



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)

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Item 3.5 of the Provisional Agenda

**REPORT OF THE IOC ACTIVITIES (2024–2025)
TO THE FORTY-THIRD GENERAL CONFERENCE OF UNESCO**

Summary

According to Article 3.2 of the Statutes of the Intergovernmental Oceanographic Commission ([IOC/INF/1148](#)) and Rule of Procedure 49.2 ([IOC/INF/1166](#)), the IOC prepares regular reports on its activities, which shall be submitted to the General Conference of UNESCO. The present report covers the period 2024–2025 and focuses on the main achievements in the implementation of the first biennium of the IOC Programme and Budget 2024–2025, contributing to *IOC's Medium-Term Strategy 2022–2029* and its High Level Objectives, as well as UNESCO Medium-term Strategy 2022–2029 (41 C/4) with respect to Strategic Objective 2 'Work towards sustainable societies and protecting the environment through the promotion of science, technology, innovation and the natural heritage' and Outcome 3 'Enhance knowledge for climate action, biodiversity, water and ocean management, and disaster risk reduction'.

Upon consideration by the Assembly, the report will be presented to the 43rd General Conference of UNESCO as 43 C/REP/__, indicating that a more complete information, including analysis by IOC function, can be found in the report of the IOC Executive Secretary to the 33rd session of the IOC Assembly ([IOC/A-33/3.2.Doc\(1\)](#) & Addendum).

The proposed decision(s) is referenced A-33/Dec.3.5 in the Provisional Action Paper ([IOC/A-33/AP](#)) of the 33rd session of the IOC Assembly.

Strategic assessment

1. The statutory purpose of the IOC is twofold. Firstly, '*to promote international cooperation and coordinate programmes research, services and capacity-building, in order to learn more about the nature and resources of the ocean and coastal areas*'. Secondly, '*to apply that knowledge for the improvement of management, sustainable development, the protection of marine environment, and the decision-making processes of its Member States*'. (Art. 2.1 of the [IOC Statutes](#)).
2. The learning process starts with sustained ocean observations that generate ocean data for research, analysis and modelling. The priorities set by IOC Governing Bodies for the current budget period reflect this and has been a critical focus of the Commission's work. With the IOC's share of UNESCO's regular budget for 2024–2025 (42 C/5) increased to 3% at the request of its Member States, the application of learning and knowledge, the second part of our mandate, has been growing in importance in line with the strengthened global ocean governance landscape, and the increased relevance of regional policy and governance mechanisms. Strengthening IOC's work in ocean observations and ocean data resulted in products and services supporting for example, marine monitoring for the Kunming-Montreal Global Biodiversity Framework, the BBNJ Treaty and pollution-related frameworks, as well as cementing IOC's role as a global knowledge partner for sustainable ocean planning.
3. These dual objectives of learning and application align with the ethos of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030), coordinated by the IOC. The IOC-led programmes and projects that are being developed under the framework of the 'Ocean Decade' range from observations to research, to sustainable ocean planning. They are testbeds of transformative approaches to the generation of timely, relevant and co-designed knowledge that has direct applicability to decision-making. The Ocean Decade provides the framework for IOC programmes to work in new ways, with new partners focusing on emerging issues, guided by the Vision 2030 insights synthesized in the Barcelona Statement from the 2024 Ocean Decade Conference and the mid-term evaluation. The 2025 United Nations Conference presented a pivotal opportunity to elevate initiatives on ocean observations, seabed mapping and the availability of actionable ocean data to support science-based decision-making and foster global collaboration for ocean sustainability.

Highlights across IOC Functions

4. The second IOC *State of the Ocean Report*, was published in June [2024](#), presenting the results of ocean-related scientific activities and analyses to describe the current and future state of the ocean, addressing physical, chemical, ecological, socioeconomic and governance aspects, focusing on the seven Outcomes of the Ocean Decade. Work is underway on the preparation of the 2026 edition.
5. IOC's data submission towards SDG Indicator 14.3.1 'Average marine acidity (pH) measured at agreed suite of representative sampling stations' collected inputs from an increased number of countries and stations (178 stations in 2021; 765 stations from 44 countries in 2025). The IOC-coordinated global expert network on ocean acidification now counts more than 1,500 members from 116 countries (26 in Africa, 23 SIDS) and continues to grow. The portfolio of IOC activities aimed to conserve, restore and sustainably manage coastal blue carbon ecosystems continued to grow, including in the context of the Global Ocean Decade Programme for Blue Carbon.
6. Recognizing that Joint programmes between IOC, United Nations and other international organizations are important ways to leverage and enhance IOC activities to best serve society and that these programmes must be underpinned by timely and relevant agreements, a revised four-year memorandum of understanding for the Global Climate Observing System (GCOS) was negotiated with the World Meteorological Organization (WMO), the United Nations Environment Programme (UNEP) and the International Science Council (ISC). In addition, a memorandum of understanding was signed in April 2024 between UNESCO-IOC and FAO to formalise joint sponsorship of the

Intergovernmental Panel on Harmful Algal Blooms (IOC-FAO IPHAB). IOC as a co-sponsor of the World Climate Research Programme hosted a meeting of the joint scientific committee at UNESCO HQ in May 2025.

7. The Global Ocean Observing System (GOOS) coordinates more than 8,700 ocean observing platforms across 13 global ocean observing networks, operated by 83 Member States (9 in Africa, 9 SIDS). Over 120,000 ocean observations are delivered to operational forecasting systems every day, as tracked through OceanOPS (GOOS IOC-WMO Operational Centre). GOOS has continued to build coordination, integration and advocacy on global ocean observing in combination with advancing stakeholder engagement, and the resilience and responsiveness of the global system. Significant steps forward were made in uniting IOC data elements towards a cutting-edge IOC Data Architecture. The Joint WMO-IOC Collaborative Board identified priority areas of work: defining the Global Basic Observing Network (GBON) for oceans; improving data management and interoperability; strengthening coastal and maritime resilience; and enhancing capacity development through joint training and collaboration.

8. The Ocean Data and Information System (ODIS) is a federation of independent data systems including continental-scale data systems, national data systems as well as those of small organizations. ODIS currently links 55 data catalogues or nodes from 45 partner organizations, enabling a sustainable, interoperable, and inclusive digital ecosystem for all ocean stakeholders that will continue to grow in the future. As a joint effort between the Global Ocean Observing System (GOOS) and the IODE/Ocean Biodiversity Information System (OBIS), information was collected from 638 long-term active biological monitoring programmes and integrated into an online metadata platform (BioEco portal), which will be connected to ODIS, and become the infrastructure to monitor the status of the marine biological component of GOOS. OBIS now holds 136 million species observations and continues to grow with over 1 million records per month collectively provided by over 1,000 institutions from 99 countries.

9. The Environmental DNA Expeditions in Marine World Heritage Sites project, funded by the Government of Flanders (Kingdom of Belgium) and implemented jointly with the World Heritage Centre, was completed in December 2024 and demonstrated the transformative potential of environmental DNA (eDNA) as a cost-effective and accessible method for monitoring and conserving ocean biodiversity. Over a period of three years, sampling campaigns were conducted at 21 marine UNESCO World Heritage sites in 19 countries. Flanders-funded Pacific Islands Marine Bioinvasion Alert Network (PacMAN) project (2020–2024), has built an end-to-end system for monitoring, sampling, and analysing marine invasive species using molecular technologies, with a pilot in Fiji, detecting presence of two species that were not previously identified.

10. Tsunami programme kept its strong capacity development focus in all ocean basins, with renewal of agreements with:

- the Agency for Meteorology, Climatology, and Geophysics of the Republic of Indonesia hosting the Indian Ocean Tsunami Information Centre (IOTIC) 2023–2027,
- the Coastal Zone Management Unit (CZMU) of Barbados hosting the Caribbean Tsunami Information Centre (CTIC) 2024–2029, and
- the Bureau of Meteorology (Bureau) of Australia hosting the Indian Ocean Tsunami Warning and Mitigation (IOTWMS) Office in Perth, Australia 2023–2027.

11. The 2nd Global Tsunami Symposium in Banda Aceh commemorated the 20th anniversary of the 2004 Indian Ocean Tsunami, taking stock of progress achieved (100 recognized Tsunami Ready communities in 31 Member States, 15 of which are SIDS), and appealing for investment to ensure that 100% of coastal community at risk are Tsunami Ready by 2030.

12. The joint IOC-SCOR GlobalHAB science programme developed a new decadal plan for an international Harmful Algal Bloom (HAB) research programme. A new partnership with the Nippon Foundation and UNEP focused on developing a decadal implementation plan for '*A global ocean*

free from the harmful impacts of pollution by 2050. The concept was presented at the World Ocean Summit in Tokyo in March 2025.

13. IOC stepped up its efforts in Marine Spatial Planning (MSP) with numerous OTGA trainings and two publications on the engagement of Indigenous Peoples and Local Communities in MSP in 2024 and four toolkits on biodiversity, climate, spatial data and offshore wind engagement in 2025. A new rapid assessment tool to facilitate national planning processes has been piloted in seven countries in Africa, Western Pacific and Latin America and the Caribbean. Renewed financial support from Government of Sweden and the European Commission's DG MARE will continue to support this work. IOC's work on MSP provides a solid basis for advancing the development of an IOC-wide Strategy on Sustainable Ocean Planning and Management (SOPM), and the new Decade Programme on Sustainable Ocean Planning launched at the 2024 Ocean Decade Conference in Barcelona.

14. A group of experts mandated by the IOC Assembly worked on developing the implementation plan for the IOC [Capacity Development Strategy, 2023–2030](#). The OceanTeacher Global Academy (OTGA) continued to grow with an increasing number of trainings (more than 50 courses per year) and approximately 14,000 beneficiaries worldwide. OTGA, a network of 17 Regional and Specialized Training Centres remains active, and dozens of additional partners have joined the training initiatives over the past two years. With its ISO 29993:2017 accreditation as a Learning Service Provider, OTGA certifies hundreds of training participants every year and guarantees a high-quality standardized Learning Management System. With the IOC's capacity development effort bolstered by NORAD funding, five activities were launched in 2024, designed jointly with regional and technical subsidiary bodies: (i) establishing Early Warning Systems for Harmful Algae Blooms in Africa; (ii) GLOSS-Africa (Phase 1–North Africa); (iii) support for strategic planning and capacity development for ocean observations under the auspices of GOOS-Africa; (iv) Biodiversity Data Hub for the High Seas; and (v) Ocean Training internships to enhance global human capacity related to the IOC mandate. New funding received in December 2024 was channeled to support the expansion of early warning systems for harmful algal blooms in Africa, including the updating of data management infrastructure to support such systems, enabling linkages between blooms and deoxygenation to be determined and ensuring that observations associated with the systems contribute to GOOS.

15. Ocean literacy multi-language trainings and e-learning modules continued through OTGA. The [Ocean Literacy for All Toolkit](#) in Swahili is now accessible to over 2,000,000 Kiswahili speakers in the East Africa sub-region, including the Democratic Republic of the Congo, Comoros, Kenya, Tanzania, and Somalia.

16. Ensuring alignment with evolving national and regional priorities and strategies is paramount for the success of our action for Global Priority Africa. The Africa Ocean Decade Task Force promoted the implementation of the [Ocean Decade Africa Roadmap](#), including the development and launch of a new Decade programme on sustainable ocean management in Africa. Similarly, the Tropical Americas and Caribbean Taskforce guided the implementation of the Ocean Decade Africa Roadmap. In the WESTPAC region, immense efforts have been made to align ocean science with societal needs including through national and international agreements and policy frameworks. A milestone was reached with the organization of the 2nd UN Ocean Decade Regional Conference and the 11th WESTPAC International Marine Science Conference (22–25 April 2024) hosted by Thailand, which brought together more than 1,200 stakeholders from 40 countries in the region and beyond. A regional framework for action to accelerate marine spatial planning was adopted to support the [MSPglobal 2.0](#).

17. As a contribution to the UNESCO operational strategy on SIDS, IOC fostered engagement of SIDS in the Ocean Decade through the establishment of a decentralized coordination hub for the Pacific Islands Region, hosted by The Pacific Community, and with the Taskforce for the Tropical Americas and Caribbean Region guiding implementation in that region.

Challenges and Opportunities

18. **Capacity and funding gaps:** Despite the growing recognition of the IOC's role, understaffing in areas identified by the Commission's Member States as 'critically vulnerable' has posed significant challenges. These capacity gaps not only strain programme delivery but also hinder the ability to achieve ambitious resource mobilisation targets. Maintaining and evolving vital systems such as the Ocean Data & Information System (ODIS), the Ocean Biodiversity Information System (OBIS), and the Global Ocean Observing System (GOOS) is key for Member States to deliver on national and global commitments. Integral to ocean science, industry and governance, they require stable and sustainable funding. Realising the full promise of the Ocean Decade requires greater investment. Aspiring goals, such as ensuring 100% of at-risk communities recognized as Tsunami Ready and mapping the entire ocean floor in high resolution through the Seabed2030 Programme, demand enhanced resources and coordinated global effort.

19. **Amplifying impact through partnerships:** The Ocean Decade Alliance will continue to catalyse impactful collaborations. Philanthropic networks like the Ocean Decade Foundations Dialogue and partnerships with organizations like the Belmont Forum and the European Commission-led Sustainable Blue Economy Partnership offer avenues for co-branded initiatives and joint calls for action. IOC aims at strengthening its role as a knowledge partner for initiatives of G20, G7, and the High-Level Panel for a Sustainable Ocean Economy. Reinforced partnerships with international organizations and UN bodies will be key to our success. Innovative initiatives—like collaboration with WMO and the 2024 Vendée Globe race, with skippers collecting valuable data from under-sampled regions like the Southern Ocean or the Sea Beyond educational programme funded by the Prada Group—will continue to broaden civil society engagement.

20. **Enhancing Member State ownership:** With the key objective of achieving a better, faster, more dynamic interaction between ocean knowledge, decision-making and management, it is also necessary to continue exploring whether *the way we work* can also get better, faster and more dynamic. The 'IOC and Future of the Ocean' consultation process launched by the IOC Assembly and calling for "streamlining of operations and optimising the use of resources so as to be truly fit-for-purpose in response to the fast-evolving ocean agenda and increasing demands of Member States and multilateral processes' will empower Member States to provide strategic guidance and ownership of their Commission.