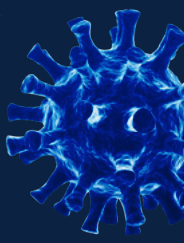
UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

UNCTAD

EXECUTIVE SUMMARY

REVIEW OF MARITIME TRANSPORT

2020



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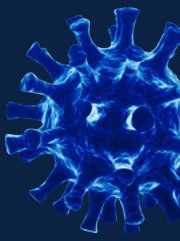

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EXECUTIVE SUMMARY

The coronavirus disease (COVID-19) pandemic has underscored the global interdependency of nations and set in motion new trends that will reshape the maritime transport landscape. The sector is at a pivotal moment facing not only immediate concerns resulting from the pandemic but also longer-term considerations, ranging from shifts in supply-chain design and globalization patterns to changes in consumption and spending habits, a growing focus on risk assessment and resilience-building, as well as a heightened global sustainability and low-carbon agenda. The sector is also dealing with the knock-on effects of growing trade protectionism and inward-looking policies.

The pandemic has brought to the fore the importance of maritime transport as an essential sector for the continued delivery of critical supplies and global trade in time of crisis, during the recovery stage and when resuming normality. Many, including UNCTAD and other international bodies, issued recommendations and guidance emphasizing the need to ensure business continuity in the sector, while protecting port workers and seafarers from the pandemic. They underscored the need for ships to meet international requirements, including sanitary restrictions, and for ports to remain open for shipping and intermodal transport operations.

International maritime trade under severe pressure

The global health and economic crisis triggered by the pandemic has upended the landscape for maritime transport and trade and significantly affected growth prospects. UNCTAD projects the volume of international maritime trade to fall by 4.1 per cent in 2020. Amid supply-chain disruptions, demand contractions and global economic uncertainty caused by the pandemic, the global economy was severely affected by a twin supply and demand shock.

These trends unfolded against the backdrop of an already weaker 2019 that saw international maritime trade lose further momentum. Lingering trade tensions and high policy uncertainty undermined growth in global economic output and merchandise trade. Volumes expanded by 0.5 per cent in 2019, down from 2.8 per cent in 2018,

and reached 11.08 billion tons in 2019. In tandem, global container port traffic decelerated to 2 per cent growth, down from 5.1 per cent in 2018.

Trade tensions caused trade patterns to shift, as the search for alternative markets and suppliers resulted in a redirection of flows away from China towards other markets, especially in South-East Asian countries. The United States of America increased its merchandise exports to the rest of the world, which helped to somewhat offset its reduced exports to China. New additional tariffs are estimated to have cut maritime trade by 0.5 per cent in 2019, with the overall impact being mitigated by increased trading opportunities in alternative markets.

Increased supply capacity remains a concern for the container shipping industry

At the beginning of 2020, the total world fleet amounted to 98,140 commercial ships of 100 gross tons and above, equivalent to a capacity of 2.06 billion dwt. In 2019, the global commercial shipping fleet grew by 4.1 per cent, representing the highest growth rate since 2014, but still below levels observed during the 2004–2012 period.

Gas carriers experienced the fasted growth, followed by oil tankers, bulk carriers and container ships. The size of the largest container vessel in terms of capacity went up by 10.9 per cent. The largest container ships are now as big as the largest oil tankers and bigger than the largest dry bulk and cruise ships. Experience from other ship types and limitations affecting access channels, port infrastructure and shipyards, suggest that container ship sizes have probably reached a peak.

Economies of scale primarily of benefit to shipping carriers

Larger ports, with more ship calls and bigger vessels, also report better performance and connectivity indicators. Increasing the number of calls by 1 per cent in container ports for example, is associated with a decrease of the time a ship spends in port per container by 0.18 per cent. Similarly, increasing the average vessel size of port calls by 1 per cent decreases the time a ship spends in port per container by 0.52 per cent.

Gains from the economies of scale resulting from the deployment of larger vessels do not necessarily benefit ports and inland transport service providers, as they often increase total transport costs across the logistics chain. A rise in the average call or ship size often leads to peak demand for trucks, yard space and intermodal connections, as well as additional investment requirements for dredging and bigger cranes.

The concentration of cargo in bigger ships and fewer ports often implies business for a smaller number of companies. The cost savings made on the seaside are not always passed on to clients in the form of lower freight rates. This is more evident in markets such as small island developing States, where only few service providers are in operation. These additional costs will have to be borne by shippers, ports and inland transport providers. Thus, economies of scale arising from the deployment of larger vessels accrue mainly to carriers.

Positive performance of freight rates despite the pandemic

As structural container shipping market imbalances remained a concern, liner shipping carriers closely monitored and adjusted ship supply capacity to match the lower demand levels in 2020. Suppressed demand forced container shipping companies to adopt more stringent strategies to manage capacity and reduce costs. Carriers started to significantly reduce capacity in the second quarter of 2020. Capacity management strategies such as suspending services, blanking scheduled sailings and re-routing vessels have all been used. From the perspective of shippers, service cuts and reduced supply capacity meant space limitations to transport goods and delays in delivery dates, affecting supply chains.

In the first half of 2020, freight rates were higher compared with 2019 for most routes, with reported profits of many carriers exceeding 2019 levels. While keeping freight rates at levels that ensure economic viability for the sector may have been justified as a crisis-mitigation strategy, sustained cuts in ship supply capacity for longer periods and during the recovery phase will be problematic for maritime transport and trade, including shippers and ports.

High freight rate volatility in dry and wet bulk segments

Tanker rates surged in March and April 2020, reflecting growing demand for floating storage. The oil market was in a state of super contango where front-month prices were much lower than prices in future months, making storing oil for future sales profitable. Traders chartered tankers to store low-cost crude oil, thereby reducing the availability of vessels for transport and supporting tanker rates. Freight rates declined sharply in May 2020, with about a third of total vessels locked in floating storage returning to active trade and inflating oil supply.

Dry bulk freight rates continued to be shaped by supply and demand imbalances, which increased with the disruptions caused by the pandemic. As a result, rates have shown high volatility especially among the larger vessel categories.

Seafarers and international cooperation: Essential and critical

Due to restrictions relating to the outbreak of COVID-19, large numbers of seafarers had their service extended on board ships after many months at sea, unable to be replaced or repatriated after long tours of duty – unsustainable, both for the safety and well-being of seafarers and the safe operation of ships. Others who had been on break could not return to work, with dire implications for their personal income. UNCTAD and others have issued calls to designate seafarers and other marine personnel, regardless of nationality, as key workers, and exempt them from travel restrictions, to ensure that crew changes can be carried out. In addition, temporary guidance was developed for flag States, enabling the extension of the validity of seafarers and ship licences and certificates under mandatory instruments of the International Maritime Organization (IMO) and the International Labour Organization.

Sustainable shipping, decarbonization and ship pollution control remain priorities

More stringent environmental requirements continue to shape the maritime transport sector. Carriers need to maintain service levels and reduce costs, and at the same time ensure sustainability in operations.

Greenhouse gas emissions from international shipping continue to rank high on the international policy agenda. Progress was made at IMO towards the ambition set out in its initial strategy on reduction of greenhouse gas emissions from ships. These include ship energy efficiency, alternative fuels and the development of national action plans to address greenhouse gas emissions from international shipping.

The increase in vessel size, combined with multiple efficiency gains and the recycling of less efficient vessels, have constrained growth in carbon dioxide emissions, despite growth in total fleet tonnage. Some further gains can reasonably be expected over the next decade, as modern eco-designs continue to replace older and less efficient ships. However, these marginal improvements will not be sufficient to meaningfully decrease overall carbon-dioxide emissions as specified in the IMO target of reducing total annual greenhouse gas emissions by at least 50 per cent by 2050 compared with levels in 2008. Achieving these targets will require radical engine and fuel technology changes.

With regard to the protection of the marine environment and the conservation and sustainable use of marine biodiversity, there are several areas where regulatory action has recently been taken or is under way. These include the implementation of the IMO 2020 sulphur limit, ballast-water management, measures to address biofouling, the reduction of pollution from plastics and microplastics, safety considerations of new fuel blends and alternative marine fuels, and the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction.

The implementation of the IMO sulphur cap regulation as of 1 January 2020 had been considered relatively smooth at the outset. However, difficulties arose in relation to disruptions caused by the COVID-19 pandemic. In March 2020, the ban on the carriage of non-compliant fuel oil entered into force to support the implementation of the sulphur cap. Its enforcement by port State control authorities was limited, due to measures put in place to reduce the number of inspections and contain the risk of spreading the coronavirus. It will be important to ensure that any delay will not have a negative impact on the long-term implementation of the sulphur cap regulation.

Sustainability and resilience take on their full meaning in small island developing States

Wide-ranging economic impacts of the COVID-19 crisis on small island developing States are likely to exacerbate existing vulnerabilities, making sustainable and resilient transport systems in those States ever more crucial. These States already face unique transport and logistical challenges that derive from their inherent size and geographical, topographical and climate features. These include a significantly lower transport connectivity, a narrow export base and low cargo volumes, limited economies of scale, higher transport costs and exposure to external shocks – as also evidenced by the pandemic.

Some small island developing States are among those with the longest port ship turnaround times and lowest service frequencies. Such States are thus confronted with diseconomies of scale as well as low levels of competition and limited choice for their importers and exporters. On the other hand, some small island developing States can attract trans-shipment services and use the additional fleet deployed to service national trade, as illustrated by the Bahamas, Jamaica and Mauritius. By serving as hub ports handling other countries' trade, these island countries have increased their own liner-shipping connectivity levels, which in turn benefits their respective importers and exporters.

The inherent vulnerabilities of small island developing States put them at the forefront of shocks and disruptions, including from pandemics and climate-change factors. Enabling a sustainable and resilient maritime transportation system in these States requires immediate actions and investment plans that promote low-carbon interregional and domestic shipping solutions and transport connectivity. They also require measures that anticipate and mitigate disruption risks and enable the adaptation of coastal transport infrastructure to climate change impacts and other stressors.

The pandemic's legacy

Maritime transport, as reiterated in the reflections by selected stakeholders showcased in this publication, is essential to keep trade flowing and supply chains connected during and outside crises. While experiences may vary depending on pre-existing conditions and levels of preparedness, all in all, maritime transport and logistics kept essential

goods and trade flows moving during the pandemic. However, a number of key trends with wide-ranging policy implications for maritime transport and trade have been observed due to the disruption. These include the following:

A paradigm shift – risk management and resilience-building are becoming new policy and business mantras. Business continuity plans and emergency-response mechanisms have never been as vital as in the case of the COVID-19 crisis. This experience has underscored the need for the maritime transport of the future to be calibrated to risk exposure and for enhanced risk management and resilience-building capabilities to be ensured. Understanding exposure, vulnerabilities and potential losses is key to informing resilience-building in the sector. Industry players and policymakers are expected to increasingly focus on developing emergency-response guidelines and contingency plans to deal with future disruptions. Criteria and metrics on risk assessment and management, digitalization, and harmonized disaster and emergency-response mechanisms are likely to be mainstreamed into relevant national and regional transport policies. Early warning systems, scenario planning, improved forecasts, information sharing, end-to-end transparency, data analytics, business continuity plans and risk management skills will need to feature more prominently on policy agendas and the industry's business plans.

Accelerated shift in globalization patterns and supply chain designs. The slowdown of globalization reflected in lower trade-to-gross domestic product (GDP) ratios observed since the 2008 financial crisis and the regionalization of trade are likely to accelerate, with the post-pandemic world featuring an element of shortened supply chains (near shoring, reshoring) and redundancy (excess stocks and inventory). Investing in warehousing and storage will become more important to ensure sufficient safety stocks and inventories. The established just-in-time supply chain model will be reassessed to include considerations such as resilience and robustness. Diversification in sourcing, routing and distribution channels will grow in importance. Moving away from single country-centric location sourcing to multiple location sourcing that is not only focused on cutting costs and delays but also on risk management and resilience will evolve further.

New consumer spending and behaviour. As tastes, consumption and shopping patterns continue to evolve, changes in production and transport requirements are likely to follow. Examples include a further rise in online shopping in the post-pandemic world and a requirement for more customized goods. These trends are likely to emphasize the last-mile transport leg and promote shorter supply chains though the use of three-dimensional printing and robotics. These trends will trigger more demand for warehousing and space for stocks, a move away from established patterns that promoted lean inventory and storage.

A strengthened case for digitalization and dematerialization. Technology, digitalization and innovation will further permeate supply chains and their distribution networks, including transport and logistics. Adopting technological solutions and keeping abreast of the most recent advances in the field will become a requisite and no longer an option. The pandemic has demonstrated that first movers in terms of technological uptake have been able to better weather the storm (for example, commerce and online platforms, those using blockchain solutions and information technology-enabled third-party logistics companies). The digitalization of interactions and information-sharing has been critical to the continuity of maritime transport operations during the pandemic. It has helped to maintain continuity in transport operations and trade processes while reducing the risk of contagion. Quick deployment of technological solutions has ensured the continuity of business activities and government processes. This has been more evident in the case of cross-border trade and when responding to new consumer expectations in an environment characterized by supply-chain disruption, remote working and increased engagement through business-to-consumer electronic commerce (e-commerce) for business operations.

A significant increase in the use of electronic trade documentation. Governments have made notable efforts to keep their ports operational and speed up the use of new technologies and digitalization. In addition, industry associations have been working to promote the use of electronic equivalents to negotiable bills of lading and their increased acceptance by government authorities, banks and insurers. International cooperation and coordination will be required to ensure that commercial parties across the world readily accept and use electronic records and that legal systems are adequately prepared. Capacity-building may be required, particularly for small and medium-sized enterprises from developing

countries that may lack access to the necessary technology or means of implementation.

Standards and interoperability becoming more important. For ports and shipping companies to benefit from benchmarking, data should be comparable, and ship types, key performance indicators, definitions and parameters need to be standardized. For instance, in the long run, the UNCTAD port performance scorecard has the potential to become an industry standard and thus a globally accepted benchmark, helping the port sector to continuously improve its efficiency. UNCTAD seeks to include more port entities and countries from the TrainForTrade network that are not yet reporting in the port performance scorecard component.

Cybersecurity becoming a major concern. Increased cyberattacks in shipping during the COVID-19 crisis were exacerbated by the limited ability of companies to sufficiently protect themselves, including because of travel restrictions, social distancing measures and economic recession. 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. Owners who fail to do so are not only exposed to such risks but may have their ships detained by port State control authorities that need to enforce this requirement. Cybersecurity risks are likely to continue to grow significantly as a result of greater reliance on electronic trading and an increasing shift to virtual interactions at all levels. This deepens vulnerabilities across the globe, with a potential to produce crippling effects on critical supply chains and services.

Adjustments in maritime transport to adapt to the new operating landscape. In addition to the oversupply of ship capacity, which remains a concern for carriers, the pandemic and its fallout will heighten competitive pressures and drive stakeholders in the maritime transport sector to increasingly tap new business opportunities to ensure relevance, profitability and business continuity. Some shipping lines and port operators have been taking greater interest in potential business opportunities that may exist in the supply chain through inland logistics. The aim is to be closer to shippers and emerge as reliable end-to-end logistics service providers. Concerns over market concentration and

oligopolistic market structures require close monitoring of trends that promote rationalization, consolidation and integration of services to ensure adequate competition levels.

A greater need for systemic and coordinated policy responses at the global level. The pandemic has highlighted the importance of coordinated action when dealing with cross-border disruptions with broad-ranging ripple effects. This has been recognized widely, as illustrated by a call to action by the COVID-19 Task Force on Geopolitical Risks and Responses of the Sustainable Ocean Business Action Platform of the United Nations Global Compact. The document sets out recommendations for urgent political action to keep global ocean-related supply chains moving, stating that "the scale, complexity and urgency of the problem call for a comprehensive, systemic and coordinated approach at the global level."[1] These issues cannot be effectively dealt with on a case-by-case basis, bilaterally or between a limited number of countries.

Six policy actions to prepare for a post-pandemic world

There are six priority areas for policy action to be taken in response to the COVID-19 pandemic and the persistent challenges facing the maritime transport and trade of developing countries.

1. **Support trade so it can effectively sustain growth and development.** Trade tensions, protectionism, export restrictions, particularly for essential goods in times of crisis, bring economic and social costs. These should, to the extent possible, be avoided. Further, non-tariff measures and other obstacles to trade should be addressed, including by stepping up trade facilitation action and customs automation.

2. **Help reshape globalization for sustainability and resilience.** Disruptions caused by the COVID-19 outbreak have re-ignited the debate on the risks associated with international manufacturing production and extended supply chains. It will be important to carefully assess the varied options when it

[1] See www.unglobalcompact.org/news/4534-05-05-2020 and https://ungc-communications-assets.s3.amazonaws.com/docs/publications/Call-To-Action_Imminent-Threats-to-the-Integrity-of-Global-Supply-Chains.pdf.

comes to changes in supply-chain design and outcomes that are aligned with the Sustainable Development Goals and the 2030 Agenda for Sustainable Development. For example, a shortening of supply chains through re-shoring or near shoring may reduce transport costs and fuel consumption, but it does not necessarily future-proof supply chains against disruptions that could take place, regardless of the location. Multi-sourcing approaches may guarantee greater resilience than approaches that concentrate production in a single location, whether at home or abroad. The debate on globalization should focus on identifying ways in which unsustainable globalization patterns could be mitigated to generate more value to a wider range of economies.

3. **Promote greater technology uptake and digitalization.** Polices should support a digital transformation that improves the resilience of supply chains and their supporting transportation networks. For maritime transport to play its role in linking global economies and supply chains, it should leverage the crisis by investing in technology and adopting solutions that meet the needs of the supply chains of the future and support resilience efforts. Digitalization efforts should enable enhanced efficiencies, including energy efficiency, and productivity in transport (for example, smart ports and shipping). It should also help countries tap e-commerce capabilities and transport facilitation benefits that boost trade. For more impact, cybersecurity should be strengthened at all levels.

4. **Harness data for monitoring and policy responses.** The use of fast-evolving data capabilities can support efforts to forecast growth and monitor recovery trends. New sources of data and enhanced possibilities emanating from digitalization provide ample opportunities to analyse and improve policies. The pandemic has highlighted the potential for real-time data on ship movement and port traffic, as well as information on shipping schedules to generate early warning systems for economic growth and seaborne trade.

5. **Enable agile and resilient maritime transport systems.** There is a need to invest in risk management and emergency response preparedness beyond pandemics. Future-proofing the maritime supply chain and risk management require greater visibility of door-to-door transport operations. To do so, it is necessary to formulate plans setting out key actions and protocols to be implemented in response to crises while ensuring business continuity. Special consideration is needed to address seafarers' concerns, most of whom come from developing countries. Collaboration across port States and among different actors within countries remains key to improving crew changeover processes and ensuring standardized procedure and risk-management protocols.

6. **Maintain the momentum on sustainability, climate-change adaptation and resilience-building.** Current efforts to deal with carbon emissions from shipping and the ongoing energy transition away from fossil fuels should remain a priority. Governments could direct stimulus packages to support recovery while promoting other priorities such as climate-change mitigation and adaptation action. Thus, policies adopted in the context of a post-pandemic world should support further progress in the shipping industry's transition to greening and sustainability. Meanwhile, sustainability and resilience concerns, such as connectivity among small island developing States and climate-change adaptation, remain key priorities. In these States, critical coastal transport infrastructure is a lifeline for external trade, tourism, and food and energy security. The generation and dissemination of tailored data and information plays an important role in risk assessment, the improvement of connectivity levels, the development of effective adaptation measures, the preparation of targeted studies and effective multidisciplinary and multi-stakeholder collaboration. In addition, progress towards the realization of target 8.1 of the Sustainable Development Goals – sustainable economic growth in the least developed countries – is ever more important to strengthen the resilience of the least developed countries and their ability to cope with future disruptions.

The COVID-19 pandemic is a litmus test, not only for globalization but for global solidarity and collaboration as well. The success of the above-mentioned policy measures will depend on effective international collaboration to ensure coordinated policy responses. Coordinated efforts are also necessary for the standardization of data, tracking of port performance and development of protection mechanisms against cybercrime. In facing the challenges ahead, policymakers should ensure that financial support, technical cooperation and capacity-building are provided to developing countries, in particular the most vulnerable groups of countries, including the least developed countries, landlocked developing countries and small island developing States.

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