



**GESAMP**

Joint Group of Experts on the  
Scientific Aspects of Marine  
Environmental Protection

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## **CONTRIBUTIONS TO OTHER UN PROCESSES**

### **Briefing paper on the development of the IOC proposal for an International (UN) Decade of Ocean Science for Sustainable Development**

**Submitted by IOC-UNESCO**

#### **Introduction**

1 At its 49th session, the IOC Executive Council requested the IOC Officers and Executive Secretary to pursue the development of the concept of an *International decade on ocean science for sustainable development (2021-2030) – Towards the ocean we need for the future we want* – potentially under the auspices of the United Nations. Following consultations with IOC Officers in January 2017, document IOC/INF-1341 describing the preliminary objectives of the Decade was prepared.

#### **Development of Decade proposal and awareness raising with Member States**

2 Document IOC/INF-1341 provides a broad rationale and context, outlines possible goals and activities, themes and expected results. The document is intended to serve as a starting point for further elaboration in discussion with Member States of IOC, UNESCO, and the UN as well as other UN bodies and external collaborators. It clearly frames the Decade initiative in the context of the 2030 Agenda and related UN frameworks, namely the Sendai Framework for Disaster Risk Reduction 2015, the SAMOA Pathway for SIDS 2014, the UNFCCC Conferences of the Parties and Paris Agreement, together with previous intergovernmental agreements.

3 In early February, through IOC Circular Letter 2657, IOC Member States were invited to provide comments to the IOC Officers of their respective electoral group. Member States inputs and revision to the Decade document are included in Document IOC/INF-1341 Rev. Prov:

- (i) in parallel to this consultation process, the IOC Chairperson and Executive Secretary have been proactive in communicating the Decade proposal to UNESCO and UN Member States;
- (ii) during the Preparatory Committee (15-16 February 2017, New York) of the UN Conference on SDG 14, IOC organized a side event 'Building ocean science, technology and related capacities towards achieving sustainable development of the ocean and seas' where the IOC Chair presented the objectives of the Decade. The Chair also made a plenary intervention to inform UN Member States on the Decade;
- (iii) on 7 April 2017, an Information session was organized to inform UNESCO Delegations on the UN Ocean Conference and Decade proposal. On 30 March a similar briefing was made with the participation of the Executive Secretary for the benefits of the GRULAC group;
- (iv) during the UN Member States consultations held in March, April and May 2017 in relation to the 'Call for Action' Outcome document to be adopted by the UN Ocean Conference, several Member States expressed their support towards the establishment of the Decade;

- (v) a Voluntary Commitment for developing the Decade proposal was registered on the UN Ocean Conference website; and
- (vi) at the UN Ocean Conference, the Plenary statement delivered by UNESCO and its IOC called for Member States to support the Decade. The Executive Secretary participated as a panelist in the Partnership Dialogue on marine scientific research and capacity building and highlighted the potential contribution the Decade could bring in helping nations to achieve SDG 14.

4 Whilst the reference to the Decade was not included in the final version of the 'Call for Action' adopted by the Conference, primarily because the IOC Assembly had not at the time formally considered the proposal, there are strong provisions in the adopted 'Call for action' that provides a rationale for establishing the Decade. In particular, paragraph (f) calls Member States to, *inter alia*:

*(...) (f) Dedicate greater resources to marine scientific research, such as interdisciplinary research and sustained ocean and coastal observation, as well as the collection and sharing of data and knowledge, including traditional knowledge, in order to increase our knowledge of the ocean, to better understand the relationship between climate and the health and productivity of the ocean, to strengthen the development of coordinated early warning systems on extreme weather events and phenomena, and to promote decision-making based on the best available science, to encourage scientific and technological innovation, as well as to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries; (...)*

5 It is noteworthy that several UN Member States have expressed support for the establishment of the Decade during the UN consultations and Conference in New York, namely Norway, Maldives (on behalf of AOSIS), Monaco, United States, New Zealand, Venezuela, I.R. of Iran, Uruguay, amongst others. During the final plenary of the Conference, the Chair of the Partnership Dialogue 6 on marine science (Iceland) reported (...) "several Member States and others voiced strong support for the International Decade of Ocean Science for Sustainable Development (...)".

6 Other effort to raise the visibility of the Decade proposal included: (i) the development of a Decade Brochure targeting UN Member States representatives, diplomats and potential partner organizations that was prepared and published in English, French and Spanish; (ii) the creation of a dedicated web page on the IOC website; (iii) references to the decade made in other fora including plenary statement at the BBNJ PrepCom-3 in April 2017; and (iv) active social media campaign, including a video animation featuring the President of the General Assembly, H.E. Peter Thomson.

7 A short video illustration of the Decade was prepared by Mr Stein van Oosteren of the Mission of The Netherlands to UNESCO with support of the UNESCO video studio. It is available for watching at the <https://www.youtube.com/watch?v=f48mSbdJAuw>.

### **Engagement with other UN and non-UN Partners**

8 In May 2017, the IOC Executive Secretary wrote to the heads of UN Agencies, international organizations, scientific unions that have an interest in ocean science with a view to engage them in the development of the Decade proposal. The following organizations received the letter: WMO, UN Environment, UNDP, IAEA, FAO, IMO, ISA, UN Division of Ocean Affairs and Law of the Sea, UN Division of Economic and Social Affairs, CBD, IHO, ICSU, SCOR, ICES and PICES.

9 The IOC letter recalls the IOC Statutes, in particular the fact that the Commission may act as a joint specialized mechanism for intergovernmental marine research, and therefore contributes to the programme of other UN bodies that have specific science requirements. It also invites the agency/organization to jointly co-design the *Decade implementation plan so that its benefits not only serve the IOC community but also the agency's own constituency. Responses received to date from WMO, IHO, ISA, OLA/DOALOS, ICES, and PICES.*

### **Way forward**

10 The proposal to launch the Decade was adopted by the IOC Assembly in June 2017 and the Decade proposal will be transmitted to the UN General Assembly (UNGA) in September 2017 for its consideration with a view to establish the Decade under the auspices of the United Nations.

11 As is generally the practice with international decades, the UNGA would then set up a process for preparing the activities to be implemented during the Decade. This would take the form of concerted programme of action that would include amongst other things, organizational arrangements for coordinating the implementation and reporting on the Decade achievements.

12 Prior to its formal consideration by the UNGA, the Decade proposal must include a draft programme of action with clearly defined objectives and activities to be carried out at the international, regional and national levels.

13 The draft programme of action should indicate:

1. organizational arrangements;
2. arrangements for financing from both budgetary and extrabudgetary sources;
3. procedures for monitoring implementation;
4. public information and outreach activities;
5. where appropriate, advisory services upon request from governments;
6. the lead agency or agencies for the decade;
7. mechanisms for coordinating the activities of the organizations of the United Nations system and those of other intergovernmental and non-governmental organizations concerned; and
8. the establishment at the national level of mechanisms to mobilize public support and carry out the related activities.

14 An appropriate intergovernmental body may be requested to review the implementation of the programme of action (e.g. ECOSOC).

### **Tentative timeline (to be confirmed)**

Time line	Action
June 2017	Endorsement by IOC Assembly of the proposal for an International Decade
July 2017	Transmission of IOC Resolution to UNESCO Governing Bodies for consideration at the 39th General Conference
August 2017	Transmission of IOC Resolution outcome to the informal consultations for the UNGA Omnibus Ocean Resolution
November 2017	Endorsement of the UNESCO General Conference of the proposal for an international Decade

November 2017	Adoption of UNGA Ocean Omnibus Resolution setting up the process for developing the draft programme of Action of the Decade in consultation with Member States, and relevant UN bodies
January 2018— July 2019	Preparation of Programme of Action through consultations with Member States, UN partners and other stakeholders
September 2019— January 2020	Formal consideration of the Decade programme of action and decision by UNGA

**Action requested of GESAMP**

15 GESAMP is requested to note the information provided and comment as appropriate on how GESAMP could engage in the Decade.

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ANNEX



**Proposal for an International  
Decade of Ocean Science for  
Sustainable Development  
(2021-2030)**



**One Planet, One Ocean**

**“An International Decade of Ocean Science could help to build an open ocean information science-based on trustworthy, science based data, from all parts of the world’s ocean.”**

**Professor Peter M. Haugan**

Chair of the Intergovernmental  
Oceanographic Commission of UNESCO





## Innovative Technologies for Sustainable Development

The global internet is based on an interconnected network of submarine cables that sit on the seafloor. Our satellite systems, aircraft and tallest buildings have embedded sensors that help to monitor their external environment, but these undersea cables do not yet contribute to monitoring of the ocean. The International Decade of Ocean Science for Sustainable Development could boost efforts to integrate new ocean monitoring technologies into this existing marine infrastructure.

Recent advances in technology have now made it possible to integrate basic sensors on submarine telecommunication cables at intervals of about 50-70 km, at an estimated 5-10% of total installation costs. These advances could now make it possible to turn submarine telecommunication cables into a global network for monitoring earthquakes, detecting tsunamis and observing physical conditions on the seafloor.

The Intergovernmental Oceanographic Commission of UNESCO (IOC), the World Meteorological Organization (WMO), and the International Telecommunication Union (ITU), are now collaborating with the telecommunications industry, governments and the international scientific community on this exciting new initiative.

Since 2011 a Joint Task Force (JTF) of these three United Nations agencies has been working to support a new SMART Cable concept that will support the potential integration of environmental sensors into new commercial cable systems.

There is no internationally-agreed methodology for estimating the economic value of services the ocean provides to humankind.

Science cannot yet meaningfully evaluate the cumulative impacts of climate change, marine pollution and other anthropogenic stresses on the health of the ocean ecosystem.

For 99% of habitable marine areas we lack the basic biodiversity knowledge we require for effective management.

## Ocean Facts & Knowledge Gaps

Only 5% of the ocean floor has been mapped and only 1% of this mapped area has been gridded at high resolution.

103 million square miles of the deep sea exists in perpetual darkness and up to a million marine species could still be unknown to science.

Only 3 humans have explored the deepest known point of the ocean.





## Why International Decade of Ocean Science?

The Intergovernmental Oceanographic Commission of UNESCO (IOC) and its partners are calling for 2021-2030 to become the International Decade of Ocean Science for Sustainable Development.

Achieving the targets of the Sustainable Development Goal 14 to “conserve and sustainably use the oceans, seas and marine resources for sustainable development” requires novel science-based solutions and their systematic transformation into informed policies and decisions.

The proposed International Decade of Ocean Science for Sustainable Development could provide Member States with a framework for coordinating and consolidating the observations and research needed to achieve SDG14.

## An urgent need for scientific solutions:

The First World Ocean Assessment found that much of the ocean is now seriously degraded. A continued failure to address these problems is likely to create a destructive cycle of degradation that will ultimately deprive society of many of the benefits currently derived from the ocean.

## How to make it happen?

The Intergovernmental Oceanographic Commission of UNESCO is inviting interested parties to collaborate on the concept of the International Decade of Ocean Science for Sustainable Development to help turn these initial ideas into a broad plan of concerted actions with shared goals and responsibilities. The Ocean Decade concept will be offered for consideration at the United Nations Ocean Conference (UN Headquarters, New York, USA, 5-9 June 2017).

**“The International Decade of Ocean Science for Sustainable Development is a unique opportunity to engage the ocean science community in achieving SDG14 - globally, regionally, and locally.”**

**Dr Vladimir Ryabinin**

Executive Secretary of the Intergovernmental  
Oceanographic Commission of UNESCO

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For more information, please visit this dedicated webpage: <http://on.unesco.org/2k00cTf>

**IOC Brochure 2017-3 (IOC/BRO/2017/3)**



## Potential Objectives:

- Stimulate a global partnership on the marine science requirements needed to support implementation of Agenda 2030;
- Understand the impacts of cumulative stressors and seek sustainable solutions for sustaining benefits from the ocean;
- Share knowledge and enhance interdisciplinary marine research capacities through the transfer of marine technology, leading to economic benefits for all Member States, particularly for Small Island Developing States (SIDS) and Least Developed Countries;
- Gain a better quantitative knowledge of ocean ecosystems and their contribution to society, through the whole ocean column, from the surface to the bottom;
- Map the ocean floor and its resources to support their sustainable management.

## Potential Themes:

- Enhancing sustainable use of ocean and marine resources including a focus on: making an inventory of ocean resources and ecosystem services; understanding and quantifying biogeographical zones and the potential role of marine protected areas;
- The expanding use of knowledge about ocean conditions including: data management; data gathering; modelling; forecasting ocean food productivity and evaluating its capacity to meet growing demands;
- Development of the ocean economy including analyses of economic and social benefits from the sustainable use of marine resources and science-based management;
- Sustainable management of coastal ecosystems including: ecosystem resilience and marine spatial planning to minimize impacts of sea-level rise, extreme weather events, flooding and erosion; improvements of baselines on environmental conditions; and public perceptions;
- Increasing scientific knowledge about the impacts of cumulative interacting stressors such as warming, acidification and habitat destruction;
- Achieving integrated observations and data sharing, including the use of satellites, fixed and moving observing platforms, all feeding into common data management and the Global Ocean Observing System (GOOS);
- Creating an information portal, regularly providing and updating authoritative quality-controlled information on the state of the ocean to all stakeholders, through available new communication and data assimilation technologies.



## Potential Outcomes:

- Help to increase awareness about the state of the ocean based on the most reliable data and information;
- Provide a framework for addressing gaps in knowledge, such as the cumulative impacts affecting ocean health;
- Stimulate the development of new observation technologies to help address information gaps such as:
  - Mapping ocean space and its sub-soil in three dimensions;
  - Subduction zones and hot vents;
  - Observations of marine biological, biogeochemical and ecosystem variables;
- Provide data on ocean pollution issues, such as plastics and microplastics;
- Create scientific collaboration across disciplines, communities and approaches to address the impacts of ocean acidification;
- Provide a scientific and normative basis for the improved management of coastal and marine ecosystems, fisheries and aquaculture;
- Support the designation and management of marine protected areas and habitats;
- Develop the capacity to predict ocean conditions, using a combination of observations and modelling to facilitate adaptive management;
- Create service delivery mechanisms that would capitalise on observations, research and development, in order to meet the needs of multiple stakeholders;
- Facilitate science/policy platforms to support marine policies based on the United Nations Convention on the Law of the Sea and other international agreements;
- Provide science support towards the conservation and sustainable use of biodiversity in Areas Beyond National Jurisdiction (ABNJ);
- Build stronger cooperation and partnership between the stakeholders responsible for ocean science while facilitating a faster and more effective delivery of knowledge to policy and decision-makers;
- Create capacities in marine observations and research and facilitate transfer of related technologies to developing countries, especially Small Island Developing States (SIDS) and Least Developed Countries (LDCs);
- Facilitate the sustainable growth of the ocean economy.