UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

2025 Review of maritime transport

Staying the course in turbulent waters

OVERVIEW

United Nations
Geneva, 2025

United Nations publication issued by the United Nations
Conference on Trade and Development

UNCTAD/RMT/2025 (Overview)

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Foreword

Global maritime transport has entered uncharted waters.

Not since the closure of the Suez Canal in 1967 have we witnessed such sustained disruption to the arteries of global commerce. Ships that once transited the Red Sea in days now sail for weeks around the Cape of Good Hope. Freight rates that were relatively stable for years now swing wildly from month to month. Supply chains we thought were resilient have proven fragile.

But this is not simply a story of disruption. As this year's *Review of Maritime Transport* documents, it is a story of transitions – technological, environmental, geoeconomic – converging at a speed that demands fundamentally rethinking how maritime transport operates.

Consider what we face today. The Suez Canal operates below normal capacity, at around 70 per cent below average tonnage transit levels in 2023. This year's developments around the Strait of Hormuz – a passage for about 34 per cent of global seaborne exports of oil – have drawn renewed attention to the need for sustained dialogue on maritime security. Disruption to port operations has also become chronic, not episodic.

These factors are already reshaping maritime trade patterns. While flows continued to expand by 2.2 per cent in 2024 over 2023, they have done so at a moderate pace – below the average recorded over the 20 years from 2003 to 2023. More telling still: maritime trade now travels significantly longer distances, with the average voyage haul having increased from 4,831 miles in 2018, to 5,245 miles in 2024, as security concerns redraw the map of global shipping. Seaborne trade in ton-miles increased by 5.9 per cent in 2024 on 2023, close to three times the increase in the volume of maritime trade. Distance is no longer geography; it is geoeconomics.

Yet alongside these immediate pressures, deeper shifts are reshaping the sector. The Net-zero Framework of the International Maritime Organization, set to be considered for adoption in October 2025, could reshape even further how ships are built, fuelled and operated. The orderbooks already tell this story: alternative fuel vessels now represent more than half of the ship tonnage of new orders, though over 90 per cent of the active fleet by tonnage still runs on conventional fuels. This gap between ambition and reality defines our challenge.

Meanwhile, automation and digitalization advances at breathtaking pace. Smart ports often process containers in minutes, not hours. Artificial intelligence systems predict congestion before it happens. Autonomous vessels are starting to move from concept to prototype. But each digital advance creates new vulnerabilities – cyberattacks on shipping are also on the rise. We are building tomorrow's infrastructure on today's security and regulatory foundations.

Who bears these costs? Developing countries now budget for freight costs that can change more in a week than they once did in a year. Small island developing States watch their import bills soar while their export competitiveness erodes. Landlocked developing countries sometimes pay transport costs three times the global average – and see that gap widen with each disruption. This cannot be our future.

The transitions ahead – to zero carbon, to digital systems, to new trade routes – must be just transitions. They must empower, not exclude. They must build resilience, not deepen vulnerability. And they must recognize that maritime transport is not merely ships and cargo; it is 1.9 million seafarers, most of whom come from developing countries and whose skills need updating, whose rights need protection, whose contribution needs recognition.

UNCTAD stands ready to support this shift. Through research that illuminates, technical cooperation that builds capacity and consensus-building that brings all voices to the table at the global, regional and national levels, we work to ensure that these transitions leave no one behind.

This *Review* offers more than data and analysis. It offers a framework for action. Sustainable and resilient practices that can withstand tomorrow's shocks. Regulatory updates that match the new technological reality and sustainability standards. Decarbonization pathways that are both ambitious and achievable. Investment in people, not just infrastructure. Trade facilitation that turns borders from barriers, into gateways.

Maritime transport has weathered disruptions before – wars, closures, economic crises. But never have so many transitions converged so quickly. The sector will adapt; it always does. The question is whether that adaptation will be managed or chaotic, inclusive or divisive, sustainable or merely survivable. This *Review of Maritime Transport* provides the evidence base for choosing wisely. The work begins now.

Rebeca Grynspan
Secretary-General of UNCTAD

Introduction

Maritime transport is navigating growing complexity, driven by geopolitical instability and an evolving, uncertain global trade framework

Maritime transport faces extraordinarily volatile and unpredictable conditions

Amid geopolitical developments and an evolving trade policy environment, maritime transport faces extraordinarily volatile and unpredictable conditions. Heightened geopolitical tensions continue to upset maritime navigation in the Red Sea and Black Sea, while the Strait of Hormuz, a critical artery for the global oil trade, has faced risks of disturbances in recent months. A rapidly changing trade policy landscape, marked by a raft of new tariffs affecting economies worldwide, is disrupting global supply chains, shipping routes, port call networks and strategic planning.

Increased volatility is reflected in freight markets, trade and shipping costs, with developing countries, especially small island developing States and least developed countries. At the same time, regulatory developments and technological changes pose new challenges and opportunities, with implications for all stakeholders and sectors of the maritime transport industry.

Examples include the Net-Zero Framework of the International Maritime Organization (IMO), a set of draft regulations on reducing greenhouse gas emissions from shipping. Agreed in April 2025, it will be considered for formal adoption in October 2025. Another case involves alternative and low-carbon fuels, which will be critical for achieving sectoral targets to reduce greenhouse gas emissions but could also pose risks of pollution damage and personal injury that need to be addressed. Effective protection of seafarer rights is increasing in importance, especially at times of disruption, as is the need for upskilling and training seafarers amid rapid technological change and a shift to alternative fuels.

Digitalization and advances in technology and artificial intelligence offer important opportunities, including to enhance port performance and improve trade and transport facilitation. At the same time, appropriate cybersecurity strategies will be required to reduce vulnerability to potentially escalating cyberrisks and threats.

The *Review of Maritime Transport 2025* covers these and other key developments across the following thematic areas.

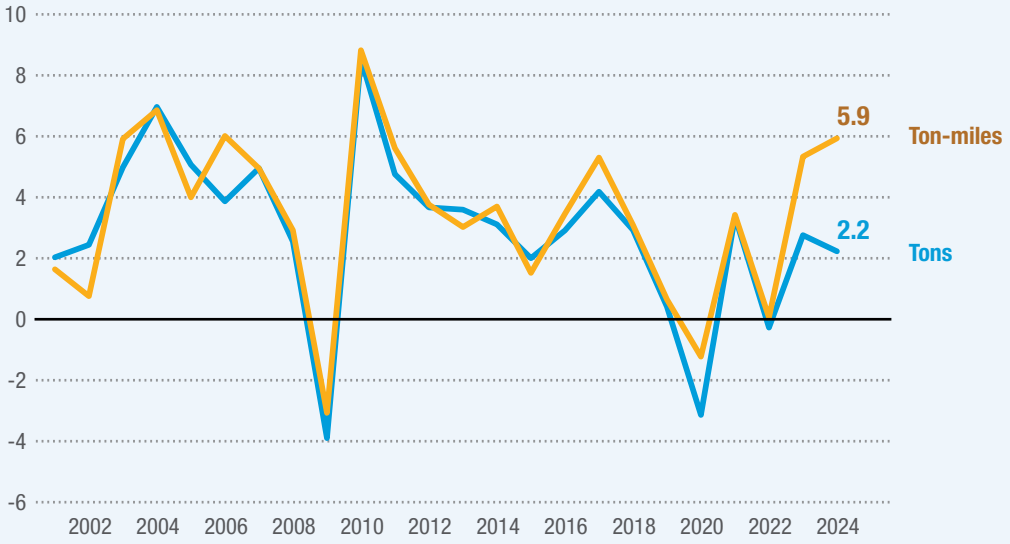
1. International maritime trade

Maritime trade continues to adjust to geopolitical and structural pressures

Seaborne trade recorded firm growth in 2024 (2.2 per cent in volumes and 5.9 per cent in ton-miles), largely due to rerouting around the Cape of Good Hope as the Red Sea disruption persisted (figure 1). Growth is forecast to slow in 2025, however. According to UNCTAD projections, maritime trade volume will expand by 0.5 per cent and containerized trade by 1.4 per cent. Over the medium term (2026–2030), UNCTAD projects total seaborne trade volumes will grow at an average annual rate of 2 per cent and containerized trade by 2.3 per cent. A marginal increase (0.3 per cent) is projected in ton-miles.[1] These shifts largely reflect structural drivers, such as geopolitical realignment, industrial policy changes and the global energy transition.

[1] Trade volume 2025 projection by UNCTAD. Distance-adjusted volume projection by Clarksons Research.

Figure 1
Seaborne trade growth
(Annual percentage change)



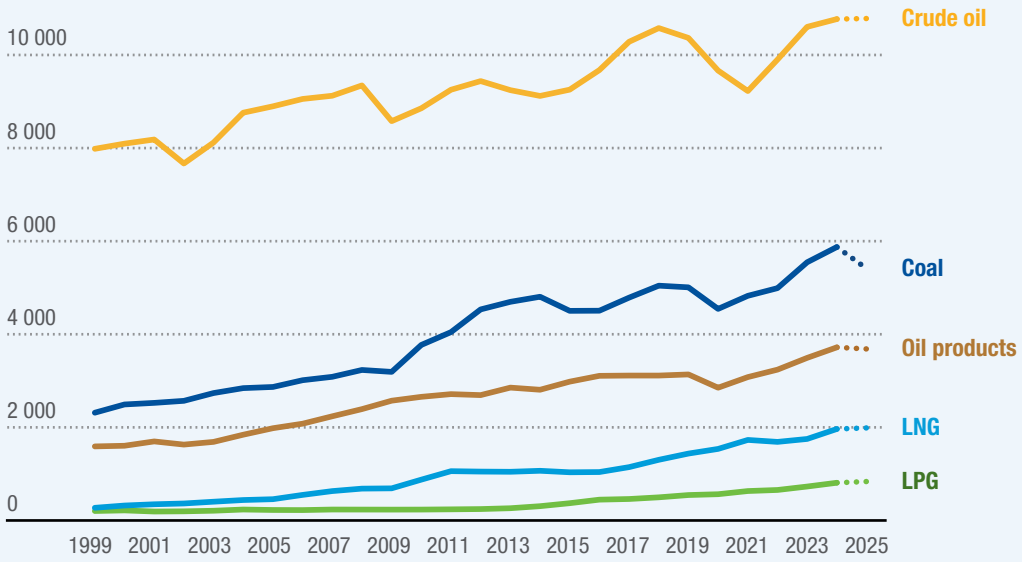
Source: UNCTAD calculations, based on Clarksons Research, Shipping Intelligence Network time series (July 2025).

Diverging trends across shipping segments: Containerized and energy trade

Containerized trade rebounded in 2024, driven by restocking, rerouted flows due to the disruption affecting the Red Sea, and resilience in both South–South and North–South trade. The energy trade is evolving, with commodities moving in different directions. Coal shipments rose in 2024 on Asian demand, yet this contrasted with their longer-term decline amid the global energy transition. Oil volumes remained broadly stable, but supply rerouting via the Red Sea and towards Asia lengthened trade distances. Gas, particularly liquified natural gas (LNG), was the most dynamic segment, supported by the diversification of suppliers and destinations. These developments illustrate how changing demand patterns, geopolitical factors and diversification strategies are reshaping energy flows, distances travelled by ships, and cargo and trade in ton-miles (figure 2).

The outlook for 2025 is more subdued compared to past performance and initial expectations, as weak consumer demand and trade policy uncertainty both weigh on global trade dynamics.

Figure 2
Seaborne trade by energy commodity
(Billions of ton-miles)



Source: UNCTAD calculations, based on Clarksons Research, Shipping Intelligence Network time series (July 2025).

Note: Figures for 2025 are forecasts. LPG indicates liquified petroleum gas.

Critical minerals trade opens new opportunities, but logistics and policy readiness are key enabling factors

Trade in critical minerals is expanding rapidly. At the same time, the concentration of seaborne trade flows in a few bilateral corridors for many critical minerals, such as copper, lithium and cobalt, heightens exposure to supply chain interruptions. To reduce strategic dependencies, importing countries are diversifying sources and enforcing traceability and sustainability standards. Some developing country exporters are introducing export restrictions and local processing incentives to move up the value chain. These developments are reshaping maritime trade patterns and placing new demands on transport and logistics systems, as shown notably by the cases of copper and cobalt.

2. World shipping fleet and services

Maritime transport is navigating uncharted waters amid geopolitical instability and trade policy uncertainty

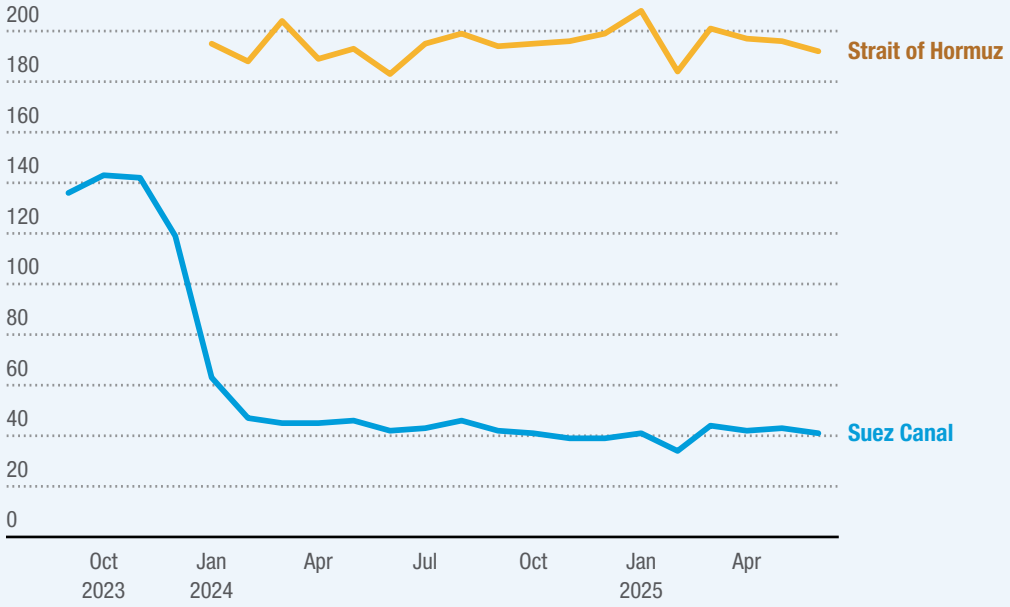
Disruption to shipping navigation in the Red Sea continues with ships still avoiding the Suez Canal

Disruption to shipping navigation in the Red Sea continues, with ships still avoiding the Suez Canal. Ship tonnage transit levels by early May 2025 remained 70 per cent below the 2023 average. Tensions between the Islamic Republic of Iran and Israel in June 2025 exacerbated concerns about interruptions in maritime chokepoints, with eyes on the Strait of Hormuz, which accounts for 11 per cent of maritime trade and over one third of seaborne oil exports. By the end of June 2025, ship transit patterns through the maritime passage had not shown any significant changes (figure 3). Depending on ongoing developments, however, the potential for disruption, resulting in increased shipping costs, delays and insurance premiums, cannot be excluded.

Figure 3

Monthly ship transits through the Strait of Hormuz and Suez Canal

(Millions of gross tons)



Source: UNCTAD calculations, based on Clarksons Research Services, Shipping Intelligence Network (August 2025).

In 2025, new trade tariffs in the United States of America and elsewhere added to uncertainty and volatility. The Office of the United States Trade Representative also announced measures such as port fees targeting certain ships calling at ports in the United States. These fees are expected to apply to Chinese-owned or -operated vessels as well as to Chinese-built vessels and foreign-built vehicle carriers.

The implications of tariffs and port fees for maritime trade flows and patterns, demand for shipping services and fleet capacity, the design of shipping networks, the port of call configuration and fleet deployment plans are not yet fully understood. Different outcomes, potentially pointing in diverse directions, could result from the combined effect of these measures for various economies, regions and stakeholders. Shipping operations, service offerings and capacity deployment patterns may need adjustment in line with changing dynamics.

Shipping operations, service offerings and capacity deployment patterns may need adjustment in line with changing dynamics

Transformational trends are influencing the global fleet profile and capacity

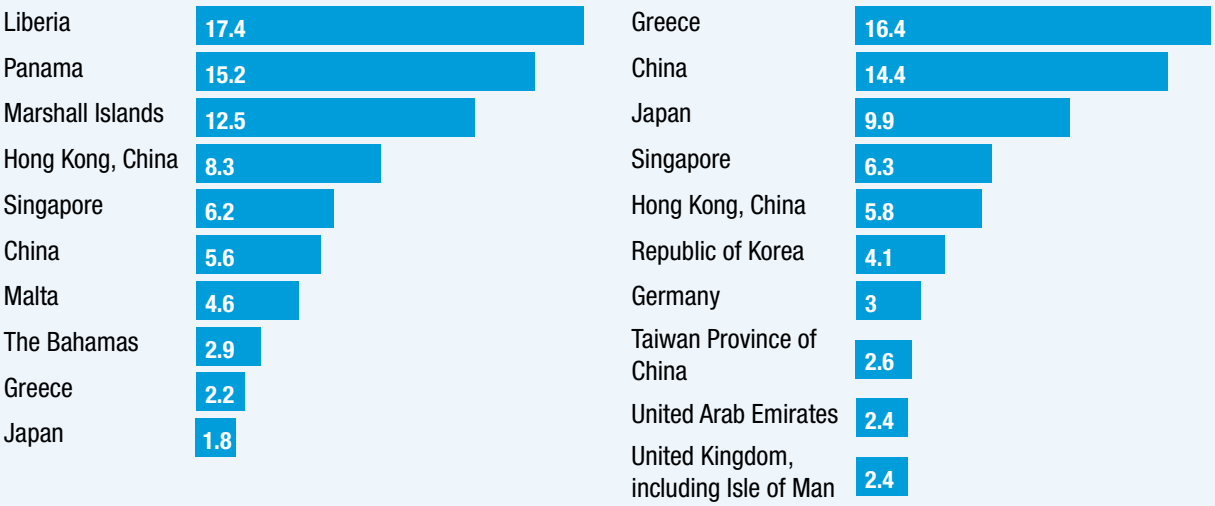
On 1 January 2025, the global fleet reached 112,500 commercial vessels with a total carrying capacity of 2.44 billion dead weight tons. This represented an annual increase of 3.4 per cent, on par with the expansion in 2023. It was well below the annual average of 5.1 per cent over the past two decades but faster than maritime trade growth. Progress in "greening" the fleet is underway but incremental. As of May 2025, 8 per cent of the active world fleet by gross tonnage and 53 per cent of tonnage on the orderbook were designed to run on alternative fuels. In tandem, labour shortages, technological advancements and associated security threats are adding complexity and reshaping the global fleet profile and outlook.

The list of top ship-owning nations and flag countries remained broadly unchanged, with some shifts in relative rankings (figure 4). As of 1 January 2025, the top three flag States, Liberia, Panama and the Republic of the Marshall Islands, together accounted for 45.1 per cent of total world ship carrying capacity, while the top three ship-owning nations, Greece, China and Japan, in order of total ownership share, accounted for over 40.7 per cent. Greece was the top ship-owning nation with 16.4 per cent of global fleet capacity.

Figure 4

Top 10 leading flags of registration (left panel) and ship-owning countries (right panel), 1 January 2025

(Percentage of dead weight ton capacity)



Source: UNCTAD calculations, based on data from Clarksons Research and UNCTADstat (available at https://unctadstat.unctad.org/datacentre/).

3. Freight rates and maritime transport costs

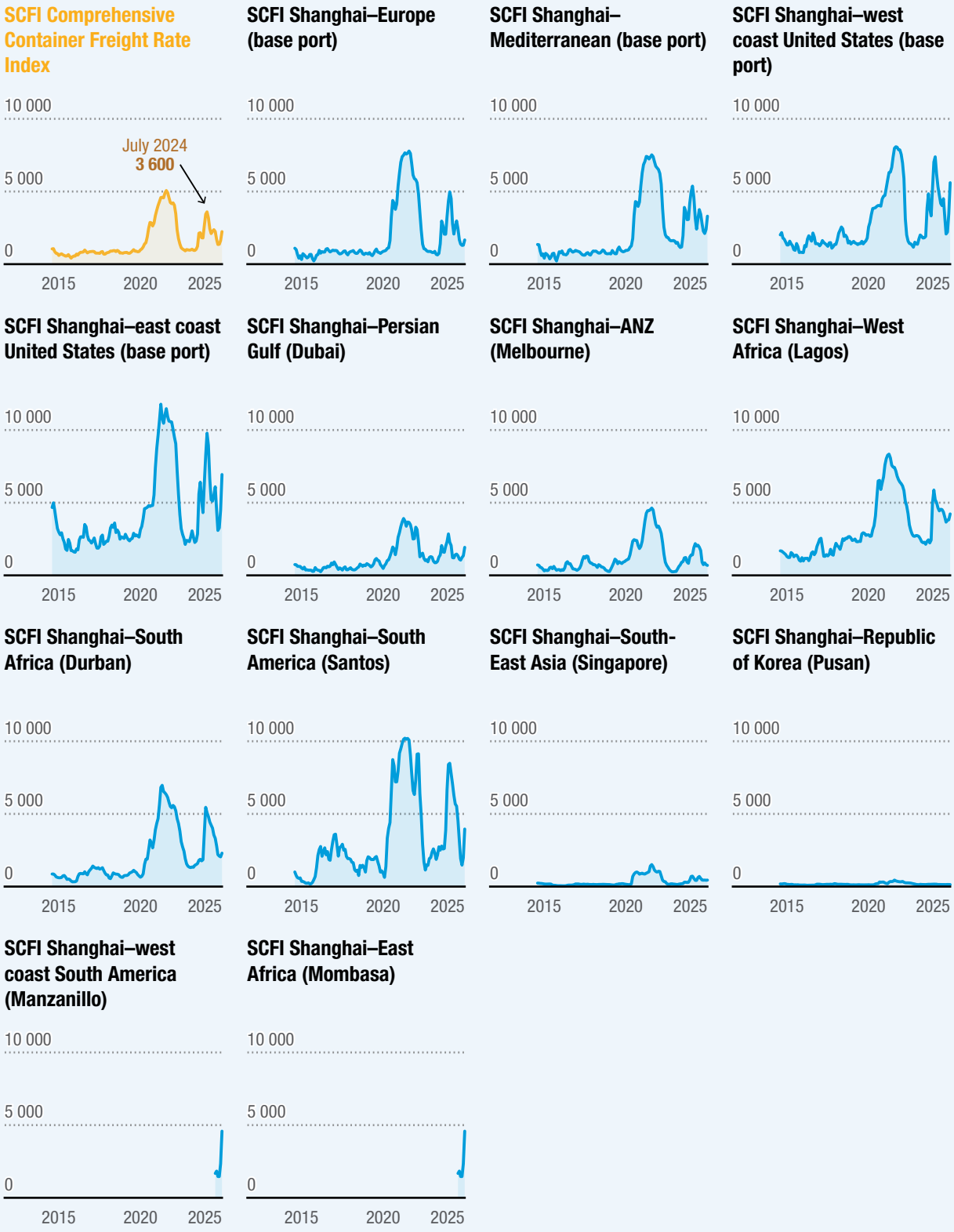
Freight rate volatility is becoming the norm, driven by geopolitical tensions, trade policy shifts, and fragile supply and demand fundamentals

From mid-2024 to mid-2025, container freight rates remained volatile and elevated. Spot rates surged by mid-2024, approaching COVID-19 era peaks, as disruption in the Red Sea and rerouting via the Cape of Good Hope caused longer voyage distances and times, and spurred higher fuel consumption and costs. By year-end, spot rates had moderated but remained significantly above pre-crisis levels. The Shanghai Containerized Freight Index (SCFI) averaged 2,496 points in 2024, up 149 per cent from 2023 (figure 5). During the same period, container ship charter rates increased across all vessel segments, with operators favouring short-term contracts for flexibility.

In early 2025, container freight rates temporarily declined due to weaker seasonal demand following the Chinese Lunar New Year. Volatility escalated thereafter, however, propelled by new tariff announcements and increased geopolitical risks, including in the Strait of Hormuz.

Freight rate volatility is becoming the norm, driven by geopolitical tensions, trade policy shifts, and fragile supply and demand fundamentals

Figure 5
Shanghai Containerized Freight Index spot rates
(Monthly averages, United States dollars per 20-foot equivalent unit)



Source: UNCTAD calculations, based on data from Clarksons Research, Shipping Intelligence Network (July 2025).

Dry bulk freight rates surged in 2024 on the back of firm demand for coal, grain and fertilizers as well as Red Sea rerouting and limited fleet growth. By mid-2025, rates had weakened as industrial activity slowed, and new ships entered service. Tanker freight rates remained elevated but volatile, supported by extended ton-mile demand and constrained supply. Rates declined overall in early 2025 but rose again in June amid increased operational risks in the Strait of Hormuz.

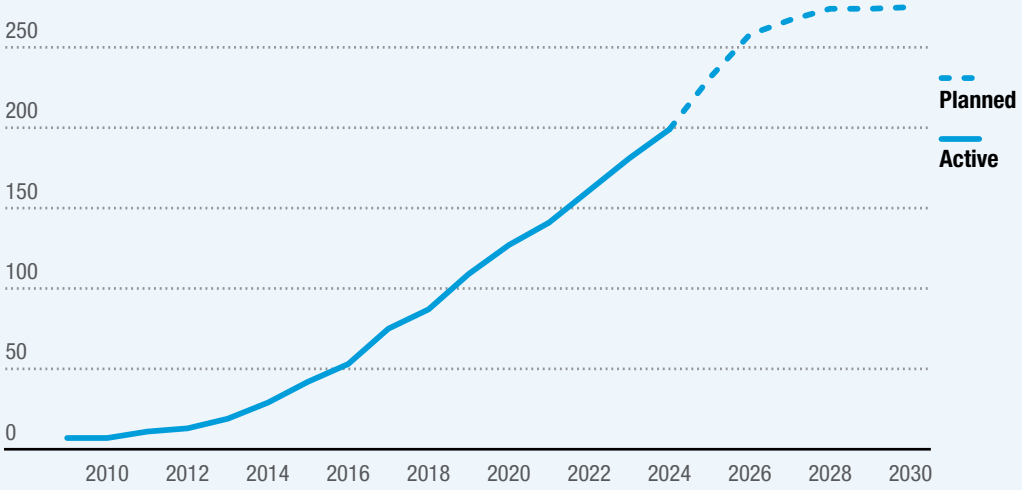
Environmental compliance costs are expected to reshape maritime transport economics. European Union carbon emissions pricing, applicable to shipments to and from European ports, is already starting to affect transport cost structures, the global fleet profile and competitiveness across ship segments.

4. Port performance and maritime trade facilitation

Port performance has varied across indicators and shipping segments; gender balance in the port workforce has yet to be achieved

Dry bulk carriers have seen a modest growth in port calls, while tanker and container vessel traffic remained relatively stable in 2024. A key factor underpinning port selection under the port call configuration, and one expected to remain important going forward, is the availability of alternative fuel bunkering infrastructure. For example, LNG bunkering has shown growth across more ports in recent years, reaching around 200 ports in 2024, with steady increases expected moving forward (figure 6).

Figure 6
Ports providing LNG bunkering services
(Number)

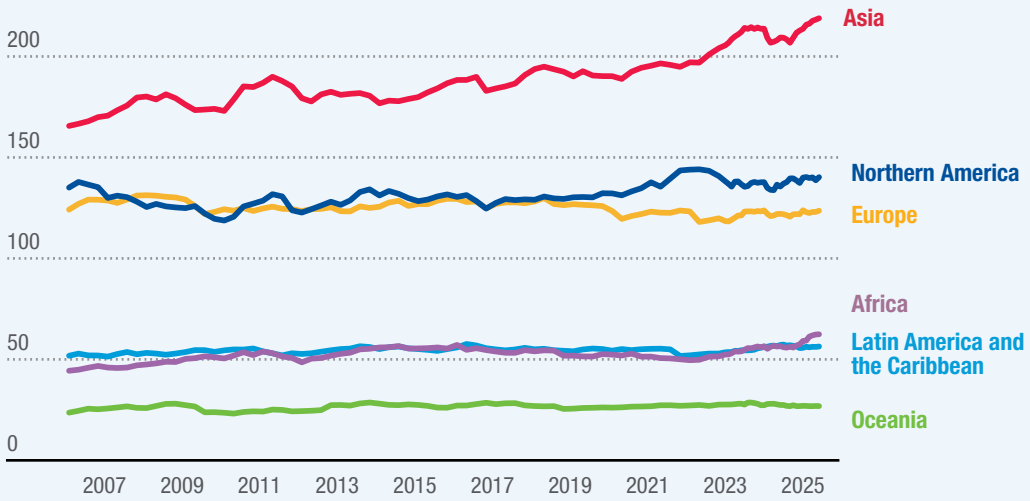


Source: UNCTAD calculations, based on data provided by Clarksons Research (May 2025).

Note: Number of active ports includes those reportedly able to provide an LNG bunkering service. Planned ports include those that reported start-up dates for planned LNG bunkering facilities as of May 2025.

UNCTAD's Liner Shipping Connectivity Index (LSCI), a measure for countries to assess their level of integration into global trade networks and maritime transport connectivity globally, reflects increases in the connectivity of ports in Africa and Asia over the past year (figure 7). By mid-2025, Asia continued to maintain its leadership in liner shipping connectivity. Africa, supported by rerouting away from the Red Sea, showed the fastest growth (10 per cent) between June 2024 and June 2025.

Figure 7
Average Liner Shipping Connectivity Index by region



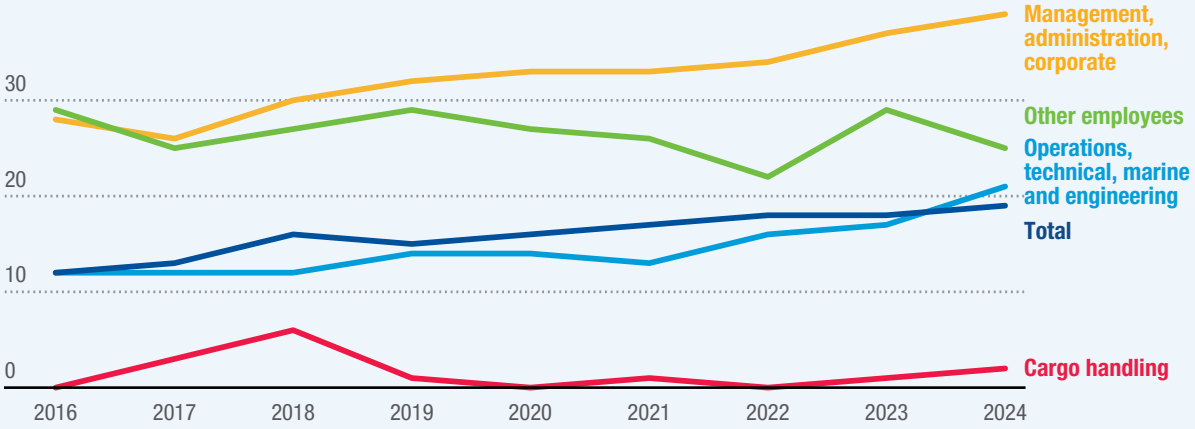
Source: UNCTAD calculations, based on data provided by MDS Transmodal (June 2025). See also UNCTADstat at https://unctadstat.unctad.org/datacentre/.

Note: The index is set at 100 for the average value of country connectivity in February of 2023. For countries with no liner shipping connections, values are assumed to be zero to better reflect lost connectivity. Countries with no liner shipping connections for the entire period are excluded from the averages.

Global ports are also grappling with congestion and prolonged ship waiting times. The average waiting time in port increased in 2024 for both developed and developing economies, from 5.2 and 10.2 hours in December 2023 to 6.4 and 10.9 hours in March 2024, respectively.

Data on 76 ports contributing to the Port Performance Scorecard indicate an improvement in gender diversity, with women now accounting for nearly 40 per cent of managerial positions. Male dominance persists in other areas, however, especially in cargo-handling, where less than 2 per cent of workers are women (figure 8). Digitalization and automation are expected to open new pathways for women, particularly in tech-driven and less physically intensive roles.

Figure 8
Women's median participation in port workforces
(Percentage)



Source: UNCTAD calculations, based on data from 76 ports reporting on the UNCTAD TrainForTrade Port Management Programme Port Performance Scorecard (June 2025).

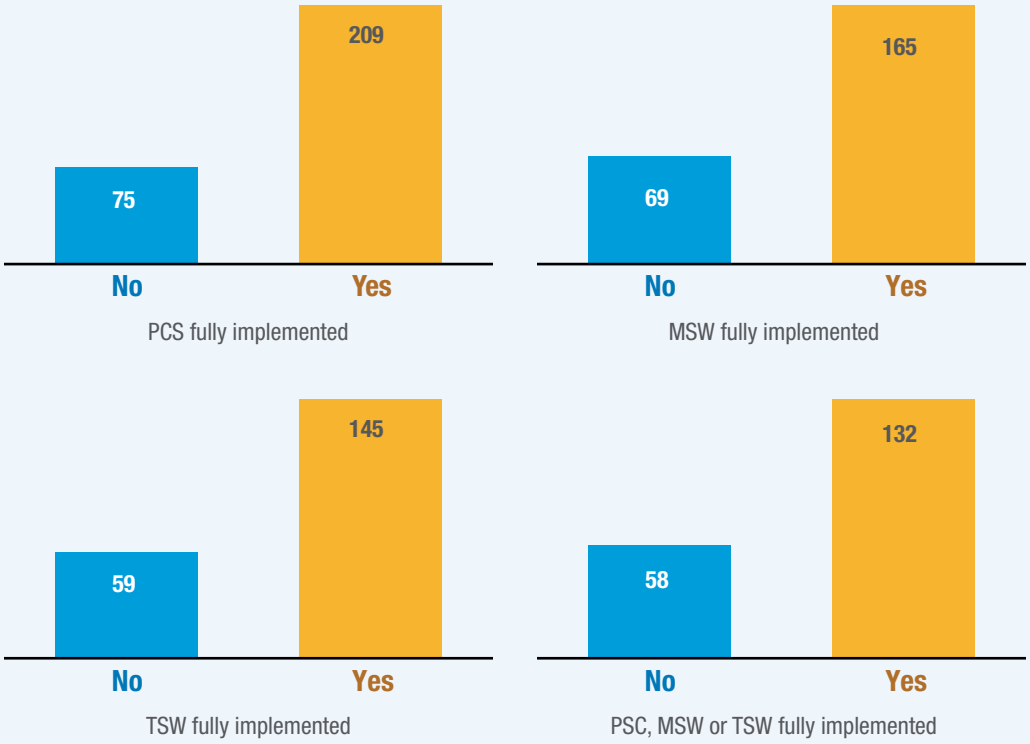
Note: Data are summarized without missing data imputation.

Trade facilitation measures can be pivotal for improved port performance in a highly disrupted and unpredictable operating environment

Trade facilitation measures can enhance port performance, including by improving transparency and communications among maritime transport stakeholders from the public and private sectors. Digital infrastructure, such as trade single windows (TSW), maritime single windows (MSW) and port community systems (PCS), enhances collaboration and data exchange. Countries with such tools tend to exhibit improved liner shipping connectivity levels and logistics performance (figure 9).

Figure 9
Correlation between connectivity and digital trade facilitation tools

Average liner shipping connectivity index



Source: UNCTAD calculations, based on IMO data available at https://www.imo.org/en/OurWork/Facilitation/Pages/IMOCompendium.aspx, and the websites of the WTO Agreement on Trade Facilitation, the World Bank Trade Logistics Performance Index and various ports.

The IMO Convention on Facilitation of International Maritime Traffic, 1965 (FAL Convention) and the World Trade Organization (WTO) Agreement on Trade Facilitation can assist in implementing digital solutions. Public-private partnerships, such as national trade facilitation committees, which UNCTAD continues to actively support, are essential mechanisms for cooperation and collaboration. With growing digitalization, it is crucial to implement risk mitigation solutions and robust cybersecurity strategies in transport and trade facilitation.

5. Legal issues and regulatory developments

In a bid to curb greenhouse gas emissions from shipping, draft IMO regulations are to be considered for formal adoption in October

In October 2025, in an important development, the new IMO Net-Zero Framework, approved by the IMO Marine Environment Protection Committee in April 2025, will be considered for formal adoption as a new mandatory chapter of the International Convention for the Prevention of Pollution from Ships 73/78, Annex VI. The framework consists of both technical and economic elements, including a global fuel standard and a carbon pricing and emissions trading mechanism. It envisages the establishment of a Net-Zero Fund to collect, manage and disburse revenues, with a special focus on, for example, rewarding low-emissions ships and supporting innovation, research, infrastructure and just transition initiatives in developing countries. Other priorities include training, technology transfer and capacity-building to support the IMO greenhouse gas emissions strategy. If formally adopted in October, the legislation will enter into force in the spring of 2027, with implementation beginning in 2028.

Revenues generated and available for disbursement could make an important contribution to a just energy transition in developing countries, especially the least developed countries and small island developing States, as well as related port infrastructure investments. Private sector initiatives to provide green and sustainable funds, green and sustainability-linked loans and blended finance will also be critical in generating sufficient funds to decarbonize the global fleet and invest in bunkering facilities and infrastructure. Following the formal adoption of the Net-Zero Framework, relevant monitoring, reporting and financial obligations with respect to individual vessels will need to be factored into commercial maritime contracts, in line with detailed implementation guidance, which remains to be developed. Industry associations can assist in developing suitable standard form clauses for incorporation into commercial contracts.

A fit-for-purpose regulatory framework is required

The international legal and regulatory framework needs to keep pace with the uptake of alternative fuels and advances in technology, including ship automation

The use and carriage of alternative fuels pose new risks. These include pollution and, considering the toxicity, volatility and flammability of some new fuels, personal injury. The work of the IMO Legal Committee on a new output, on the suitability of IMO liability and compensation regimes with respect to alternative fuels, is an important first step towards instituting appropriate legal frameworks on liability and compensation for pollution and personal injury, before any associated risks materialize. A fit-for-purpose regulatory framework is also required for autonomous shipping. IMO is currently developing a non-mandatory maritime autonomous surface ships (MASS) code, scheduled to be concluded in 2026. United Nations Member States and shipping industry stakeholders are strongly encouraged to actively engage in this important work.

Safeguarding seafarers' rights is becoming more crucial

Seafarers operate in a highly challenging environment, often in difficult working conditions; geopolitical tensions and disruption compound these issues

Seafarers operate in a highly challenging environment, often in difficult working conditions. Geopolitical tensions and disruption compound these issues. Recently agreed amendments to the 2006 Maritime Labour Convention (MLC) to strengthen seafarers' rights to repatriation and shore leave, as well as the development of further guidelines on the fair treatment of seafarers detained in connection with alleged crimes, reinforce the existing regulatory framework. They deserve the active support of all stakeholders.

Entry into force of new global rules on sustainable ship recycling

The entry into force, in June 2025, of the Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships, 2009, is expected to make a major contribution to enhancing the safety of workers and render ship-recycling operations more environmentally friendly. The importance of ship recycling is set to grow as the global fleet is renewed and replaced by ships running on low- or zero-carbon fuels. While the four major recycling countries, as well as some major flag States, are already among the Contracting States to the Convention, all United Nations Member States are encouraged to consider acceding to the Convention to ensure its widespread application at the international level.

Policy focus

Maritime transport stands at a pivotal juncture. It must transition to a sustainable, resilient and digitally enabled future while navigating an increasingly unpredictable operational landscape beset by geopolitical tensions, geoeconomic fragmentation, and a growing imperative to decarbonize, digitalize and future-proof infrastructure, operations and services. Against this background, sustainability and resilience-building, system flexibility and agile adaptation are crucial. Developing countries require support and assistance to better prepare and adapt to an evolving landscape for maritime transport and trade.

Priority actions for maritime transport stakeholders and Governments, supported by UNCTAD and other international organizations as well as development partners, include the following:

Leverage maritime logistics for equitable integration and transformation: The participation of developing countries in reconfigured trade flows, including critical minerals, hinges on modern, connected, resilient maritime logistics systems. Investments in transport and logistics must facilitate trade flows and support value addition, industrial upgrading and structural transformation. International cooperation is needed to manage evolving trade policy measures.

Plan and prepare for disruptions and uncertainty: The maritime transport and logistics industry, supported by adequate policy and regulatory frameworks, needs to design and implement adaptation strategies in a fast-evolving operating landscape. Industry actors should enhance operational flexibility, upgrade the fleet, and modernize equipment, infrastructure and port management practices to better handle rerouted traffic and service disruptions as trading dynamics evolve. Mitigating the impact of higher transport costs, including for essential goods, is particularly important for the least developed countries and small island developing States. To control costs, key actions include establishing effective trade facilitation measures and improving port performance and connectivity.

Promote fleet modernization and sustainable maritime business practices: Incentivize active fleet renewal and boost ship recycling while complying with requirements to strengthen the safety and sustainability of the latter. This demands larger scrapping capacity that is compliant with the Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships. Required actions involve Governments, regulators, shipbuilders, shipowners, providers of ship finance and ship scrappers. United Nations Member States are encouraged to consider acceding to the Convention to support application on an international scale.

Maritime transport stands at a pivotal juncture.

It must transition to a sustainable, resilient and digitally enabled future while navigating an increasingly unpredictable operational landscape

Protect and empower the maritime workforce, and promote inclusiveness and upskilling: Effective implementation of the international regulatory framework on seafarer rights remains a critical challenge, both for the safety and well-being of seafarers and for the safe and secure flow of goods across global supply chains. Governments, international organizations and other stakeholders should accelerate implementation and enforcement of the framework, including the latest amendments to the MLC. Closer collaboration would reduce cases of abandonment. Amid the uptake of alternative fuels and advances in ship automation, relevant stakeholders should prioritize targeted capacity-building and training for seafarers in collaboration with relevant organizations.

Implementing proactive, inclusive recruitment strategies and tapping the pool of talent provided by women seafarers, who remain vastly underrepresented in the current workforce, would help to address the persistent seafarer shortage. For the shipping industry, Governments and relevant regulatory agencies, providing incentives to attract qualified labour as well as safeguarding the rights of seafarers are essential measures. Governments and port authorities should implement inclusive workforce development programmes to boost women's participation. Capacity-building programmes, such as the UNCTAD TrainForTrade Port Management Programme, have important roles to play.

Effectively implement regulatory measures to reduce greenhouse gas emissions from international shipping, accelerate decarbonization, and facilitate a just and fair energy transition: This will depend on industry support for developing and deploying viable alternative fuels, and on the formal adoption of the Net-Zero Framework along with pending guidance on implementation. As the monitoring, reporting and financial obligations envisaged by the Net-Zero Framework would need to be factored into commercial maritime contracts, commercial parties, in collaboration with industry associations, should begin considering the need for appropriate contractual clauses to balance the allocation of associated commercial risks.

The use of energy-saving technologies on ships and in ports as well as multistakeholder initiatives (e.g., Green Shipping Corridors) should accelerate. Funds under a new carbon pricing mechanism could potentially contribute to supporting the energy transition in developing countries. Since significant additional investment will be required, all appropriate mechanisms to generate the necessary finance should be explored. Private sector initiatives backing green and sustainable investments, green loans and sustainability-linked loans, and additional new financing mechanisms should be promoted.

Prepare for the safe handling, use and carriage of alternative fuels: Alternative fuels, while key to reducing greenhouse gas emissions from shipping, could pose daunting risks. Their carriage and use require appropriate safety and security protocols. Addressing associated risks and liabilities, including by making adequate compensation for related pollution damages available, requires reviewing and adjusting the existing international legal framework. Governments, in collaboration with the shipping industry, maritime workforce entities and recruitment agencies, also need to facilitate and enhance related maritime workforce training and upskilling.

Leverage digital solutions and strengthen the regulatory framework to address cyberrisks: Policymakers as well as the maritime transport and logistics industry should continue to advance digitalization to enhance efficiency and mainstream sustainable shipping practices (e.g., the monitoring of navigation patterns and predictive maintenance solutions). Growing use of technology in transport and trade facilitation requires appropriate cybersecurity strategies and an adequate regulatory framework.

Measure port performance to monitor and track efficiency, connectivity, sustainability and resilience: Ports should regularly assess their performance, using globally recognized indicators tailored to their specific strategies, priorities and local conditions, to identify areas for improvement and strategic goals. The UNCTAD Port Performance Scorecard can help ports define performance gaps and set measurable improvement targets.

Capitalize on trade facilitation measures to enhance port and maritime supply chain performance: Countries are strongly encouraged to implement the FAL Convention and the WTO Trade Facilitation Agreement, including provisions related to automation, digitalization and MSWs in ports. Collaboration around port and trade facilitation digital infrastructure and data should be enhanced. Digital systems, such as ASYHUB Maritime, can provide scalable, standards-aligned platforms for resilient and transparent port operations.

Enhance capacity-building and support developing countries: UNCTAD and other development partners should support developing countries, particularly the least developed countries, small island developing States and landlocked developing countries, to better manage risks and seize opportunities for shipping, ports and trade. These arise from a range of factors, including shifting trade patterns and the evolving geography of transport and trade, decarbonization and the energy transition, climate change adaptation, digitalization and ship automation.

Strengthen and promote targeted collaboration on regulatory issues to address new challenges: Close collaboration among all public and private sector stakeholders will be key to navigating persistent and emerging challenges and, ultimately, to realizing the sustainability and resilience of supply chains. Regulators should work closely with industry and other stakeholders, whose involvement will be required for effective adaptation to changing conditions and the mitigation of potential risks. To this end, active engagement of all stakeholders in ongoing IMO processes is strongly encouraged. Examples, among others, include the development of a voluntary MASS code and guidance aimed at combating fraudulent ship registration and ship registries.

The United Nations Conference on Trade and Development – UNCTAD – is the leading body of the United Nations focused on trade and development.

UNCTAD works to ensure developing countries benefit more fairly from a globalized economy by providing research and analysis on trade and development issues, offering technical assistance and facilitating intergovernmental consensus-building.

Standing at 195 countries, its membership is one of the largest in the United Nations system.

Review of maritime transport 2025

Printed at United Nations, Geneva – 2515010 **(E)** – September 2025 – 576 – **UNCTAD/RMT/2025 (Overview)**