



General Assembly

Distr.: General
24 December 2019

Original: English

Seventy-fourth session

Items 19 and 74 (a)

Sustainable development

Oceans and the law of the sea: oceans and the law of the sea

Preparatory process of the 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

Note by the Secretary-General

Summary

The present note was prepared in response to paragraph 22 of General Assembly resolution [73/292](#), in which the Secretary-General was requested to prepare a background note, including a proposal for themes of the interactive dialogues for the 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, to be considered at the preparatory meeting to be held at Headquarters on 4 and 5 February 2020. Outlined herein are the status and trends, challenges and opportunities for the implementation of Goal 14. The theme of the Conference, “Scaling up ocean action based on science and innovation for the implementation of Goal 14: stocktaking, partnerships and solutions”, is addressed, and eight themes for interactive dialogues are proposed.



I. Introduction

1. The General Assembly, in its resolution [73/292](#), decided to convene the high-level 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 in Lisbon, from 2 to 6 June 2020, under the overarching theme “Scaling up ocean action based on science and innovation for the implementation of Goal 14: stocktaking, partnerships and solutions”.

2. The present note was prepared in response to paragraph 22 of resolution [73/292](#), in which the Secretary-General was requested to prepare a background note, including a proposal for themes of the interactive dialogues for the Conference, to be considered at the preparatory meeting to be held at Headquarters on 4 and 5 February 2020. It should be read together with the contributions received for the present note¹ and the background note prepared by the Secretary-General for 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 ([A/71/733](#)), as well as other reports relevant to oceans and the law of the sea issued since 2017 (for example, [A/74/70](#), [A/74/119](#) and [A/74/350](#)).

II. Status and trends, challenges and opportunities for the implementation of Sustainable Development Goal 14 and cross-cutting issues

A. Status and trends

3. Oceans, seas and marine resources are critical to sustainable development, including sustainable ocean-based economies and to the 2030 Agenda for Sustainable Development as a whole. They underpin poverty eradication and food security, are a source of employment and livelihoods and support the well-being of humans and the planet. Marine and coastal ecosystems provide protection from natural disasters. Oceans provide oxygen and regulate the global climate, acting as a giant sink for greenhouse gases.

4. Since the 2017 Conference raised global awareness of the problems facing the oceans and seas, including through its outcome document entitled “Our ocean, our future: a call for action”, various actions, as reflected herein, have been taken at all levels in support of Sustainable Development Goal 14.² Also of note with regard to the conservation and sustainable use of the oceans, seas and marine resources are the political declaration of the high-level political forum on sustainable development convened under the auspices of the General Assembly, as contained in the annex to Assembly resolution [74/4](#), and the political declaration of the high-level meeting to review progress made in addressing the priorities of small island developing States through the implementation of the SIDS Accelerated Modalities of Action (SAMOA) Pathway, as contained in Assembly resolution [74/3](#).

5. The extent to which progress has been made in the implementation of Goal 14 varies among countries and regions and depends on such factors as the availability of science and innovation, capacity-building and financing, as well as the level of intersectoral and interdisciplinary cooperation at the national, regional and global levels.

¹ Available at <https://oceanconference.un.org/#documentation>.

² See the registry of voluntary commitments available at **Error! Hyperlink reference not valid..**

6. Addressing climate change and its impacts on the oceans remains one of the most significant challenges to achieving the 2030 Agenda and Goal 14 as a result of ocean warming and deoxygenation, sea level rise and ocean acidification, which are increasingly adversely affecting the oceans and their resources.

7. Overall, the progress made to date notwithstanding, existing actions for the implementation of Goal 14 are insufficient, thus also indicating insufficient progress towards the implementation of international law as reflected in the United Nations Convention on the Law of the Sea.³ Accelerated action is necessary on an urgent basis, in particular in view of the four targets of Goal 14 that mature in 2020 (targets 14.2, 14.4, 14.5 and 14.6).

8. Accelerating action to deliver effectively on Goal 14 would require building on synergies between ocean-related Goals and targets, processes and initiatives, including those addressing climate change and biodiversity, and providing for enhanced cooperation and coordination and science and innovation (see sect. III).

B. Challenges and opportunities

9. Challenges with regard to addressing the continued deterioration of the marine environment and its resources stemming from unsustainable anthropogenic activities are mostly linked to scarce intersectoral and interdisciplinary ocean data and information, inadequate data-sharing, insufficient capacity to assess and address ocean issues in an integrated and holistic manner and inadequate capacity for the implementation of international law as reflected in the United Nations Convention on the Law of the Sea. Furthermore, the urgent adoption of adaptation and mitigation measures to address the effects of climate change on the oceans is required.

10. Addressing those challenges by scaling up ocean action, including through science and innovation, increasing and improving cooperation and coordination at all levels, capacity-building and financing and continued monitoring and review of the implementation of Goal 14 can underpin the achievement of healthy and productive oceans and seas for sustainable development.

Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

11. Land-based activities continue to represent an estimated 80 per cent of the sources of marine pollution, highlighting the need for integrated source-to-sea approaches to protect the marine environment. Governments cooperate in the implementation of their international obligations, including those under the Convention, through, inter alia, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities.

12. Plastics continue to be the most prevalent debris item recorded, accounting for an estimated 60 to 80 per cent of all marine litter. Since 1980, plastic pollution in oceans has increased tenfold. In total, 8 million tons of mismanaged plastic waste are estimated to be entering the oceans annually. At such a pace, it is likely that the goal of a significant reduction in marine pollution by the year 2025 will not be achieved without transformative action.

13. In the past several years, global awareness of plastic pollution has surged. Several Governments and the private sector have taken steps to reduce it, for example by banning single-use plastics. Plastic waste was also included within the purview of

³ For progress on Goal 14, see [E/2019/68](#), para. 35.

the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

14. However, it is also important to address plastic pollution more comprehensively through the consideration of global approaches aimed at harmonizing standards and practices, as well as catalysing significant innovation across the entire plastics supply chain.

15. Initiatives such as the ad hoc open-ended expert group on marine litter and microplastics, established by the United Nations Environment Assembly in 2017 (see [UNEP/EA.3/Res.7](#)), and the partnership on plastic wastes in the context of the Basel Convention will help to address some of the challenges. However, further concerted efforts are required.

16. Similarly, progress in catalysing action on nutrient pollution resulting in eutrophication has been very modest since 2015. Eutrophication, particularly when combined with the effects of climate change, can lead to severe oxygen loss and so-called “dead zones”.

17. Action towards dramatically reducing nutrient pollution, as well as aggressive action to reduce “hot spot” nutrient pollution from untreated wastewater, especially in coastal cities, could include a range of policy, regulatory, economic and financial reforms and tools. In that regard, the Colombo Declaration on Sustainable Nitrogen Management provides a road map for action on nitrogen challenges.

18. As regards pollution from ships, as the volume of international trade increases, the risk of shipping-related marine pollution may increase and would need to be addressed through regulatory and other measures. Recent initiatives include measures to address biofouling and the transfer of invasive aquatic species, and the discharge of sewage and marine plastic litter from ships. Anthropogenic underwater noise pollution is also an area of concern requiring further attention.

Target 14.2: By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

19. The state of marine and coastal ecosystems has continued to deteriorate. Exploitation of resources has had the largest relative impact on marine ecosystems, followed by many changes in the uses of the sea and coastal land. The Living Planet Index shows a 35 per cent reduction of marine species since 1970 (see [IPBES/7/10/Add.1](#)).

20. Coastal ecosystems are affected by ocean warming, including intensified heat waves, acidification, loss of oxygen, salinity intrusion and sea level rise, in combination with adverse effects from human activities on oceans and land.⁴ Coral reefs, for example, are projected to decline by a further 70 to 90 per cent at global warming of 1.5°C, with larger losses at 2°C.⁵

21. Challenges include the integration of the conservation and sustainable management of marine and coastal ecosystems into national development plans; mainstreaming the consideration of biodiversity in sectors such as fisheries and aquaculture; embracing gender equality and women’s empowerment; the lack of consistent and accessible data; insufficient data-sharing; limited coordination and insufficient resources, particularly in developing countries; increases in risks to

⁴ See Intergovernmental Panel on Climate Change (IPCC), *The Ocean and Cryosphere in a Changing Climate*.

⁵ IPCC, *Global Warming of 1.5°C*.

critical coastal transportation infrastructure; and inadequate cooperation and synergies in implementing biodiversity-related conventions.

22. While payment for ecosystem services schemes poses technical, financial and policy challenges, such schemes also present opportunities for improving the condition and resilience of coastal ecosystems. The exploration of innovative financing mechanisms, such as insurance for coral reefs in the Mesoamerican Reef or carbon market payments in Kenya and Madagascar, provides promising avenues. Other instruments for financing conservation include biodiversity offset schemes, blue carbon payments, cap and trade programmes, green bonds and trust funds (see IPBES/7/10/Add.1). However, significant capacity development is required to address in-country coordination, as well as cooperation between countries, on those issues.

23. Marine spatial planning, which may include ecosystem and area-based approaches, offers opportunities for achieving target 14.2. More countries are now developing marine spatial plans to manage areas within national jurisdiction.

24. Indigenous peoples and their traditional knowledge systems for the management of marine and coastal ecosystems could provide valuable models of stewardship, conservation and ecosystem-based adaptation.

25. The restoration of coastal ecosystems, such as mangroves, tidal marshes and seagrass meadows (coastal “blue carbon” ecosystems), could increase carbon uptake and storage with multiple other benefits.⁶ Restoration is thus progressively at the forefront of national and regional agendas, including increasingly in national biodiversity strategies and action plans, intended nationally determined contributions and regional seas action plans. The United Nations Decade on Ecosystem Restoration (2021–2030), as proclaimed in General Assembly resolution [73/284](#), can provide an opportunity to highlight the potential for marine and coastal ecosystem restoration.

26. Climate action focusing on ocean ecosystems presents an opportunity for mitigation and adaptation action to build resilience and generate co-benefits. Intended nationally determined contributions by parties to the Paris Agreement under the United Nations Framework Convention on Climate Change provide opportunities for the protection of coastal ecosystems. Over 70 per cent of current such contributions mention ocean-related topics, in particular with reference to coastal ecosystems, fisheries and ocean warming impacts and ocean research.

Target 14.3: Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

27. The ocean has very likely taken up between 20 and 30 per cent of total anthropogenic carbon dioxide emissions since the 1980s.⁷ When carbon dioxide enters the ocean, it changes seawater chemistry, resulting, among other changes, in increased seawater acidity. Long-term observations of ocean acidification over the past 30 years have shown an average increase in acidity of 26 per cent since pre-industrial times (see [E/2019/68](#)). Continued carbon uptake by the ocean by 2100 is virtually certain to exacerbate ocean acidification.⁸ The methodology for indicator 14.3.1 supports the regular reporting of ocean acidification data by Member States and enables regular regional and global analysis.

28. Ocean acidification affects calcifying organisms, such as corals, because their ability to build shell or skeletal material depends on the acidity of the water. It also

⁶ IPCC, *The Ocean and Cryosphere*.

⁷ IPCC, *The Ocean and Cryosphere*.

⁸ IPCC, *The Ocean and Cryosphere*.

affects important components of the ocean food web, such as primary producers (plankton), shellfish and crustaceans and marine species that are important in capture fisheries and aquaculture, affecting food security and the livelihoods of fishing and aquaculture communities (see [A/72/70](#)).

29. Urgent carbon dioxide reductions by parties to the Paris Agreement would ameliorate further ocean acidification. Target 14.3 can be achieved only if greenhouse gas emissions are significantly reduced.

30. Further investment is needed in research on the impacts of acidification on biodiversity, as well as on ecosystem services and the economy, the regional variability of ocean acidification impacts and the impacts of acidification with other stressors, to determine the capacity of important species to adapt to changing ocean conditions. Many gaps in ocean acidification observation prevail, particularly in the southern hemisphere. In that regard, the General Assembly, for example in its resolution [74/19](#), has repeatedly encouraged States, individually or in collaboration with relevant international organizations and bodies, to enhance their scientific activity to support continued coordination of scientific work to study and minimize the impacts of ocean acidification and develop ways and means of adaptation.

Target 14.4: By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

31. To achieve the sustainable development of fisheries, fish stocks must be maintained within biologically sustainable levels. However, the state of marine fishery resources has continued to decline, and the fraction of marine fish stocks fished within biologically sustainable levels has decreased, from 90.0 per cent in 1974 to 66.9 per cent in 2015.⁹ Simultaneously, the status of some stocks in some regions has improved thanks to improved fisheries management.

32. As it appears unlikely that the world's fisheries can rebuild the 33.1 per cent of current overfished stocks in the very near future, urgent measures are needed to stop the decline of stocks and begin the rebuilding process.¹⁰ Moreover, climate change is projected to reduce ocean net primary production and fish biomass,¹¹ posing additional challenges to fisheries.

33. To address overfishing and illegal, unreported and unregulated fishing, efforts are required to strengthen not only regional fisheries management organizations and arrangements but also national authorities dealing with fisheries, in areas such as monitoring, control and surveillance, the application of ecosystem-based approaches and science-based management plans and the use of economic instruments. It has been estimated that rebuilding overfished stocks could increase annual fishery production by 16.5 million tons, worth \$32 billion.

34. A number of international legal instruments, in particular the United Nations Convention on the Law of the Sea and the 1995 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 (Fish Stocks Agreement) require the conservation and management of marine living resources and cooperation among

⁹ Food and Agriculture Organization of the United Nations (FAO), *The State of World Fisheries and Aquaculture 2018: Meeting the Sustainable Development Goals* (Rome, 2018).

¹⁰ Ibid.

¹¹ IPCC, *The Ocean and Cryosphere*.

States. In particular, the Resumed Review Conference for the Agreement, held in 2016, called for the strengthening of interaction between fisheries managers and scientists, and other stakeholders, to ensure that conservation and management measures were based on the best available scientific evidence. The Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing is the first international legally binding agreement to combat such fishing. Further efforts are needed to make progress in implementing those and other international instruments.¹² It is also necessary to address human rights abuses and transnational crime in the fishing industry that may be related to illegal, unreported and unregulated fishing.

35. Technical solutions, such as the development of global data exchange standards, can help to improve fisheries management. The Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels presents an opportunity towards the implementation of target 14.4.

Target 14.5: By 2020, conserve at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.

36. Area-based conservation measures and management tools, such as marine protected areas, and other approaches, such as marine spatial planning and integrated coastal zone management, play an important role in the protection of coastal and marine areas and resources. When managed effectively, marine protected areas have successfully conserved biodiversity (see IPBES/7/10/Add.1). They also represent an effective tool to mitigate and adapt to climate change impacts and to increase the resilience of ecosystems. Marine protected areas have increased rapidly in both number and size in recent years, with a more than tenfold increase since 2000.¹³ As at December 2019, they cover almost 8 per cent of the world's ocean. If concerted efforts to implement national commitments continue, target 14.5 is likely to be achieved by 2020.

37. Nevertheless, challenges remain. The uneven geographical distribution of marine protected areas limits their effectiveness, connectivity and representativeness. While much of the recent growth in marine protected area coverage has been driven by the establishment or expansion of several very large marine protected areas by a small number of States, there is minimal coverage for such areas in coastal areas and intensely used seas in many regions. Efforts have been made to develop a definition and guiding principles for the design and management of marine protected areas. Questions have also been raised regarding the efficacy of management for some of the areas, including their limited designation of no-take areas. Further efforts are required to measure progress against marine protected area objectives. There is also a need for more inclusive and effective stakeholder engagement that empowers local and small-scale fishing communities to participate in the development, designation and management of area-based conservation measures. Such enhanced engagement would also assist in acquiring further data on socioeconomic issues and values linked to marine protected areas.

38. Opportunities exist to enhance the governance of marine protected areas, and their integration with broader spatial planning efforts.¹⁴ Moreover, there is increasing recognition of the value of combining marine protected areas with other effective

¹² See “Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing”. Available at www.fao.org/sdg-progress-report/en/#sdg-14.

¹³ See “Growth in marine protected area coverage”. Available at www.protectedplanet.net/marine.

¹⁴ See www.unenvironment.org/resources/enabling-effective-and-equitable-marine-protected-areas-guidance-combining-governance.

area-based conservation measures (for example, by the Conference of the Parties to the Convention on Biological Diversity in its decision 14/8), and the need to integrate those tools with broader cross-sectoral spatial planning efforts at the national level.

Target 14.6: By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation

39. According to recent estimates, subsidies to the fishing industry amounted to around \$35.4 billion per year, of which around \$22.2 billion was provided in forms that tended to enhance fishing capacity, which in turn, can contribute to overcapacity and overfishing.¹⁵

40. During the World Trade Organization (WTO) negotiations on fisheries subsidies, members agreed on an intensified programme of work leading up to the twelfth WTO Ministerial Conference, to be held from 8 to 11 June 2020. There remains a need to accelerate the pace of the WTO negotiations on fisheries subsidies that contribute to illegal, unreported and unregulated fishing, overcapacity and overfishing, and cross-cutting issues, which include special and differential treatment, disputes, remedies for non-compliance, and transparency and notifications.

41. Many regional trade agreements have started implementing environmental rules, including specific clauses dealing with fisheries subsidies.

Target 14.7: By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

42. The sustainable use of marine resources and the development of sustainable ocean-based economies present vital opportunities for small island developing States and least developed countries to increase economic benefits, including from fisheries, aquaculture, tourism, maritime transportation, renewable energy, marine biotechnology and seawater desalination.

43. In the fisheries sector, recent figures suggest that its contribution to the gross domestic product (GDP) of small island developing States and least developed countries is increasing (from 6.69 per cent in 2011 to 13.68 per cent in 2015 for small island developing States, and from 2.28 per cent in 2011 to 3.48 per cent in 2015 for least developed countries).¹⁶ In the light of increasing pressure on marine ecosystems and the fish stocks therein, the socioeconomic benefits of fisheries will need to increasingly rely on enhanced value addition of fisheries products, while ensuring adequate benefit-sharing for fishers. Aquaculture is growing in importance as a source of livelihoods for many coastal communities and the sustainable management of the sector can benefit small island developing States and least developed countries.

44. Small island developing States have a strong competitive advantage in the tourism sector given their location and natural and cultural resources. The sector already accounts for a significant proportion of GDP of many such States. However, some require infrastructure development and improved transport to reap economic benefits from the sector.

¹⁵ U. Rashid Sumaila and others, "Global fisheries subsidies: an updated estimate", *Marine Policy*, vol. 69 (2016), pp. 189–193.

¹⁶ See "Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries". Available at www.fao.org/sdg-progress-report/en/#sdg-14.

45. Integrated, cross-sectoral governance with stakeholder engagement is key to the development of sustainable ocean-based economies for small island developing States and least developed countries. Some small island developing States have already taken initiatives at the national and local levels to implement institutional reforms and prepare action plans to address “blue growth” objectives. They have also demonstrated innovative pathways for financing ocean-based initiatives.

46. Many small island developing States and least developed countries remain in need of technical and financial assistance to develop sustainable ocean-based economies, including in identifying priorities and advantages, adapting their legal and political frameworks, harnessing capital and planning support and on-the-ground pilot projects. Capacity-building activities and technical assistance programmes for small island developing States and least developed countries have been undertaken.

Target 14.a: Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

47. Scientific knowledge, research capacity and marine technology are essential to encourage innovation to scale up solutions for the conservation and sustainable use of the oceans, seas and marine resources.

48. Progress has been made in ocean sciences, including in observations, data and information flow, the provision of services, including food, weather and climate predictions, and disaster risk reduction. However, enhancements in research are required to enable an understanding of fundamental ocean processes and to support effective policymaking and implementation.

49. The methodology for indicator 14.a.1 was developed in the context of the *Global Ocean Science Report*, which also acts as a system to collect data on the status and trends in ocean science at the global level. The second edition of the report will provide a baseline on ocean science capacity for the United Nations Decade of Ocean Science for Sustainable Development (2021–2030), including with respect to the transfer of marine technology. In support of the Intergovernmental Oceanographic Commission Guidelines and Criteria on the Transfer of Marine Technology, the Commission is considering the development of a global clearing house mechanism for the transfer of marine technology.

50. There are various challenges and opportunities relating to the implementation of target 14.a. Inadequate governance and science-policy dialogue hamper many countries from participating in ocean science or benefiting from existing knowledge. In fisheries, challenges include the lack of data to analyse stock status, a lack of global models and gaps in fisheries data. For biodiversity conservation, the need for multilevel governance policies beyond conservation measures to achieve target 14.a is noted, as is the need for the co-production of knowledge. Other challenges include the need for sustainable funding, given that ocean science expenditure is highly variable worldwide, and government funding is modest overall, although investment is increasing. It is also necessary to translate the increase in scientific knowledge into effective development opportunities, especially for small island developing States and least developed countries, to overcome capacity limitations and to find new ways of garnering investment. Basic and applied research should be linked in order to deliver impact in terms of improving the state of the marine environment and ocean economy. Acceleration in science and technology also provide a challenge and an opportunity for the coherent implementation of the United Nations Convention on the Law of the

Sea and its provisions on marine scientific research and the transfer of marine technology.

51. Innovation, technological development, capacity development and ocean literacy are enabling factors that can support actions at all levels of society. Furthermore, specific efforts should be targeting developing countries, in particular small island developing States and least developed countries, in order to assist them in strengthening their capacity through science, technology and innovation policy frameworks and institutional mechanisms.

Target 14.b: Provide access for small-scale artisanal fisheries to marine resources and markets

52. Small-scale fisheries globally account for 90 per cent of the 300 million fishers and fish workers and more than half of total production on average, in terms of both quantity and value (see [E/2019/68](#)).

53. Challenges to accessing markets and resources for small-scale artisanal fishers include competition over resources, insufficient market information, knowledge and capacity constraints, high post-harvest losses and a lack of access to financial services. A range of actions can help to address those challenges, including promoting the co-management of resources, the development of equitable and sustainable business opportunities, improved access to education and other public services, community empowerment and the adoption of legal measures. It is important that fishers, including small-scale fisheries, participate in those processes.

54. Women constitute almost half of artisanal or small-scale fishers and fish workers. They lead the post-harvest sector but face many obstacles, including a lack of social protection and unequal employment opportunities. Empowering women and supporting the post-harvest sector are therefore key to achieving that target.

55. To promote the access of small-scale artisanal fishers and fish workers to marine resources, services and markets, most countries have developed targeted regulatory and institutional frameworks. However, the effectiveness of their implementation varies. Developing countries need assistance in creating and implementing a policy and regulatory environment that allows small-scale artisanal fishers to realize their full economic potential. The full implementation of the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication also presents opportunities to contribute to the implementation of target 14.b.

Target 14.c: Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of “The future we want”

56. The full and effective implementation of the international legal framework for the oceans, with the United Nations Convention on the Law of the Sea at its core, is essential to achieving the conservation and sustainable use of the oceans and their resources. That framework encompasses the Convention’s two implementing agreements, 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 Fish Stocks Agreement, as well as instruments developed by competent international organizations, including at the regional level, covering many aspects of ocean use. Progress in their implementation is critical to achieve target 14.c and support the cross-sectoral and integrated efforts necessary to achieving all the targets of Goal 14.

57. Steps have been taken at all levels to strengthen the implementation of international law, as reflected in the Convention, including through programmes and activities to enhance institutional and human capacities, initiatives to support the development and strengthening of national legal and governance frameworks for the oceans and their resources, and by raising awareness of relevant instruments to promote their ratification and full implementation. Data to be collected based on the approved methodology for indicator 14.c.1 will provide, for the first time, a baseline of the current state of implementation of the Convention and its implementing agreements with respect to the conservation and sustainable use of the oceans and their resources.

58. Efforts to strengthen the international legal framework through the elaboration of new instruments include, in particular, the intergovernmental conference convened by the General Assembly to elaborate the text of an international legally binding instrument under the Convention on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction. The International Seabed Authority is also developing exploitation regulations, which will provide a framework for regulating and managing the exploration and exploitation of mineral resources in the Area in a sustainable manner.

59. The progress notwithstanding, there are challenges that are yet to be fully addressed with regard to achieving universal participation in the Convention and other relevant instruments. Processes such as the resumed Review Conference on the United Nations Fish Stocks Agreement and the upcoming review at the third meeting of the Parties to Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing can play an important role in that regard.

60. If not addressed, scientific, technical, financial, institutional and legal capacity constraints, in particular for developing countries, will continue to preclude significant progress in the implementation of international law as reflected in the Convention. For example, further efforts are required to address the technical and scientific capacity limitations that hinder developing States, including small island developing States, from making the deposits of charts or lists of geographical coordinates describing the outer limits of their continental shelves that are required under the Convention.

61. Increasing participation in relevant instruments, addressing challenges of implementation, including resource and capacity constraints, strengthening intersectoral cooperation, coordination and information-sharing at all levels and developing new instruments to address emerging challenges in a timely fashion will be key elements in accelerating the implementation of efforts to achieve that target. With regard to the need for sustained funding, the establishment of a dedicated financial mechanism, or other innovative schemes to stimulate private sector support, would merit consideration.

C. Cross-cutting issues

Financing

62. Several conferences, including the 2017 Conference and other forums, have generated initiatives and partnerships aimed at promoting financing for the development of sustainable ocean-based economies. At the country level, there are good practices of financing ocean-related activities, such as the debt for nature swap and sovereign blue bond by Seychelles. Other examples include the Blue Action Fund and the World Bank PROBLUE multi-donor trust fund and sustainable development bonds, which highlight the critical role of ocean and water resources. Other initiatives and partnerships include the development of the Sustainable Blue Economy Financing

Principles, the United Nations Global Compact Sustainable Ocean Principles and the Social Impact Investing Initiative of the United Nations Office for Project Services. While capital is increasingly flowing into the development of sustainable ocean-based economies, additional prioritization and communication of development needs at the national and regional levels will further reinforce the impact of investments and blended finance approaches.

Capacity-building

63. While there are many capacity-building activities being conducted, further concerted efforts are required. Piecemeal and one-off projects need to be transformed into programmes that meet clear needs and priorities and are delivered at impactful scales. Fellowships and grant systems that provide government and donor support to a new generation of experts are critical, including programmes to reinforce capacity in ocean sciences and science-policy interfaces. In addition, there is a need to enhance not only North-South but also South-South and triangular cooperation to achieve Goal 14.

Ways to promote collaboration, cooperation and coordination, as well as preventing the unnecessary duplication of efforts, to ensure further efficiency and effectiveness in support of Goal 14

64. The General Assembly has consistently emphasized that the United Nations Convention on the Law of the Sea sets out the legal framework within which all activities in the oceans and seas must be carried out. Furthermore, it has reaffirmed the need to improve cooperation and coordination at the national, regional and global levels, to support and supplement, inter alia, the efforts of each State in promoting the implementation of the Convention and the integrated management and sustainable development of the oceans and seas.

65. The General Assembly annually reviews developments relating to ocean affairs and the law of the sea, assisted by the ocean processes that it established, such as the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea. The Informal Consultative Process, which is mandated to facilitate the Assembly's review, with an emphasis on identifying areas in which coordination and cooperation at the intergovernmental and inter-agency levels should be enhanced, has considered topics from the perspective of the three pillars of sustainable development, including "Ocean science and the United Nations Decade of Ocean Science for Sustainable Development" in 2019.

66. In the outcome document entitled "Our ocean, our future: call for action", adopted at the 2017 Conference, a call was also made to strengthen cooperation, policy coherence and coordination among institutions at all levels,¹⁷ while in the political declaration of the high-level political forum on sustainable development convened under the auspices of the General Assembly (resolution 74/4, annex) emphasis is laid on the importance of solving challenges through international cooperation and enhancing global partnerships.

67. Challenges common to cooperation and coordination include a lack of human and institutional capacity and financial resources to overcome fragmentation, and competing objectives and conflicting solutions.

68. Integrated approaches to achieve Goal 14 require the involvement of diverse actors, for example scientists, policymakers, managers, communities and businesses at various levels, working towards a set of common and interlinked but diverse goals.

¹⁷ See General Assembly resolution 71/312, annex, para. 13 (b).

Involving such diverse actors in knowledge generation, policymaking or management requires awareness by those actors of the importance of the ocean.

69. As regards inter-agency cooperation, UN-Oceans was established as the mechanism that seeks to enhance the coordination, coherence and effectiveness of activities relating to oceans and coastal areas. Its terms of reference also provide for collaboration between UN-Water and UN-Energy, in recognition of the interrelations between oceans, water and energy. In the outcome document entitled “Our ocean, our future: call for action”, the Secretary-General was called upon to continue his efforts to support the implementation of Goal 14, in the context of the implementation of the 2030 Agenda, in particular by enhancing inter-agency coordination and coherence throughout the United Nations system on ocean issues, taking into consideration the work of UN-Oceans. The General Assembly will review the terms of reference of UN-Oceans at its seventy-fifth session.

70. Cross-sectoral cooperation and coordination on ocean issues at the national level can foster integrated decision-making, reflecting a broad range of interests and viewpoints. Fragmentation and a lack of cooperation and coordination represent one of the main challenges to institutional effectiveness at all levels. Opportunities remain, in terms of capacity-building and institutional strengthening, to ensure cooperation and collaboration between different government institutions in the implementation of national strategies and plans.

71. Cooperation at the regional level has also been identified as one of the key elements to accelerate the implementation of Goal 14; for example, owing to the potential of regional cooperation to enhance financing for development.

72. Cooperation and coordination can be improved by building the holistic governance of ocean activities at the global and regional levels, establishing mechanisms for cooperation on issues of common interest between regional organizations with different mandates, establishing transboundary cooperation, given the interconnected nature of marine ecosystems (for example the Coral Triangle Initiative on coral reefs, fisheries and food security), and establishing or strengthening mechanisms for collaboration, knowledge-sharing and the exchange of best practices.

III. Scaling up ocean action based on science and innovation

73. Science and innovation are essential tools for addressing the challenges to achieving Goal 14 in particular and the Goals in general. They are key to the development of integrated and coordinated approaches that capture the interlinkages among the targets and synergies between Goal 14 and the other ocean-related Goals.

74. The data obtained from marine scientific research and its supporting technologies can improve knowledge of drivers of change, events and disasters. In order to do so effectively, marine science needs to be mainstreamed into decision-making and be interdisciplinary and intersectoral, including to achieve a deeper understanding of the ocean-atmosphere interface and the land-ocean connection. Scaling up ocean action will require understanding the complex challenges of sustainable development through both knowledge and potential solutions. Interdisciplinary science and cross-variable analysis of cumulative impacts on the oceans will address growing challenges to ocean management, link the implementation of Goal 14 to other Goals, create synergies and avoid trade-offs.

75. Challenges can be turned into opportunities by scaling up ocean action in various areas in favour of sound science, access to necessary data and information, and the effective utilization of such data and information by decision makers for effective integrated ocean management and conservation. That requires consistent and

comprehensive global ocean observation, including biological observation and monitoring to better understand ocean ecosystems and species, changes over time, gaps in understudied locations and gaps in understanding the biodiversity in the deep sea and other understudied marine biodiversity.

76. The resulting data and information gathered from observation and monitoring must also be accessible to all and readily available through open-access databases. That is true to the 2030 Agenda core principle of leaving no one behind. Improving access to data through such databases will require standardization of data, interoperability between databases and synthesis of data into information for decision makers. International science partnerships are key for connecting the dots for ocean management. There is a need for long-term, well-resourced and inclusive scientific partnerships to be complemented by innovation partnerships on priority ocean issues in order to improve governance, build the capacity of scientists and facilitate technology transfer.

77. To achieve Goal 14, social science data will be needed to underpin the successful application of management and conservation tools in human-ecological systems in marine and coastal areas, and to ensure that the costs and benefits of conservation are equitably shared. Data on human uses of the ocean are required to design management measures. In the context of the development of sustainable ocean-based economies, social science data will also help to address inequality, basic needs, employment and well-being and provide opportunities and benefits for all segments of society. Similarly, knowledge co-production between traditional knowledge and science has the potential to help to address complex and interconnected environmental and social problems. In addition, citizen science can mobilize communities around environmental issues and help to collect much larger amounts of data than by scientists alone.

78. The achievement of Goal 14 and its targets requires a strong science-policy interface to provide timely scientific information that tracks progress towards Goal 14 and its targets, highlighting actions that have been successful and that could be scaled up. Several international instruments and science-policy interfaces have been formally established by the United Nations or work with United Nations agencies. The Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects, and its second world ocean assessment, and the United Nations Decade of Ocean Science for Sustainable Development have the potential to play an important role in strengthening the science-policy interface. In addition, the 2030 Agenda envisages that the *Global Sustainable Development Report* will strengthen the science-policy interface and could provide a strong evidence-based instrument to support policymakers.

79. With the scientific understanding of the ocean gradually improving, technological innovations in many fields are moving forward rapidly. Those can make ocean uses more sustainable and such solutions can be scaled up to accelerate the implementation of Goal 14. In addition, capacity-development and technology transfer are urgently needed to ensure that the scientific capacity gap between developed and developing countries is bridged. To achieve that, sustainable financing is required to support research and development, as well as the sharing of information and the transfer of skills and technology.

80. In the outcome document entitled “Our ocean, our future: call for action”, the special importance of certain targets of Goal 14 for small island developing States and least developed countries is recognized. Scaling up ocean action would include developing the technological capacity of small island developing States, including through the Technology Bank for the Least Developed Countries, establishing dedicated regional oceanographic centres, enhancing technical assistance and

collaboration among the universities of small island developing States and other regional ocean-focused institutions and promoting the participation of least developed countries in ocean science. Additional ways to scale up ocean action based on science and innovation include strengthening cooperation and coordination, enhancing financing opportunities and building capacity.

81. The current pace of scientific advances and data collection has generated a solid foundation for better management of the ocean, but it is not enough to realize a future sustainable ocean. Innovations in science and technology will play a key role in reconciling the objectives of environmental conservation with those of economic development and societal inclusion.

82. In that regard, developments in information and communications technology (such as satellite, sensor radars and sonar technology) can play a significant role in the conservation and sustainable use of the oceans through improved monitoring and reporting, which leads to increased accountability. Satellite-based monitoring can deliver timely and accurate data on a global basis, while local sensors deliver on-the-spot updates in real time. Big data can be used to analyse short-term and long-term trends in terms of biodiversity, pollution, weather patterns and ecosystem evolution and to plan mitigation activities. Mobile devices can help to access ocean information and take an active role in monitoring progress against conservation targets. Trans-ocean and regional telecommunication cable systems equipped with sensors could also enable real-time data for ocean climate monitoring and disaster mitigation. Earth observation data, particularly radar data, can be used to create maps to monitor the spread of oil spills and to provide data in near-real time to authorities involved in clean-up efforts.

83. Potential solutions to detect and/or reduce illegal fishing activities combine Earth observation data with information from fishing vessel databases and oceanographic data, providing reports that can alert officials to suspicious vessel movements. Remotely sensed data and Global Navigation Satellite Systems can also be used to improve the productivity of fishing activities and compliance with fishery regulations.

84. Technology and innovation in the energy supply sector can substantively improve the performance of shipping. Options to reduce emissions from the energy sector include increasing the uptake of renewable energy technologies, improving energy efficiency and reducing fugitive emissions from fuel extraction processes. Those developments, applied to the shipping industry, could lead to greener, more efficient and safer shipping, minimizing the impact of marine traffic and port operations.

85. Innovations in infrastructure will be critical to the achievement of all the Goals. For Goal 14, that includes reducing marine pollution through improved wastewater management, incorporating coastal erosion into flood risk management plans, supporting renewable energy sources, enhancing port infrastructure to reduce transportation routes and thus fuel use and exhausts, and using digital technology to combat overfishing.

86. There are many promising solutions, including tools, practices and partnerships that can transform local fisheries, biodiversity conservation and marine spatial planning. The challenge is to scale them up to be applied globally, so that the solutions match the scale of the problems facing the oceans. Scaling up solutions in the complex and interconnected ecological, social and economic ocean-related systems will require an understanding of the interdisciplinary science underpinning those activities, and the factors affecting human values and choices. One approach is to learn from what are referred to as “bright spots” – those places where ecosystems are substantially better. With regard to coral reefs, for example, a study found that bright

spots were characterized by strong sociocultural constructs, high levels of local engagement in management, high dependence on marine resources, and beneficial environmental conditions such as deep-water refuges. In general, solutions have a better chance of succeeding when they are implemented with the full participation of local communities, provide local benefits and apply community knowledge.

87. The greatest benefit is derived by combining global and local solutions, some of which could be implemented or scaled up immediately. One example is the combined application of emissions reductions, and nature-based adaptation and mitigation solutions for climate change. Implementing solutions will inevitably require changes; for example, in consumer behaviour regarding single-use plastics, in how industry uses those materials and innovative alternatives.

88. In the outcome document entitled “Our ocean, our future: call for action”, all stakeholders were called upon to approach the implementation of Goal 14 in an integrated and coordinated way and to promote policies and actions that took into account the interlinkages among the targets of Goal 14, and the potential synergies between Goal 14 and the other Goals.¹⁸

89. The contributions received also underscore that need for integration in order to achieve Goal 14. That includes integration within ocean science, involving multiple disciplines, knowledge systems and diverse stakeholders in knowledge production; in policymaking, ensuring coherence between laws and policies for various sectors; in development, uniting policymakers with managers, local communities and other stakeholders; and between scientists and policymakers to ensure that knowledge produced is usable and useful for action. Examples of integrated approaches include the use of marine spatial planning and area-based management tools; ecosystem approaches; integrating urban planning with marine spatial planning; applying a source-to-sea approach to land-based pollution; taking a holistic approach to infrastructure and to waste by creating circular economies; and introducing reduce-reuse-recycle thinking into all aspects of society.

IV. Development of partnerships

90. The development of effective partnerships enabling collective action towards the implementation of Goal 14 is of critical importance. The acceleration of action to that end requires multi-stakeholder partnerships, including public-private and cross-sectoral partnerships.

91. The inputs to the present note indicate that areas in which partnerships aimed to fill scientific gaps and further innovation for Goal 14 include: (a) addressing land-based sources of marine pollution, such as reducing marine plastic litter and microplastics through circular economy practices; (b) restoring marine and coastal ecosystems; (c) improving fisheries management using ecosystem approaches; (d) accelerating sustainable tourism; (e) reducing emissions from maritime transport; (f) helping to build more sustainable and climate-resilient ports; (g) collecting and sharing data through strengthened observation networks; and (h) providing for the transfer of marine technology.

92. There is no one-size-fits-all approach to developing effective partnerships: some areas require particular types of actors as key partners. For example, partnerships for the effective functioning of area-based conservation measures and management tools are more likely to succeed if the meaningful involvement of local fishing communities

¹⁸ Ibid., para 13 (a).

is ensured. Partnerships for outreach activities, such as awareness-raising, would be effective if they can involve young people.

93. Efforts to assist with the implementation of existing partnerships and stimulate new partnerships could be facilitated by: (a) incentivizing the sharing of good practices and giving visibility to well-performing partnerships; (b) implementing a strong engagement and communications strategy to fill geographical, stakeholder and substantive gaps; (c) providing space for meaningful interaction and networking among partnerships; and (d) offering financial support for long-term sustainability.

94. The 2017 Conference contributed to forging and catalysing partnerships, in particular through the generation of 1,380 voluntary commitments in support of Goal 14.¹⁹ While those voluntary commitments covered all ocean basins and all targets of Goal 14, gaps remain in relation to participation, targets, geographical coverage and linkages with the other Goals. More engagement of academic institutions, the scientific community, the private sector and philanthropic organizations should be encouraged. Areas in which further voluntary commitments are required include small-scale and artisanal fisheries, ocean acidification, marine biotechnology and innovative ocean technologies and engineering solutions, such as marine renewable energy. Furthermore, efforts to increase scientific knowledge, capacity-building and the transfer of marine technology should focus on those regions and countries left the furthest behind.

95. A number of voluntary commitments have provided updates reporting good progress. Moving forward, however, it is also important to better understand challenges to the delivery of voluntary commitments that are lagging behind.

96. Building on the success demonstrated by, inter alia, the 2017 Conference, several other ocean-related processes now utilize voluntary commitments and pledges as a way to accelerate implementation of Goal 14 and other ocean-related Goals. Maximizing the shared benefits arising from those voluntary commitments and pledges by exploring further synergies between related processes and initiatives would contribute to the achievement of the Goal.

V. Possible themes for the interactive dialogues

97. In order to address the implementation of Goal 14 comprehensively, it is important that the eight interactive dialogues address all its targets. That requires designing appropriate clusters of issues addressing several targets in conjunction. The clusters will also help to galvanize momentum towards the implementation of Goal 14 in the decade of action for the Sustainable Development Goals and delivery for sustainable development. With that in mind, the following themes are proposed:

- (a) Addressing marine pollution (target 14.1);
- (b) Managing, protecting, conserving and restoring marine and coastal ecosystems (targets 14.2 and 14.5);
- (c) Minimizing and addressing ocean acidification (target 14.3);
- (d) Making fisheries sustainable and providing access for small-scale artisanal fishers to marine resources and markets (targets 14.4, 14.6 and 14.b);

¹⁹ The list of the voluntary commitments is included in annex II to the report of the 2017 Conference (A/CONF.230/14). The registry of voluntary commitments (available at <https://oceanconference.un.org/commitments>) has been kept open since the conclusion of the 2017 Conference, and the total number of such commitments, as at 27 November 2019, was 1,573.

(e) Promoting and strengthening sustainable ocean-based economies, in particular for small island developing States and least developed countries (target 14.7 and other relevant targets);

(f) Increasing scientific knowledge, and developing research capacity and the transfer of marine technology (target 14.a);

(g) Enhancing the conservation and sustainable use of oceans and their resources by implementing international law, as reflected in the United Nations Convention on the Law of the Sea (target 14.c);

(h) Leveraging interlinkages between Goal 14 and other Goals towards the implementation of the 2030 Agenda.

VI. Conclusions

98. Anthropogenic pressures are creating unsustainable levels of stress on the oceans, seas and marine resources. Global temperatures have already warmed by approximately 1°C above pre-industrial levels owing to human activities.²⁰ There is overwhelming evidence that that is resulting in profound consequences for ecosystems and people. Sea levels are rising, and the ocean is warmer, more acidic and less productive. Plastic pollution continues to enter the ocean at an alarming rate, a third of fish stocks are now overexploited and half of all living coral has been lost. While progress is being made and favourable trends in the implementation of some aspects of Goal 14 are evident, action is not advancing at the required speed or scale. Greater urgency and ambition are needed at all levels to address the global emergency regarding the oceans. A concerted global push for action anchored in sound science is critical in that regard. To that end, the 2020 Conference will contribute to the implementation of Goal 14 by generating science-based and innovative solutions to address ocean-related challenges and provide inputs to the high-level political forum on sustainable development and the United Nations Decade of Ocean Science for Sustainable Development.

²⁰ IPCC, *Global Warming of 1.5°C*.