United Nations

Framework Convention on Climate Change

Subsidiary Body for Scientific and Technological Advice

Ocean and Climate Change Dialogue 2024

Information Note by the Co-Facilitators

(24 May 2024)

Summary

The Conference of the Parties, at its twenty-sixth session, requested the Chair of the Subsidiary Body for Scientific and Technological Advice (SBSTA) to hold an annual dialogue, starting at the fifty-sixth session of the SBSTA (June 2022), to strengthen ocean-based climate action. At the 27th session of the Conference of the Parties (COP 27), Parties decided that future dialogues will be facilitated by two co-facilitators, who will be responsible for deciding the topics of 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 information note provides the co-facilitators' choice of two topics for the Ocean and Climate Change Dialogue 2024, guiding questions and proposed approach based on consultations with Parties and observers. These consultations took place at the virtual informal exchange of views for the preparation of the Ocean and Climate Change Dialogue 2024 held on 6–7 March 2024. Nineteen Parties and Groups of Parties and thirty-four observers and groups of observers provided oral and/or written views.

By the letter dated 19 April 2024 to Parties and observers, based on the exchange of views, the co-facilitators decided that the two topics of the dialogue will be:

a) Marine biodiversity conservation and coastal resilience.
b) Technology needs for the ocean - climate action, including finance links.

The dialogue will be held on 11–12 June 2024, 14:00–17:00 CEST, Plenary Room New York, World Conference Center, Bonn. The New York room will also be used for the breakout sessions. The dialogue will be conducted in hybrid mode.

Abbreviations and acronyms

ABMT	Area-based Management Tools
AC	Adaptation Committee
AI	Artificial Intelligence
BBNJ Agreement	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
CARES	Coordinated Actions to Reduce Emissions from Shipping
CBD	Convention on Biological Diversity
CBIT	Capacity-building Initiative for Transparency Trust Fund
CCCAP	Coastal Climate Change Adaptation Plan
CCS	Carbon Capture and Storage
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CMS	Convention on Migratory Species
CO2	Carbon Dioxide
CO2e	Carbon Dioxide equivalent
COP	Conference of Parties
CREWS	Climate Resilience and Early Warning Systems
DOALOS	Division for Ocean Affairs and the Law of the Sea
EEZ	Exclusive Economic Zone
EW4All	Early Warnings for All
EWS	Early Warning System
FAO	Food and Agriculture Organization of the United Nations
G20	Group of 20
GAN	Global Adaptation Network
GBF	Global Biodiversity Framework
GBFF	Global Biodiversity Framework Fund
GBON	Global Basic Observing Network
GCF	Green Climate Fund
GCOS	Global Climate Observing Programme
GEF	Global Environment Facility
GEO	Group on Earth Observations
GFCR	Global Fund for Coral Reefs
GGA	Global Goal on Adaptation
GHG	Greenhouse Gases
GIZ	Deutsche Gesellschaft Für Internationale Zusammenarbeit
GMN	Global MTCC Network
GOOS	Global Ocean Observing System
GST	Global Stocktake
ICO	International Coastal and Ocean Organization
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
ISA	International Seabed Authority
IUCN	International Union for Conservation of Nature
KMBGF	Kunming-Montreal Global Biodiversity Framework
LAKI	Lima Adaptation Knowledge Initiative
LDC	Least Developed Countries
LDCF	Least Developed Countries Fund
LEG	Least Developed Countries Expert Group
LT-LEDs	Long-Term Low-Emission Development Strategies
MARPOL	International Convention for the Prevention of Pollution from Ships
MEAs	Multilateral Environmental Agreements

MHEWS	Multi-Hazard Early Warning Systems
MOI	Means of Implementation
MPA	Marine Protected Area
MTCC	Maritime Technology Cooperation Centres
NAP	National Adaptation Plans
NbS	Nature-based Solutions
NBSAP	National Biodiversity Strategy and Action Plans
NCQG	New Collective Quantified Goal
NDCs	Nationally Determined Contributions
NGOs	Non-Governmental Organization
NMHS	National Meteorological and Hydrological Services
NPIF	Nagoya Protocol Implementation Fund
NWP	Nairobi Work Programme
Ocean Decade	UN Decade of Ocean Science for Sustainable Development.
Ocean Panel	High Level Panel for a Sustainable Ocean Economy
PCCB	Paris Committee on Capacity Building
PSSA	Particularly Sensitive Sea Areas
R&D	Research and Development
REDD	Reducing Emissions from Deforestation and Forest Degradation
SAICM	Strategic Approach to International Chemicals Management
SB	Subsidiary Bodies
SBSTA	Scientific and Technological Advice
SCCF	Special Climate Change Fund
SDG	Sustainable Development Goal
SIDS	Small Island Developing States
SOFF	Systematic Observations Financing Facility
SOLAS	International Convention for the Safety of Life at Sea
SOP	Sustainable Ocean Plans
TEC	Technology Executive Committee
UAE FGCR	UAE Framework for Global Climate Resilience
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNDESA	United Nations Department of Economic and Social Affairs
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNNF	United Nations – Nippon Foundation
UNODC	United Nations Office on Drugs and Crime
WCCB	World Conference Centre Bonn
WCRP	World Climate Research Program
WMO	World Meteorological Organization
WOA	World Ocean Assessment
WWF	World Wildlife Fund

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I. Introduction

1. In decision 1/CP.27, the Sharm el-Sheikh Implementation Plan, Parties decided that the annual ocean and climate change dialogue will, from 2023, be facilitated by two co-facilitators, selected by Parties biennially, who will be responsible for deciding the topics and conducting the dialogue, in consultation with Parties and observers.

2. Accordingly, as the co-facilitators for the 2024 Ocean and Climate Change Dialogue ("dialogue"), on 6-7 March 2024, we convened the virtual informal exchange of views ("exchange of views") with Parties and observers, that accommodated various time zones.

3. We have prepared this information note in advance of the dialogue that provides our choice of the two topics and the agenda for the dialogue, whilst taking note of the submissions of Parties and observers from the exchange of views.

4. The dialogue will be held on 11–12 June 2024, 14:00–17:00 CEST, Plenary Room New York, World Conference Center, Bonn, Germany in conjunction with the Subsidiary Body session. The New York room will also be used for the breakout sessions. The dialogue will be conducted in a hybrid mode.

5. All information on the dialogue, including the detailed agenda and connection details, is available from the UNFCCC webpage.

II. Overview of the informal virtual exchange of views on the preparation for the ocean and climate change dialogue 2024

6. This section provides a summary of the exchange of views with Parties and observers that was held on 6–7 March 2024.

7. During the exchange of views, we referred to our mandate and purpose of the exchange of views. We presented on the ocean in the COP28 outcomes and the dialogue topics that were recommended by the Parties and observers at the informal meeting on the summary report of the 2023 ocean dialogue that was convened by us at COP28.

8. At the exchange of views, we encouraged Parties and observers to focus their interventions on the priority topics, expected outcomes and structure for the dialogue. Nineteen Parties and Groups of Parties and thirty-four observers and groups of observers provided oral and/or written views. Annex I provides the list of Parties and observers who provided views.

A. Topics at the exchange of views

(a) A variety of topics were recommended by Parties, Groups of Parties and observers in their submissions and/or oral interventions. Both ocean-based adaptation and mitigation topics were identified in the views, with recommendations to have one topic each on adaptation and mitigation for the dialogue.

(b) Biodiversity restoration, protection and conservation, marine ecosystems and restoration, strengthening coastal resilience, marine protected areas, climate smart marine planning, marine spatial planning, nature-based solutions, ecosystem-based management approaches, science-based sustainable ocean planning and other area-based management tools, sustainable ocean-based tourism, ocean acidification/deoxygenation emerged as the top priority adaptation topics in the exchange of views.

(c) Other proposed adaptation topics included- strengthening the biodiversity-climate nexus, relevance of the BBNJ Agreement in relation to climate change, adaptation to sea level rise, polar regions/ arctic sea ice and ice sheets, marine areas beyond national jurisdiction, monitoring, climate-ocean risk assessments, early warning systems, source-to-sea, marine stressors, loss and damage impacts, marine and coastal resilient employment opportunities, ocean waste management, marine food security, aquatic animal welfare.

(d) Similarly, several mitigation topics were identified in the exchange of views by Parties and observers. Decarbonization of shipping/green shipping, offshore/renewable energy,

ocean-related technologies, technological innovation, fishing sector technology, innovative financing mechanisms/ technology finance, new blue carbon sources, marine carbon dioxide removal, blue carbon restoration, management and protection emerged as the top priority topics.

(e) Other mitigation-based proposed topics included- blue carbon in high seas, measurement of GHG and CO_2 emissions in ocean economic sectors, sectoral plans for decarbonization of ocean-based sectors, conservation of carbon cycles in deep oceans and polar areas.

9. Several cross-cutting issues were raised by Parties and observers. The top priority cross-cutting issues being: strengthening finance, innovative financing mechanisms, financing ocean-based adaption and mitigation actions; integrating the ocean in the existing mandates and workplans of relevant UNFCCC work programmes and constituted bodies, including the Global Stocktake; strengthening ocean-based action in national ambitions and policies, by inclusion of the ocean in the new and updated NDCs and NAPs; strengthening synergies across the ocean-related UN processes and international initiatives, including the BBNJ agreement, KMGBF, plastic pollution, and the 2030 Agenda; and appropriate recognition and integration of ocean science.

10. Other cross-cutting issues mentioned during the exchange included: indigenous and local knowledge; MOI, strengthening international cooperation and fostering partnerships on marine scientific research, capacity building, technology transfer and knowledge exchange; addressing ocean-based knowledge gaps; mainstream gender; mainstreaming ocean-based literacy; monitoring and measurement; ocean forecast data/data management and sharing; research and development; coastal ecosystems in GHG inventories; human rights inclusivity, equity, governance, and precautionary principle.

11. In selecting the topics for the dialogue this year, we have taken consideration of the outcomes of the dialogue last year, as well as the specific reference to the ocean in COP28/CMA5 decisions. Particularly relevant in this regard are paragraphs 35, 56, 180 of decision 1/CMA.5 on the Global Stocktake as well as paragraph 9 (d) of decision 2/CMA.5 on the Global Goal on Adaptation.

12. An additional consideration to bear in mind is that the ocean and climate dialogue aims to be a multi-year exercise, with topics that will build on previous years' experience, inputs and reports. In this regard, the dialogue this year will be considered in the context of the discussions held in 2023, as well as the outcomes of the recent COP/CMA sessions.

B. Topics and cross-cutting issues for the dialogue

13. Based on the priority topics identified by Parties and observers, as the co-facilitators of the dialogue, we have decided that the two topics of the dialogue will be:

(a) Marine biodiversity conservation and coastal resilience.

(b) Technology needs for the ocean - climate action, including finance links.

14. **Topic 1 on Marine biodiversity conservation and coastal resilience,** will explore a wide-ranging array of critical issues to deepen the understanding of how integrated management and conservation strategies can mitigate the adverse effects of climate change on marine and coastal ecosystems, enhance biodiversity, and strengthen community resilience. The dialogue will expand on these critical areas with a specific focus on adaptation strategies to protect, conserve and restore marine biodiversity, which would have an impact on marine areas beyond national jurisdiction. Building on the 2023 dialogue, this year's discussion will incorporate discussions on biodiversity restoration, protection, and conservation; the role and enhancement of marine ecosystems; and the strengthening of coastal resilience through various strategies including marine protected areas, climate-smart marine planning, marine spatial planning, and the implementation of ecosystem-based solutions.

15. The dialogue will also explore nature-based solutions, ecosystem-based management approaches, and science-based sustainable ocean planning alongside other area-based management tools. Furthermore, the discussions will emphasize the critical role of blue carbon ecosystems as pivotal components of nature-based solutions to climate change, offering both mitigation benefits and enhancing resilience. The dialogue will address the pressing challenges posed by ocean acidification and deoxygenation and explore sustainable practices in ocean-based tourism. Recognizing the need for a holistic approach to address dual challenges of marine biodiversity

conservation and coastal resilience, discussions will also address the needs for robust data collection, enhanced scientific understanding, and international cooperation.

16. The dialogue will extensively address the strengthening of coastal resilience, exploring how marine and coastal environments can be managed to mitigate impacts from climate change, including sea level rise, extreme weather events, and changing conditions in polar regions. Effective strategies for enhancing coastal resilience, including through multi-hazard early warning services and mainstreaming community preparedness, will be emphasised. Key components of coastal resilience will be discussed, including governance/institutional/social aspects such as marine/maritime spatial planning, contingency planning, fostering community partnerships; risk reduction and assessment through observation, research and data management, developing advanced early warning systems, and building capacity.

17. **Topic 2 on Technology needs for the ocean - climate action, including finance links,** will discuss the current state and future potential of ocean energy technologies for advancing climate-based ocean mitigation action. Central to the discussion will be an exploration of a range of ocean energy technologies that are transforming our understanding and management of ocean resources. The dialogue will explore the fast development, deployment and acceleration of existing clean technologies and innovation, digital transformation and development, demonstration and dissemination of new and emerging ocean-related technologies. This includes offshore, geothermal and renewable energy sources, highlighting technological advancements and barriers to scale. Additionally, there will be a focus on ocean monitoring and data technologies, highlighting recent advancements that enhance real-time ocean health management. Innovations in fisheries technology will also be examined, that aid in effective and sustainable fisheries management. The dialogue will discuss the transformative impact of automation and artificial intelligence in ocean technologies, including how satellite technologies complement the use of drones and automated systems.

18. The dialogue will address the current developmental stages of these technologies, and also consider the broader implications of deploying these technologies at scale to support the overarching goals of just energy transition to net-zero emissions. The dialogue will consider the broader socio-environmental implications of deploying ocean energy technologies. This includes potential benefits such as the reduction of adverse effects on marine life, creation of employment opportunities, and tourism. The dialogue will also address the early-stage environmental risks and the uncertainty about how social and environmental concerns might constrain the development of ocean energy technologies.

19. Financial strategies to support these technological innovations will be a critical component of the discussion. The dialogue will outline the necessity for innovative financial instruments that can catalyze investments in ocean technology sectors and ensure equitable access to these technologies, whilst also underscoring the importance of international cooperation for technology transfer, capacity building, R&D.

20. For both the topics, as cross-cutting issues, the ocean dialogue will be an opportunity to discuss pathways to incorporate adaptation and mitigation efforts into country-led instruments such as the NDCs and NAPs. With the next round of NDCs in 2025, this dialogue will create the sharing space for countries that have integrated coastal and marine mitigation and adaptation measures within their NDCs, as positive examples that can inform the new or updated NDCs in 2025.

21. Additionally, the dialogue will showcase the work of the relevant UNFCCC constituted bodies and work programmes, to enable discussions around capacity building, technology transfer and technological innovations, financing and resource needs, and actions that can be taken under existing UNFCCC processes for further integration of the dialogue topics.

22. To continue enhancing synergies with other relevant UN processes and international initiatives on the ocean and climate, the dialogue will give a voice to representatives from UN agencies and the international ocean community, working on ocean-based climate action and finance.

C. Expectations on the outcomes

23. The exchange of views in preparation of the dialogue highlighted a number of expectations for the ocean dialogue. We collated these expectations below.

Global Stocktake	Deliver on the ocean-related language of the GST outcome in national actions by Parties through science-based recommendations, including in the preparation of the next round of NDCs.
	Ensure the outcomes of the GST are reflected in the 2025 NDCs, including strengthening of ocean-based action as appropriate.
	Ocean issues should feed into the next GST process more directly.
	Ocean issues could be considered under a permanent item on the agenda of future COPs and SBs, as appropriate, or under existing items such as the GST, GGA, among others.
	Integrate the first outcome of the GST on the importance of marine ecosystems.
NDCs & NAPs	Enhance understanding of ocean-based climate action in Party's NDCs and NAPs.
	Encourage Parties to include more ambitious ocean-related actions in their NDCs.
	Highlight opportunities, tools, and best practices for integrating ocean-related measures into NDCs and NAPs.
	Provide recommendations for Parties to showcase successes, challenges, and requirements related to ocean-based climate action in their NDCs and NAPs.
	Enhance collaboration and support for developing countries, particularly African countries, in implementing ocean-based actions identified in their NDCs.
	Identify specific opportunities to strengthen coastal resilience and adaptation action in NDCs and NAPs before the submission of the 2025 NDCs, informed by the GST outcomes.
	Promote integration of solutions identified during the dialogue into national ocean climate action plans, including NDCs, NAPs, and NBSAPs.
	Understand how ocean-climate initiatives can contribute to the achievement of the outcomes of the GGA and GST.
	Convene an informal working group to make recommendations for improved ocean observing, data, and information by 2027 to inform NAPs by 2030.
Ocean integration in UNFCCC	Increase visibility of UNFCCC's work on ocean-climate issues by strengthening institutional interlinkages and enhancing national ocean-based climate action before the next round of NDCs.
	Ensure the dialogue results in actionable outcomes for ocean action within UNFCCC, including at the national level.
	Support the implementation of adaptation measures and develop useful indicators for progress at the national level.
	Integrate and strengthen ocean-based action in UNFCCC work programmes and constituted bodies.
	Provide clear recommendations and advice on integrating ocean-based action into NDCs and NAPs through relevant UNFCCC programmes and bodies.
	Showcase climate-positive innovations in ocean-based sectors to support processes such as TNAs and TAPs under the UNFCCC Technology Mechanism.
	Integrate dialogue outcomes into COP28 and upcoming COP29 outcomes with recent global processes, frameworks, and recommendations relevant to the ocean, including the GST, GGA, UAE Framework for Global Climate Resilience, NCQG, and LT-LEDs, Loss and Damage fund guidelines.

Strengthen Synergies	Synchronize climate and biodiversity policies in the ocean, promote synergies and enhance cooperation with relevant UN frameworks, MEAs, and conventions, including the BBNJ agreement, KMGBF, Regional Seas Agreements, 2030 Agenda, Regional Fisheries Bodies, human rights instruments, IOC ocean decade science for sustainable development, CMS, and children's rights.
	Avoid duplication on issues being dealt with in other UN fora with specific mandates.
	Achieve synergies between international platforms and tools associated with ocean and climate change issues.
	Align recent COP28 and upcoming COP29 outcomes with global processes and recommendations.
	Continue dialogue involving other UN frameworks to support focal areas, solutions, and needs identified.
	Integrate ocean-based knowledge and action into NDCs by strengthening synergies with other UN processes.
	Organize a ministerial high-level dialogue at COP to discuss informal summary report.
Action-oriented summary report and dialogue outcomes	Deliver an action-oriented summary report for COP29 that highlights best practices by Parties on ocean-based climate action, international funding avenues, and knowledge sharing and capacity building information. Advance the inclusive participation of the most vulnerable and provide strategic links for future dialogue topics.
	Formalize the continuity in ocean dialogue discussions.
	Dialogue should promote and support the establishment of key climate-ocean indicators that will help Parties increase concrete adaptation actions.
	The outcomes from the dialogue be formulated as clear, actionable recommendations to provide inputs to a range of other discussions including- UN Climate Week, CBD COP16, G20, and COP29.
	Dialogue as a platform to advance financial and political commitments to accelerate ocean and climate investments for scaling of blue carbon pathways.
	Dialogue to recommend ocean-climate concrete actions for regional cooperation.
	To make progress in technology transfer, financing and capacity building in concrete, enforceable, effective mitigation and adaptation at the regional and jurisdictional levels.
	Widely disseminate outcomes to relevant stakeholders to allow learning and exchange.
	Effectively communicate outcomes of the dialogue for strengthening synergies and for ocean integration within UNFCCC.
Knowledge, science and research	Enhance collective understanding of the climate-ocean linkages based on current and emerging scientific and Indigenous Peoples' knowledge.
	The dialogue should include as appropriate, relevant traditional knowledge and Indigenous Peoples' knowledge.
	Dialogue to provide actionable recommendations guided by the best available science.
	Create a stockpile platform or open data repository for knowledge sharing and capacity building amongst UNFCCC Parties for ocean-based mitigation and adaptation sectors.
	Organize workshops to develop policy recommendations on ocean and climate change issues.
	Recommendation to IPCC experts to increase research related to the role of the ocean as a carbon sink or as a carbon source.

	Strengthen the science basis of the dialogue through connections with relevant scientific bodies such as IPCC and IPBES.
	Coordinated efforts between Parties and observers to promote research, management, and risk assessment alongside proposed ocean climate interventions.
Climate-resilient livelihoods	Identifying opportunities and challenges for climate-resilient livelihoods across diverse ocean sectors, with a focus on vulnerable communities.
	Highlight tools and resources available for enhancing climate resilience in livelihoods.
	Showcase best practices and innovations supporting climate-resilient livelihoods, especially for smallholders.
	Integrate climate-resilient livelihood strategies into national climate plans, such as NDCs and NAPs.
	Emphasize the importance of supporting vulnerable communities in adapting to climate change impacts on their livelihoods.
	Encouraging international knowledge sharing and capacity building for climate-resilient livelihoods, particularly in developing countries.
	Recommending the establishment of key indicators to monitor and increase concrete adaptation actions in livelihoods

24. We shall be incorporating several of these expectations in the guiding questions, the informal summary report, and in the reporting of the dialogue outcomes. Additionally, these expectations are also to be considered as tasks that the dialogue should address over time.

D. Structure of the ocean and climate change dialogue 2024

25. In the submissions from Parties and observers on the structure of the dialogue, the 2023 dialogue format was recommended as the proposed continued structure for this year's dialogue. The 2024 dialogue follows last year's format, incorporating brief presentations followed by world café style breakout group discussions moderated by appointed facilitators and moderators. These discussions will focus on active participation from diverse stakeholders on best case practices and knowledge exchange based on the guiding questions prepared by us, that will feed into the informal summary report preparation. Thereafter, a plenary session shall present the preliminary report of the break-out group discussions, followed by discussions and reflections.

26. The presentations shall include a high-level panel, followed by expert panels to introduce Topics 1 and 2, and the cross-cutting issues based on the guiding questions. This will include representatives from Parties, UNFCCC constituted bodies, UN agencies, financial mechanism, non-Party stakeholders, practitioners, and experts leading on topics of the dialogue, to ensure synergies and integration of the dialogue outcomes in relevant processes.

27. Day 2 of the dialogue shall delve into Panel discussions on case studies, best practices and challenges at the regional and national level on Topics 1 and 2 of the dialogue. In alignment with the submissions on the structure, speakers shall represent inclusivity, diversity, and enable a solutions-oriented and regional discussion to address specific national needs and regional perspectives alongside global discussions. All panel presentations shall be interactive sessions, so as to allocate time for plenary discussions and Q&A from the participants. The format of the dialogue shall adopt a participatory and inclusive approach to ensure and encourage the exchange of the participation of all stakeholders.

28. Additionally, based on the feedback from last year's dialogue, more time will be allocated for plenary statements from Parties.

III. Guiding questions and indicative agenda for the ocean and climate change dialogue 2024

29. 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, COP 27 and COP 28 ocean-related mandates.

30. The ocean dialogue will involve:

(a) Day 1: High level opening; expert panels on topics 1 and 2; breakout groups on topics 1 and 2 based on the guiding questions below.

(b) Day 2: Reporting back from the breakout groups; panel presentations on case studies, best practices and challenges at the regional and national level; plenary statements on next steps and further strengthening ocean-based action.

31. An indicative agenda is provided after the guiding questions below. Detailed agenda with the speakers, rapporteurs and moderators shall be made available on the UNFCCC webpage in due course.

A. Guiding questions

32. The guiding questions are:

Days 1 and 2	Breakout and Panel Discussions
Topic 1: Marine biodiversity conservation and coastal resilience	1. How can conservation measures such as MPAs, NbS and blue carbon ecosystems, support efforts by Parties to adapt to the accelerating impacts of climate change, restore biodiversity, support livelihoods, and maintain ecosystem services? 2. What comprehensive strategies exist that can enhance coastal resilience against the impacts of climate change that are also informed by the outcomes of the GST?
Topic 2: Technology needs for the ocean - climate action, including finance links	3. Considering the current developmental stages of ocean technologies, what are the **critical pathway**s to developing and deploying sustainable ocean technologies towards net-zero emissions? How can the integration of **automation and satellite technologies**, further transform our approach to ocean health and resource management under the UNFCCC process? 4. Considering the current high costs and developmental stages of ocean energy technologies, what **innovative financial approaches** could be pursued to attract sufficient capital for research, development, and deployment to support countries in using technology to enhance participation in UNFCCC processes? How can Parties apply the potential role of public-private partnerships, green bonds, and climate funds in supporting these technologies?
Cross-cutting	5. How can international cooperation enable just and equitable access to ocean-based technologies, data management, capacity building and marine scientific research, particularly for developing countries, especially those that are particularly vulnerable to the adverse effects of climate change? 6. What role can international agreements, including the 2030 Agenda, BBNJ agreement and KMGBF play to enhance international cooperation in these areas?

	7. What are the most promising innovative financing mechanisms currently available or under development that could support ocean-based mitigation and adaptation climate action? How can these financial mechanisms be tailored to address the specific needs and vulnerabilities of developing countries, including small island developing states and least developed countries? How can international financial institutions and global partnerships enhance their support for these financial mechanisms?
Day 2	**Plenary Discussion on ways forward and further strengthening ocean-based action**
Ways Forward/ Next Steps	8. How can the ocean dialogue support Parties to deliver on the ocean-related language of the outcome of the first global stocktake in their national actions and strategies, including NDCs and NAPs? 9. What is needed to better integrate the ocean within the existing mandates and workplans of UNFCCC's relevant constituted bodies and work programmes, and to promote synergies with other relevant UN and non-UN initiatives and processes?

B. Indicative Agenda

Ocean and climate change dialogue 2024 11–12 June Plenary Room New York, WCCB Chaired by the ocean dialogue co-facilitators ***Julio Cordano (Chile) and Niall O'Dea (Canada)***		
Day 1. Tuesday 11 June, 14:00–17:00		
14:00	**Welcome**	*Co-facilitators*
14:05	**High Level Remarks and Opening**	
	Expert panels to introduce Topics 1 and 2, and the guiding questions	*United Nations, intergovernmental and non-governmental organizations representatives*
14:25	**Expert Panel Topic 1.** Marine biodiversity conservation and coastal resilience	
14:55	**Expert Panel Topic 2.** Technology needs for the ocean – climate action, including finance links	*UNFCCC Constituted Bodies and Work programmes representatives*
15:25	**Introduction to the Breakout Group Discussions**	*Co-facilitators*
15:30	**Breakout Group Discussions on Topics 1 and 2** • 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 15:30–16:10: There will be 4–5 breakout groups for Topic 1 and 4–5 breakout groups for Topic 2 for a total of 40 mins. *5 min changeover time* 16:15–16:55: Participants will change groups for a second round of breakout discussion on the same or the other topic as per their preference for a total of 40 mins.	*Breakout Groups with Moderators and Rapporteurs*
16:55	**Wrap up day 1**	*Co-facilitators*
Day 2. Wednesday 12 June, 14:00–17:00		
14:00	**Day 1 recap & day 2 agenda setting**	*Co-facilitators*
14:05	**Reporting back on the breakout groups/ Q&A**	*Moderated by Co-facilitators*

	Panel discussions on case studies, best practices and challenges at the regional and national level	
14:30	**Topic 1**: Marine biodiversity conservation and coastal resilience • Presentations • Q&A	*Experts from Parties and non-Party stakeholders*
15:00	**Topic 2:** Technology needs for the ocean – climate action, including finance links • Presentations • Q&A	
15:30	**Plenary statements by Parties and observers on ways forward and further strengthening ocean-based action**	*Moderated by Co-facilitators*
16:45	**Close**	*Co-facilitators*

IV. Relevant updates under the UNFCCC process, UN system and other non-UN processes

33. In accordance with the wishes of the Parties and observers, the relevant UNFCCC constituted bodies and work programmes, UN agencies and non-UN initiatives have made a written contribution to the information note. These contributions highlight their relevant workplans and mandates, including key outcomes on the ocean, thereby demonstrating the integration of the ocean under the UNFCCC process, and further strengthening institutional connections across international policy processes and support, as well as across UN and other international agendas. Their written contribution is provided as Annex II to this information note.

Annex I: List of Parties and observers who provided oral and/or written views at the informal exchange of views on 6–7 March 2024

Parties and groups of Parties
Argentina
Australia
Belgium on behalf of the European Union and its Member States
Canada
China
Colombia
Indonesia
Iran
Japan
Mauritius
Mexico
Monaco
Republic of Korea
Samoa on behalf of the Alliance of Small Island States (AOSIS)
Senegal
Singapore
United Kingdom
United States of America
Zambia on behalf of the African Group of Negotiators (AGN)

UN organizations, observers and non-Party stakeholders
Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations (DOALOS)
Food and Agriculture Organization of the United Nations (FAO)
IOC-UNESCO
The United Nations Conference on Trade and Development (UNCTAD)
UN Tourism
UN Women
United Nations Foundation and the International Alliance to Combat Ocean Acidification
Aquatic Life Institute and the Aquatic Animal Alliance
Climate Action Network (CAN) Ecosystems Working Group
Climate Action Network for International Educators
Commonweal
Conservation International (CI) and Rare (Joint submission with Ocean Conservancy, the Pew Charitable Trusts and Wetlands International)
Deep Ocean Stewardship Initiative and Deep Ocean Observing Strategy

UN organizations, observers and non-Party stakeholders
Environmental Defense Fund (EDF)
Global Ocean Forum
Greenpeace International
Ocean Conservancy
Ocean Risk and Resilience Action Alliance
Ocean Visions
Pew Charitable Trusts
Plymouth Marine Laboratory (PML)
Renewables Grid Initiative
Resilient Lagoon Network
Responsible Finance & Investment (RFI) Foundation C.I.C.
Stockholm International Water Institute & Action Platform for Source-to-Sea Management
Stop Ecocide Foundation
The International Union for Conservation of Nature (IUCN)
The Nature Conservancy (TNC)
The Ocean & Climate Platform (OCP)
The Ocean Foundation (TOF)
The One Ocean Hub
The World Wildlife Fund (WWF)
Wetlands International (Joint submission with Global Mangrove Alliance, the Nature Conservancy and IUCN)
WildAid

Annex II: Relevant updates under the UNFCCC process, the UN system and other non-UN processes

A. Updates under the UNFCCC Process

1. Outcome of the first global stocktake

34. The outcome of the first global stocktake (Decision 1/CMA.5), welcomed the outcomes of and the informal summary report on the 2023 ocean dialogue and encouraged further strengthening of ocean-based action, as appropriate (para. 180).

35. In the outcome of the first global stocktake, Parties noted in the preamble the importance of ensuring the integrity of all ecosystems, including in forests, the ocean, mountains and the cryosphere, and the protection of biodiversity, recognized by some cultures as Mother Earth including the ocean.

36. The outcome of the first global stocktake invites Parties to preserve and restore oceans and coastal ecosystems and scale up, as appropriate, ocean-based mitigation action (para. 35). Further, Parties note that ecosystem-based approaches, including ocean-based adaptation and resilience measures, can reduce a range of climate change risks and provide multiple co-benefits (para. 56).

37. The outcome of the first global stocktake, encourages the implementation of integrated, multi-sectoral solutions, such as nature-based solutions and ecosystem-based approaches, and protecting, conserving and restoring nature and ecosystems, including marine and coastal ecosystems, which may offer economic, social and environmental benefits such as improved resilience and well-being (para.55).

38. In accordance with decision 2/CMA.5 on the Global goal on adaptation, the outcome of the first global stocktake urges Parties and invites non-Party stakeholders to increase ambition and enhance adaptation action and support, in order to accelerate swift action at scale and at all levels, from local to global, in alignment with other global frameworks, towards the achievement of, inter alia, the target by 2030 and progressively beyond, of reducing climate impacts on ecosystems and biodiversity and accelerating the use of ecosystem-based adaptation and nature-based solutions, including through their management, enhancement, restoration and conservation and the protection of terrestrial, inland water, mountain, marine and coastal ecosystems (para 63 (d)).

2. Nationally determined contributions

39. In the 2023 synthesis report of the secretariat on the nationally determined contributions (NDCs) under the Paris Agreement, the new or updated NDCs reflect an increased recognition of the ocean's role in strengthening climate action.[1] A total of 10 per cent of the 148 new or updated NDCs submitted between 29 March 2019 and 1 October 2023[2] include a reference to ocean changes, such as acidification and coral bleaching, and/or climate-driven impacts on the ocean such as sea level rise. A total of 56 per cent of the 148 Parties integrated coastal and marine nature-based solutions within new or updated NDCs as part of mitigation or adaptation measures.

40. Of the 106 NDCs of island and coastal States submitted from 1 January 2020 to 11 October 2022, 73 per cent included at least one target, policy or measure aimed at ocean- based climate action, of which 59 per cent included ocean-based adaptation action, 48 percent ocean-based mitigation action and 13 per cent action that links to both mitigation and adaptation goals.[3]

41. Of the 158 Parties with an adaptation component in their NDCs, 30 per cent identified ocean ecosystems as a priority sector for adaptation and 11 per cent developed quantified targets for both fisheries and ocean ecosystems.

[1] Lecerf M, Herr D, Thomas T, et al. 2021. Coastal and marine ecosystems as Nature-based Solutions in new or updated Nationally Determined Contributions. Ocean & Climate Platform, Conservation International, IUCN, GIZ, Rare, The Nature Conservancy and WWF.

[2] Among the 148 submissions, six countries that are referred to as "new" (i.e. Brunei Darussalam, Ecuador, Holy See, Philippines, Senegal, South Sudan) submitted their first NDCs during this period.

[3] Khan, M., and E. Northrop. 2022. Analysis of Ocean-Based Climate Action in Nationally Determined Contributions. Technical Note. Washington, DC: World Resources Institute. Available at doi.org/10.46830/writn.22.00063.

3. National Adaptation Plans

42. Coastal and marine ecosystems are highly vulnerable to climate-induced hazards. Climate change adaptation is therefore critical to build and strengthen the resilience of coastal and marine ecosystems. National adaptation plans ("NAPs") provide the opportunity to identify and implement long-term adaptation options for coastal and marine ecosystems through a holistic and integrated approach.

43. As at 31st March 2024, the majority of NAPs (29 NAPs, 53%) identifies sea level rise as a significant climate hazard. Some NAPs also mention ocean acidification, saltwater intrusion, increasing sea surface temperatures and coastal erosion. 22 NAPs identified coastal and low-lying zones as a priority area in which action is deemed key to reducing vulnerability to climate change.

44. Some of the adaptation actions and measures included in the NAPs to address the vulnerability of coastal and low-lying zones are:

(a) Promotion of low-cost coastline protection techniques;

(b) Restoring and protecting mangroves; design and implement integrated coastal zone management and resilience plans to restore mangroves, coastal barriers and coastal aquifer recharge;

(c) Establish robust and long-term mangrove ecosystem health surveillance, monitoring and analysis to develop insights into their current state and map future risks and vulnerabilities;

(d) Establishment of a sea level rise monitoring system;

(e) Improve technical capacity and institutional arrangements for coastal zone management;

(f) Develop and update ocean ecosystem management policies, guidelines and institutional capacities for management of the blue economy;

(g) Provide financial aid for preventative and protective actions for coastal damage;

(h) Raise awareness among decision-makers to incorporate sea level rise scenarios into development plans;

(i) Promotion of non-destructive fishing techniques to maintain resilience of marine ecosystems;

(j) Legislate laws to restrict negative anthropogenic activities in the coastal zones to maintain coastal wildlife;

(k) Implement nature-based erosion control techniques and restore degraded areas;

(l) Promote research for a better understanding of the risk of marine submersion.

45. Cameroon, Grenada, Kuwait, Liberia, Madagascar, Saint Lucia, Saint Vincent and the Grenadines, Sierra Leone, Sudan, Timor-Leste, Togo – among others – have undertaken climate vulnerability and risk assessments on coastal zones, examining the vulnerability of fishing communities and ecosystems.

46. Some countries explicitly included ensuring the resilience of coastal and marine ecosystems in the objectives of their NAPs (Albania, Brazil, Cambodia, Costa Rica, Ecuador, Grenada, Saint Lucia).

47. Sierra Leone produced a Coastal Climate Change Adaptation Plan (CCCAP) and integrated it into the NAP. Grenada has integrated adaptation considerations into its coastal zone policies.

4. Adaptation Committee

48. As part of the Cancun Adaptation Framework, Parties established the Adaptation Committee (AC) to promote the implementation of enhanced action on adaptation in a coherent manner under the Convention and the Paris Agreement. There is an opportunity for the AC to enhance its support towards the ocean agenda. By aligning our efforts with this area, the AC can effectively contribute to broader technical guidance on the relevant theme as outlined in the UAE Framework for Global Climate Resilience decisions from COP28.

49. One proposed avenue is to intensify the focus of the AC on gathering information and experiences from Parties and stakeholders regarding ocean-based adaptation action. This could involve integrating ocean-related data into our existing State of Adaptation, particularly country profiles, and expanding our intelligence-gathering efforts to track progress towards UAE Framework targets, possibly through enhancements to the work on the State of Adaptation portal.

50. Additionally, the AC may wish to explore ways to incorporate ocean-related activities into our training materials and technical guidance, ensuring a more comprehensive approach to supporting adaptation efforts globally. Collaborative engagements with other relevant bodies offer further opportunities for cross-cutting initiatives in this domain.

51. Furthermore, by aligning our support with the ocean agenda, the AC can play a significant role in advancing adaptation action to ensure our efforts are coherent and manageable, fostering resilience in marine and coastal ecosystems.

52. Currently, focus within the AC is on leveraging ongoing initiatives that can provide tools for advancing adaptation action. This may include addressing technology needs for ocean-climate action, along with establishing vital finance links. Significant existing AC resources include the Toolkit for Monitoring, Evaluation, and Learning for National Adaptation Plan Processes. Additionally, methodologies covering various aspects, from reviewing the adequacy and effectiveness of adaptation and support to prioritizing gender-responsive adaptation action, strategies for assessing adaptation needs, and navigating the support landscape for the formulation and implementation of national adaptation plans, are available. Collaborative work with the NWP and other constituted bodies on cross-cutting aspects could also be of interest.

53. Looking ahead, we anticipate fruitful discussions on how best to integrate these ideas into the future flexible workplans of the AC as appropriate.

5. Nairobi Work Programme

54. The Nairobi work programme on impacts, vulnerability and adaptation to climate change ("NWP") seeks to advance both transformational and long-term incremental adaptation towards reducing vulnerability and enhancing adaptive capacity and resilience.[4] The recent report on activities under the NWP, by region, between 2019 and 2023 prepared for SBSTA 60[5] provides an overview of the activities undertaken by the NWP with thematic expert groups, UNFCCC constituted bodies and communities of practice to enhance action at the regional and transboundary level, through the provision of information and application of knowledge, to achieve transformational adaptation and resilience, including on oceans.

55. **Ocean, coastal areas and ecosystems.** To address needs identified by Parties, the secretariat established the NWP expert group on oceans,[6] which includes the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and the IPCC, and prepared several knowledge products in collaboration with constituted bodies such as the LEG and the TEC. Relevant region-specific knowledge products include:

(a) A scoping paper on closing knowledge gaps and advancing adaptation action for ocean, coastal areas and related ecosystems, including mega deltas, coral reefs and mangroves, that addresses climate change impacts, including of slow onset events, resilience-building and adaptation.[7] The paper draws on initiatives and actions in several regions, including Africa, the Caribbean and the Pacific SIDS;

(b) A policy brief on innovative approaches to strengthening coastal and ocean adaptation, prepared by the NWP expert group on oceans in collaboration with IUCN and the TEC, that summarizes action across many regions and includes recommendations for scaling up innovative approaches in order to achieve multiple benefits for people and nature;[8]

[4] For more information on the NWP, see http://unfccc.int/nwp.

[5] FCCC/SBSTA/2024/2.

[6] See https://www4.unfccc.int/sites/NWPStaging/Pages/NWP-Expert-Group-on-Oceans.aspx.

[7] UNFCCC. 2019. *Adaptation of the Ocean, Coastal Areas and Ecosystems: Scoping Paper on Closing Knowledge Gaps and Advancing Action.* Bonn: UNFCCC. Available at https://unfccc.int/documents/230928.

[8] UNFCCC and IUCN. 2022. *Innovative Approaches for Strengthening Coastal and Ocean Adaptation*

(c) A report prepared by the NWP expert group on oceans in collaboration with the GCF and the LEG that provides insights for developing countries relevant to implementing NAPs to increase resilience to extreme climatic events.[9] This report is targeted at the LDCs and SIDS in Africa, the Caribbean and the Pacific. According to the report, the capacity of the LDCs and SIDS to develop high-quality project proposals must be enhanced to unlock access to funding for nature-based solutions, including ecosystem-based adaptation. The report identifies entry points for enhancing access to the GCF for funding to implement coastal and marine nature-based solutions.

(d) At the 13th NWP Focal Point Forum, on the ocean, held at COP 25,[10] an IPCC presentation on the findings in its Special Report on the Ocean and Cryosphere[11] was followed by a discussion among Parties and NWP partners on knowledge needs and specific actions that national Governments and NWP partners could take to address knowledge gaps in order to build the resilience of ocean, coastal areas and related ecosystems.

56. **LAKI** is a joint initiative between the secretariat and UNEP through its Global Adaptation Network, an action pledge under the NWP, that aims to enhance adaptation action in subregions by closing priority knowledge gaps in all countries, but particularly in developing countries, including the LDCs, SIDS and African States.[12]

57. **Pacific small island developing States.** The activities for this subregion cover 14 SIDS: Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu, of which three are LDCs.

58. The UNFCCC secretariat, UNEP and the Secretariat of the Pacific Regional Environment Programme co-convened a virtual priority-setting workshop for the Pacific SIDS.[13] The workshop helped to enhance understanding of the priority knowledge gaps impeding the implementation and scaling up of adaptation action in the Pacific SIDS. During the workshop, the experts focused on how to use existing data and information to bridge certain knowledge gaps, how to facilitate the informed application of knowledge and how to enhance access to information by those implementing actions on the ground. Priority knowledge gaps discussed during the workshop include how to include women, girls and people with disabilities in the design and implementation of adaptation plans and policies; how to enable access by government officers working in climate change, finance and other relevant ministries to climate change adaptation funds; how to integrate ecosystem-based adaptation into programme design; and how to determine the limits to ecosystem-based approaches in the face of future climate change.

59. The priority knowledge gaps for the Pacific SIDS identified from applying the LAKI methodology have guided the development of new and innovative ways of achieving resilience in the Pacific SIDS. A strategic partnership between the Secretariat of the Pacific Regional Environment Programme and the UNEP Asia Pacific Adaptation Network has resulted in the establishment of relationships with new partners and the implementation of co-developed activities designed to address these gaps, one of which is a regional event held during Asia-Pacific Climate Week 2023.[14]

6. Technology Executive Committee

60. **Background.** Since last year, the Technology Executive Committee ("TEC") has implemented its' "Rolling workplan of the Technology Executive Committee for 2023–2027".

- *Integrating Technology and Nature-based Solutions*. Bonn: UNFCCC. Available at https://unfccc.int/documents/510426.

[9] UNFCCC. 2021. *Coastal adaptation and nature-based solutions for the implementation of NAPs: Considerations for GCF proposal development.* Bonn: UNFCCC. Available at https://unfccc.int/documents/278047.

[10] See https://unfccc.int/event/13th-focal-point-forum-of-the-nairobi-work-programme-on-the-ocean.

[11] IPCC. 2019. Glossary. *In:* H-O Pörtner, DC Roberts, V Masson-Delmotte, et al. (eds.). *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*. Cambridge: Cambridge University Press. pp.677–702. Available at https://www.ipcc.ch/srocc/ .

[12] For more information, see document FCCC/SBSTA/2022/4 (chap. V) and https://www4.unfccc.int/sites/NWPStaging/Pages/laki.aspx.

[13] For more information, as well as the workshop report, see https://www4.unfccc.int/sites/NWPStaging/Pages/Lima-Adaptation-Knowledge-Initiative-(LAKI)-for-the-Pacific-sub-region.aspx.

[14] See https://unfccc.int/news/closing-adaptation-knowledge-gaps-in-asia-pacific.

Under this workplan, the TEC has not only dedicated activity on Innovative Ocean Climate Solutions which aims to analyze the contributions of innovative solutions and technological innovations for ocean-based actions, including how technology can help address issues related to marine protected areas and achieve the SDG 14, but also some different activities which could relate to the ocean technologies e.g. early warning systems, disaster risk management, water-energy-food systems and digital technologies (particularly AI). To carry out this workplan and complete some deliverables in a timely manner, and ensuring the quality of outcomes, the TEC has strengthened our partnerships with various organizations to leverage their knowledge and insights in our work. For the work on Ocean and EWS, the TEC has been closely working with IUCN, ICO and GEO.

61. **TEC knowledge products related to Oceans and Technology.** In 2022, the TEC published two Policy Briefs "Innovative Approaches for Strengthening Coastal and Ocean Adaptation: Integrating Technology and Nature-based Solution" and "Technologies for Averting, Minimizing and Addressing Loss and Damage in Coastal Zones", in collaboration with relevant constituted bodies and stakeholders. These policy briefs provided information on an array of technologies – hardware, software, and orgware – currently available to assess risks, reduce risks, recover and rehabilitate from the impacts of climate change in coastal zones. It also highlighted the challenges and opportunities of these technologies where improvements can be made to help countries prepare better to deal with adverse impacts of climate change in coastal zones. In 2023, drawing upon these policy briefs, the TEC provided key messages and recommendations for the COP and CMA on innovative technologies and integrated adaptation solutions in the ocean and coastal zones. This can be seen here.

62. The TEC is currently preparing a joint policy brief in collaboration with GEO, which aims to offer policy-relevant insights for advancing risk informed climate planning and action, and highlights innovations and technology solutions for improving disaster risk knowledge in support of the overall MHEWS framework and the implementation of EW4All initiative, especially in LDCs and SIDS. The brief has focused its attention on proven technology solutions that are available and may be scaled up for wider application in vulnerable contexts, i.e. SIDS and LDCs. However, it is equally important to consider potential applications of emerging technologies that are currently is use primarily in developed countries, but may lend themselves to innovative solutions for improving risk knowledge and information for all in the near future. For example, a case from Belize includes AI and machine learning for NAPs.

7. Paris Committee on Capacity Building

63. **Mainstreaming the ocean at the Paris Committee on Capacity Building ("PCCB") Capacity-building Hubs.** To respond to the mandate from COP 26 to constituted bodies to integrate and strengthen ocean-based action in their existing mandates and workplans, the PCCB has been mainstreaming oceans at its Capacity-building Hubs during the COPs. The PCCB hosted Capacity-building Hubs,[15] bring together international partners and capacity-building stakeholders to organize a week-long series of sessions on different themes to foster co-creation and sharing of knowledge and collaboration within the capacity-building community.

64. *"Oceans and Land Day" at the 4th Capacity-building Hub at COP27***.** The Oceans and Land Day sought to highlight capacity-building efforts related to the Warsaw Framework for REDD-plus and the Koronivia Joint Work on Agriculture. Eight sessions were organized by 11 different partners with the key outcomes including:

(a) The need to integrate scientific, traditional, local, and indigenous knowledge systems into implementing the Rio Conventions and the Paris Agreement.

(b) Emphasized mainstreaming nature-based solutions and ecosystem-based approaches into climate adaptation plans, especially for SIDs and LDCs.

(c) Emphasis on bottom-up conservation and sustainable development, leveraging local knowledge for climate adaptation and environmental stewardship.

(d) Capacity-building programs for understanding governance frameworks like UNCLOS and the Paris Agreement.

[15] See https://unfccc.int/capacity-building-hub.

(e) Success factors for NbS implementation include: community-led conservation, cross-sectoral solutions, strengthening local capacities and knowledge, incorporating traditional management practices into formal regulatory frameworks, and ensuring long-term ecological resilience by improving access to finance and economic resilience in the short-term.

65. *"Rio Conventions Synergies Day" at the 6th Capacity-building Hub at COP29.* As the three Rio Conventions address interconnected environmental challenges, there is a need to build capacities for understanding the synergies that exist between the three Conventions and the systems that they represent. This includes integrating marine biodiversity conservation and coastal resilience efforts into broader conservation and sustainability strategies to contribute to both adaptation and mitigation efforts, particularly as regards the important role oceans play in regulating the carbon cycle.

66. This thematic day would seek to delve into case studies showcasing successful integration of efforts, highlight the benefits of coordinated action, as well as share the best examples of developing practical tools and methodologies for assessing and leveraging synergies. Empowering stakeholders to implement integrated strategies at local, national, and international levels is essential for achieving meaningful progress in marine biodiversity conservation. The day would also seek to provide a platform that brings together policymakers, communities, and researchers to catalyze innovative solutions for sharing integrated and effective approaches to addressing the interconnected challenges facing coastal ecosystems and the communities that depend on them.

8. Marrakech Partnership for Global Climate Action

67. Within the work of the High-Level Champions and the Marrakech Partnership, the 2030 Climate Solutions was launched at COP 28 to bring together their existing 2030 frameworks and tools, including concrete solutions and opportunities in the area of Ocean and Coastal Zones, such as Mangroves, Coral Reefs, Ocean Renewable Energy, Aquatic Food, Marine Conservation and Shipping.

68. Moving on to 2024, the priorities include regionalizing the 2030 Climate Solutions and ensuring that ocean-based solutions are scalable and based on scientific knowledge to drive forward the implementation of the outcome of the first global stocktake and support national governments in preparing for enhanced NDCs. Starting with mangroves, the specific targets are to invest in securing the future 15 million hectares of mangroves globally by halting mangrove loss and restoring recent losses, doubling their protection and sustaining long-term finance for existing mangroves. For coral reefs, the target is to secure at least 125,000 km2 of shallow-water tropical coral reefs and to invest for the resilience of more than half a billion people globally by 2030. The target for ocean renewable energy is to install at least 380 GW of offshore capacity by 2030 and establish targets and measures for net-positive biodiversity outcomes, and finally to mobilise concessional finance for developing countries to reach the targets. In terms of aquatic food, the target is to provide financial support for resilient aquatic food systems and sustain food and nutrition security for three billion people. For marine conservation, significant investments should be made by 2030 to protect, restore and conserve at least 30% of the ocean. In shipping, zero emission fuels should make up at least 5%, entailing 10% of international shipping fuels and 15% of domestic shipping fuels by 2030. Two additional workstreams will also be launched: Coastal Tourism and Seagrass as part of the Ocean Breakthroughs and 2030 Sharm El-Sheikh Adaptation Agenda, alongside the launch of the first tracking mechanism on ocean-based solutions.

B. Updates under the UN system and other non-UN processes

1. Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations

69. The 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 was adopted on 19 June 2023 and opened for signature on 20 September 2023. The Agreement addresses a package of issues[16] under the general objective of conserving and sustainably using marine biological diversity of areas beyond national jurisdiction. In this context, the Agreement

[16] These issues are: marine genetic resources, including the fair and equitable sharing of benefits; measures such as area-based management tools (ABMTs), including marine protected areas; environmental impact assessments; and capacity-building and the transfer of marine technology.

addresses the impacts of climate change on marine biological diversity of areas beyond national jurisdiction. For instance, its Preamble recognizes the need to address, in a coherent and cooperative manner, biological diversity loss and degradation of ecosystems of the ocean, due, in particular, to climate change impacts such as warming, ocean deoxygenation, as well as ocean acidification. To achieve its objectives, the Agreement emphasizes that its Parties shall be guided by an approach that builds ecosystem resilience, including to adverse effects of climate change and ocean acidification, while maintaining and restoring ecosystem integrity, including carbon cycling services that underpin the role of the ocean in climate. Furthermore, building resilience to stressors related to climate change and ocean acidification is an objective of ABMTs, including marine protected areas. The dissemination of information on the adverse effects of climate change is also among the aspects to be included as part of capacity-building and the transfer of marine technology initiatives.

70. The Resolutions of the United Nations General Assembly on oceans and the law of the sea continue to address the impacts of climate change on marine biodiversity and coastal resilience, as well as ocean related technology.[17]

71. The United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea focused on "New maritime technologies: challenges and opportunities" in 2023 and will address “The ocean as a source of sustainable food” in 2024. Climate change aspects are addressed in the context of these topics.[18]

72. The 17th round of the Informal Consultations of States-Parties to the 1995 UN Fish Stocks Agreement will hold panel discussions on the topic “Sustainable Fisheries Management in the face of Climate Change”.[19]

73. Issues related to marine geospatial information have been explored in recent studies, showing that developing strategies and actions aiming *inter alia* at mitigating the risks related to and effects of climate change depends directly on well-structured, integrated marine geospatial information management, including its infrastructure and systems, populated with reliable, timely and quality marine geospatial data (standardized, interoperable, integrated, and available and accessible for cross-sectoral and multi-disciplinary research, policy-development, decision-making and strategic actions).[20] Many countries lack the resources and capacities necessary to respond to data demands, resulting in persistent significant gaps in the geographic and temporal data coverage. Consequently, major investments are needed to strengthen public sector capacity to build and manage such digital infrastructures.[21]

74. As the inter-agency mechanism to enhance, strengthen and promote coordination, coherence and effectiveness of the activities of the United Nations system and the International Seabed Authority (ISA) on ocean and coastal issues, UN-Oceans continues to play an important role in facilitating inter-agency information exchange, including sharing of experiences, best practices, tools and methodologies and lessons learned in ocean-related matters, including in relation to climate change.

75. As regards the science-policy interface, building on the findings from the Second World Ocean Assessment (WOA II) and the Policy Brief of WOA II on Climate Change, WOA III will provide the most updated and comprehensive scientific knowledge on the marine environment, including socio-economic aspects. The insights and findings from WOA III will have significant relevance to the work of the international community on climate-related issues, ensuring a more robust and integrated understanding of ocean-climate linkages, challenges, and solutions.

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17 See A/RES/78/69 on Oceans and the law of the sea; and A/RES/78/68 - Sustainable fisheries, including through 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, and related instruments.

18 See documents related to these meetings at https://www.un.org/Depts/los/consultative_process/consultative_process.htm.

19 See documents related to this meeting at https://www.un.org/Depts/los/convention_agreements/fish_stocks_agreement_states_parties.htm.

20 “Marine Geospatial Information Management” Office of Legal Affair, Division for Ocean Affairs and the Law of the Sea, United Nations, September 2024.

21 “Progress towards the Sustainable Development Goals: towards a rescue plan for people and planet’ Report of the Secretary General (special edition) (A/78/80-E/2023/64).

76. Finally, DOALOS offers technical assistance, support through trust funds, outreach activities, capacity-building projects and Fellowships, with the aim of enhancing human capacity to support the effective development and implementation of ocean governance, legal and policy frameworks in conformity with UNCLOS, related agreements, and the 2023 Agenda on Sustainable Development.[22] The interlinkages between ocean, climate change, and biodiversity are addressed across capacity-building activities, including all Fellowships[23] and will be a key component of the newly established Ocean Governance Fellowship for SIDS.[24]

2. Global Environment Facility

77. Over the past three decades, the GEF has provided nearly $25 billion in financing and mobilized another $138 billion for thousands of priority projects and programs. The family of funds includes the Global Environment Facility Trust Fund, Global Biodiversity Framework Fund (GBFF) [25], Least Developed Countries Fund (LDCF)[26], Special Climate Change Fund (SCCF)[27], Nagoya Protocol Implementation Fund (NPIF), and Capacity-building Initiative for Transparency Trust Fund (CBIT). The GEF Trust Fund serves as the main source of funding into oceans climate change resilience and mitigation action, primarily through the International Waters, Biodiversity, Chemicals and Waste, and Climate Change Mitigation Focal Areas. The LDCF and SCCF also fund ocean climate change adaptation action.

78. The Global Biodiversity Framework Fund aims to help countries achieve the Kunming-Montreal Global Biodiversity Framework (KMGBF) goals and targets with a strategic focus on strengthening national-level biodiversity management, planning, policy, governance, and finance approaches. This includes many ocean and climate change related KMGBF Targets, including Target 3 to conserve 30% of land, waters and seas and Target 8 minimize the impacts of climate change on biodiversity and build resilience. Eligible countries have been invited to participate in the first GBFF programming tranche of $211 million.

79. The GEF's 2022 – 2026 Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF) adaptation strategy aims at supporting developing countries move to a climate resilient development pathway while reducing exposure to the immediate risks posed by climate change. The LDCF is the only multilateral fund that focuses exclusively on the unique climate adaptation challenges of Least Developed Countries. The SCCF, one of the world's first multilateral climate adaptation finance instruments, was created at the 2001 Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) to help vulnerable nations in addressing these negative impacts of climate change. The LDCF and SCCF are supporting respective countries across four key adaptation themes, including: a) agriculture, food security, and health; b) integrated water resource management to address water security, droughts, and flooding; c) nature-based solutions, and; d) early warning and climate information systems. Other context-specific priority adaptation topics may also be supported. Activities funded by the SCCF have fostered improvements several key areas related to the oceans, including disaster risk management, infrastructure, climate information systems, natural resource and integrated and coastal zone management. The current SCCF strategy also has a specific window of support on climate adaptation for SIDS.

80. Within the current GEF Trust Fund four-year (July 2022 – June 2026) GEF-8 Programming Directions[28] totaling US$5.33 billion, there are multiple entry points for strengthening marine ecosystem conservation and sustainable management of marine natural resources. In addition to four GEF Focal Areas, least five of eleven Integrated Programs (IPs) totaling over US$620 million are addressing major drivers of environmental degradation and deliver multiple global environmental benefits. Ocean related IPs include: a) Clean and Healthy Ocean IP addressing land-based sources of organic pollution into coastal and marine environments; b) Blue and Green Islands IP supporting Small Island Developing States (SIDS); c) Circular Solutions to Plastic Pollution IP addressing the global plastic pollution crisis; d) Eliminating Hazardous Chemicals from Supply Chains IP that is

[22] https://www.un.org/oceancapacity/.
[23] https://www.un.org/oceancapacity/UNNF.
[24] https://www.un.org/oceancapacity/content/unnf-ocean-governance-fellowship-sids.
[25] www.thegef.org/what-we-do/topics/global-biodiversity-framework-fund.
[26] www.thegef.org/what-we-do/topics/least-developed-countries-fund-ldcf.
[27] www.thegef.org/what-we-do/topics/special-climate-change-fund-sccf.
[28] www.thegef.org/who-we-are/funding/gef-8-replenishment.

removing harmful chemicals from waterways, and; f) Food Systems IP that is addressing the curbing the impacts of food systems on the environment, including aquaculture.

81. Collectively, the expected GEF-8 results aim to make considerable progress on global ocean conservation and sustainable management, including creating or improving management in at least 100 million hectares of marine protected areas, improving practices to benefit biodiversity in an additional 70 million hectares of marine habitat, mitigating at least 1,850 million metric tons of CO_2e in Greenhouse Gas emissions, at least 40 shared water ecosystems are under new or improved cooperative management, and at least 2.1 million metric tons of globally over-exploited marine fisheries moved to more sustainable levels.[29]

82. Within the GEF-8 International Waters Focal Area strategy, approximately $220 million is allocated towards accelerating joint action to support sustainable blue economies, including sustaining healthy blue ecosystems and advancing sustainable fisheries management, as well as advancing management in the Areas Beyond National Jurisdiction. This includes providing ratification support and early action activities as part of the financial mechanism for the 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 (BBNJ Agreement).

83. The US$1.919 million GEF-8 Biodiversity strategy protects marine biodiversity and ecosystems through the implementation of the Convention on Biological Diversity, aiming to conserve, sustainably use, and restore globally significant biodiversity. This is being achieved through three main objectives: a) improve conservation, sustainable use, and restoration of natural ecosystems; b) effectively implement the Cartagena and Nagoya protocols; c) increase mobilization of domestic resources for biodiversity.

84. The US$800 million GEF-8 Chemicals and Waste strategy promotes ocean health activities in relation to investments eliminating the harmful chemicals covered by the Stockholm Convention, Minamata Convention, and Montreal Protocol, and achievement of broader sound management of chemicals and waste through the Strategic Approach to International Chemicals Management (SAICM), the United Nation's policy framework to promote chemical safety around the world.

85. The US$852 million GEF-8 Climate Change Mitigation Focal Area, as part of the financial mechanism of the Paris Agreement, supports developing countries make transformational shifts towards net-zero greenhouse gas emissions and climate-resilient development pathways. This is being achieved through multiple approaches by promoting innovation, technology development and transfer, and enabling policies for mitigation options with systemic impacts. Of relevance to the oceans, it includes promoting nature-based solutions with high mitigation potential.

86. The operationalization of the Green Climate Fund has added to the evolving context in which the GEF operates, and the two institutions are collaborating closely through the Long-Term Vision on Complementarity, Coherence, and Collaboration. The GEF-8 Climate Change Focal Area Strategy is complementary to programming by the Green Climate Fund and other climate funds and lays the foundation for enhanced climate action by harnessing synergies across the different focal areas and building on the GEF's record of driving innovation.

3. International Maritime Organization

87. The International Maritime Organization ("IMO") is the UN specialized agency responsible for the safety and security of shipping, the prevention of marine and atmospheric pollution, transfer of invasive species by ships and dumping of wastes at sea. The continued implementation of IMO's well-established global regulatory framework on marine environment protection supports our common efforts to address some of the challenges the planet is facing including climate change and to halt and reverse biodiversity loss.

88. IMO plays a critical role in global efforts to protect biodiversity in and around the world's oceans. An essential aspect of this work relates to tackling invasive species, which are recognized as one of the greatest threats to biodiversity. IMO conventions and guidelines on the management of ships' ballast water, biofouling and anti-fouling systems help prevent the transfer of aquatic organisms to new environments via shipping. IMO treaties also play a fundamental role in limiting the dumping of waste at sea, which helps minimize marine pollution and limit impacts on biodiversity. The London Convention and London Protocol ban disposal of wastes at sea except in

[29] www.thegef.org/projects-operations/results.

very specific cases, they also prohibit the dumping of radioactive and industrial waste. The IMO regulatory framework also grants additional protection to areas known as Particularly Sensitive Sea Areas (PSSAs), with special measures to preserve their vulnerable ecosystems, such as ship routeing.

89. The maritime sector, like the rest of the world, is voyaging through substantial changes as it tackles climate change and one of the biggest challenges being addressed by the IMO is the decarbonization of international shipping. In July 2023 IMO adopted the 2023 IMO Strategy on Reduction of GHG Emissions from Ships, which sets an ambitious goal of achieving net-zero GHG emissions from international shipping by or around, i.e. close to 2050.

90. Central to the maritime sector's energy transition and achieving SDGs is promoting inclusive innovation and the uptake of new technologies, especially in the context of developing countries, and in particular the small island developing States (SIDS) and least developed countries (LDCs). IMO is actively supporting that greener transition and showcasing maritime innovation, research and development, and the demonstration and deployment of new technologies through a number of major projects including: The Global MTCC Network (GMN), GreenVoyage2050, and IMO CARES (Coordinated Actions to Reduce Emissions from Shipping), which promote technologies and operations to improve energy efficiency in the maritime sector and help navigate shipping into a low-carbon future.

91. Finally, the London Convention and London Protocol have also taken ground-breaking steps to regulate climate change mitigation technologies that have the potential to cause harm to the marine environment. The treaties are currently the most advanced international regulatory instruments addressing carbon capture and storage (CCS) in sub-sea geological formations and marine geoengineering activities.

4. International Seabed Authority

92. The global oceans hold vast resources, notably deep-sea minerals and energy. These deep-sea minerals could play a role in the supply of metals needed for the energy transition and limiting the global temperature increase to the targets set in the Paris Agreement.[30]

93. Preliminary concepts exist for harvesting energy resources, including offshore wind, tides, oceanographic gradients, wave energy, and seabed geothermal. Besides offshore wind, none of these resource options have been tested at an industry-like scale, and a wide variety of technologies from the existing offshore hydrocarbon industry can be used. Technological innovations are required for their development.

94. While offshore wind is a well-established industry covering up to 20% of national energy consumptions, tidal wave and ocean current generators in estuaries, straits, and isthmi remained largely undeveloped despite significant energy potentials. Instead, ocean wave energy is frequently used for the electricity supply of ocean signals and warning installations for ocean hazard prediction (e.g., tsunami and submarine landslide warnings). Despite the low energy production required for these warning systems, a significant energy potential exists for large offshore installations, with the potential use of surface and internal waves at greater water depths. Countries identified the use of oceanographic gradients (e.g., temperature, salinity) at greater water depths to supply energy for the desalination of seawater and the offshore production of potable waters for onshore communities with limited water supply. Oceanographic data acquisition, compilation, and interpretation, based on existing> 15 million. Water stations in the global oceans, will certainly benefit the mapping of opportunities for energy resources in the water column and wider use of these potentials.

95. Offshore geothermal energy might be seen as game-changing for shifting the world rapidly to carbon-free economies without sacrificing large areas of land. Geothermal exploration can take advantage of existing technologies from the oil and gas industry allowing for additional benefits in shifting into a green industry. Sites of potential offshore geothermal resources occur globally along the 65,000 km long, magmatically active mid-ocean ridges, with an average water depth to the top of the ridges of only 2,500 meters. While minor parts of the global ridge systems occur in national

[30] https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf; https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement. However, the ocean and climate dialogue co-facilitators noted that many Parties have expressed their concerns about the lack of sufficient scientific knowledge related to the impacts of future extraction activities, and have argued that no such activities should occur in the absence of such knowledge.

jurisdiction, the majority belongs to the Area governed under the United Nations Convention on the Law of the Sea (UNCLOS) and the 1994 Agreement relating to the Implementation of Part XI of UNCLOS.

96. Geothermal baseload power generation delivers a variety of resources. Geothermal power can generate hydrogen without going through the desalination stage, producing large volumes of freshwater as a by-product of power generation through steam turbines. The energy is converted to an exportable commodity (e.g., hydrogen, ammonia) from any geothermal location across the global oceans, with carbon-free transportation to the ports or landside docking station. The remaining heat can be used for other processes, such as extracting elements from the geothermal brine or food processing. The geology at some offshore geothermal sites could also offer the potential to store CO2 in reservoirs below the seabed.

97. Pursuant to its mandate under UNCLOS and the 1994 Agreement, the International Seabed Authority (ISA) works across disciplines to facilitate technological innovation and development. It has continued to advance the assessment of marine technologies, which takes stock of the current status and progress of scientific and industrial developments as well as the currently best available seabed technologies and engineering. Since 2001, 31 contractors from 22 different countries engaged in exploration activities in the Area have invested over 1,844 million USD to generate knowledge and information about the seabed.[31] The collected environmental data is available through ISA's open database, DeepData and entered public scientific databases for biodiversity and oceanography.[32]

98. Scientific data and information collected through ISA's work can be pertinent in assessing the potential of offshore energy and the future exploitation of deep-sea minerals.

5. The High Level Panel for a Sustainable Ocean Economy

99. The High Level Panel for a Sustainable Ocean Economy (the Ocean Panel) is a unique global initiative of 18 serving world leaders, representing over 50% of global coastlines and 45% of the world's EEZ, working together towards a sustainable ocean economy. In 2020, the Ocean Panel laid out its ocean action agenda, '*Transformations for a Sustainable Ocean Economy*', charting a course towards achieving effective protection, sustainable production and equitable prosperity of the ocean in particular through its commitment of 100% sustainable ocean management.

100. The Ocean Panel has put knowledge at the heart of its agenda, translating this into policy advice and concrete solutions for action – including being instrumental in driving forward ocean climate solutions. This started with a landmark Special Report in 2019, The Ocean as a Solution to Climate Change, and Call to Ocean Based Climate Action. The Special Report was updated in 2023, highlighting that full implementation of ocean-based climate solutions that are ready for action now could reduce the 'emissions gap' by up to 35 % on a 1.5°C trajectory in 2050. Marine and coastal protection and restoration could contribute to closing the emissions gap by c.1 % in 2050, and the report investigated the financial investment needed to support technology and infrastructure development to achieve the full potential of ocean climate solutions.

101. The Ocean Panel has also published a Blue Paper on the expected impacts of climate change on the ocean economy and the Blue Carbon Guidebook. This Handbook is intended for non-specialists who are starting to consider blue carbon opportunities, acting as a reference guide to support decision-making.

102. These products have changed the global discourse from viewing the ocean as a victim of climate change, to a solution. They have inspired policy action (e.g., the US Ocean Climate Action Plan), initiatives (e.g. the Ocean Breakthroughs), and influenced action across stakeholders (e.g. the Green Shipping Challenge).

103. At COP28, the Ocean Panel launched it's 'Joint declaration on ocean and climate action', reaffirming its commitment to accelerating domestic and collective ocean-based climate action and calling for other countries to do the same, and to commit to the goal of 100 % sustainable management of national waters, guided by Sustainable Ocean Plans. The Ocean Panel Action Group 'Ocean Action 2030' supports countries in the development and implementation of Sustainable

[31] https://www.isa.org.jm/exploration-contracts/.

[32] https://www.isa.org.jm/deepdata-database/.

Ocean Plans, and at COP28 launched a Rapid Assistance Fund to provide expedited funding to help countries kick-start their SOPs.

6. United Nations Educational, Scientific and Cultural Organization

104. Sea level rise poses a significant threat to underwater and coastal cultural heritage sites worldwide. As the sea level increases, these sites face the risk of inundation, erosion, and accelerated deterioration, ultimately leading to their potential loss. The impact is twofold: tangible structures such as shipwrecks, submerged cities, and coastal archaeological and cultural sites are directly affected, while intangible cultural heritage tied to these locations, such as traditional practices, stories, and knowledge systems, may also be at risk of being lost.

105. The consequences of sea level rise on underwater and coastal cultural heritage sites are multifaceted. Increased water levels can submerge previously accessible archaeological sites, leading to the loss of valuable historical and cultural information. Coastal erosion, exacerbated by rising sea levels, can undermine the stability of structures, leading to their collapse or destruction. Additionally, changes in water salinity and temperature can accelerate the degradation of artifacts and structures underwater, further threatening their preservation.

106. It is crucial to measure the areas affected by sea level rise to assess the extent of the threat to underwater and coastal cultural heritage sites accurately. Conducting inventories of these sites is essential to identify vulnerable areas and prioritize conservation efforts. By documenting and cataloging these sites, researchers and conservationists can develop strategies to mitigate the impacts of sea level rise and protect cultural heritage for future generations.

107. UNESCO plays a crucial role in addressing the challenges posed by sea level rise to underwater and coastal cultural heritage. As the leading agency for the protection of cultural heritage globally, UNESCO provides guidance, support, and expertise to member states in the preservation of underwater and coastal cultural heritage. Through initiatives such as the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage and the World Heritage Programme, UNESCO facilitates international cooperation, research, and capacity-building efforts to safeguard cultural heritage in coastal environments.

108. Encouraging action at local, national, and international levels is essential to address the threat of sea level rise to underwater and coastal cultural heritage effectively. Collaboration between governments, scientific institutions, local communities, and NGOs is vital to develop adaptive strategies and implement measures to protect and preserve these invaluable cultural assets. By recognizing the importance of underwater and coastal cultural heritage and taking proactive steps to safeguard it, we can ensure that these sites continue to enrich our understanding of the past and inspire future generations.

7. Intergovernmental Oceanographic Commission

109. IOC-UNESCO's foundational mandate as described in IOC Statutes, Article 2.1 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.'

110. The recognition of the importance of the ocean is reflected in a large number of international commitments, such as the Sustainable Development Goals (especially Goal 14), United Nations Framework Convention of Climate Change (UNFCCC) and the Paris Agreement, Biodiversity Beyond National Jurisdiction treaty (BBNJ), the UN Early Warning Systems for All, the WMO Global Greenhouse Gas Watch, and the UN Decade of Ocean Science for Sustainable Development (Ocean Decade). As international obligations related to ocean management become more science-dependent, IOC-UNESCO is well-placed to leverage its global leadership and position to help nations meet their commitments by bringing to bear the powerful scientific, data and technical expertise of the organisation.

111. Much remains to be done to fill our collective knowledge gaps about the ocean—both in terms of the knowledge we have never had, and in terms of the new knowledge needed as a result of the dramatic changes unfolding in ocean ecosystems. There is a need to build, expand and sustain the infrastructure for ocean observations and data, and for structural and systemic changes to the way we finance it. This will be key to sustainable ocean management at national level and for

effective implementation of international agreements such as the Paris Agreement and the BBNJ treaty. Given the significance of the ocean in economic and societal terms, as well as the implications at planetary scale of the changes rapidly unfolding in the ocean, ocean observations and data should be considered on a par with critical infrastructure.

112. This was one of the key takeaways from deliberations at the 2024 Ocean Decade Conference in Barcelona (10–12 April 2024). The conference brought together the global ocean community to present achievements made over the last three years, take stock and set a collective vision towards 2030. Over 1,500 in-person participants from 124 countries and over 3,000 virtual participants participated in this milestone event and identified priorities for the Ocean Decade in coming years that are documented in The Barcelona Statement.

8. United Nations Environment Programme

113. The United Nations Environment Programme's (UNEP) mandate for the ocean revolves around sustainable management, protection, and restoration, recognizing the ocean's critical role in climate regulation and its impact on global goals related to climate, sustainable development, and biodiversity. This includes strengthening ecosystem resilience and working towards ensuring ocean and coastal ecosystems maintain and regain their health and productivity.

114. UNEP contributes towards achieving the Global Biodiversity Framework (GBF) and all Sustainable Development Goals. UNEP is committed to the effective implementation of the GBF's ocean-related targets, including targets 1, 2, 3 and 7. For biodiversity in the high seas, UNEP supports Member States in ratifying and implementing the recently adopted BBNJ Agreement, including through information and awareness raising, capacity building support for ratification through the Montevideo Environmental Law Programme and via technical assistance on applying area-based management tools, including MPAs, working through Regional Seas Conventions and Action Plans alongside other MEAs.

115. Supporting coordinated land-sea activity management to minimize cumulative impacts on marine and coastal ecosystems, UNEP offers leadership on holistic human-ecosystem interactive management. Fostering integrated management solutions, UNEP aims to unlock a sustainable blue economy that provides essential benefits for current and future generations, restores, protects and maintains diverse, productive and resilient ecosystems; is based on clean technologies, renewable energy and circularity; and enhances national and regional capacities to prepare for and respond to marine pollution including oil spills and plastics. UNEP's efforts include working with the Global Fund for Coral Reefs (GFCR), a blended finance vehicle dedicated to coral reefs, to unlock new public and private resources that accelerate sustainable businesses and financial solutions. This global coalition led by three UN agencies, including UNEP, has mobilised US$225 million since 2020 and is driven to significantly contribute towards achieving the Coral Reef Breakthrough target of US$12 billion to support the resilience of more than half a billion people globally by 2030.

116. Through the UN Decade on Ecosystem Restoration 2021–2030, UNEP, UNDESA and FAO have launched the SIDS Ecosystem Restoration Flagship Initiative. To promote the integration of marine and coastal ecosystem restoration/conservation and sustainable blue finance into economic recovery and growth in Comoros, Saint Lucia and Vanuatu, the initiative delivers a 'ridge-to-reef' approach to build back better and bluer. By putting marine and coastal ecosystems at the heart of economic policy and decision-making, the initiative aims to guide and document transformative investments unlocking blue economy potential in SIDS and inspire further action.

9. United Nations Office on Drugs and Crime

117. The United Nations Office on Drugs and Crime (UNODC) spearheads efforts to combat international crime, including transnational organised crime impacting the health of marine ecosystems and overall ocean's resilience. A surge in crimes in the fisheries sector, marine pollution offenses and violations of Marine Protected Areas underscores the critical need for enhanced law enforcement at sea to drive effective ocean climate action and ensure maritime security for safeguarding blue carbon sinks.

118. UNODC implements a range of initiatives to strengthen law enforcement responses at sea, including support to exercise of coastal and flag state jurisdiction, leveraging advanced technology solutions to combat illegal and criminal activities that undermine marine biodiversity and ocean resilience. It also works to address related crimes and illegal activities on land that impact the health of the ocean and enable other crime to occur. These initiatives include UNODC's flagship project,

FishNET, designed to enhance law enforcement capacities for identifying, investigating, and prosecuting crimes within the fisheries sector. As part of this project UNODC in partnership with FAO has recently launched a guide to good legislative practices for combatting crimes in the fisheries sector, as well as a guide and risk management tool aimed at addressing corruption in the fisheries sector.

10. World Meteorological Organization

119. The World Meteorological Organization ("WMO") is the authoritative voice on the state and behavior of the Earth's atmosphere, its interaction with the land and ocean, the weather and climate it produces and resulting distribution of water resources. WMO contributes to ocean issues through various avenues, including ocean observation and monitoring, marine services, delivery of early warning services, capacity development, research on climate and related Earth systems, and dissemination of science-based information such as the annual publications: State of the Global Climate (including ocean-related indicators, providing insights to inform climate actions), and United in Science. WMO supports the mandate of climate change conventions such as UNFCCC and ocean conventions such as UNCLOS, SOLAS and MARPOL.

120. WMO's critical role is the forefront of innovation in weather and climate action. Through coordinating infrastructure, services, and research, WMO advances understanding of ocean dynamics and enhances weather and climate predictions, and climate change projections. This provides the framework for science-based efforts to conserve marine biodiversity and leading to enhanced regional cooperation in transboundary waters.

121. WMO is also at the forefront of strengthening coastal resilience by supporting National Meteorological and Hydrological Services (NMHSs) to improve service delivery activities (such the Coastal Inundation Forecasting Initiative), providing guidance materials (such as for storm surge, marine environmental emergency response, and marine heatwave forecasts), and supporting the regulatory framework necessary for effective early warning systems. WMO, in collaboration with partners, has a lead role in implementing the UN Early Warning for All initiative.

122. WMO co-sponsors the Intergovernmental Panel on Climate Change (IPCC), the World Climate Research Program (WCRP), the Global Climate Observing Programme (GCOS), the Global Ocean Observing System (GOOS) all of which are addressing gaps in the global observing system, improving availability of Earth Systems data (including ocean and climate) and advancing scientifically robust research. WMO also uses the Systematic Observations Financing Facility (SOFF) - a financing mechanism which supports Least Developed Countries and Small Island Developing States in fulfilling the WMO led Global Basic Observing Network- an international agreement to expand observations. WMO also is an implementing partner with financial mechanisms such as the Climate Resilience and Early Warning Systems (CREWS) Initiative for key international projects and UN Ocean Decade Actions.

123. WMO collaborates closely with weather, climate and ocean communities to ensure that its activities effectively address the needs of maritime stakeholders and coastal communities in using and driving ocean, weather, and climate related technology, tools, and services.