



United Nations



Framework Convention on
Climate Change

Subsidiary Body for Scientific and Technological Advice

Ocean and Climate Change Dialogue 2023

Information note by the Co-Facilitators of the ocean and climate change dialogue 2023–2024

(30 May 2023)

Summary

The Conference of the Parties, at its twenty-sixth session, requested the Chair of the Subsidiary Body for Scientific and Technological Advice (SBSTA) hold an annual dialogue, starting at the fifty-sixth session of the SBSTA (June 2022), to strengthen ocean-based climate action. At COP 27, Parties decided that future dialogues will be facilitated by two co-facilitators, who will be responsible for deciding the topics for and conducting the dialogue, in consultation with Parties and observers, and preparing an informal summary report to be presented in conjunction with the subsequent session of the Conference of the Parties.

This note provides the co-facilitators' choice of two topics for the ocean and climate change dialogue 2023, guiding questions and proposed approach based on consultations with Parties and observers. These consultations took place at the informal virtual exchange of views on the preparation for the Ocean and Climate Change Dialogue 2023 held on 29–30 March 2023. Fourteen Parties and Groups of Parties and 42 non-Party stakeholders and groups of non-Party stakeholders provided oral and/or written views.

The dialogue will be held on 13–14 June 2023, 15:00–18:00 CEST, Plenary Room New York, World Conference Center, Bonn. It will be an in-person dialogue that will also be webcast.

Abbreviations and acronyms

Draft BBNJ Agreement	Draft agreement 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
CBD	Convention on Biological Diversity
COP	Conference of the Parties
FAO	Food and Agriculture Organization of the United Nations
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	greenhouse gas
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPBES	The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IUCN	International Union for Conservation of Nature
LDC	Least developed country
LP	London Protocol
MPA	Marine protected area
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
Ocean dialogue	SBSTA Ocean and Climate Change Dialogue
RAMSAR	The Convention on Wetlands
SBSTA	Subsidiary Body for Scientific and Technological Advice
SCF	Standing Committee on Finance
SDG	Sustainable Development Goal
SIDS	Small island developing State(s)
SROCC	Special Report on the Ocean and Cryosphere
UNESCO	United Nations Educational, Scientific and Cultural Organization

Contents

Page

Abbreviations and acronyms	2
I. Introduction	4
II. Overview of the informal virtual exchange of views on the preparation for the ocean and climate change dialogue 2023	5
A. Topics	5
B. Expectations on the outcomes.....	7
III. Proposed approach for the ocean and climate change dialogue 2023	8
A. Guiding questions	9
B. Next Steps.....	9
IV. Background information	10
A. IPCC Synthesis Report 2023	10
B. Updates under the UNFCCC Process	10
C. Updates under the UN system	12

Annexes

I. List of Parties and non-Party stakeholders who provided oral and/or written views at the informal exchange of views with the co-facilitators on 29–30 March 2023	20
II. Indicative agenda	21

I. Introduction

1. At COP 25, Parties requested the Chair of the SBSTA to convene a dialogue on the ocean and climate change, to consider actions to strengthen mitigation and adaptation within the ocean-climate nexus.¹ The ‘Ocean and Climate Change dialogue to consider how to strengthen adaptation and mitigation action’ took place on 2 and 3 December 2020.²
2. At COP 26, in the Glasgow Climate Pact 2021,³ building on the outcomes of the first ocean and climate change dialogue in 2020, governments permanently anchored the inclusion of strengthened ocean-based action under the UNFCCC multilateral process. As part of this mandate, Parties invited the SBSTA Chair to hold an annual dialogue on ocean and climate to strengthen ocean-based action.
3. At COP 27, in 2022, the COP Sharm el-Sheikh Implementation Plan 2022,⁴ welcomed the outcomes of and key messages from the ocean and climate change dialogue 2022,⁵ the first ocean dialogue held following the COP 26 mandate. The COP decided that future ocean dialogues will, from 2023, be facilitated by two co-facilitators, selected by Parties biennially, who will be responsible for deciding the topics for and conducting the dialogue, in consultation with Parties and observers, and preparing an informal summary report to be presented in conjunction with the subsequent session of the Conference of the Parties. In February 2023, the SBSTA Chair appointed two co-facilitators for the biennium 2023–2024.⁶ Following the resignation in April 2023 of Gwynne Taraska (USA), Mr. Niall O’Dea (Canada), has been selected as the new co-facilitator
4. In light of the COP 27 mandate, the co-facilitators organised an informal exchange of views on the preparation for the ocean dialogue 2023 with Parties and non-Party stakeholders on 29–30 March 2023. In order to accommodate different time zones, two meetings were held with Parties and groups of Parties on the 29 March 2023, 11:00 to 12:30 and 22:00 to 23:30 GMT, and two meetings with non-Party stakeholders and groups of non-Party stakeholders on the 30 March 2023, 11:00 to 12:30 and 22:00 to 23:30 GMT.
5. Based on this exchange of views, the co-facilitators, in consultation with the SBSTA Chair, identified two topics for the ocean dialogue 2023:
 - (a) Coastal ecosystem restoration including blue carbon;
 - (b) Fisheries and food security.
6. This information note provides: in section II a brief overview of the topics and cross-cutting issues discussed at the exchange of views, which guided the choice of the two topics and the dialogue itself; in section III the co-facilitators proposed approach for the ocean dialogue 2023 to address the two topics, including guiding questions; and in section IV relevant background on activities under the UNFCCC and wider UN system.
7. The ocean dialogue 2023 will be held on 13–14 June 2023 in conjunction with the Subsidiary Body session (5–15 June 2023), Bonn, Germany. The co-facilitators invite Parties and non-Party stakeholders to consider the guiding questions in advance to help facilitate interactive discussions and effective deep-dives into the two topics as well as consideration of what is needed to further centralize the role of oceans in climate change mitigation and adaptation action and through UNFCCC processes.
8. Following the ocean dialogue, the co-facilitators will prepare an informal summary report to be made available in advance of, and presented in conjunction with, COP 28.

¹ Decision 5/CP.25, para. 7.

² See <https://unfccc.int/event/ocean-and-climate-change-dialogue>.

³ Decision 1/CP.26.

⁴ Decision 1/CP.27.

⁵ See <https://unfccc.int/event/ocean-and-climate-change-dialogue-2022>.

⁶ See <https://unfccc.int/topics/ocean#Co-Facilitators-of-the-Ocean-Dialogue-2023-2024-and-Activities>.

II. Overview of the informal virtual exchange of views on the preparation for the ocean and climate change dialogue 2023

9. This section provides a summary of the informal exchange of views which took place between the co-facilitators and Parties and non-Party stakeholders on 29–30 March 2023.

10. At the informal exchange of views, the co-facilitators presented their vision for the ocean dialogues which was to focus on:

- (a) Two topics per dialogue, in order to permit depth of discussion;
- (b) Deep dives on ocean-climate action to be determined in consultation with Parties and non-Party stakeholders;
- (c) Topics to have near-term relevance, considering a multi-year arc in which some topics could be addressed this year and others held for subsequent years.

11. Fourteen Parties and groups of Parties and 42 non-Party stakeholders and groups of non-Party stakeholders, including UN entities and UNFCCC observers, provided oral and/or written views. Annex I provides the list of Parties and non-Party stakeholders who provided views.

A. Topics

12. In their views expressed at the informal exchange, the co-facilitators encouraged Parties and non-Party stakeholders to identify topics and cross-cutting issues that would be priorities for 2023, as well those that could be considered for the future.

13. The key topics and cross-cutting issues highlighted in views were quantified. Figure 1 shows a) Number of views in which a topic/issue was mentioned and b) Number of views in which a topic/issue was mentioned as a percentage of the total views.

14. The two most requested topics were Ecosystem restoration (64%) with blue carbon included in this context (52%), and fisheries and aquaculture, “aquatic food” and related food security (52%).

15. Several cross-cutting issues were raised with the top priority issues being: unlocking and strengthening finance and addressing the climate-ocean financing gaps (83%); optimizing institutional connections across international policy processes and support, as well as across UN and other international agendas (79%); ensuring engagement and inclusion of indigenous peoples, local communities, women and youth in decision-making, protecting livelihoods and governance (67%); and integrating the ocean across UNFCCC processes, including the GST (50%).

Figure 1a.
Number of views in which topics and cross-cutting issues was mentioned

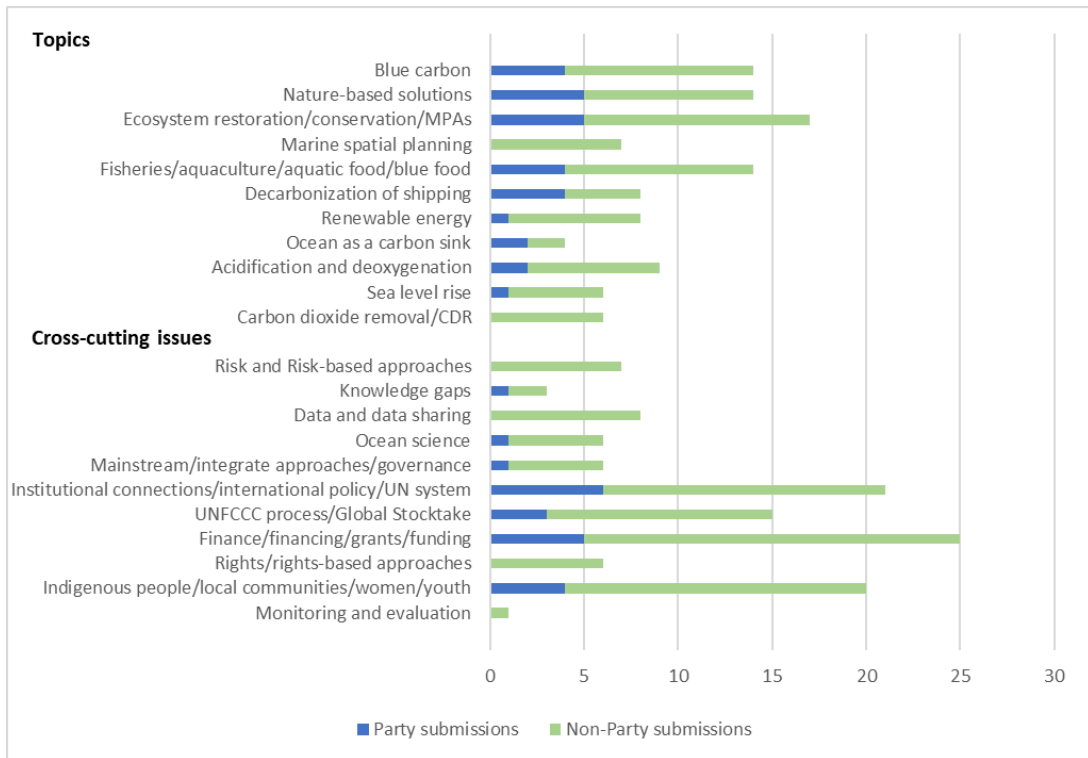
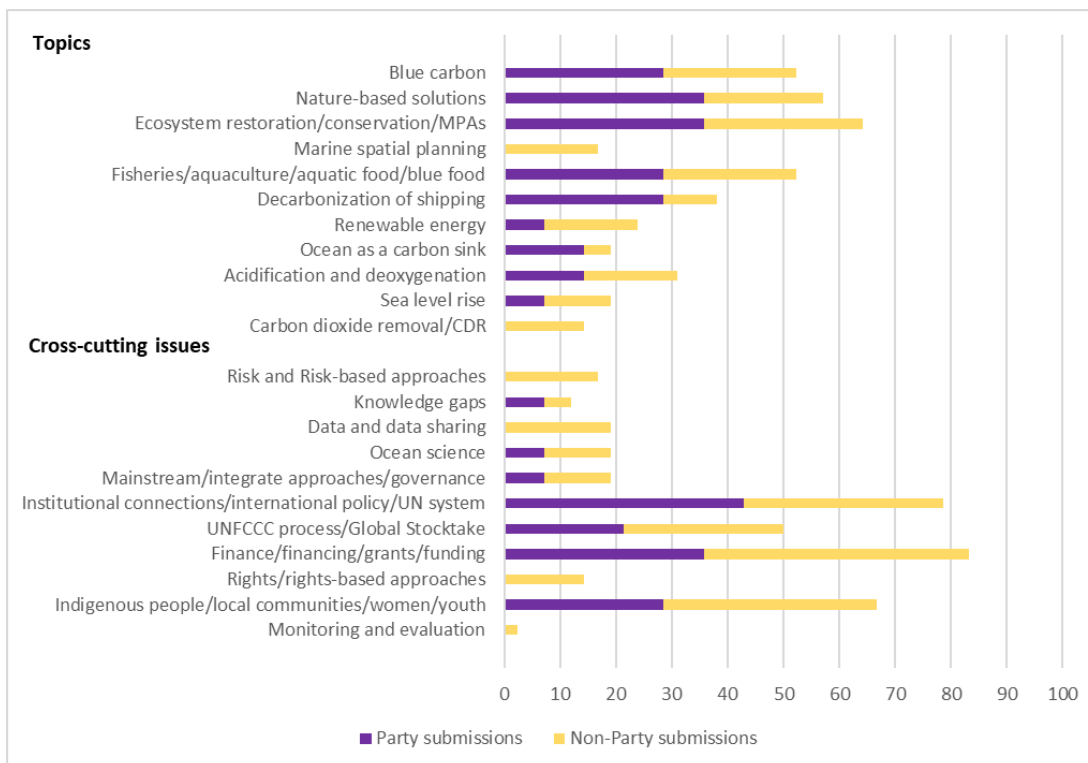


Figure 1b.
Number of views in which topics and cross-cutting issues was mentioned as percentage of the total



B. Expectations on the outcomes

16. The exchange of views highlighted a number of expectations for the ocean dialogues. The co-facilitators collated these expectations below.

Knowledge	<p>Strengthen international cooperation for science (observation, data, targeted research, digital solutions) including understanding risks and providing globally coordinated climate services, recognizing the role of the UN Decade of Ocean Science for Sustainable Development (the Ocean Decade) and innovating nature-based ocean-climate solutions and practical learning via the UN Ecosystem Restoration Decade</p> <p>Strengthen linkages between research, indigenous knowledge systems and knowledge from local communities</p> <p>Provide evidence on (national and regional) maritime uses that are most vulnerable to climate change and options to address their possible spatial relocation through marine spatial (MSP) planning</p>
Case studies	<p>Share and capture good practices, that provide concrete practical solutions and recommendations</p> <p>Identify indicators, norms and standards to monitor progress and provide lessons learned</p>
Finance and MOI	<p>Understand challenges of and needs for mobilization of funds. Find opportunities and address barriers for national and regional funding (including with GCF and GEF), financing products and innovative financing mechanisms</p> <p>Strengthen links, including with SCF, PCCB, TEC, to support provision of program funds, capacity building and technology for ocean-climate action</p>
Inclusivity	<p>Bring together diverse stakeholders and practical entry points for engagement - develop communities of practice and common standards</p> <p>Ensure inclusive representation and inclusion in decision making of youth, women, indigenous peoples (including small-scale fishers) and local communities</p>
Institutional arrangements	<p>Map good practices to inform NDCs, NAPs and GST and other work programmes within the context of climate-resilient marine spatial planning</p> <p>Provide guidance, frameworks, tools and case studies to align with other international organizations and processes to incentivize ambition and action - and build synergies at all levels</p> <p>Integrate strategic climate objectives into overall national sustainable development using climate-smart, nature-inclusive marine spatial planning as a common framework for setting up meaningful and effective actions</p>
UNFCCC advice	<p>Provide policy guidance for Parties on mitigation and adaptation strategies at appropriate scales, using fit-for-purpose, spatially explicit and operationally mature practices, as well as strategic investments to achieve long-term visions reflected in climate-smart, nature-inclusive marine spatial plans</p> <p>Advise Parties / COP on recommended next steps for integrating ocean under the UNFCCC, including action items for constituted bodies and work programmes that develop ocean-based climate action and goals (potentially guided by UNFCCC ocean work programme or roadmap under UNFCCC)</p> <p>Advise Parties/ COP on alignment with international policy and UN processes and best practices</p>

17. The co-facilitators took note of these expectations, which are also to be considered as tasks that the dialogue should address over time.

III. Proposed approach for the ocean and climate change dialogue 2023

18. As discussed in the two previous ocean dialogues in 2020 and 2022, the ocean-climate nexus is a place for sustainable climate-smart ocean and coastal solutions and actions, based on the best available science, that can be reflected in national climate goals, policies and strategies and effect a sustainable ocean economy. The Ocean holds the keys to an equitable and sustainable planet.⁷

19. The co-facilitators propose a solution-focused discussion at the ocean dialogue 2023 taking into account the desired outcomes highlighted above.

20. On topic 1 on coastal ecosystem restoration including blue carbon, the ocean dialogue recognises the inherent value coastal ecosystems provide to people and the environment, including for coastal resilience, adaptation, food security, biodiversity, livelihoods and climate mitigation. It also recognizes the impacts and threats, such as sea level rise and ocean acidification, that climate change has on these ecosystems. Coastal blue carbon ecosystems – such as mangroves, tidal and salt marshes, and seagrasses, as well as kelp forests and macroalgae – sequester carbon from the atmosphere and the ocean, at orders of magnitude higher per area than terrestrial ecosystems and store the carbon belowground in the soil for millennia. These ecosystems are thereby considered a key component of nature-based solutions to climate change and can offer mitigation benefits, along with other resilience and adaptation benefits. The effective protection, restoration and sustainable management of these ecosystems should be prioritized. Economic benefits of restoration exceed nine times the cost of investment, whereas inaction is at least three times more costly than ecosystem restoration.⁸ The ocean dialogue will explore opportunities and challenges related to the protection and restoration of coastal ecosystems as multipurpose solutions to climate change, including the existing tools available, financing and resource needs, and actions that can be taken under existing UNFCCC processes

21. On topic 2 fisheries and food security, the ocean dialogue will acknowledge the critical role of the ocean for global food production, the role of aquatic food for food security, as well as the role of fishers and fish farmers (including small-scale producers) in being part of the solution to make responsible decisions around fishing and fish farming practices and low-emissions equipment. The ocean dialogue will illustrate the vulnerabilities of the aquatic food production sector along the value chain, as well as the contribution it can bring to the new economy guaranteeing the 1.5 °C. The ocean dialogue will explore the opportunities for incorporating the solutions coming out of aquatic food systems and sustainable fisheries and aquaculture for climate action and goals.

22. For both topics, the ocean dialogue will illustrate the pathways to incorporate adaptation and mitigation efforts into country-led instruments such as the Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) through the development of a menu of nature-based marine and coastal good practices and approaches, as one of the ocean dialogue outcomes, as well as a roadmap containing concrete actions and capacity building plans. The ocean dialogue will be built around interventions of countries that have forward-looking national policies and instruments that contribute to their climate change adaptation and mitigation efforts. This will allow showcasing positive examples that can inform the UNFCCC work and potential work programme.

23. The ocean dialogue will also give voice to UN representatives who are spearheading the global agenda on these topics, linking it to other international initiatives and instruments such as relevant work under UNCLOS, UNEP, the UN Decade of Ocean Science for Sustainable Development, the UN Decade of Ecosystem Restoration, and promotion of Blue Transformation and the Kunming-Montreal Global Biodiversity Framework (GBF); as well as representatives from constituted bodies and the finance community.

24. The co-facilitators invite Parties to consider the **guiding questions below** in their preparations for the ocean dialogue, as well as recommendations for responding to the COP 26 and COP 27 ocean-related mandates.

⁷ See <https://oceandecade.org/>.

⁸ See <https://www.unep.org/explore-topics/ecosystems-and-biodiversity/what-we-do/decade-ecosystem-restoration>.

25. The ocean dialogue will involve:
- (a) Day 1: High Level opening; setting the scene for topics 1 and 2; breakout groups on topics 1 and 2 based on the guiding questions below.
 - (b) Day 2: Reporting back from breakout groups; panel discussions highlighting case studies on topics 1 and 2; moderated discussion on next steps and messages for COP.
26. An indicative agenda is provided in Annex II.

A. Guiding questions

27. The guiding questions are

Days 1 and 2	Breakout and Panel Discussions
Topic 1: Coastal ecosystem restoration	<ol style="list-style-type: none"> 1. How can Parties strengthen recognition of coastal ecosystems as assets, to increase investments, and improve processes to protect and restore them? 2. How can Parties further include blue carbon ecosystems (i.e., mangroves, seagrass and saltmarshes, among others) as part of their mitigation strategy and what are the key data/knowledge gaps that prevent Parties from doing so?
Topic 2: Fisheries and food security	<ol style="list-style-type: none"> 3. How can Parties develop sustainable and equitable aquatic food production that are also inclusive, nature-positive and resilient? 4. How can Parties support decarbonisation along the value chains of aquatic food systems (e.g., technology efficiency, replacement of fish-based feed ingredients, production closer to the final market, reduced reliance on fossil fuel)?
Overarching	<ol style="list-style-type: none"> 5. How can Parties engage with coastal communities, including indigenous peoples, to align direct benefits with better management of coastal ecosystems? 6. How can Parties create an enabling environment (e.g. policy, regulation, information, capacity), especially to attract resilient investments for both topical areas?
Day 2	Plenary Discussion on ways forward and messages for COP 28
Ways Forward/ Next Steps	<ol style="list-style-type: none"> 7. What is needed to further centralize the role of the ocean in climate change mitigation and adaptation through UNFCCC processes, including the Global Stocktake? 8. How can the discussions from day 1 be translated into actionable recommendations that can lead towards more climate action in the ocean? 9. How can the dialogue be further strengthened in the future to provide more concrete actions and messages for COP?

B. Next Steps

28. Additional information, including a detailed programme, will be posted on the UNFCCC ocean dialogue 2023 webpage at <https://unfccc.int/event/ocean-and-climate-change-dialogue-2023>.
29. The co-facilitators informal summary report from the ocean dialogue will be available in advance of COP 28 and published on the webpage.

IV. Background information

A. IPCC Synthesis Report 2023

30. The IPCC Climate Change 2023 Synthesis report⁹ identifies that climate change has already caused widespread impacts and related losses and damages on human systems and altered ocean ecosystems worldwide. Hundreds of local losses of species have been driven by increases in the magnitude of heat extremes. Ocean warming and ocean acidification have adversely affected food production from fisheries and shellfish aquaculture. In scenarios with increasing CO₂ emissions, natural ocean carbon sinks are projected to take up a decreasing proportion of these emissions. In the near-term every region in the world is expected to face projected increases in impacts including biodiversity loss and a decrease in food production.

31. The vulnerability of ecosystems will be strongly influenced by past, present, and future patterns of unsustainable consumption and production, increasing demographic pressures, and persistent unsustainable use and management of land, ocean, and water. Loss of ecosystems and their services has cascading and long-term impacts on people globally, especially for indigenous peoples and local communities who are directly dependent on ecosystems to meet basic needs. As warming levels increase, so do the risks of species extinction or irreversible loss of biodiversity in ecosystems including coral reefs and in Arctic regions.

32. Deep, rapid and sustained GHG emissions reductions are needed to limit global temperatures to 1.5 degrees C. However, this will not prevent continued changes in climate system components that have multi-decadal or longer timescales of response, such as ocean warming and sea level rise.

33. Maintaining the resilience of biodiversity and ecosystem services at a global scale depends on effective and equitable conservation of approximately 30% to 50% of Earth's land, freshwater and ocean areas, including currently near-natural ecosystems. Conservation, protection and restoration of terrestrial, freshwater, coastal and ocean ecosystems, together with targeted management to adapt to unavoidable impacts of climate change reduces the vulnerability of biodiversity and ecosystem services to climate change, reduces coastal erosion and flooding, and could increase carbon uptake and storage if global warming is limited. Coastal blue carbon management providing mitigation options can enhance biodiversity and ecosystem functions, employment and local livelihoods. Rebuilding overexploited or depleted fisheries reduces negative climate change impacts on fisheries and supports food security, biodiversity, human health and well-being. Whilst energy efficiency and reduced waste are becoming increasingly cost effective and are generally supported by the public.

B. Updates under the UNFCCC Process

34. The NDC synthesis report 2022, identified that an increasing number of Parties (40 per cent) are targeting ocean-based climate action. Some Parties (26 per cent) include an ocean-based climate target, policy or measure. Ocean-related measures reported in the NDCs relate more often to adaptation than to mitigation, with an increase in adaptation measures identified related to fisheries and aquaculture.¹⁰

35. The National Adaptation Plan Process facilitates adaptation planning in least developed countries and other developing countries. Ocean-related supplementary information to the technical guidelines include those by the CBD and FAO.¹¹ The ocean and coastal zones are addressed in over

⁹ IPCC. 2023. publisher: Intergovernmental Panel on Climate Change. Summary for Policymakers. In: Climate Change 2023: Synthesis Report. A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Core Writing Team, H. Lee and J. Romero (ed.). Geneva, Geneva: IPCC. Available at <https://www.ipcc.ch/report/ar6/syr/>.

¹⁰ See FCCC/PA/CMA/2022/4.

¹¹ See <https://www4.unfccc.int/sites/NAPC/Guidelines/Pages/Supplements.aspx>.

70% of new or revised NAPs.¹² The report on progress in the process to formulate and implement national adaptation plans (2022)¹³ provides the latest overview.

36. The SBSTA research and systematic observation agenda continues to discuss gaps and needs in relation to ocean science. Parties at COP 27 noted with concern the existing gaps in the global climate observing system, including ocean observation; and the need to enhance the coordination of activities by the systematic observation community and improve its ability to provide useful and actionable climate information for mitigation, adaptation and early warning systems.¹⁴ SBSTA 56 encouraged Parties and relevant organizations to strengthen research and research capacity and to address related research needs on climate change impacts and risks for the ocean and cryosphere, and related ecosystems.

37. In the context of the Nairobi work programme, the UNFCCC knowledge-to-action hub on adaptation and resilience, the NWP expert group on oceans¹⁵ has been working since 2019 to address the specific knowledge needs of countries in oceans, coastal areas and ecosystems and provide policy-relevant advice. Relevant publications on technology, finance and advice for NAP development include: *Enhancing resilience of oceans, coastal areas and ecosystems through collaborative partnerships* (2021),¹⁶ Policy Brief on *Innovative Approaches for Strengthening Coastal and Ocean Adaptation: Integrating Technology and Nature-based Solutions* (2022),¹⁷ and “Coastal adaptation and nature-based solutions for the implementation of NAPs: Considerations for GCF proposal development. A supplement to the UNFCCC NAP technical guidelines (2021).¹⁸

38. The Local Communities and Indigenous Peoples Platform (LCIPP) highlights indigenous knowledge, traditional knowledge and customary practices of indigenous peoples in SIDS, as an ocean-faring and ocean-dependent people, enhancing their resiliency, for adapting to climate change impacts in the coastal ecosystems affecting their livelihoods.¹⁹

39. The TEC has been involved over the last few years in policy discussions around innovation and technologies for strengthening climate ambition and action in coastal zones and oceans, including hard technology measures or hardware, soft measures, and measures related to organizational technologies or org-ware. The TEC continues to put focus on adaptation solutions, for example on technologies for addressing loss and damage in coastal areas²⁰ and nature-based solutions for strengthening coastal and ocean adaptation.²¹ It has also expanded its work to explore mitigation options and cross-cutting aspects of climate technology policies in the context²² of the ocean and coastal zones, for example the use of digital technologies and ecosystem-based practices for innovative and transformational climate solutions in oceans and across the agri-food systems.²³

40. Under the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation,²⁴ the fourth workshop focussed on communicating and reporting on adaptation priorities. Discussions at the workshop emphasised the importance of incorporating ocean and coastal-based adaptation priorities and actions in communicating and reporting on adaptation under the UNFCCC. Linking to key messages from the 2022 ocean dialogue, the workshop reported how integrated ocean-based solutions can be reflected in national climate policies and strategies.

41. In discussions during the two technical dialogues (TDs) of the GST to date, Parties highlighted the ocean-induced changes caused by climate change including sea level rise, ocean acidification, coastal flooding and erosion and impacts of climate change on marine ecosystems. A

¹² See <https://unfccc.int/topics/ocean/ocean-action-under-the-unfccc>.

¹³ See <https://unfccc.int/documents/621664>.

¹⁴ Decision 22/CP.27.

¹⁵ Details on the expert group and its second virtual meeting are available at <https://unfccc.int/topics/adaptation-and-resilience/workstreams/nairobi-work-programme-nwp/workshops-meetings/nwp-virtual-expert-group-meeting-on-the-oceans-17-18-june-2020#eq-5>.

¹⁶ See <https://unfccc.int/documents/307871>.

¹⁷ See <https://unfccc.int/documents/510426>.

¹⁸ See <https://unfccc.int/documents/278047>.

¹⁹ Examples of customary practices of indigenous peoples can be found here: <https://lcipp.unfccc.int/about-lcipp/un-indigenous-sociocultural-regions/pacific>.

²⁰ <https://unfccc.int/documents/210342>.

²¹ <https://unfccc.int/ttclear/coastalzones/>.

²² <https://unfccc.int/ttclear/tec/techandndc.html>.

²³ <https://unfccc.int/ttclear/tec/workplan>.

²⁴ <https://unfccc.int/topics/adaptation-and-resilience/workstreams/glasgow-sharm-el-sheikh-WP-GGGA>.

number of ocean-based climate solutions have been mentioned, including marine and coastal nature-based solutions (e.g., mangrove restoration), offshore wind energy, decarbonised shipping (e.g., blue hydrogen), spatial planning (e.g., blue infrastructure) and managed fisheries. In TD1.1, the ocean was mostly discussed in the adaptation round table including with respect to nature-based solutions and the need for spatial planning for marine, coastal and arctic ecosystems. In TD1.2, the ocean was only discussed in the mitigation round table. One presentation shared the Seychelles NDC as an example of marine ecosystem restoration which includes a reset of baselines for protecting mangroves and seagrass as carbon sinks and involving communities in the process to help hold government accountable to targets. The need for sector-specific policies including in the fishery industry was also mentioned by participants in this round table.

42. As part of the implementation of the Marrakech partnership, the MP-GCA Ocean & Coastal Zones aims at leading the way to improve and operationalise the mobilisation of non-state actors to drive forward thinking and deliver on a fair, nature-positive and net-zero future. Following the launch of the Blue Ambition Loop report at COP 27, the MP-GCA Ocean is focussing on identifying breakthroughs in five key sectors: marine conservation, ocean-based transport, marine renewable energy, aquatic food and coastal tourism. Each of these breakthroughs will be science-based and include a finance component. One breakthrough launched at COP 27 is the 2030 Mangrove Breakthrough.²⁵

C. Updates under the UN system

1. Food and Agriculture Organization

43. The Food and Agriculture Organization is the UN agency in charge of ending hunger and poverty, and it has a mandate to support the sustainable use of resources from open ocean, coastal ecosystems, and inland systems for global food and nutrition security and socio-economic development, including in the context of climate change. The Declaration for Sustainable Fisheries and Aquaculture, adopted at the 34th session of the FAO Committee on Fisheries (COFI) in 2021, fully recognized the fisheries and aquaculture sector's contribution to fighting poverty, hunger and malnutrition, its ability to prepare for and respond to changing climate and ocean conditions, and its commitment to sustainability.

44. FAO implements a range of activities aimed at supporting member countries and partners to effectively mitigate and adapt to the impacts of climate change. These include a [comprehensive review of the impacts of climate change on fisheries and aquaculture and guidance on mitigation and adaptation](#), as well as a number of field programmes and projects building on the FAO Adaptation Toolbox implemented in collaboration with governments and with the full involvement of local communities in more than 30 countries.

45. FAO combines disaster risk reduction and management (including emergency preparedness and response) and climate change adaptation approaches to develop a suite of actions that aim to build the resilience of the fisheries and aquaculture sector to climate and non-climate risks and impacts.

46. FAO and its partners are working on [Blue Transformation](#) to secure aquatic food supply and sustainability in the face of climate change. Blue Transformation, through expanding sustainable aquaculture, transforming fisheries through better management, and improving the efficiency and inclusiveness of aquatic food value chains, will be critical to building the climate resilience of aquatic food systems.

2. Intergovernmental Oceanographic Commission

47. The Intergovernmental Oceanographic Commission is the United Nations body responsible for supporting global ocean science and services. The purpose of the Commission is to promote international cooperation and to coordinate programmes in research, services and capacity-building, in order to learn more about the nature and resources of the ocean and coastal areas and to apply that knowledge for the improvement of management, sustainable development, the protection of the marine environment, and the decision-making processes of its Member States.

²⁵ See <https://racetozero.unfccc.int/system/breakthroughs> and <https://climatechampions.unfccc.int/system/mangroves>.

48. IOC is engaged at the scientific and policy levels with the vision to protect, manage and restore global blue carbon ecosystems (mangroves, seagrasses and tidal/salt marshes) for combating climate change. Major initiatives in this field relevant in the framework of the UNFCCC are the Blue Carbon Initiative (BCI), co-organized by IOC, Conservation International (CI) and the International Union for Conservation of Nature (IUCN), that works to develop management approaches, financial incentives and policy mechanisms for ensuring the conservation, restoration and sustainable use of coastal blue carbon ecosystems. Its goal is to develop comprehensive methods for assessing blue carbon stocks and emissions, which will be implemented by projects around the world to demonstrate the feasibility of blue carbon accounting, management and incentive agreements. Furthermore, IOC is Partner of the International Partnership for Blue Carbon (IPBC), launched in 2015 at UNFCCC COP21, and shares the Coordinator role with the Australian Government. The Partnership provides an open forum for government agencies, non-governmental organisations, intergovernmental organisations and research institutions to connect, share and collaborate to build solutions, take actions, and benefit from the experience and expertise of the global community, with a vision to protect, sustainably manage and restore global coastal blue carbon ecosystems. IOC also engages actively in the newly established Ocean Decade programme GO-BC, which will enhance understanding of the ocean-climate nexus and generate new knowledge and solutions to mitigate the effects of climate change.

49. IOC-UNESCO has been mandated by the UN General Assembly to coordinate implementation of the UN Decade of Ocean Science for Sustainable Development. The Ocean Decade brings together scientists, resource providers, governments, UN agencies and other stakeholders from diverse sectors to generate scientific knowledge and develop the partnerships needed to support a well-functioning, productive, resilient, and sustainable ocean. The vision of the Ocean Decade is ‘the science we need for the ocean we want’. To stimulate the ambitious global ocean science agenda contained in the Ocean Decade Implementation Plan, IOC-UNESCO launches biannual Calls for Decade Actions to solicit initiatives that will fulfil the ten Ocean Decade Challenges. Although ocean-climate issues are fundamental to many of the Ocean Decade Challenges, Ocean Decade Challenge 5 relates specifically to increased knowledge related to the ocean-climate nexus, and Challenge 6 relates to climate resilience including resilience to ocean hazards. A global portfolio of nearly 50 transformative ocean science programmes and close to 250 smaller-scale projects are currently being implemented by partners around the world including numerous initiatives specifically addressing climate mitigation and adaptation.

3. Kunming-Montreal Global Biodiversity Framework

50. At its fifteenth meeting in December 2022, the Conference of the Parties to the Convention on Biological Diversity (CBD) adopted the Kunming-Montreal Global Biodiversity Framework, as well as various other decision related to the implementation of the Framework.²⁶ This new Framework contains a set of global goals and targets.

51. The vision of the Kunming-Montreal Global Biodiversity Framework is a world of living in harmony with nature where “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.

52. The mission of the Framework for the period up to 2030, towards the 2050 vision is: To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity and by ensuring the fair and equitable sharing of benefits from the use of genetic resources, while providing the necessary means of implementation.

53. The Framework has four long-term Goals for 2050 related to the 2050 Vision and 23 action-oriented Targets, in addition to other sections intended to provide further guidance on the implementation of the Framework.

54. The Framework is highly cross-cutting, addressing the wide range of actions needed to conserve and sustainably use biodiversity and the interventions needed across various sectors and sections of society to address the drivers of biodiversity loss. Indeed, the Framework calls for a whole-of-society approach in its implementation.

²⁶ See <https://www.cbd.int/gbf/>.

55. There are a number of elements of the Framework that are highly relevant to ocean and climate issues, including the following action targets:²⁷

- (a) Target 1—All areas are planned or managed to bring loss of areas of high biodiversity importance close to zero;
- (b) Target 2—30% of degraded areas are under effective restoration;
- (c) Target 3—30% of areas are effectively conserved;
- (d) Target 8—Minimize impacts of climate change and ocean acidification including through nature-based solutions and/or ecosystem-based approaches;
- (e) Target 11—Nature’s contributions to people are restored, maintained and enhanced.

56. Efforts are now underway to, inter alia:

- (a) Refine the monitoring framework (including its indicators) for the Global Biodiversity Framework, which will be considered at the 16th meeting of the CBD COP in 2024;
- (b) Review and update/revise National Biodiversity Strategies and Action Plans (NBSAPs) to translate the Framework to the national level;
- (c) Put in place the capacities and enabling conditions needed to implement the Framework.

4. London Convention and the London Protocol

57. The London Convention (LC) and London Protocol (LP) treaty regime addresses climate change mitigation technologies by ensuring they are regulated responsibly to protect the marine environment. They are the most advanced international regulatory instruments addressing carbon capture and sequestration (CCS) in sub-sea geological formations and marine geoengineering such as ocean fertilization (OF).

58. The LP Parties have adopted amendments to the LP to regulate the sequestration of CO₂ streams from CO₂ capture processes in sub-seabed geological formations, and to allow the transboundary export of CO₂ streams for disposal. As the export amendment is not yet in force, to date only 10 States had deposited an instrument of acceptance. In 2019, the LP Parties adopted a resolution to allow provisional application of the export amendment to allow sub-seabed geological formations for sequestration projects to be shared across national boundaries. Six Governments have deposited declarations of provisional application so far, including Belgium and Denmark who in March 2023 embarked on the world’s first cross-border CCS project.

59. In 2013, LP was amended to further regulate ocean fertilization. This amendment will, when in force, create a legally binding regime providing a science based, global, transparent and effective regulatory and control mechanism for marine geoengineering. The amendment enables the future regulation of marine geoengineering techniques that also fall within the scope of LP and have the potential to cause widespread, long-lasting or severe impacts on the marine environment. In October 2022 the LC/LP Parties adopted a Statement on Marine Geoengineering recognizing the growing interest into marine geoengineering techniques and identifying four further techniques for priority evaluation: enhancing ocean alkalinity; macroalgae cultivation and other biomass for sequestration including artificial upwelling; marine cloud brightening; and microbubbles/reflective particles/material.

60. In undertaking this work the LC/LP Parties benefit from advice provided by the GESAMP Working Group on ocean interventions for climate change mitigation (WG 41) on the potential environmental and wider societal implications of the marine geoengineering techniques on the marine environment. WG 41 is currently developing an Integrated Assessment Framework (IAF) which integrates inputs from natural sciences and societal disciplines into a holistic assessment of ocean interventions for climate change mitigation or other purposes consistent with the London

²⁷ Note—text shown here is not the full version of the target text, but rather a paraphrased version. Full versions of the target text are available here: <https://www.cbd.int/gbf/targets/>.

Protocol's definition of marine geoengineering. The WG is co-sponsored by IMO, IOC-UNESCO and WMO.

5. RAMSAR

61. The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, 1971; the Convention on Wetlands) provides the global legal framework for the conservation and sustainable use of all wetlands, including marine and coastal ecosystems such as mangroves, intertidal marshes and mud flats, coral reefs and seagrass meadows. The Convention includes an obligation of Contracting Parties to designate and manage Wetlands of International Importance, also called 'Ramsar sites'. To date, the 172 Contracting Parties have designated 2,493 Wetlands of International Importance, including 1,014 sites with a total area of 75,562,622 ha that contain coastal or marine areas.

62. The 4th Strategic Plan (2016-2024)²⁸ of the Convention on Wetlands (Resolution XII.2) identifies climate change and wetlands as a priority area of focus, and encompasses targets related to restoration of degraded wetlands with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation (Target 12); as well as significantly increasing area of under-represented types of wetlands such as peatland and blue carbon ecosystems in the Ramsar Site network (Target 6).

63. Contracting Parties to the Convention on Wetlands have recognized the role of wetland protection, restoration and wise use in addressing climate change as well as in Disaster Risk Reduction, including e.g. Resolution XI.14 which, inter alia, urges parties to maintain or improve the ecological character of wetlands to promote the ability of wetlands to contribute to nature-based climate change adaptation, Resolution XII.13 (COP 12, 2015), which encourages contracting parties to integrate ecosystem management related considerations, in particular relating to wetland and water management, in their national disaster risk reduction and climate change adaptation strategies.

64. Resolution XIII.14,²⁹ inter alia, affirms the significant value of coastal wetlands for climate-change mitigation and adaptation, encourages Contracting Parties to pursue policies and projects to conserve and restore these ecosystems, and encourages parties to update National Wetland Inventories (NWIs) in order to estimate carbon storage and fluxes of coastal wetlands and update national greenhouse gas inventories. Resolution XIII.20,³⁰ inter alia, encourages Parties to include coastal ecosystems, including relevant Ramsar Sites, in national policies and strategies for climate-change mitigation as well as adaptation, and to promote the role of coastal ecosystems in ecosystem-based adaptation; and encourages Parties to urgently designate intertidal wetlands and ecologically associated habitats of international importance. Resolution XIV.17³¹ *The protection, conservation, restoration, sustainable use and management of wetland ecosystems in addressing climate change*, inter alia, encourages Contracting Parties, in their plans and strategies, to deploy wetland-focused nature-based solutions or ecosystem-based approaches.

65. The 2023-2025 work plan of the Scientific and Technical Review Panel of the Convention on Wetlands includes a Thematic Work Area on climate-change-related pressures on wetlands, their impacts, and responses, including work specifically on blue carbon guidance, data and models, and support for integration of blue carbon in climate change planning frameworks. The panel previously prepared, for example, Briefing Note 10: Wetland restoration for climate change resilience³² and Briefing Note 12: The contribution of blue carbon ecosystems to climate change mitigation.³³

²⁸ See <https://www.ramsar.org/the-ramsar-strategic-plan-2016-24>.

²⁹ See https://www.ramsar.org/sites/default/files/documents/library/xiii.14_blue_carbon_e.pdf.

³⁰ See https://www.ramsar.org/sites/default/files/documents/library/xiii.20_intertidal_wetlands_e.pdf.

³¹ See https://www.ramsar.org/sites/default/files/documents/library/xiv.17_climate_change_e.pdf.

³² See

https://www.ramsar.org/sites/default/files/documents/library/bn10_restoration_climate_change_e.pdf.

³³ See

https://www.ramsar.org/sites/default/files/documents/library/bn12_blue_carbon_cmitigation_e.pdf.

6. UN General Assembly

(a) Resolutions of the United Nations General Assembly on oceans and the law of the sea

66. In its annual resolutions on oceans and the law of the sea, the General Assembly specified that the current and projected adverse effects of climate change on the marine environment and marine biodiversity include rising seawater temperature, ocean deoxygenation, sea level rise, and ocean acidification, and highlighted the importance of preserving the ocean as a carbon sink.³⁴ The General Assembly has put a great emphasis on scientific research, consistently encouraging States to enhance their scientific activity to better understand the effects of climate change on the marine environment and marine biodiversity.³⁵

67. Noting the findings of the IPCC, the General Assembly has extensively addressed ocean acidification and the substantial risks to marine ecosystems resulting from it.³⁶ It has encouraged States to urgently pursue further research and to increase efforts to address levels of ocean acidity and the negative impact of such acidity on vulnerable marine ecosystems, particularly coral reefs.³⁷ Furthermore, the General Assembly identified polar ecosystems as being especially at risk from ocean acidification, as well as plankton and other organisms with calcareous exoskeletons or shells, such as crustaceans.³⁸

68. The General Assembly has also addressed mitigation and adaptation to climate change, noting the vital role that coastal blue carbon ecosystems, including mangroves, tidal marshes and seagrasses, play in climate adaptation and mitigation through carbon sequestration, and in increasing the resilience of coastal ecosystems to ocean acidification, and encouraging States and relevant international institutions and organizations to work collaboratively to protect and restore coastal blue carbon ecosystems.³⁹ In its most recent resolution on oceans and the law of the sea⁴⁰, the General Assembly called upon States and international institutions to support and strengthen capacity-building activities in developing countries, in particular least developed countries and small island developing States, in the area of mitigation of and adaptation to climate change impacts on the ocean, including protection of coasts against sea level rise.

(b) Resolutions of the United Nations General Assembly on sustainable fisheries

69. In relation to sustainable fisheries, in 2008, the General Assembly expressed its concern over current and projected adverse effects of climate change on food security and the sustainability of fisheries.⁴¹ It has continued to do so in its annual sustainable fisheries resolution, reiterating this concern most recently in resolution 77/118 of 9 December 2022.⁴²

70. From 2008, the General Assembly began to annually urge States to intensify efforts to assess and address the impacts of both climate change and ocean acidification on the sustainability of fish stocks and their habitats.⁴³ Five years later, in its resolution 68/71 of 9 December 2013, the General Assembly recognized the wide range of impacts of ocean acidification on marine ecosystems, and importantly, begun to annually call upon States to tackle the causes of ocean acidification and to further study its impacts.⁴⁴ In the same resolution, the General Assembly began to annually emphasize the importance of developing adaptive marine resource management strategies, and

³⁴ [A/RES/77/248](#), Preamble.

³⁵ This was first mentioned in [resolution 62/215](#) of 22 December 2007, paragraph 82, and language to that effect has been included in all resolutions on oceans and the law of the sea since then.

³⁶ [A/RES/69/245](#), paragraph 166. Language to that effect has been included in all resolutions on oceans and the law of the sea since then.

³⁷ This was first mentioned in [resolution 63/111](#) of 5 December 2008, paragraph 99, and language to that effect has been included in all resolutions on oceans and the law of the sea since then.

³⁸ [A/RES/71/257](#), paragraph 185; and language to that effect has been included in all resolutions on oceans and the law of the sea since then.

³⁹ [A/RES/71/257](#), paragraph 192; and language to that effect has been included in all resolutions on oceans and the law of the sea since then.

⁴⁰ [A/RES/77/248](#), paragraph 20.

⁴¹ [A/RES/63/112](#), Preamble.

⁴² [A/RES/77/118](#), Preamble.

⁴³ [A/RES/63/112](#), paragraph 3.

⁴⁴ [A/RES/68/71](#), paragraph 156.

building the necessary capacity to implement them, in order to enhance resilience to the impacts of ocean acidification on marine organisms and the threats to food security caused by the same.⁴⁵

71. In its resolution 71/123 of 7 December 2016, the General Assembly began to annually call upon States and regional fisheries management organizations and arrangements, to publish best practice data related to the development and implementation of adaptation strategies to assist developing States, especially those particularly vulnerable to the adverse impacts of climate change.⁴⁶ In the same resolution, the General Assembly began to annually call upon States to take into account the potential impacts of climate change and ocean acidification when taking measures to manage deep-sea fisheries and protect vulnerable marine ecosystems.⁴⁷ The General Assembly went on to express its serious concern regarding the impacts of climate change and ocean acidification on coral reefs and other ecosystems relevant to fisheries starting with its resolution 73/125 of 11 December 2018.⁴⁸

72. The Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects (“Regular Process”) aims to provide a regular assessment of the state of the ocean.⁴⁹ The outcome of the first cycle of the Regular Process, the 2015 First Global Integrated Marine Assessment, addressed the impacts of climate change and related changes in the atmosphere, based on the work of the IPCC.⁵⁰ The outputs of the second cycle of the Regular Process in 2020 included the Second World Ocean Assessment, with similar climate change-related components and a technical abstract prepared by the Group of Experts of the Regular Process.⁵¹ These assessments provide scientific evidence on the impacts of climate change and related changes in the atmosphere and ocean.

7. Draft agreement 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

73. On 4 March 2023, the Intergovernmental Conference established by the United Nations General Assembly, in its resolution 72/249⁵² of 24 December 2017, finalized the text of a *Draft agreement 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* (Draft BBNJ agreement).⁵³ It is expected that the draft agreement will be adopted by the Conference at a further resumed fifth session, tentatively scheduled for 19–20 June 2023.

74. The general objective of the draft BBNJ agreement is to ensure the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, for the present and in the long term, through effective implementation of the relevant provisions of the Convention on the Law of the Sea and further international cooperation and coordination (Article 2).

75. The draft BBNJ agreement addresses the impacts of climate change and ocean acidification in a number of ways. It recognizes the need to address biological diversity loss and degradation of ocean ecosystems in a coherent and cooperative manner, in particular, climate change impacts on marine ecosystems, such as warming and ocean deoxygenation, as well as ocean acidification, pollution, and unsustainable use.⁵⁴ In accordance with the general principles and approaches set out in the draft BBNJ agreement, its Parties shall be guided by an approach that builds ecosystem resilience, including to adverse effects of climate change and ocean acidification, and also maintains

⁴⁵ Ibid., paragraph 157.

⁴⁶ [A/RES/71/123](#), paragraph 9.

⁴⁷ Ibid., paragraph 185.

⁴⁸ [A/RES/73/125](#), paragraph 10.

⁴⁹ A/RES/58/240.

⁵⁰ [A/70/112](#).

⁵¹ [A/75/232/Rev.1](#), Technical Abstract of the First Global Integrated Marine Assessment on the Impacts of Climate Change and Related Changes in the Atmosphere on the Oceans (2017), available at https://www.un.org/depts/los/global_reporting/8th_adhoc_2017/Technical_Abstract_on_the_Impacts_of_Climate_Change_and_Related_Changes_in_the_Atmosphere_on_the_Ocean.pdf.

⁵² See <http://undocs.org/en/a/res/72/249>.

⁵³ See <https://www.un.org/bbnj/>.

⁵⁴ See Preamble; see also Annex II(b)(iv).

and restores ecosystem integrity, including carbon cycling services that underpin the role of the ocean in climate.⁵⁵

76. A definition of “cumulative impacts” is provided in the draft agreement as the combined and incremental impacts resulting from different activities, including known past and present and reasonably foreseeable activities, or from the repetition of similar activities over time, and the consequences of climate change, ocean acidification and related impacts.⁵⁶

77. Among the objectives of the part of the draft agreement related to measures such as area-based management tools, including marine protected areas, is the objective of protecting, preserving, restoring and maintaining biological diversity and ecosystems and strengthening resilience to stressors, including those related to climate change, ocean acidification and marine pollution.⁵⁷ Vulnerability to climate change and ocean acidification is among the criteria for identifying areas that may be proposed for the establishment of area-based management tools, including marine protected areas.⁵⁸

78. The draft BBNJ agreement provides that capacity-building and technology transfer may include information dissemination and awareness-raising, including with regard to stressors on the ocean that affect marine biological diversity of areas beyond national jurisdiction, including the adverse effects of climate change, such as warming and ocean deoxygenation, as well as ocean acidification.⁵⁹

8. UN Environment Programme

79. The UN Decade on Ecosystem Restoration 2021–2030⁶⁰ is a rallying call for the protection and revival of ecosystems all around the world, for the benefit of people and nature. It aims to halt the degradation of ecosystems and restore them to achieve global goals. Only with healthy ecosystems can we enhance people’s livelihoods, counteract climate change, and stop the collapse of biodiversity. Led by the United Nations Environment Programme and the Food and Agriculture Organization of the United Nations, the UN Restoration Decade is therefore building a strong, broad-based global movement to ramp up restoration and put the world on track for a sustainable future. This includes building political momentum for restoration as well as thousands of initiatives on the ground. Through communications, events and a dedicated web platform, the UN Restoration Decade provides a hub for everyone interested in restoration to find projects, partners, funding and the knowledge they need to make their restoration efforts a success.⁶¹

80. The UN Decade on Ecosystem Restoration has identified 10 first Flagship initiatives to boost nature and livelihood’s around the World, which illustrate the breadth and promise of restoration work already underway. Together, the 10 flagships aim to restore more than 60 million hectares and create more than 13 million jobs. Three flagships are advancing innovative marine and coastal restoration, including demonstrating joined-up landscape-seascape management in SIDS; mangrove rehabilitation as nature-based solution to coastal erosion in Indonesia; and seagrass restoration to safeguard dugon populations in Abu Dhabi. Further details are available in the introductory Ecosystem Restoration Flagship Interactive.⁶²

81. New UNEP reports take stock of kelp and mangrove blue carbon ecosystems:

(a) *Into the Blue: Securing a Sustainable Future for Kelp Forests*⁶³ provides the most comprehensive knowledge review on kelp to date, revealing the state of science on the world’s kelp forests and providing recommended actions to build the recovery of the world’s kelp forests. Aiming to improve our understanding of the value of kelp forests and provide recommendations to protect and sustainably manage them, the report also provides a range of policy and management interventions and options that can be used to maintain these remarkable ecosystems into the future and to support the people and economies that have depended on them for generations. Despite the

⁵⁵ Article 7(h).

⁵⁶ Article 1, paragraph 6.

⁵⁷ Article 17(c).

⁵⁸ Article 19, paragraph 4 (a) and (b) in conjunction with Annex I, (f).

⁵⁹ See Annex II(b)(iv).

⁶⁰ UNGA Resolution 73/284: United Nations Decade on Ecosystem Restoration 2021–2030.

⁶¹ See <https://www.decadeonrestoration.org/>.

⁶² UNEP-FAO Restoration Flagship Initiatives.

⁶³ See <https://www.unep.org/resources/report/blue-securing-sustainable-future-kelp-forests>.

many challenges they face, kelp forests provide valuable ecosystem services, including supporting coastal fisheries, mitigating climate change, and protecting biodiversity. The report emphasizes the importance of combining sociocultural knowledge with economic valuations to strengthen the case for devoting resources to the conservation, sustainable management, and restoration of kelp, the most extensive marine vegetated ecosystem in the world;

(b) Decades of Mangrove Forest Change: What does it mean for nature, people and the climate?⁶⁴ The report reviews the extent of mangrove forest cover and considers the potential consequences of changes in mangrove extent for more than 1,000 mangrove associated species including birds, fish, plants, mammals, reptiles and amphibians. Further, the report analyses the potential consequences of changes in mangrove extent on carbon storage and for small scale fishers, demonstrating that restoration is clearly needed but showcases encouraging examples of mangrove recovery. The report highlights the need to improve our knowledge of what species use and depend upon mangroves in order to better understand the consequences of changes in mangroves on people and our natural world. It also emphasises the need for integrated thinking, by conserving, restoring and sustainably managing mangrove ecosystems in a coherent and inclusive way, and coordinating management and governance actions across local, national, regional and international scales. We urgently need to transform our relationship with nature and transition to a more equitable and sustainable future to end ecosystem loss and degradation.

⁶⁴ See <https://www.unep.org/resources/report/decades-mangrove-forest-change-what-does-it-mean-nature-people-and-climate>.

Annex I: List of Parties and non-Party stakeholders who provided oral and/or written views at the informal exchange of views with the co-facilitators on 29–30 March 2023

Parties and Groups of Parties

Arab Group
ABU (Argentina, Brazil and Uruguay)
Alliance of Small Island States (AOSIS)
Australia
Canada
Costa Rica
European Union
Indonesia
Japan
Kingdom of Saudi Arabia
New Zealand
Singapore
United Kingdom
United States of America (USA)

UN Organizations, Observers and non-Party Stakeholders

Brazilian Bar Association
Conservation International
Center for Ocean Solutions, Stanford University
Council on Energy, Environment and Water (CEEW)
Deep Ocean Stewardship Initiative and Deep Ocean Observing Strategy
Division for Ocean Affairs and the Law of the Sea,
Office of Legal Affairs, United Nations
Food and Agriculture Organization (FAO)
Greenpeace Research Laboratories (Greenpeace International) at the University of Exeter
IOC- UNESCO

IUCN
International Alliance to Combat Ocean Acidification
International Coral Reef Society (ICRS)
IUAV University of Venice
Institute of Research for Development
Individual member of the European Association for Environmental and Resource Economists
Ocean Conservancy
Ocean & Climate Platform
Ocean Visions
Oceano Azul Foundation
Ocean Risk and Resilience Action Alliance
Ocean expert, CSO
Prime Initiative on Green Development, and on behalf of YOUNGO
Plymouth Marine Laboratory
Sustainable Ocean Alliance (SOA)
Stop Ecocide Foundation
The Convention on Biological Diversity secretariat
The David and Lucile Packard Foundation
The Nature Conservancy
The Scubaverse
The Congolese Diaspora for Nelson Mandela Legacy
UN Human Rights
United Nations Foundation
UNCT Mozambique
WWF
Wetlands International
World Climate Research Program's CLIVAR (Climate and Ocean variability and prediction) project
WILPF

Annex II: Indicative agenda

Ocean and climate change dialogue 2023 13–14 June. Plenary Room New York, WCCB Chaired by the ocean dialogue co-facilitators <i>Julio Cordano (Chile) and Niall O’Dea (Canada)</i>		
Day 1. Tuesday 13 June, 15:00–18:00		
15:00	High Level Remarks and Opening	
15:20	Setting the Scene Topic 1. Coastal ecosystem restoration including blue carbon Topic 2 Fisheries and food security	<i>UN agency representatives</i>
15:55	Introduction to the Breakout Group Discussions	<i>Co-facilitators</i>
16:00	Breakout Group Discussions on Topics 1 and 2 <ul style="list-style-type: none"> • Participants will divide into groups (10–20 people in each group) to discuss the guiding questions • Participants will have a chance to discuss both topics 16:00–16:55: There will be 4–5 breakout groups for Topic 1 and 4–5 breakout groups for Topic 2. <i>5min changeover time</i> 17:00–17:55: Participants will change groups for a second round of breakout discussion.	<i>Breakout groups with Moderators and Rapporteurs</i>
17:55	Wrap up day 1	<i>Moderated by co-facilitators</i>
Day 2. Wednesday 14 June, 15:00–18:00		
15:00	Report back from breakout groups	<i>Moderators and Rapporteurs</i>
	Panel discussions on best practices	
15:30	Topic 1: Coastal ecosystem restoration including blue carbon <ul style="list-style-type: none"> • Examples of national adaptation and mitigation solutions by Parties and NPS • Q&A 	<i>Experts from Parties and NPS</i>
16:15	Topic 2: Fisheries and food security <ul style="list-style-type: none"> • Examples of national adaptation and mitigation solutions by Parties and NPS • Q&A 	
17:00	Plenary Discussion on ways forward and messages for COP 28	<i>Moderated by co-facilitators</i>
17:55	Close	SBSTA Chair