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(of UNESCO)

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Item **4.7** of the Provisional Agenda

IOC CONTRIBUTIONS TO UN GOVERNANCE PROCESSES

Summary

This document provides information on outcomes and contribution of IOC to a number of UN processes relevant to ocean affairs that took place during the intersessional period. These are the UN Framework Convention on Climate Change, the International Legally Binding Instrument on the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction (BBNJ); and Kunming-Montreal Global Biodiversity Framework of the Convention on Biological Diversity.

Decision proposed: The Assembly is requested to take note of these developments and further encourage IOC Member States to engage in these intergovernmental fora, highlighting the role of ocean science and contribution of IOC. The decision on this item is referenced as draft decision A-33/4.7 in the Provisional Action Paper (IOC/A-33/AP Prov.)

Context

1. The IOC plays a recognized role in the United Nations system, in accordance with its Statutes. As the competent international organization in the fields of marine scientific research and transfer of marine technology, the IOC contributes to various UNCLOS processes, including the recently adopted international legally binding instrument on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, known as BBNJ, which is currently undergoing ratification prior to its entry into force.

2. The IOC also contributes to other major UN global agreements and frameworks including: the UN 2030 Agenda and its Sustainable Development Goals (SDGs), in particular Goal 14 on the ocean—specifically as the custodian UN agency for reporting on SDG Targets 14.3 and 14.a and a contributor to 14.1.1 Indicator; the UNFCCC and the Paris Agreement; the Sendai Framework for Disaster Risk Reduction, the Kunming-Montreal Global Biodiversity Framework of the Convention on Biological Diversity, and the Antigua and Barbuda Agenda for SIDS (ABAS).

3. The IOC Assembly through decision A-32/4.6 (2023) requested the Executive Secretary to continue to engage the Commission in these UN processes by providing scientific and technical information and assisting IOC Member States in strengthening their capacities to contribute to the achievement of the objectives of these ocean governance frameworks. The IOC could play an increasing central role in these processes by bringing together the scientific communities, the government decision-making system, and a broader range of stakeholders within IOC Member States, including the private sector and civil society, to generate authoritative knowledge and develop efficient, science-based integrated ocean management and solutions. This document provides an overview of developments since the 57th session of the Executive Council in June 2024 and how IOC has engaged in these processes, with particular emphasis on the Convention on Biological Diversity, the BBNJ High Seas Treaty and the UNFCCC process. It should be noted that the IOC's work on monitoring Sustainable Development Goals is presented in the addendum to document IOC/EC-57/3.1.Doc(1) section D.

A – Contribution to the Montreal-Kunming Global Biodiversity Framework (GBF) under the Convention on Biological Diversity

4. The Kunming-Montreal Global Biodiversity Framework (KMGBF), adopted at COP15, identified 23 action-oriented global targets to curb biodiversity loss and restore ecosystem by 2050. Several of the KMGBF targets rely on the provision and access to measurable data, making sustained ocean observations and accessible data vital for informed decision-making. IOC as a whole, the Ocean Biodiversity Information System (OBIS) of the International Ocean Data Exchange (IODE) and the Global Ocean Observing System (GOOS, co-sponsored with the World Meteorological Organization, the UN Environment Programme and the International Science Council) in particular, therefore play a pivotal role in supporting several Global Biodiversity Framework targets and indicators by providing coordinated marine biological and ecosystem observations, structured around a set of Essential Ocean Variables (EOVs) and ocean data products in association. Furthermore, OBIS was added to the list of tools designed to help countries monitor biodiversity and track progress in ocean, species, and ecosystem protection. Specifically, the work of the IOC is directly relevant to monitoring progress towards numerous KMGBF goals and targets:

- **KMGBF 2050 Goals A1 and A2 (Ecosystems & Species Status):** IOC's work supports monitoring, protecting, and restoring natural ecosystems like mangroves, coral reefs, seagrass meadows, and kelp forests, and monitoring plankton biomass and abundance. These are recognized as GOOS Essential Ocean Variables (EOVs), and relevant data is stored in OBIS. The taxa-specific EOVs defined by GOOS are also the foundation for assessments conducted under the IUCN Red List framework, supporting reporting on Headline indicators A3 and A4 related to species status.

- **KMGBF 2050 Goal A.4 (Genetic Diversity):** OBIS could support monitoring related to this goal.

- **KMGBF 2030 Target 1 (Spatial Planning):** IOC's extensive work on Marine Spatial Planning (MSP) since 2006 is highly relevant to Headline indicator 1.1 (Percentage of land and sea area covered by biodiversity-inclusive spatial plans). IOC tracks the global status of MSP. COP16 adopted binary indicator questions specifically asking if countries address sea-use (coastal and marine) change in spatial planning processes using participatory methods (binary indicator 1.b). The IOC suggested more relevant references for MSP guidance within the indicator framework. Of importance, OBIS was also a primary source of information for describing and updating Ecologically or Biologically Significant Marine Areas (EBSAs), which are relevant to spatial planning efforts and the EBSA process will enter a new phase under the CBD.

- **KMGBF 2030 Target 6 (Invasive Species):** OBIS has established an early-detection early-warning system using eDNA in Fiji, and supports reporting against this target by providing access to global marine biodiversity detections ideal for tracking invasive species movement. OBIS is linked to invasive species databases and can develop an early-warning decision-support tool for Member States. The IOC suggested including OBIS as a data source, provider, and compiler for Headline indicator 6.1 (Rate of invasive alien species establishment). In addition, the IOC co-sponsors several working groups (in collaboration with ICES and IMO) focused on invasive species and fouling of ships that can support both the monitoring of invasive species and their management.

- **KMGBF 2030 Target 7 (Pollution):** The Global Ocean Observing System (GOOS) EOVs associated with ocean colour and phytoplankton can deliver observational data that supports the work that the IOC is doing in developing a eutrophication index that delivers against SDG 14.1.1 and is relevant to Target 7.

- **KMGBF 2030 Target 8b (Climate Change and Ocean Acidification):** The IOC is the custodian agency for the SDG indicator 14.3.1 (Average marine acidity (pH)) and delivers this indicator on behalf of Member States into annual UN reporting processes. COP16 adopted a binary indicator questions for Target 8, asking countries if the impacts of ocean acidification on biodiversity are monitored and reported on. The IOC's support of the Global Ocean Acidification Observing System and the Ocean Decade programme Ocean Acidification Research for Sustainability provides the opportunity for supporting Member States in identifying the impacts of ocean acidification on marine biodiversity. The average marine acidity (pH) is also listed as Complementary indicator 8.CY.4. Work undertaken by the IOC also contributes to understand climate change and associated impacts more broadly.

- **KMGBF 2030 Targets on Capacity, Cooperation, and Information (Targets 20, 21.1):** OBIS is specifically mentioned in complementary indicators providing an overview of scientific capacity (Target 20) and for Headline indicator 21.1 (Availability of biodiversity information), in particular: complementary indicators D.CY.2: Number of joint scientific papers published in OBIS by sector, and 21.CY.3: Growth in marine species occurrence records accessible through OBIS. Also, the GOOS BioEco Metadata portal serves as an example of an open global meta-database relevant to Headline indicator 21.1.

5. The Parties to the CBD agreed on a new process for identifying **Ecologically or Biologically Significant marine Areas (EBSAs)**. They also adopted mechanisms to add new EBSAs and revise existing ones, ensuring that information on these areas is catalogued in a way that supports planning and management using the best available science and knowledge OBIS maps and biodiversity indices have been used as a primary source of information to support the EBSA process and with the introduction of the new process could continue providing an essential source of information.

6. The IOC Secretariat actively engaged in the 16th Conference of the Parties (COP16) of the Convention on Biological Diversity (Cali, Colombia, 21 October–1 November 2024) and the additional agenda finalisation meeting 25–27 February 2025 (Rome, Italy). Through CBD COP Decision 16/31, the Conference of the Parties welcomed the guidance[1] on the monitoring framework provided by the Ad Hoc Technical Expert Group on Indicators for the KMGBF. This guidance informs how Parties should monitor and report their progress towards the KMGBF goals and targets. Importantly, this guidance directly refers to a Global Biodiversity Observing System (GBiOS). The guidance, and the COP16 discussions it informed, explicitly acknowledge that the IOC already provides the ocean component of this GBiOS through its existing systems: GOOS, OBIS, and ODIS.

7. The planning, monitoring, reporting, and review mechanisms adopted at COP16 further rely on data and information streams that IOC provides. National reports, which are the primary source for the global review, require Parties to use headline indicators, including providing data (either national or from relevant global sources). The global report will draw upon analyses of indicator usage and relevant national, regional, and international scientific and technical assessments. IOC's data systems, reports (such as the *State of the Ocean Report* and the *Global Ocean Science Report*), and contributions to global assessments are crucial inputs for this process. The establishment of an Ad Hoc Scientific and Technical Advisory Group to prepare the global report, which will provide advice on the use of indicators and draw on these sources, highlights the need for reliable data and scientific input from bodies such as the IOC.

8. The context of COP16 highlights the need to strengthen national monitoring systems, improve international cooperation, and address capacity gaps. The IOC, through its GOOS and OBIS national and regional networks, is already positioned to support countries in these areas, for example, in developing national marine biodiversity monitoring systems. Leveraging the framework of the UN Decade of Ocean Science for Sustainable Development should be considered as a means to call for actions that contribute to addressing ocean science and knowledge gaps for GBF implementation and support Parties through guidance (e.g., on integrating ocean issues into NBSAPs) and tailored capacity development products.

B – Contribution to the BBNJ Agreement

9. On 19 June 2023—after nearly two decades of discussions and negotiations—governments adopted the BBNJ Agreement. The Agreement is currently open for signature until 20 September 2025. As of 15 May 2025, the Agreement has 115 signatories of which 21 countries have ratified the Agreement. The Agreement will enter into force 120 days after the date of deposit of the sixtieth instrument of ratification, approval, acceptance or accession. After the agreement enters into force, the first Conference of Parties to the Agreement will be organized. At the current pace of ratification, the expectation is that the first meeting of the Agreement's Conference of the Parties (COP 1) may convene in late 2026. However, many elements needed for the Agreement to become truly operational are yet to be agreed upon. To facilitate progress on these operational components, the UN General Assembly convened a Preparatory Commission (PrepCom), which met for the first time on 14–25 April 2025. It was agreed there that more sessions are needed, with the second one to be held in August 2025 and the third one in March/April 2026 and maube mor to come. At its first session, discussions focused on the:

- rules of procedure of the COP;
- rules of procedure and modalities of operation of the subsidiary bodies;
- arrangements for the Secretariat, including the selection of its seat;
- funding of the Secretariat, COP, and subsidiary bodies;

[1] https://www.cbd.int/doc/c/85eb/18f4/797b0b3e3accf4f07746e773/cop-16-inf-04-en.pdf

- arrangements with the Global Environment Facility and provisions of funding; and
- operationalization of the Clearing-House Mechanism (CHM).

10. This first PrepCom meeting was based on a background document intended to facilitate negotiations, prepared by its co-chairs as well as briefing notes prepared by the United Nations Division for Ocean Affairs and Law of the Sea (DOALOS), which serves as interim secretariat for the Agreement. During this first meeting, delegations exchanged views on the matters to be considered at the second PrepCom, including cooperation with other instruments, frameworks, and bodies, which is key for the smooth implementation of the Agreement. In advance of the second PrepCom (scheduled 18–29 August 2025), the co-chairs and DOALOS were tasked with preparing:

- a matrix outlining proposed rules of procedure and modalities for each subsidiary body;
- a comparison of secretariat arrangements in other multilateral environmental agreements (MEAs); and
- draft terms of reference for a group to seek expert input on the CHM and a flowchart on the functions of the CHM and its possible links with institutions established under the Agreement.

Potential role of the IOC and key messages for IOC Member States

11. The IOC is the only United Nations body with a mandate focused entirely on the ocean. It has recognized technical expertise in relation to the BBNJ Agreement, including coordinating international ocean science processes, collecting, processing, and sharing ocean data, assessing national and regional ocean science capacities, gathering information on capacity development opportunities, and designing/implementing tailored capacity development initiatives and regional collaborative approaches. In this regard, the IOC is recognized, through UNCLOS, as a international organization with competence in the fields of Marine Scientific Research and Transfer of Marine Technology. In accordance with its Statutes (Article 11.3), the IOC may act as a specialized mechanism for UN organizations that have agreed to use its services to carry out responsibilities in marine sciences and ocean services, thereby enabling it to serve other UN mechanisms by providing scientific and technical advice. The following section describes the potential contributions of the IOC to the four pillars of the BBNJ Agreement:

(i) **Marine Genetic Resources (MGRs):** OBIS provides globally accessible marine biodiversity data and supports access and benefit-sharing. OBIS holds information on species observations (136M), DNA sequences (27M), and marine species (195K). Of those observations held, OBIS includes over 9.5 million observations in areas relevant to the BBNJ Agreement, integrated from over 1,200 datasets. OBIS is integrating capabilities for sequence-based searches of genetic data records. The IOC also conducts capacity development activities related to MGRs, such as environmental DNA training. It therefore serves as a data repository supporting data transparency and equitable access to MGR information, helping fulfill obligations under access and benefit-sharing provisions;

(ii) **Area-Based Management Tools (ABMTs):** GOOS provides ocean observations that can be used in the identification, management, and evaluation of ABMTs such as Marine Protected Areas aimed at conserving and reducing stressors on marine biodiversity. OBIS, as a repository for **observations** on biodiversity coordinated by GOOS, can provide these data to processes that use them to define and update ABMTs. The IOC also provides frameworks for ABMTs planning (such as marine spatial planning) and produces outputs that integrate environmental information and

multiple biogeochemical and physical variables to understand changes in marine systems and the future adaptability of ABMTs;

(iii) **Environmental Impact Assessments (EIAs):** The IOC can contribute to supporting the delivery of EIAs through multiple pathways. The observations collected by GOOS and delivered through IODE infrastructure will be essential for understanding the current state of ocean systems. The results of IOC sponsored programmes provide key information on current and projected change in these systems, and tools such as those provided by MSPGlobal enable the assessment of spatial and temporal interactions between activities and ocean systems.

(iv) **Capacity Building & Technology Transfer (CBTMT):** The OceanTeacher Global Academy (OTGA) provides training on ocean science and BBNJ topics through 17 regional and specialized training centres worldwide, enabling countries to participate fully and reap its full benefit. The Ocean Capacity Development Hub (Ocean CD-Hub) serves as a repository for Capacity Development offers and maps capacity development needs to support BBNJ topics. It is complimented by capacity development coordination also carried out under the United Nations Ocean Decade. The IOC provides capacity development and training, particularly for early career scientists, through summer schools organized in partnerships with international expert groups in the fields of observation collection, observation management, data products development and the translation of science into information useful for decision-making. The IOC is well placed to develop marine scientific capacity through these programmes. The types of marine capacity development and technology transfer identified in the annex to the agreement are largely based on the *IOC Criteria and Guidelines on Transfer of Marine Technology*.

Supporting the BBNJ Clearing-House Mechanism (CHM)

12. IOC has extensive expertise in designing, operating, and interconnecting data and information systems crucial for ocean understanding and management. While the BBNJ Agreement foresees the Secretariat managing the CHM, Article 51 highlights that the mechanism could benefit from cooperation with the IOC. The BBNJ CHM is intended to serve as a centralized platform for Parties to access, provide, and disseminate information across the Agreement's four main areas. IOC's infrastructures and expertise components could support the BBNJ CHM functions through:

(i) The metadata portal of the **Global Ocean Observing System (GOOS)**'s Biology and Ecosystems panel already provides information on biological monitoring programmes globally and could be adapted for BBNJ planning and prior notification. GOOS also provides data and science for identifying, managing, and evaluating Area-Based Management Tools (ABMTs) and supports Environmental Impact Assessments (EIAs) with scientific data and monitoring.

(ii) The **Ocean Biodiversity Information System (OBIS)** provides globally accessible, FAIR marine biodiversity data, supporting data transparency and equitable access to Marine Genetic Resources (MGR) information. It can help fulfill obligations under access and benefit-sharing provisions, potentially providing Standard Batch Identifiers (SBIs) and supporting monitoring. OBIS contains millions of species observations and DNA sequences, including substantial data from Areas Beyond National Jurisdiction (ABNJ). It serves as a data repository and can provide baseline biodiversity data for defining, assessing, and monitoring ABMTs. OBIS also delivers marine life baseline and trend data for EIAs. It is listed as a complementary indicator for KMGBF Targets and recognized as part of a Global Biodiversity Observing System. OBIS corresponds to CHM functions related to MGR data, transparency, and scientific information sharing.

(iii) The **Ocean Capacity Development Hub (IOC CD Hub)** and **OceanTeacher Global Academy (OTGA)**specifically address the Capacity development and Transfer of Marine Technology (CBTMT) pillar across all IOC fields of expertise. OTGA delivers training through regional centres, directly contributing to BBNJ Article 44. The CD Hub is a global repository for CD opportunities and maps needs. These correspond to CHM functions related to requests for CBTMT, opportunities, training, technological information sources, and funding availability.

13. A key feature of the BBNJ CHM is to facilitate the matching of capacity development needs with available support and providers. The IOC is well-placed to provide support in this regard. The **Ocean CD Hub**, a prototype of which was recently launched, is designed to be a global repository for capacity development information and aims to facilitate the search for opportunities and help providers promote training. It also seeks to identify synergies and avoid duplication among organizations providing CD opportunities. The ***Global Ocean Science Report*** (GOSR) and regular assessments of CD needs conducted by the IOC can inform the assessment of needs under the BBNJ Agreement by:

- **Linking to Relevant Mechanisms and Databases:** The BBNJ CHM is expected to provide links to relevant global, regional, subregional, national, and sectoral clearing-house mechanisms and databases:

  (i) The **Ocean Data Information System (ODIS)** provides the technical framework for interoperability by connecting distributed information systems and data hubs. It improves the discoverability of ocean information.

  (ii) The **Ocean Info Hub (OIH)** is a user-oriented interface that connects to multiple "CHMs" using ODIS technology. OIH aims to build a sustainable, interoperable, and inclusive digital ecosystem by linking existing and emerging data systems. OBIS already maintains links to relevant genetic databases and integrates data from platforms like EBI/MGnify. These systems directly support the function of linking and strengthening existing institutions and databases.

- **Fostering Transparency:** Enhanced transparency is a requirement for the BBNJ CHM, including sharing baseline data. IOC services, such as **OBIS**, are designed to be **FAIR** (Findable, Accessible, Interoperable, Reusable) and open-access, supporting transparency.

- **Facilitating International Cooperation:** The CHM should facilitate international cooperation and collaboration, including scientific and technical aspects. The IOC already provides a global platform for this purpose through its programmes and regional subsidiary bodies. **OceanExpert** also supports collaboration by maintaining a list of experts.

14. The IOC's services are designed with equity in mind, offering free and open access, in line with FAIR data principles, and providing tailored support for Least Developed Countries (LDCs), Small Island Developing States (SIDS), and developing countries through low-cost technologies and the piloting of systems at regional level like ODIS/OIH. This is fully in line with the BBNJ Agreement, which fully recognize the special needs of developing States Parties and the special situation of SIDS. The Preparatory Commission recognized the central role of the CHM and is working towards establishing a group involving experts to advance work on this matter. The technical expertise of the IOC can contribute to any feasibility study or expert groups that the Preparatory Commission may initiate. With appropriate financial resources, the IOC could support BBNJ by strengthening its existing services, leveraging platforms to promote experience sharing and avoid duplication, and enhancing preparedness through its existing and operational CHM.

Providing scientific and technical guidance globally and regionally

15. While the BBNJ Scientific and Technical Body (STB) is designed as a group of experts nominated by the Parties, it may seek appropriate advice from competent bodies, including UN bodies such as the IOC. The IOC could also contribute to the scientific substance of proposals during the consultation process (Article 18), although that this would be less visible than a direct role within the STB. The IOC could also assist Member States in preparing ABMTs proposals or conducting EIAs by providing scientific advice and data and building capacities. Ideally, the IOC should provide expertise to the Capacity Building and Transfer of Marine Technology Committee. The UNESCO-IOC's *Global Ocean Science Report* (GOSR) is an important source of information to inform the Agreement by assessing Member States' BBNJ-related scientific and technical needs. IOC Regional Sub-Commissions could play a key role, particularly with regard to the CHM and Capacity Building and Transfer of Marine Technology (CBTMT). These could, for example, support regional cooperative approaches, strengthen Member States' capacity in scientific aspects of implementing BBNJ, and test regional data systems linked to the global system.

C – Contribution to the UN Framework Convention on Climate Change

16. The IOC Statutes are consistent with and support the Convention (in particular Articles 4.1(g) and 4.1(h) and Article 5) and the Paris Agreement. The IOC recognised the important relationship between the IOC and the UNFCCC in decision IOC-XXX/5.2 'IOC Contribution to the United Nations Framework Convention on Climate Change (UNFCCC)'.

17. Since this decision by the Assembly, a number of mandates and activities have been established where the IOC Secretariat has participated and which deserve recognition:

- The Glasgow Climate Pact 2021 (Decision 1/CP.26) permanently anchored the inclusion of strengthened ocean-based action under the UNFCCC multilateral process including an annual ocean and climate change dialogue taking place in the first sessional period of every year and inclusion of ocean-based action into relevant work programmes and constituted bodies under the UNFCCC.
- At COP 27/CMA 4, in 2022, the COP Sharm el-Sheikh Implementation Plan (Decision 1/CP.27, paragraph 46) and CMA Sharm el-Sheikh Implementation Plan (Decision 1/CMA.4, paragraph 79) encouraged Parties to consider, as appropriate, ocean-based action in their national climate goals and in the implementation of these goals, including but not limited to Nationally Determined Contributions, long-term strategies and adaptation communications.
- At COP 28, the outcome of the first global stocktake (Decision 1/CMA.5, paragraph 180), welcomed the outcomes of the 2023 ocean dialogue and encouraged further strengthening of ocean-based action, as appropriate.
- The Global Goal on Adaptation (GGA, Paris Agreement Article 7.1) aims to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change. The Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation set in place a process to elucidate the framing for the GGA. At COP28, through Decision 2/CMA 5, Parties adopted the UAE Framework for Global Climate Resilience, as part of the UAE Consensus and also established a two-year UAE–Belém work programme, on the development of indicators for measuring progress achieved towards the targets outlined in the framework. The IOC is supporting this work through technical work of expert groups.
- The IOC also contributes to the UNFCCC Ocean and Climate Dialogue established since 2020.

18. In the longer term, the IOC can help Member States coordinate the data and information needed to implement the above mandates and processes at the international, regional and national levels. For example:

- provide advice on integrating oceans into Nationally Determined Contributions, including within relevant UNFCCC work programmes;
- with regard to indicators, provide relevant data, for example through GOOS and OBIS;
- assist countries in co-designing ocean-related actions, such as those aimed at improving scientific knowledge, mitigating the effects of natural disasters, adapting to it and reducing disaster risk.