

Ocean Decade Conference Bulletin



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### Summary of the 2024 Ocean Decade Conference: 10-12 April 2024

The Ocean is the world's most vital resource. It plays a major role in global climate cycles, provides us with half of our oxygen, is home to a majority of species on Earth, and underpins a "blue economy" that feeds hundreds of millions of people. This resource, however, is under increasing pressure from anthropogenic threats, ranging from marine pollution and overharvesting to warming ocean temperatures and acidification.

Under the UN umbrella, major initiatives have been undertaken to reverse these trends and improve the Ocean's health. One of these is the <u>UN Decade for Ocean Science for</u> <u>Sustainable Development (2021-2030)</u> ("Ocean Decade"), which aims to bring together ocean stakeholders globally to ensure ocean science supports countries in achieving <u>Sustainable</u> <u>Development Goal (SDG) 14</u> (life below water).

The 2024 Ocean Decade Conference united the Ocean Decade community and partners to take stock and celebrate achievements three years after the start of the Decade. Around 1,500 participants, representing governments, universities, the private sector, non-governmental organizations, and other stakeholders, gathered for this three-day event to reflect on progress and set a collective vision and joint priorities for the rest of the Decade. Another 3,000 participants joined the meeting online.

The main Conference outcome was the <u>Barcelona Statement</u>, which identifies three sets of priorities: ocean knowledge and science generation to inform management decisions; improved infrastructure including for marine pollution monitoring and ocean observations; and cross-cutting issues such as co-designing initiatives and embracing all knowledge systems.

Through discussions, participants provided input into a set of ten draft white papers, which correspond with the UN Decade's ten Challenges and were prepared by ten Working Groups. These inputs will be incorporated into the final versions of the white papers, and an outcomes document that will include a synthesis of the white papers, by May 2024. The white papers identify future priorities for the Ocean Decade to generate knowledge on science-based solutions to biodiversity conservation, climate change, food security, a sustainable ocean economy, pollution, and natural hazards.

Many praised the Ocean Decade Conference as an important step on the way to the next key moment of the global movement for the Ocean: the third UN Ocean Conference, to be held in Nice, France, in June 2025.



Audrey Azoulay, UNESCO Director-General

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### A Brief History of the UN Ocean Decade

In September 2015, Heads of State and Government adopted <u>Transforming Our World: The 2030 Agenda for Sustainable</u> <u>Development</u>, including 17 SDGs and 169 targets. <u>SDG 14</u> (life below water) contains ten targets, addressing: marine pollution; marine and coastal ecosystems; ocean acidification; overfishing and illegal, unreported and unregulated fishing and destructive fishing practices; conservation; harmful fisheries subsidies; economic benefits for small island developing states (SIDS) and least developed countries (LDCs); and, as means of implementation, increasing scientific knowledge, providing access to resources and markets for small-scale artisanal fishers, and implementing international law, among others.

**UN Conference to Support Implementation of SDG 14:** The first UN Ocean Conference was held from 5-9 June 2017, at UN Headquarters in New York, US. The Conference aimed to: identify ways and means to support the implementation of SDG 14; build on existing successful partnerships and stimulate innovative and concrete new partnerships to advance the implementation of SDG 14; involve all relevant stakeholders; share experiences gained at the national, regional and international levels in the implementation of SDG 14; and contribute to the follow-up and review process of the 2030 Agenda for Sustainable Development, by providing input to the High-level Political Forum on Sustainable Development (HLPF).

The conference resulted in three outcomes: an intergovernmentally agreed <u>Call for Action</u>; a registry of 1,328 voluntary commitments; and key messages from the partnership dialogues.

UN Decade of Ocean Science for Sustainable Development (2021-2030) (the "Ocean Decade"): Proclaimed in 2017 by the UN General Assembly, the UN Ocean Decade seeks to stimulate ocean science and knowledge generation to reverse the decline of the state of the ocean system and catalyze new opportunities for sustainable development. The vision of the Ocean Decade is "the science we need for the Ocean we want." The Ocean Decade provides a convening framework for scientists and stakeholders from diverse sectors to develop the scientific knowledge and partnerships needed to accelerate and harness advances in ocean science to achieve a better understanding of the ocean system, as well as deliver science-based solutions to achieve the 2030 Agenda. The UN General Assembly mandated IOC/UNESCO to coordinate the preparations and implementation of the Decade.



Pere Estupinyà, Master of Ceremonies

The Ocean Decade identified <u>ten Challenges</u> and launched <u>Vision 2030</u>, a strategic ambition-setting process to identify a common measure of success for each of the ten Challenges on the road to 2030.

**Second UN Ocean Conference:** This event took place in Lisbon, Portugal, from 27 June to 1 July 2022. The Conference featured debates on, *inter alia*: marine pollution; strengthening ocean-based economies; managing, protecting, conserving, and restoring marine and coastal ecosystems; and increasing scientific knowledge, developing research capacity and undertaking the transfer of marine technology. Delegates announced over 300 voluntary commitments, with approximately 50 highlevel commitments and pledges, including an investment of at least USD 1 billion to support the creation, expansion, and management of marine protected areas (MPAs) and Indigenous and locally governed marine and coastal areas by 2030, a commitment made by the <u>Protecting Our Planet Challenge</u>.

**New Multilateral Agreements:** Several major milestones towards the sustainable use and conservation of the Ocean have been achieved in the international negotiation arena since the second UN Ocean Conference in 2022. Notable achievements include the adoption of the Kunming-Montreal Global Biodiversity Framework under the Convention on Biological Diversity, the Agreement on Fisheries Subsidies at the World Trade Organization, the new UN Agreement under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Biodiversity Beyond National Jurisdiction (BBNJ Agreement), and the establishment of an intergovernmental negotiating committee to develop an international legally binding instrument on plastic pollution (the Plastic Treaty).

### 2024 Ocean Decade Conference Report

### High-level Opening Segment

Pere Estupinyà, Master of Ceremonies, welcomed participants to the Conference on Wednesday morning, outlining the main aims of the UN Decade for Ocean Science.

Audrey Azoulay, Director-General of UNESCO, opened the Conference by thanking the region of Catalonia and the city of Barcelona for hosting the event. She mentioned that more than

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Wavel Ramakalawan, President of Seychelles

500 initiatives have been set up in 60 countries since the Ocean Decade's launch in 2021 and that the Decade focuses on three goals: understanding, protecting, and educating on the Ocean.

José Maria Neves, President of Cabo Verde and Ocean Decade Alliance Patron, highlighted the many adversities facing our Ocean. He urged catalyzing the multilateral commitments and partnerships needed to address these threats, and encouraged the sharing of technology and funding, stressing the specific needs of SIDS.

Wavel Ramkalawan, President of Seychelles and Ocean Decade Alliance Patron, underlined the significance of science in underpinning our decisions and enhancing the quality of our lives. He added that the <u>Ocean Decade Alliance</u> can empower stakeholders and help plan for actions in the spirit of co-design.

HSH Prince Albert II of Monaco highlighted the Principality's efforts to advance ocean science and reminded participants that scientific research lies at the heart of the "struggle for truth" that determines our ability to act on ocean challenges.

Mark Brown, Prime Minister of the Cook Islands, reflected on the cultural and regional value of ocean exploration to Pacific Island communities and their commitment to living in harmony with the Ocean. He underlined the role of traditional knowledge in furthering ocean science in the Pacific region and beyond.

Jaume Collboni, Mayor of the City of Barcelona, announced Barcelona's candidature to host a new <u>Decade Collaborative</u> <u>Centre</u> to support the Ocean Decade, remarking that "cities must have their own voice" and are an essential part of the solution to ocean challenges.

Diana Morant Ripoll, Minister of Science, Innovation and Universities, Spain, highlighted the importance of public investment in ocean science towards reaching the objective of protecting 30% of Spain's marine ecosystems by 2030.

Pere Aragonès, President, Region of Catalonia, emphasized Catalonia's "special bond with the sea" as a "source of life and welfare," and outlined the region's efforts to foster inclusive partnerships to discuss and address the future of the Ocean.

Cecilie Myrseth, Minister of Fisheries and Ocean Policy, Norway, cited that currently 72% of industrial fisheries are not publicly tracked, calling for cooperative efforts to ensure that science can provide the "best advice to develop the blue economy in a sustainable and fair way."

Sun Shuxian, Vice Minister of Natural Resources, China, encouraged transforming the Ocean Decade <u>Vision 2030</u> to action through global collaborations, sharing initiatives to reinforce ocean research and conservation to support a sustainable blue economy, marine biomedicine, and marine cultural tourism, among others.

Filimon Manoni, Pacific Ocean Commissioner, urged catalyzing transformative actions, expressing that "we cannot journey back home without clear actions and partnerships to bring about the change we want."

Manuel Barange, Assistant Director-General and Director of the Fisheries and Aquaculture Division, Food and Agriculture Organization of the UN (FAO), called science an "honest broker" and unifying tool to help break the link between socio-economic development and environmental degradation, encouraging alignment among land and ocean matters. Referring to the UN Decade goal to "deliver the science we need for the Ocean we want," he cautioned that "we" do not have a single voice and must create inclusive science.

Ambassador Peter Thomson, UN Secretary-General's Special Envoy for the Ocean, recognized the valuable efforts made under the UN Decade. Reflecting on progress made among UN Conventions, he stressed that the state of knowledge on the Ocean remains insufficient and urged UN Member States to make contributions to ensure adequate funding for ocean science.

#### **Conditions of Success for the Ocean Decade**

In Wednesday's morning plenary, Vidar Helgesen, Executive Secretary, IOC/UNESCO, and Assistant Director-General of UNESCO, recalled advances made in the past fifteen years to put ocean knowledge at the center of the global agenda. Among Ocean Decade successes, he identified: the creation of a global movement convening the scientific community, governments, philanthropy, and industry; awareness of ocean science as a tool for sustainable development; science for emerging global policy issues; and inclusion of Indigenous and local knowledge. Among remaining challenges, he listed: critical knowledge gaps; lack of



Jack Thatcher, Māori Master Navigator



Maria Carteressian, State Secretary for Foreign Affairs, Norway

a clear process to translate science into policy outcomes; the need for more support to SIDS and LDCs to fulfill their priorities; and more investment in science for monitoring and predictions. He called on all stakeholders to engage in discussions to build the Ocean Decade's future through inputs to the Vision 2030 process that will underpin the main discussions in the Conference and be finalized in May 2024.

### **Panel Discussions:** Ronnie Noonan-Birch, Ocean Frontier Institute, moderated a panel on **understanding and managing the Ocean through different forms of knowledge and innovation**.

Jack Thatcher, Māori master navigator, New Zealand, spoke about the exceptional navigating capabilities of Indigenous Pacific Peoples in the past and present. He said this knowledge is now made available through an online <u>Science Learning Hub</u>.

Katy Soapi, Pacific Community Centre for Ocean Science, highlighted the SDG principle "leave no one behind" and stressed how the Ocean Decade can help ensure this is implemented through capacity building and empowerment of coastal and Indigenous communities.

Jyotika Virmani, Executive Director, Schmidt Ocean Institute, gave several examples of the use of new technologies, such as visual data, to strengthen ecosystem management by local communities.

Grant Dalton, CEO of Emirates Team New Zealand and 37th America's Cup, spoke about the partnership with the City of Barcelona to develop hydrogen-fueled ships to help decarbonize the shipping industry.

A second panel, on the **relationship between ocean science and policy**, was moderated by Gabriel Akoko Juma, Alfred Wegener Institute, Germany. The panel began with a chant and musical performance and address by Larissa Hale, Gavin Singleton and Manuwuri Forester, Traditional Owners of the Great Barrier Reef, Australia. They reiterated that "we are the Ocean and the Ocean is us," and underlined the crucial role of First Nations in combining traditional knowledge and practices with modern governance systems to protect the reef.

Cass Hunter, Commonwealth Scientific and Industrial Research Organisation, called for "full courage" from leaders to ensure that having "a seat at the table" is matched by a table "that can hold the cutlery" and allows First Nations to make a genuine contribution.

Maria Varteressian, State Secretary of Foreign Affairs, Norway, remarked that "we must balance how we use and how we protect" the Ocean and pointed to Norway's experiences in championing integrated ocean management approaches.

Gideon Henderson, UK Department for Environment, Food and Rural Affairs, highlighted the role of fundamental science in driving policy and reminded the audience that "we cannot have a policy about the Ocean alone" but that "policy needs to address the ways people interact with the Ocean."

Arthur Tuda, Executive Secretary, Western Indian Ocean Marine Science Association, argued that science sometimes follows policy and expounded the example of Kenya's first MPAs, created in 1968 based on coastal communities' needs and knowledge.

**Special Interventions:** Geng Tao, Vice Mayor, Qingdao City Council, China, presented actions in Qingdao in an effort to become a global example of a modern marine city, highlighting the establishment of a Decade Collaborative Center. He announced that Qingdao would host the Ocean Decade International Coastal Cities Symposium in early 2025.

Ambassador Olivier Poivre d'Arvor, Presidential Envoy for the 2025 UN Ocean Conference, France, urged postponing the International Seabed Authority decision on a mining code, saying "it is about humanity as much as it is about respecting science." He also proposed that an intergovernmental science-to-policy panel be created and hosted by IOC/UNESCO.

### *Thematic Session: Science and Solutions for a Clean, Healthy and Resilient Ocean*

This thematic session, held on Wednesday afternoon in plenary and parallel sessions, focused on <u>Ocean Decade Challenges</u> 1 (Marine Pollution), 2 (Ecosystems) and 5 (Ocean-Climate Nexus).

Moderator Jessica Brown, Back to Blue Initiative, encouraged a focus on solutions. Kestutis Sadauskas, Deputy Director-General for Maritime Affairs and Fisheries, European



Imogen Napper, University of Plymouth, UK



Marc Simon, SUEZ France

Commission, highlighted the <u>EU Mission: Restore our Ocean</u> and <u>Waters</u>, describing how various activities can encourage knowledge sharing as well as inspire solutions, such as wind turbine parks simultaneously growing seafood.

Jean-Pierre Gattuso, Institute for Sustainable Development and International Relations (IDDRI), referred to the need to implement frameworks such as the Paris Agreement on climate change. Aileen Tan, Universiti Sains Malaysia, raised the importance of improving science communication to policymakers and local authorities as a critical component of making solutions "practical, adoptable and adaptable."

Imogen Napper, University of Plymouth, UK, demonstrated how research can support pollution mitigation by comparing the effectiveness of technologies with marketing claims. Marc Simon, SUEZ France, noted the potential for unlocking profit by addressing pollution, such as through sustainable tourism, improved public health, and poverty reduction.

In the ensuing discussion, Gattuso noted the "appalling" low level of funding available and governance in place to support ocean science. Napper referred to the ongoing plastic treaty negotiations as a "once in a planet opportunity" and warned against "techno-optimism" which does not avoid pollution or change behavior. Simon called for the creation of a map of pollution sources, targeting an "80/20 level of accuracy" to help set priorities for policymaking.

**Parallel Sessions:** Participants split into six parallel sessions to discuss the <u>draft white papers</u> for each of the three Challenges, with two parallel sessions for each Challenge.

*Challenge 1 – Understand and beat marine pollution:* The two parallel sessions on this Challenge were facilitated by Kathryn Sheps, Ocean Decade Collaborative Center for the Northeast Pacific, and Dimitris Faloutsos, Global Water Partnership. The draft white paper was introduced by the Working Group Co-Chairs, Vanessa Hatje, Federal University of Bahia, Brazil, and Rosemary Rayfuse, University of New South Wales, Australia. Among key recommendations, they highlighted: establishment of a network to define priority pollutants by 2025; delivery of training programmes to harmonize research protocols by 2026; completion of a thorough analysis of data gaps as well as strategies to fill those gaps by 2028; and establishment of a network of long-term sentinel stations by 2030. <u>Nine experts reported on several topics</u> related to the Challenge:

- Karolin Thomisch, Alfred Wegener Institute, Germany, on the <u>Open Portal to Underwater Soundscapes</u> to share knowledge on noise as a major anthropogenic marine pollutant;
- Janine Osborne, Sustainable Seas Trust, on <u>Operation Clean</u> <u>Spot</u>, a community-based waste management programme in South Africa;
- Beatriz Mattiuzzo, Federal Rural University of Rio de Janeiro, Brazil, on old fishing nets as a marine pollution problem and social business initiatives to combat pollution, increase <u>Ocean</u> <u>Literacy</u>, and "promote blue justice, not just a blue economy";
- Noriko Tamiya-Hase, University of Tokyo, Japan, on experiences learned through the creation of a global network for sharing monitoring data on ocean surface microplastics;
- Zanobia Ibrahim-Watkins, University of California Los Angeles, US, on the effect of antimicrobial resistance through waste water and agricultural uses of antibiotics on marginalized coastal communities;
- Thomas Davies, University of Plymouth, UK, on the <u>Global</u> <u>Ocean Artificial Light at Night Network;</u>
- Farhat-Un-Nisá Bajwa, University of Algarve, Portugal, on the link between contaminants of emerging concern and seafood consumption;
- Shin-ichi Ito, University of Tokyo, Japan, on modelling microplastic distribution on the sea floor; and
- Chiara Certomà, University of Turin, Italy, on the role of citizen science as a crucial lever to combat marine pollution. Presenters answered some clarifying questions and engaged in

a discussion with the audience, addressing, among other things, methods to improve data sharing and bottom-up versus top-down approaches to implementing the white paper recommendations.

*Challenge 2 – Protect and restore ecosystems and biodiversity:* The two parallel sessions under this Challenge were chaired by Frank Müller-Karger, University of South Florida, US, and Aileen Tan, Universiti Sains Malaysia. They stressed that the vision for this white paper goes beyond 2030 and highlighted the recommendations, stressing that all strategies of the Ocean Decade should promote: imagining a positive future; finding and filling information gaps; building on existing efforts and public-private partnerships; incentivizing the promotion of ocean science and education for sustainable development; highlighting and supporting local communities and Indigenous Peoples; agreeing on interoperable biology and ecosystem variables; and coordinating the "Ocean" and "Ecosystem Restoration" Decades.

- Expert presentations included: • Marcos Llope, CSIC, Spain, on integrated assessment of the
- Canary Current Large Marine Ecosystem
- Lindsey West, Sea Sense, Tanzania, on the links between gender inequalities and biodiversity loss and pathways to empower women as knowledge holders;
- Jimmy Masagca, Catanduanes State University, Philippines, on mangrove biodiversity rehabilitation as a Nature-based Solution (NbS) for climate adaptation;



Steven Thur, Director of Research, NOAA, US

- Jennifer Freer, British Antarctic Survey, on a project that fosters innovative and inclusive research to understand polar marine ecosystems and their global impacts;
- Janae Collier, University of Michigan, US, on the establishment of environment summer schools in Nigeria and Ghana;
- Lisa Levin, Scripps Institution of Oceanography, University of California San Diego, US, on mainstreaming deep-sea biodiversity into policy; Ana Giró Petersen, Healthy Reefs for Healthy People, Guatemala, on large-scale reef health;
- Thomas Sberna, International Union for Conservation of Nature (IUCN), Mozambique, on NbS in regenerative seascapes;
- Adzim Fatta, Reef Check Malaysia, on a science-based approach to empowering local communities; and
- Jan-Claas Dajka, Helmholtz Institute for Functional Marine Biodiversity, Germany, on the need to implement sciencebased policy targets for marine biodiversity.

Discussions addressed, *inter alia*: a new suggested title of this Challenge, "measure and understand marine biodiversity and ecosystem change to better implement protection and conservation," which is more specific but potentially less ambitious; the required biodiversity baselines needed in a rapidly changing environment; and how to promote the use of the white paper by policymakers.

**Challenge 5 – Unlock ocean-based solutions to climate change:** These two parallel sessions were chaired by Christopher Sabine, University of Hawai'i at Mānoa, US, and Richard Bellerby, Norwegian Institute for Water Research. They introduced efforts to provide solutions to mitigate, adapt, and build resilience of the Ocean to the effects of climate change.

On mitigation through negative-emission technologies, Bellerby said reduction of at least 80% of emissions must be the priority. Both chairs outlined the key recommendations, including to: expand research into marine renewable energy and ways to reduce marine pollution; co-design and implement controlled field testing of marine carbon dioxide removal with invested communities, including its modeling and monitoring; enhance ocean stewardship and literacy and ocean-based solutions to climate change; and support adaptive governance and



Claire Jolly, Head, Innovation Policies for Space and Oceans Unit, OECD

management, including through the development of decisionsupport tools.

Eight experts presented their work:

- Tony MacDonald, Urban Coast Institute at Monmouth University, US, on the <u>Roadmap to Oceans and Climate</u> <u>Action</u>;
- Steve Widdicombe, Plymouth Marine Laboratory, UK, on the Ocean Acidification Research for Sustainability Community Vision for the Ocean Decade publication;
- Romain Troublé, Tara Ocean Foundation, France, on the Tara Polar Station, a drifting Arctic station that records data to inform and help improve climate models;
- Fanny Douvere, World Heritage Centre's Marine Programme, UNESCO, on the need to develop climate strategies for MPAs;
- Fabio Berzaghi, World Maritime University, Sweden, on distribution and quantification of the Ocean's biological carbon pump as an ecosystem service;
- Ceren Cerit Dindar, Ankara University, Türkiye, on pioneering legal strategies for the decarbonization of shipping;
- Marisa Ensor, Georgetown University, US, on ocean-climate interactions in SIDS and other coastal communities; and
- Astra Rushton-Allan, Climateworks Centre, Australia, on the <u>Southeast Asia Framework for Ocean Action in Mitigation</u> (SEAFOAM).

Discussions addressed, among other things: the value of and need for transparency in science; the need for the blue economy to feature nature more predominantly; accountability; the role of partnerships and communities to help make climate and ocean issues reflect human values; and variation of climate change across various locations, including MPAs. Participants questioned, *inter alia*, how to: define <u>Ocean Literacy</u>; better involve coastal communities and incorporate local knowledge; improve transdisciplinarity; and make ocean science more understandable and relevant.

# Thematic Session: Science and Solutions for a Sustainable and Resilient Ocean Economy

This session took place in plenary and parallel sessions on Thursday morning and addressed Challenges 3 (Sustainable



Shakuntala Thilsted, CGIAR

Ocean Economy) and 4 (Sustainable Blue Food). The plenary session was moderated by Claire Jolly, Organisation for Economic Co-operation and Development (OECD).

In his keynote address, Steven Thur, National Oceanic and Atmospheric Administration (NOAA), US, recognized that "science alone is not sufficient," calling for effective communication and coordination between science and society. He also stressed the emergence of a "new blue economy," which leverages data and knowledge rather than relying on resource extraction. Thur advocated for increased involvement of earlycareer ocean professionals (ECOPS) to foster an inclusive understanding of the Ocean.

In a panel discussion, Peter Haugan, University of Bergen, Norway, highlighted that the ocean economy is about all human activities, not just industry. He supported the role of practical knowledge as complementary to scientific models and presented Norway's experiences in developing integrated and sustainable ocean plans.

Shakuntala Thilsted, CGIAR, emphasized the need to consider the entire food system and suggested orienting research and innovation towards consumption rather than production. She further underscored the overlooked but major role of women in aquatic food systems.

Sergi Tudela, Director-General for Maritime Policy and Sustainable Fisheries, Government of Catalonia, elaborated on Catalonia's experiences in developing a maritime strategy and implementing a system of fisheries co-management, which devolves decision-making authority to committees composed of diverse stakeholders.

Almotaz Abadi, Deputy Secretary-General, Union for the Mediterranean (UfM), explained how the UfM is fostering political will, building partnerships, and providing technical support to research and protect the Mediterranean Sea.

**Parallel Sessions:** Participants split into four parallel sessions to discuss the <u>draft white papers</u> for each of the two Challenges.

**Challenge 3 – Sustainably feed the global population:** Two parallel sessions were facilitated by Shakuntala Thilsted, CGIAR, and Merete Tandstad, FAO. Participants heard introductions from the Working Group Co-Chairs, Vera Agostini, FAO, and Erik Olsen, Institute of Marine Research, Norway. They noted the amended objective from "feeding" to "nourishing" the global population, and a paradigm shift towards a science that supports a "one food system" approach to ensure science solutions are relevant and accessible to the entire value chain. They also highlighted the barriers and the key "users" identified to achieve Challenge 3.

Nine <u>experts</u> made presentations. Marta Ballesteros, CSIC, Spain, identified the need to update the scientific advisory process and systematically integrate knowledge from the fishing industry and citizens to support decision making. Mark Dickey-Collas, IUCN Fisheries Expert Group, reflected that economic and social issues are rarely considered in the nascent "Blue Transformation" across Regional Fishery Management Organizations. He recommended that science address steps needed to bring integrity, credibility, and legitimacy to the process.

Yoko Tamura, University of Tokyo, Japan, shared experiences with small-scale fisheries, indicating the need for solutions to be locally tailored and co-designed with local stakeholders. Terhemba Ambe-Uva, University of Ottawa, Canada, offered recommendations to support addressing the opportunities and risks in blue food, underscoring the need to ensure social justice. Vania Andreoli, University of Western Australia, reflected on the negative impacts of harmful subsidies as barriers to access and distribution of seafood in the Indian Ocean and driving overfishing globally. She called for science to support restructuring harmful subsidizing decisions to more beneficial ones.

Mireia Valle, Centro de Investigación Marina y Alimentaria (AZTI), Spain, presented a 3D distribution model that incorporates the importance of the water column for assessing commercial fish biomasses. Kristin Kleisner, Environmental Defense Fund, US, spoke about the importance of considering the flow of micronutrients in our Ocean and to reframe fish as food rather than a natural resource to ensure aquatic food plays a role in achieving international policy targets.

Katherine Mills, Gulf of Maine Research Institute, US, referred to the <u>FishSCORE 2030 Global Network</u>, a multi-scale and multi-dimensional approach to climate-resilient marine fisheries. Elisabeth Ytteborg, Norwegian Food Research Institute (Nofima), Norway, presented the "boomerang approach" as a



Vera Agostini, Deputy Director, Fisheries and Aquaculture Division, FAO

step change in aquaculture adaptation through bridging spatially specific models with fishers' engagement.

Discussions addressed topics such as: ensuring that knowledge is co-created and co-used; localizing data through training; and managing food loss and consumption patterns. A warning was raised against "science in isolation," in light of the different material and spiritual meanings that concepts like transformation and food hold.

**Challenge 4 – Develop a sustainable and equitable ocean economy:** These two parallel sessions were chaired by Working Group Co-Chairs Peter Haugan, University of Bergen, Norway, and Andrew Rhodes Espinoza, iAlumbra, and Mexican Special Envoy for Oceans.

Phil James, University of New South Wales, Australia, summarized key recommendations, focusing on: strategic partnerships that should be inclusive and collaborative across sectors and produce locally adapted solutions; private-sector adoption of sustainable practices and investments in green technologies; and policies that ensure equitable access and benefits distribution among all stakeholders, particularly marginalized communities and Indigenous Peoples.

Presentations from experts included: Marietta Lizano, National System of Conservation Areas, Costa Rica, on successful oceanic governance models; Rafael Sardá Borroy, CSIC, Spain, on the blue economy and the "Business In Nature" framework; Alice Guittard, Athens University of Economics and Business, Greece, on creating a sustainable and resilient Black Sea blue economy with, and for, local communities; Kizzy Beaumont, University of Plymouth, UK, on using natural capital and ecosystem service indicators in the Plymouth Sound National Marine Park; and Silvia Rayo Luengo, University of Cadiz, Spain, on strategic measures for blue economy sectors within MPAs.

Carl Gouldman, NOAA, US, presented on scientific initiatives underway in the US to foster "ocean enterprise growth and development"; Lucy Buxton, Ocean Decade Australia, focused on the <u>Ocean Business Leaders' Summit</u> that took place in Sydney in March 2023; Laura de Luca, Ghent University, Belgium, discussed how full lifecycle assessments of offshore multi-use farms can guide sustainable policymaking; Shang Chen, Ministry of Natural Resources, China, on the "Gross Ecosystem Product" as an alternative to Gross Domestic Product to measure economic value; and Tobias Dolch, Alfred Wegener Institute, Germany, on stakeholder engagement in the context of a project using seagrass as an NbS to coastal erosion in Tunisia.

The ensuing discussions touched on: the possibilities of involving politicians through storytelling and effective communication; the potential for NbS to generate new funding and finance mechanisms; and evidence of a lack of ocean issues at business and economic summits.

Participants also addressed ways to: develop tangible indicators to implement legal and governance frameworks more effectively; move away from a "capitalist world view"; make communication more efficient; move into a "confidence arena" with the business sector; and build public-private partnerships.

### *Thematic Session: Science and Solutions for a Safe and Predicted Ocean*

Plenary and parallel sessions on Thursday afternoon addressed <u>Challenges</u> 6 (Coastal Resilience), 7 (Observations), and 8 (Data and Predictions). The plenary was moderated by Mark Heine, CEO, Fugro, who stressed the importance of observations for all the Ocean Decade Challenges, flagging the need to engage the entire value chain, from data producers to users.

Dwikorita Karnawati, Head, Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG), gave a keynote speech on gaps and strategies for a safe and predicted Ocean. She spoke about the <u>UNESCO Tsunami Ready</u> <u>Programme</u> that aims to increase community resilience by addressing capacity and preparedness. She highlighted the gaps and weaknesses of observation and warning systems in many countries, such as the lack of legal frameworks, institutional mechanisms, observation infrastructure, and monitoring systems, as well as financial limitations, among others.

Patricia Miloslavich, Australian Antarctic Program, underlined that linking observation to requirements delivers more useful and impactful information. Describing technical challenges in the collection and translation of information for usable products, she outlined priorities in data collection. She also stressed the need to co-design, co-develop, and co-deliver these products with the actors that need them.



**Dwikorita Karnawati**, Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG)



Left to right: Mark Heine, Fugro; Kimberly Mathisen, HubOcean; and Pierre Bahurel, Mercator Ocean International

Ann-Christine Zinkann, NOAA, US, spoke about user-friendly data and fit-for-purpose observation systems. Citing the <u>Global</u> <u>Ocean Observing System (GOOS)</u>, she identified challenges such as the need to integrate the value chain in observing the Ocean through user engagement. She mentioned the <u>Essential Ocean</u> <u>Variables</u> to support observation systems and enable forecasts, early warnings, climate projections, and assessments.

On "digital twins," or digital, virtual representations of the Ocean, Dawn Wright, Environmental Systems Research Institute, US, explained how "two-way communication digital twins" can be a tool for predictive analysis and scenario-building. She highlighted the benefits of digital twins to all other Challenges as a means to increase data accessibility.

Pierre Bahurel, Director-General, Mercator Ocean International, France, shared plans to connect socio-economic and environmental data for decision-making tools on a global, as well as regional and local, level. He framed the challenge with optimism, saying that if everyone delivers in their roles, the collective result will bring benefits to all.

Kimberly Mathisen, CEO, HUB Ocean, Norway, discussed how to access the "missing component, industry data," to help fill gaps through compliance mechanisms and leveraging profits. She also identified the power of consumer demand to increase both mandatory and voluntary data disclosures from companies.

**Parallel Sessions:** Participants split into six parallel sessions to discuss the <u>draft white papers</u> for each of the three Challenges.

*Challenge 6 – Increase community resilience to ocean hazards:* Working Group Co-Chairs Nadia Pinardi, University of Bologna, Italy, and Srinivasa Kumar Tummala, Indian National Centre for Ocean Information Services, introduced the draft white paper, noting the dire need to foster coastal resilience in light of worsening ocean hazards. Among key recommendations, they highlighted: developing an open and accessible system for risk assessment and management; integrating coastal resilience targets and indicators into the SDGs; and establishing a review process.

Participants heard from nine expert presenters:

- Janelle Kellman, Center for Sea Rise Solutions, US, on coordinating and disseminating information about hazards among coastal communities;
- Benjamin Osei Botwe, University of Ghana, on the value of mangroves as an NbS to protect against coastal erosion and flooding;
- Xavier Sánchez-Artús, UPC-BarcelonaTech, Spain, on the promise of NbS for restoring river-delta ecosystems;
- Peter Busumprah, Ministry of Fisheries and Aquaculture Development, Ghana, on efforts in the West African region to nurture NbS;
- Rachid Omira, Joint Task Force SMART Cables, and Portuguese Institute for Sea and Atmosphere, on using subsea telecommunication cables for environmental sensing of climate and ocean hazards;
- Dava Amrina, Indonesian Agency for Meteorology, Climatology and Geophysics, on the establishment of weather field school initiatives to empower coastal communities; Silvia Chacón-Barrantes, National University of Costa Rica,

on decreasing tsunami vulnerability in Costa Rican coastal national parks; Ana Queiros, Plymouth Marine Laboratory, UK, on climate-smart, economically viable, and socially acceptable early warning systems; and Víctor Tendero-Salmerón, University of Granada, Spain, on the multiplied risks of cascading geohazards.

Discussions addressed, among other things: involving fisherfolk in data collection for early warning systems; anthropogenic geohazards; disasters as a social construct; and the impact of climate change on coastal resilience.

**Challenge 7 – Expand the Global Ocean Observing System** (GOOS): Two parallel sessions were facilitated by Emma Heslop and Terry McConnell, IOC/UNESCO. Working Group Co-Chairs Joe O'Callaghan, Oceanly Science, New Zealand, and Patricia Miloslavich, Australian Antarctic Program, presented the white paper, highlighting that ocean observations are the foundation on which other challenges depend, and are used by many different users. They stressed the strategic ambition of this challenge to develop an operational and co-designed system to deliver observations that can guide mitigation and adaptation responses to climate change, sustain ocean health within a blue economy, and facilitate informed decision making.

Among recommendations, the Co-Chairs highlighted: improving global observation capabilities and translation of data into information; emphasizing critical thinking; fostering partnerships; and building a capable and diversified workforce.

Eight experts presented their work:

- Toste Tanhua, GEOMAR Helmholtz Center for Ocean Research, Germany, on scientific programmes that seek to involve non-scientists in ocean research;
- Hind Azidane, Ibn Tofail University, Morocco, on satellite mapping to monitor total suspended matter in coastal waters;
- Claire Szostek, Plymouth Marine Laboratory, UK, on various programmes to enhance capacity building for transformative, smart ocean observations and tools;
- Cooper Van Vranken, Ocean Data Network, US, on democratizing coastal ocean observing at scale through the Fishing Vessel Ocean Observing Network;



- Carlos Barrera,-Plataforma Oceánica de Canarias, Spain, on Uncrewed Surface Vehicles;
- Michelle Heupel, Integrated Marine Observing System, Australia, on ocean observing as a tool for creating "the Ocean we want";
- Susan Bengtson, Nash Griffith University, Australia, on the Humpback Whale Sentinel Program; and
- Frode Vikebø, Institute of Marine Research, Norway, on integrated coastal observatory and digital twin infrastructure.

Discussions touched on: the need to accept that current global observatories were made to respond to questions from yesterday, not today; the need to integrate social sciences; co-design of the observatories with local communities; expansion of interactions between fishers, scientists, and blue industries; economic aspects, such as the profits made from investing in a predicted Ocean and opportunities to retain young people in the field; and ways to convince policymakers to invest public money through the notion of critical national infrastructure.

*Challenge 8 – Create a digital representation of the Ocean:* Two parallel sessions were facilitated by Working Group Co-Chairs Jan-Bart Calewaert, Decade Coordination Office for Ocean Data Sharing, IOC/UNESCO, and Paula Cristina Sierra-Correa, Instituto de Investigaciones Marinas y Costeras, Colombia.

Among key recommendations, they highlighted global tools and services to be developed, including: an Ocean Data Discovery and Access Service; a technical and organizational structure for ocean forecasting; a digital atlas of the Ocean; and a series of platforms, mechanisms, and tools to store and share ocean information and knowledge beyond data and data products.

Technical presentations were made by:

- Ghada El Serafy, Deltares, Netherlands, on the application of a digital twin and scenarios to apply interoperable ocean and coastal data and tools;
- Henry Ruhl, Monterey Bay Aquarium Research Institute, US, on the Ocean Vision AI, which accelerates processing of visual data;
- Hannah Brocke, PlanBlue, Germany, on the world's first scalable health and biodiversity map of the seafloor;



Ken Paul, Principal, Pokiok Associates

- Jennifer Sletten, ProtectedSeas, US, on the <u>ProtectedSeas</u> <u>Navigator</u>, which improves marine protection assessments and planning through regulation-centered MPA data;
- Lucy Scott, UNESCO, on how <u>Ocean Data 2030</u> supports the <u>Ocean Decade Data and Information Strategy</u>;
- Alexander Rumson, DeepOcean, Norway, on a collaborative approach to remote monitoring and modelling of the Ocean;
- Verena Schrameyer, DHI, Denmark, on bringing data from the North Sea back to life through ecosystem-based analytics to assess the changes in biodiversity of an ecosystem;
- Knut Hartmann, EOMAP, Germany, on the fact that 75% of the Ocean has not been sufficiently mapped, and the need for global coastal bathymetry;
- Paula García Rodríguez, Fugro, Netherlands, on private-sector data as a key to unlock our Ocean's health; and
- Aymen Chrigui, University of Sevilla, Spain, on the evolution of bathymetric data in the Mediterranean.

During discussions, panelists addressed ongoing challenges of standardized operating procedures. On developing a comprehensive digital representation of the Ocean, participants referred to digital twins as an "end-users' dream and a modeler's nightmare." On data sharing, they suggested tapping into national-level models and making them publicly available in a centralized way, and finding solutions for effectively sharing high-resolution data. One industry representative explained how the private sector itself benefits from sharing data.

### *Thematic Session: An Inspiring and Engaging Ocean for All*

This session took place in plenary and parallel sessions on Friday morning and addressed Challenges 9 (Skills, Knowledge and Technology) and 10 (Humanity's Relationship with the Ocean).

Jacqueline Uku, Kenya Marine and Fisheries Research Institute, facilitated the plenary discussion. In his keynote presentation, Ken Paul, Pokiok Associates, Canada, invited a shift away from fear-based language. He explained how "respecting" rather than "protecting" marine spaces invites engaging with and learning from the Ocean "from a place of love." He recommended honoring the <u>UN Declaration on the Rights of</u> <u>Indigenous Peoples</u>, embracing the concept of reciprocity,



Lora Fleming, European Centre for Environmental and Human Health

investing in Indigenous Peoples and knowledge systems, and building mutually beneficial partnerships.

Vivienne Solís Rivera, Founder, CoopeSoliDar R.L., Costa Rica, reiterated the importance of recognizing the difference between rights holders and stakeholders, calling for a return to a human rights-based approach and the use of existing guidelines, such as the <u>Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries</u>.

Lora Fleming, European Centre for Environment and Human Health, UK, summarized a <u>blue paper</u> on the linkages between the O cean and human health, highlighting their interdependencies. She noted that "everything that we do to affect the Ocean has to do with human behavior" and argued that the health sector could become an ally for ocean protection.

Ronaldo Christofoletti, Federal University of São Paulo, Brazil, described the evolution of Ocean Literacy from education aimed at engaging children to empowering a wider group of stakeholders, including decision makers. He encouraged the development and use of indicators to measure human beliefs, attitudes, and behaviors.

Josep Pelegrí, Institute of Marine Sciences, Spain, remarked that "the more we include non-cognitive aspects, the more we bring in sentiments, the more people will really engage in Ocean protection." He expressed hope that the Ocean Decade provides a chance to rethink priorities, shed individualism and work together from a basis of empathy, love and happiness.

**Parallel sessions:** Participants split into four parallel sessions to discuss the <u>draft white papers</u> for each of the two Challenges.

*Challenge 9 – Skills, knowledge and technology for all:* These sessions were facilitated by Working Group Co-Chairs Edem Mahu, University of Ghana, and Brian Arbic, University of Michigan, US. They underlined that capacity development had already played a key role in IOC/UNESCO's work prior to the Ocean Decade and reiterated that assets, such as research vessels, access to education and computing power, were still distributed highly unequally.

They outlined key recommendations, such as increasing the number of ocean scientists and policymakers from underrepresented groups, and milestones such as a 30% increase in participation and recruitment of minority groups into oceanrelated fields by 2030.

- <u>Expert presentations</u> showcased various scientific initiatives: Gabriel Akoko Juma, Alfred Wegener Institute, Germany, on cross-boundary training among ECOPs;
- Awa Bousso Dramé, CoastGIS Research Institute, Senegal, on mentoring opportunities to unlock careers in science, technology, engineering and mathematics for young girls in West Africa;
- Pascale Chabanet, French Research Institute for Sustainable Development (IRD), on IRD's experiences in organizing workshops and multistakeholder monitoring to foster coastal conservation among Southwest Indian Ocean communities;
- Fern Wickson, University of Tromsø the Arctic University of Norway, on her institution's newly established executive

master's programme as a capacity-building tool for ocean leadership;

- Frank Mirobo, University of Dodoma, Tanzania, on youth engagement with and ECOPs ownership of the Ocean Decade in Africa; and
- Paige Martin, Australian Earth System Simulator, on open science for ocean capacity sharing.

Several other experts also spoke: Mumin Oladipo, Koladaisi University, Nigeria; Daniel Tetteh Quaye, Leibniz Institute for Troposphere Research, Germany; Joseph Gum, National Center for Atmospheric Research, US; Ebenezer Nyadjro, Mississippi State University and NOAA, US; Carly Frank, Purdue University, US; and Saba Abdulwakil, Lagos State University, Nigeria.

Participants debated: expectations that African ECOPs have of the global North; funding sources for capacity development programmes; and the importance of South-South collaboration and partnerships among historically marginalized communities.

Discussions also revolved around, among other things: representation of grassroots organizations in the Working Group; innovative ways to learn from each other; how to reach and educate those who have no interest in the Ocean; the need to take a holistic approach, including in education and capacity building; and ways to increase the inclusion of women, youth, and minority groups in the ocean debate.

**Challenge 10 – Change humanity's relationship with the ocean:** These two parallel sessions were facilitated by Working Group Co-Chairs Nicola Bridge, Ocean Conservation Trust, UK, and Diz Glithero, Canadian Ocean Literacy Coalition. They stressed that "to achieve the scale of societal transformation needed, the society has to be involved."

The Co-Chairs presented prioritized drivers of pro-ocean behavior: knowledge systems, communications, education, and cultural connections. They also outlined key recommendations for each of these drivers, notably the strengthening of meaningful society-ocean connections, and transdisciplinary social science research on society-ocean connections and behavior and policy change.



Online at: enb.iisd.org/2024-ocean-decade-conference



Alfredo Giron, World Economic Forum

Ten experts provided specific input to the draft white paper:

- Arianna Bucci, Anthesis Group, Spain, on the Barcelona Blue Connection, a local initiative seeking to create a transformative collective imagination by bringing together stakeholders who carry out sustainable initiatives;
- Ella Whitman, Boston College, US, on the links between human and ocean health and the role that the health sector can play in Ocean Literacy;
- Rhianon Williams, Interchange, Germany, on projects such as the <u>Thalassophile Project</u> and <u>Into the Deep</u>, which help to better communicate stories and information on the Ocean;
- Randa Sacedon, University of Wollongong, Australia, on the Ocean Story Map, a proposal for mapping intangible cultural heritage of the deep sea; and
- Evelien VanderKloet, Ocean Tracking Network, Canada, on collaboration among different types of knowledge to better understand aquatic species through projects such as <u>Apoqnmatulti'k</u>.

Laura Bastide, EU4Ocean and Acteon, France, presented an initiative driven by intergenerational, transdisciplinary, multiscale, and multi-stakeholder approaches to bring collective action and knowledge to people. Athena Trakadas, Ocean Decade Heritage Network, UNESCO, expressed hope that different ways of knowing, such as Indigenous knowledge, can exist alongside Western science methods.

Ken Paul, Pokiok Associates, Canada, presented <u>Advancing</u> <u>Indigenous Partnerships in Ocean Sciences for Sustainability</u>, aimed at building long-term relationships and enhancing Indigenous expertise and coastal community resilience. Germana Barata, Ressoa Oceano, Brazil, drawing on work to train journalists, curate actions, publish content and contribute through citizen science, shared recommendations such as increasing the diversity of voices and improving gender equity in ocean science.

Dorothy Hodgins, University of Victoria, Canada, compared co-design models, calling for radically participatory approaches to establish equity among Western and Indigenous frameworks.

Participants reflected on: the need to increase emphasis on co-design, empathy, and rights holders in the white paper and to value communication activities in academia and funding agencies; the deconstruction of the "hierarchies of knowledge" and the establishment of cultural humility; better communication



Sylvia Michele Diez, World Bank

on the Ocean with women given their important power in terms of economic choices and education; and enhancing focus on Challenge 10, given it was recognized by the Ocean Decade Coordination Unit as a foundational Challenge underpinning the success of all the others.

### **Resources and Partnerships for the Ocean Decade**

This plenary session took place on Friday afternoon. Moderator Alfredo Giron, World Economic Forum, introduced the panelists. François Houllier, President and CEO, French Research Institute for Exploitation of the Sea (IFREMER), described the "bold" multi-scale partnerships needed to connect science, society, and decision making. He looked ahead to the <u>One Ocean Science Congress</u>, to be held in France in 2025, to continue bridging these domains.

Hide Sakaguchi, Sasakawa Peace Foundation, spoke about his personal transition from practicing science to focusing on using science to influence policymaking. He identified the power of science diplomacy, which provides opportunities for countries to collaborate and advance peace.

Susan Gardner, UNEP, affirmed the value of collaboration and partnerships and cited examples, such as the <u>Regional Seas</u> <u>Programme</u> and the <u>Global Environment Monitoring System for</u> the Ocean and Coasts (GEMS Ocean) Programme, underlining that complex challenges require interdisciplinary work. She highlighted <u>The Economics of Ecosystems and Biodiversity</u> (TEEB) initiatives to value natural assets and coordinated activities with the <u>UN Decade on Ecosystem Restoration</u>.

Sylvia Michele Diez, World Bank, highlighted the Bank's <u>PROBLUE</u> investments of USD 8 billion that have leveraged USD 50 for every dollar invested across 80 countries, emphasizing a refocus from supporting blue economy projects to systemically establishing them. She identified the value of data and analytics, institutions, and financing.

Barbara Karuth-Zelle, Allianz Board Member and Group, Germany, described partnerships undertaken with NGOs, calling for opportunities to develop an impact framework, increase participation with a wider group of stakeholders, and build capacity around leveraging big data.

Following the panel discussion, Elisabetta Balzi, European Commission, and Julian Barbière, IOC/UNESCO, announced the adoption of a joint roadmap to align the two institutions' work



Maria Eugènia Gay, Second Deputy Mayor, Barcelona

and mobilize partners within and beyond the EU for the Ocean Decade.

### Special Event – The Statsraad Lehmkuhl

This event featured Haakon Vatle, CEO, Statsraad Lehmkuhl Foundation, and leader of the <u>One Ocean Expedition</u> that sailed around the world for ocean science, education, and outreach in 2021-2023, on board the ship Statsraad Lehmkuhl. He said this expedition was a recognized part of the Ocean Decade, and a second global circumnavigation will start in 2025, stopping in Nice, France, to be part of the third UN Ocean Conference. Vatle engaged all participants to come to the front of the room and jointly sing a traditional sea shanty, adapted to honor the Ocean Decade.

### Announcements and Conference Closing

The closing plenary session, on Friday, highlighted several new announcements and commitments related to the Ocean Decade, including: the launch of a matchmaking project to facilitate philanthropic funding in the Decade by <u>HUB Ocean</u>; a pre-announcement of a new Africa regional funding call by the Belmont Forum; the announcement of a partnership programme to strengthen ocean science in SIDS by the Government of Ireland; an invitation to the high-level event on <u>Ocean Action</u>: <u>Immersed in Change</u> organized by the Government of Costa Rica in June 2024; and the launch of a roadmap for the Ocean Decade in the Pacific.

Three new IOC/UNESCO-led initiatives were also presented: a programme for Decade Action in Africa that will contribute to the <u>Ocean Decade Africa Roadmap</u>; Sustainable Ocean Planning, an umbrella framework in collaboration with the <u>High Level Panel for a Sustainable Ocean Economy</u> to achieve 100% sustainable management of areas under national jurisdictions; and an initiative to improve the resilience of coastal cities by connecting ocean scientists with city representatives.

**Barcelona Statement:** Vidar Helgesen, IOC/UNESCO Executive Secretary, underlined the Conference's success with more than 1,500 participants attending in-person, from 124 countries, and over 3,000 online. He presented the Ocean Decade Conference outcome document, the <u>Barcelona Statement</u>.

The <u>Barcelona Statement</u> identifies three sets of priorities: ocean knowledge and science generation to inform management



Eloísa del Pino, President, CSIC

decisions; infrastructure needs including for marine pollution monitoring and ocean observations; and cross-cutting issues such as the shift to policy action as a stronger driver for science and knowledge generation, co-designing initiatives with all societal actors, and embracing all knowledge systems. The Statement also includes a specific focus on the needs of SIDS, LDCs, and other under-represented groups contains a call to action to all societal actors for, among other things: developing partnerships, increasing the volume of investments, and seizing all opportunities to raise awareness on these priorities so that they drive the global ocean science agenda

Helgesen said the 2024 Ocean Decade Conference was a critical moment for the ocean community to define the priorities for the global ocean science agenda so that these can be translated into action in the lead-up to the 2025 UN Ocean Conference and beyond.

**Closing Remarks:** Sergi Tudela, Director-General for Maritime Policy and Sustainable Fisheries, Government of Catalonia, stressed that interactions between science, the Ocean, and people are at the heart of IOC/UNESCO's mission. He explained that we need a science that is agile, dynamic, and functional to support adaptive management of the Ocean.

Maria Eugènia Gay, Second Deputy Mayor, Barcelona, reflected on the importance of the meeting in preparing for the UN Ocean Conference in France in 2025. She stressed that Barcelona shares UNESCO's vision that the blue economy can ensure protection and sustainable use go hand-in-hand.

Eloísa del Pino, President, CSIC, highlighted that although the values we assign to nature come from different sources, if we all sit at the same table, we can conceive efficient policy tools that are underpinned by scientific evidence. She noted we are facing vast challenges and opportunities, and that "the voice of the sea will tell us where to go because our sea is our confidant".

Del Pino closed the meeting at 6pm.

### **Upcoming Meetings**

Seventeenth Round of Informal Consultations of States Parties to the UN Fish Stocks Agreement (ICSP17): ICSP17 will focus its discussion on the topic "Sustainable fisheries management in the face of climate change". dates: 15-17 May 2024 location: UN Headquarters, New York, US www: un.org/

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Fourth International Conference on Small Island Developing States (SIDS4): SIDS4 will bring together leaders to assess the ability of SIDS to achieve the 2030 Agenda for Sustainable Development and its SDGs and discuss a new programme of action for SIDS. The Conference will convene under the theme "Charting the Course Toward Resilient Prosperity." dates: 27-30 May 2024 location: Saint John's, Antigua and Barbuda www: sdgs.un.org/conferences/sids2024

Third UN Ocean Conference Stakeholder Meeting: A stakeholder meeting will be organized in advance of the Third UN Ocean Conference, in June 2025. The meeting will convene under the theme "Ocean Action: Immersed in Change" and serve as a consultation with civil society. dates: 7-8 June 2024 location: San José, Costa Rica www: immersedinchange.gob. go.cr/

**36th Session of the FAO Committee on Fisheries (COFI):** The 36th session of COFI will address ways to achieve a blue transformation of aquatic food systems. **dates:** 8-12 July 2024 **location:** FAO Headquarters, Rome, Italy **www:** <u>fao.org/about/</u> <u>meetings/cofi/en/</u>

**2024** UN High-level Political Forum on Sustainable Development (HLPF): The 12th session of the HLPF will take place under the auspices of the UN Economic and Social Council under the theme "Reinforcing the 2030 Agenda for Sustainable Development and eradicating poverty in times of multiple crises: The effective delivery of sustainable, resilient and innovative solutions." It will include an in-depth review of SDG 1 (no poverty), SDG 2 (zero hunger), SDG 13 (climate action), SDG 16 (peace, justice and strong institutions), and SDG 17 (partnerships for the Goals). dates: 8-18 July 2024 location: UN Headquarters, New York, US www: hlpf.un.org/2024

**UN Biodiversity Conference (CBD COP 16):** COP 16 of the Convention on Biological Diversity will convene in Cali, Colombia, in October 2024. Topics to be addressed are the translation of the Montreal-Kunming Global Biodiversity Framework into action, bolstering means of implementation, and accelerating progress on access and benefit-sharing. **dates:** 21 October - 1 November 2024 **location:** Cali, Colombia **www:** cbd.int/meetings/COP-16



UN Ocean Decade organizing team

**One Ocean Science Congress:** Directly preceding the 2025 UN Ocean Conference, this meeting will convene under the theme "Science for Ocean Action" and will unite the global ocean science community to foster a holistic understanding of maritime challenges. **dates:** 4-6 June 2025 **location:** Nice, France **www:** <u>one-ocean-science-2025.org/</u>

**Blue Economy and Finance Forum (BEFF)**: Organized by the French Organizing Committee of the 2025 UN Ocean Conference, the Oceanographic Institute of Monaco, and the Prince Albert II of Monaco Foundation, BEFF will convene in advance of the UN Ocean Conference. It aims to identify and mobilise solutions to support the blue economy and preserve marine ecosystems. **dates:** 7-8 June 2025 **location:** Monaco **www:** <u>fpa2.org/en/news/monaco-will-host-the-blue-economyand-finance-forum-as-part-of-the-united-nations-oceanconference-2025-unoc-nice-june-2025-08403</u>

**2025 UN Ocean Conference:** The third UN Ocean Conference, co-hosted by France and Costa Rica, will be held in Nice, France, in June 2025 under the theme "Accelerating action and mobilizing all actors to conserve and sustainably use the ocean." The Conference aims to support further and urgent action to conserve and sustainably use the ocean, seas and marine resources for sustainable development and identify further ways and means to support the implementation of SDG 14. **dates:** 9-13 June 2025 **location:** Nice, France **www:** <u>sdgs.un.org/</u> <u>conferences/ocean2025</u>

**Barcelona Convention COP 24:** Egypt will host the next meeting of the Conference of the Parties (COP) to the Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention) and its Protocols in 2025. **dates:** 2025, TBC **location:** Cairo or Alexandria, Egypt **www:** <u>www.unep.</u> <u>org/unepmap/who-we-are/barcelona-convention-and-protocols</u>

For additional meetings, see sdg.iisd.org/

Glossary		
CSIC	Spanish National Research Council	
ECOP	Early career ocean professional	
FAO	Food and Agriculture Organization of the UN	
GOOS	Global Ocean Observing System	
IOC/UNESCO	Intergovernmental Oceanographic Commission of the UN Educational, Scientific and Cultural Organization	
LDCs	Least developed countries	
MPA	Marine Protected Area	
NbS	Nature-based Solution	
Ocean Decade	UN Decade of Ocean Science for Sustainable Development (2021-2030)	
SDG	Sustainable Development Goal	
SIDS	Small island developing states	
UNEP	UN Environment Programme	