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(of UNESCO)

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Item 3.1 of the Provisional Agenda

**REPORT OF THE EXECUTIVE SECRETARY ON THE WORK ACCOMPLISHED
SINCE THE THIRTY-FIRST SESSION OF THE ASSEMBLY (July 2021–May 2022)**

Summary

The report starts with the strategic analysis by the Executive Secretary of the IOC's situation and of work highlights.

It is followed by the Analytical Programme Implementation Report (APIR) 2022, covering the full programme quadrennium (1 January 2018–31 December 2021) and the assessment of the results framework against approved performance indicators and targets.

The Addendum to this document, in English only, provides a detailed update of the work accomplished over the period from June 2021 to May 2022 by IOC functions.

In addition, the 'Report on 2020–2021 (40 C/5) Budget Implementation as at 31 December 2021' (IOC/EC-55/3.1.Doc(2)) and the 'Report on the Financial Situation of the IOC Special Account at year end 2021 and forecast for 2022' (IOC/EC-55/3.1.Doc(3)) complete the documentation in support of the oral presentation of the Executive Secretary to the plenary session of the Executive Council.

Decision proposed: The Executive Council is invited to take note of this report and consider the draft decision referenced as Dec. EC-55/3.1 in the Provisional Action Paper (document IOC/EC-55/AP).

INTRODUCTION – STRATEGIC ANALYSIS BY THE IOC EXECUTIVE SECRETARY

Staying the course after IOC-31

1. The strategic analysis presented in the Report of the IOC Executive Secretary to the 31st IOC Assembly in June 2021 ([IOC/A-31/3.2.Doc\(1\)](#)) remains valid, and the short 4-page segment below simply complements and updates it.
2. Despite the complex international situation in the wake of the COVID-19 pandemic and the geopolitical tensions due to, *inter alia*, the military conflict in Ukraine, the year 2022 is supposed to be the “year of the ocean”. Its start was marked by the ‘One Ocean Summit’, the first One Planet Summit entirely dedicated to the Ocean, which was organized in Brest (France) on 9, 10 & 11 February 2022 in the context of the French Presidency of the Council of the European Union and with the support of the United Nations. UNESCO Director-General spoke at the high-level segment of the Summit in presence of many Heads of State and government. The IOC mobilized UNESCO’s contribution to the Summit, organized and/or participated in key Summit events.
3. The Seventh ‘Our Ocean Conference’ in Palau (13–14 April 2022) provided additional momentum for ocean stakeholders, particularly in generating ocean commitments for and from SIDS and the Pacific. The “ocean route” of 2022 will continue through: the 10–12 May 2022 African Conference in Cairo, Egypt, setting the [Ocean Decade](#) roadmap for the continent; the 22nd meeting of the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea focusing on ocean observing (6–10 June 2022); and the Ocean and Climate Dialogue of the UNFCCC (also in June 2022). After the 55th session of the IOC Executive Council, IOC will focus on the critically important ‘United Nations Ocean Conference’ in Lisbon (27 June–1 July 2022), co-hosted by Portugal and Kenya. Conclusions and commitments from all the above events should shape the ocean dimensions of the 2022 Conference of the Parties to the Convention on Biological Diversity (CBD CoP-15 (Part 2), Kunming, China) in the third quarter of 2022, determining the global post-2020 biodiversity agenda. Later this year, the UN Climate Change Conference 2022 (UNFCCC CoP-27) in Sharm El-Sheikh (Egypt, 7–18 November 2022) should be key for strengthening the ocean and climate nexus, catalysing ocean-based climate action and setting a solid course for the climate change agenda in Africa.
4. As the UN Secretary-General Envoy for the Ocean Ambassador Peter Thomson stated on several recent occasions, “*the decline of the ocean health continues, but the society is mobilizing more and more to counter it.*” Difficult negotiations are taking place at the World Trade Organization on the elimination of harmful States’ subsidies to large fishery fleets. In early March 2022, the 5th session of the UN Environment Assembly (UNEA-5) adopted a resolution starting a process of developing an international legally binding instrument to end plastic pollution, including in the marine environment. There are expectations that national and communal commitments to combat global warming, loss of biodiversity and pollution will become more ambitious, and their implementation will be strengthened. There is momentum for establishing more marine protected areas both on land and in the ocean, particularly under the 30 x 30 initiative (protecting at least 30% of the area of the planet, including the ocean, by 2030).
5. The Executive Secretary hopes that IOC Member States will be satisfied with the pilot *State of Ocean Report* (StOR), which was first proposed in his oral report to the Executive Council at its 53rd session (February 2021). The pilot version capitalizes on data from IOC-sponsored programmes and affiliated networks. We hope that future editions will include contributions from other UN agencies and key actors outside of the UN System. In this way, the world will be kept informed not only of the salient changes in ocean environment but also of the relevant activities in these areas. Publishing the report on an annual basis, ideally on the eve of 8 June (the World Oceans Day) can contribute to raising global awareness and to mobilizing actions to manage and protect the ocean, for the life in it, for climate regulation and ultimately the wellbeing of people.

6. The Global Ocean Observing System (GOOS) is enabling the provision of required ocean information in support of monitoring and predicting the changing climate, ocean health, marine life, weather, and hazard warnings. The *in situ* observing system now numbers about 10,000 ocean observing platforms, across 12 global ocean observing networks, with some 84 countries contributing to the system. A recent study in *Frontiers in Marine Science* reveals that sustained biological observations only cover 7% of the entire ocean surface, and some of the biggest data gaps are in areas of rich biodiversity and high human pressure. Nevertheless, 12 BioEco (biology and ecosystems) ocean observing networks are now strengthened. The United Nations Decade of Ocean Science for Sustainable Development 2021–2030 is an opportunity. More than half of the current Decade actions highlight the Decade challenge of integrated ocean observing system. Ensuring that these initiatives contribute to coordinated observing systems is vital for supporting the transformation envisioned under the Ocean Decade. Therefore, IOC through GOOS proposed a Decade Coordination Office for Ocean Observations to facilitate this work.

7. Since the release of its [Recommendation on Open Science](#) in 2021, UNESCO has called on countries to increase scientific collaboration and information sharing, making all scientific data and knowledge openly available, accessible and reusable for the benefit of society. The Open Science approach, complemented by the new Unified Data Policy of the World Meteorological Organization (WMO), has the potential to reduce digital, technological and knowledge gaps. The Executive Council at this session will consider a recent report, the result of a multi-agency workshop, which proposes a number of potential solutions for facilitating ocean observations within areas under national jurisdiction, such as the EEZs, to be implemented through UN agencies (agenda item 3.4).

8. Ocean forecasting has a significant potential of developing new important numerical products. Equally, there is a need to significantly increase the use of satellite data, merging it with *in situ* data, to scale up efforts on ocean data reanalysis and to facilitate intercomparisons of predictive ocean models. In recent discussions, the Deep Ocean Observing System community mentioned the need for quasi-real time prediction of submarine heat waves, episodes of deoxygenation and acidification. The recent, likely disease-based, bleaching of corals in the Caribbean points at the urgency of developing an ecosystem health component of the ocean prediction system, encompassing key multiple stressors. At the ‘One Ocean Summit’ in Brest a major commitment was made on establishing, on the basis of Mercator International, an intergovernmental organization in Europe, which will be spearheading ocean data processing and forecasting. This organization may become a new key contributor to IOC goals, creating a new level of delivery of processed ocean data, in real time and delayed mode, also acting as a Decade Collaborative Centre.

9. The development of Ocean Data and Information System (ODIS) and its key component, Ocean InfoHub, is progressing well. Ocean data and the issue of their openness and access, are becoming a “hot topic”, and many new players and partners are joining the ocean data quest. A highlight for IOC was the successful International Ocean Data Conference organized in Sopot (Poland) in February 2022. With major Ocean Decade programmes and other developments, conditions are becoming more and more conducive for creating a “digital ecosystem of the ocean” or “the digital twin of the ocean”, enabling transparent and informed ocean management.

10. For several years, the European Commission Directorate-General for Maritime Affairs and Fisheries (DG MARE) and IOC-UNESCO have been cooperating in the promotion of maritime spatial planning worldwide. Since 2017, this cooperation has been taking place in the framework of a joint roadmap (MSP Roadmap). In October 2021, IOC successfully completed the EC-funded MSPGlobal Project, which resulted, *inter alia*, in the publication on a new MSPGlobal International Guide on Marine/Maritime Spatial Planning. The European Commission committed in January 2021 to support a new phase of MSPGlobal expanding marine spatial plans in the world in support of a new MSP Roadmap covering the period 2023–2028. Another DG MARE-sponsored project focusing on ocean literacy, started in 2022. Long-term fruitful collaboration with the Global Environment Facility, UNDP and UNEP continues under the IW:Learn umbrella with a new 4-year project and two new regional projects focussing on Large Marine Ecosystems in the Sargasso Sea and in the Black Sea.

11. The IOC Chair, IOCINDIO Chair, IOC Vice-Chair for Electoral Group 4 and Executive Secretary have been deeply involved in the establishment and the start of work of the open-ended intersessional working group on the status of IOCINDIO. Two online meetings had been held by the end of March 2022, and the Group is actively discussing the terms of reference of the to-be-established Sub-Commission, its regional area of work, with a focus on identifying positive ways of interacting/cooperating with IOCAFRICA and WESTPAC, avoiding duplication or weakening mandates of these two IOC Sub-Commissions.

12. The IOC tsunami programme is strengthening under the most useful guidance of the expert community, e.g., through the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WS), and with efficient support of the IOC Tsunami Unit. There is expectation to step up the scientific and technological capacity of the system, increase its area of coverage, an attempt to develop warnings for tsunamis generated by some non-seismic sources. The ambitious Tsunami Ready programme is working towards the objective to have all coastal municipalities that are under risk of tsunamis recognized as “Tsunami Ready” by 2030.

13. A key test to the IOC Tsunami System happened on 15 January 2022. The massive explosion on the volcanic island of Hunga Tonga - Hunga Ha'apai (HTHH), about 30 km south-southeast of Fonuafo'ou island in Tonga, generated a tsunami that caused loss of life and damages locally, regionally, and across the Pacific. This was the first time that the Pacific Tsunami Warning Center (PTWC) had to respond, almost instantly, to such an event, since its system is primarily focused on earthquake-generated tsunamis representing nearly 90% of the past cases of tsunami in the world. The PTWC team managed to issue tsunami threat messages despite major technical difficulties together with National Tsunami Warning Centres and National emergency Management Offices that issued warning and evacuation orders saving lives. Following this event, an IOC Post-Event Assessment for the HTHH volcanic eruption and tsunami was conducted. As well, the Intergovernmental Coordination Group (ICG) for the Pacific Tsunami Warning and Mitigation System (PTWS) established a Task Team on Tsunami Hazard Response and requested it to prepare a PTWS HTHH Interim Volcano Tsunami Procedures Implementation Plan.

14. IOC continues to build scientific and institutional capacity of all its constituencies through the transfer of marine technology, education and training. The IOC Group of Experts on Capacity Development engages leading experts in the preparation of the IOC CD Strategy 2023–2030. The strategic approach is to design relevant actions to assist Members States in developing and expanding the capacity on sustainable management of the ocean. Through the trainings delivered via the OceanTeacher Global Academy global network of 17 Regional and Specialised Training Centres, OTGA delivered 24 on-line training courses for the period June 2021–December 2021. Eight additional online training courses are to be delivered during the first semester of 2022 through centres in Belgium, Norway, Argentina, Mozambique, and Portugal. WESTPAC Regional Training and Research Centres delivered trainings in Marine Biodiversity and Ecosystem Health (RTRC-MarBEST), Ocean Dynamics and Climate (RTRC-ODC), Reef Management and Restoration, Marine Toxin and Food Security, and Plastic Marine Debris and Microplastics. Early career professionals were also engaged in RTRCs programmes and trainings leading to further advancement of their knowledge and providing collaboration and networking opportunities.

15. The good progress of the Ocean Decade will be reported upon under agenda item 4.1. The Decade Coordination Unit is ably supporting the unprecedented scale of activities, although mobilization of resources remains a key challenge for the Decade during the transition from the planning phase to the action phase. We see fruitful and already massive engagement of individuals, communities, institutes, organizations, and countries in the Decade. Many activities, including 31 Decade Programmes, resulted from the First Call for Decade Actions. More will be announced soon following the analysis of submissions to the Second Call. On 15 April 2022, the Third Call for Decade Actions focusing on sustainable ocean economy and blue food was announced. The Decade Alliance is acquiring momentum, with the involvement of leaders of the world at the highest level of authority, as exemplified by the recent adhesion of H.E. Mr Jonas Gahr Støre, Prime Minister of Norway, and H.E. Mr Wavel Ramkalawan, President of the Republic of Seychelles. Twenty-five (25)

National Decade Committees are in place, and more are in the making. The Decade Stakeholder Forum, expert roster, four informal working groups on cross cutting issues (Ocean Data, Innovation and Technology, Communication and Monitoring/evaluation) are providing advice on the co-design of actions and the Decade engagement strategy.

16. The Executive Secretary would like to highlight three important dimensions of the Decade that will determine its success. *Firstly*, it is important to find a way to ensure that the bottom-up proposed and subsequently endorsed Decade Actions, in their totality, create a basis for sustainable ocean management routed in planning and science. This requires support of Member States and funders and also calls for a structured process for setting priorities and targets across the Decade and for the current 10 Decade challenges. The potential and engagement of the recently established 15-member Decade Advisory Board is impressive. The Executive Secretary further calls on all actors to consider how to make the Decade larger than the sum of all its activities and structures. *Secondly*, the Decade was proposed and is coordinated by the IOC. The Ocean Decade and IOC should go towards the future hand in hand, reinforcing each other so that the Decade helps IOC to transform and grow into a stronger, more capable organization, delivering along all components of its value chain. Further efforts are required for all IOC Functions to start working as an end-to-end system. Moreover, the Decade has reached such a level of visibility that it may look to sponsors as a more attractive investment than IOC, and this is an issue for fundraising related to IOC core programmes. The complementarity between the Ocean Decade and IOC activities should be further pursued. *Thirdly*, and this may be the answer to the issues flagged above, there is a need for an overarching Decade programme that would be bringing together most of Decade components and turn them into a movement towards enabling science-based ocean planning and management, as advocated by the High-Level Panel for a Sustainable Ocean Economy.

17. As the home of ocean science in the UN System, IOC can and should play the role of ocean science enabler and facilitator of the sustainable ocean planning. IOC with partners created conditions for reversing the decline in ocean health based on new level of awareness, suggesting solutions, strengthening engagement and commitment (see Executive Secretary's considerations in his [report to the last Assembly](#)). The Executive Secretary is continuing to work on the related concept of "optimal" and "healthy" IOC, and it will be presented to the IOC Assembly at its 32nd Session of in 2023. The Internal Oversight Service (IOS) Evaluation of the strategic positioning of IOC and its conclusions ([212 EX/9](#)) are very useful in this regard.

18. The Executive Secretary would like to thank the IOC Secretariat for the work accomplished despite the shortage of resources, very often in stressful conditions, sometimes with requests coming at a short notice, and still under the difficult conditions of pandemic. The Executive Secretary is proud to be part of the IOC Secretariat team.

19. On behalf of the IOC Secretariat, the Executive Secretary would like to thank the IOC Chair Mr Ariel Troisi and all IOC Officers for their strategic insight and guidance to the work of IOC. This work is voluntary on their part, but their dedication is unparalleled. Finally, it is the interest and support of Member States, leadership by Chair and Officers and overarching support by Secretariat that keeps the IOC, despite all storms, steady on the course towards "The Ocean We Need for the Future We Want".

ANALYTICAL PROGRAMME IMPLEMENTATION REPORT 2018-2021

[Abstract from 214 EX/4.I: Analytical Programme Implementation Report (APIR) 2022 (1 January 2018–31 December 2021)]

Introduction - Highlights of programme achievements

16. Following the adoption by the United Nations General Assembly of the Implementation Plan of the United Nations Decade of Ocean Science for Sustainable Development (the Ocean Decade) 2021-2030, IOC has embarked on the full-scale coordination of the Decade. It established a number of global and regional coordination mechanisms, which, facilitated by partners like NORAD, the Pacific Community (SPC) and the Indian Ocean Rim Association (IORA), are meant to ensure energetic and self-driven development of unique regional perspectives. The First Call for Decade Actions resulted in the endorsement of 31 transformative programmes and other major initiatives. The Decade Actions endorsed in 2021 bring together a collective investment in the order of \$840 million over the next three years. Still, more resources will be needed to unlock the full potential of the Ocean Decade.

17. IOC is establishing dozens of Decade communities of practice to ensure that all nations, in particular SIDS and LDCs, are equipped with tailored ocean science capacities, strong institutions, and ability to develop and use technology and technical design to reap the benefits of the new ocean. A network of philanthropic organizations was established, bringing together 20 international foundations.

18. The Ocean Decade Alliance is taking shape with world leaders and countries joining. The early private sector champions of the Ocean Decade are already arising, such as a new partnership with FUGRO (world leader in geo-intelligence) for setting up an ocean Data initiative and with the AXA Ocean Research Fund, to set up an Ocean research fund on coastal resilience. Ocean Decade Virtual Series events were organized to establish a global community around women in ocean science with a view of supporting and empowering them at all levels of their career.

19. The Commission successfully assumed its custodian role in the development of the methodology to support Member States' implementation of and reporting on the SDG target indicators 14.3.1 and 14.a.1. It contributed to informing the negotiation process of an International legally binding instrument on the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction. IOC further strengthened ocean data exchange and services, advanced research in key scientific areas such as ocean acidification and deoxygenation, facilitated the connectivity of the science-policy interface, and worked on enhancing ocean science capacities in its Member States, in particular in Africa and SIDS, and on fostering gender equality in ocean sciences. IOC has also achieved important results in the development of ocean literacy, thus contributing to the achievement of SDG target 4.7 on quality education. 20. Leading such a vast and successful global movement as the Ocean Decade, while also strengthening IOC's core programmes, requires significant additional resources. Key strategic partnerships will need to be reinforced and new ones established to ensure success.

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[...]

Key trends, challenges and opportunities

108. During the 2018-2021 quadrennium, despite certain disruptions in ocean observations and data exchange caused by the COVID-19 pandemic, IOC has succeeded to further advance international cooperation in delivering ocean science for the sustainable management of the ocean.

109. Following the adoption by the United Nations General Assembly of the Implementation Plan of the United Nations Decade of Ocean Science for Sustainable Development (the Ocean Decade) 2021-2030, IOC established a number of global and regional coordination mechanisms, including dozens of communities of practice. The First Call for Decade Actions resulted in the endorsement of 31 transformative programmes and other major initiatives. The Commission successfully assumed its custodian role in the development of the methodology to support Member States' implementation of and reporting on the SDG target indicators 14.3.1 and 14.a.1. It contributed to informing the negotiation process of an international legally binding instrument on the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction and further strengthened ocean data exchange and services, advancing research in key scientific areas such as ocean acidification and deoxygenation fostering the science-policy interface, enhancing ocean science capacities in

its Member States, in particular in Africa and SIDS, and fostering gender equality in ocean sciences. IOC has also achieved important results in the development of ocean literacy, thus contributing to the achievement of SDG target 4.7 on quality education. Ocean Decade Virtual Series events were organized to establish a global community around women in ocean science to support and empower them at all levels of their career.

110. In doing so, IOC continued to reinforce its cooperation within and outside the United Nations building on the solid support of its Member States, the Commission further developed its links with multilateral partners such as GEF, EC, the Pacific Community and the Indian Ocean Rim Association; private sector partners such as AXA Ocean Research Fund, FUGRO, Panerai and Prada. It continued its efforts to foster engagement of the civil society, notably the sailing community through cooperation with the International Monohull Open Class Association. The Ocean Decade Alliance started gaining momentum with numerous world leaders and institutions joining it.

111. With efforts and achievements of this quadrennium, IOC is poised to work with its partners to successfully coordinate the Ocean Decade and its ambition to deliver science solutions to reverse the decline in ocean's health with great benefits for humanity.

Major achievements realized during the quadrennium

112. The large consultative process led by the IOC within the United Nations Ocean framework manifested itself in the elaboration of a comprehensive and community-based Implementation Plan for the United Nations Decade of Ocean Science for Sustainable Development 2021-2030, with a meaningful division of labour among all partners in the United Nations system. In June 2021 the IOC Assembly adopted the Terms of Reference of the Decade Advisory Board (DAB), which was established in December 2021 following an international call for nomination. The 2020 First Call for Decade Actions resulted in some 250 proposals for potential Decade Actions. Proposals included 31 transformative programmes, 10 United Nations-led Decade Actions and over 40 contributions, covering diverse themes, such as ocean science in support of policy development in Pacific SIDS, ocean literacy, deep sea research and management, ocean ecosystem management under multiple stressors, underwater cultural heritage, ocean observations, coastal resilience and sustainable fisheries. The second Call for Decade Actions was launched in October 2021 with a view to deliver science-based actions and solutions in the areas of marine pollution, ecosystem resilience and the ocean and climate nexus. In addition to the high-level global launch event of the Decade, which brought together several heads of States and leaders of United Nations agencies, IOC organized in 2021 the United Nations Ocean Decade Kickoff Conferences for the Western Pacific and Tropical Western Atlantic and started the preparations for a major Decade kick-off conference on ocean science in support of Africa's sustainable development to take place in 2022. Further commitments and partnerships to be catalysed in 2022 include the international "One Ocean Summit" hosted by France, the "Our Ocean Conference" to be hosted by USA and Palau, and the Lisbon "UN Ocean Conference" to be hosted by Kenya and Portugal.

113. IOC's leadership took an active part in the negotiation process on an international legally binding instrument (ILBI) on the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction (BBNJ). In October 2020, with a view to inform the negotiation process, the Secretariat published a Non-Paper on existing and potential contributions of IOC-UNESCO to the BBNJ process (IOC/INF-1387) in the areas of marine research, data, capacity development and the transfer of marine technology. In November 2021, a dedicated information session for United Nations Member States was dedicated to the work of IOC in relation to clearing house mechanism for ocean data and information, as well as capacity development.

114. Significant progress was made during the quadrennium in the development of the methodology to support Member States' implementation of and reporting on the two SDG target indicators 14.3.1 and 14.a.1, for which the IOC has been assigned the custodian role in the United Nations system. A dedicated portal for gathering **data on ocean acidification** was developed, and related capacity development activities at the regional level implemented, to attain data requirements of SDG Target 14.3.1. The 2nd edition of the **Global Ocean Science Report** (GOSR) was launched on the occasion of the IOC's 60th anniversary, on 14 December 2020. In addition to establishing a solid basis for measuring progress towards the attainment of SDG Target 14.a, the report provides the baseline for ocean science capacity and related investments and will serve as a monitoring tool for the United Nations Ocean Decade. The GOSR's gender-disaggregated data continues to serve as a progress monitoring mechanisms.

115. The second United Nations **World Ocean Assessment** was released in April 2021 through a global event with the participation of IOC as a speaker, and the third cycle of the United Nations Regular Process on the assessment of the state of the marine environment was initiated. In that context, IOC and DOALOS have identified specific collaborations in the area of science-policy interface, capacity development and synergies with the Ocean Decade.

116. At the interface of **science and policy**, IOC was able to develop a consolidated, multi-partner research and observation agenda for ocean carbon in support of the United Nations Framework Convention on Climate Change (UNFCCC) and its Paris Agreement. This entailed active participation in the UNFCCC SBSTA Research Dialogues, a leading role in the Ocean Pathway of the non-State Party Marrakech Partnership of the Convention, and informing the planning of COP 26, specifically Ocean Action Day. IOC actively participated in the COP 26 and COP 27 conferences through more than a dozen events promoting the contribution of ocean science to inform climate change adaptation and mitigation, highlighting the Ocean Decade framework, and with focus on the IOC's work in the area ocean acidification, SDG 14, blue carbon, ocean observation, and capacity development.

117. The establishment of a regular ocean-climate dialogue by COP 26 provides an important focus for the future work of IOC. IOC continued to support the Global Ocean Acidification Observing Network, co-sponsoring the Blue Carbon Initiative with Conservation International and IUCN and to co-sponsor research on and management of Harmful Algae with FAO and SCOR. Since 2020, it hosts the secretariat of the International Partnership for **Blue Carbon**, funded by Australia. In the context of the United Nations inter-agency Group of Experts on the Scientific Aspects of Marine Environmental Protection, IOC, together with IMO, started working on guidelines for biofouling and prevention of spreading of invasive marine species. Expert work on alien species constitutes the focus of the project in the Canary Current Large Marine Ecosystem funded by Spain. To better respond to the needs of its Member States, IOC Regional Subsidiary Bodies stepped up their assistance and delivery of service at the regional level and the level of Member States.

118. The EU-funded **Marine Spatial Planning** Global (MSPGlobal) project increased awareness and capacities of governmental authorities and stakeholders. The project main output is a new set of international guidance for MSP which was launched in October 2021 at the project final conference. Funding from the Government of Sweden further supported the development of MSP in Africa, South-East Asia and the Caribbean. IOC increased its collaboration with the Global Environment Facility with two regional projects for Large Marine Ecosystems of the Black Sea and of the Sargasso Sea, in addition to the new IW-Learn Global project. In January 2021, the IOC hosted the 37th meeting of the GEBCO Guiding Committee and GEBCO Symposium, as a contribution to the Ocean Decade in advancing ocean mapping campaigns.

119. The **Global Ocean Observing System** (GOOS) 2030 Strategy was adopted by the IOC in 2019 and now forms the basis of the work of the GOOS Core Team of panels, expert teams and coordinating groups. In 2020, GOOS published a Roadmap designed to help nations, partners and sponsors envision actions together towards achieving this strategy. Similarly, the ocean data community mobilized to step up its work. In April 2020, as a first step towards the development of Ocean Data and Information System (ODIS), the Ocean InfoHub (OIH) project was launched, funded by the Government of Flanders (Belgium). Its initial focus is on Latin America, Africa and Pacific SIDS. Two other new projects were launched: the Pacific Islands Marine Bioinvasions Alert Network (PacMAN) and the OceanTeacher Global Academy 2. The Ocean Biodiversity Information System celebrated its 20th anniversary while continuing to be a broadly cited support to researchers and feeding statistics into global and regional assessments such as those of the United Nations Regular Process (World Ocean Assessment) and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), as well as the recent IOC led Global Harmful Algal Bloom Status report. Through PacMAN, and with support from OBIS, IOC is developing local science-capacity in Pacific SIDS to establish an early-detection/early-warning system of marine invasive species using molecular methods (environmental DNA).

120. Development and harmonization of **regional tsunami warning systems** continued to be coordinated by four regional intergovernmental groups (NEAMTWS, CARIBE EWS, PTWS and IOTWMS). One hundred and thirty-nine Member States, of which 28 SIDS and nine African countries, have now established National Tsunami Warning Focal Points/Centres. The South China Sea region has now its own dedicated Tsunami Advisory Centre. National Tsunami Warning Centres in France, Greece, Italy, Portugal and Turkey were accredited as regional Tsunami Service Providers. The performance-based community recognition programme Tsunami Ready is now piloted in three regions - Caribbean, Pacific and Indian Ocean - with over 25 communities recognized in 15 countries, including 10 SIDS. The World Tsunami Awareness Days were celebrated. In particular, the November 2020 event, organized in cooperation with UNDRR, featured a 30-day online campaign with the participation of the Director-General of UNESCO.

121. IOC continued to focus on **fostering capacities** of its Member States through its Regional Subsidiary Bodies – WESTPAC, IOCARIBE, IOCAFRICA and IOCINDIO – critical in providing strategic and technical support for national and regional Decade activities. To ensure a better-targeted approach, the 2nd Capacity Development Needs Assessment Survey was conducted online in February 2021, resulting in 1005 responses from 118 countries. The 2nd International Indian Ocean Expedition engaged more than 50 African scientists in research cruises organized by South Africa. 16 Ocean Teacher Global Academy (OTGA)

Regional/Specialized Training Centres, as well as the WESTPAC Regional Training and Research Centres contributed to substantially raise the level of expertise. Support from NORAD gave a new momentum to IOC's capacity development efforts and enabled the launch of two projects in Africa: (i) database of training opportunities in Africa (linked to OIH); and (ii) Science for Management in Africa: Building Capacity for Expanding Ocean Acidification Research and Observation, and Detection and Early Warning Systems for Harmful Algae. With the support from NORAD and AUSAid, Tsunami Ready recognition processes were triggered in the Caribbean for 6 communities in Barbados, Dominican Republic, Grenada, Jamaica and Trinidad and Tobago.

122. The Ocean Decade Implementation Plan devoted specific attention to **SIDS**, including the value of **indigenous knowledge**. Following the positive experience of the first Global Planning Meeting in Copenhagen in May 2019, every regional consultation engaged **young ocean professionals**. Support provided by the Government of Norway/NORAD in 2020 was critical for further strengthening capacities of Member States and for facilitating the regional coordination for the Decade, including in the Pacific and Caribbean SIDS regions, and for building a global network of Early Career Ocean Professionals.

123. The Ocean Decade presents a unique opportunity to identify and capitalize on synergies between SDG 5 and SDG 14 and to move from gender-disaggregated assessments within the field of ocean science workforce to a more coherent framework of action. Ocean Decade Virtual Series events were organized with the support of Canada to establish a global community around **women in ocean science**, and to support and empower them at all levels of their career. Regular assessments of women in ocean science conducted through GOSR publications allow to track change and observe the impacts of new initiatives and gender sensitive strategies. IOC's future work in the area of gender equality – as well as in many others - will benefit from the recommendations by the IOS Evaluation of the strategic positioning of IOC-UNESCO (IOS/EVS/PI 197 and 212 EX/9).

124. To ensure that all nations, in particular SIDS and LDCs, are equipped with tailored ocean science capacities, strong institutions, and ability to develop and use technology and technical design to reap the benefits of the new ocean, IOC-UNESCO is establishing dozens of **Decade communities of practice**. Agreements developed with the Pacific Community (SPC) and the Indian Ocean Rim Association (IORA) are meant to ensure powerful and self-driven development of unique regional perspectives. The establishment of a dedicated network of philanthropic organizations, bringing together 20 international foundations is part of the resource mobilization for the Decade aimed at opening up better coordinated and larger funding streams from philanthropy and the private sector. The Ocean Decade Alliance is taking shape with world leaders and countries joining. The early private sector champions of the Ocean Decade are already contributing through the development of new partnerships with FUGRO (world leader in geo-surveying) in the area of ocean data, Panerai in the area of ocean literacy, and with the AXA Ocean Research Fund in support of Decade actions towards improving coastal resilience.

125. With the support of the Swedish Government, IOC has launched the **Ocean Literacy Platform** and produced a toolkit which was tested through the ASPNet in schools in 36 countries. In June 2021 the IOC Assembly in endorsed the IOC Ocean Literacy Strategy in support of the United Nations Ocean Science Decade. At a first meeting in November 2020, IOC Chair, staff, and experts of the STAB of the 2001 Convention on the Protection of the Underwater Cultural Heritage, agreed to work together in the development of a strategic framework identifying priority actions for the underwater cultural heritage community, which can inspire and stimulate "Decade Actions".

[...]

Global Priority Africa

Flagship 4: Fostering science for the sustainable management of Africa's natural resources and disaster risk reduction

310. Capacity development in marine science and technology continues to be the key focus for the IOC's Sub-Commission for Africa and the Adjacent States, with three regional training centres established within the framework of the Ocean Teacher Academy (OTGA) programme in Kenya, Mozambique and Senegal. The centres organized 12 training courses, attended by more than 250 trainees from 27 countries. The availability of the OTGA e-learning platform allowed a quick re-orientation and organization of online courses as from mid-2020.

311. The Second International Indian Ocean Expedition (2015-2020) offered an excellent opportunity for the Member States from the region to strengthen their ocean observations capabilities. The Government of South Africa provided its oceanographic research vessel, the SA Agulhas II, for two cruises, enabling participation of

more than 50 marine scientists and students from Comoros, Egypt, Kenya, Madagascar, Mozambique, Nigeria, and the United Republic of Tanzania. Two online training workshops on Understanding the Benefits of Operational Ocean and Forecasting Systems (“Awareness Workshop” and on Implementing an Operational Ocean Monitoring and Forecasting Systems (“Hands-on Workshop”) were organized in June 2021. Operational Ocean Monitoring and Forecasting System products benefit maritime navigation, harbour management, search and rescue, coastal disaster risk reduction, coastal environmental management, oil spill response and management, as well as blue economy activities. The two trainings attracted 65 participants from Africa.

312. Five regional workshops on Marine Spatial Planning in English, French and Portuguese were attended by more than 200 participants from 20 Member States. These were followed by a series of national marine spatial planning workshops in Cameroun, Comoros, Gabon, Ghana, Kenya, Madagascar, Mauritius, Morocco, Mozambique and Tanzania, with the financial support from Sweden. Case studies on Gender and Poverty perspectives in Marine Spatial Planning were undertaken in Kenya, Madagascar and Tanzania. A technical workshop on coastal vulnerability in Libreville, Gabon, in November 2019, with experts from Angola, Cameroon, Congo, Equatorial Guinea, Gabon, Democratic Republic of Congo, and Sao Tome and Principe, laid the foundation for developing a sub-regional coastal vulnerability project. Spain-funded project focused on assessing the effects of climate change and ocean stressors on the natural dynamics of the Canary Current. It involved scientists from Cabo Verde, Gambia, Guinea, Guinea-Bissau, Mauritania, Morocco, Senegal and Spain (Canary Islands), with a strong participation of female and early career ocean scientists.

313. The development of the African regional node for the Ocean Information Hub (OIH) started with the stakeholders’ workshop in June 2020, attended by more than 100 participants. IOC developed and updated six thematic databases: Experts and Institutions; Training and Research Opportunities; Document and Best Practices; Spatial Data and Maps; Ocean Observation Platforms in Africa; and Marine Related Projects in Africa.

314. Under the framework of the IOC/UNESCO Indian Ocean Tsunami Warning and Mitigation System (IOTWMS), Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa and United Republic of Tanzania received training coordinated by IOC and tsunami threat information provided by three designated Tsunami Service Providers (Australia, India, and Indonesia). Three initiatives deserve particular mention. Capacity assessment of tsunami preparedness provided a benchmark of the current status of tsunami warning and mitigation systems, identifying gaps, and prioritizing capacity development needs in 20 Member States across the Indian Ocean (including Kenya, Madagascar, Mauritius, Mozambique and United Republic of Tanzania). All African Member States bordering the Indian Ocean, except Somalia, participated in IOWave18 and IOWave 20 tsunami exercises. United Republic of Tanzania, Kenya, Mauritius and Seychelles also conducted community evacuations as part of the drill for IOWAVE18. Despite the COVID-19 pandemic, Kenya, Mauritius, Mozambique and Seychelles managed to also involve local communities in IOWave2020. Representatives from Comoros, Kenya, Mozambique, Mauritius, Seychelles, South Africa, and United Republic of Tanzania participated in various meetings and training workshops (Tsunami Ready, evacuation planning, Palu & Sunda Strait Symposium, tsunami warning chains and critical infrastructure, intersessional working group and task team meetings).

315. Under the framework of the IOC/UNESCO Tsunami Early Warning and Mitigation System in the North-eastern Atlantic, the Mediterranean and connected seas (NEAMTWS), a workshop on Preparing for the Next Tsunami: Reducing Losses and Damages in the Coastal Western Mediterranean Areas was held in Rabat, Morocco, in November 2018. Two online workshops were organized by the National Institute of Oceanography and Fisheries (NIOF) in 2020 and 2021 in Cairo, Egypt to commemorate the World Tsunami Awareness Day. Morocco and Egypt participated in the NEAMWave21 tsunami exercise in March 2021 and in the online kick-off workshop of the new IOC EU ECHO NEAMTWS “CoastWAVE project’ in December 2021. Both countries are direct beneficiaries of the new EU-funded project and one of the project aims is to establish Tsunami Ready recognized community in Alexandria (Egypt) and El Jadida (Morocco) by end of 2023.

316. Building on the outcomes of the workshop “the Regional Consultation workshop for the United Nations Decade of Ocean Science for Sustainable Development 2021-2030 for Africa and the Adjacent Islands States” held in Nairobi, Kenya, January 2020, IOC, in collaboration with the Western Indian Ocean Marine Science Association (WIOMSA), undertook a Regional Gap Analysis from July-December 2021 to develop a participatory, succinct statement of the priority needs for Africa under the Ocean Decade and identify the key barriers, opportunities and actions to meet those needs. The results of the Regional Gap Analysis will be validated and presented to the African Regional Kick-Off Conference for the United Nations Decade of Ocean Science, organized by IOC and the Government of Egypt and scheduled for May 2022.

[...]

Global Priority Gender Equality

336. The [Global Ocean Science Report](#) (2020) revealed that 38.6% of total ocean science researchers are women, about 10% higher than the share of female researchers in natural science overall. Challenges remain, particularly when it comes to encouraging women in ocean science leadership and in overcoming the underrepresentation of women in the highly technical categories of ocean science. The United Nations Decade of Ocean Science for Sustainable Development (2021-2030) presents a unique opportunity for action to address these challenges.

[...]

Key achievements in addressing COVID-19 related challenges

126. IOC ocean observation related activities were particularly challenged during the pandemic because of cancelled research cruises, lack of maintenance of observing equipment, reduction in staff and in operational budgets. However, IOC succeeded in adapting its working methods including through: (i) preparation of guidelines for tsunami warning services, evacuation and sheltering during COVID-19 and (ii) survey on the impact assessment of COVID-19 pandemic on Seismic Tide Gauge and Tsunameter Networks and operations of Tsunami Service Providers. The availability of the OceanTeacher Global Academy e-learning platform allowed a quick re-orientation and organization of online courses as from June 2020, thus maintaining the IOC capacity development efforts at the planned level. IOC Regional Subsidiary Bodies demonstrated their adaptability by continuously advancing marine science development and cooperation among Member States in different regions. Some of the major United Nations meetings had to be postponed to the end of 2021 or even 2022, as is the case of the second United Nations Conference on the Ocean and International Ocean Data Conference 2022.

Funds mobilized and major partnerships established

127. The global and regional consultations held during the quadrennium for the elaboration of the Ocean Decade Implementation Plan offered the opportunity to the IOC to reinforce existing and establish new partnerships with United Nations agencies, bilateral and intergovernmental regional partners, philanthropic organizations, the private sector as well as the civil society. It also led to the creation of the Ocean Decade Alliance. Reinforced partnership with long-term bilateral donors, including through lightly earmarked funding, for example from NORAD, were pivotal for the Commission to deliver against its commitments and expectations by the Member States.

128. Inter-agency cooperation was strengthened in particular with DOALOS, IMO, WMO, FAO, UNEP, UNDP UNFCCC, UNDRR, WHO, IAEA, IUCN. For example, successful delivery of climate and operational services was ensured in close cooperation with WMO; cooperation with the Global Environmental Facility (GEF), UNDP and UNEP continued successfully and IOC was entrusted to deliver two GEF Large Marine Ecosystems projects (Black Sea and Sargasso Sea). A tripartite agreement was concluded with IAEA, FAO and WHO on Ciguatera Poisoning.

129. Capacity development and work at field level continued to be facilitated by IOC Regional Subsidiary Bodies as well as the OTGA Regional Training Centres and OTGA Specialized Training Centres, and the WESTPAC Regional Training and Research Centres. In the IOCINDIO region the two category 2 centres, in Iran and in India, provided valuable contributions and ensure regional ownership of programmes. Cooperation at regional level, mainly in IOCARIBE and IOCAFRICA, was increased in the area of ocean mapping through the GEBCO Seabed 2030 project. Cooperation with Prada and Panerai were critical to the progress in Ocean Literacy and a new partnership with the European Commission will allow new achievements in 2022.

Major challenges and remedial actions (other than those related to the COVID-19 pandemic)

130. The preparatory effort for the Ocean Decade, as well as the increased global recognition of the importance of IOC's work for advancing sustainable ocean management, increased substantially the workload of the IOC staff, impacting its capacity to deliver on core programmes. Key strategic partnerships will need to be reinforced and new ones established, including in the context of the Ocean Decade Alliance. Having acquired a leadership position in the United Nations on ocean-related issues, with a clear role as the provider of ocean science for agencies' agendas, there is a need to strengthen our capacities as the Decade's coordinating entity through active resource mobilisation. Such trends will continue to be observed during the implementation of the 41 C/5.

ASSESSMENT OF PROGRESS AGAINST APPROVED RESULTS FRAMEWORK

(Ref. 214 EX/4.1.INF)

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION

IOC Expected Result 1: Science-informed policies for reduced vulnerability to ocean hazards, for the global conservation and sustainable use of oceans, seas and marine resources, and increased resilience and adaptation to climate change, developed and implemented by Member States, towards the realization of the 2030 Agenda

| Integrated Budget Framework (non-staff) (in USD '000s) | | | | Funds mobilized (in USD '000s) | |
|---|--------------|--------------------|--------------|-----------------------------------|-----------|
| 39 C/5 (2018-2019) | | 40 C/5 (2020-2021) | | 2018-2019 | 2020-2021 |
| IBF as adjusted | Expenditures | IBF as adjusted | Expenditures | | |
| 20,351 | 16,544 | 18,559 | 12,042 | 9,066 | 18,279 |

| Performance Indicators (PI) and Targets (T) | Assessment against Target as at 31/12/2021 |
|---|--|
| <p>FUNCTION A PI: Number of supported Member States which have conducted up-to-date ocean research to address specific challenges of the ocean and human impacts on coastal areas</p> <p>T 2018-2021:</p> <p>(i) 54 Member States, of which 7 from Africa and 8 SIDS, participate in international research initiatives under the WCRP</p> <p>(ii) 94 Member States, of which 23 from Africa and 17 SIDS, integrate best practices, standards and methodologies to observe ocean acidification and blue carbon ecosystems</p> <p>(iii) 83 Member States of which 9 from Africa and 5 SIDS contribute to improving understanding of marine ecosystem functioning and the impacts of change on ecosystem services</p> | <p>(i) 19 Member States, of which 1 in Africa</p> <p>(ii) 104 Member States, of which 24 in Africa and 19 SIDS</p> <p>(iii) 95 Member States, of which 21 from Africa and 18 SIDS.</p> |
| <p>FUNCTION B PI: Number of supported Member States which maintained, strengthened and integrated global ocean observing, data and information systems to reduce vulnerability to ocean hazards and benefit from their outputs</p> <p>T 2018-2021:</p> <p>(i) Good level of participation and engagement in GOOS regional alliances of 68 Member States (out of 104 GOOS Member States), of which 12 in Africa and 9 SIDS</p> <p>(ii) 13 Member States, of which 5 in Africa and 1 SIDS, participate in IOGOOS, as an indicator of involvement in IIOE-2</p> <p>(iii) 20 Member States contribute to JCOMMOPS</p> <p>(iv) 100 Member States have established NODCs or Associate Data Units (of these 25 in Africa) and 10 Member States have established Associate Information Units Member States (of which 3 in Africa)</p> | <p>(i) 66 Member States of which 12 in Africa and 9 SIDS</p> <p>(ii) 13 Member States of which 8 in Africa and 2 SIDS</p> <p>(iii) 20 Member States</p> <p>(iv) NODCs or Associate data units: 93 data centres in 68 Member States of which 18 data centres in Africa; AIUs: 5 established, 1 in Africa (less than previous period due to extensive review and closures; re-activation campaign started June 2021)</p> |
| <p>FUNCTION C PI: Number of supported Member States which have developed early warning systems and preparedness to mitigate the risks of tsunamis and other ocean-related hazards towards increased resilience</p> | <p>(i) 138 Member States of which 12 in Africa and 36 SIDS</p> <p>(ii) 16 Member States, of which 6 SIDS</p> <p>(iii) 17 Member States of which 7 SIDS</p> <p>(iv) 14 of which 2 in Africa and 2 SIDS</p> |

| | |
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| <p>T 2018-2021:</p> <p>(i) 139 Member States, of which 28 SIDS and 9 in Africa, have National Tsunami Warning Centres</p> <p>(ii) 16 Member States, of which 6 SIDS, have increased communities' preparedness</p> <p>(iii) 15 Member States, of which 7 SIDS, developed capacities for tsunami and other coastal hazard assessment</p> <p>(iv) 14 Member States actively participate in operational ocean forecast system, of which 2 in Africa and 2 SIDS</p> <p>(v) 47 Member States developed capacities for research and management of harmful algae, of which 6 in Africa and 5 SIDS</p> | <p>(v) 50 Member States, of which 7 in Africa and 6 SIDS</p> |
| <p>FUNCTION D PI: Number of supported Member States that have ocean science and policy interface mechanisms in support of healthy ocean ecosystems in accordance with Agenda 2030</p> <p>T 2018-2021:</p> <p>(i) 40 Member States contribute to and use Bathymetric datasets through GEBCO</p> <p>(ii) 757 experts have been nominated by 72 Member States to the WOA Pool of Expert, with 21 from Africa and 5 from SIDS</p> <p>(iii) 48 Member States manage data sets relevant to ocean acidification (7 in Africa)</p> <p>(iv) 35 Member States, of which 7 in Africa and 5 SIDS, participate in science and capacity development programmes on nutrients assessment and management</p> <p>(v) 11 Member States, of which 5 from Africa and 2 SIDS, have held a regional workshop on coastal vulnerability aimed at developing a regional project on climate change adaptation.</p> | <p>(i) Over 95 Member States accessing datasets and 35 contributing datasets</p> <p>(ii) 796 experts including 87 experts from the African Group are now nominated to the Pool of Expert. The WOA was completed and released in April 2021</p> <p>(iii) 30 Member States, of which 5 in Africa</p> <p>(iv) 30 Member States, of which 7 in Africa and 1 SIDS (through Global Partnership on Nutrient Management (GPNM))</p> <p>(v) 5 Member States from Africa participating in a regional scoping workshop on coastal vulnerability, 6 Member States from Africa conducting national expert consultations in coastal and environmental pressures; National practices in coastal risks management published for 10 Member States, including 4 from Africa, 4 National workshops in preparation.</p> |
| <p>FUNCTION E PI: Number of supported Member States which implement science-based ecosystem management and measure progress on SDG 14 implementation</p> <p>T 2018-2021:</p> <p>(i) 108 Member States, of which 28 Africa and 10 SIDS, contribute to the implementation of workplans of IOC governing and regional subsidiary bodies</p> <p>(ii) experts from 50 Member States, including 8 from Africa and 5 from SIDS, participating in MSP international forum and training activities and applying knowledge towards the development of MSP national plans</p> <p>(iii) 17 Member States, of which 5 SIDS, participated in UN outreach activities, through Side events at BBNJ meeting, Our Ocean, UNFCCC</p> | <p>(i) 114 Member States, of which 29 in Africa and 19 SIDS</p> <p>(ii) 125 Member States, of which 13 in Africa, and 8 from SIDS</p> <p>(iii) 70 Member States, of which 10 SIDS took part in the Decade 'Brave New Ocean' event in February and Global Launch event on 1 June; 60 Member States, of which 9 SIDS, took part in the UNGA President's event on the SDG 14 where ADG/IOC presented the Ocean Decade. 55 UN Member States took part in the IOC information session on BBNJ.</p> |
| <p>FUNCTION F PI: Number of supported Member States which have developed institutional capacity and used it towards IOC's high-level Objectives</p> <p>T 2018-2021:</p> <p>(i) 52 Member States participated in the needs assessment survey, of which 12 from Africa and 11 were SIDS.</p> | <p>(i) 89 Member States, of which 28 in Africa and 6 SIDS</p> <p>(ii) 45 Member States submitted data to the GOSR2020 questionnaire, of which 11 in Africa and 2 SIDS; 52 Member States contributed to the GOSR Portal, of which 13 in Africa and 4 SIDS.</p> |

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|---|--|
| <p>(ii) 62 Member States, of which 8 SIDS and 8 from Africa, contributing to 2nd GOSR</p> <p>(iii) (a) CD plans implemented in 24 Member States in IOCARIBE region, 18 in IOCAFRICA, 16 in WESTPAC</p> <p>(b) 150 practitioners, of which 30 from Africa and 7 from SIDS trained in priority topics identified by regional subsidiary bodies</p> <p>(iv) 150 practitioners trained, of which 40 from Africa and 3 from SIDS, with a gender target of 40% women (5 RTCs established)</p> | <p>(iii)</p> <p>(a) CD implementation plans adopted by Sub-Commissions in 2021 and implementation started, largely dependent on XB: 24 Member States in IOCARIBE region, 25 in Africa (IOCAFRICA), 16 in WESTPAC</p> <p>(b) 1559 practitioners of which 255 from Africa, 335 from IOCARIBE, 520 from WESTPAC and 76 from SIDS.</p> <p>(iv) 1559 practitioners trained, of which 255 from Africa, 335 from IOCARIBE, 520 from WESTPAC and 76 from SIDS with a gender ratio of 44% women (16 RTCs established)</p> |
|---|--|

| Contribution of key partners |
|---|
| <p>Partnerships are critical to the successful delivery by the Commission of its consistently increasing mandate. Effective and efficient division of labor between UN Oceans partners takes a particular importance in the context of the UN Ocean Decade. Through global and regional consultations over the biennium, thousands of stakeholders from governments, science and technology, business, civil society and international organizations have contributed to the formulation of the Decade Implementation Plan. New partnerships have been established with philanthropic organizations, the private sector (Axa, Panerai, FUGRO), as well as regional intergovernmental partners.</p> <p>Successful delivery of climate and operational services is ensured in close cooperation with WMO, including through programme co-sponsorship. Cooperation with the Global Environmental Facility (GEF) and UNDP and UNEP continues successfully and IOC was entrusted by the GEF to deliver the next phase of the IW:Learn+ project (2022-2025) as well as two GEF Large Marine Ecosystems projects (Black Sea and Sargasso Sea). A tripartite agreement was concluded with IAEA, FAO and WHO on Ciguatera Poisoning.</p> <p>The IOC Assembly and WMO Executive Council adopted in June 2021 a WMO-IOC Collaborative Strategy, which identifies ways of mutually reinforcing programmes that focus on both operational and science-policy value chains covering oceans, climate, and disaster risk reduction. WMO has pledged to substantially increased its co-sponsorship commitment to the Global Ocean Observing System (GOOS).</p> <p>Capacity development and work at field level is facilitated by IOC Regional Subsidiary Bodies as well as the OTGA Regional Training Centres and OTGA Specialized Training Centres, and the WESTPAC Regional Training and Research Centres. In the IOCINDIO region, the two category 2 centres, in Iran and in India, provide valuable contributions and ensure regional ownership of programmes. Agreements under negotiation with the South Pacific Community and the Indian Ocean Rim Association will be an important step in this regard. The IOC CD strategy has enabled an across regions common approach to CD outputs. Cooperation at regional level, mainly in IOCARIBE and IOCAFRICA, was increased in the area of ocean mapping through the GEBCO Seabed 2030 project.</p> <p>Civil society partners are key in raising the awareness of the socio-economic value of the ocean and IOC's efforts in supporting the sustainable ocean economy and addressing major challenges and opportunities from the ocean. In the context of IOC's partnership with the International Monohull Open Class Association, Vendee Globe skippers collected vital observations, including from the least-visited areas of our global ocean, supporting the Global Ocean Observing System, within the framework of the Ocean Decade and under the leadership of OceanOPS.</p> |

| Key challenges | Remedial actions |
|--|--|
| <p>The preparation of the Decade increased substantially the workload of the Secretariat, impacting its capacity to deliver on core programmes. A sustained and well-staffed coordination unit will need to be established to match and support the level of ambition of the Decade during the next ten years. Emerging role for IOC might also need to be considered in the context of UNCLOS</p> | <p>A fundraising campaign is being implemented to catalyze further extrabudgetary investments in the Decade. A Decade Alliance was launched to bring in new donors and partnership agreement signed with several leading philanthropic institutions.</p> |

| Key challenges | Remedial actions |
|---|---|
| <p>and the BBNJ negotiations, which could further exacerbate this aspect.</p> <p>Key partnerships need to be established so that GOOS - with ocean observing at the beginning of a value chain that connects to data management, analysis and forecasting systems, and on to scientific information of relevance for policy and individual safety and decision-making - can grow to be a responsive system, with advocates ensuring its sustainability.</p> | <p>The co-sponsor role of WMO is key for the successful delivery in the area of climate and operational weather services, and engagement has yielded a positive result.</p> <p>The Ocean Decade will also be a transformative moment that GOOS intends to contribute to, with stronger delivery and fit for purpose as key objectives</p> |

| Impact of the COVID-19 pandemic on the achievement of the Expected result |
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| <p>The impact of the COVID-19-related lockdown was of a particular concern for the Commission's operational programmes – the Global Ocean Observing System and the International Oceanographic Data and Information Exchange - delivering the essential information needed in marine, climate and weather forecasts and warnings. The IOC-coordinated Global Ocean Observing System was found vulnerable to the impacts of COVID-19 in some cases, but resilient in many others – proving the value of international cooperation. Some activities, particularly linked to research vessel operations and the servicing of moorings, taking surface CO2 measurements, and the deployment of autonomous platforms like Argo floats and surface drifters, remained restricted, with the implementing community slowly adapting, finding new ways of cooperating, and operating under new restrictions. IOC conducted a number of surveys and will continue to work closely with its partners in the relevant communities to assess the complete impact through 2021, with reallocation of resources from cancelled activities and reduced travel. It is, however, becoming increasingly clear that data gaps will be created in the global ocean data archives due to cancelled research cruises, lack of maintenance of observing equipment during the pandemic, reduction in staff during and possibly after the pandemic and possibly reductions in operational budgets, which will be monitored through the GOSR Data Portal. The intergovernmental coordination of the Global Tsunami Warning System activities were limited to mostly online meetings, with governance meetings postponed to a later date in online mode, where necessary. Activities were quickly adapted to the new "working normal", including through: (i) preparation of guidelines for tsunami warning services, evacuation and sheltering during COVID-19 and (ii) survey on the impact assessment of COVID-19 pandemic on Seismic Tide Gauge and Tsunameter Networks, and operations of Tsunami Service Providers. The availability of the OceanTeacher Global Academy e-learning platform allowed a quick re-orientation and organization of online courses as from June 2020, thus maintaining the IOC capacity development efforts at the planned level. IOC Regional Subsidiary Bodies demonstrated their adaptability by continuously advancing marine science development and cooperation among Member States in different regions. Some of the major UN meetings had to be postponed to the end of 2021 or even 2022, as is the case of the second UN Conference on the Ocean and International Ocean Data Conference 2022 - The Data We Need for the Ocean We Want. Alternative actions to sustain the engagement of stakeholders were identified, such as the Kick-off Conference for the Ocean Decade, with the support of the Government of Germany, which has been redesigned into a series of high level events and Decade laboratories over the course of 2021.</p> |

Assessment of the achievement of the expected result

The expected result has been achieved: Fully Partially Not achieved