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Oceans and the law of the sea

Report of the Secretary-General**

Summary

The present report, which covers the period from 1 September 2020 to 31 August 2021, is submitted pursuant to paragraph 364 of General Assembly resolution [75/239](#). It is also being submitted to States parties to the United Nations Convention on the Law of the Sea, pursuant to article 319 of the Convention. The present report provides information on developments and issues relating to ocean affairs and the law of the sea, including the implementation of the resolution, in particular, at the United Nations and its specialized agencies, funds and programmes, as well as within the bodies established by the Convention.

* [A/76/150](#).

** The present report contains a summary of the most significant recent developments and selected parts of contributions by relevant specialized agencies, funds, programmes and bodies. Owing to word limits for reports mandated by the General Assembly, an advance, unedited version of the report, with comprehensive footnotes, is available on the website of the Division for Ocean Affairs and the Law of the Sea at: www.un.org/depts/los/general_assembly/general_assembly_reports.htm.



I. Introduction

1. The oceans and their ecosystems, covering more than 70 per cent of the surface of the planet and forming 95 per cent of the biosphere, provide vital benefits to the global population, including climate regulation, coastal protection, food, employment, recreation and cultural well-being.
2. With more than 3 billion people relying on the oceans for their livelihoods and over 80 per cent of world trade transported by sea, the oceans and their resources contribute significantly to poverty eradication, sustained economic growth and food security. The health of the oceans is closely tied to human well-being.
3. While the oceans provide significant benefits for human development, these benefits, and the very ocean processes and related ecosystem services that provide them, remain under threat from a wide range of anthropogenic pressures, including climate change, unsustainable fishing, invasive species, pollution and hazardous substances (including plastics), anthropogenic noise, coastal development and oil and gas extraction.
4. These pressures are putting many of the benefits that the oceans provide at risk, including critical ecosystem services such as carbon storage and oxygen generation, and important habitats for marine life and coastal protection, such as mangroves and coral reefs. The general failure to achieve integrated sustainable management of coasts and the oceans has increased the risks.
5. Many of the changes in the oceans, ice sheets and global sea levels are now irreversible for centuries to millennia, as recently reported by the Intergovernmental Panel on Climate Change.¹
6. As the global community continues its efforts to recover better from the coronavirus disease (COVID-19) pandemic,² it faces enormous challenges in ensuring the health of the oceans today and for future generations. Progress in realizing the 2030 Agenda for Sustainable Development, including Sustainable Development Goal 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development), and its 10 targets, some of which expired in 2020, has been significantly curtailed and in some areas halted, or even reversed.
7. The United Nations Decade of Ocean Science for Sustainable Development presents an opportunity for the international community to enhance scientific understanding of the oceans and marine scientific research in order to strengthen and enhance ocean sustainability.³
8. The present report highlights key activities and developments relating to ocean affairs and the law of the sea, including those undertaken by the United Nations system and other intergovernmental organizations in relation to General Assembly resolution 75/239. The legal framework for all such efforts and activities is the United Nations Convention on the Law of the Sea, the world's "constitution for the oceans".
9. The report should be read together with other reports relevant to oceans and the law of the sea issued by the United Nations during the period under review. It should also be read together with the more detailed contributions provided by the United Nations specialized agencies, funds and programmes, and other intergovernmental organizations.⁴

¹ See www.ipcc.ch/report/ar6/wg1.

² See www.un.org/en/coronavirus/un-response.

³ See www.oceandecade.org.

⁴ All contributions are available at www.un.org/Depts/los/general_assembly/contributions76.htm.

II. Impact of the coronavirus disease (COVID-19) on oceans issues

10. The coronavirus disease (COVID-19) pandemic continued to have an impact on the ocean and ocean activities across all pillars of sustainable development, although effects and recovery speeds differed, with vulnerable ocean-based economies, especially small island developing States and least developed countries, being particularly affected.

11. Maritime trade, the backbone of international trade and the global economy, showed signs of recovery following a decline at the beginning of the pandemic. The pandemic may have lasting impacts, however, given shifts in supply chains and consumer preferences, accelerated technological and digitalization trends, and increased emphasis on risk assessment and management and resilience-building.

12. Successful vaccination roll-outs contributed to economic recovery as travel restrictions were relaxed; however, marine and coastal tourism decreased by approximately 70 per cent in 2020.

13. The COVID-19 pandemic continued to negatively affect global fisheries through, inter alia, illness, labour shortages, reduced fishing activities and decreased demand from value chain partners, with multifaceted consequences for fish workers, small-scale fishers and retailers, among others. Compliance activities continued where remote electronic monitoring was possible; however, direct physical checks on fisheries were restricted. The pandemic also had an impact on research activities, including data collection, development, enforcement of conservation and management measures and capacity-building. Fresh fish production, including by small-scale fishers, faced multiple challenges, while other fisheries activities were less affected, including those conducted by some distant water fishing fleets.

14. Vulnerable groups, including those working in the informal sector, such as small-scale fishers, migrant workers and ethnic minorities, as well as women and children, were particularly affected by economic disruptions and the lack of social protection. The number of seafarers confronting pandemic-related hardships declined over the reporting period, however many still faced restrictions in terms of travel, repatriation, crew changes and access to medical care. Public health concerns, including related travel restrictions, caused additional challenges for people seeking refuge, and irregular and unsafe travel by sea continued.

15. Impacts on the marine environment were reported due to changes in production and consumption patterns and challenges in management and enforcement. The pandemic resulted in short-term benefits to certain marine ecosystems and species from reduced economic activity. Lessons were also learned on the reduction of carbon dioxide emissions, which dropped in 2020; however, long-term reductions were not expected unless a low-carbon transition was pursued in the post-pandemic recovery period. Impacts from increased pandemic-related plastic waste generation also remained a concern.

16. Some data-gathering and research activities continued despite the difficult circumstances. Impacts on observation and warning systems were reported due to reductions in scientific activity during the pandemic. Declining trends in ocean observation data flows, observations from commercial ships and risks that autonomous platforms, drifters and profiling floats would degrade were expected to impede forecasting and create gaps in observational records. Efforts to assess the impact of the pandemic on ocean science investments and on the capacity to mitigate its effects continued.

17. Many intergovernmental gatherings were postponed or delayed; however, virtual or hybrid formats were successfully adopted for meetings, consultations or hearings. Travel restrictions continued to hinder the delivery of capacity-building and technical assistance programmes, although virtual and other remote means of implementation offered opportunities to deliver assistance and explore new models of engagement and fulfilment of mandates. Many activities specifically addressed the impact of COVID-19 and pathways for recovery in relevant regions and sectors. Some organizations adopted recommendations for policy response, recovery and resilience-building in the post-pandemic period, including for ensuring timely progress on the ocean-related Sustainable Development Goals.

III. Legal and policy framework

18. The international legal regime governing all activities in the oceans and seas consists of a multifaceted range of global, regional and bilateral legal instruments, as well as national laws and regulations adopted within the overarching legal framework of the Convention. They are complemented by a wide range of non-legally binding instruments, including the 2030 Agenda and the annual resolutions of the General Assembly on oceans and the law of the sea and on sustainable fisheries, which provide internationally agreed policy guidance, commitments, goals and targets.

19. Further progress towards universal participation in the Convention and its implementing agreements is needed. As at 31 August 2021, the number of parties to the Convention and to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks remained at 168 and 91, respectively. The number of parties to the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 increased from 150 to 151.

20. The ongoing development of the legal framework for the oceans set out in the Convention continued to be challenged by the pandemic. The fourth session of the intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction was further postponed to the earliest possible available date in 2022, preferably during the first half of the year. Consideration of the draft regulations on exploitation of mineral resources in the Area by the Council of the International Seabed Authority could not resume in person, although work continued through virtual means in respect of the financial terms of exploitation contracts. The Legal and Technical Commission of the Authority released drafts of the initial set of standards and guidelines, aimed at supporting implementation of the regulations, for consultations by stakeholders. Pursuant to section 1, paragraph 15, of the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, Nauru requested that the Council of the Authority complete the adoption of the rules, regulations and procedures necessary to facilitate the approval of plans of work for exploitation in the Area and indicated that an entity sponsored by Nauru intended to apply for approval of a plan of work for exploitation in the Area in two years.

21. The postponed 2020 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 is now scheduled to be held from 27 June to 1 July 2022.⁵ To generate momentum towards that conference, a high-level

⁵ See www.un.org/en/conferences/ocean2022.

thematic debate on the ocean and Sustainable Development Goal 14 was convened by the President of the General Assembly on 1 June 2021.⁶

22. Data and information were collected on ratifications and accessions and implementation of the Convention, the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 and the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks. The findings showed that States had implemented these instruments through legal, policy and institutional frameworks; however, further progress was needed in some developing countries, particularly least developed countries (see [E/2021/58](#)).⁷

IV. Maritime spaces

23. Due to specific pandemic-related challenges, the Commission on the Limits of the Continental Shelf was unable to continue its examination of submissions and decided not to hold its fifty-third and fifty-fourth sessions as originally scheduled. In the light of those challenges, the thirty-first Meeting of States Parties to the United Nations Convention on the Law of the Sea decided to extend the five-year term of office of the current members of the Commission by one year, on an exceptional basis ([SPLOS/31/9](#) and [SPLOS/31/10](#)).

24. The International Seabed Authority and the International Tribunal for the Law of the Sea continued to undertake some activities, albeit in a limited way owing to the impacts of the pandemic, including with postponements and operational adjustments.

25. In addition to the continued development of the regulatory framework, the Council of the Authority approved a plan of work, sponsored by Jamaica, for exploration of polymetallic nodules. The Legal and Technical Commission of the Authority made recommendations on requests for the extension of exploration contracts made by seven contractors.

26. In the context of Part XV of the Convention, a number of proceedings relating to the oceans are currently before the International Tribunal and the International Court of Justice, as well as arbitral tribunals with support provided by the Permanent Court of Arbitration. The Tribunal has an important role in the interpretation and application of the Convention and the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 in order to promote the settlement of disputes by peaceful means in accordance with Part XV of the Convention.

27. Deposits by States parties to the Convention of charts and/or lists of geographical coordinates of points concerning baselines and the outer limits of maritime zones were received, including observations regarding the impact of sea level rise on the maritime zones of coastal States parties to the Convention. *Guidelines on Deposit with the Secretary-General of Charts and Lists of Geographical Coordinates of Points under the United Nations Convention on the Law of the Sea* were published pursuant to paragraph 363 of General Assembly resolution [74/19](#). Additional background information was contained in a note by the Secretariat on the practice of the Secretary-General in respect of the deposit of charts and/or lists of geographical coordinates of points under the Convention ([SPLOS/30/12](#)).

⁶ See www.un.org/pga/75/ocean/; www.un.org/pga/75/wp-content/uploads/sites/100/2021/07/PGA-HLTD-Ocean-1-June-2021-Summary.pdf.

⁷ Aggregated information for each State is available at www.unstats.un.org/sdgs/indicators/database.

V. Importance of the human dimension

28. As underlined in the present report, the symbiotic relationship between humans and the ocean has been under direct threat from cumulative pressures resulting from a wide range of human activities, the impacts of which disproportionately affect coastal communities and vulnerable groups, including women and girls. These impacts, now compounded by the COVID-19 pandemic, have diminished the ability of seafarers and communities working in fisheries and ocean-reliant sectors to derive safe and sustainable livelihoods and food security from the ocean, rolling back gains in achieving decent work as well as gender equality in ocean-related sectors.

29. Small island developing States, in particular, have been acutely affected by the virtual standstill in international travel and tourism due to the pandemic. The impacts of climate change also loomed large for small island developing States and coastal communities in least developed countries, given their lesser adaptive capacity and greater vulnerability.

30. Women, who principally participate in the informal sector of fisheries as processors and vendors and often lack access to social protection, were particularly affected by COVID-19 containment measures impacting fisheries, including greater risk of infection, since fish markets and processing facilities are places of close contact. While at the forefront of the response to the COVID-19 pandemic, women in science continued to remain underrepresented in highly technical sectors, such as deep-sea research. In addressing the challenges, the United Nations system continued efforts to implement Sustainable Development Goal 5 in terms of gender equality in ocean-related sectors, including in deep-sea research and in the maritime sector. Work was also ongoing on the impacts of sea level rise on maritime zones. Specific initiatives were taken to address sea level rise in relation to international law and the protection of the human rights of migrants and displaced persons due to climate change.

A. Labour at sea

31. Owing to the impacts of the COVID-19 pandemic large numbers of seafarers, already facing challenging labour conditions, extended their service on board ships, as they could not be replaced after long tours of duty or be repatriated to their home countries. Over 400,000 seafarers on board ships were affected worldwide in 2020, with a similar number waiting to join ships, unable to work. While these numbers declined to around 200,000 as of April 2021, abandonment cases related to COVID-19 increased dramatically, further exacerbating the crew change situation.

32. To address pandemic-related challenges faced by seafarers and to support global supply chains, the General Assembly adopted resolution [75/17](#) calling upon States to designate seafarers as key workers and implement the industry-recommended framework of protocols. The International Labour Organization (ILO) adopted a resolution concerning maritime labour issues and the pandemic, which called upon States, inter alia, to designate seafarers as key workers and, moreover, to adopt necessary measures to fully implement the Maritime Labour Convention, 2006. The Organization's Committee of Experts on the Application of Conventions and Recommendations adopted general observations on matters arising from the application of the Maritime Labour Convention, 2006, stressing the need for scrupulous application of the Convention during times of crisis.

33. At its fourth meeting, the Special Tripartite Committee established under article XIII of the Maritime Labour Convention, 2006, adopted a resolution on the implementation and practical application of that Convention during the COVID-19 pandemic. In the resolution, the Committee, inter alia, requested ILO to renew calls

for member States to designate and treat seafarers as key workers and to take all necessary measures to ensure that seafarers could travel, transit and obtain medical care and shore leave and that they were not required to stay on board a vessel beyond the period specified in their employment agreement, and under no circumstances longer than the stipulated maximum period of service. The International Maritime Organization (IMO) and ILO also adopted resolutions recommending, inter alia, that States and relevant national authorities give priority to seafarers in their national COVID-19 vaccination programmes, accept vaccines given to seafarers by other States and facilitate access to vaccinations ashore.

34. In other developments, ILO, IMO, the Food and Agriculture Organization of the United Nations (FAO) and other specialized agencies of the United Nations system continued to cooperate to combat illegal, unreported and unregulated fishing, tackle modern slavery at sea and ensure decent work for seafarers, fishers and others working in maritime sectors, including by participating in each other's meetings and events and jointly promoting compliance with relevant international instruments. A new due diligence tool was published by the United Nations Global Compact, the Office of the United Nations High Commissioner for Human Rights, ILO and IMO to help businesses uphold their responsibility to protect human rights at sea.

35. Specific measures were addressed to female seafarers and fishers, who face particular challenges in a traditionally male-dominated sector. A memorandum of understanding between IMO and the Women's International Shipping and Trading Association was concluded to promote greater diversity and inclusion through enhanced cooperation activities in the maritime field. IMO and the Women's International Shipping and Trading Association launched a joint study to collect and analyse data on the number of women employed in the maritime sector. The United Nations Assistance Mission in Somalia supported the country's Women in the Maritime Sector initiative.

B. Migration by sea

36. Despite national response measures related to the COVID-19 pandemic, such as border closures or entry restrictions, refugees and migrants continued to undertake irregular and dangerous journeys by sea in search of international protection. Refugees and migrants, especially women, children and vulnerable groups, were exposed to heightened risks of trafficking, kidnapping for ransom, sexual and gender-based violence and other forms of inhumane and degrading treatment. Refugees and migrants also faced delays in disembarkation, denials of entry and reduced access to information, asylum and protection. Reduced search and rescue capacities presented additional challenges.

37. In a decision concerning a group of migrants at sea, the Human Rights Committee found that certain elements, including the initial contact made by the vessel in distress, the close proximity to that vessel and the relevant obligations of the State under the law of the sea and the International Convention on Maritime Search and Rescue, established a special relationship of dependency between the State and the individuals in distress. The Committee concluded that a State was obliged to guarantee the right to life of individuals under its control or dependency, regardless of whether the individuals were in a maritime area under its jurisdiction.

38. Between September 2020 and April 2021, approximately 68,600 refugees and migrants crossed the sea to Europe through the Mediterranean and Canary Islands routes, with over 1,700 people believed to have died or gone missing at sea. Approximately 8,650 refugees and migrants were disembarked in Libya, notwithstanding reports of the Office of the United Nations High Commissioner for Human Rights

(OHCHR) and the Office of the United Nations High Commissioner for Refugees (UNHCR) that Libya was not a safe place for return or disembarkation and that such returns could violate the principle of non-refoulement due to continued violence and insecurity, as well as human rights abuses.

39. More than 13,500 refugees and migrants coming from Libya and Tunisia, and 23,700 who arrived in the Canary Islands, were rescued. In a related development, OHCHR and UNHCR called upon the international community, including States members of the European Union, to expand State-led search and rescue operations and establish safe and predictable disembarkation mechanisms. A new pact on migration and asylum, proposed by the European Commission, offered opportunities to tackle these issues and should reflect policy ideas from the global compact on refugees.

40. Refugees and migrants from Ethiopia and Somalia continued to make dangerous journeys across the Gulf of Aden to Yemen. At least 90 people were believed to have drowned in four separate incidents since September 2020 and two shipwreck incidents were recorded in March and April 2021. In South-East Africa, the number of asylum seekers travelling across the Mozambique Channel to reach the island of Mayotte increased dramatically. In West and Central Africa, irregular migration on makeshift boats resumed due to tightening controls and dangers along other routes, often leading to loss of life. Support was provided in adapting domestic legislation to achieve a more coherent and holistic approach to mixed migration and arrivals by sea.

41. By the end of 2020, nearly 200,000 Venezuelans were reported to have been displaced to nearby Caribbean countries. Multiple incidents of shipwrecks and missing boats off the Bolivarian Republic of Venezuela and resulting drownings and missing persons were reported. In the face of these challenges, UNHCR supported national authorities in the region to ensure implementation of protection-sensitive entry and referral systems, alternatives to detention, and adequate reception and identification. The United Nations Office on Drugs and Crime delivered training to national authorities on the smuggling of migrants at sea.

42. Approximately 200 Rohingya refugees attempting to reach Malaysia lost their lives at sea in 2020. In some cases, boats carrying refugees were pushed back into international waters or rescued refugees were detained indefinitely in conditions not meeting the criteria for a place of safety under IMO guidelines on the treatment of persons rescued at sea. In a related development, UNHCR, the United Nations Office on Drugs and Crime and the International Organization for Migration made a joint recommendation at the fifteenth meeting of the Ad Hoc Group Senior Officials of the Bali Process on People Smuggling, Trafficking in Persons and Related Transnational Crime to convene a regional conference on safety of life at sea.

VI. Maritime safety and security

43. With the COVID-19 pandemic taking its toll on the world population and global economy, maritime safety and security was vital for the sustained delivery of critical supplies and for global trade. The pandemic significantly impacted the shipping industry, including in terms of the safety of seafarers and port workers and the safe operation of ships. It also brought new safety and security challenges, such as cybersecurity in shipping, and had an impact on the capacity of some States to implement monitoring, control, surveillance and other enforcement measures. Intensified efforts were needed to address these impacts and new challenges.

44. In a wide range of developments during the reporting period, progress was made to strengthen maritime security and safety initiatives. At the global level, the Security

Council convened a high-level open debate on the theme “Enhancing maritime security: a case for international cooperation” as an urgent priority. IMO finalized the process of assessing the applicability of its regulatory instruments to ships with varying degrees of autonomy and made progress on its regulatory scoping exercise on the use of maritime autonomous surface ships. Safety guidelines were approved for certain categories of fishing vessels and pleasure yachts operating in polar waters. Work continued on the conformity of rules on the design and construction of bulk carriers and oil tankers with goal-based ship construction standards, promoting concrete actions to prevent fraudulent registration and registries of ships and the use of low-sulphur fuel oil. Progress was also made on model regulations for domestic ferry safety.

45. The International Hydrographic Organization continued its efforts to ensure hydrographic support for the safety and efficiency of maritime navigation, including by developing standards and guidance on hydrographic information, supporting the full implementation of “e-navigation” in collaboration with IMO and producing, with the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO), bathymetric data sets and products under the General Bathymetric Chart of the Ocean project and the Seabed 2030 project. The World Meteorological Organization continued its collaboration with IMO and the International Hydrographic Organization on providing coordinated and standardized meteorological and oceanographic information, forecasts and warning services. Efforts were also made to minimize the occurrence of collisions between cetaceans and ships, including through a database on ship strikes.

VII. Climate change and the ocean

46. As recently reported by the Intergovernmental Panel on Climate Change, it is now unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred at a scale that is unprecedented. Many of the changes are irreversible for centuries to millennia, especially changes in the ocean, ice sheets and global sea level.

47. The ocean absorbs around 90 per cent of the heat generated by greenhouse gas emissions and 30 per cent of carbon emissions, thereby bearing most of the burden of anthropogenic global warming. Related impacts, including ocean warming, acidification, deoxygenation, cryosphere melt, sea level rise and exacerbated natural disasters, devastate human lives and livelihoods, particularly in vulnerable coastal communities, as well as marine and coastal life and ecosystems, and are expected to worsen. The past six years were the warmest on record, with ocean heat and global mean sea levels at their highest recorded values.

48. Urgent mitigation action remains critical. While countries committed to net-zero emissions goals by mid-century, levels of greenhouse gas emissions rose in 2019 and, at current rates, temperatures will increase over three degrees Celsius during the current century, far in excess of global targets. Increased near-term action, reflected in nationally determined contributions, will be essential to reach the Paris Agreement targets, which include many possibilities for ocean-related action.

49. Among the actions taken at the intergovernmental level, the United Nations Framework Convention on Climate Change convened an ocean and climate change dialogue to strengthen adaptation and mitigation action and identified options and opportunities for action. The twenty-first meeting of the Informal Consultative Process considered the topic “Sea level rise and its impacts”. The International Law Commission continued its work on sea level rise in relation to international law. At the fifty-first Pacific Islands Forum Leaders Meeting, Australia, New Zealand and

Pacific small island developing States adopted a declaration on preserving maritime zones in the face of climate change-related sea level rise. The Marrakech Partnership for Global Climate Action raised awareness of interactions between oceans and climate.

50. With regard to emissions from shipping, IMO approved amendments for new mandatory measures to cut the carbon intensity of ships by at least 40 per cent by 2030 compared to 2008 and strengthened energy efficiency design requirements. Deeper shifts in engine and fuel technology may, however, be needed.

51. In support of mitigation, various projects were aimed at protecting and conserving blue carbon ecosystems, including mangroves, as well as protecting and restoring coral reef ecosystems. Working Group 41 on Ocean Interventions for Climate Change Mitigation, established by the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, considered challenges and possibilities in marine geoengineering. A framework for international collaboration was established to encourage widespread renewable ocean energy deployment and contribute to decarbonising the power sector.

52. In terms of adaptation, the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region developed a toolkit for assessing the vulnerability of communities to climate change. As part of the Nairobi work programme of impacts, vulnerability and adaptation to climate change, established under the United Nations Framework Convention on Climate Change, priority was given to oceans, coastal areas and ecosystems in addressing impacts, vulnerability and adaptation to climate change, with a focus on supporting least developed countries and small island developing States. With respect to challenges for small island developing States, research was undertaken on the impacts of sea level rise and adaptation initiatives. Pacific Islands Forum leaders affirmed their commitments to concluding outstanding maritime boundaries and securing maritime entitlements in the light of the threats posed by sea level rise. The commitments were also reflected in observations made in conjunction with the deposit of lists of geographical coordinates of points concerning baselines and the outer limits of maritime zones under the Convention.

53. Research continued on the regional impacts of climate change, while global observing systems were strengthened to provide critical data. Consideration was given to technological solutions to assess and manage climate-related risks in coastal zones. The United Nations Conference on Trade and Development continued to enhance understanding of climate change and the impacts of extreme weather events on coastal transport infrastructure and to assist in developing adaptation response measures, particularly for small island developing States. Actions were taken to support damage and loss assessments in disaster risk management and early warning and preparedness activities.

54. The World Meteorological Organization continued to provide expert support on the climate-science basis for projects funded by the Green Climate Fund. The Commonwealth Climate Finance Access Hub supported small and vulnerable States to access over \$40 million in climate finance, by developing capacity to access and utilize data and information. Countries were also assisted with legal frameworks and incorporating youth perspectives into climate change project proposals.

55. The International Atomic Energy Agency provided technical support and expertise to States, including regarding processes and mechanisms of climate change and ocean impacts, facilitating and promoting knowledge of ocean acidification impacts and assisting in developing nature-based solutions and climate change adaptation strategies. The Intergovernmental Oceanographic Commission of UNESCO supported States in measuring and reporting on ocean acidification,

convened stakeholders in ocean carbon research and systematic observations and continued to carry out work relating to blue carbon and on scientific and capacity development efforts relating to deoxygenation.

VIII. Ocean sustainability

56. Ocean sustainability remained a focus of global efforts to achieve ocean-related goals and targets of the 2030 Agenda and the Aichi Biodiversity Targets, as well as in the context of the United Nations Decade of Ocean Science for Sustainable Development and the United Nations Decade on Ecosystem Restoration, both covering the period 2021–2030. Challenges remained in achieving these goals and targets, which were exacerbated by the impacts of the COVID-19 pandemic. The high-level thematic debate convened by the President of the General Assembly on 1 June 2021 addressed these aspects, including the impacts of the pandemic on the ocean economy.

57. Efforts intensified at all levels to support sustainable ocean-based economies, including by developing and implementing strategies, action plans and management tools; promoting sustainable trade in ocean-related goods and services; developing innovative financing mechanisms; increasing awareness and scientific understanding and advancing technological innovations; building more resilient, inclusive and sustainable regulatory frameworks; and implementing international law, as reflected in the Convention and related instruments.

58. Ongoing challenges to ocean sustainability owing to declining ocean health and increasing pressures highlighted the need to address pressing environmental issues, such as climate change, biodiversity loss and pollution.⁸ Investments in sustainable ocean-based economies remained low, however, and innovative approaches to mobilize blended capital were necessary. Assessing and addressing the impacts of the pandemic on ocean sustainability was also needed.

59. Capacity-building remains critical, in particular in least developed countries, landlocked developing countries and small island developing States, for the planning and development of sustainable ocean-based economies, including with respect to the sustainable management of related human activities. The road map for accelerated implementation of the Vienna Programme of Action in the remaining five years, adopted by the Group of Landlocked Developing Countries, outlined key actions and activities to increase awareness and the capacity of landlocked developing countries to derive benefits from the development of sustainable ocean-based economies.

A. Increasing knowledge and understanding and promoting marine science and technology

60. Increasing scientific knowledge, developing research capacity and transferring marine technology will be essential to transforming humankind's relationship with the ocean, recovering better from the COVID-19 pandemic and achieving the Sustainable Development Goals. To that end, efforts continued at all levels to promote a better understanding of the ocean, including in the context of human impacts on marine ecosystems and changes in the marine environment; increase the research capacity of developing States; promote ocean literacy; and enhance the development and transfer of technologies and science-based management tools to support the sustainable development of the ocean and its resources.

⁸ See www.unep.org/resources/making-peace-nature.

61. The completion and launch of the second World Ocean Assessment, in 2021, was a significant milestone and the major output of the second cycle of the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects. The assessment served to evaluate trends since the release of the First Global Integrated Marine Assessment, conducted in 2015, and to identify current gaps in knowledge and capacity-building, which will inform efforts to promote marine science and technology. According to the third cycle of the Regular Process (2021–2025), which began in January 2021, there may be a new assessment or assessments of the state of the marine environment, including socioeconomic aspects, strengthened support for and interaction with other ocean-related intergovernmental processes and a coherent programme on capacity-building to strengthen the ocean science-policy interface (see [A/75/362](#), annex).

62. The United Nations Decade of Ocean Science for Sustainable Development generated momentum to address challenges in realizing the potential of ocean science. Efforts continued at the regional and global levels to support the implementation of the decade and attainment of its objectives. A first set of endorsed actions for the decade included 28 programmes and 33 contributions across all ocean basins.⁹ Together with six registered actions led by United Nations entities, these efforts formed the first building blocks of the decade, touching on diverse subjects such as management of the mesopelagic zone, resilient fisheries, underwater cultural heritage, coral reef resilience, ocean observations and ocean literacy. Cross-cutting initiatives also addressed capacity development, gender and early career ocean professionals throughout the decade and enhanced ocean management in Pacific small island developing States. Efforts were also carried out in the context of over 20 national committees and several regional initiatives that catalysed the co-design of future actions for the decade. The Ocean Decade Alliance was established to leverage and multiply financial and in-kind resource commitments, playing a key role in resource mobilization efforts.

63. Strengthening ocean observation, data collection and the sharing of information continued to receive priority attention. Actions were taken to improve the Global Ocean Observing System and to increase data availability, accessibility and usability, including through standardization and harmonization, addressing impacts of the pandemic on ocean observations, preventing data buoy vandalism and implementing the Convention in relation to ocean observation. Improvements were made in data processing and forecasting services. As part of the United Nations Decade of Ocean Science for Sustainable Development, the Intergovernmental Oceanographic Commission of UNESCO is aiming to advance tsunami detection and measurement and forecasting, including through new technologies using submarine cables.

64. Significant progress was made in collecting new data relating to indicators 14.3.1 and 14.a.1. of Goal 14. An ocean acidification data portal was fully established to facilitate reporting on indicator 14.3.1. The *Global Ocean Science Report 2020*, which served as a basis for reporting on indicator 14.a.1, was launched to offer a global record of the conduct of ocean science. Funding has yet to be secured, however, for the development of an index for coastal eutrophication potentials under indicator 14.1.1.

65. At the national level, however, only 1.7 per cent of research budgets on average were allocated for ocean science. Other challenges in the promotion of marine science and technology included impacts of the pandemic, transforming ocean science into solution-oriented research that responded to societal needs and designing joint modelling and observation campaigns across the ocean, atmospheres and land.

⁹ See www.oceandecade.com/resource/166.

66. Efforts continued at all levels to strengthen the science-policy interface, including by conducting assessments, such as the “Global harmful algal bloom: status report 2021”, which provides the first assessment of the status of, and trends in, harmful algal blooms around the world.

B. Conservation and sustainable use of living marine resources

67. Despite the impacts of the COVID-19 pandemic, activities continued during the reporting period in order to strengthen the conservation and sustainable use of living marine resources.

68. At the global level, decisions were adopted at the thirty-fourth session of the Committee on Fisheries of FAO on implementation of the 2030 Agenda, small-scale and artisanal fisheries, ecosystems approach to fisheries, combatting illegal unreported and unregulated fishing and global and regional fisheries processes. The third meeting of States parties to the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing served as a review conference, with delegations, inter alia, agreeing to launch the pilot phase of a global information exchange system and establishing an ad hoc intersessional working group to improve the effectiveness of the Agreement. The global action plan for the International Year for Artisanal Fisheries and Aquaculture was launched.

69. Progress was also made at the World Trade Organization (WTO) on curbing harmful fisheries subsidies. A revised draft text on fisheries subsidies was introduced by the chair of the negotiations and members pledged to conclude the negotiations before the twelfth Ministerial Conference, which was postponed in 2020 due to COVID-19 and will be held in Geneva from 30 November to 3 December 2021.

70. To continue momentum from the Ministerial Conference on Fishing Vessel Safety and Illegal, Unreported and Unregulated Fishing, held in 2019, IMO organized associated regional webinars and undertook bilateral discussions with States that had signed the Torremolinos Declaration on the Cape Town Agreement of 2012 on the Implementation of the Provisions of the Torremolinos Protocol of 1993 relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977 (Cape Town Agreement) and committed to ratify the Cape Town Agreement of 2012 relating to fishing vessel safety and combating illegal, unreported and unregulated fishing by the tenth anniversary of its adoption. ILO also published guidelines for flag State and port State inspections under the Maritime Labour Convention, 2006.

71. At the regional level, the Agreement to prevent Unregulated High Seas Fisheries in the Central Arctic Ocean entered into force on 25 June 2021, with the aim of regulating possible future commercial fishing in the region. Regional fisheries management organizations and arrangements took important steps to manage fisheries within their competences, despite COVID-related challenges.

C. Protection and preservation of the marine environment and conservation and sustainable use of marine biodiversity

72. At the global level, land-based sources of pollution contributed the most to marine pollution. Plastic pollution and other marine debris were of particular concern and focus, including efforts to advance understanding of marine debris flows resulting from the COVID-19 pandemic. While amendments to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal regarding plastic waste took effect as at 1 January 2021, discussions continued on strengthening the global framework to address marine litter and plastic pollution,

including through a legally binding agreement or other instrument. A ministerial conference was held in the lead-up to the fifth United Nations Environment Assembly to help build a global vision to tackle marine litter and plastic pollution.

73. Work continued on the environmentally sound management of wastes, including plastic, household and e-wastes, sanitation and wastewater management, as well as monitoring and analysis of various persistent organic pollutants, mercury and radionuclides.

74. Further measures were taken to address a range of other pollution sources and pressures, including ocean deoxygenation, nutrient pollution and eutrophication, harmful algae blooms, ocean acidification, anthropogenic underwater noise and invasive species.

75. Oil spills and the release of hazardous substances from ships and land-based installations were of particular concern, with technical assistance being provided in various regions. Measures were taken to mitigate impacts on the marine environment from shipping, including regarding sulfur and other emissions, anti-fouling, cargo residues and tank washings of noxious liquid substances, ballast water management and sustainable ship recycling.

76. In terms of the conservation and sustainable use of marine biodiversity, none of the Aichi Biodiversity Targets were fully achieved at the global level by the 2020 deadline. The second World Ocean Assessment highlighted improvements in understanding the distribution and status of species and habitats and the effects of anthropogenic pressures; however, gaps remained, particularly regarding deep-sea ecosystems and open-ocean planktonic and benthic species.

77. In support of the post-2020 global biodiversity framework, activities aimed at developing and refining indicators of the monitoring framework with respect to marine and coastal biodiversity issues. Parties to the Convention on Biological Diversity considered potential modalities for the modification of the description of new and existing ecologically or biologically significant marine areas.

78. Marine migratory species, coral reefs and associated ecosystems, mangroves, seagrasses, cold water areas and deep-sea ecosystems continued to be a focus of attention, with a reported surge in projects to restore coastal ecosystems, including mangroves, seagrass meadows, kelp forests, and coral and oyster reefs.¹⁰ Work was undertaken to prevent, reduce and control pollutants and stressors, including the impacts of climate change, on marine biodiversity, as well as the impacts of international trade.

79. Management approaches increasingly shifted from sectoral use to consider the diverse links between ecological and social, economic and cultural aspects. Work continued on cross-sectoral and integrated approaches to address the cumulative effects of human activities on coastal and marine ecosystems, including through marine and coastal biodiversity strategies and mainstreaming of marine and coastal biodiversity issues into broader biodiversity strategies and action plans. The implementation of marine spatial planning and ecosystem approaches was promoted.

80. The identification and application of area-based management tools advanced, including the designation of marine protected areas. In 2020, such areas covered 18 per cent of the ocean within national jurisdictions, while 1 per cent of marine areas beyond national jurisdiction were protected, representing approximately 8 per cent of the entire ocean. While Aichi Biodiversity Target 11 was achieved numerically, progress was modest with regard to safeguarding important areas for biodiversity,

¹⁰ Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 5* (Montreal, 2020). See also www.cbd.int/marine/gbo5.

ecological representativity and connectivity, and management effectiveness. At the regional level, a proposal was under consideration for the designation of a marine protected area beyond national jurisdiction to protect seabirds, referred to as the North Atlantic Current and Evlanov Seamount marine protected area.

81. In a review of the implementation of the regional environmental management plan for the Clarion-Clipperton Zone in the Area, the Legal and Technical Commission of the International Seabed Authority recommended the establishment of four additional areas of particular environmental interest. Work was also undertaken to support the development of such plans in other priority regions in the Area, in particular the northern Mid-Atlantic Ridge and Northwest Pacific.

IX. Strengthening international cooperation and coordination, including through integrated and cross-sectoral approaches

82. A wide range of events and initiatives aimed at strengthening cooperation and coordination at all levels, including through integrated and cross-sectoral approaches for the implementation of ocean-related instruments and policies. States, intergovernmental organizations and other stakeholders also explored innovative ways to address ocean issues in the light of the COVID-19 pandemic, including through virtual or hybrid events and the convening of intergovernmental meetings in revised formats.

83. Among these developments, UN-Oceans convened a high-level virtual event to take stock of ongoing ocean-related initiatives in the light of the pandemic and to achieve enhanced inter-agency coordination and cooperation on ocean and coastal issues beyond 2020.¹¹ UN-Oceans members shared methods and experiences on delivering mandates and activities during the pandemic. UN-Oceans also held teleconferences in April 2021 to discuss and adopt, in particular, the UN-Oceans work programme for 2021.¹² The UN-Oceans contact group continued to contribute to the Decade Implementation Plan for the launch of the United Nations Decade of Ocean Science for Sustainable Development. UN-Oceans members also contributed to a dedicated segment during the celebration of World Oceans Day, marked with a virtual event under the theme “The ocean: life and livelihoods.”¹³

84. During the high-level political forum on sustainable development, convened under the auspices of the Economic and Social Council, on the theme “Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development”, delegations adopted a ministerial declaration (E/HLS/2021/1) that reiterated the crucial importance of conserving and sustainably using oceans, seas and marine resources, including addressing plastic litter and other waste in oceans, significantly reducing marine pollution of all kinds and ensuring sustainable consumption and production patterns. Delegations noted with concern that targets with a 2020 deadline under the 2030 Agenda had not been fully achieved, including several targets under Goal 14, and expressed their commitment to achieving these targets in an accelerated time frame.

85. The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, continuing to work largely through virtual means, established a new working group on climate change impacts on contaminants in the ocean under the

¹¹ See www.media.un.org/en/asset/k1m/k1mvc196lu.

¹² Available at www.unoceans.org/documents/en.

¹³ See www.unworldoceansday.org.

lead of the International Atomic Energy Agency and co-sponsored by the United Nations Environment Programme, the Intergovernmental Commission of UNESCO and IMO.

X. Capacity-building and technical assistance to States

86. Capacity-building initiatives were undertaken by many organizations and agencies to assist developing States in sustainably managing ocean spaces, resources and activities, including through the implementation of the Convention and related instruments. While the COVID-19 pandemic affected many activities, it also provided opportunities to test new methods of virtual delivery for future capacity-building programmes.

87. In the context of these broader efforts, the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs provided information, advice and assistance to States and intergovernmental organizations and other stakeholders through its capacity-building programmes, including technical assistance projects and fellowships and participation in conferences, meetings, workshops and training events.¹⁴ It continued to adapt its capacity-building activities in the light of the pandemic to ensure delivery of needs-based and effective assistance to Member States, in particular least developed countries and small island developing States.

88. The Division commenced a project financed by the Norwegian Agency for Development Cooperation to assist developing countries in implementing the Convention and its implementing agreements and promoting strengthened, sustainable and inclusive ocean economies, including by taking into account the constraints posed by the pandemic.¹⁵ It also collaborated with the World Bank in delivering online training in ocean governance, in partnership with the University of Melbourne Law School (Australia), the Authority and FAO and funded through PROBLUE, the World Bank's blue economy programme. Regional courses for the Pacific and African regions were held in 2021.

89. The Division continued a four-year project funded through the United Nations Development Account and implemented together with the United Nations Conference on Trade and Development to assist Barbados, Belize and Costa Rica in developing ocean economy and trade strategies and realizing economic benefits from sustainable use of marine resources.¹⁶ The final phase involved targeted capacity-building activities on priority issues, as well as examining the impact of COVID-19 on selected ocean economy sectors.

90. The Division completed a multi-year capacity-building programme for Somalia on the legal framework for the governance of the country's maritime zones and the sustainable development of its marine resources, under a project funded through the United Nations trust fund to support initiatives of States countering piracy off the coast of Somalia. It also worked to develop in-person training for Saudi Arabia, which was aimed at building capacity in the field of ocean affairs and the law of the sea, with a focus on maritime boundaries.

91. The Division continued to administer nine voluntary trust funds to assist developing States regarding the implementation of the Convention and its

¹⁴ For more information, see "Division for Ocean Affairs and the Law of the Sea list of activities from 1 September 2020 to 31 August 2021", available at www.un.org/Depts/los/general_assembly/general_assembly_reports.htm.

¹⁵ See www.un.org/Depts/los/doalos-norway.htm.

¹⁶ See <https://unctad.org/projects>.

implementing agreements, their participation in ocean-related meetings and intergovernmental processes, and the settlement of disputes through the Tribunal.¹⁷

Fellowships

92. Since 2004, in the context of the highly successful and valued United Nations-Nippon Foundation Fellowship Programme, 165 awards have been given to nationals (90 men and 75 women) of 78 countries. Since 2018, under the more recent United Nations-Nippon Foundation Sustainable Ocean Programme, 13 Critical Needs Fellowships have been awarded (8 to women and 5 to men) and 35 Thematic Fellowships (19 to women and 16 to men). In the period between 2015 and 2017, two men and three women were awarded Strategic Fellowships. A total of 62 men and 58 women have participated since 2018 in training related to the intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction. A total of 33 individuals (18 men and 15 women) from 30 developing countries have completed the Hamilton Shirley Amerasinghe Memorial Fellowship since its inception in 1986.

93. In-person implementation of the Hamilton Shirley Amerasinghe Memorial Fellowship, and the Critical Needs Fellowship and the Thematic Fellowship was disrupted by the pandemic and associated widespread travel restrictions. After initial postponement, these fellowships will be implemented in the second half of 2021 in a hybrid format, with in-person activities recommencing when circumstances allow. Given the ongoing impacts of the pandemic, the Division decided to continue to offer, until mid-2021, the extensive programme of virtual training that it had developed and implemented under the auspices of the United Nations-Nippon Foundation Fellowship and the Alumni Programme since early 2020.¹⁸

XI. Conclusions

94. The international community has recognized that protecting and restoring the ocean, the planet's biggest ecosystem, must be the imperative of the twenty-first century in order to achieve the 2030 Agenda and the climate goals set in the Paris Agreement. Significant challenges remain, however, many of which have been exacerbated by the ongoing COVID-19 pandemic.

95. Despite efforts to alleviate and adapt to the impacts of COVID-19, the pandemic posed many challenges for ocean-based economic sectors and those who depend on the ocean and its resources for food security and livelihoods, including coastal communities and vulnerable groups already facing disproportionate impacts from cumulative pressures on the ocean, in particular least developed countries and small island developing States.

96. Reaching universal participation in the Convention remains a priority, as significant economic, social and environmental benefits can be gained from its effective implementation. Innovations in ocean activities and initiatives allowed some progress to be made during the pandemic to provide for the further implementation and development of the legal framework set out in the Convention. The following, both now scheduled to be held in 2022, represent significant opportunities for further

¹⁷ For more information, see "Status of voluntary trust funds administered by the Division for Ocean Affairs and the Law of the Sea (1 August 2020–31 July 2021)", available at www.un.org/Depts/los/general_assembly/general_assembly_reports.htm.

¹⁸ See www.un.org/oceancapacity/unnf/virtual-training.

progress to be made in this regard: fourth session of the intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction; and, postponed from 2020, the 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.

97. Achieving ocean sustainability will require urgent and greater efforts on all fronts to reverse negative trends, including through advancing marine science and technology, conservation and sustainable use of marine biodiversity and marine resources and protection and preservation of the marine environment. Transformative changes are needed in the way human activities are managed in marine and coastal areas, in particular through sustainable ocean-based economies, by balancing economic growth with environmental protection and social development.

98. As States strive to recover better, redoubled efforts will be needed to make progress on ocean-related sustainable development targets, some of which have already expired, to ensure that no one is left behind. Sustainable ocean-based economies will play a crucial role in the COVID-19 recovery and achieving the 2030 Agenda, including through building resilience in sectors such as tourism, fishing, shipping and marine renewable energy.

99. Apart from the expected conclusion of WTO talks on the elimination of harmful fisheries subsidies, a number of crucial international meetings are expected to be held in 2022 on fisheries issues, including the resumed Review Conference on the Fish Stocks Agreement and the review by the General Assembly on bottom fishing, which will contribute to the long-term sustainability of marine living resources in the post-COVID-19 setting.

100. Strengthened cooperation and coordination, including on the protection of human rights, will be vital in efforts to improve the plight of refugees and migrants undertaking dangerous journeys by sea, especially women and children, including through global and integrated approaches and improved participation in and implementation of relevant instruments.

101. The shipping industry will play an essential role in the global recovery from COVID-19, by keeping global supply-chains open and ensuring the continued delivery of critical supplies. Increased efforts are still needed to address the significant impacts of the pandemic on seafarers, as well as new safety and security challenges in the context of crimes at sea, including piracy, armed robbery against ships, trafficking and smuggling, which continue to threaten the lives and livelihoods of seafarers and the security of the oceans.

102. The devastating impacts of climate change on the oceans have never been more apparent, including warming, acidification, deoxygenation and other related effects, such as sea level rise, which threaten lives and livelihoods, globally. Averting the worst impacts of climate change will require a just transition to a sustainable future during the post-pandemic recovery. While ongoing mitigation and adaptation actions are welcome, piecemeal measures are insufficient. Integrated, collaborative action will be essential, including cross-agency action at the global level.

103. Efforts must be scaled up through capacity-building and mobilizing blended capital to support sustainable ocean-based economies in the COVID-19 recovery and to achieve the 2030 Agenda. Sustained capacity-building initiatives will be vital to ensuring that all benefit from, and contribute to, a more resilient and sustainable relationship with the oceans, maximizing long-term benefits for all stakeholders.

Remote learning opportunities, which have proved to be a valuable complement to in-person training, could play an important role.

104. As the contributions to the present report make clear, strengthening international cooperation and coordination on ocean issues, including through integrated and cross-sectoral approaches and mechanisms such as UN-Oceans, will remain a priority as the world recovers from the COVID-19 pandemic. These efforts will be galvanized by the momentum generated from the United Nations Decade of Ocean Science for Sustainable Development and the third cycle of the Regular Process to promote the use of marine science and technology to achieve ocean sustainability.
