transport costs, this may pose serious challenges to trade recovery, especially for small and vulnerable states (see section 4.1).

3.4 COVID-19 and the maritime trade outlook

Prior to the onset of the COVID-19 pandemic, shipping was seen as a sector with prospects for high long-term growth of business and employment (OECD, 2016). Seaborne trade was expected to grow by 4 per cent per annum on average over 2020–2029 and 3.3 per cent between 2030 and 2040. Long-term growth in container traffic was expected to be broadly in

Box 5. Implications of the Suez Canal blockage for maritime trade

On 23 March 2021, a 200,000 tonnes and 400m-long mega-ship, *Ever Given*, blocked the Suez Canal, disrupting the busiest and shortest maritime trade route connecting the East to the West (Asia to Europe and the United States East Coast). The blockage, which lasted for seven days, significantly disrupted world trade (Lewis, 2021). More than 360 ships transporting anything from oil and auto parts to food products were stuck in traffic along the canal. Several vessels were also re-routed around Africa's Cape of Good Hope, a voyage more than 6,000 miles longer. Some exporters even opted to transport their goods via railways connecting China to Europe (Global Times, 2021).

The Suez Canal is an important maritime trade route in facilitating global container shipping and is rivalled only by the Panama Canal. This man-made waterway connects the Mediterranean Sea and the Red Sea and reduces the distance travelled from Asia and the Middle East to Europe. Travelling via the Suez Canal rather than around the horn of Africa reduces travel time by seven to nine days on East-West routes. Today, more than 12 per cent of world trade passes through the Suez Canal annually. Energy exports such as crude oil and LNG are among the top shipments, with consumer products making up the rest of the cargoes.

The blockage of the canal dealt a hard blow to world trade in the short and medium term. Whilst it is difficult to evaluate the exact cost, an estimated \$9.6 billion of trade was held up each day, which equated to \$6.7 million worth of goods per minute, according to data from the Lloyd's List (Petras et al., 2021; Russon, 2021). German Insurer Allianz estimated that the blockage could cost global trade between \$6 to \$10 billion and could reduce annual trade growth by 0.2 to 0.4 percentage points (Russon, 2021).

The impact has been felt downstream by scores of businesses, including supermarkets, domestic transport providers, retailers and manufacturers. It has also put a dent in the operation of global supply chains, which continue to feel the brunt of the COVID-19-induced economic shock. The Suez Canal crisis further exacerbated the shortage of shipping containers, which has fuelled an unprecedented hike in freight rates.¹³ The Asia-Europe ocean rates, for example, are said to have climbed by 6 per cent. As at mid-April 2021, rates were valued at \$7,762 per FEU (forty-foot equivalent unit) as reported in Lloyd's Loading List (Barns-Graham, 2021).

Source: Commonwealth Secretariat

line with that for total seaborne trade, while below average growth was expected in tanker and bulk cargoes. Fast growth was anticipated for LPG/LNG passenger roll-on/roll-off transport, cruises and other seaborne passenger traffic. By 2030, global port activities were projected to contribute US\$473 billion in value-added to the global economy (from \$193 billion in 2009) and port throughput to create 4.2 million jobs, up from 1.7 million in 2009 (OECD, 2016).

The pandemic has, however, moderated these projections. In its *Review of Maritime Transport 2020*, UNCTAD (2020) suggested that maritime trade would plummet by 4.1 per cent in that year. The pandemic disrupted supply chains, shipping networks and cargo volume growth prospects. However, forecasts point to a recovery in 2021, albeit with great uncertainty as this will depend on policy responses to stimulate growth as well as the pace of vaccine roll out.

Maritime trade is undergoing enormous transformation. For example, container ships are getting bigger – today, the biggest container ship is 400 metres long and can carry up to 22,000 twenty-foot containers – creating new challenges for the management of ports and logistics in Commonwealth and other countries (Priya, 2019) and creating potential new risk factors, as seen in the obstruction of the Suez Canal. The rolling-out of autonomous ships (or e-navigation) is another promising trend, although this is likely to be implemented first on domestic harbour craft such as ferries, harbour launches and tugboats. Several ports are also investing in renewable energy, especially solar capacity, and cleaner fuels, such as LNG, for their operations. The global shipping industry, from container to cruise ships, is also investing heavily in new energy efficiency technologies and cleaner fuels to reduce their environmental impact.

4. Addressing the challenges to maritime trade-led growth

The pandemic has brought to the fore the importance of maritime transport as an essential sector for the continued delivery of critical

supplies in time of crisis, during the recovery stage and when resuming normality. Seaports will remain economic lifelines in facilitating

trade globally. In 2020, about 775 million TEU (about 11.09 billion tons of goods) were loaded in ports worldwide (UNCTAD, 2020). The Commonwealth accounted for 18 per cent of this global container traffic.

Although shipping and port activities are mature industries, continuous technological innovations and high long-term growth prospects for business and employment means maritime trade offers important opportunities to help address many of the economic, social and environmental challenges in trade recovery and resilience-building. Many Commonwealth countries are investing heavily in seaports, logistics, infrastructure and related industries to benefit from the projected growth of maritime trade. This continued expansion requires a conducive policy environment and a sharp focus on the five areas discussed below.

4.1 Regulating container freight rates

Defying expectations at the start of the COVID-19 pandemic that seaborne trade would experience a strong downturn, the changes in consumption and shopping patterns triggered by the pandemic, including a surge in electronic commerce as well as lockdown measures, have led to increased import demand for manufactured consumer goods, a large part of which is moved in shipping containers. Moreover, the recent lessening of lockdown measures and resumption of economic activities worldwide, as well as stimulus packages supporting consumer demand, inventory-building and frontloading

in anticipation of new waves of the pandemic, is contributing to a further increase in containerised freight rates. Developing countries, especially in Western Africa and South America, are adversely affected by the rise in shipping costs that, as key component of trade costs, pose a serious challenge to trade recovery.

The underlying causes are complex and include capacity management by carriers and a severe shortage of containers as these are held up in waiting ships, combined with pandemic-related delays in intermodal connections (see section 3.3).

The current surge in freight rates is expected to ease soon; however, in the longer term, policymakers need to focus on (a) further reforms in trade facilitation and ports including digitisation of maritime trade procedures and services; (b) monitoring of port call and liner schedules and improved tracking and forecasting of demand; and (c) strengthening national competition authorities to investigate potentially anti-competitive abusive practices. Otherwise, the enduring container shortages and increasing freight rates could provide further impetus for reshoring and nearshoring trends, delaying recovery in many developing countries.

4.2 Improving ports and logistics performance

A granular analysis of available national data points to significant gaps in the quality of logistics and efficiency of customs clearances, especially in SIDS and LDCs. The average score for the efficiency

Table 4. Key indicators of ports and logistics in the Commonwealth

	No of highly active seaports	Liner shipping connectivity index (2019)	Efficiency of seaport services (2019)	Logistics quality and competence (2018)	Time to import, border compliance (hours) (2019)
Global range		1–100	1–7	1–5	
Commonwealth	184	27	4.2	2.7	69.9
<i>Of which</i>					
Developed	63	43.2	4.9	3.5	14.3
Developing	121	23.5	3.9	2.5	83.8
<i>Of which</i>					
<i>Africa</i>	39	17.1	3.5	2.6	107.9
<i>Asia</i>	35	47.7	4.6	2.9	90.2
<i>Caribbean</i>	24	14.2	3.8	2.3	57.8
<i>Pacific</i>	23	7.1	–	2.3	79.1
SIDS	50	15.5	4.6	2.6	66
LDCs	25	7.8	3.2	2.5	120.2

Sources: VEDP, 2019; UNCTAD, 2019; World Bank, 2019a, 2019b; Schwab, 2019.

Box 6. Developing sustainable maritime transportation systems for SIDS

A 'shipping hub', a 'maritime cluster' or a 'maritime centre' essentially describes a location that has the facilities, expertise and legislative and fiscal frameworks in place to enable a range of maritime activities to be established and prosper. In the Caribbean, for example, two Commonwealth members – The Bahamas and Trinidad and Tobago – as well as Bermuda and the Cayman Islands may be considered as shipping hubs. Being island states, each of the Caribbean countries of necessity has port facilities. However, only The Bahamas, Jamaica and Trinidad and Tobago have developed significant ports to handle large tonnages of cargo.

Even before the onset of the pandemic, SIDS maritime transport systems were vulnerable to a range of factors that undermine their sustainable growth and development. These include a lack of capacity and infrastructure to support the growth of international shipping (e.g., maintaining national hydrographic charting capacity), lack of on-shore facilities and resources to deal with the broad range of ship-sourced waste, high reliance on imported fossil fuels, low transport connectivity and relatively high transport costs (Commonwealth Secretariat, 2014). Most SIDS confront a vicious cycle: low cargo volumes discourage investments that could improve their maritime transport connectivity, while low connectivity also translates into more costly and less competitive trade.¹⁴

Creating sustainable and resilient regional maritime or multimodal hubs and enabling the provision of adequate infrastructure and incidental services (such as port-related storage, insurance and financial services), as well as reliable transport services, can help address the challenges faced by SIDS around maritime transport and in so doing improve connectivity.

Source: Commonwealth Secretariat

of seaport services in the Commonwealth was 4.2 in 2019 (see Table 4). Although developed countries (4.9) and the developing Asia sub-region (4.6) exceeded the Commonwealth average, Africa and the Caribbean and LDCs and SIDS fall below it. Similarly, in terms of logistics quality, developed countries (3.5) significantly exceed the Commonwealth average (2.7) and that of developing countries (2.5). However, only the Asian sub-region (2.9) is on par with the Commonwealth average. Other Commonwealth sub-regions, small states and SIDS are below this.

Looking at customs clearance, measured by time to import, it takes an average of 70 hours to comply with customs regulations in the Commonwealth. There seems to be a particularly significant gap in the pace of customs clearance between developed countries (14.3 hours) and developing countries (83.8). Furthermore, the Caribbean sub-region (57.8 hours) records relatively better customs clearance than other sub-regions including Asia. LDCs (120.2) have the slowest pace of customs clearance, suggesting the need for greater investment in trade facilitation infrastructure and procedures, especially by accessing international support available under the WTO's Trade Facilitation Agreement (TFA).

4.3 Increasing trade facilitation and trade openness

4.3.1 Trade facilitation

In addition to the direct effects on shipping, the pandemic created demand for expedited customs procedures, such as pre-arrival processing, single

windows and transit corridors, proving that such trade facilitation measures could contribute positively to the health security of various actors associated with the maritime industry. Disruptions to transport and logistics services, as well as additional checks and requirements owing to quarantine and sanitary measures, have adversely affected maritime trade, including the transit of medicines, food and other essential goods. In response, many Commonwealth countries temporarily implemented a range of digital trade-facilitating measures to streamline processes for clearing goods through borders. For instance:

- The UK Government introduced temporary changes to its customs border processes, including transit and export procedures, which allowed traders, agents and Border Force staff to exchange documents electronically by email, fax and digital photographs (HM Revenues & Customs, 2020).
- The South African Government adopted measures to permit the submission of electronic veterinary health certificates for importers of live animals and animal products in lieu of hard copies, subject to further verification of the documents directly with the veterinarian authorities of the exporting countries (WTO, 2020).
- In the Asia-Pacific region, several trade facilitation measures were introduced in areas such as transparency and institutional coordination, simplification of customs procedures and import easing, digital trade and transport and transit (UNESCAP, 2021).

- Grenada, St Vincent and the Grenadines and Trinidad and Tobago expedited the introduction of ePhyto certificates to avoid delays and disruptions in the movement of fresh produce among them (Government of Trinidad and Tobago, 2020).

Significant gains can be made, and sustained, if these temporary measures are made permanent post-COVID. In addition, Commonwealth countries can expedite implementation of the TFA. While 17 Commonwealth countries are implementing more than 50 per cent of the category A commitments, only two countries are implementing more than 50 per cent of the category B commitments (i.e., those that require a transition period).¹⁵ The low rate of implementation of category C commitments is partly explained by a transition period and conditioned upon receipt of technical assistance, as stipulated in TFA article 14. Only two Commonwealth LDCs, Bangladesh and Rwanda, had on-going projects under category C by the end of March 2021.

Through the TFA Facility, developing countries and LDCs can access the technical assistance and capacity-building needed to implement the Agreement, although several countries have raised concerns about increasing difficulties securing the required support (WTO, 2019). Since many Commonwealth African, Caribbean and Pacific countries are already engaged in trade facilitation initiatives at the bilateral and regional levels, in many cases the implementation of these regional deals will help anchor and achieve the TFA.

4.3.2 Trade openness

Trade openness is supportive of maritime trade-led growth. Economies hosting the leading Commonwealth ports on the Lloyd's List of top container ports are more open to trade than other Commonwealth countries (see Figure 3). They also have higher trade volumes, which incentivises investments in ports, shipping and logistics. Historically, openness to international trade has gone in parallel with better economic performance internationally and in the Commonwealth. Open economies have generally grown faster and witnessed higher prosperity.

The trade openness level of the Commonwealth as a whole, at 59 per cent, is the same as that of the world economy (see

Table 5). Overall, the trade openness of developed countries (65 per cent) is very similar to that of developing countries (67 per cent). Within the developing Commonwealth, trade openness is highest in Asia followed by the Pacific, the Caribbean and Africa. Small states and SIDS are more open than LDCs. However, the commonly used measure of trade openness – the sum of exports and imports normalised by GDP – captures both a country's macroeconomic conditions as well as trade liberalisation, making it difficult to interpret the empirical results.

Simple average most favoured nation (MFN) import tariffs are also used as a measure of trade openness (see Table 5). Developed countries (2.8 per cent) turn out to be much more open than developing countries (10.5 per cent). Furthermore, Asia (8.9 per cent) remains the most open sub-region in the developing Commonwealth, while Africa and the Pacific turn out to have similar levels of openness. The Caribbean seems to be less open than other sub-regions. Overall, SIDS (10 per cent) are more open than LDCs (11.5 per cent). All these indicators point to significant scope for improving trade openness.

Table 5. Tariffs and trade openness, 2019

	Trade openness (%)	Tariff rate (%)
Commonwealth	59	8.9
<i>Of which</i>		
Developed	67	2.8
Developing	65	10.5
<i>Of which</i>		
Africa	31	9.6
Asia	74	8.9
Caribbean	60	13.5
Pacific	63	9.9
SIDS	277	10
LDCS	41	11.5
World	59	–

Source: Authors' calculations from World Tariff Profiles (WTO et al., 2019) and the IMF Economic Outlook Database.

Note: Trade openness is measured as a fraction of total trade to GDP and tariffs are simple average MFN applied tariffs for 2018 and 2019. Estimates for simple average MFN applied for Dominica, Malawi, Malaysia and Tonga. IMF, YEAR was used for countries that had missing trade data.

4.4 Tackling maritime security challenges

Marine security challenges, such as piracy, cybersecurity and drug trafficking, pose risks to maritime trade-led growth. Non-traditional maritime security threats related to various forms of maritime crime seem particularly challenging for Commonwealth countries.¹⁶ Piracy – narrowly defined as unlawful acts committed between vessels on the high seas – seems to be a worldwide problem, though there are limited available data. In 2017, 54 incidents of piracy were reported in East Africa, 97 in West Africa, 99 in Asia and 71 in Latin America and the Caribbean (One Earth Future, 2017). These figures, totalling 321 piracy incidents in 2017, show an increase from 278 in 2016.

In 2019, according to a major industry survey, cyber incidents were rated second among the top five risks for the maritime and shipping sector (Allianz, 2019). While cyber risks had already become a major concern prior to the COVID-19 crisis, the pandemic has compounded existing problems and provided a new impetus for action. The importance of cybersecurity is expected to grow further, given the increasing reliance on virtual interactions and the related rise in cyberthreats and vulnerabilities.

With ships and ports becoming better connected and further integrated into information technology networks, the implementation and strengthening of cybersecurity measures are becoming essential priorities. New IMO resolutions encourage administrations to ensure that cybersecurity risks are appropriately addressed in safety-management systems. Shipping lines that fails to do so are not only exposed to such risks but may have their ships detained by state port control authorities that need to enforce this requirement. The risks are likely to continue to grow significantly owing to greater reliance on electronic trading and an increasing shift to virtual interactions at all levels. This deepens vulnerabilities across the globe, with the potential to produce crippling effects on critical supply chains and maritime trade-related services.

Increasing drug trafficking across the Commonwealth seems an even more worrying non-traditional threat, according to the available information from the United Nations Office on Drugs and Crime (UNODC). Annual

drug seizures (of all types of drugs reported in kilograms) in Commonwealth countries as a share of world drug seizures rose from 22 per cent to 30 per cent between 2012 and 2016 (UNODC, 2019). Moreover, drug seizures in developing countries accounted for 97 per cent of the Commonwealth total and developed countries for 3 per cent.

4.5 Addressing climate change and improving environmental sustainability

More than a third of Commonwealth ports are located in SIDS (50) and coastal LDCs (25). These countries are the most vulnerable to environmental pollution and climate change but have the least capacity to adapt and diversify their economies. Across the world, most ports are in estuaries or on low-lying coasts, which expose them to coastal hazards and the risk of rising sea levels, intense storms (including hurricanes and cyclones) and higher temperatures. For this reason, several major seaports across the Commonwealth are taking steps towards adaptation.

Most Caribbean and many Pacific SIDS also lie along the edges of the earth's tectonic plates, which makes them vulnerable to geological hazards such as volcanic eruptions and earthquakes, sometimes resulting in tsunamis (UNCTAD, 2014). Natural hazards can cause delays and disruptions or damage to assets and infrastructure, resulting in economic losses. Moreover, in many LDCs, port infrastructure is already in poor repair and expensive to maintain. The challenge for SIDS and LDCs, as well as other coastal countries, is to adapt and build resilient maritime transport infrastructure and services.

Global warming caused by climate change is rapidly transforming the maritime industry and opening new frontiers for maritime trade. The melting of the Arctic ice caps, which has accelerated in recent years, could open up the Northern Sea as a potentially high-volume commercial route for maritime trade (see Box 7).¹⁷ During the 2020-2021 winter season, three LNG carriers traversed the full distance of the Arctic, for the first-time delivering LNG from Russia to Asia without ice-breaker escorts (Humpert, 2021). Depending on the pace of climate change, the Northern Sea Route (NSR) could become increasingly

Box 7. Melting of the Arctic ice and opening of Northern Sea Route

Currently, shipping through the Suez Canal offers the shortest transit time (up to 48 days) for year-round transport from Asia to Europe. However, if shipping via the Northern Sea Route (NSR) becomes commercially viable, the average shipping distance would shorten by around one third, reducing the voyage time by as much as 15 days (Bekker et al., 2015). As many as 10,000 ships could cross the Arctic yearly, rerouting around 5.5 per cent of world trade. This includes an estimated 15 per cent of all trade from China.

Transit via the NSR has the potential to boost trade between Asia and Europe as it would save time and money. Fuel and other transport costs would be lowered given the shorter distance travelled. Shorter delivery times could also mean more efficient operation of global supply chains. This is especially crucial amidst on-going debates concerning the reconfiguration of supply chains, which the pandemic has further underscored. Moreover, the NSR could provide a buffer against any potential disruption in the operation of the Suez Canal by providing an alternative route in case of blockage (see Box 5).

Whilst much of the discussion surrounding the economic viability of the Arctic route has stressed the shortening of distance and ease of access to the Arctic's vast natural resources,¹⁸ the thawing of ice is raising critical environmental as well as economic concerns. First, although less travel time at sea means less fuel use, lower carbon emissions and greener trade, there is also the potential risk of fuel spillage in the Arctic. Second, the ships using the Suez Canal (or Southern) route make stops at ports in Southeast Asia and the Middle East. The territory along the Northern Sea does not offer such options as it is sparsely populated and hence there is a lower demand for goods.

Therefore, the prospects of the NSR competing or even replacing the Suez Canal are uncertain in the short term (Sharma, 2019). The commercial use of the NSR will depend on the speed of climate change, the stakeholders involved and development of transport logistics network along the Arctic (Bekkers et al., 2015; 2018).

Source: Commonwealth Secretariat

navigable and could potentially rival the Suez Canal route.

Port activities also discharge harmful pollutants including carbon and non-carbon varieties, greenhouse gasses, smog and soot-causing nitrogen oxides (Bailey and Solomon, 2004). However, shipping is still the most environmentally sound mode of transport in terms of carbon dioxide (CO₂) emissions per tonne of cargo transported. Managing shipping to avoid environmental degradation and reduce greenhouse gas emissions (GHG) contributing to

climate change remains a challenge.¹⁹ The main environmental and ecological effects of maritime transport include marine and atmospheric pollution, marine litter, underwater noise and the introduction and spread of invasive species (Braker, 2019). Various measures and regulations are currently in place to support the transition to more sustainable 'blue shipping' (see Box 8). These include investment in renewable energy – including wind, sun, wave and biofuels – and the deployment of more energy-efficient vessels.

Box 8. Towards sustainable shipping and the Blue Shipping Partnership

Key moves towards sustainable shipping – sometimes called blue shipping – include the International Maritime Organization (IMO) target to reduce the total annual GHG emissions from shipping by at least 50 per cent by 2050. The IMO also implements the incremental Energy Efficiency Design Index (EEDI) for new ships, so that ships constructed in 2025 will be required to be at least 30 per cent more energy efficient than those constructed in 2014. From 1 January 2020, the IMO has regulated for lower sulphur in ships' fuel oil, from 3.5 per cent to 0.5 per cent. However, regulation for carbon emissions has yet to come into force and may be some years off.

In 2019, the Commonwealth's Blue Charter Action Group Champion on Ocean and Climate Change, Fiji, along with five other Pacific nations, launched the Blue Shipping Partnership. This aims to reduce Pacific countries' CO₂ emissions from shipping by 40 per cent by 2030, with the aim of achieving complete decarbonisation by 2050.

There is also extensive research into innovative low-carbon technologies for maritime transport, including solar and wind power. In 2009, a solar-powered container ship made its maiden voyage. However, given the enormous capital investment tied up in a ship – including a five-year lead time on cleaner, greener versions – owners are reluctant to scrap old ships. Implementation of more sustainable and low-carbon transportation systems globally will require both capacity-building and technology transfer.

Source: Commonwealth Secretariat

5. Conclusion and the way forward

The evidence presented in this paper underlines the importance of the Commonwealth in global maritime trade. Commonwealth countries cover more than a third of the world's ocean waters under national jurisdiction for economic purposes (i.e., EEZs). They also have the largest ocean area to land area ratio in the world economy. Such direct access to the sea means that maritime goods trade has fundamentally shaped Commonwealth countries' economies throughout history and especially during the period of rapid globalisation and integration of countries into the world trading system. A network of seaports forms the backbone of an increasing globalised Commonwealth maritime transport and international trading system reliant on container traffic. Container traffic through Commonwealth ports accounted for 140 million TEUs in 2020, and this figure could rise to 150 million TEUs by 2022 assuming a continued rapid adjustment of the industry to pandemic-related changes.

There is a wide variation across the Commonwealth both in levels of engagement in maritime trade and efficiency of port operations. A dozen elite seaports are on the Lloyd's List of top 100 container ports worldwide, including ports in India, Malaysia, Singapore, Sri Lanka and the United Kingdom. Encouragingly, seaports in a couple of small states (Jamaica and Malta) also appear on the Lloyd's List, highlighting that small states can participate in container traffic-led growth under certain stringent conditions. Nonetheless, the majority of small states are yet to fully realise the potential of maritime trade-led growth.

The growth of container traffic through Commonwealth ports has slowed since the 2008 global financial crisis to 4.3 per cent annually in 2011–2018, compared with double-digit pre-crisis growth. The COVID-19 pandemic has further disrupted containerised trade and continues to pose several challenges. Apart from direct effects, the pandemic also altered the growth forecast of maritime trade due to rising protectionism and increasing debate around nearshoring and the reconfiguration of supply chains. These challenges could hinder the Commonwealth's maritime performance

relative to long-term potential and create risks for the achievement of the SDGs.

Shipping was already depressed in 2019 as trade protectionism, slower oil demand and tariff wars slashed its growth rate to 0.5 per cent, the lowest since the financial crisis. Those problems persisted in 2020 and were compounded by the COVID-19 pandemic. But the industry met the challenge head-on and has played a vital role in the global response. The rising demand for its services limited the annual decline in maritime trade volumes to around 4.1 per cent in 2020 (UNCTAD, 2020). This downturn might have been worse had the pandemic not also prompted people to stock up, fuelling demand for maritime transport. In 2021, maritime trade volumes could rebound by 4.8 per cent if economic growth resumes as the pandemic subsides. On the other hand, further waves of the pandemic could lead to a steeper decline in shipping.

In 2018, Commonwealth Heads of Government set the long-term vision of growing intra-Commonwealth trade to US\$2 trillion by 2030 and strengthening connectivity among Commonwealth countries and their global partners. Since trade is mostly seaborne, a more coordinated effort at Commonwealth and national levels to formulate an agenda for maritime trade-led growth will contribute towards achieving this target.²⁰ Indeed, looking beyond the pandemic, the provision of safe, secure shipping on cleaner seas has never been of greater importance than it is now. This agenda should include four policy elements:

Efficiently upgrade hard and soft port infrastructure. Fiscal constraints in the wake of COVID-19 mean that Commonwealth countries should carefully prioritise investments in modernising ports, logistics and customs services. They should also calibrate large port investments through mega infrastructure initiatives with economic risks (e.g., debt sustainability and environmental degradation), using tools such as comprehensive infrastructure master planning and sustainable financing strategies. Furthermore, with rising provision of port-related services online, countries need to increase investment in port community

systems and digitise various segments of the supply chain.

Enhance trade liberalisation, services cooperation and trade facilitation. Reducing tariffs and ensuring regulatory coherence (in services trade and behind-the-border regulations) should be pursued gradually. This should be accompanied by trade adjustment programmes to mitigate possible adverse effects on shrinking sectors and workers within them. Comprehensive bilateral and regional free trade agreements – such as the African Continental Free Trade Area (AfCFTA) and Asia's Regional Comprehensive Economic Partnership (RCEP) – can be useful complements for securing increased market access and the opening of services and investment. The pandemic has also highlighted the role of related services such as finance, logistics, transport and distribution to ensure the operation of maritime trade. There is a need to strengthen collaboration between governments and multilateral institutions to avoid obstacles to the movement of essential workers (crew, seafarers and drivers) and ensure the delivery of related services.

Mitigate growing maritime security threats. Commonwealth countries should actively pursue diplomatic dialogue with other multilateral and regional organisations to enhance measures to improve maritime safety. Practical

measures could include intelligence sharing, improving relevant technologies, joint exercises and capacity-building. The United Nations Convention on the Law of the Sea (UNCLOS) should guide regional maritime governance, supplemented by soft law and Commonwealth conventions where appropriate.

Decarbonise and digitise to build climate resilience: To thrive in a post COVID-environment, the maritime industry needs to decarbonise and digitise. The overarching goal should be to create a sustainable and resilient maritime industry that protects the marine environment. On digitisation, the IMO has set a mandate that the global regulatory framework for international shipping accommodate the adoption of new technologies to improve safety, protect the marine environment and facilitate trade, while providing the necessary impetus for decarbonisation. Commonwealth SIDS and coastal LDCs need to build the climate resilience of transport systems through adequate adaptation action and promote sustainability through enhanced energy efficiency as well as greater use of alternative energy sources and clean technologies. Sustainable and resilient transports systems can have broader economic effects, given the underlying linkages between transport and key sectors such as tourism, fisheries and agriculture.

Notes

- 1 The authors are extremely grateful to Pabasara Kannangara, Hilary Enos-Edu and Kimonique Powel for efficient research assistance undertaken for this Commonwealth International Trade Working Paper. Sujeevan Pereira provided valuable comments and insights on the initial draft.
- 2 The United Nations Educational, Scientific and Cultural Organization (UNESCO) refers to Big Ocean Sustainable States and the Pacific Islands Forum Secretariat refers to Big Ocean Stewardship States.
- 3 Generally, a 1 per cent increase in real GDP corresponds to a 1.1 per cent growth in seaborne trade (as measured in tonnes) (OECD, 2016: 190).
- 4 Calculated from UNCTADstat maritime transport data throughout this section.
- 5 Data on the Commonwealth's seaports are a subset of a global database compiled by Virginia Economic Development Partnership (VEDP) based in the United States. VEDP data suggest that the 835 most active seaports and inland ports in the world handle more than 99 per cent of the world's trade. Fishing ports and small ports that primarily handle private pleasure craft are omitted from the VEDP's list. See <http://exportvirginia.org/wp-content/uploads/2014/04/Seaports-of-the-World.pdf> for full list.
- 6 <https://www.drewry.co.uk/maritime-research-products/maritime-research-products/ports-and-terminals-insight-annual-subscription>
- 7 Three small states – Botswana, Eswatini and Lesotho – are landlocked.
- 8 In 2020, a total of around 775 million TEUs were handled in container ports worldwide.
- 9 https://www.wto.org/english/res_e/statis_e/wtoi_e.htm
- 10 Singapore is not classified as a small state for this analysis.
- 11 Data on container traffic flows are only available for 20 of the 31 small states in the Commonwealth. There is an absence of data for the smallest of the small states.
- 12 The Northern Corridor links the landlocked countries of the Great Lakes Region with the Kenyan port of Mombasa.
- 13 Delays in cargo ships getting to their destinations due to the obstruction of the canal has tied up the supply of empty containers for reuse. As containers were already scarce due to dislocation in the early days of the pandemic and the recent surge in the demand for consumer goods, the obstruction further compounded the issue (UNCTAD, 2021).
- 14 https://unctad.org/system/files/official-document/ares69d15_en.pdf
- 15 The TFA sets a timeframe for developing countries and LDCs to implement measures designated into categories A, B and C. Category A commitments were required to be implemented by 22 February 2017 for developing countries and 22 February 2018 in the case of LDCs. Category B recognises that developing countries and LDCs need more time to implement these measures. For category C, developing countries and LDCs need additional time and capacity-building to implement the measures.
- 16 Data gaps on maritime crime are problematic due to widespread under-reporting and varying conventions for data recording across different sources.
- 17 In 2018, the extent of the Arctic ice averaged 6.06 million km² (approximately 2.34 million square miles) which is 2.29 million km² or 1.4 million square miles below the 1981 to 2010 average (Sharma, 2019). The September ice coverage of the Arctic has decreased by more than 25 per cent since 1979.
- 18 There are an estimated 1,670 trillion cubic feet of natural gas and excess reserves of gold, zinc, nickel and iron (UNCTAD, 2019).
- 19 Shipping is responsible for 2.6 per cent of total global anthropogenic CO₂ emissions, which is broadly equivalent to the emissions of Germany.
- 20 The Commonwealth Secretariat already works with member countries to help them revitalise their maritime administrations, support the implementation of key IMO conventions and build capacity through targeted training and upskilling.

References and Bibliography

- Allianz (2019) 'Allianz: Shipping Losses Lowest This Century, but Incident Numbers Remain High'. Press release, 4 June. <https://www.agcs.allianz.com/news-and-insights/news/safety-shipping-review-2019.html>
- Barns-Graham, W (2021). 'Monstrous rates' for freight continue to rise due to Covid-19, Brexit and Suez Canal blockage. Available at: <https://www.export.org.uk/news/562101/Monstrous-rates-for-freight-continue-to-rise-due-to-Covid-19-Brexit-and-the-Suez-Canal-blockage.htm>
- Bekkers, E, J Francois and H Rojas-Romagosa (2015) 'Melting Ice Caps and the Economic Impact of Opening the Northern Sea Route'. CPB Discussion Paper 307. <https://www.cpb.nl/sites/default/files/publicaties/download/cpb-discussion-paper-307-melting-ice-caps-and-economic-impact-opening-northern-sea-route.pdf>
- Bekkers, E, J Francois and H Rojas-Romagosa (2018) 'Melting Ice Caps Will Open the Northern Sea to Commercial Traffic and Change World Trade Patterns'. LSE Blog, 8 August. <https://blogs.lse.ac.uk/businessreview/2018/08/08/melting-ice-caps-will-open-the-northern-sea-to-commercial-traffic-and-change-world-trade-patterns/>
- Bekkers, E, J Francois and H Rojas-Romagosa (2015). Melting ice caps and the Economic impact of opening the Northern Sea Route. Available at: [cpb-discussion-paper-307-melting-ice-caps-and-economic-impact-opening-northern-sea-route.pdf](https://www.cpb.nl/sites/default/files/publicaties/download/cpb-discussion-paper-307-melting-ice-caps-and-economic-impact-opening-northern-sea-route.pdf)
- Bekkers, E, J Francois and H Rojas-Romagosa (2018). Melting ice caps will open the northern sea to commercial traffic and change world trade patterns. Available at: [Melting ice caps will open the northern sea to commercial traffic and change world trade patterns | LSE Business Review](https://blogs.lse.ac.uk/businessreview/2018/08/08/melting-ice-caps-will-open-the-northern-sea-to-commercial-traffic-and-change-world-trade-patterns/)
- Berti, A (2020) 'The Impact of COVID-19 on Global Shipping: Part 1, System Shock'. *Ship Technology*, 2 April. <https://www.ship-technology.com/features/impact-of-covid-19-on-shipping/>
- Bhagwati, J (1988) 'Export-Promoting Trade Strategy: Issues and Evidence'. *World Bank Research Observer*, 3(1): 27–57.
- Commonwealth Secretariat (2015) *The Commonwealth in the Unfolding Global Trade Landscape. Commonwealth Trade Review 2015*. London: Commonwealth Secretariat.
- Cosar, AK and B Demir (2018) 'Shipping Inside the Box: Containerization and Trade'. *Journal of International Economics*, 114(C): 331–345.
- Cruise Industry News (2021) 'Maltese Authorities Greenlight COVID-19 Cruise Operational Guidelines'. 17 March. <https://www.cruiseindustrynews.com/cruise-news/24579-maltese-authorities-greenlight-covid-19-cruise-operational-guidelines.html>
- Dappe, MH and A Suarez-Aleman (2016) *Competitiveness of South Asia's Container Ports: A Comprehensive Assessment of Performance, Drivers and Costs*. Washington DC. World Bank.
- Ebbin, SA, AH Hoel and K Sydnes (eds.) (2005) *A Sea Change: The Exclusive Economic Zone and Governance Institutions for Living Marine Resources*. Dordrecht: Springer.
- Global Times (2021). China-Europe cargo trains shine, as Suez Canal blockade drives shippers to seek new options. Available at: <https://www.globaltimes.cn/page/202103/1219756.shtml>
- González Moncada, V (2020) 'Impact of COVID-19 on Transport and Logistics Connectivity in the Caribbean'. Project Document LC/TS.2020/157. Santiago: Economic Commission for Latin America and the Caribbean (ECLAC).
- Government of Trinidad and Tobago (2020) "Innovative Approaches to Managing Risks and Facilitating Intra-Regional Trade during COVID-19 Pandemic in the Caribbean Region". <https://repositorio.iica.int/bitstream/handle/11324/12196/BVE200985531.pdf?sequence=1&isAllowed=y>
- Hanich, QA and BM Tsamenyi (2006) 'Exclusive Economic Zones and Pacific Developing Island States: Who Really Gets All the Fish?' Faculty of Law, Humanities and the Arts – Papers 209. <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=1213&context=lhpapers>
- Hellenic Shipping News (2020) 'Malta Prioritises Blue Economy and Maritime Cluster'. Port News, 8 January. <https://www.hellenicshippingnews.com/malta-prioritises-blue-economy-and-maritime-cluster>
- HM Revenues & Customs (2020) "Moving Goods through Customs during the Coronavirus (COVID-19)". 1 April. <https://www.gov.uk/guidance/moving-goods-through-customsduring-the-coronavirus-covid-19>
- Hoffman, J (DATE) Interview on UN TV. <https://news.un.org/en/audio-hub>
- Humpert, M (2021) 'A New Dawn for Arctic Shipping: Winter Transits on the Northern Sea Route'. High North News, 19 January. <https://www.highnorthnews.com/en/new-dawn-arctic-shipping-winter-transits-northern-sea-route>
- Humpert, M (2021). A new dawn for Arctic Shipping- Winter Transits on the Northern Sea Route. Available at: [A New Dawn for Arctic Shipping – Winter Transits on the Northern Sea Route \(highnorthnews.com\)](https://www.highnorthnews.com/en/new-dawn-arctic-shipping-winter-transits-northern-sea-route)
- IMF (International Monetary Fund) (2020) 'Direction of Trade Statistics'. <https://data.imf.org/?sk=9D6028D4-F14A-464C-A2F2-59B2CD424B85>
- IMF (International Monetary Fund) (2020) 'World Economic Outlook Database'. WEBSITE
- International Chamber of Shipping (2020) 'Coronavirus (COVID-19): Guidance for Ship Operators for the Protection of the Health of Seafarers'. 29 September. <https://www.ics-shipping.org/wp-content/uploads/2020/11/covid19-guidance-for-ship-operators-for-the-protection-of-the-health-of-seafarers-v3-min.pdf>
- Lam, JSL and WY Yap (2011) 'Dynamics of Liner Shipping Network and Port Connectivity in Supply Chain Systems: Analysis of East Asia'. *Journal of Transport Geography*, 19(6): 1272–1281.
- Levinson, M (2006) *The Box: How the Shipping Container Made the World Smaller and the World Bigger*. Princeton, NJ: Princeton University Press.
- Lewis, A (2021). Amid dispute, Suez Canal blame's ship's grounding on speed, rudder. Available at: <https://www.reuters.com/world/amid-dispute-suez-canal-blames-ships-grounding-speed-rudder-2021-05-27/>

- Lloyd's List (2020) 'One Hundred Ports 2020'. Maritime Intelligence. <https://lloydslist.maritimeintelligence.informa.com/one-hundred-container-ports-2020>
- Malta Profile (2017) 'Doing Business: Ports and Shipping'. <https://maltaprofile.info/article/ports-shipping>
- Mckinsey & Company (2021) 'Asia: The Highway of Value for Global Logistics'. Article, 19 May. <https://www.mckinsey.com/featured-insights/asia-pacific/asia-the-highway-of-value-for-global-logistics>
- OECD (2016), *The Ocean Economy in 2030*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264251724-en>.
- Pandya, A, R Hebert-Burns and J Kobayashi (2011) *Maritime Commerce and Security: The Indian Ocean*. Washington, DC: The Henry L. Stimson Center.
- Petras, G, S. J Beard, R Padilla and S. J Sullivan (2021). Suez Canal Ship stuck: How did Ever Given get stuck? Available at: Suez Canal ship stuck: How did Ever Given get stuck? (usatoday.com)
- Port Technology (2020) 'Port of Colombo Operations Return to Normal'. 26 November. <https://www.port-technology.org/news/port-of-colombo-operations-return-to-normal/>
- Russon, M (2021). The Cost of the Suez Canal blockage. Available at: The cost of the Suez Canal blockage – BBC News
- Schwab, K (ed.) (2019) *Global Competitiveness Report 2019*. Geneva: World Economic Forum. http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
- Sharma, T (2019). 'Melting Arctic Sea Ice Opens New Maritime Shipping Route'. *Global Security Review*, 9 June. <https://globalsecurityreview.com/arctic-new-maritime-shipping-route/>
- Sharma, T (2019). Melting Arctic Sea Ice Opens New Maritime Shipping Route. Available at: Melting Arctic Sea Ice Opens New Maritime Shipping Route | Global Security Review
- Sri Lanka Port Authority (2020) 'Colombo Port Could Expand to Full Maritime Hub'. SLPA News, 21 May. <https://news.slpa.lk/index.php/2020/05/21/colombo-port-could-expand-to-full-maritime-hub/>
- STA Law Firm (2020) 'United Arab Emirates: Impact of COVID-19 on the Shipping and Maritime Industry'. 26 June. <https://www.mondaq.com/marine-shipping/958770/impact-of-covid-19-on-the-shipping-and-maritime-industry>
- Statista (2021) 'Container Throughput at Ports Worldwide from 2012 to 2020 with a Forecast for 2021 until 2024'. 18 March. <https://www.statista.com/statistics/913398/container-throughput-worldwide/>
- Stavridis, J (2018) *Sea Power: The History and Geopolitics of the World's Oceans*. New York: Penguin Books.
- UN News (2020) 'Seafarers, Heroes of the Pandemic as Shipping Plays Vital Role in Crisis'. 12 November. <https://news.un.org/en/story/2020/11/1077462>
- UNCTAD (2021). Container shipping in times of COVID-19: Why freight rates have surged, and implications for policymakers. Available at: https://unctad.org/system/files/official-document/presspb2021d2_en.pdf
- UNCTAD (United Nations Conference on Trade and Development) (2015). 'The International Ballast Water Management Convention 2004 is set to enter into force in 2016'. Transport and Trade Facilitation Newsletter No. 68
- UNCTAD (United Nations Conference on Trade and Development) (2019) 'Maritime Transport Database'. UNCTADstat. https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ChosenLang=en
- UNCTAD (United Nations Conference on Trade and Development) (2020) *Review of Maritime Transport 2020*. Geneva: United Nations. https://unctad.org/system/files/official-document/rmt2020_en.pdf
- UNCTAD (United Nations Conference on Trade and Development) (2021) 'COVID-19 and Maritime Transport: Impact and Responses'. Transport and Trade Facilitation Series No. 15. https://unctad.org/system/files/official-document/dtltlbinf2020d1_en.pdf
- UNODC (United Nations Office on Drugs and Crime) (2019) 'Annual Drug Seizures'. DATAUNODC. <https://dataunodc.un.org/drugs/seizures>
- VEDP (Virginia Economic Development Partnership) (2019) 'Seaports of the World, by Country'. <http://exportvirginia.org/wp-content/uploads/2014/04/Seaports-of-the-World.pdf>
- Wallace, P (2021) 'Why Container Freight Rates Have Surged'. *Daily Cargo News*, 6 April. <https://www.thedcn.com.au/news/law-regulation-trade/why-container-freight-rates-have-surged/>
- WCN Editorial (2021) 'Hyster Speaks on Equipment ZE'. *World Cargo News*, 31 May. <https://www.world-cargonews.com/news/hyster-speaks-on-ze-equipment-66376>
- Wignaraja, G (2019) 'An Economic Analysis of Sri Lanka's Indian Ocean Opportunity'. *Journal of Indian Ocean Rim Studies*, 2(1): 132–149.
- Wignaraja, G, D Panditaratne, P Kannangara and D Hundlani (2020) 'Chinese Investment and the BRI in Sri Lanka'. Research Paper, March. London: Chatham House.
- Wignaraja, G, J Tyson, A Prizzon and D Willem te Velde (2018) *Asia in 2025: Development Prospects and Challenges for Middle-Income Countries*. London: Overseas Development Institute. <https://www.odi.org/publications/11202-asia-2025-development-prospects-and-challenges-middle-income-countries>
- Willmsmeier and Hoffman (2008). Liner shipping connectivity and port infrastructure as determinants of freight rates in the Caribbean Maritime Economics & Logistics 10 (1-2), 130–151
- World Bank (2019a) 'Logistics Performance Index (LPI) Database'. <https://lpi.worldbank.org/>
- World Bank (2019b) *Doing Business 2019: Training for Reform*. Washington, DC: World Bank.
- World Bank (2021) 'Databank: World Development Indicators'. <https://databank.worldbank.org/source/world-development-indicators>
- WPSP (World Ports Sustainability Program) (2020) 'Port of Colombo: Response to the Pandemic'. <https://sustainableworldports.org/project/port-of-colombo-response-to-the-pandemic/>
- WTO (World Trade Organization) TFAF (Trade Facilitation Agreement Facility) (2020) 'Launch: COVID-19 Trade Facilitation Repository'. 18 May. <https://www.tfafacility.org/launch-covid-19-trade-facilitation-repository>
- WTO (World Trade Organization), ITC (International Trade Centre) and UNCTAD (United Nations Conference on Trade and Development) (2019) *World Tariff Profiles 2019*. https://www.wto.org/english/res_e/booksp_e/tariff_profiles19_e.pdf

Annex tables

Table A-1. Container traffic in Commonwealth small states (2010, 2019)

Country	Container traffic (TEUs)		(%)	
	2010	2019	2010	2019
Antigua and Barbuda	26,366	27,657	0.32	0.30
The Bahamas	1,125,000	1,473,460	13.61	15.76
Barbados	80,430	82,204	0.97	0.88
Belize	31,917	44,510	0.39	0.48
Brunei Darussalam	93,230	282,432	1.13	3.02
Cyprus	344,882	389,962	4.17	4.17
Dominica	7,974	8,083	0.10	0.09
Fiji	257,316	145,782	3.11	1.56
The Gambia	58,521	71,470	0.71	0.76
Grenada	15,000	26,290	0.18	0.28
Guyana	59,850	51,360	0.72	0.55
Jamaica	1,891,770	1,873,399	22.89	20.03
Kiribati	29,876	52,100	0.36	0.56
Maldives	49,627	107,728	0.60	1.15
Malta	2,450,665	2,712,800	29.65	29.01
Mauritius	332,700	570,817	4.03	6.10
Namibia	256,276	185,328	3.10	1.98
Papua New Guinea	282,907	338,300	3.42	3.62
Samoa	22,465	27,221	0.27	0.29
Seychelles	62,825	154,423	0.76	1.65
Solomon Islands	63,095	128,036	0.76	1.37
St Kitts and Nevis	7,100	14,258	0.09	0.15
Saint Lucia	52,478	31,875	0.63	0.34
St Vincent and the Grenadin	16,967	18,650	0.21	0.20
Tonga	48,431	76,854	0.59	0.82
Trinidad and Tobago	577,883	368,055	6.99	3.94
Tuvalu	1,719	5,150	0.02	0.06
Vanuatu	18,040	77,436	0.22	0.83
Commonwealth total	99,894,251	142,954,618		
Small states	8,265,310	9,350,966		
SIDS	5,061,736	5,708,975		
LDCs	2,232,956	3,905,630		

Note: Data not available for Nauru.

Table A-2. Ratio of marine area to land area in Commonwealth countries

Commonwealth country	Marine area (km ²)	Land area (km ²)	Ratio
Africa			
Botswana		581,163	0.0
Cameroon	14,704	469,428	0.0
The Gambia	22,746	10,758	2.1
Ghana	226,759	240,330	0.9
Kenya	112,400	586,770	0.2
Eswatini		17,336	0.0
Lesotho		30,495	0.0
Malawi		118,860	0.0
Mauritius	1,280,068	2,062	620.8
Mozambique	574,410	791,082	0.7
Namibia	562,728	827,465	0.7
Nigeria	182,868	914,306	0.2
Rwanda		25,452	0.0
Seychelles	1,340,839	487	2753.3
Sierra Leone	160,453	72,709	2.2
South Africa	1,542,560	1,224,385	1.3
Uganda		243,145	0.0
Tanzania	243,130	947,253	0.3
Zambia		755,640	0.0
Asia			
Bangladesh	84,563	140,160	0.6
Brunei Darussalam	25,698	5,962	4.3
India	2,301,226	3,061,193	0.8
Maldives	926,867	300	3,090.0
Malaysia	451,742	331,701	1.4
Pakistan	222,744	798,144	0.3
Singapore	763	605	1.3
Sri Lanka	534,085	66,632	8.0
Caribbean and Americas			
Antigua and Barbuda	108,492	455	238.4
The Bahamas	597,705	13,458	44.4
Barbados	185,020	444	416.7
Belize	36,250	22,298	1.6
Canada	5,698,083	9,955,033	0.6
Dominica	28,749	766	37.5
Grenada	26,282	374	70.3
Guyana	136,910	211,200	0.6
Jamaica	246,488	11,059	22.3
St Kitts and Nevis	10,263	271	37.9
Saint Lucia	15,560	622	25.0
St Vincent and the Grenadines	36,511	410	89.1
Trinidad and Tobago	75,798	5,213	14.5
Europe			
Cyprus	98,280	9,063	10.8
Malta	55,697	325	171.4
United Kingdom	723,405	245,248	2.9

(Continued)

Table A-2. Ratio of marine area to land area in Commonwealth countries (*Continued*)

Commonwealth country	Marine area (km ²)	Land area (km ²)	Ratio
Pacific			
Australia	7,432,133	7,722,102	1.0
Fiji	1,293,035	19,155	67.5
Kiribati	3,459,130	1,033	3348.6
Nauru			
New Zealand	4,106,954	269,652	15.2
Papua New Guinea	2,407,382	467,406	5.2
Samoa	132,306	2,894	45.7
Solomon Islands	1,609,757	29,192	55.1
Tonga	668,055	767	871.0
Tuvalu	731,900	42	17426.2
Vanuatu	622,073	12,575	49.5
Commonwealth Total	40,426,704	31,264,580	1.3

