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2025 United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Nice, 9 June –13 June 2025
Ocean Action Panels

ADVANCE UNEDITED

Ocean Action Panel 6: Advancing sustainable ocean-based economies, sustainable maritime transport and coastal community resilience leaving no one behind

Concept paper prepared by the Secretariat

Summary

The present concept paper was prepared pursuant to paragraph 24 of General Assembly resolution 78/128, in which the Assembly requested the Secretary-General of the 2025 United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development to prepare concept papers on each of the themes of the Ocean Action Panels, taking into account the relevant ocean-related processes of the Assembly and other possible contributions. The present paper relates to Ocean Action Panel 6, entitled "Advancing sustainable ocean-based economies, sustainable maritime transport and coastal community resilience leaving no one behind". In the paper, the status, trends, challenges and opportunities for the achievement of relevant targets of Sustainable Development Goal 14 are set out, under the overarching theme of the Conference: "Accelerating action and mobilizing all actors to conserve and sustainably use the ocean".

I. Introduction

1. The ocean is the cradle of life and home to a significant proportion of the world's biodiversity. It is also a vital sphere of human endeavour, providing millions of jobs in primary and secondary sectors, central to food and nutritional security and economic and social well-being. Developing a sustainable, resilient and equitable ocean economy is also identified as one of the key challenges to be addressed through the UN Ocean Decade 2021-2030.

2.The sustainable use and management of ocean resources and spaces can foster economic diversification, improved livelihoods, environmental sustainability and resilience. Encompassing the interlinked sectors of fisheries, tourism, maritime transport, renewable energy, biodiversity conservation, and waste management, the sustainable ocean or "blue" economy presents opportunities—particularly to small island developing States (SIDS) and coastal nations—to become more resilient to exogenous shocks while preserving and restoring their natural heritage and resources. Progress in building resilience is stymied by many factors, including emerging hazards such as ocean acidification, plastic pollution and biodiversity loss.

3.Ambitious action to address climate change and biodiversity loss must be taken with a commitment to a just transition for workers. Too often, livelihoods, the environment and climate change are dealt with in silos. As we move towards a sustainable ocean economy that addresses the triple planetary crisis of climate change, pollution, and biodiversity loss, it is essential to also reinforce integrated ocean governance frameworks and labour and social sustainability, and to amplify the voices of coastal communities, including Indigenous Peoples, local communities, women and youth. There is a need to enable cohesive policy and integrated management that protects and regenerates ocean ecosystems while facilitating sustainable use of marine and coastal resources for human wellbeing.

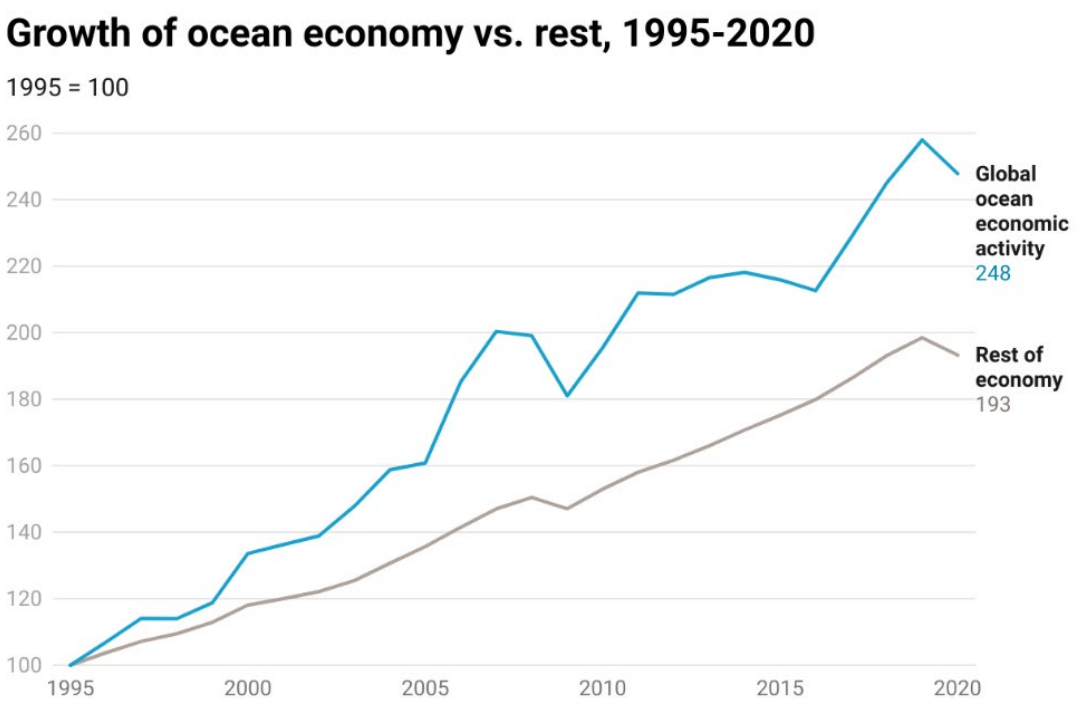
II.Status and Trends

4.The ocean economy contributed 3% to 4% of global gross value-added between 1995 and 2020, doubling in size to at least USD 2.6 trillion over this period.[1] If the ocean economy were a country, it would be the fifth largest economy in the world. Over the past 25 years, the ocean economy has expanded without major downturns, demonstrating resilience and economic potential. The Asia-Pacific region accounted for approximately 75% of ocean economy growth, with Southeastern Asia and Oceania showing the highest average rates. The ocean economy directly sustains at least 600 million livelihoods across diverse sectors, including among others fishing, aquaculture, maritime transport, tourism, offshore wind energy, and marine biotechnology.[2] Ocean economy growth has outpaced global growth since 1995, multiplying by a factor of 2.5 compared to 1.9 for the rest of the economy (cf. Figure 1below).

Figure 1

[1] OECD (2025), https://unctad.org/ter2023. World Bank (2018), The potential of the blue economy. https://blogs.worldbank.org/en/voices/potential-blue-economy

[2] UNCTAD (2023). Trade and Environment Review. United Nations: Geneva



Source: UN Trade and Development (UNCTAD) 2025 based on OECD Ocean Economy Monitor, preliminary estimates, June 2024.

5.Trade in ocean goods and services[3] reached a record of $899 billion and $1.3 trillion, respectively, in 2023 (Figure 2).[4] The biggest ocean sector was marine and coastal tourism ($725 billion), followed by maritime freight transport ($386 billion), and high-technology manufactures, which comprises manufactures for fishing, pharmaceuticals, marine sports, clean energy, and electrical equipment, among others ($346 billion). Primary marine fisheries, for food and non-food purposes, generated $114 billion in exports in 2023.[5] In 2023, exports of all aquatic food products totaled $194 billion, with an estimated 76 percent originating from marine products.[6] Asia and Europe account for over 80 per cent of global exports. Africa has a relatively small share of goods in its total ocean exports due to its low exports of manufactured ocean goods, such as ships, port equipment, and high-technology products (21 per cent, as opposed to a 41 per cent global average) (Figure 3).

[3] Excluding offshore drilling for oil and gas.
[4] UNCTAD (2025). UNCTADStat. Trade in ocean goods and services databases. databases. By contrast to GDP estimates of the ocean economy, which are measured in value-added, trade figures are based on official data reporting by countries and correspond to sales value (not value-added). As such, the GDP and trade data estimates are not comparable.
[5] Ibid.
[6] FAO (2022).

Figure 2

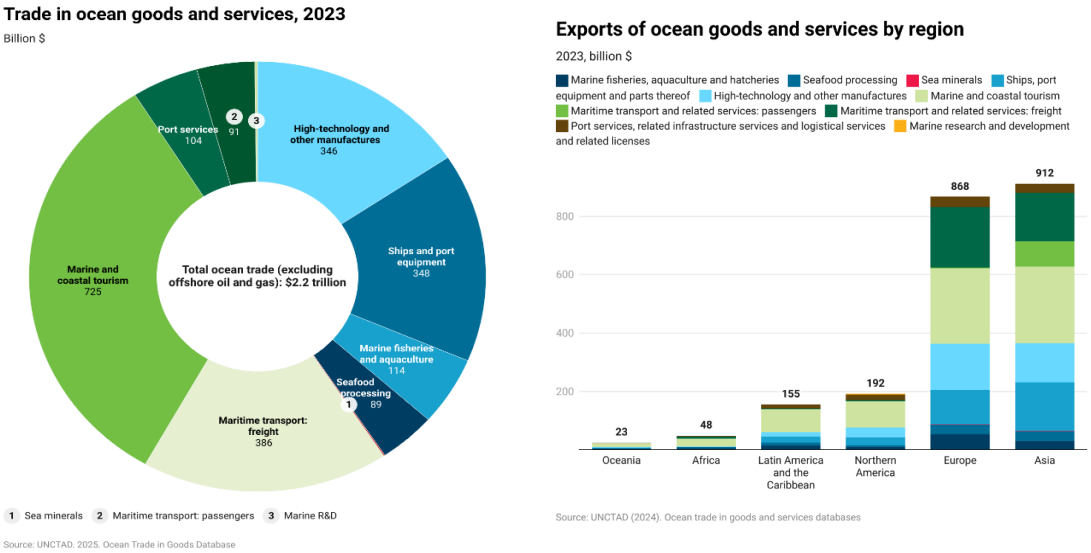
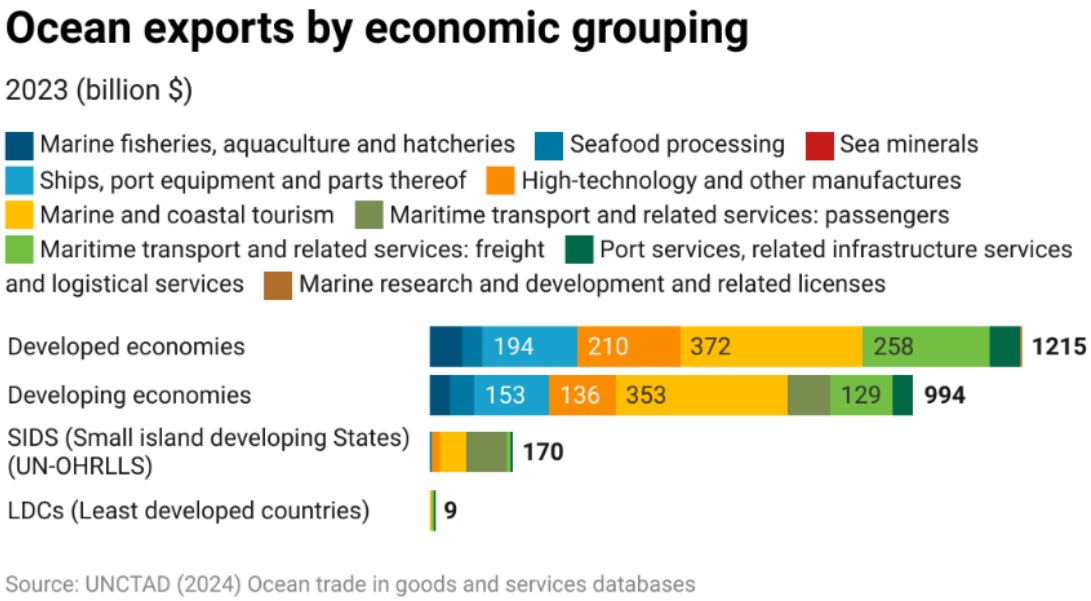


Figure 3



6.In this period of rapid growth, environmental and social considerations have often been overlooked. The ocean is under increasing stress from issues such as eutrophication, acidification, dwindling fish stocks, rising temperatures, elevated sea levels, and plastic pollution. FAO data reveals that the proportion of fish stocks within biologically sustainable limits decreased from 90% in 1974 to 62.3% in 2021. In addition, UNEP estimates that the ocean contains approximately 75-199 million tons of plastic, with 19 to 23 million tons of plastic waste entering aquatic ecosystems annually. Plastics

production doubled between 2000 and 2019, from 234 to 460 million tons based on OECD estimates. Without more ambitious policies, the amount of plastics produced around the world will continue to rise. Global production and use of plastics could reach 736 million tons (Mt) by 2040, up 70% from 435 Mt in 2020.[7] And unprecedented ocean temperatures have led to a fourth global coral-bleaching event, the second in the past decade.[8]

Fisheries and aquaculture

7.Marine and coastal capture fisheries and aquaculture nourish millions of people and sustain coastal economies and livelihoods, particularly in low- and middle-income countries. Around 61.8 million[9] people were directly employed in capture fisheries and aquaculture in 2022, and the sector provided livelihoods for 600 million people worldwide.[10] In 2022, the total first sale value of aquatic animals was around USD 447 billion, of which USD 123 billion came from aquaculture in marine areas and approximately USD 139 billion came from marine capture fisheries[11]. FAO estimates that the total net trade of aquatic animal products in low- and middle-income countries reached USD 45 billion in 2022, greater than that of all other agricultural products combined[12], highlighting the critical role of the sector on both food security and income. Small-scale and artisanal fishing, which provide an estimated 68 percent of global marine catches and provide livelihoods to around 492 million people[13] in developing countries, require particular attention. These fisherfolk may lack protections afforded by the fundamental principles and rights at work (FPRW) due to widespread informality in the sector.

8.The scourge of industrial Illegal, Unreported and Unregulated (IUU) fishing and associated criminal activity exacerbates these challenges. IUU fishing is frequently associated with severe human and labour rights violations, and forced labour and human trafficking have become pillars of IUU fishing operations, particularly affecting migrant fishers. Organized criminal activity in fisheries depletes the marine resources upon which coastal communities depend, jeopardizing food security and sustainable development of communities in coastal states, particularly SIDS. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) regulates international trade in marine species, and its enforcement is one tool to address IUU fishing.[14]

9.Some government support to fisheries is critical to ensure effective fisheries management, to help boost productivity and to build resilience in the sector.[15] But subsidies that make it easier and cheaper to fish can also drive overfishing and illegal fishing, particularly where fisheries management is weak. The total annual support to fisheries amounted to USD 10.7 billion from 2020-22 across 41 countries and territories including the world's top three fish producers – China, India and Indonesia, according to

[7] OECD (2024), Policy Scenarios for Eliminating Plastic Pollution by 2040, OECD Publishing, Paris, https://doi.org/10.1787/76400890-en.
[8] UNCTAD (2025). Background note for 5th UN Ocean Forum
[9] Ibid
[10] Ibid
[11] FAO. 2025. *Fishery and Aquaculture Statistics – Yearbook 2022*. FAO Yearbook of Fishery and Aquaculture Statistics. Rome.
[12] FAO. 2024. *The State of World Fisheries and Aquaculture 2024 – Blue Transformation in action*. Rome.
[13] FAO, Duke University & WorldFish. 2023. Illuminating Hidden Harvests – The Contributions of small-scale fisheries to sustainable development. Rome.
[14] https://cites.org/eng
[15] OECD (2025), https://doi.org/10.1787/560cd8fc-en.

OECD estimates.[16] Some 65% of government support for fisheries risks encouraging overfishing and illegal fishing in the absence of effective management.

10.A more in-depth review of the challenges and opportunities facing the fisheries and aquaculture sector can be found in the concept note for Ocean Action Panel 5: Fostering sustainable fisheries management including supporting small-scale fishers, and the concept note for Ocean Action Panel 9: Promoting the role of sustainable food from the ocean for poverty eradication and food security.

Shipping and tourism

11.With over 80 per cent of the volume of world merchandise trade carried by sea, shipping is a major engine of the ocean-based economy and the global economy as a whole. The shipping industry employs 1.89 million seafarers globally, and even at that scale, there is a predicted shortage of 90,000 officers by 2026[17] compounded by the crew change crisis during the COVID-19 pandemic. Challenges in recruiting and retaining qualified young and/or female seafarers are particularly acute, with women making up just 2% of the seafarer workforce.

12.Marine and coastal tourism represents one the largest economic activities in the global ocean economy, reaching a peak of USD 1.06 trillion in 2019, in real-terms gross value added.[18] At least 50% of all tourism takes place in coastal areas, and, thus, tourism is a cornerstone of the economies of many coastal communities—supporting up to one third of the total jobs in some countries. It is estimated that the ocean related tourism industry grows at approximately $134 billion per year and this growth trend is expected to continue. [19] In the face of this growth, coastal communities are seeking to balance economic benefits with the potentially devastating effects that overtourism can have on biodiversity and local culture.

13.For both shipping and tourism sectors, ports are crucial infrastructure assets, often integrated within large urban agglomerations. At the same time, ports are at the frontline of climate change and disaster risks. Annual port-specific risk from natural hazards has been estimated at USD 7.5 billion, with an additional USD 63.1 billion of trade at risk.[20]Annual systemic risk to global maritime transport, trade and supply-chain networks has been estimated at USD 81 billion, with (at least) USD 122 billion of economic activity on average also at risk.[21] These loss estimates do not, however, account for the expected increase of hazards under climate change and could be conservative, given that losses arising from a single extreme event can lead to potentially crippling losses, as exemplified by recent tropical cyclones. Climate impacts are discussed further, below.[22]

Ocean-based energy

14.Renewable energy located in or powered by the ocean has enormous potential to advance the green energy transition in the coming decades. Offshore wind and marine

[16] Ibid.
[17] See BIMCO/ICS Seafarer Workforce Report 2021
[18] OECD (2025) https://doi.org/10.1787/a9096fb1-en.
[19] https://www.un.org/sustainabledevelopment/oceans/
[20] Verschuur J, Koks EE, Li S, Hall JW (2023a) Multi-hazard risk to global port infrastructure and resulting trade and logistics losses. Commun Earth Environ 4:5. https:// doi. org/ 10. 1038/ s43247- 022- 00656-7
[21] https:// doi. org/ 10. 1038/s41558- 023- 01754-w
[22] See also https://www.undrr.org/gar/gar2023-special-report

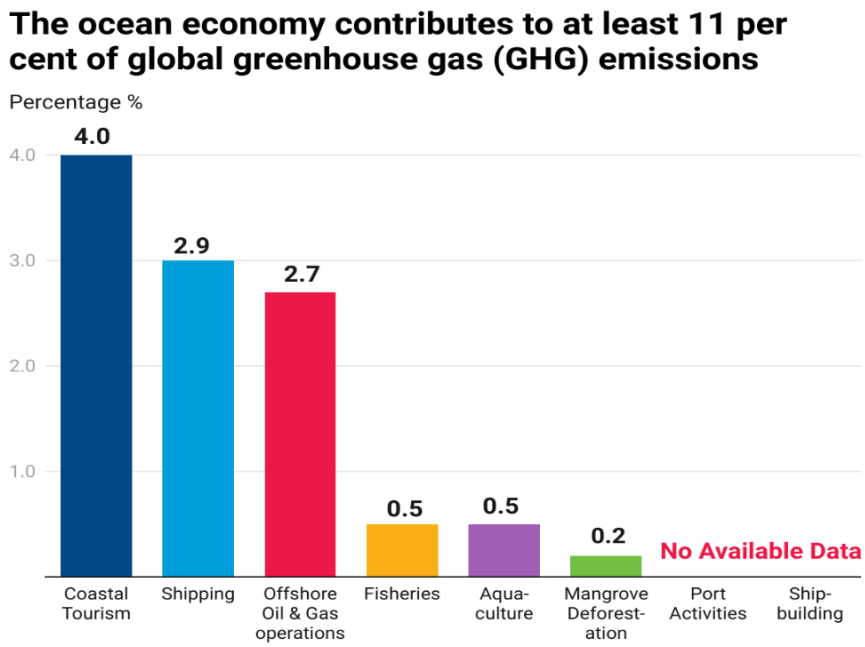
renewables showed an impressive average annual growth rate of 31%, with global value added rising from USD 38 million in 2000 to USD 5 billion in 2020, although it remains very small as a share of the global ocean economy.[23] In 2024, offshore wind energy was valued at more than USD 39.6 billion in corporate revenues, and by 2031 the industry is projected to be worth more than USD 146 billion.[24] Globally, countries have made offshore wind pledges that would provide power to approximately 1.5 billion homes per year by 2050.[25] Wave and tide energy are currently less developed than wind, but pilot projects can be found in France, Ireland, China, Denmark, Australia, Republic of Korea and others.[26] Other emerging sources include "salinity gradient" and "thermal energy conversion", which use differences in levels of saltiness or temperature within the ocean to generate energy.[27]

Climate change and pollution impacts

15.The ocean economy is both a key contributor and victim of climate change. The ocean economy accounted for at least 11 per cent of global GHG emissions, including from coastal and marine tourism (4 per cent), shipping (2.9 per cent), offshore oil and gas operations (2.7 per cent) and emissions from fishing and aquaculture (1 per cent) (Figure 4 and Figure 5).[28], [29] These are likely underestimates, as reliable data is lacking for key sectors such as port activities and shipbuilding.

[23] OECD (2025), The Ocean Economy to 2050, OECD Publishing, Paris, https://doi.org/10.1787/a9096fb1-en.
[24] https://www.verifiedmarketresearch.com/product/global-offshore-wind-market-size-and-forecast/
[25] https://www.wri.org/insights/ocean-based-climate-change-solutions
[26] https://www.weforum.org/stories/2022/03/wave-energy-ocean-electricity-renewables/
[27] https://www.irena.org/Energy-Transition/Technology/Ocean-energy
[28] UNCTAD (2023) https://unctad.org/system/files/official-document/rmt2023_en.pdf.
[29] UNCTAD (2025) calculations based on UNCTAD (2024), High Level Panel for a Sustainable Ocean Economy (2022), FAO (2021), Donato et al., (2011), MacLeod et al. (2020), IEA (2024), Statista (2024).

Figure 4



Source: UNCTAD (2025) calculations based on UNCTAD (2024), High Level Panel for a Sustainable Ocean Economy (2022), FAO (2021), Donato et al., (2011), MacLeod et al. (2020), IEA (2024), Statista (2024)

16. 2023 was the warmest year on record for seawater surface temperatures, with an increase of 1.55°C compared to 1850-1900 levels[30]. As climate change heats the oceans, ocean-related hazards including storms, sea level rise and saltwater intrusion have the potential to become more intense. The effects of ocean hazards can ripple across the globe with profound consequences. Seawater warming significantly impacts the ocean economy and trade by disrupting water ways and marine ecosystems, exacerbating extreme weather events, and leading to shifts in fish populations and habitats. Ocean warming and melting glaciers also contribute to sea level rise, which can damage coastal infrastructure, ports, and shipping routes, increasing maintenance and insurance costs. Recent data shows glaciers and sea ice have continued to melt at a rapid rate, which in turn pushes sea levels to a new high. According to the WMO, from 2015 to 2024, sea levels rose by an average of 4.7 millimeters (mm) a year, compared to 2.1mm from 1993 to 2002, thus posing an existential risk to the livelihoods of 900 million people who live in coastal zones at low elevations.

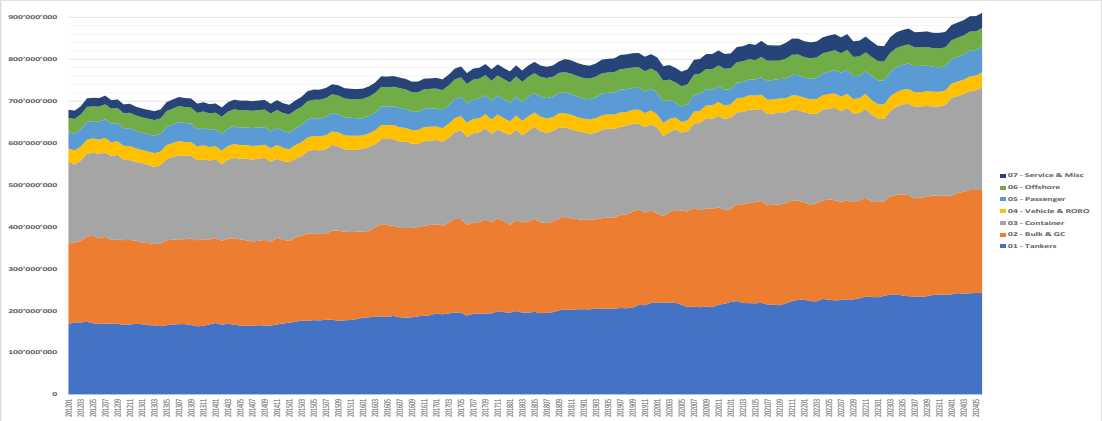
17.With natural and hydrometerological hazards growing at an alarming rate, addressing the impacts of climate change on ports and other critical coastal transport infrastructure is becoming an increasingly urgent challenge. Ports are exposed to various hazards, including sea level rise, hurricanes, cyclones, storm surges, erosion and land loss, waves

[30] WMO (2025: https://wmo.int/news/media-centre/wmo-report-documents-spiralling-weather-and-climate-impacts#:~:text=WMO%E2%80%99s%20State%20of%20the%20Global%20Climate%20report%20confirmed,1.55%20%C2%B1%200.13%20%C2%B0C%20above%20the%201850-1900%20average.

and winds as well as flooding[31]. Associated damage, delay, operational disruptions and related economic losses can be extensive, with important repercussions for local, regional and international trade and the development prospects of the most vulnerable countries.[32] Enhancing the resilience of ports' infrastructure is therefore a matter of strategic socio-economic importance, particularly for those at greatest risk of impacts and with limited capacity to respond, such as SIDS.[33] Specific work on resilient infrastructure, including through stress-testing of critical infrastructure has been undertaken across regions, including, for example, in the Caribbean region[34].

18. Shipping accounts for nearly 3 per cent of global total GHG emissions. These have risen by 20 per cent over the past decade, further challenging ongoing decarbonization efforts (Figure 5).[35]

Figure 5 Monthly annualized CO2 in tons, per vessel type, January 2012–June 2024



Source: UNCTAD secretariat, based on data from Marine Benchmark, 2024.

19. Pollution from ships goes beyond GHG emissions and includes harmful underwater noise, invasive species through ballast water discharge and biofouling, and other ship-source pollution. In particular, liability and compensation for bunker oil pollution damage is a matter of concern for every coastal territory, especially SIDS and other vulnerable developing countries that rely heavily on fisheries, aquaculture and tourism. This issue is made more challenging by the fact that the amount of liability and compensation available for bunker oil pollution damage is low and is difficult to ascertain for claimants[36]. Further discussion of marine pollution can be found in the concept note for Ocean Action Panel 4: Preventing and significantly reducing marine pollution of all kinds, in particular from land-based activities.

III. Challenges and opportunities that have emerged or become more urgent since the 2022 Ocean Conference.

Worsening climate change impacts

[31] IPCC (2018) https://doi.org/10.1038/s41558-020-00937-z.
[32]UNCTAD (2021) https://unctad.org/news/climate-change-impacts-seaports-growing-threat-sustainable-trade-and-development
[33] See https://sidsport-climateadapt.unctad.org/.
[34] https://www.undrr.org/gar/gar2023-special-report
[35] UNCTAD (2023) https://unctad.org/system/files/official-document/rmt2023_en.pdf.
[36] See UNCTAD news (2020). https://unctad.org/news/mauritius-oil-spill-highlights-importance-adopting-latest-international-legal-instruments

20. Climate change has continued to grow as an increasingly critical issue since the 2022 conference. Low-lying coastal communities and countries face disproportionate risks due to their geographical and economic vulnerabilities, threatening food security, livelihoods and cultural heritage. Adaptation and disaster risk reduction strategies, such as community-based early warning systems, integrated coastal management and nature-based solutions are urgently needed, as is strong regional cooperation. OECD projections indicate that as climate change impacts unfold, all ocean-based economic activities could suffer, potentially leading to a decline in the global ocean economy by 2050—especially if progress on the global energy transition stalls.[37]

21. Recognizing the need for scaling up action, the International Maritime Organization (IMO) adopted an ambitious strategy in 2023 aiming for net-zero emissions from shipping by 2050, while leaving no one behind.[38] Achieving the objective of net-zero emissions from international shipping by 2050 will require the transformation of many aspects of the sector, including alternative fuels, advanced technology relating to ship propulsion, addressing new safety risks, and preventing shortages of skilled officers and seafarers. It is estimated that training approximately 800,000 seafarers will be required by the mid-2030s. In the long-term, automation is expected to reduce the number of jobs, especially low-skilled ones.

22. Decarbonizing the shipping industry involves multi-billion-dollar investments. Annual funding requirements for ship decarbonization are estimated at $8–$28 billion, while scaling up carbon-neutral fuel infrastructure could demand $28–$90 billion annually.[39] These costs could inflate maritime logistics expenses, disproportionately impacting developing countries, especially SIDS and LDCs, which already face high transport costs and limited resources.[40] In addition, the growing potential of pollution arising from the use and carriage of new, alternative types of fuels (including hybrid fuels, ammonia, biofuels and hydrogen) aimed at reducing GHG emissions in shipping and fisheries[41] posed additional safety challenges and will require appropriate regulation, including in terms of civil liability for pollution incidents.[42]

23. Amid this fast-evolving operating landscape, maritime trade has continued to grow, rebounding from Covid-related challenges and reaching 12.3 billion tons in 2023.[43] Trade in ton-miles increased even faster, reflecting growth in demand and shipping distances (Figure 6). The shipping fleet also expanded, hitting 2.4 billion deadweight tons (Figure 7), but it is aging and remains heavily reliant on fossil fuels for propulsion.

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[37] OECD (2025) https://doi.org/10.1787/a9096fb1-en.
[38] IMO (2023). 2023 IMO Strategy on Reduction of GHG Emissions from Ships. Resolution MEPC.377 (80). MEPC 80/17/Add.1. 7 July 2023. ttps://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/annex/MEPC%2080/Annex%2015.pdf.
[39] UNCTAD (2023) https://unctad.org/publication/review-maritime-transport-2023.
[40] UNCTAD (2021). UNCTAD Assessment of the Impact of the IMO Short-Term GHG Reduction Measure on States. UNCTAD/DTL/TLB/2021/2 DOI: 10.18356/9789210058551 .
[41] UNCTAD (2024) unctad.org/system/files/official-document/ditcted2023d5_en.pdf
[42]While some of the new fuels could fall within the scope within the scope of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea which is not currently in force (IMO, LEG 112/3) others are all altogether excluded.

[43] UNCTAD (2024) https://unctad.org/publication/review-maritime-transport-2024.

Figure 6 Developments in international maritime trade v olume in tons, ton-miles and distance, 2000-2024

Figure 7 Developments in the global shipping fleet, 1980-2024

Source: UNCTAD secretariat, Review of Maritime Transport 2024, Geneva.

24. Worsening climate impacts have been particularly devastating for SIDS, as they depend on their ports and coastal airports as lifelines for external trade, food and energy security, as well as tourism, and in the context of disaster response and recovery. In many SIDS, these assets are projected to be at high and growing risk of coastal flooding, from as early as in the 2030s.[44] In the absence of timely adaptation measures, the projected impacts on critical transport infrastructure may have broad economic and trade-related repercussions and may severely compromise the sustainable development prospects of the most vulnerable.

Continued impact of the Covid-19 pandemic

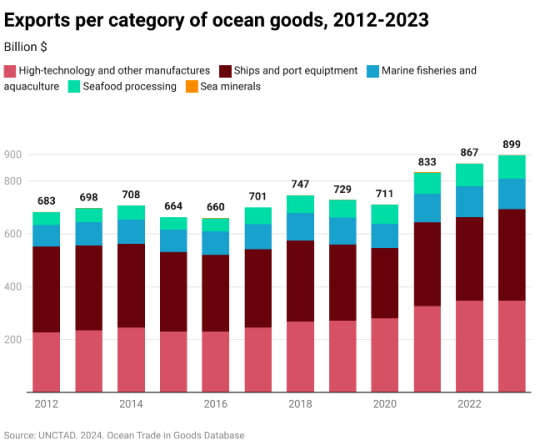
25. The strong dependency of some economies, most notably SIDS, on ocean services exports, particularly tourism, contributed to a starker recession during the COVID-19 pandemic.[45] Continuing Covid aftershocks have posed challenges since 2022. Marine and coastal tourism exports dropped by nearly 70 percent in 2020 and only recovered to their pre-2020 levels in 2023 (Figure 8 and Figure 9). Despite strong growth since then, growth in ocean services declined to 2 per cent in 2023 due to the fall in maritime freight rates in 2023. By contrast, exports of ocean goods were largely resilient to the covid-19 pandemic and grew by at least 4 per cent in 2023.[46] Total merchandise maritime trade also contracted in 2020 with the onset of the pandemic. Between 2021 and 2024, growth resumed but remained below the historical average.

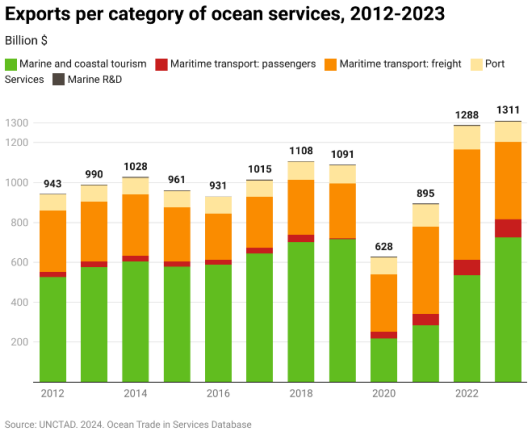
Figure 8
Figure 9

[44] Monioudi IN et al. (2018) https://doi.org/10.1007/s10113-018-1360-4

[45] See: UNCTAD/DOALOS. 2022 https://unctad.org/system/files/official-document/ditcted2021d4_en.pdf

[46] Some sectors are likely to be under-estimated given gaps in data reporting.

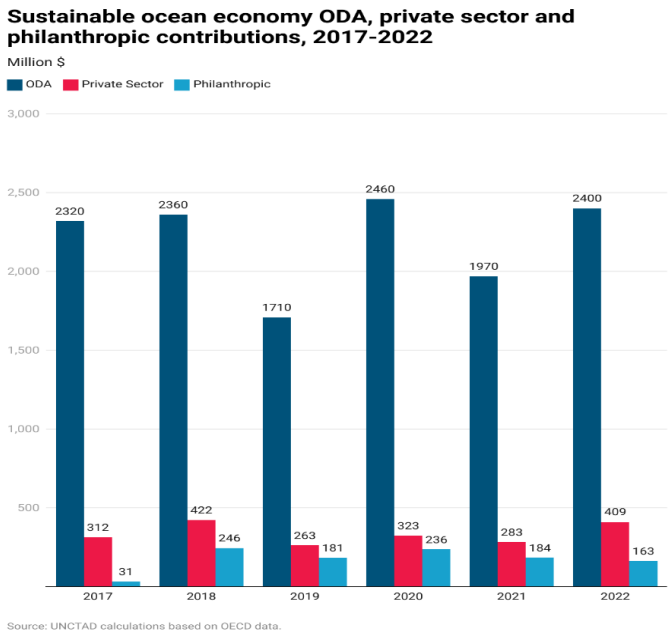




Inadequate finance and economic resources

26. The 2022 United Nations Ocean Conference highlighted that SDG 14 received the lowest level of funding of all the SDGs, and this continues to be the case. In 2022, globally, SDG 14 received $3 billion, of which $2.4 billion was Official Development Assistance (ODA) for a sustainable ocean economy.[47] Philanthropic contributions in 2022 amounted to $163 million, or less than 1 per cent of global philanthropic funding, while private sector finance only reached $409 million. As achieving SDG 14 by 2030 requires $175 billion annually, which represents approximately 60 times current investment levels, there is an urgent need for scaling up blue finance.[48] These issues are further discussed in the concept note for Ocean Action Panel 3: Mobilizing finance for ocean actions in the support of SDG 14.

Figure 10

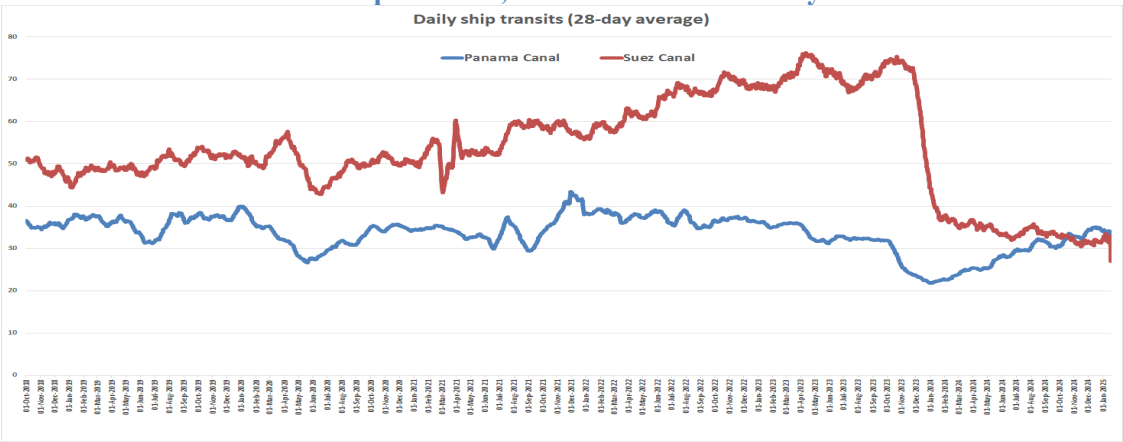


[47] https://oecd-main.shinyapps.io/ocean/
[48] Johansen, Despina F., Rolf A. Vestvik, 2020 https://doi.org/10.1016/j.marpol.2019.103783

Challenges at maritime chokepoints

27. Ongoing disruption to shipping in the Black Sea, tensions in the Red Sea and the Suez Canal as well as constraints affecting ship crossings in the Panama Canal in 2023 and 2024 have amplified challenges in maritime transport. Houthi attacks on ships crossing the Red Sea and the Suez Canal, and reduced water levels in the Panama Canal, have altered ship transit patterns and caused ships to reroute onto longer journeys. By mid-2024, the number of vessel transits through the Panama Canal and the Suez Canal were down by over half compared to their respective peaks (Figure 11). Shipping distances, transit times, freight costs, fuel consumption, sailing speeds, and GHG emissions have all increased. Rerouting vessels has exacerbated safety and security concerns for seafarers, increased exposure to piracy incidents and drove up insurance costs.[49] These factors have exacerbated the challenges left over from the Covid pandemic, which caused an unprecedented logjam in global maritime logistics, soaring shipping costs and inflation.

Figure 11:
Panama and Suez Canal ship transits, October 2018–January 2025



Source: UNCTAD secretariat, based on data from Clarksons Research, 2025.

28. Troubles in maritime chokepoints and disrupted supply chains have sparked debates on the future of globalization and the need for resilience-building through risk management, supply chain visibility, and shifting to more localized production.

IV. Solutions

29. The ocean remains a largely untapped source of innovation that can support global climate goals: 80 per cent of the earth's biodiversity is in the ocean, yet much of it remains unknown. Innovations such as natural-based substititues and alternatives to plastics; renewable energy technologies; innovative propulsion and fuels in shipping, boating and fishing; and sustainable and circular aquaculture systems not only reduce emissions and pollution but also create opportunities to fund critical ecosystem restoration projects. Advancing such products requires reinforced ocean governance, legal and institutional frameworks, increased investment in research, and partnerships and policies that prioritize sustainable marine solutions. It will also require the integration of the best available knowledge across all aspects of sustainable development, for example the outputs of the United Nations Regular Process for Global Reporting and Assessment of

[49] UNCTAD (2024) https://unctad.org/publication/review-maritime-transport-2024.

the State of the Marine Environment, including Socioeconomic Aspects such as the World Ocean Assessment[50] as well as outcomes and recommendations of the UN Ocean Forum on trade related aspects of SDG 14[51]. Solutions and recommendations for ocean based livelihoods related to fisheries, food from the ocean and other sectors can be found in other Ocean Action Panel background documents.

Marine Protected Areas and other effective area-based based measures

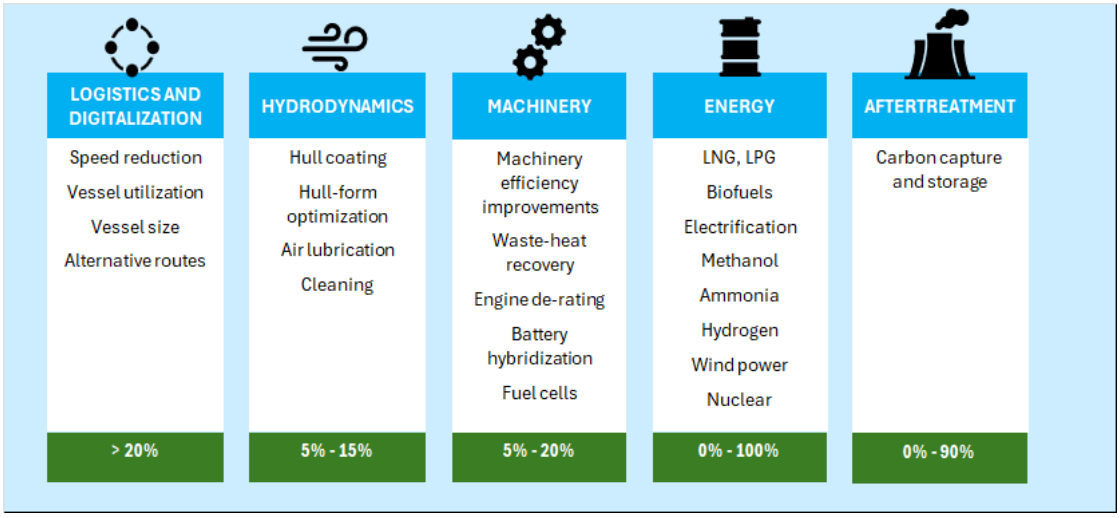
30. Marine Protected Areas (MPAs) must be scaled up and better monitored to protect biodiversity and improve the economic situation of coastal communities. Similarly, 'other effective area-based conservation measures' (OECMs), spatially defined management or conservation measures, distinct from traditional protected areas, can be used to identify locations of ongoing area-based management that supports local livelihoods while also maintaining in-situ biodiversity. Both MPAs and OECMs play a key role in improving the ecosystem approach to fisheries and protecting and conserving key areas in the life cycle of marine resources. Potentially, the increased abundance of life in MPAs may spillover to unprotected areas, leading to greater catch volumes with less effort, and the economic, social and environmental benefits could outweigh the costs for the long term. In parallel, OECMs recognize conservation efforts from marine governance, such as fisheries management, beyond protected areas. This allows for a wider recognition of the myriad ways marine governance measures can deliver biodiversity outcomes. Still, the needs and concerns of the communities that depend on the ocean need to be considered, and those communities should be included in decision making processes on MPAs as well as the process to identify, evaluate, and report OECMs."

Technologies

31.There are opportunities in maritime transport for innovation and sustainable practices. Machine learning, artificial intelligence, Internet of things, performance optimization platforms (e.g., monitoring, routing, speed, predictive maintenance, crew training, reduce idle time, etc.) can all help accelerate decarbonization. Port call optimization can help support energy efficiency and fuel saving by enabling better access to data and improved synchronization of port ship arrivals. Exhaust gas savers, propeller efficiency equipment, bow enhancement, and air lubrication systems also improve energy efficiency. Further exploration of novel wind proposal technologies for certain functions such as cruise tourism could assist in curbing down GHG emissions by coastal and maritime tourism.
Leveraging technology, including new fuel technologies requires a full life cycle perspective in order to prevent carbon leakage and address the heightened exposure to cyber security threats.[52] Alternative fuels and technologies hold a transformative potential for the sector (Figure 12), though their adoption remains in the early stages.[53]

Figure 12: Shipping decarbonization solutions leveraging technology, logistics and alternative fuels

[50] See https://www.un.org/regularprocess/
[51] See: https://unctad.org/meeting/5th-united-nations-ocean-forum-trade-related-aspects-sustainable-development-goal-14
[52] UNCTAD (2023) https://unctad.org/system/files/official-document/rmt2023_en.pdf
[53] DNV (2024) https://www.dnv.com/publications/energy-transition-outlook-2024/.



Source: DNV,2024.

32. Artificial intelligence (AI) and Automatic Identification Systems (AIS) can be applied to ocean data to better understand the impact of and monitor ocean-based activities. For example, UNDESA and UNCTAD are working with four SIDS in the Caribbean to monitor maritime transport, fisheries and its related GHG emissions. The project draws on AIS data, national data, as well as the application of Artificial Intelligence for Environment & Sustainability (ARIES), which can be used for the System of Environmental Economic Accounting (SEEA). This project can be scaled up to new regions so as to effectively monitor vessels and carbon emissions.

33. Ports can accelerate the decarbonisation process by producing, storing, consuming and delivering alternative fuels through alternative fuel bunkering facilities and services. Shipping companies and ports are building innovative partnerships such as green shipping corridors. One such initiative is the Rotterdam–Singapore Green and Digital Shipping Corridor, established in 2022[54]. The Global South Green Corridors project is another example[55]. Other multi-stakeholder initiatives and partnerships include for example, Cargo Owners for Zero Emission Vessels (coZEV), Clydebank Declaration for Green Shipping Corridors, Green Maritime Africa Coalition (GMAC), Zero Emission Maritime Buyers Alliance (ZEMBA)[56], Getting to Zero Coalition, Clean Energy Marine Hubs, Poseidon Principles, GreenVoyage2050, Mission Innovation. [57] Accelerating the development of targeted measures to implement the IMO GHG Strategy, as well as supporting the adoption of low-carbon fuels, retrofitting older vessels with energy-efficient technologies, and expanding resilient infrastructure for clean fuels are critical steps.

34. Technological advances can provide promising solutions in a number of other ocean sectors as well. As noted above, there is great potential in renewable energy technologies, including offshore wind, wave, offshore solar, osmotic and tidal energies. In the realm of science and environmental monitoring, UAVs (autonomous underwater vehicles) can

[54] Maritime and Port Authority of Singapore (2024) https://www.mpa.gov.sg/media-centre/details/singapore-rotterdam-green---digital-shipping-corridor-accelerates-digitalisation-and-decarbonisation-with-new-global-value-chain-partners.
[55] Maersk Mc-Kinney Møller Centre (2023) https://www.zerocarbonshipping.com/news/united-states-denmark-and-the-center-join-forces-to-establish-global-south-green-corridors.
[56] SLOCAT (2024) https://slocat.net/wp-content/uploads/2024/12/Transport-in-COP29-outcomes_Overview.pdf.
[57] UNCTAD (2023) https://unctad.org/system/files/official-document/rmt2023_en.pdf.

collect data in situ at very low cost and with lower carbon emissions than conventional means (manned vessels). Satellite observation provides a wealth of high-quality data for understanding and monitoring the marine environment. And in aquaculture, artificial closed-circuit and circular tanks greatly reduce the impact on the marine environment and biodiversity.

Labor protections for seafarers and fishers

35. The ILO Maritime Labour Convention, 2006, as amended (MLC, 2006) is a bill of rights for seafarers that aims to ensure decent work at sea as well as a level-playing field for the shipping sector. Its universal ratification, implementation and enforcement would ensure that the global workforce of the shipping sector enjoys decent working and living conditions, safe workplaces, fair wages, better social security, and effective protection against abandonment (see also ILO/IMO Joint Database on Abandonment of Seafarers). Greening the maritime industry requires addressing skill mismatches and gaps and integrating training needs arising from decarbonization processes into national skills development policies. The aim is to enable seafarers to adapt to the energy transition, increased digitalization, and automated navigation, benefiting from lifelong learning, reskilling, and upskilling initiatives. A related effort, the Maritime Just Transition Task Force (MJTTF), aims to ensure that shipping's response to the climate emergency puts seafarers at the heart of the solution, supported by globally established just transition principles.

36. The Work in Fishing Convention, 2007 (C.188) is the bill of rights for fishers, aiming to ensure decent work on board fishing vessels as well as fair competition in the fishing sector. It is the "social pillar" of the international maritime regulatory regime that supports sustainable fisheries. Decent work can be an ally in the fight against industrial IUU fishing as it helps prevent and detect human rights abuses and exploitative labour practices, thus obstructing environments conducive to IUU operations. Decent work can also create a culture of compliance with fisheries management measures by helping mitigate their adverse effects on the livelihoods of small-scale and artisanal fishers. Enhanced national and regional cooperative governance mechanisms that respond to local contexts to address criminality in the fishing industry can help coastal communities to secure sustainable and resilient livelihoods.

37. The Joint Ad Hoc Working Group on IUU Fishing and Related Matters, initially formed by FAO and IMO and recently joined by ILO, brought to the forefront the views of employers' and workers' representatives. This inter-agency mechanism seeks to combat illegal, unregulated and unreported fishing while advancing safety and decent work on board fishing vessels. The three organizations mutually promote and support the harmonized implementation of FAO, IMO and ILO instruments, for example by enhancing coordination among fisheries, maritime and labour authorities at national level, by introducing the labour dimension in the work of regional fisheries organizations and by fostering collaboration between port State control and port State measures regimes.
In addition to the above, the 2012 Cape Town Agreement[58], which aims to enhance the safety of fishing vessels and combat illegal, unreported, and unregulated (IUU) fishing is coming closer to meeting the conditions for its entry into force: ratification by at least 22 states with a combined fleet of 3,600 fishing vessels[59].

Scaling up investment

[58] IMO, MSC 92/26/Add.2 (28 June 2013).
[59] At present there are 23 contracting Member with a combined number of fishing vessels of 2935.

38. Public and private funding for ocean health and the sustainable use of ocean resources have gradually increased over the last decade, but these increases have not been nearly enough to narrow the ocean finance gap. A first step towards financing a sustainable ocean economy is to redirect the funding of unsustainable activities—currently there are approximately $2.6 trillion in harmful subsidies contributing to biodiversity loss, mostly for the oil and gas, agriculture, and fisheries—toward sectors that represent a win-win for people and planet[60].

39. While domestic government spending remains the largest share of finance for nature, international public funding can play a catalytic role especially for LDCs and SIDS. In addition, aligning private and other sources of finance with transformative ocean economy solution can yield high returns. For example, UNCTAD's "Blue Deal"[61] offers an integrated strategy to align ocean finance, trade, and innovation, fostering sustainable growth and supporting developing economies.

40. It is estimated that every $1 invested will generate on average $5 in global benefits by 2050, and over $10 for ocean-based food production and offshore wind energy production.[62] Blended finance - combining grants and concessional funding - can de-risk projects and attract commercial investment. In this perspective, Multilateral Development Banks (MDBs) have a key role to play to leverage private resources.

41. Innovative instruments such as green and blue bonds, debt for nature swaps on private, and sustainability-linked loans are supporting efforts towards clean technologies, renewable energy as well as conservation projects. Public-private partnerships and blended financing schemes have proven effective in overcoming financial barriers and mobilizing resources. For example, Maersk and Japanese shipping firms have successfully issued green and blue bonds demonstrating the viability of these mechanisms for shipping.[63] UNDP's Blue and Green Island Programme, financed by the Global Environment Facility (GEF), is establishing a global platform to reduce ecosystem degradation in SIDS by applying nature-based solutions (NbS) and valuing natural capital to transform food, tourism, and urban sectors.

42. The international community has been seeking to adopt a holistic approach to ocean investments. Sectoral-level negotiations on trade in marine species through the Global System of Trade Preferences among Developing Countries (GSTP) can promote economic growth, low trade disruptions, and sustainability. The IMO-EBRD-World Bank FINSMART Roundtable has been aiming to showcase investment opportunities and challenges for maritime decarbonization, with a focus on developing countries, especially LDCs and SIDS. The effort recognizes the important role of MDBs, which play a crucial role in developing countries where conventional private investors are often reluctant to invest.

[60] See: https://www.earthtrack.net/blog/environmentally-harmful-subsidies-update-26-trillionyear-and-continuing-threat-nature#:~:text=Our%20current%20estimate%20is%20at%20least%20%242.6%20trillion,transition%20to%20lower-impact%20production%20methods%20and%20energy%20systems.

[61] UNCTAD (2023) https://unctad.org/news/global-blue-deal-urgently-needed-protect-and-invest-our-ocean

[62] Stuchtey, M., A. Vincent, A. Merkl, M. Bucher et al. (2020).Ocean Solutions That Benefit People, Nature and the Economy. Washington, DC: World Resources Institute. www.oceanpanel.org/ocean-solutions

[63] UNCTAD (2024) https://unctad.org/system/files/official-document/cimem7d32_en_0.pdf

Enabling a sustainable ocean-based economy transition

43. Holistic policies and integrated management are needed to ensure healthy and productive ocean ecosystems, while enabling long-term sustainable use of marine and coastal resources. UNEP has developed a practical planning approach to help countries develop and implement pathways to sustainable, resilient and equitable blue economies tailored to their unique setting and needs. A stepwise Sustainable Blue Economy Transition Framework[64] helps countries to consider their existing situation, including current governance, status of their ecosystems and resources, and identify integrated management actions to deliver sustainable blue economy outcomes.

Climate change and pollution action

44. The sustainability and resilience of maritime transport are inextricably linked to the health of oceans. By addressing its environmental footprint, embracing sustainability principles and integrating disaster risk reduction, resilience and agility criteria, the sector can support ocean sustainability and boost compliance with SDG 14. A portfolio of solutions spanning partnerships, collaboration, technology and innovation, capacity building, training, technical assistance, innovative financing, regulatory certainty and adequate frameworks, research and development is required for sustainability and resilience building in maritime transport.[65]

45. The International Maritime Organization (IMO)'s landmark 2023 Strategy on the Reduction of GHG Emissions from Ships has set the course towards net-zero shipping by around 2050. This ambitious Strategy requires the uptake of alternative, zero and near-zero GHG fuels and technologies in the maritime sector by 2030. It also aims to slash annual GHG emissions by at least 20% by 2030 (striving for 30%) and 70% by 2040 (striving for 80%), compared to 2008 levels.

46. Countries are already weighing practical ways to achieve these targets. Proposals on the table include the establishment of a global standard for marine fuel and a pricing mechanism for GHG emissions from ships. The aim is to promote the energy transition and give the world fleet an incentive, while contributing to a level playing field and a just and equitable transition.

47. There are also ongoing global efforts to protect the ocean and its vital ecosystems from ship-generated pollution, marine plastic litter and underwater noise. Targeted programs and long-term technical cooperation projects are being rolled out, building on pilot projects exploring new technologies and methodologies. For example, initiatives such as GloFouling Partnerships and TEST Biofouling help address the threat against biodiversity that arises when invasive aquatic species accumulate on ship parts (especially hulls) and are then carried into new environments. Other critical issues being looked at include marine litter (through GloLitter, PROSEAS and RegLitter projects), GHG emissions reduction (through GreenVoyage2050, GHG SMART and IMO CARES), and ship recycling (SENSREC).

48. However, to be truly successful, the journey towards a more sustainable maritime future must be integrated into wider national and international agendas, supported by a significant boost in investments. An additional $8 billion to $28 billion is estimated to be

[64] UNEP (2025) (https://www.unep.org/topics/ocean-seas-and-coasts)

[65] See for example UNCTAD Sustainable Freight Transport Framework (SFT),https://sft-framework.unctad.org/ ; Resilient Maritime Logistics Platform (RML), https://resilientmaritimelogistics.unctad.org/"https://resilientmaritimelogistics.unctad.org/; Sustainable and Smart Ports project, https://unctad.org/project/sustainable-smart-ports-african-countries-including-small-island-developing-states-recover

required annually to decarbonize ships by 2050, and even more substantial investments, ranging from $28 billion to $90 billion every year, will be needed to develop infrastructure for 100% carbon-neutral fuels by 2050.[66]

49. Multifaceted approaches are needed to advance and facilitate climate change adaptation and resilience-building for ports, including evidence-based risk-assessments, effective adaptation measures,[67] as well as capacity-building and affordable adaptation finance for develping countries.[68] Coherent and supportive policy and legal frameworks have a particularly critical role to play in this context by creating a level playing field and galvanizing action on the ground[69][70]may serve as useful examples of good practices for other countries.

50. SIDS can pioneer new ocean-based solutions to climate action, but must be supported to do so. Ocean-based mitigation and adaptation measures are at the center of SIDS' Nationally Determined Contributions (NDCs) under the Paris Agreement, such as through building resilient economies and ensuring food and energy security. UNCTAD identified, across 39 SIDS, 606 ocean measures in their NDCs, with 77 per cent focused on adaptation (e.g., ecosystem resilience and restoration) and 23 per cent on mitigation (e.g., renewable energy and decarbonizing maritime transport).[71] Almost two thirds of total measures are conditional on adequate funding, so urgent and tailored international support is essential. The UNDOALOS Programmes of Assistance, through its Ocean Governance Studies and Technical Assistance,[72] and the UNCTAD/UNDOALOS Ocean Economy and Trade Strategies (OETS)[73] have supported policy shifts towards sustainable and resilient ocean economy sectors in countries arround the world. This support can be scaled up by applying it to other developing economies, especially SIDS.

51. Capacity-building, best practice exchange, information sharing and inclusive strategies are also essential to ensure that SIDS and LDCs can participate meaningfully in relevant efforts.

V. Conclusions and recommendations

52. As the world makes advances in green shipping, sustainable fisheries, and other aspects of the sustainable ocean-based economy, it is essential to recognize that

[66] [66] UNCTAD (2023) https://unctad.org/publication/review-maritime-transport-2023.
[67] See Climate Risk and Vulnerability Assessment Framework for Caribbean Coastal Transport Infrastructure, https://unctad.org/system/files/official-document/dtltlb2018d1_en.pdf; and other related work by UNCTAD at https://unctad.org/topic/transport-and-trade-logistics/policy-and-legislation/climate-change-and-maritime-transport; https://SIDSport-ClimateAdapt.unctad.org;
[68] UNCTAD (2022) https://unctad.org/publication/climate-resilience-seaports-adequate-finance-critical-developing-countries-remains

[69] UNCTAD (2020) https://unctad.org/system/files/official-document/dtltlb2019d1_en.pdf; Asariotis, R. et.al (2024). Climate change and seaports: hazards, impacts and policies and legislation for adaptation. Anthropocene Coasts 7, 14 (2024). https://doi.org/10.1007/s44218-024-00047-9
[70] Art. 5 European Climate Law (Regulation (EU) 2021/1119 30/6/2021); Art. 46 revised EU TEN-T Guidelines (Regulation (EU) 2024/1679; "Technical guidance on the climate proofing of infrastructure in the period 2021-2027", O.J. (C 373), 16.9.2021, p. 1
[71] UNCTAD (2024). A deep dive into ocean measures in the nationally determined contributions of small island developing States.

[72] See https://www.un.org/oceancapacity/norway
[73] See https://unctad.org/project/evidence-based-and-policy-coherent-oceans-economy-and-trade-strategies

sustainability has three dimensions: environmental, economic, and social. While governments increasingly adopt measures to protect the environment, the human element is often an afterthought. Yet, climate action taken in a vacuum is not only less effective but can lead to unintended consequences for workers in shipping, fishing, and other ocean sectors.

53. A just transition is critical: it means greening the economy in a way that is as resilient, fair and inclusive as possible, ensuring that seafarers, fishers, and other ocean workers are protected from emerging risks and empowered, creating decent work opportunities and leaving no one behind. Governments must assess the impacts of their policies on the ocean workforce, mitigate potential negative consequences, and adopt measures that promote decent work opportunities. This includes fostering social dialogue at all levels, as climate change has expanded the traditional scope of negotiations between social partners. Effective ocean governance frameworks are the necessary infrastructure for the sustainable management of the oceans, and they foster the clarity and stability necessary to enable innovation and investment.

54. The sustainable livelihoods of coastal communities must be secured and enhanced by government measures aimed at addressing the triple planetary crisis. The voices of indigenous peoples, all people in coastal communities, coastal states and particularly SIDS, that depend on the ocean and its resources for employment - both at-sea and on land-, food and nutritional security and as a way of life, should be afforded agency in this regard. Governments should ensure that measures taken towards a sustainable ocean economy, including nature-based solutions, disaster risk reduction, and in the context of fisheries management, reflect the imperative of supporting coastal community resilience.

55. The world must work toward a bright sustainable ocean / "blue" economy where fishers, seafarers, and all other ocean workers can work in conditions of freedom, security, and dignity – while sustaining life in the oceans and on land.

Recommendations include:

- Strengthen and expand the role of the UN in supporting the emergence of sustainable ocean economies, including ocean trade, production, and finance, and to develop relevant economic, environmental and social indicators and integrated ocean governance frameworks.
- Strengthen the development and implementation of national and regional integrated ocean governance legal and institutional frameworks, including to integrate ocean-based economy initiatives.
- Support countries in adopting and implementing whole-of-government approaches to policy and integrated management that enables a sustainable blue economy transition, which protect and regenerates ocean ecosystems while facilitating sustainable use of marine and coastal resources for human wellbeing.

- Strengthen the capacity of all countries to collect disaggregated data on the ocean economy, including by sector and through national accounting for ocean and ocean economy. Ensure that high quality climate change data is also collected and analyzed. Improve availability and access to quality data and indicators on trade in ocean goods and services to foster sustainable ocean economies, by supporting national capacities to collect and compile data and

strengthening and expanding the sustainable use of marine resources[74]. United Nations entities and other partners, such as the OECD, must have enhanced capacity to develop relevant indicators, databases, and country profiles, to measure ocean ecosystem services and potential consequences from new activities, such as seabed mining and impacts of changing temperatures on the seawater surface.[75]

- Revitalize and make effective use of the GSTP and other South-South cooperation platforms, including a new round of GSTP negotiations on sustainable ocean products from the perspective of the South[76]. This round could focus on market access and cooperation to enhance the availability, affordability, and value addition of sustainably sourced ocean products, including primary and processed fisheries and aquaculture. It could also facilitate trade by reducing non-tariff measures (NTMs), promoting affordable access to technology, including for maritime transport, and establishing financial agreements to facilitate international transactions.
- Enhance market access opportunities and address non-tariff barriers for fisheries and aquaculture products by conducting surveys and qualitative assessments of relevant NTM.[77] Responsive actions could also include promoting mutual recognition of catch records and reporting requirements, streamlining border procedures, reducing delays, minimising waste in trade processes, and building the capacities of small-scale fishers (SSF) and MSMEs to increase their market access and technology skills, with the support of UNCTAD and FAO.
- Strengthen the development and implementation of the international legal framework for maritime transport to effectively respond to environmental challenges, including climate change and ship-source pollution, and enable innovation and use of natural-base substitutes and alternatives to plastics[78].
- Support developing countries, and particularly SIDS and LDCs, through targeted investments, innovative solutions and international collaboration to ensure the equitable decarbonization and sustainability of the ocean economy.
- Prioritize investment in maritime transport and chokepoint infrastructure, operations, services and equipment as well as in port infrastructure adaptation. Investment should also promote greater use of alternative fuels, marine renewable energy technologies and management practices that support maritime green transition and build resilience.
- Undertake technology deployment pilots in developing countries to support showcasing feasibility of alternative fuels and other green technologies and lay down foundation for investments from MDBs;
- Build on and multiply effect of ongoing projects in developing countries addressing green transition of maritime shipping, including aspects of sea-based marine litter, under-water noise, biofouling, ship-recycling, to address whole life-cycle of sustainability of shipping and by this support healthy oceans and a resilient ocean economy,
- Enhance sectoral cooperation to improve the transparency and environmental and social dimensions of fisheries by sharing best practices and country experiences in mitigation and adaptation strategies for fisheries and aquaculture, taking advantage of centres of excellence

[74] Recommendation made at the 5th United Nations Ocean Forum, 3-5 March 2025. See: https://unctad.org/system/files/information-document/5unof-chairs-summary-format-v-final-rev.pdf
[75] Ibid
[76] Ibid
[77] Ibid
[78] Ibid

when appropriate, and by leveraging technologies, including digital, artificial intelligence, and satellite surveillance, to ensure traceability under the UNCTAD' BioTrade Principles and Criteria[79].

- Scale up support for developing countries, in particular SIDS and LDCs, in adapting to climate change and leveraging opportunities for sustainable production and trade in ocean goods and services.
- Upscale assistance to SIDS and coastal developing countries in support of sustainable transport and logistics services, sustainable fisheries, animal and plant aquaculture production, climate change adaptation and disaster risk reduction including support for the development of multi-hazard Early Warning Systems, as well as human capacity-building, training, and increasing access to technology and to finance[80].
- Adopt adequate frameworks for maritime shipping that maintain resilience and risk management principles, greener and alternative fuels, sustainable, resilient, and smart port infrastructure and services, efficient and sustainable hinterland connections, greater digitalization uptake and upskilling and reskilling of transport workers.
- Commit to innovative sustainability financing mechanisms, including climate finance together with public–private partnerships and enhanced collaboration across all stakeholders from within and outside the sector, as well as increased official development assistance to ensure the resilience and sustainability of the sector, particularly in developing countries[81].
- Promote and implement relevant international agreements to tackle IUU fishing : the FAO Agreement on Port State Measures (PSMA), the ILO Work In Fishing Convention (C188), the IMO Cape Town Agreement to enhance fishing safety and the WTO Agreement on Fisheries Subsidies.
- Keep under review and as necessary strengthen the international legal framework for liability and compensation for ship-source pollution, to ensure the availability of adequate compensation for bunker oil pollution damage and address regulatory gaps in relation to the use and carriage of new fuels, as well as the carriage of hazardous substances.
- Adopt a comprehensive approach by strengthening the inclusion of the labour and social dimension to effectively respond to maritime challenges, including the adaptation to energy transition, increased digitalization and automated navigation, as well as the fight against criminality along the fisheries value chain

VI. Guiding questions

1.How can governments integrate sustainable ocean-based economic initiatives within their ocean governance legal and institutional frameworks?

2.How can developing countries, particularly SIDS and LDCs, access resources, financing, and technologies needed for a sustainable and resilient ocean economy including maritime transport, fisheries and aquaculture, renewable offshore energy, and maritime and coastal tourism?

[79] ibid
[80] Ibid
[81] Ibid

3.How can public-private partnerships and sustainable finance tools be scaled to meet the funding needs of the ocean economy decarbonization and climate adaptation and resilience-building?

4.What capacity-building programs and training initiatives are needed to ensure the maritime transport sector and fisheries and aquaculture are sustainable and resilient and aligned with SDG?

5.What are the priority areas for research and development to advance sustainable and resilient maritime transport, fisheries and aquaculture?

6.How can the labour and social dimension be better included by all stakeholders when addressing current and future maritime challenges?

7.How can UN-OCEANS and its member agencies better support related efforts by SIDS and other vulnerable developing countries?