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Global maritime transport: Staying the course in turbulent waters

Note by the UNCTAD secretariat

Summary

In recent years, disruptions to maritime transport and global supply chains have grown more frequent and consequential, with global trading and shipping patterns being redrawn. Disruptive factors, particularly geopolitical tensions, are spilling over and affecting maritime chokepoints and trade routes such as the Black Sea, the Red Sea and the Suez Canal. Climatic factors such as drought and reduced water levels had constrained ship traffic in the Panama Canal, but activity has normalized. Risks to the Strait of Hormuz, a strategic route for the global energy trade, also increased, with geopolitical tensions affecting the area in mid-2025. Starting in early 2025, maritime transport faced a rapidly shifting trade policy framework. Consequently, uncertainty and volatility increased, along with shifts in trading patterns, and reconfigurations of shipping networks continued, in tandem with vessel rerouting and trade diversion. With maritime trade travelling longer distances and disruptions increasing, high and volatile freight rates are increasingly becoming the norm. Ports are under strain from rerouted traffic, resulting in congestions and longer waiting times. Persistent high transport costs often affect developing countries the most, particularly landlocked developing countries, the least developed countries and small island developing States.

Alongside immediate pressures, longer-term shifts are transforming the sector. The transitions ahead, to zero carbon, to digital systems and to new trade routes, pose challenges, but also offer potential opportunities. Addressing the challenges and seizing the opportunities requires a balancing act, to ensure carefully managed, just and equitable transitions. Whether caused by sudden shocks or slow-moving structural shifts, disruptions to maritime transport and trade keep the operating landscape in flux and highly volatile. Action is necessary in order to control and mitigate cost increases, strengthen port performance, advance trade facilitation, mainstream sustainability and resilience-building principles, address climatic risks and implement adaptation measures, enhance public–private partnerships, improve stability and predictability in the trade policy framework and achieve well-managed and inclusive transitions.

Informed by considerations and priorities in transport, trade logistics and trade facilitation, as reflected in the Geneva Consensus, and drawing on *Review of Maritime Transport 2025*, discussions at the twelfth session will explore key developments affecting global maritime transport and trade and provide expert insights into challenges and opportunities for the maritime transport industry and stakeholders, as well as policymakers.

I. Introduction

1. Global supply chain disruptions have become more frequent and complex, with shocks converging and compounding, to create unprecedented volatility. Maritime transport, which carries over 80 per cent of world merchandise trade by volume and underpins global supply chains, has been particularly affected. Since 2020, shipping, ports and hinterland connections have weathered overlapping disruptions linked to the coronavirus disease (COVID-19) pandemic and its legacies, geopolitical tensions and climate-related constraints. Recent chokepoint disruptions in the Red Sea and the Suez Canal, security risks in the Black Sea and drought-induced draught limits in the Panama Canal have reshaped routes and schedules. Beginning in 2025, shifts in trade policy have added regulatory uncertainty and operational complexity. These pressures are transmitted across supply chains, with landlocked developing countries, the least developed countries and small island developing States often the most affected due to capacity constraints, connectivity gaps, infrastructure deficits and higher transport costs.

2. Informed by considerations and priorities in transport, trade logistics and trade facilitation, as reflected in the Geneva Consensus, and drawing on *Review of Maritime Transport 2025*,[1] discussions at the twelfth session will explore key developments affecting global maritime transport and trade and provide expert insights into challenges and opportunities for the maritime transport industry and stakeholders, as well as policymakers. The session will provide an opportunity to share experiences, good practices and recommendations, with a particular focus on developing countries, landlocked developing countries, the least developed countries and small island developing States.

3. The discussions are expected to inform the related UNCTAD programme of work, including the second UNCTAD Global Supply Chain Forum, to be held in late 2026, in collaboration with the Saudi Ports Authority, and help identify thematic priorities and activities for enhanced collaborative action, to advance sustainable, resilient and inclusive transport and trade facilitation as part of the United Nations Decade of Sustainable Transport 2026–2035,[2] with a focus on key issues of relevance to developing countries.

4. To facilitate the deliberations, the UNCTAD secretariat has prepared the present note, with, in chapter II, highlights of key developments and trends shaping maritime transport and logistics, together with proposed areas for priority action; in chapter III, an outline of key aspects of the relevant global policy framework, including a strategic direction for impactful collective collaborative engagement; and, in chapter IV, questions on ways forward.

II. Key developments as presented in *Review of Maritime Transport 2025*[3]

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

6. Amid geopolitical developments and an evolving trade policy environment, maritime transport faces volatile and unpredictable conditions. Heightened geopolitical tensions continue to affect maritime navigation in the Black Sea and the Red Sea; and the Strait of Hormuz, a critical route for the global oil trade, has faced risks of disturbances in

[1] TD/561/Add.2, paras. 80.35–80.40 and 80.43; UNCTAD, 2025, *Review of Maritime Transport 2025: Staying the Course in Turbulent Waters* (United Nations publication, Sales No. E.25.II.D.36, Geneva).

[2] A/RES/80/132.

[3] This chapter builds on the findings in the overview of UNCTAD, 2025, available at https://unctad.org/publication/review-maritime-transport-2025. Some adjustments have been made to clarify important developments regarding the status of some measures since the publication date. The information presented does not capture developments after September 2025, but if the status of any measures considered has changed, this has been noted.
Note: Mention of any firm or licenced process does not imply the endorsement of the United Nations.

recent months. A rapidly changing trade policy landscape, marked by new tariffs affecting economies worldwide, is disrupting global supply chains, shipping routes, port call networks and strategic planning.

7. Increased volatility is reflected in freight markets, trade flows and patterns and shipping costs, with developing countries the most affected, particularly the least developed countries and small island developing States. 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.

8. One example is the net-zero framework of the International Maritime Organization, a set of draft regulations on reducing greenhouse gas emissions from shipping. Agreed in April 2025, the framework was to be considered for formal adoption in October 2025. However, at its extraordinary session in October 2025, the Marine Environment Protection Committee agreed to adjourn discussions on the adoption of the net-zero framework for one year.[4] Another example involves alternative and low-carbon fuels, which will be critical in achieving sectoral targets to reduce greenhouse gas emissions but could also pose risks of pollution damage and personal injury that need to be addressed. Further, effective protection of seafarer rights is increasing in importance, particularly in times of disruption, as is the need to upskill and train seafarers amid rapid technological change and a shift to alternative fuels. Finally, digitalization and advances in technology and artificial intelligence offer opportunities, including to enhance port performance and improve transport and trade facilitation. At the same time, appropriate cybersecurity strategies will be required in order to reduce vulnerability to potentially escalating cyberrisks and threats.

9. These and other key developments are covered in *Review of Maritime Transport 2025* across various thematic areas and are addressed in this chapter.

A. International maritime trade

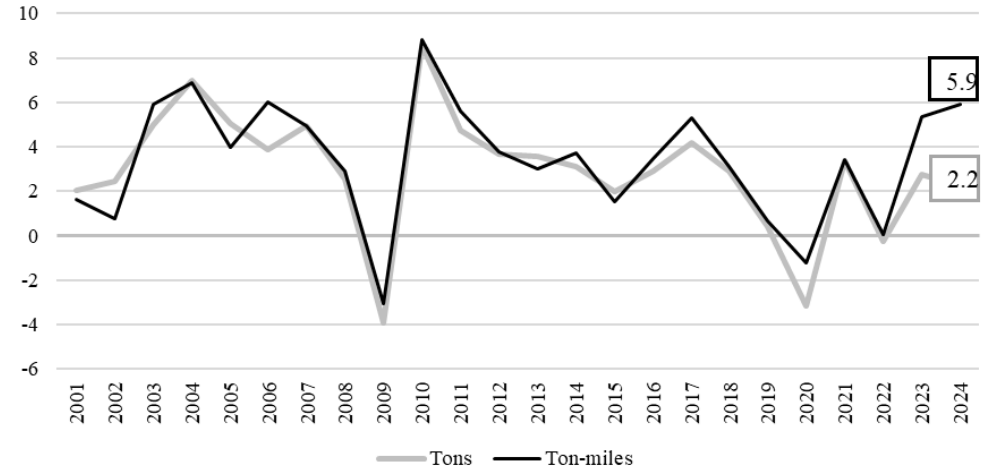
1. Maritime trade continues to adjust to geopolitical and structural pressures

10. Seaborne trade recorded 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 disruptions in the Red Sea persisted (figure 1). Growth was forecast to slow in 2025. 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, in 2026–2030, UNCTAD projects that total seaborne trade volumes will grow at an average annual rate of 2 per cent and containerized trade volumes, by 2.3 per cent. A marginal increase of 0.3 per cent is projected for ton-miles.[5] These shifts largely reflect structural drivers, such as geopolitical realignment, industrial policy changes and the global energy transition.

[4] See https://www.imo.org/en/mediacentre/pressbriefings/pages/imo-net-zero-shipping-talks-to-resume-in-2026.aspx (accessed January 2026). For further information, see chapter II, section E.

[5] Distance-adjusted volume projections are by Clarksons Research.

Figure 1
Seaborne trade growth
(Annual percentage change)

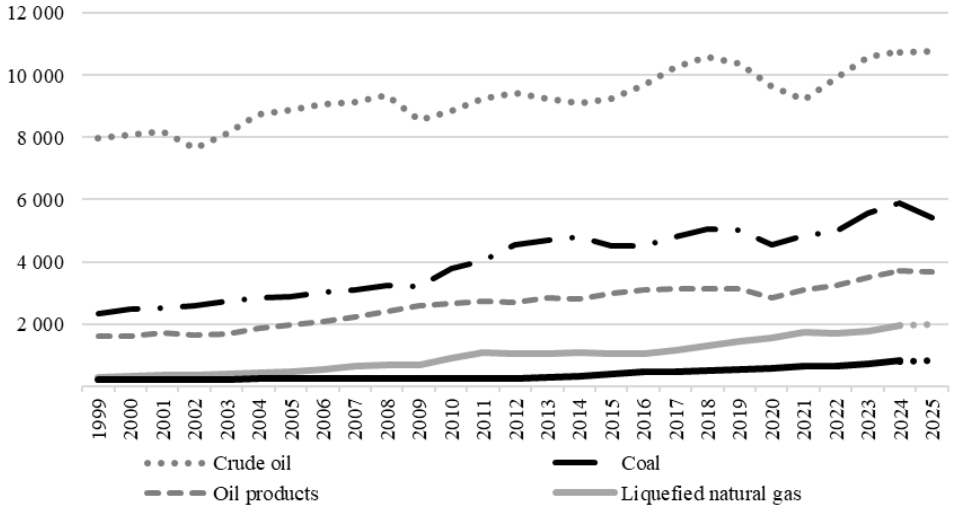


Source: UNCTAD, 2025.

2. Diverging trends are seen across shipping segments: Containerized and energy trade

11. Containerized trade rebounded in 2024, driven by restocking, rerouted flows due to the disruptions 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 increased in 2024, due to demand from Asia, yet this contrasted with a longer-term decline amid the global energy transition. Oil volumes remained broadly stable, but supply rerouting around the Cape of Good Hope and towards Asia lengthened trade distances. Gas, particularly liquefied natural gas, was the most dynamic segment, supported by the diversification of suppliers and destinations. These developments serve to show that 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 in 2025 was more subdued, compared to past performance and initial expectations, as weak consumer demand and trade policy uncertainty both weighed on global trade dynamics.

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



Source: UNCTAD, 2025.
Note: Figures for 2025 are forecasts.

3. Critical minerals trade opens new opportunities and logistics and policy readiness are key enabling factors

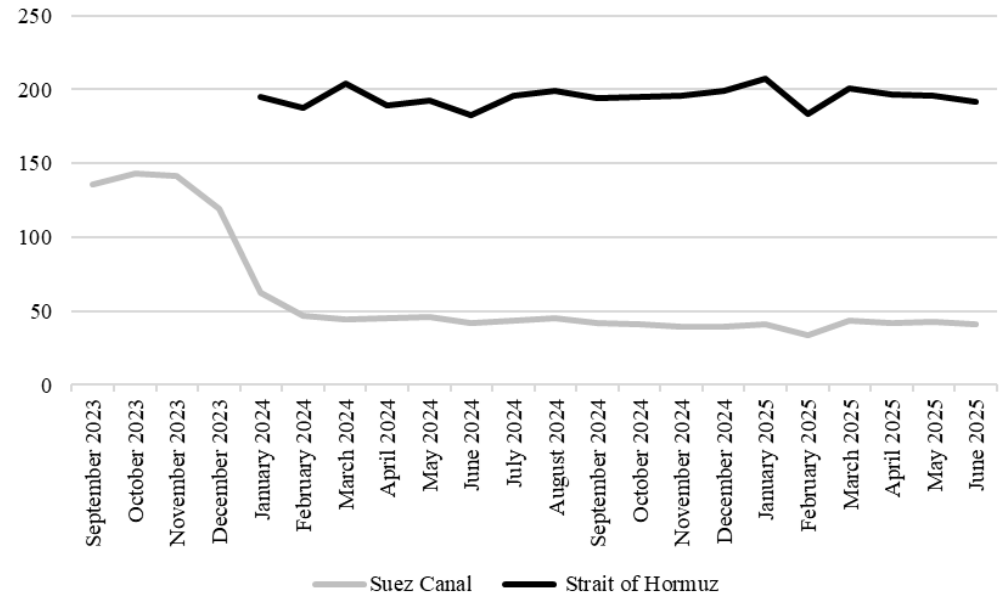
12. Trade in critical minerals is expanding rapidly. At the same time, the concentration of seaborne trade flows in a few bilateral corridors for many critical minerals, such as cobalt, copper and lithium, heightens exposure to supply chain interruptions. To reduce strategic dependencies, importing countries 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 with regard to cobalt and copper.

B. World shipping fleet and services

1. Maritime transport navigates uncharted waters amid geopolitical instability and trade policy uncertainty

13. Disruptions to shipping navigation in the Red Sea continue, with ships avoiding the Suez Canal. Ship tonnage transit levels by early May 2025 remained at 70 per cent below the average in 2023. In June 2025, tensions between the Islamic Republic of Iran and Israel increased concerns about interruptions at maritime chokepoints, particularly the Strait of Hormuz, which accounts for 11 per cent of maritime trade and over one third of seaborne oil exports. By end-June 2025, ship transit patterns through this 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 the Suez Canal
(Millions of gross tons)



Source: UNCTAD, 2025.

14. 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 announced measures such as port fees targeting certain ships calling at ports in the United States, expected to apply to vessels owned or operated by China, as well as to vessels built by China and other foreign-built vehicle carriers; however, as of 10 November 2025, this

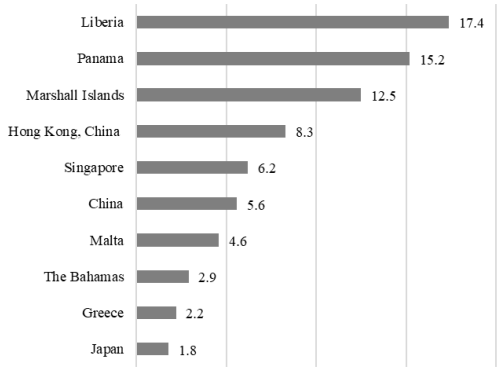
measure was suspended for one year.[6] The implications of tariffs and port fees for maritime trade flows and patterns, demand for shipping services and fleet capacity, the design of shipping networks, port of call configurations and fleet deployment plans are not yet fully understood. Different outcomes, potentially leading in diverse directions, could result from the combined effect of these measures on various economies, regions and stakeholders. Shipping operations, service offerings and capacity deployment patterns may need adjustment in line with changing dynamics.

2. Transformational trends influence the global fleet profile and capacity

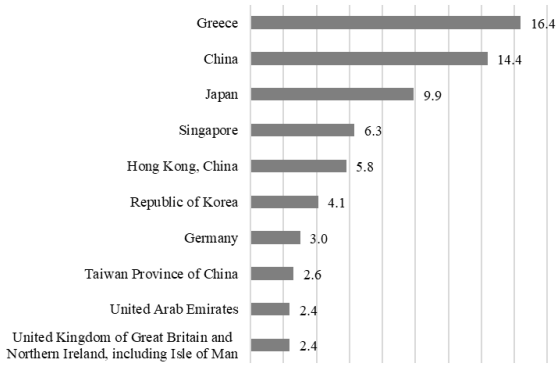
15. On 1 January 2025, the global fleet reached 112,500 commercial vessels, with a total carrying capacity of 2.44 billion dead weight tons. This represented an annual increase of 3.4 per cent, on par with the expansion in 2023, but below the annual average of 5.1 per cent over the past two decades, although a faster rate than that of maritime trade growth. Progress in greening the fleet is under way, but incremental. As at 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. At the same time, labour shortages, technological advancements and associated security threats are adding complexity and reshaping the global fleet profile and outlook. The leading flags of registration and ship-owning countries remained broadly unchanged, with some shifts in relative rankings. As at 1 January 2025, the top three flags of registration, Liberia, Panama and the Marshall Islands, together accounted for 45.1 per cent of total world ship carrying capacity. The top three ship-owning countries, Greece, China and Japan, in order of total ownership share, accounted for over 40.7 per cent. Greece was the leading ship-owning country, with 16.4 per cent of global fleet capacity (figure 4).

Figure 4
Leading flags of registration and ship-owning countries, 1 January 2025
(Percentage of dead weight ton capacity)

(a) Flags of registration



(b) Ship-owning countries



Source: UNCTAD, 2025.

C. Freight rates and maritime transport costs

16. Freight rate volatility is becoming the norm, driven by geopolitical tensions, trade policy shifts and fragile supply and demand fundamentals. In mid-2024–mid-2025, containerized freight rates remained volatile and elevated. Spot rates had surged by mid-2024, approaching the peaks during the COVID-19 pandemic, as disruptions in the Red Sea and rerouting around the Cape of Good Hope caused longer voyage distances and times and spurred greater fuel consumption and higher costs. By year-end, spot rates had moderated, but remained significantly above pre-crisis levels. The Shanghai Containerized Freight Index averaged 2,496 points in 2024, up by 149 per cent from 2023. In the same period,

[6] See https://ustr.gov/sites/default/files/files/Issue_Areas/Enforcement/Section%20301/2025-19873.pdf (accessed January 2026).

container ship charter rates increased across all vessel segments, with operators favouring short-term contracts for flexibility. In early 2025, containerized freight rates temporarily declined due to weaker seasonal demand following the Chinese New Year. Volatility escalated thereafter, however, propelled by new tariff announcements and increased geopolitical risks, including in the Strait of Hormuz. Dry bulk freight rates surged in 2024 on the back of demand for coal, grain and fertilizers, 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.

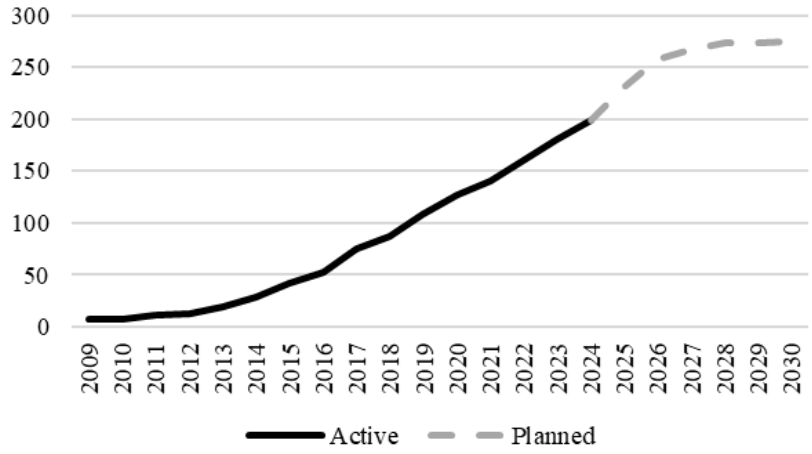
17. Environmental compliance costs are expected to reshape maritime transport economics. European Union carbon emissions pricing, applicable to shipments to and from European ports, is already starting to affect transport cost structures, the global fleet profile and competitiveness across ship segments.

D. Port performance and maritime trade facilitation

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

18. There has been modest growth in port calls by dry bulk carriers. Tanker and container ship traffic remained relatively stable in 2024. A key factor underpinning port selection under the port call configuration, expected to remain important in future, is the availability of alternative-fuel bunkering infrastructure. For example, liquefied natural gas bunkering has shown growth across more ports in recent years, reaching around 200 ports in 2024, with steady increases expected (figure 5).

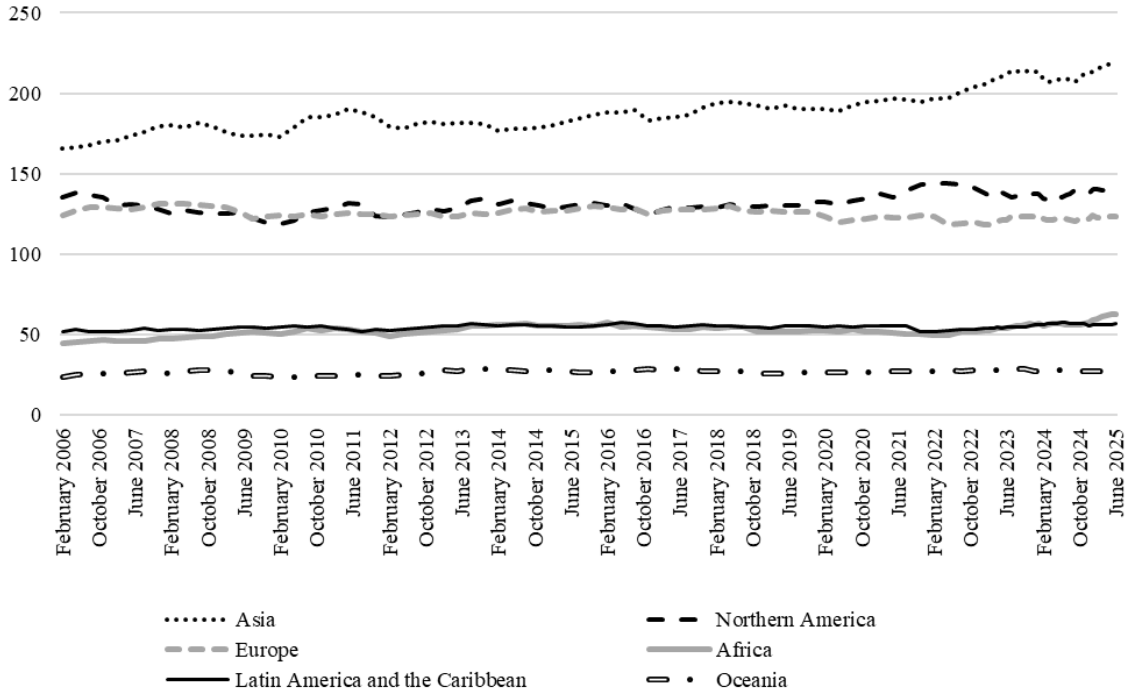
Figure 5
Ports providing liquefied natural gas bunkering services
(Number)



Source: UNCTAD, 2025.
Note: Active ports are those reportedly able to provide a liquefied natural gas bunkering service; planned ports include those that reported start-up dates for such a service as at May 2025.

19. The UNCTAD Liner Shipping Connectivity Index, a measure by which countries can assess the level of integration into global trade networks and maritime transport connectivity globally, reflects increases in the connectivity of ports in Africa and Asia (figure 6). By mid-2025, Asia had continued to maintain leadership in liner shipping connectivity. Africa, supported by rerouting away from the Red Sea, showed the fastest growth (10 per cent) in June 2024–June 2025.

Figure 6
Average Liner Shipping Connectivity Index value by region

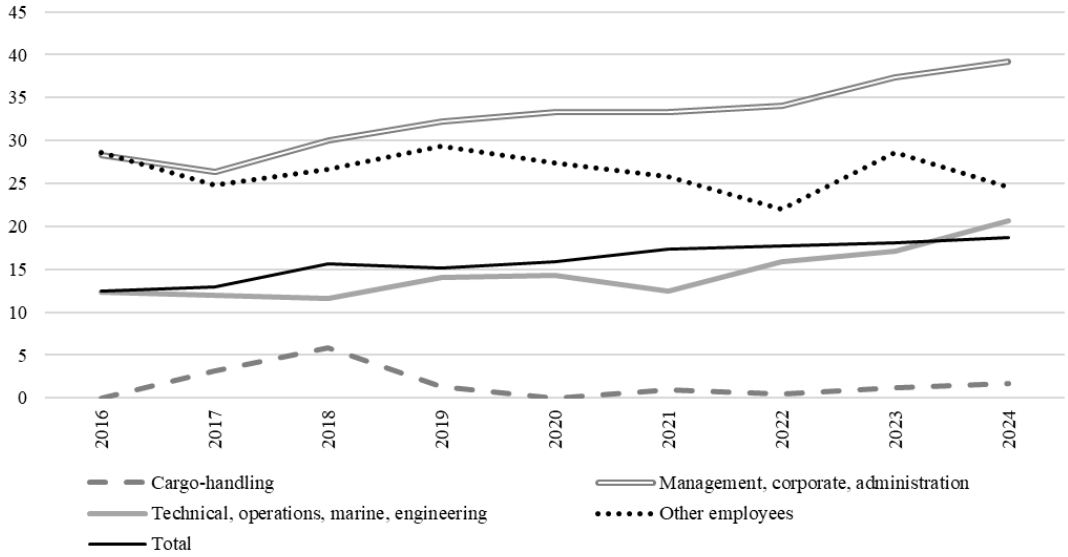


Source: UNCTAD, 2025.

Note: The index is set at 100 for the average value of country connectivity in February 2023. For countries without liner shipping connections, values are assumed to be zero, to better reflect lost connectivity. Countries without liner shipping connections during the entire period are excluded from the averages.

20. Global ports are also dealing with congestion and prolonged ship waiting times. The average waiting time in port increased in 2024 in 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 balance, with women presently accounting for nearly 40 per cent of managerial positions. However, in other areas, men remain dominant, particularly in the cargo-handling sector, in which less than 2 per cent of workers are women (figure 7). Digitalization and automation are expected to open new paths for women, particularly in technology-driven and less physically intensive roles.

Figure 7
Women's median participation in port workforces
(Percentage)



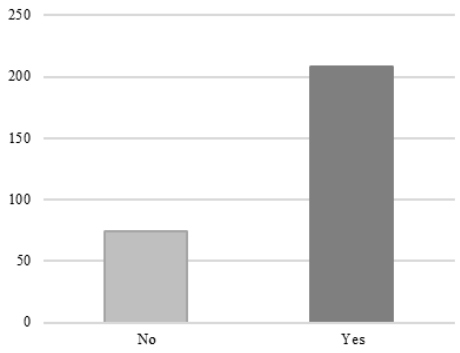
Source: UNCTAD, 2025.
Note: Data are summarized without using missing data imputation.

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

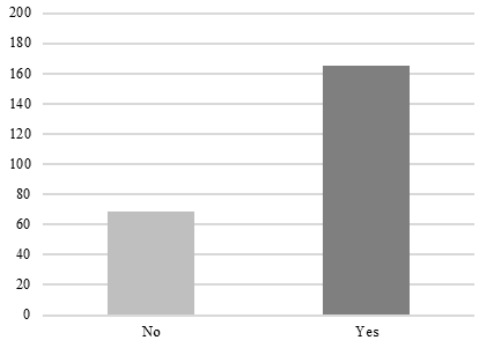
21. Trade facilitation measures can enhance port performance, including by improving transparency and communications among maritime transport stakeholders from the public and private sectors. Digital infrastructure, such as maritime single windows, port community systems and trade single windows, enhances collaboration and data exchanges. Countries with such tools tend to exhibit improved liner shipping connectivity levels and logistics performance (figure 8).

Figure 8
Correlation between connectivity and digital trade facilitation tools
(Average Liner Shipping Connectivity Index value)

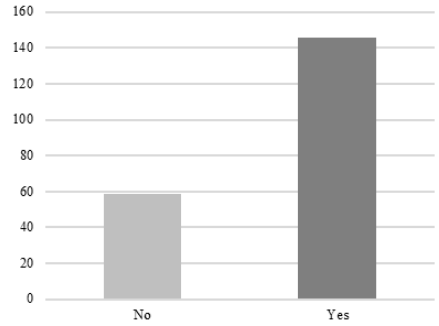
(a) Port community system fully implemented



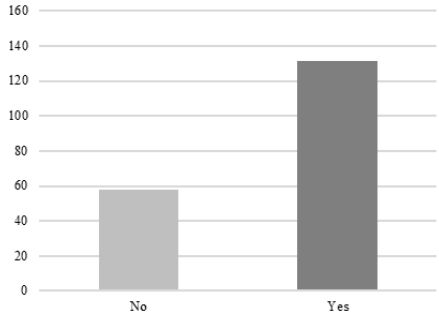
(b) Maritime single window fully implemented



(c) Trade single window fully implemented



(d) Maritime single window, port community system or trade single window fully implemented



Source: UNCTAD, 2025.

22. The Convention on Facilitation of International Maritime Traffic and the Agreement on Trade Facilitation of the World Trade Organization 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 increasing digitalization, it is critical to implement risk mitigation solutions and robust cybersecurity strategies in transport and trade facilitation.

E. Legal issues and regulatory developments

1. Draft International Maritime Organization regulations under consideration, to curb greenhouse gas emissions from shipping

23. In October 2025, in an important development, the draft net-zero framework, approved by the Marine Environment Protection Committee of the International Maritime Organization in April 2025, was to be considered for formal adoption, as a new mandatory chapter of annex VI to the International Convention for the Prevention of Pollution from Ships. However, at its extraordinary session in October 2025, the Marine Environment Protection Committee agreed to adjourn the session for one year, to allow for further discussions.

24. The framework consists of both technical and economic elements, including a global fuel standard, a carbon pricing and emissions trading mechanism and the establishment of a net-zero fund, to collect, manage and disburse revenues. The fund is expected to focus on, among others, rewarding low-emission 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 International Maritime Organization greenhouse gas emissions strategy. Revenues generated and available for disbursement could make an important contribution to a just energy transition in developing countries, particularly 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.

25. Subject to formal adoption of the net-zero framework, relevant monitoring, reporting and financial obligations with regard 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.

2. International legal and regulatory framework needs to keep pace with uptake of alternative fuels and advances in technology, including ship automation

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

3. Safeguarding seafarers' rights becoming increasingly critical

27. Seafarers operate in a highly challenging environment, often in difficult working conditions. Geopolitical tensions and disruptions compound these issues. Recently agreed amendments to the Maritime Labour Convention, to strengthen seafarers' rights to repatriation and shore leave, and the development of further guidelines on the fair treatment of seafarers detained in connection with alleged crimes, reinforce the existing regulatory framework and require support from all stakeholders.

4. New global rules on sustainable ship recycling entering into force

28. The entry into force in June 2025 of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, adopted at a diplomatic conference held in Hong Kong, China, in May 2009, is expected to make a significant contribution to enhancing the safety of workers and rendering ship recycling operations more environmentally friendly. The importance of ship recycling will increase as the global fleet is renewed and replaced by ships using low- or zero-carbon fuels. The four major recycling countries and some major flags of registration are already among the Parties to the Convention; United Nations Member States are encouraged to consider acceding to the Convention, to ensure widespread application at the international level.

F. Policy focus

29. Maritime transport is at a critical juncture. A transition to a sustainable, resilient and digitally enabled future needs to be ensured, while navigating an increasingly unpredictable operational landscape, with geopolitical tensions, geoeconomic fragmentation and the increasing imperative to decarbonize, digitalize and future-proof infrastructure, operations and services. Against this background, sustainability and resilience-building, system flexibility and agile adaptation are critical. Developing countries require support and assistance, to better prepare for and adapt to an evolving landscape in maritime transport and trade.

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

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

(b) 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 in 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;

(c) 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. Doing so requires a larger scrapping capacity that is compliant with the Hong Kong International 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 at the international level;

(d) 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, for both the safety and well-being of seafarers and the safe and secure flow of goods across global supply chains. Governments, international organizations and other stakeholders should accelerate the implementation and enforcement of the framework, including the latest amendments to the Maritime Labour Convention. Closer collaboration could 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;

(e) Implement proactive, inclusive recruitment strategies and tap into the pool of talent provided by women seafarers, who remain significantly underrepresented in the current workforce, in order to help address the persistent seafarer shortage. For Governments, the shipping industry and relevant regulatory agencies, providing incentives to attract qualified labour and 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 Train for Trade Port Management Programme, play important roles;

(f) Effectively implement regulatory measures, to reduce greenhouse gas emissions from international shipping, accelerate decarbonization and facilitate a just and fair energy transition. Doing so depends 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. The monitoring, reporting and financial obligations envisaged under the framework need to be factored into commercial maritime contracts; commercial parties, in collaboration with industry associations, could begin to consider the need for appropriate contractual clauses, to balance the allocation of associated commercial risks;

(g) The use of energy-saving technologies on ships and in ports, as well as multi-stakeholder initiatives such as green shipping corridors, should be accelerated. Funds under a new carbon pricing mechanism could potentially contribute to supporting the energy transition in developing countries. Since significant additional investment is 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;

(h) Prepare for the safe handling, use and carriage of alternative fuels. Alternative fuels, while key in reducing greenhouse gas emissions from shipping, could pose significant risks. Their carriage and use require appropriate safety and security protocols. Addressing associated risks and liabilities, including making available adequate compensation for pollution damage, 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;

(i) 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, such as the monitoring of navigation patterns and predictive maintenance solutions. The increasing use of technology in transport and trade facilitation requires appropriate cybersecurity strategies and an adequate regulatory framework;

(j) Measure port performance, to monitor and track efficiency, connectivity, sustainability and resilience. Ports should regularly assess performance, using globally recognized indicators tailored to their particular strategies, priorities and local conditions, to identify areas for improvement and strategic goals. Use of the UNCTAD port performance scorecard can help ports define performance gaps and set measurable improvement targets;

(k) Capitalize on trade facilitation measures, to enhance port and maritime supply chain performance. Countries are encouraged to implement the Convention on Facilitation of International Maritime Traffic and the Agreement on Trade Facilitation, including provisions related to automation, digitalization and maritime single windows in ports. Collaborations in port and trade facilitation, digital infrastructure and data should be enhanced. Digital systems[7] can provide scalable, standards-aligned platforms for resilient and transparent port operations;

(l) Enhance capacity-building and support developing countries. UNCTAD and other development partners should support developing countries, particularly landlocked developing countries, the least developed countries and small island developing States, in better managing risks and seizing opportunities in 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;

(m) Strengthen and promote targeted collaboration on regulatory issues, to address new challenges. Close collaboration among all public and private sector stakeholders is key in navigating persistent and emerging challenges and, ultimately, realizing the sustainability and resilience of supply chains. Regulators should work with industry and other stakeholders, whose involvement is required for an effective adaptation to changing conditions and the mitigation of potential risks. To this end, the active engagement of all stakeholders in ongoing International Maritime Organization processes is encouraged, including, for example, the development of a voluntary maritime autonomous surface ships code and guidance aimed at combating fraudulent ship registration and ship registries.

III. Key aspects of the global policy framework in support of sustainable, resilient and inclusive maritime transport, logistics, trade facilitation and supply chains

31. The United Nations Conference on Trade and Development, at its sixteenth session (UNCTAD XVI), adopted the Geneva Consensus, strengthening the UNCTAD mandate in support of sustainable, resilient and smart transport, logistics, trade facilitation and supply chains. In addition, the ministerial declarations of the group of landlocked developing countries, the least developed countries and the small island developing States to UNCTAD XVI and the Ministerial Statement for Enhancing Transport and Logistics in Small Island Developing States adopted at the first UNCTAD Global Supply Chain Forum (Barbados, 2024) stressed the need for related support.[8] Key priorities identified by transport ministers from small island developing States included the following: enhancing connectivity and accessibility; strengthening resilience and sustainability; addressing the transport, energy and food security nexus; mobilizing sustainable finance and investment; promoting innovation, digital transformation and capacity-building; partnerships, international

[7] See, for example, https://www.asyhub.org/.

[8] See https://unctad.org/unctad16/documents and https://unctad.org/meeting/global-supply-chain-forum-2024 (accessed January 2026).

cooperation and monitoring; and ensuring inclusivity and equity. The UNCTAD strategy to support small island developing States, launched in 2024, may be noted in this context.[9] In addition, discussions at the UNCTAD XVI ministerial round table, "Towards resilient, sustainable and inclusive supply chains and trade logistics", served to identify the need for concrete policy actions in a number of areas, including investment in sustainable transport and climate-resilient infrastructure, the transition to a low-carbon path, trade facilitation, coordinated crisis responses, digital innovations and transport corridor development and integration.[10]

32. Recent international agreements have focused on key country groupings, noting the need for targeted actions to transform transport, including by strengthening transport connectivity, climate resilience and digital trade facilitation. Such agreements include the Doha Programme of Action for the Least Developed Countries, emphasizing investment in people, science, technology and innovation, structural transformation, trade and regional integration, climate resilience and the role of transport and ports in enabling diversification and graduation from the least developed country category; the Antigua and Barbuda Agenda for Small Island Developing States: A Renewed Declaration for Resilient Prosperity, addressing climate exposure and economic fragility and prioritizing sustainable connectivity and transport, climate action, the ocean economy, disaster risk reduction and digitalization, as well as access to concessional and climate finance; and the Programme of Action for Landlocked Developing Countries for the Decade 2024–2034 and the Awaza Political Declaration, highlighting the need to address structural disadvantages, such as high transport costs, infrastructure deficits and climate vulnerabilities, and to strengthen transit transport connectivity, digital transformation and resilient corridors.[11]

33. With regard to financing for development, the Sevilla Commitment outlines ways to close sustainable development financing gaps and mobilize finance at scale, while investing in trade-related infrastructure and connectivity and promoting regional integration.[12]

34. The General Assembly, in its resolution on oceans and the law of the sea, provided further policy guidance.[13] In addition to highlighting the importance of action in support of maritime safety and security, the resolution serves to underscore the critical role of oceans for livelihoods and trade, while emphasizing the increasing risks posed by climatic factors and ecosystem degradation, including with reference to shipping and coastal transport infrastructure, such as ports; and reiterate the need for strengthened cooperation on key issues, in particular with regard to vulnerable coastal communities and small island developing States.

35. The declaration of the United Nations Decade of Sustainable Transport 2026–2035 serves to highlight the importance of sustainable, efficient and resilient transport systems that integrate all modes of transport for the achievement of the 2030 Agenda for Sustainable Development and related goals. Key thematic areas and priorities include stronger international cooperation, to develop multimodal transport networks; improved connectivity for landlocked developing countries; and access, safety, affordability and coordinated action, to advance inclusive and environmentally sound transport solutions.[14] The purpose of the United Nations Decade of Sustainable Transport 2026–2035 "shall be to accelerate collective action towards sustainable, inclusive, accessible, affordable, safe, low- or zero-emission, energy-efficient, quality, reliable and resilient transport systems worldwide, taking into account different national circumstances, and in support of the 2030 Agenda for Sustainable Development and beyond".[15] In this context, an implementation plan issued in December 2025 is aimed at facilitating transformative action by all relevant

[9] See https://unctad.org/publication/unctad-strategy-support-small-island-developing-states (accessed January 2026).

[10] TD/555. See https://unctad.org/unctad16/ministerial-roundtable-towards-resilient-sustainable-and-inclusive-supply-chains (accessed January 2026).

[11] A/RES/76/258; A/RES/78/317; A/RES/79/233; A/RES/80/3.

[12] A/RES/79/323.

[13] A/RES/80/110.

[14] A/RES/78/148.

[15] A/RES/80/132.

stakeholders under the following six focus areas: ensure access to sustainable transport for all; advance low- or zero-carbon, resilient and environmentally sound transport systems; enhance efficiency and promote sustainable connectivity and logistics; shape people-centred urban mobility and liveable cities; make transport safe and secure; and leverage science, technology and innovation for sustainable transport. With regard to maritime transport and ports, the implementation plan highlights decarbonization; resilience-building, including climate adaptation, redundancy and crisis management; digitalization through paperless trade, data interoperability and cybersecurity; and policy coherence, by aligning with development, climate and ocean agendas.[16]

IV. Turning policy commitments into collective action and results

36. Maritime transport is a conduit for global trade and can catalyse sustainable, resilient, climate-ready, digitally enabled and data-driven supply chains. However, the sector and its diverse stakeholders face many transitions, including towards zero carbon, digital systems and new trade routes, which require adaptation. To ensure adaptations will be well-managed, inclusive and sustainable, leaving no one behind and enabling all countries to seize opportunities while building resilience to shocks and disruption, concerted collective action is needed. The international community has established policy and strategic frameworks that reflect common objectives and commitments; at present, there is a need to move from ambition to action. Proposed priorities for action are outlined in the overview of *Review of Maritime Transport 2025*, covering the following issues: just decarbonization, transition to cleaner energy, digital uptake and data and system interoperability; regional integration through transport systems and corridors; trade facilitation supported by digital tools and data and enhanced cybersecurity; resilience of infrastructure, services and operations and climate-ready maritime transport systems; adequate financing; a skilled workforce with strong protection of rights and well-being; and upgraded and fit-for-purpose rules, to ensure digital and energy transition readiness amid more frequent shock-induced disruptions. In this context, effective partnerships, collaboration networks and training and capacity-building are critical.

37. Building on existing activities under its three pillars of work, namely, research and analysis, technical assistance and consensus-building,[17] and supported by a strengthened related mandate, UNCTAD has an important role to play in supporting countries and stakeholders in maritime transport and logistics in transitions and adaptations to the evolving operating landscape. UNCTAD, through its three pillars of work, addresses some of the key issues highlighted in the present note, with the aim of building capacity to mainstream sustainability, resilience, digital readiness, data-driven solutions and climate-risk preparedness in planning, operations and policy formulation. Relevant analytical work is disseminated through the annual publication *Review of Maritime Transport*, providing critical sectoral insight and extensive data and statistics, monitoring, tracking and reporting on key developments; and topical studies featuring insights and intelligence, to support policymaking and assist stakeholders on the ground, including analytical reports on the implications of the COVID-19 pandemic for commercial contracts and on maritime transport-related impacts and response measures, as well as other knowledge products and training courses developed as part of a multi-agency project, with a focus on addressing the implications of the pandemic.[18] Relevant technical assistance and capacity-building includes a guidebook for ports, a training module on ports and maritime supply chain resilience, a project on sustainable smart ports, a sustainable freight transport framework, a sustainable freight transport and finance toolkit and extensive work on climate change adaptation in ports, such as a capacity-building project with a focus on critical coastal transport infrastructure in small island developing States, including a methodological framework and adaptation guidelines in support of climate-resilient ports; and research and

[16] See https://sdgs.un.org/un-decade-sustainable-transport-2026-2035 (accessed January 2026).

[17] See https://unctad.org/ttl.

[18] See, for example, https://sdgpulse.unctad.org/sustainable-transport/, https://unctad.org/project/transport-and-trade-connectivity-age-pandemics and https://unttc.org/ (accessed January 2026).

analysis includes work on related policy and legal issues, as well as on trade facilitation and training and capacity-building, under the Train for Trade Programme, and the Automated System for Customs Data, the largest technical cooperation programme of UNCTAD.[19]

38. The twelfth session of the Multi-year Expert Meeting on Transport, Trade Logistics and Trade Facilitation provides an opportunity to articulate a way forward for maritime transport and logistics, to stay the course in turbulent waters. To help guide the discussion, the following questions are offered for consideration:

(a) What are the lessons learned from recurrent supply chain disruptions affecting maritime transport, logistics, maritime chokepoints, shipping networks and trading patterns? Which good practices may be highlighted?

(b) Which approaches should be prioritized, to future-proof maritime transport and logistics by enhancing preparedness and the ability to respond, recover from and adapt to disruption and change? Which metrics should be used to measure progress while offering a useful framework with which to assess improvements in resilience over time?

(c) Which technical assistance and capacity-building efforts, products and/or tools are required, particularly with regard to vulnerable economies such as landlocked developing countries, the least developed countries and small island developing States, to efficiently transition to low-carbon, digital and resilient transport and logistics? How can UNCTAD best assist in this regard?

(d) Which business opportunities could arise from the shifting geography of trade and evolving globalization patterns, including rerouting and the potential for ports in developing countries? How can developing countries and their private sector stakeholders benefit from such opportunities?

(e) How can the financial resources and investment required to enhance sustainability, build resilience, advance climate readiness and support digitalization uptake in maritime transport and logistics be scaled up and diversified? What role is there for innovative financing mechanisms? What are successful examples of innovative financing applied in maritime transport and logistics?

(f) What are some key topics that should feature as part of the discussions at the second UNCTAD Global Supply Chain Forum? What could be among the outcomes of the forum?

(g) Which collaborative initiatives could help ensure that all modes of transport and stakeholders across the logistics chain, with shipping and ports playing a strategic leading role, can mainstream sustainability and resilience criteria?

(h) Which particular collective activities and initiatives may be proposed as part of the United Nations Decade of Sustainable Transport 2026–2035?

[19] UNCTAD, 2024, *Review of Maritime Transport 2024: Navigating Maritime Chokepoints* (United nations publication, Sales No. E.24.II.D.19, Geneva); UNCTAD, 2022, Climate-resilience of seaports: Adequate finance is critical for developing countries but remains a major challenge, Policy Brief No. 3. See https://resilientmaritimelogistics.unctad.org/, https://unctad.org/project/sustainable-smart-ports-african-countries-including-small-island-developing-states-recover, https://sft-framework.unctad.org/, https://unctadsftportal.org/sftftoolkit/, https://unctad.org/topic/transport-and-trade-logistics/policy-and-legislation/climate-change-and-maritime-transport, https://sidsport-climateadapt.unctad.org/, https://unctad.org/topic/transport-and-trade-logistics/trade-facilitation, https://unctad.org/topic/training-and-capacity-building/trainfortrade and https://asycuda.org/en/ (accessed January 2026).