

**Intergovernmental Oceanographic Commission**  
*Reports of Governing and Major Subsidiary Bodies*



**Thirty-first Session  
of the Assembly**

14–25 June-2021(online)

**UNESCO**

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**UNESCO 2021**

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## TABLE OF CONTENTS

### PART I

<b>1.</b>	<b>OPENING .....</b>	<b>1</b>
<b>2.</b>	<b>ORGANIZATION OF THE SESSION.....</b>	<b>1</b>
2.1.	ADOPTION OF THE AGENDA .....	1
2.2.	DESIGNATION OF THE RAPPORTEUR.....	1
2.3.	ESTABLISHMENT OF SESSIONAL COMMITTEES AND WORKING GROUPS .....	2
2.4.	INTRODUCTION TO TIMETABLE and DOCUMENTATION .....	2
<b>3.</b>	<b>IOC MATTERS AND REPORTS.....</b>	<b>3</b>
3.1.	STATEMENT OF THE CHAIRPERSON .....	3
3.2.	REPORT OF THE EXECUTIVE SECRETARY ON THE WORK ACCOMPLISHED SINCE THE THIRTIETH SESSION OF THE ASSEMBLY AND ON BUDGET IMPLEMENTATION.....	3
3.3.	REPORTS OF THE IOC SUB-COMMISSIONS AND REGIONAL COMMITTEES .....	7
3.3.1.	<b>IOC Sub-Commission for Africa and the Adjacent Island States: 6th Session of IOCAFRICA, online, 13–16 April 2021 .....</b>	<b>7</b>
3.3.2.	<b>IOC Sub-Commission for the Western Pacific: 13th Intergovernmental Session of WESTPAC, online, 27–29 April 2021 .....</b>	<b>11</b>
3.3.3.	<b>IOC Sub-Commission for the Caribbean and Adjacent Regions: 16th Session of IOCARIBE, online, 3–6 May 2021 .....</b>	<b>13</b>
3.3.4.	<b>IOC Regional Committee for the Central Indian Ocean: 8th Session of IOCINDIO, online, 17–19 May 2021.....</b>	<b>17</b>
3.4	REPORTS OF OTHER IOC SUBSIDIARY BODIES.....	19
3.4.1	<b>Warning and Mitigation Systems for Ocean Hazards .....</b>	<b>19</b>
3.4.2	<b>International Oceanographic Data and Information Exchange: 26th Session of IODE, 20–23 April 2021 .....</b>	<b>26</b>
3.4.3	<b>Harmful Algal Blooms: 15th Session of IPHAB, 23–25 March 2021.....</b>	<b>34</b>
3.5	PROGRAMMATIC DEVELOPMENTS.....	36
3.5.1	<b>Biennial assessment to be conducted by the Working Group on User Requirements and Contributions to GEBCO Products .....</b>	<b>36</b>
3.5.2	<b>Global Ocean Observing System Work Plan.....</b>	<b>37</b>
3.5.3	<b>Revision of the IOC Capacity Development Strategy .....</b>	<b>41</b>
3.5.4	<b>IOC Ocean Literacy Action Plan and Strategy.....</b>	<b>44</b>
3.5.5	<b>Adoption of a Joint WMO-IOC Collaborative Strategy and Report on the Establishment of the Joint WMO-IOC Collaborative Board .....</b>	<b>46</b>
3.5.6	<b>Status of the Regional Committee of the Central Indian Ocean (IOCINDIO) .....</b>	<b>48</b>
3.6	IOC REPORT TO THE 41 <sup>ST</sup> GENERAL CONFERENCE OF UNESCO.....	50
3.7	REPORT ON THE DECADE IMPLEMENTATION PLAN.....	51

<b>4</b>	<b>GOVERNANCE, PROGRAMMING AND BUDGETING .....</b>	<b>55</b>
4.1	DRAFT IOC MEDIUM TERM STRATEGY FOR 2022–2029 (41 C/4) .....	55
4.2	DRAFT PROGRAMME AND BUDGET FOR 2022–2025 (41 C/5) .....	56
4.3	FOLLOW-UP TO RESOLUTION EC-53/2 ON REVIEW & UPDATE OF THE RULES OF PROCEDURE TO ADAPT THEM TO ONLINE MEETINGS AND GUIDELINES FOR REPORTING ON IN-KIND CONTRIBUTIONS .....	58
4.4	REPORT BY THE CHAIRPERSON OF THE FINANCIAL COMMITTEE .....	58
4.5	ELECTIONS OF THE OFFICERS OF THE COMMISSION AND MEMBERS OF THE EXECUTIVE COUNCIL.....	61
4.6	32ND SESSION OF THE ASSEMBLY AND 55TH SESSION OF THE EXECUTIVE COUNCIL.....	62
<b>5</b>	<b>ADOPTION OF RESOLUTIONS AND MODALITIES FOR THE FINALISATION OF THE REPORT .....</b>	<b>63</b>
<b>6</b>	<b>CLOSURE .....</b>	<b>64</b>

## **PART II**

### **Resolution A-31/1: Implementation of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030)**

Annex to Res. A-31/1: Terms of reference of the Advisory Board of the UN Decade of  
Ocean Science for Sustainable Development (the Decade Advisory Board)

### **Resolution A-31/2: Governance, programming and budgeting matters of the Commission**

Annex to Res. A-31/2: IOC Medium-Term Strategy for 2022–2029 (41 C/4)

## **ANNEXES**

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- I. AGENDA
- II. SUMMARY REPORT OF THE 54<sup>TH</sup> SESSION OF THE IOC EXECUTIVE  
COUNCIL ACTING AS THE STEERING COMMITTEE OF THE 31<sup>ST</sup> SESSION  
OF THE IOC ASSEMBLY
- III. STATEMENTS  
A- Chairperson’s Statement  
B- Report of the Chairperson of the Nominations Committee
- IV. NATIONAL STATEMENTS
- V. 2021 ELECTIONS
- VI. LIST OF DOCUMENTS
- VII. LIST OF PARTICIPANTS
- VIII. ACRONYMS

## 1. OPENING

1. The Chair, Mr Ariel Hernan Troisi, opened the online session at 15:05 on 14 June 2021, following the closure at 14:00 of the 54<sup>th</sup> session of the IOC Executive Council, which acted as the steering committee of this Assembly session.
2. The Deputy Director-General of UNESCO, Mr Xing Qu, delivered a video message to the Assembly on behalf of Director-General of UNESCO, Ms Audrey Azoulay. He expressed UNESCO's confidence that the United Nations Decade of Ocean Science for Sustainable Development will increase awareness of the importance of the ocean in educative, scientific and cultural public policies and environmental agenda that it has long deserved. See full statement in Annex \_\_\_\_.
3. The Chair asked participants to stand for a minute of silence to honour distinguished individuals who had participated in the work of the Commission and have passed away during the short intersessional period between the 53<sup>rd</sup> session of the Executive Council in February and the current Assembly: Dr John Bemiasa (Madagascar, –2021), Prof. José Stuardo (Chile, 1929–2021) and Prof. Keisuke Taira (Japan, 1941–2021).
4. The representative of Chile expressed the appreciation from his delegation and the entire oceanographic community of Chile and beyond for the commemoration of Prof. Jose Stuardo. A record of his intervention was provided for the informational annex to the meeting report.

## 2. ORGANIZATION OF THE SESSION

### 2.1. ADOPTION OF THE AGENDA

5. The Chair reminded that the Executive Council, acting as the Steering Committee for this Assembly session, examined the revised provisional agenda for the session and noted there was no request for supplementary items. The Executive Secretary informed that the Secretariat received 3 draft resolutions, of which two – the one on the UN Decade of Ocean Science for Sustainable Development (agenda item 3.7) and the one on Governance, Programming and Budgeting Matters of the Commission (agenda item 4.4) – can be found in the Action Paper. The third draft resolution was received on the deadline from a group of African countries on Priority Africa with no indication of the Agenda Item under which the text was proposed. Following consultations with the proponents, the substance of the text was reflected in various draft decisions and resolutions. The proposed Draft Resolution on Priority Africa was withdrawn later in the session.
6. The Chair further referred to a series of 10 thematic webinars produced by the Secretariat before the session and made available online (<https://ioc.unesco.org/news/ioc-assembly-31-thematic-webinars>) in the four working languages of the Commission to complete the information of delegates at this session.
7. The timetable for the session was modified and the timing of the Financial Committee and Nominations Committee were interchanged.
8. The Chair further clarified that the report of the session will be adopted by correspondence, while decisions and resolutions will be adopted in session.

### 2.2. DESIGNATION OF THE RAPPORTEUR

9. *[See decision under item 2.4]*

### 2.3. ESTABLISHMENT OF SESSIONAL COMMITTEES AND WORKING GROUPS

10. Referring to the recommendations made by the Executive Council (EC-54/Dec.3.1) on this item, acting as the steering committee for the present session, the Chair reminded of the mandate of the three statutory sessional committees, their open-ended composition, and the working arrangements agreed for their meetings.

11. Later during the session, the Assembly established a sessional Working Group on IOCINDIO Status under item 3.5.6 with Vice-Chair for Group IV, Dr Satheesh Shenoi providing the lead.

### 2.4. INTRODUCTION TO TIMETABLE and DOCUMENTATION

12. The Executive Secretary introduced this item. He recalled that the documentation was referenced in accordance with Resolution XXX-3. He reminded the Assembly of the deadline for submitting nominations for the elections – 16 June, 16:00 Paris time.

13. He explained that the late holding of sessions of major subsidiary bodies between the 53rd session of the IOC Executive Council in February 2021 and this session of the IOC Assembly in June resulted in the late publication of some reports that were posted beyond the statutory deadline.

14. The Assembly adopted IOC Decision A-31/2.

The Assembly,

#### I. Agenda

Adopts the agenda and the timetable of work as set out in documents IOC/A-31/2.1.Doc Prov. and Add. Rev. with the following additional modifications:

- to switch the meeting of the Financial Committee (III) and the meeting of the Nominations Committee (III) on Friday 18 June;

#### II. Rapporteur

On a proposal of Portugal, seconded by the Russian Federation,

Designates Dr G. A. Ramadass, India, as Rapporteur for its present session to assist the Chairperson and the Executive Secretary in the preparation of the draft provisional report of the session;

#### III. Sessional Committees and Working Groups

Establishes the following sessional open-ended committees and refers to them the following agenda items and responsibilities:

Financial Committee: to examine the documentation and prepare a resolution under items 3.1 (budget implementation and financial report), 4.1, 4.2 and 4.3; under the chairship of Dr Karim Hilmi (Morocco, Vice-chair) with the following Member States participating: Afghanistan, Algeria, Argentina, Australia, Azerbaijan, Bangladesh, Belgium, Benin, Brazil, Bulgaria, Canada, China, Colombia, Cote d'Ivoire, Cuba, Djibouti, Dominican Republic, Egypt, El Salvador, Finland, France, Germany, Greece, Grenada, Italy, India, Indonesia, Iran (Islamic Republic of), Japan, Kenya, Korea (Republic of), Kuwait, Libya, Madagascar, Malaysia, Mexico, Monaco, Morocco, Mozambique, Netherlands, Nigeria, Norway, Panama, Peru, Philippines, Portugal, Qatar, Romania, Russian Federation, Saint Vincent and the Grenadines, Senegal, Serbia, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Sweden, Tanzania, Thailand, Timor Leste, Togo, Tunisia, Turkey, Turkmenistan, UAE, United Kingdom of Great Britain and Northern Ireland, Uruguay, USA, Viet Nam and Venezuela. Ms Ksenia Yvinec provided the Secretariat support to the Financial Committee.

Resolutions Committee: to report on all draft resolutions duly presented for consideration at the session; under the chairship of Prof. Yutaka Michida, Japan with the following Member States participating: Angola, Argentina, Canada, China, El Salvador, France, Grenada, India, Japan, Kenya, Korea (Republic of), Kuwait, Madagascar, Malaysia, Mexico, Monaco, Philippines, Portugal, Saint Vincent and the



Grenadines, Seychelles, South Africa, Spain, Sweden, Thailand, Togo, Tunisia, United Kingdom of Great Britain and Northern Ireland, Uruguay and USA. Mr Julian Barbière provided the Secretariat support to the Resolutions Committee.

Nominations Committee (to examine all proposals of candidates for the elections to the chair, vice-chairs and to the Executive Council at the present session, and to report on them – item 4.5): under the chairship of Mr Amr Morsy, Egypt with the following Member States participating: Algeria, Bulgaria, China, Colombia, Egypt, El Salvador, France, Grenada, India, Indonesia, Japan, Kenya, Korea (Republic of), Madagascar, Malaysia, Mexico, Morocco, Nigeria, Philippines, Portugal, Romania, Seychelles, Sri Lanka, Thailand, Tunisia, Turkmenistan, Uruguay, USA and Viet Nam. Dr Salvatore Aricò provided the Secretariat support to the Nominations Committee.

### **3. IOC MATTERS AND REPORTS**

#### **3.1. STATEMENT OF THE CHAIRPERSON**

15. In accordance with rule of procedure 8.1(a), Chair Ariel H. Troisi delivered an oral statement on recent developments in the work of the Commission and perspectives for the coming years (Annex IIIa).
16. The Assembly thanked the Chair for his remarks and leadership, and for fostering the work of the IOC in a difficult period, including with the launch of the Ocean Decade.
17. The representatives of four Member States and IOCINDIO took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Kenya](#), [Republic of Korea](#) and [USA](#).

#### **3.2. REPORT OF THE EXECUTIVE SECRETARY ON THE WORK ACCOMPLISHED SINCE THE THIRTIETH SESSION OF THE ASSEMBLY AND ON BUDGET IMPLEMENTATION**

18. The Executive Secretary introduced this item using a PowerPoint [presentation](#).
19. He recalled that a key focus of the Commission over the past two years was on the preparation of the Implementation Plan for the United Nations Decade of Ocean Science for Sustainable Development 2021–2030. IOC spared no effort in engaging all Member States, United Nations partners and key civil society stakeholders in regional and global consultations to seize this once-in-a-life-time opportunity to harness advances in ocean science to achieve a better understanding of the ocean system and deliver science-based solutions to achieve the 2030 Agenda. Effective use of UN-Oceans consultations reinforced the collaborative approach to ensure a meaningful division of labour among the IOC's partners in the United Nations system.
20. He highlighted the efforts deployed in all regions in order to make the most of the opportunity that the Decade represents for all Member States, and in particular for Africa, LDCs (least developed countries) and SIDS (Small Island Developing States), leaving no one behind. IOC's regional subsidiary bodies continue to play a critical role in this regard. Specific attention was given to SIDS, which will also build on UNESCO's growing SIDS focus, as well as to the youth involvement and the value of indigenous knowledge. The 2nd International Indian Ocean Expedition (IIOE-2) has engaged in various Indian Ocean related Ocean Decade planning meetings, aiming to ensure that the IIOE-2 is well positioned to make a tangible contribution to the Decade's implementation.
21. The Ocean Decade represents a tremendous opportunity for African countries to strengthen their capacities in ocean research in support of the sustainable ocean economy. IOC partnered with the Western Indian Ocean Marine Science Association and the secretariat

of the Nairobi Convention (UN Environment) to organize “the Regional Consultation workshop for the UN Decade of Ocean Science for Sustainable Development 2021–2030 for Africa and the Adjacent Islands States”, which was hosted by the Government of Kenya from 27 to 29 January 2020 in Nairobi. The workshop, as well as the webinar on “Co-designing the Ocean Science we need for Africa” (3 November 2020), offered an opportunity to identify regional needs and priorities in terms of transforming knowledge systems, accelerating transfer of marine technology, enabling training and education, fostering science-policy dialogues and building capacities, in alignment with the African Union’s initiatives. IOC assisted in holding at the UNESCO Headquarters and online the first part of the 2021 African week, which was organized by group of African representatives with UNESCO. With the support of the Government of Egypt, IOC is now preparing a Decade kick-off conference on ocean science in support of Africa’s sustainable development to take place in the second half of 2021.

22. The Ocean Decade Implementation Plan gives specific attention to SIDS and youth involvement, as well as to the value of indigenous knowledge, based on numerous regional consultations (with South Pacific SIDS in Noumea in July 2019, Caribbean and Western Indian Ocean SIDS in, respectively, Mexico and Kenya, in early 2020. The performance-based community recognition programme “Tsunami Ready” was piloted in three regions (Caribbean, Pacific and Indian Ocean). Ten SIDS communities were recognized before the end of 2020.
23. The Executive Secretary presented Member States with a non-exhaustive list of programmatic milestones, as well as an update on the highlights of each of the six IOC functions, from research to observations and data management, ocean services, assessments, governance and capacity development including the work of the regional and technical subsidiary bodies of the Commission. He recalled informative webinars organized by the Secretariat prior to the Assembly.
24. The IOC work includes supporting 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. The 2nd edition of the *Global Ocean Science Report (GOSR)* was launched on the occasion of the IOC’s 60th anniversary celebration, on 14 December 2020. There was a measurable impact of the COVID-19 pandemic on IOC’s operational activities – the Global Ocean Observing System and the International Oceanographic Data and Information Exchange. Some activities, particularly those linked to research vessel operations and the servicing of moorings, surface CO<sub>2</sub> measurements, and the deployment of autonomous platforms like Argo floats and surface drifters, remained restricted – with the implementing community adapting, finding new ways of cooperating, and operating under new conditions. 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 and beyond, including any impact on investment through GOSR Data Portal. As regards capacity building, the OceanTeacher Global Academy e-learning platform allowed a quick re-orientation and organization on online courses as from June 2020. The Executive Secretary emphasized the importance of Member State national capacity development focal points in helping to plan and put in place actions. The IOC-affiliated UNESCO Category 2 Centres have been very active and their work is very successful.
25. Dr Ryabinin highlighted GOOS moving from Strategy to implementation with partners, including through the design of three Ocean Decade programmes, the disbanding of JCOMM but continued strong partnership with WMO in research through the WCRP, and in observations through GCOS and GOOS, the rebranding of JCOMMOPS as OceanOPS with a new five-year strategy, and a now-functioning Joint Collaborative Board. He highlighted development activities in data management around the Ocean Data and Information System, and an exponential increase of records in OBIS. COVID-19 had also forced adaptation in the work of the tsunami early warning systems and preparedness, as well as perhaps enabling a new surge of activities in regional bodies, enabled by a switch to online work.

26. Dr Ryabinin also elaborated on the concept for the State of the Ocean Report (StOR), of which the idea was already presented to the IOC Executive Council at 53rd session last February. The report is intended to present a summary of key changes in the ocean state, in terms of its physical, biogeochemical, biological and ecological variables, supplemented by a strategic assessment of developments with regard to integrated ocean management, such as percentage of area covered by area management tools, observations, etc. StOR would be one contribution of IOC to the Decade and would facilitate understanding of the urgent need to address issues related to ocean management towards sustainability and measure progress in that direction. A circular letter was sent to Member States asking their views on the spatial and temporal scope of the report, focus areas, and styles of presentation. An informal expert consultation involving 16 independent experts reflecting all IOC Functions and geographically and gender balanced was held on 28 May 2021. The outputs of the survey to Member States and the expert consultation have informed the revised version of IOC/INF-1393. The Secretariat will therefore undertake a pilot State of the Ocean Report, for presentation at the 55th session of the IOC Executive Council in 2022.
27. The Executive Secretary informed the Assembly of the active part taken by IOC's leadership 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).
28. The Executive Secretary explained that due to the cancellation or postponement of many important events because of the COVID-19 pandemic, including the "2020 UN Ocean Conference", the Secretariat had to explore alternative approaches to the launch of both the Draft Implementation Plan for the Decade and the 2nd edition of the Global Ocean Science Report. In this context, he also presented the main initiatives of the Secretariat to assess the influence of the pandemic on IOC's areas of competence: surveys and assessments of impact on ocean observation and tsunami warning services, as well as the longer-term effect on investment in ocean sciences and Member States capacities to achieve the SDG target 14.a, to be measured through GOSR.
29. With regard to the Commission's financial situation, he confirmed that the Secretariat implemented 2018–2019 workplans in accordance with the budgetary allocations and resource mobilization targets approved by the IOC Executive Council's Resolution EC-LI.2 and developed 2020–2021 workplans in accordance with Resolution XXX-3, as presented in document IOC/EC-53/3.1(2).
30. The Executive Secretary highlighted the development of the new Medium-Term Strategy (Item 4.1) with a new high-level objective on scientifically-founded services for the sustainable ocean economy, and a vision to bring governments and the science community together in a common goal.
31. The Executive Secretary thanked Member States and partners having provided voluntary contributions to the Commission's budget and reported on new partnerships and main outreach and engagement initiatives. He stressed that 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. The Executive Secretary informed the Assembly of a joint initiative with EurOcean and Portugal to establish the Mário Ruivo Memorial Lecture. This Memorial Lecture would be in homage to and recognition of Professor Mário Ruivo's long-life commitment to ocean science and the sustainable development of the ocean, and his significant contributions to the work of IOC, ocean knowledge, international cooperation, capacity development and ocean literacy. The Lecture would be delivered at the IOC Assembly by Early Career Ocean Professionals (ECOPs) selected on a competitive basis. It would focus on the priorities of the Ocean Decade in the spirit of the commitment of Professor Ruivo to solutions-oriented ocean research. The

Ocean Decade Informal Working Group for ECOPs has been involved in initial discussions on the initiative and would be engaged in the design and scoping of the Memorial Lecture and in the selection of the candidates for its presentation. The Memorial Lecture would be anchored within the Early Career Ocean Professional Programme that has recently been endorsed as an action of the Ocean Decade.

32. The Executive Secretary also expressed concern that IOC programme delivery continues, to a large extent, on an unsustainable basis, with chronic understaffing and shortage of resources. The COVID-19 pandemic had created enduring new opportunities to work in new ways, and the Executive Secretary questioned whether the previously recommended ratio of 75% staff to 25% programme activity remained relevant. He highlighted the main challenge for the Commission's small Secretariat presented by the dual task to raise not only extrabudgetary resources necessary to maintain its core operational programmes but also significant additional resources to lead and coordinate the Ocean Decade. Only a small fraction of voluntary contributions was non-earmarked, leaving little flexibility to deploy resources strategically. A new approach to fund-raising and communication and outreach is needed, based on highlighting the societal benefits of IOC's work and demonstrating the return on investment in ocean science and observation.
33. The external evaluation of the IOC strategic positioning, launched in cooperation with the Internal Oversight Service and supported by OpenCities Ltd, showed in early results that IOC has trust, but can position itself better to have greater impact. The outcome of this work will inform IOC governing bodies' decision-making and planning for the next programmatic cycle.
34. The representatives of 33 Member States, the WMO as an observer organization, and two subsidiary bodies took the floor.
35. The Assembly congratulated the Executive Secretary and the secretariat for delivering despite the hard challenges of the past year, and with a successful change to working in new ways. Member States expressed pride in working together through the IOC, with many emphasizing their contributions to its work. A number of Member States highlighted their support in UNESCO governing bodies to reinforce the IOC.
36. The Ocean Decade was widely viewed as a critical opportunity to transform ocean science for society, and to put the IOC in a central role. Member States welcomed a growing emphasis on the marine economy, and the broad transformations needed for sustainability. They highlighted the role that the IOC had to play in UN processes, such as Sustainable Development Goal indicators, the UN Framework Convention on Climate Change, and the development of a legally binding instrument on marine biological diversity of areas beyond national jurisdiction (BBNJ).
37. Many Member States welcomed development of work on Ocean Literacy, with some emphasizing the potential synergies with other UNESCO sectors.
38. Overall, Member States supported the pilot State of the Ocean Report, to be delivered in 2022, with a number underlining the need to avoid duplication and looking forward to an evaluation of the pilot.
39. Many Member States stressed the importance of capacity development, including the need to energize national focal points, but also welcoming opportunities for new ways of working online. A number of Member States called for an approach to youth and young scientists in this respect, with others emphasizing the importance of engaging academic institutions. Priority Africa and a focus on SIDS were both stressed. A number of Member

States drew attention to the importance of incorporating indigenous knowledge in the work of the IOC.

40. Some Member States, acknowledging the Executive Secretary's report on chronic understaffing and shortage of resources, underscored a need to take stock and focus on priorities, welcoming the external evaluation on IOC's strategic positioning. Several Member States encouraged exploration of Article 10.4 of the IOC Statutes regarding financial arrangements to ensure implementation.
41. The Executive Secretary welcomed the overall positive tone of interventions, appreciating both the support and healthy criticism. He acknowledged the support and encouragement for the pilot State of the Ocean Report, comments on capacity development, involving universities, Priority Africa, and a focus on youth. He concluded by stating that modern leadership involved partnership, and that IOC was on this path.
42. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Argentina](#), [Brazil](#), [Colombia](#), [Côte d'Ivoire](#), [Gabon](#), [India](#), [Italy](#), [Japan](#), [Kenya](#), [Norway](#), [Portugal](#), [Spain](#), [Thailand](#), [United Kingdom](#), [USA](#), [WMO](#).
43. The Assembly adopted IOC [Decision A-31/3.2](#).

### **Report of the Executive Secretary**

The Assembly,

Having examined documents IOC/A-31/3.2.Doc(1) and Addendum, [IOC/A-31/3.2.Doc\(2\)](#), [IOC/A-31/3.2.Doc\(3\)](#) and 10 information documents on various programmatic developments,

Thanks the Executive Secretary for a very comprehensive report;

Takes note of the information provided, welcoming significant advances in many programmatic areas.

### **3.3. REPORTS OF THE IOC SUB-COMMISSIONS AND REGIONAL COMMITTEES**

#### **3.3.1. IOC Sub-Commission for Africa and the Adjacent Island States: 6th Session of IOCAFRICA, online, 13–16 April 2021**

44. The IOC Vice Chair Group V, Prof. Karim Hilmi (on behalf of the IOCAFRICA Chair, Prof Mohamed Said), presented an overview of the activities implemented by the Sub-Commission during the intersessional period 2019–2020, and the major outcomes of the sixth session of the IOCAFRICA.
45. IOCAFRICA made good progress in the implementation of its ambitious work plan adopted at its fifth session on 25–27 March 2019, Nairobi, Kenya. Due to the COVID-19 pandemic, some events were held online and others postponed to the second half of 2021. The activities implemented covered all priorities areas identified by the Sub-Commission.
46. A regional training course on marine GIS was hosted by the Kenya Marine and Fisheries Research Institute in Mombasa from 28 October to 1 November 2019 and attended by 22 trainees from Kenya, Mauritius, Mozambique, Nigeria, Senegal, South Africa, and Tanzania. Regional Training Centres for the new phase of the Ocean Teacher Academy programme were designated at the University of Ghana (Accra), the Eduardo Mondlane University (Maputo, Mozambique) and the Kenya Marine and Fisheries Research Institute

(Mombasa). A joint workshop on Environmental Data Analysis planned the FAO/NANSEN programme was postponed due to the COVID-19 pandemic.

47. IOCAFRICA organized an online regional workshop on “Mapping the Sea Floor around Africa” jointly with the Nippon Foundation-GEBCO Seabed2030 project on 10 and 24 February 2021. The webinars, attended by more than 100 participants from 25 countries provided an opportunity to review the current status of mapping in the region, identify and discuss the needs of stakeholders, and explore opportunities for collaboratively advancing seabed mapping to achieve mutually beneficial outcomes.
48. A series of national marine spatial planning workshops (including environmental pressures that impact on MSP and decision support tools) were organized with support from the Government of Sweden in the following countries in 2020: Cameroun, Gabon, Ghana, Kenya, Madagascar, Mauritius, Morocco, Mozambique and Tanzania. A regional workshop was also organized for the Gulf of Guinea region. IOCAFRICA is working with the Kenya Marine and Fisheries Research Institute on a publication on “Marine Spatial Planning and the Blue Economy in Kenya”.
49. In the context of the institutional Integrated Coastal Area Management Strategy, having received financial support from Sweden which was available for 2019, IOCAFRICA and IOC Marine Policy and Regional Coordination Section, with the support of the Central African countries, organized a technical workshop on coastal vulnerability in Libreville, Gabon (5–7 November 2019) with the participation of national experts from Angola, Cameroon, Congo, Equatorial Guinea, Gabon, Democratic Republic of the Congo, and Sao Tome and Principe. A coastal vulnerability project is being considered at present by these countries, reflecting their needs for sustainable coastal zone management.
50. The development of the regional node for the Ocean Information Hub commenced with the organization of an online stakeholders meeting in June 2020, followed by bilateral consultations with partners, including IUCN, CORDIO, UNEP (Abidjan and Nairobi Convention secretariats), and WIOMSA on developing interoperability projects. Two virtual meetings on the seaweed Sargassum for Atlantic region organized in 2020, in collaboration with UNEP and IOC’s Sub-Commission for the Caribbean and Adjacent regions, agreed on working together on development of Sargassum Information Hub. IOCAFRICA is preparing four policy briefs on climate change adaptation in coastal zones of Africa focusing on: (i) Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities; (ii) Changing Oceans, Marine Ecosystems and Dependent Communities; (iii) Extremes, Abrupt Changes and Managing Risks; and (iv) Climate Change & Ocean Economy.
51. IOC is implementing a project, funded by the Spanish International Technical Cooperation Agency, aimed at furthering the scientific knowledge and capacity basis in the Canary Current Large Marine Ecosystem (CCLME). The project focuses on assessing the effects of climate change and ocean stressors on the natural dynamics of the Canary Current through a collaborative approach involving scientists, with a focus on female and early career ocean scientists, from Cabo Verde, Gambia, Guinea, Guinea-Bissau, Mauritania, Morocco, Senegal and Spain (Canary Islands). The results of the project have contributed to informing science-based management of the CCLME. As part of this initiative, a workshop was organized in St Vicente, Cabo Verde on 10–13 March 2020.
52. IOCAFRICA organized an online regional tsunami awareness event with the UNDRR, and a national event for Nigeria with the Nigerian Institute of Ocean and Marine Research (NIOMR) and the National Commission for UNESCO on 5 November 2020. IOC also worked on the publication of a tsunami awareness manual in Swahili with UNDRR. An ongoing survey of the status of ocean observations along the African coastline will inform the preparation of a proposal for the development of a comprehensive African Ocean Observing System.

53. Prof. Hilmi expressed sincere appreciation to Member States that had supported the development and implementation of programmes of the Sub-Commission during the inter-sessional period, and especially the Governments of Flanders (Kingdom of Belgium), China, Norway, Spain and Sweden.
54. Prof. Hilmi informed the Assembly that the Sixth Session of IOC's Sub-Commission for Africa and the Adjacent Island States (IOCAFRICA-VI) was held online on 13–15 April 2021, and attended by more than 75 delegates from 23 Member States and partner organizations. The session adopted four Recommendations on: (i) Establishment of a Regional Planning Group for the UN Decade of Ocean Science for Sustainable Development; (ii) Extension of the mandate of the IOCAFRICA Strategic Planning Group; and (iii) Strengthening Collaboration with the African Union Commission; and (iv) IOCAFRICA Programme of Work for 2021–2023 focussing on Ocean Observations and Data and Information Management, Capacity Development for Marine Science and Technology and Ocean Literacy, and Ocean Sciences and its Application to Management. The Sub-Commission had stressed the importance of aligning its programmes to frameworks adopted by the African Union Commission such as the Agenda 2063, the 2050 Africa's Integrated Maritime Strategy, the African Blue Economy Strategy, as well as the Implementation Plan for the UN Decade of Ocean Science for Sustainable Development.
55. Prof. Hilmi further informed the Assembly that the session supported the establishment of the IOCINDIO Sub-Commission comprising the current Member States of the Regional Committee for IOCINDIO. The Sub-Commission further suggested the establishment of an inter-regional committee bringing together IOCAFRICA, WESTPAC and IOCINDO, which will act as a mechanism to develop and coordinate the implementation of basin-wide programmes for the Indian Ocean.
56. Prof. Hilmi noted that the Sub-Commission was not able to elect new IOCAFRICA Officers at its Sixth session due to: (i) lack of nominations from Member States for the positions of IOCAFRICA Chair and Vice-Chairs at the close of the deadline for nominations; and (ii) the challenges of holding online elections by secret ballot. At the request of the Sub-Commission the secretariat had sent out a fresh call for candidates for the positions of IOCAFRICA Chair and Vice Chairs through Circular Letter n° [2847](#) on 13 May 2021, with a deadline for response of 2 June 2021. The completed nominations forms had been received from the following by the deadline:
- |                     |                                      |
|---------------------|--------------------------------------|
| Chair:              | Prof. Kouadio AFFIAN (Cote d'Ivoire) |
| Vice Chair Group A: | Dr Zacharie SOHOU (Benin)            |
| Vice Chair Group B: | Ms Candida Ines SETE (Mozambique)    |
| Vice Chair Group C: | Dr Suzan Mohamed ELGHARABAWY (Egypt) |
57. It was therefore not necessary to hold elections at this session of the IOC Assembly, as there was one nominee for each of the positions.
58. The representatives of 8 Member States (Algeria, Kenya, Tanzania, Spain, Côte d'Ivoire, Nigeria, Egypt, and Togo) took the floor.
59. The Assembly welcomed this development and congratulated the new IOCAFRICA Officers. The Assembly thanked the outgoing IOCAFRICA Officers for accepting to stay in Office in the interim. The Assembly congratulated them on the excellent work they had implemented, especially in the light of the challenging COVID-19 pandemic situation.

60. The Assembly welcomed the presentation by Egypt on the regional Kick-Off conference for the UN Decade of Ocean Science for Sustainable Development which will be held in hybrid form on 7–9 December 2021 and encouraged Member States to support and participate in this important conference which will provide a forum to take stock of developments in ocean science in the region and chart a roadmap for the Decade.
61. The Assembly noted the wide range of relevant activities taking place at national and regional level as highlighted during the intervention by Member States and partners and emphasised the need to strengthen collaboration so as to benefit from synergies.
62. The following Member States and organizations chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Côte d'Ivoire](#), [Kenya](#), [Spain](#), [USA](#) (covers all items under 3.3), [WMO](#).
63. The Assembly adopted IOC [Decision A-31/3.3.1](#).

### **IOC Sub-Commission for Africa and the Adjacent Islands States**

The Assembly,

Having examined the Executive Summary report of the 6th session of the IOC's Sub-Commission for Africa and the Adjacent Island States, online, 13–16 April 2021 (IOC/SC-IOCAFRICA-VI/3s),

Acknowledges the importance that the African Union places on the African oceans and their resources as outlined in the AU's Agenda 2063, Africa Integrated Maritime Strategy 2050, the Africa Blue Economy Strategy, as well as the adoption of 2015-2025 as the Decade of African Seas and Oceans and the 25 July each year as the African Day of Seas and Oceans;

Recalls the Priority accorded to Africa by UNESCO and its Intergovernmental Oceanographic Commission;

Takes note of the progress made in the implementation of the IOCAFRICA work programme 2019–2021 and strengthening of the IOCAFRICA Secretariat;

Congratulates the Africa Group at UNESCO for selecting the “Oceans, Peace and Sustainable Development in Africa” as the theme for the 2021 Africa Week at UNESCO;

Thanks the Member States who have provided support for the development and implementation of programmes of the sub-commission, and especially the Governments of Belgium, Cote d'Ivoire, China, Kenya, Norway, South Africa, Spain, and Sweden;

Accepts the report of IOCAFRICA-VI and the recommendations therein, including the work programme for the sub-commission for 2021–2023;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2);

Requests the IOC Executive Secretary to:

- explore opportunities for additional extrabudgetary resources for further strengthening the IOCAFRICA Secretariat and implementation of activities;
- follow up on strengthening collaboration with the African Union and joint implementation of programmes related to the Decade of African Seas and Oceans and the UN Decade of Ocean Science for Sustainable Development;

Urges Member States to continue and increase their support to IOCAFRICA and its secretariat through financial and in-kind contributions, including the secondment of staff.



**3.3.2. IOC Sub-Commission for the Western Pacific:  
13th Intergovernmental Session of WESTPAC, online, 27–29 April 2021**

64. Dr Vo Si Tuan, Chair of the IOC Sub-Commission for the Western Pacific (WESTPAC) was invited to present the key achievements over the last intersessional period and key results of the 13th WESTPAC Intergovernmental Session (online, 27–29 April 2021).
65. He highlighted that, notwithstanding the COVID-19 pandemic, the Sub-Commission has been making tremendous efforts in concerting joint actions of research and policy communities to address critical challenges for ocean sustainability in the region. Since the last session of the IOC Assembly (July 2019), a number of workshops, trainings, field surveys, and demonstration activities had been carried out in the field until the pandemic broke out in early 2020, and more than 100 virtual consultations/meetings were organized since early 2020.
66. He reported that the Sub-Commission has been co-designing, and co-implementing its various programmes and activities with Member States to address the IOC High Level Objectives and common ocean priorities of the region, namely: ocean and climate; marine biodiversity, seafood safety and security; and ocean ecosystem health. The main thrust of the Sub-Commission includes two regional GOOS groupings (NEAR-GOOS and SEAGOOS); one regional network of training and Research centers on marine science (RTRCs); and 16 programmes/working groups, respectively focusing on monsoon onset, air-sea interactions in the Kuroshio extension, Asian marginal seas, ocean acidification, ocean deoxygenation, feasibility study on the Second Cooperative Study of the Kuroshio and Adjacent Regions (CSK-2), coastal upwelling studies, fluvial sediment to the South China Sea, coral reef restoration and conservation, harmful algal blooms, endangered megafauna, remote sensing for coastal habitat mapping, marine toxins and seafood safety, marine microplastics, harmful jellyfish, and ocean forecasting system development and application.
67. The WESTPAC Chair emphasized the great importance that the Sub-Commission has been attaching over the last intersessional period to the development and delivery of needed knowledge and services for Member States to serve their needs. Significant progress could be demonstrated by: (i) the development of operational ocean forecasting services to support coral reef conservation; (ii) the monitoring of ocean acidification and research on its impact; (iii) the establishment of an Ocean Oxygen Research and Monitoring Network to spearhead the studies of various aspects of hypoxia and help inform policymakers; (iv) increased Member States' research capacity for combating marine plastic pollution; (v) the transfer and application of remote sensing techniques for marine protected area management in three selected MPA sites in Thailand and Viet Nam, respectively; and (vi) the delivery of knowledge and outreach services on harmful jellyfish for public health, with a Field Guide to the Jellyfish of Western Pacific published, and a number of outreach and awareness activities conducted locally on harmful jellyfish and emergency response for hoteliers, coastal government authorities and school students.
68. The Sub-Commission also took a lead in the preparations and mobilizing actions for the UN Ocean Decade in the region. Key efforts over the last intersessional period include: (i) leading the organization of the Decade Regional Planning Workshop (31 July–2 August 2019, Japan) together with the North Pacific Marine Science Organization (PICES); (ii) motivating stakeholders in the region into the development process of the Decade Implementation Plan; (iii) developing and organizing the Decade Regional Dialogue on Co-designing the Ocean Science We Need for the Ocean We Want (10 November 2020, virtual); (iv) developing potential proposals for Decade Actions for further inputs, engagement and commitment, while capitalizing on existing programmes and networks; (v) providing strategic and technical support to Member States in the region for their decade related activities at both regional and national level; and (vi) catalysing partnerships and initiating co-design of transformative solutions amongst diverse stakeholder groups in the region by planning for and organizing a Decade

Regional Kick-off Conference (24–25 August 2021, Virtual) and the Decade Regional Conference Series in 2022, 2025, 2028, and 2031, respectively.

69. Dr Vo Si Tuan informed the Assembly that the Sub-Commission has been continuously implementing the IOC Capacity Development Strategy (2015–2021), and fulfilling its voluntary commitment to the UN Ocean Conference— “Develop research capacity and transfer of marine technology through the UNESCO/IOC Regional Network of Training and Research Centres (RTRCs) on Marine Science”. Main activities over the last intersessional period include: (i) the Regional Training and Research Centre on Ocean Dynamics and Climate (RTRC-ODC, First Institute of Oceanography, Ministry of Natural Resources of China) and Regional Training and Research Centre on Marine Biodiversity and Ecosystem Health (RTRC-MarBEST, Indonesian Institute of Sciences, Indonesia) have been operating smoothly with annual trainings organized in 2019 and 2020 in a hybrid mode, based on the pressing needs of early career ocean scientists; (ii) three new RTRCs, respectively on Reef Management and Restoration (Marine Science Institute, the University of the Philippines), Marine Toxin and Food Safety (Institute of Oceanography, Viet Nam), and Marine Plastic Debris and Microplastics (East China Normal University of China) are well prepared to receive young scientists from within and outside region as soon as the pandemic ends; (iii) the implementation of the third phase of a UNESCO/Korean Funds-in-Trust project “Enhance the Capacity for Species Identification and Genetic Analysis on Marine Organisms in the Coral Reef Ecosystems in the Western Pacific”, and the UNESCO/Japanese Funds-in-Trust project aiming to accelerate the transfer of marine technology for marine biodiversity conservation. Furthermore, the Sub-Commission demonstrated its unique value for IOC in addressing Member States’ specific needs directly. For instance, WESTPAC has been assisting Viet Nam and Thailand, over the last intersessional period, to enhance its research capacity for ocean acidification and molecular techniques.
70. He reported on the major results of the Thirteenth Intergovernmental Session of the IOC Sub-Commission for the Western Pacific (WESTPAC-XIII, 27–29 April 2021). He extended his deep appreciation to Member States for their overwhelming support expressed throughout the session, for the continued efforts of the Sub-Commission in assisting Member States to address their development challenges, and the leading role that the Sub-Commission has been taking in promoting and mobilizing actions in the region for the UN Ocean Decade. To serve the needs of its Member States, the Sub-Commission further decided to establish two new programmes on the Second Cooperative Study of the Kuroshio and its Adjacent Regions (CSK-2), and Changing Asian Marginal Seas and their Response to Climate Change, respectively; and three new Working Groups on Gas Hydrates and Methane Fluxes in the Indo-Pacific; Rapid Detection Technology for Harmful Algal Blooms, and Integrated Investigation in the Indo-Pacific Convergent Center: Marine Ecosystem and Biodiversity, respectively.
71. In view of the high level of support of Member States in the region for the leading role of Sub-Commission in preparing and mobilizing actions for the UN Ocean Decade in the region, the WESTPAC Chair drew attention of the Assembly to the suggestion that Member States made at the WESTPAC-XIII that a certain level of authority, for instance the endorsement of Decade activities which are to be conducted in the region, be delegated to the Sub-Commission to ensure the timely conduct of Decade activities and the ownership of Member States over the Decade. The Sub-Commission further requested IOC Executive Secretary to consider supporting the role of the Sub-Commission in the Decade.
72. He informed the Assembly that, in a “co-designed, solution-oriented” approach and capitalizing on the existing networks and resources, the Sub-Commission has been developing pipeline proposals for UN Ocean Decade Actions. The Sub-Commission emphasized the importance of capacity development and transfer of marine technology as integral part of its Decade Actions, and further reaffirmed its commitment to stepping up its efforts in this regard. Furthermore, The Sub-Commission welcomed the kind offer of the Government of Thailand to

host: (i) a Decade Coordination Office, as an extension of the current WESTPAC Office, with a mandate to develop, coordinate and implement Decade Actions in the region; and (ii) the Decade Regional Kick-off Conference (late 2021, online), and the first Decade Regional Conference in conjunction with the 11th WESTPAC International Marine Science Conference which was scheduled for August 2022.

73. He finally expressed his sincere thanks to the Government of Indonesia for its kind offer to host the next intergovernmental session of the Sub-Commission in early 2023, and informed the Assembly that the Sub-Commission elected by acclamation Fangli Qiao from China and Kentaro Ando from Japan as Co-Chairpersons; and Aileen Tan Shau Hwai from Malaysia as Vice-Chairperson of the Sub-Commission for the next intersessional period.

74. The representatives of 10 Member States and WMO took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [China](#), [Indonesia](#), [Japan](#), [Malaysia](#), [Philippines](#), [Republic of Korea](#), [Russian Federation](#), [Thailand](#), [USA](#), [Viet Nam](#), [WMO](#).

75. The Assembly adopted IOC [Decision A-31/3.3.2](#).

### **IOC Sub-commission for the Western Pacific**

The Assembly,

Having considered the executive summary report of the 13th Intergovernmental Session of the IOC Sub-Commission for the Western Pacific (online, 27–29 April 2021) (IOC/WESTPAC-XIII/3s),

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

### **3.3.3. IOC Sub-Commission for the Caribbean and Adjacent Regions: 16th Session of IOCARIBE, online, 3–6 May 2021**

76. The IOCARIBE Chair of the IOC (of UNESCO) Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE) Mr Arnulfo Sanchez (Panama), reported on the progress achieved in IOCARIBE during the last intersessional period. He referred to the programme progress and to the implementation of decisions and recommendations during the period 2019–2021, particularly those made at the online Session Sixteenth Session of the Sub-Commission held on 3–6 May 2021.

77. Mr Sanchez stressed that IOCARIBE Region is prone to hurricanes, coastal flooding and other natural and man-made hazards. He referred to those actions developed by IOCARIBE for Disaster Risk Reduction. In particular, initiatives to Improve Member States Hurricane and Coastal Inundation Observing Forecasting Capacity: a) IOCARIBE GOOS establishment of a pilot project on Improvement of Hurricane Observing Forecasting Capacity developed with national and regional institutions, universities and UN partners; b) IOCARIBE is working with IOC CARIBE-EWS and Partners, including WMO and National Agencies in a Coastal Inundation Forecasting Initiative which will develop and disseminate an operational system to forecast coastal inundation and flooding.

78. He also stressed the importance of the IOCARIBE and IHO Meso-American and Caribbean Sea Hydrographic Commission – MACHC partnership. IOCARIBE and MACHC Member States developed a joint strategy (January 2021) to complete baseline seabed map of the MACHC-IOCARIBE Region by 2030 that informs the sustainable, multi-purpose use of this region of the Ocean, as a contribution to the Nippon Foundation-GEBCO Seabed 2030 Project and the UN Decade of Ocean Science for Sustainable Development 2021-2030 (The Ocean Decade). IOCARIBE and MACHC have identified respective capacity development training offerings for 2020 and 2021 and considered co-sponsoring those of common interest

to avoid duplication of efforts and maximize impact. In 2020 they agreed on a MACHC-IOCARIBE Seabed 2030 Work Plan for 2021; and as a part of their contribution to Seabed 2030, they will be sharing, delivery and management of marine spatial data holdings through pilot projects with partners such as the IOC/IODE and the IOCARIBE Caribbean Marine Atlas. He also highlighted the work of partners and Hydrographic Offices for the publication last December 2020 of the updated final version of the IBCCA- International Bathymetric Chart of the Caribbean and the Gulf of Mexico, and to the plans for elaboration of a higher resolution IBCCA chart.

79. The IOCARIBE Chair highlighted the progress made in the development of an operational region-wide information and forecasting system for sargassum and oil spills; where IOCARIBE, GEO Blue Planet, AIR Centre, AtlantOS and other partners developed a Tropical Atlantic Sargassum Information Hub to improve communication among stakeholders, and increase visibility of sargassum activities. The Sargassum Information Hub was launched on July 2020 ([sargassumhub.org](http://sargassumhub.org)). IOCARIBE and Partners have established a Trans-Atlantic collaboration between IOCARIBE of IOC, IOCARIBE GOOS, GEO Blue Planet, IOCAFRICA, UN Environment, Cartagena and Abidjan Convention Secretariats, AtlantOS, the AIR Centre and other partners to create a sargassum community of practice. A Regional Pilot Programme for Satellite Oil Spill monitoring for the wider Caribbean region is the first step for the development of a coordinated region-wide monitoring and forecasting system that started in March 2021 with the contribution of NOAA (USA) and working with partners including UN Environment Cartagena Convention Secretariat. Trinidad and Tobago has been selected as a test area given its abundance of oil facilities and monitoring needs and the Institute of Marine Affairs and the Ministry of Energy are the national partners.
80. The IOCARIBE HAB Group ANCA (Algas Nocivas del Gran Caribe) has been implementing IOC Ciguatera Strategy and developed national standards in coordination with national health authorities. Also, ANCA has carried out Capacity Development activities in HABs ecology and related issues, and promoted enhanced HAB research coordination among universities, research institutes, the government sector, and the industrial-business sector, and supported the creation of public risk management policies in the event of HAB events.
81. To strengthen IOCARIBE Region institutional capacities in Marine Spatial Planning (MSP) and the Sustainable Ocean Economy, and to adopt and implement the IOC and European Commission Joint Roadmap (MSProadmap), with the support of Sweden, and national and regional authorities and partners, a series of online and face-to-face events took place throughout the months of October and November 2020, with the aim to build collective capacities to respond to emerging ocean issues, facilitate exchanges among public and private stakeholders, and formulate recommendations for the development of MSP and the Sustainable Blue Economy in each country and the Region.
82. After the successful completion in 2020 of the Caribbean Marine Atlas (CMA) project that was funded by the Government of Flanders (Kingdom of Belgium), Member States and Partners aimed to consolidate the CMA sustainability, ensuring continuity and its upgrading by hosting, operating, and maintaining the CMA2 at INVEMAR (Colombia) facilities; they strengthen links and develop synergies with projects and programmes. Particularly, with CLME+ project; IHO MACHC – IOCARIBE contribution to the SeaBed 2030 programme; the Sargassum Information and Forecasting System; and with the newly started IOC of UNESCO Ocean InfoHub project.
83. Mr Sanchez pointed out that the ocean economy of the wider Caribbean is dominated by Shipping, Tourism and Oil and Gas industries and referred to the IOCARIBE recommendation to Member States and regional partners to enhance science and services needed to support a Sustainable Ocean Economy within the context of the IOCARIBE Biennial

Work Programme and co-designed Ocean Decade actions and programmes to achieve SDG 14.

84. The IOCARIBE Chair acknowledged the successful implementation to date of the CLME+ Project “Catalysing implementation of the Strategic Action Programme (SAP) for the Sustainable Management of Shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems,” and invited countries and organizations from the region to continuing their efforts to mobilize renewed funding from the GEF to support the implementation of the CLME+ SAP and the operationalization of the “Ocean Coordination Mechanism,” through the proposed new UNDP/GEF Project Concept “PROCARIBE+: Protecting and Restoring the Ocean’s Natural Capital, Building Resilience and Supporting Region-wide Investments for Sustainable Blue Socio-Economic Development.”
85. He mentioned that as part of IOCARIBE efforts and partnerships with CLME+, UN and Regional organizations and national agencies, the Sub-commission developed in cooperation with University of Ghent (Belgium) the CLME+ Training and Capacity Development (TCD) Portal that was launched 15th December 2020 to bridge the information gap between marine practitioners in search of training opportunities and those providing training and capacity building initiatives (clmeplus.marinettraining.org).
86. He highlighted the significant contribution of the OTGA Regional Training Centre established at INVEMAR (Colombia) to the capacity development of Member States in ocean sciences. During the reporting period, the OTGA RTC at INVEMAR completed 12 courses where 317 experts from 20 countries participated, and for 2021 there are 9 courses planned. He also acknowledged the enhancement of the OTGA network in LAC by the establishment of new centres in Escuela de Ciencias del Mar, Argentina; University of Uruguay University of Santa Catarina, Uruguay/ Brazil; Escuela Superior Politécnica del Litoral (ESPOL), Ecuador.
87. As well, the Chair reported how IOCARIBE is developing jointly with Member States national agencies and institutions, the LAC Regional Node for the IOC Ocean Information Hub (LAC OceanInfo Hub) with the technical support of IODE and the financial support of the Government of Flanders (Kingdom of Belgium).
88. He referred to The UN Decade of Ocean Science Regional virtual Workshop for the Western Tropical Atlantic (WTA), 28–29 April 2020, that provided a regional contribution to the Ocean Decade with a focus on IOCARIBE countries’ and territories’ needs and priorities in terms of transforming knowledge systems; accelerating transfer of technology; enabling training and education; fostering science-policy dialogues, and enabling scientific solutions to the Region’s socio-economic challenges.
89. IOCARIBE, as the WTA Ocean Decade Coordination mechanism has the overall responsibility for formulation of principles and for planning and coordination of the Ocean Decade in the Western Tropical Atlantic region in consultation with the many leading UN, NGO, science, regional organisations, private sector, indigenous and local communities and other stakeholders of the region.
90. He reported that IOCARIBE established on October 2020 a Regional Planning Group (WTA RPG) for the WTA-Ocean Decade to advance and coordinate strategic partnerships and actions for Western Tropical Atlantic engagement in the Ocean Decade. The WTA RPG established eight Working Groups to promote multi-disciplinary and inclusive co-design and implementation partnerships to achieve each societal outcome and Capacity Development, recognizing the importance of the work of the Working Groups as the core of its strategy for advancing the Ocean Decade in the Western Tropical Atlantic Region. Mr Sanchez informed the Assembly that the Ocean Decade Regional Kick-off Conference is planned to be held online in October 2021.

91. He referred to the Sub-commission's financial situation and confirmed that the IOCARIBE Secretariat has been implementing the work plans in accordance with the budgetary allocations. He highlighted the work achieved by the Sub-commission despite financial difficulties and constraints. He also mentioned the financial and planning impact of COVID-19 on the IOCARIBE activities development and implementation.
92. Mr Sanchez thanked Member States for their continuous support to the activities of the Sub-Commission. He gave special thanks to Colombia for hosting the Secretariat since its initial establishment in 1986, and for seconding two professionals who are working at the Secretariat. He also highlighted the contributions from the Government of Flanders (Kingdom of Belgium), Barbados, Mexico, Norway, Panama, Republic of Korea, the EU, Sweden, and USA. He also recalled that the Sub-Commission will celebrate its 40th Anniversary in 2022.
93. The IOCARIBE Chair highlighted the importance of co-operation and partnerships with other UN Agencies and Programmes, and the work with national agencies for programme and project implementation and financial support.
94. Mr Sanchez finally informed the Assembly that the Sub-Commission elected by acclamation Mr Leo Brewster (Barbados), Ms Claudia Alves De Magalhaes (Brazil), and Mr John Cortina (USA) as Vice-Chairpersons of the Sub-Commission for the next intersessional period. Mr Sanchez was re-elected as IOCARIBE Chair for the next intersessional period, also by acclamation.
95. The representatives of 7 Member States and WMO took the floor.
96. Member States thanked the IOCARIBE Chairman for his report and stressed the importance of continuing the development and implementation of disaster risk reduction and ecosystem-based management initiatives and programmes. In particular, they noted the initiatives to improve hurricane and coastal inundation observing and forecasting capacity, and the critically important sargassum work and the coordination with IOCAFRICA, especially for the post-Covid 19 recovery. They commended IOCARIBE for coordinating the Ocean Decade in the WTA Region and for incorporating Ocean Decade goals and principles into its biennial work plan. They valued the establishment of Ocean Decade national committees and the cooperation and coordination in the co-designing and co-delivery of the Region initiatives, projects and programmes. They also referred to the IOCARIBE Secretariat staff situation, where they are asked to do more with the same or less human and financial resources.
97. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Colombia](#), [France](#), [Jamaica](#), [USA](#), [WMO](#).
98. The Assembly adopted IOC [Decision A-31/3.3.3](#).

### **IOC Sub-Commission for the Caribbean and Adjacent Region**

The Assembly,

Having considered the Executive Summary Report of the 16<sup>th</sup> session of the IOC Sub-Commission for the Caribbean and Adjacent Region (IOCARIBE), online, 3–6 May 2021,

Takes note of the progress made in the implementation of the IOCARIBE work programme 2019–2021;

Thanks the Member States who have provided support for the development and implementation of programmes of the Sub-commission, and especially the Governments of Colombia, the Government of Flanders (The Kingdom of Belgium), Barbados, Mexico, Norway, Panama, the Republic of Korea, Sweden, the EU, and USA;

Accepts the report of IOCARIBE-XVI and the Recommendations therein, including the Work Programme for the Sub-commission for 2021–2023;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

### **3.3.4. IOC Regional Committee for the Central Indian Ocean: 8th Session of IOCINDIO, online, 17–19 May 2021**

99. Noting the importance and the potential need of thorough discussion on the IOCINDIO, the Chair suggested that Assembly consider first the both agenda items devoted to IOCINDIO, namely its report (agenda item 3.3.4) and, immediately after it, the proposal for the transformation of the Regional Committee status to an IOC Sub-Commission (item 3.5.6). The IOCINDIO Chair, Rear Admiral Kushed Alam (Retd) Md, elected at the 8th session of the IOCINDIO, 17–19 May 2021 online, presented an overview of the activities led by the regional committee in the intersessional period (2019–2020), as well as the major outcomes of the 8th session of IOCINDIO, with its main recommendation on the change of IOCINDIO status.
100. This section of the IOC-31 Report concerns the deliberations of the Assembly on IOCINDIO work. The IOC-31 discussions on the IOCINDIO status and their outcome are reported in section 3.5.6 of the Report.
101. The IOCINDIO Chair stressed that the IOCINDIO remains the sole IOC intergovernmental body for the Central Indian Ocean but also for its northern part including the ROPME Sea Area.
102. He recalled the results of the IOCINDIO workshop on scientific, technical and institutional innovations for National and Regional Framework on Coastal Vulnerability Assessment and Monitoring for Sea-Level Rise and Storm Surges in the Indian Ocean Region, which was hosted by the UNESCO Category 2 International Training Centre for Operational Oceanography (ITOOcean) at the Indian National Centre for Ocean Information Services (INCOIS), on 27–30 May 2019 in Hyderabad, India.
103. As a follow-up to the above workshop, the Committee organized upon the kind invitation of the Government of India, the IOCINDIO Leadership Workshop to review progress towards developing the IOCINDIO Regional Framework for Coastal Vulnerability towards the Safety, Security and Sustainable Development of Member States in the Indian Ocean, at the Indian National Institute of Ocean Technology in Chennai, (6–7 January 2020). The workshop recommended the establishment of the IOCINDIO Working Group on Coastal Vulnerability as an advisory Group for the implementation of the IOCINDIO-VII recommendations including the development of the Regional Vulnerability Framework. The workshop was organised back to back with the Regional Planning workshop of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030) for the Northern and Central Indian Ocean countries as well as ROPME Sea Area, taking place on 8–10 January 2020. He mentioned that IOCINDIO participated in the Regional Ocean Decade Planning Workshop for Africa and Adjacent Islands, Nairobi, 27–29 January 2020.
104. The Regional Planning Workshop for the Ocean Decade proposed a number of flagship IOCINDIO activities: (i) a regional framework for coastal vulnerability towards the safety, security and sustainable development of Member States in the Indian Ocean, which would include preparation of regional coastal vulnerability guidelines and maps; (ii) monitoring and management of marine litter and research on micro-plastics; (iii) reinforcement of the Tsunami Early Warning in the Indian Ocean; (iv) inventory of knowledge gaps in existing programmes, studies and research to maximize their wide and equitable use for the Ocean Decade success; (v) identification of partnerships, search of public/private funding sources and institutions in the region to support the Ocean Decade Action Plan; (vi) establishment of an Indian Ocean Youth Leadership Network of Ocean, Climate, and Atmospheric Sciences; (vii) establishment of the Indian Ocean Leadership Mentoring Network; (viii) establishment of a Coordinating Expert

Group to follow up on advancement of Decade plans in the region, composed of Chairs and Rapporteurs of the Thematic Working Groups established during the workshop; (ix) the reinforcement of IOCINDIO-IOCAFRICA cooperation through a Joint Expert Team with the view to develop a joint cooperative programme on coastal vulnerability capacity building with the potential support of Kuwait, Bangladesh, Saudi Arabia and India in partnership with related African initiatives.

105. The Chairman also referred to the specific capacity development requirements for IOCINDIO including on-job training, international and in-region science mobility mechanisms, fellowships/bursaries, and joint regional and international projects.
106. During the intersessional period, regional and international cooperation was reinforced with US-NOAA (Ocean and Weather services), UK Portsmouth University, and Indian Ocean Rim Association, amongst a few.
107. During the extended COVID-19 pandemic, and despite the subsequent exceptional sanitary impacts on the region and its populations; the IOCINDIO Officers held several online meetings leading to the development of the proposal for changing the status of IOCINDIO containing the mission, the objectives, terms of references, budgetary implications, secretarial arrangements and other necessary provisions that was submitted to the Executive Secretary of the IOC, based on Decision IOC-XXX/3.3.4 of 30th session of the Assembly. The second half of 2020 was mainly devoted to the joint review of the proposal by the IOC Secretariat, the IOC Chair and Vice-Chair for Group IV and the IOCINDIO Officers.
108. The IOCINDIO Chair informed the Assembly that on 16 February 2021 an online consultation meeting was organised on the potential transformation of the Regional Committee into an IOC Sub-Commission, bringing together the IOC Member States representatives and partners beyond the Indian Ocean region.
109. The IOCINDIO Chair informed the Assembly that the Committee organized on 6 May 2021 an 'Indian Ocean Blue Economy Summit' – a live online webinar towards the United Nations Decade of Ocean Science for Sustainable Development (2021–2030). This event attracted participants from all IOC regions and was co-sponsored by IOCINDIO and several national, regional and international partners. The final outcomes and recommendations addressed the following areas: (i) cooperation and collaboration in key development areas for the region such as mariculture and fisheries to meet the demand towards achieving food security; (ii) focus on natural hazards in the region; (iii) studies on pollution, micro-pollution, ship-related pollution; (iv) building up alliances towards productive ocean health taking into account climate change scenarios with a fast warming of the Indian Ocean; (v) development of predictive and awareness-creating capabilities for natural hazards like tropical cyclones; (vi) climate change impacts on the fisheries sector, (vii) cooperative programmes in the context of the IIOE-2 and its sponsors: IOC, SCOR, and IOGOOS. Furthermore, the webinar highlighted the importance to translate research into applications for sustainable development and governance for societal benefit.
110. The IOCINDIO Chair reported to the Assembly that the IOCINDIO-VIII session formulated the IOCINDIO Work Plan for the period 2022–2023 with a focus on reinforcing cooperation with the Institute of Electrical and Electronics Engineers, and Ocean Engineering Society towards joint activities, engagement with the Ocean Decade and resources mobilization including the Ocean Decade regional enabling activities sponsored by the Government of Norway.
111. He informed the Assembly that the IOCINDIO-VIII Session also elected by acclamation the new officers, himself as Chair and two Vice-chairs, Dr Maryam Ghaemi (Islamic Republic of Iran) and Dr Saif Mohammed AlGhais (United Arab Emirates).



112. In conclusion, he stressed that the Indian Ocean is the least studied ocean, and its coasts are prone to many natural hazards. The countries of the Indian Ocean Rim have lots of untapped resources as far as the sustainable ocean economy is concerned. He called on Member States to formulate a strong vision for the Indian Ocean region by the end of the Ocean Decade in 2030.
113. He finally read the recommendations of the IOCINDIO-VIII and requested the Assembly to consider the change of the status of IOCINDIO into Sub Commission.
114. The representatives of 20 Member States, WMO and WESTPAC took the floor. A number of Member States commented on the report of the IOCINDIO-VIII. The interventions concerned both the report of the Regional Committee and the proposal to change its status into a Sub-Commission (see also Item 3.5.6).
115. The following Member States and Observers chose to provide record of their plenary interventions on this agenda item for the informational annex to the meeting report: [USA](#), [WESTPAC](#) and [WMO](#).
116. The Assembly adopted IOC [Decision A-31/3.3.4](#).

### **IOC Regional Committee for the Central Indian Ocean**

The Assembly,

Having examined the Executive Summary report of the 8th session of the IOC Regional Committee for the Central Indian Ocean, online, 17–19 May 2021 (IOC/SC-IOCINDIO-VIII/3s),

Takes note of the progress made in the implementation of the IOCINDIO work programme 2019–2021;

Thanks the IOC Member States and partners for their support to the reactivation of the Committee and the implementation of its work programme and for their sustained efforts for its transformation into an IOC Sub-Commission for the Indian Ocean, in particular, Bangladesh, India, Iran (Islamic Republic of), Kuwait and Saudi Arabia;

Takes note of the report of IOCINDIO-VIII and the recommendations therein, including the work programme for the period 2021–2023 under item 3.5.6;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

## **3.4 REPORTS OF OTHER IOC SUBSIDIARY BODIES**

### **3.4.1 Warning and Mitigation Systems for Ocean Hazards**

#### *3.4.1.1 Regional Early Warning Services*

117. Dr Silvia Chacon, Chair of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS), introduced the report of ICG/CARIBE-EWS. She highlighted the results of the CARIBE WAVE 2020 and CARIBE WAVE 2021 exercises that mobilized 400,000 people in total on 19 March 2020 and 11 March 2021, despite the pandemic, with all due consideration to sanitary measures.
118. Dr Chacon reported on other results of the ICG/CARIBE-EWS-XV, 27–29 April 2021 (online), including the planning of the CARIBE WAVE 2022 exercise for Thursday 10 March 2022, which will consist of the following three scenarios: (i) a tsunamigenic earthquake along the Muertos Trough south of Dominican Republic; (ii) a flank collapse of the Cumbre Vieja Volcano (La Palma, Canary Island); and (iii) an off shore event north of Panama along the Northern Panama Deformed Belt.

119. Dr Chacon highlighted the recent volcanic eruption of the La Soufrière volcano in Saint Vincent's and the Grenadines and implications for volcanic sources of tsunamis. Due to the current state of the sea level monitoring network and the recent volcanic activity at the Lesser Antilles, ICG/CARIBE-EWS-XV recommended to Member States to maintain their sea-level stations to an operational standard, to produce an assessment of potential impacts from local tsunamis for decision making and to educate at-risk populations on the natural tsunami warning signs for their respective sources.
120. Member States were also encouraged to diversify their means of communication, to commemorate World Tsunami Awareness Day on November 5th and to engage and contribute to the co-design and co-delivery of Ocean Science for Sustainable Development and the Ocean Decade Tsunami Programme.
121. Prof. Costas Synolakis, recently elected Vice-Chair of the ICG/NEAMTWS, presented the report of the ICG/NEAMTWS on behalf of the Chair Prof Maria Ana Baptista. He informed that the 16th session of the ICG/NEAMTWS was held in Cannes, France, 2–4 December 2019.
122. The Instituto Português do Mar e da Atmosfera (IPMA, Portugal) has gone through the ICG/NEAMTWS accreditation process and has met the requirements to be a Tsunami Service Provider, becoming the fifth in NEAM region.
123. Prof. Synolakis highlighted the continued national efforts, particularly in France, Greece, Israel, Italy and Turkey to increase awareness on tsunami hazards and preparedness in line with and as contributions to the World Tsunami Awareness Day, 5 November 2019 (WTAD). The ICG/NEAMTWS organized a regional webinar on WTAD on 4 November 2020.
124. There continues to be gaps in the seismic and sea level network notably in North Africa. Some countries have difficulties sharing observations due to national policy. The implication is sub-optimal performance of the regional tsunami warning systems.
125. Prof. Synolakis highlighted that a Tsunami Ready Team has been established in April 2021 and that Member States, in particular France, Italy and Spain are piloting Tsunami Ready community recognition programmes in five communities.
126. Prof. Costas Synolakis informed the Assembly that the fourth regional tsunami exercise (NEAMWave21) was conducted on 8-10 March 2021. The exercise constituted a very positive experience for Tsunami Service Providers and Member States.
127. He also reported progress regarding the development of a new ICG/NEAMTWS 2030 Strategy. A final draft strategy will be presented at the ICG/NEAMTWS session in November 2022.
128. Finally, Prof. Costas Synolakis reported on a potential new IOC UNESCO project funded by DG-ECHO on "Strengthening the Resilience of Coastal Communities in the North East Atlantic, Mediterranean Region to the Impact of Tsunamis and Other Sea Level-Related Coastal Hazards".
129. The representatives of 21 Member States and WMO took the floor.
130. The Assembly expressed support for the recommendations of the ICG/CARIBE-EWS and ICG/NEAMTWS. United States announced that over US \$660,000 of new funding is being made available through USAID's Bureau for Humanitarian Assistance to support Tsunami Ready related preparedness efforts in the Caribbean and Pacific regions.

131. The following Member States chose to provide records of their plenary intervention on this agenda item for the information annex to the meeting report: [Colombia](#), [India](#), [Italy](#), [Portugal](#), [Spain](#), [Turkey](#), [United Kingdom](#), [USA](#).

#### 3.4.1.2 *Global Coordination of Warning and Mitigation Systems for Ocean Hazards*

132. Dr Alexander Frolov, Chair of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), introduced this item. He informed the Assembly about recent developments in Tsunami Warning and Mitigation Systems and reported on the decisions and recommendations of TOWS-WG at its 13th and 14th meetings.

133. He noted that this activity is based on a multiscale digital coastal mapping, high density coastal observation networks, and sophisticated numerical simulations of the complex nonlinear transformation of a tsunami wave incident on the coast. At the same time, there remains a fundamental capability gap when it comes to providing accurate, actionable tsunami forecasts to the most at-risk coastal communities.

134. The TOWS-WG recognized that the UN Decade of Ocean Science for Sustainable Development provides a once-in-a-generation opportunity to address and potentially fill this gap by leveraging novel sensing platforms, techniques and/or infrastructures in order to quickly detect and measure tsunamis the near-instant they form. As a result, the TOWS-WG proposed the establishment of an Ocean Decade Tsunami Programme in support of the United Nations Decade of Ocean Science for Sustainable Development and presented it to the Assembly for approval.

135. The Ocean Decade Tsunami Programme (the programme) will achieve transformational advances in tsunami warnings to enhance the coastal community responses. The programme will contribute to achieving the societal Ocean Decade outcome of 'A Safe Ocean' with the aim of making 100% of communities at risk of tsunami prepared for and resilient to tsunamis by 2030 through the implementation of the UNESCO/IOC Tsunami Ready Programme and other initiatives.

136. Dr Alexander Frolov also informed about the proposals of the TOWS-WG on the programme governance structure, including the establishment of a Scientific Committee that will be in charge of drafting a 10-Year Research, Development and Implementation Programme, and a special Coalition for Tsunami Ready.

137. He informed further about outcomes of the International Symposium on lessons learnt from the 2018 Tsunamis in Palu and Sunda Strait (Jakarta, Indonesia, 26–28 September 2019), which was held in respect to Decision IOC-XXX/8.2 of the IOC Assembly at its 30th session (26 June–4 July 2019, Paris).

138. He also noted that Member States will greatly benefit from the recently published IOC guide entitled *Preparing for Community Tsunami Evacuations: from inundation to evacuation maps, response plans and exercises (Manuals and Guides, 82, 2020)*. The guide is based on best practice papers and presentations prepared for a programme of training workshops on how communities and governments can work together to create reliable and practical tsunami evacuation maps.

139. The representatives of 21 Member States and WMO took the floor.

140. The Assembly expressed strong support for the TOWS-WG recommendation of establishing a UN Ocean Decade Tsunami Programme and a Scientific Committee with an advisory role, to prepare the UN Ocean Decade Tsunami Programme Draft 10-Year Research,

Development and Implementation Plan 2021-2030. Several Member States highlighted the importance of community preparedness and awareness for local and non-seismic source tsunami events.

141. The following Member States chose to provide records of their plenary intervention on this item for the informational annex to the meeting report: [Chile](#), [France](#), [Indonesia](#), [Japan](#), [New Zealand](#), [Thailand](#), [USA](#), [WMO](#).

142. The Assembly adopted IOC [Decision A-31/3.4.1](#).

### **Warning Mitigation Systems for Ocean Hazards**

The Assembly,

Having examined the executive summary reports of the recent sessions of the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS-XV), the North-Eastern Atlantic, the Mediterranean and Connected Seas Tsunami Warning and Mitigation System (ICG/NEAMTWS-XVI), and the reports of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (IOC/TOWS-WG-XIII and XIV),

Accepts the reports by the IOC/ICGs and TOWS-WG;

Notes with satisfaction the progress made during the intersessional period, including:

- Instituto Português do Mar e da Atmosfera (IPMA, Portugal) accredited as a Tsunami Service Provider in NEAMTWS;
- five exercises carried out (CARIBE WAVE 20, PacWave20, IOWave20, CARIBE WAVE 21 and NEAMWave21) including testing plans for tsunami response in backdrop of a pandemic, and regular communication tests performed;
- timely issued Best Practice documents and Guidelines for Tsunami Warning Services, Evacuation and Sheltering during COVID-19;
- IOTWMS Capacity Assessment of Tsunami Preparedness in the Indian Ocean – Status Report 2018 ([IOC/2020/TS/143](#)) published based on results of an online survey responded by 21 Member States;
- published Summary Statement ([IOC/BRO/2020/1](#)) of the International Symposium on lessons learnt from the 2018 tsunamis in Palu and Sunda Strait organized by UNESCO-IOC during 26–28 September 2019;
- publication of the IOC Manuals and guides 82 "Preparing for community tsunami evacuations: from inundation to evacuation maps, response plans and exercises" ([IOC/2020/MG/82](#));
- four communities in the Caribbean and Adjacent Regions (St. John's City, Antigua and Barbuda; Shermans, St. Lucy to Mullins, St. Peter, Barbados; Union Island, St. Vincent and the Grenadines; and Carenage, Trinidad and Tobago), two communities in the Pacific Ocean (Samara and Tamarindo, Costa Rica), and two communities in the Indian Ocean (Venkatraipur and Noliasahi, Odisha province, India) achieved UNESCO/IOC Tsunami Ready recognition, and growing interest for piloting Tsunami Ready expressed in NEAMTWS;
- successful and widely attended UNDRR IOC World Tsunami Awareness Day (WTAD) 2020 campaign consisting of high-level events, regional webinars, social media visuals, videos, and eyewitness accounts, as well as the creation of 15 videos highlighting countries joining the global Tsunami Ready community;
- designation of ITIC and the Indonesia BMKG as Ocean Teacher Global Academy Specialized Training Centres (OTGA STC) in 2020;
- Progress by Indonesia in their application for ISO certification of a Community Based Early Warning System;
- European Commission's support to the 3-year project project "Strengthening the Resilience of Coastal Communities in the North East Atlantic, Mediterranean Region to the Impact of

Tsunamis and Other Sea Level-Related Coastal Hazards” contributing to NEAMTWS, UNESCAP funding for the project “Strengthening Tsunami Early Warning in the North West Indian Ocean Region”, and ongoing renewal for an additional two years of the support provided by the Government of Australia to the Indian Ocean Tsunami Warning and Mitigation System (IOTWMS) Secretariat Office, hosted by the Bureau of Meteorology.

Welcomes the appointment of the new ICG/NEAMTWS officers for the biennium 2020–2021.

I.

**Tsunami and other Coastal Hazards Warning System  
for the Caribbean and Adjacent Regions (CARIBE-EWS)**

Notes the successful conduct of the CARIBE WAVE 20 and CARIBE WAVE 21 exercises with the participation of 98 percent of the Member States and Territories and almost 400,000 people in total despite the COVID-19 pandemic,

Welcomes the decision of organising CARIBE WAVE 22 with 3 scenarios that include (1) a tsunamigenic earthquake along the Muertos Trough south of Dominican Republic, (2) a flank collapse of the Cumbre Vieja Volcano (La Palma, Canary Island), and (3) an off shore event north of Panama along the Northern Panama Deformed Belt,

Recommends that ICG/CARIBE-EWS communities prone to tsunami risk, aspire to become Tsunami Ready, as this recognition includes many aspects of preparedness essential for an effective local tsunami response,

II.

**Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic,  
the Mediterranean and Connected Seas**

Endorses the accreditation of the Instituto Português do Mar e da Atmosfera (Portugal) as a fifth Tsunami Service Provider (TSP) in the NEAM region;

Encourages Member States to explore the adaptation of community preparedness and recognition programmes such as Tsunami Ready for the NEAM region, including Tsunami Hazard and Tsunami Evacuation Maps, Plans, and Procedures (TEMPP);

Further encourages Member States to increase the number of seismic and sea-level stations available in North Africa and to share data using bilateral agreements whenever possible;

III.

**Working Group on Tsunamis and Other Hazards Related  
to Sea-Level Warning and Mitigation Systems (TOWS-WG)**

Reiterates that the UN Decade of Ocean Science for Sustainable Development provides a once-in-a-generation opportunity to address and potentially fill capability gaps by leveraging novel sensing platforms, techniques and/or infrastructures in order to more quickly detect, measure, forecast and warn for tsunamis, even from the near-instant they form, and to enhance the preparedness of coastal communities for tsunamis through the UNESCO/IOC Tsunami Ready Programme;

Approves the establishment of the Ocean Decade Tsunami Programme (the programme) and a Scientific Committee to prepare the Draft 10-Year Research, Development and Implementation Plan for this programme with Terms of Reference included as Annex 1;

Approves also the following governance structure for the UN Decade Tsunami Programme:

- (i) the TOWS-WG will perform Global Steering Committee functions for the programme;
- (ii) a Scientific Committee with an advisory role for the duration of the programme will be established;
- (iii) the Scientific Committee will be tasked to develop a Draft 10-Year Research, Development and Implementation Plan for the programme for endorsement by the TOWS-WG at its next meeting;
- (iv) the four Intergovernmental Coordination Groups (ICGs) will perform regional Steering Committee functions, including implementing coordinating roles for the regional aspects of the programme;

- (v) a special Coalition for Tsunami Ready will be established in collaboration with other critical stakeholders across the UN structure as well as national civil protection agencies and will report to the TOWS-WG on Tsunami Ready aspects of the programme;

Decides that the Draft 10-Year Research, Development and Implementation Plan for the UN Decade Tsunami Programme is dedicated to achieving transformational advances in tsunami detection, measurement and forecasting, including tsunamis generated by non-seismic sources. The programme includes the following focus areas related to tsunami warning capabilities:

- expansion of existing observational systems including seismometers, coastal tide gauges, and deep ocean tsunameters to fill identified gaps;
- deploy new technologies to address observational gaps that cannot be covered by existing networks embracing. This would include the widespread implementation of scientific instrumentation on deep-ocean telecommunications cables as developed by the ITU/WMO/UNESCO-IOC Joint Task Force (JTF) SMART Subsea Cables effort; and submission of a Programme to the UN Decade of Ocean Science for Sustainable Development;
- wide expansion of data access and availability and development of capability for real-time and near-real time sea level, seismic and GNSS-derived land motion data at an appropriate sampling rate and relevant tools to forecast tsunamis from all sources;
- increase access and regularly update the collection of coastal topographic and bathymetric data, in collaboration with the Nippon Foundation-GEBCO Seabed 2030 project, as well as high performance computational capabilities to enable more timely, accurate and comprehensive tsunami and other coastal hazard forecasts to better advise community response;
- ensure all National Tsunami Warning Centres have access to data, tools and communication platforms, protocols and training to timely and effectively warn coastal and maritime communities threatened by tsunamis and other coastal hazards and are integrated into a multi hazard framework;

Further decides that the Draft 10-Year Research, Development and Implementation Plan for the Ocean Decade Tsunami Programme contribute to achieving the societal outcome 'A Safe Ocean' of the Ocean Decade with the aim of making 100% of communities at risk of tsunami prepared for and resilient to tsunamis by 2030 through the implementation of the UNESCO/IOC Tsunami Ready Programme and other initiatives to include, but not limited to:

- the adoption and continued implementation of the UNESCO-IOC Tsunami Ready Guidelines and Indicators as the international standard for evidence-based community preparedness for tsunamis;
- enhanced access and capacity development for high-resolution near shore bathymetric and topographic data and identification of potential tsunami sources for accurate and improved inundation modelling and evacuation mapping and planning in support of Tsunami Ready communities;
- enhanced integration to minimize tsunami disaster impacts and to enable rapid restoration of socio-economic activities and critical infrastructure services post tsunami impacts;

Encourages Member States to:

- (i) provide voluntary financial contributions to the IOC special account and in-kind contributions to support the Ocean Decade Tsunami Programme;
- (ii) densify sea level networks capable of Tsunami detection as well as seismic network particularly nearby tsunamigenic sources;
- (iii) implement a sample rate of 1 sample/sec. or higher on sea level gauges in order to record and transmit tsunami wave-form data from all seismic and non-seismic sources;
- (iv) register National Tsunami Warning Centres (NTWCs) and Tsunami Warning Focal Points (TWFPs) as alerting authorities in the "WMO Alerting Authority Register" via the WMO National Permanent Representative and in follow-up to WMO circular letters;
- (v) use best practices in engineering design and construction of evacuation shelters, especially where local tsunami hazards exist;

- (vi) include the IOTIC compilation of school Disaster Risk Reduction and preparedness materials as a resource, and especially as part of Tsunami Ready pilots that include schools;

Instructs the regional Intergovernmental Coordination Groups (ICGs) to:

- (i) continue the strong collaboration between the IOC and UNDRR for World Tsunami Awareness Day (5 November), noting that the 2021 WTAD will highlight Target F of the Sendai Framework on international cooperation to developing countries through support to the implementation of their national and local strategies for disaster risk reduction;
- (ii) urgently complete the IOC Manual & Guides 74 on the guidelines for the Tsunami Ready recognition programme for widespread distribution to Member States;
- (iii) include local source tsunami Standard Operating Procedures as an important component of the UNESCO-IOC Tsunami Ready programme;
- (iv) develop standardized trainings that can be delivered online or in person, in particular through the Ocean Teacher Global Academy (OTGA);
- (v) with regard to the next Tsunami Symposium, incorporate more diversity in the organizing committee by inclusion of all regions; consider a venue that can accommodate a hybrid meeting that would enable the most people to successfully participate and engage; and explore funding opportunities;

Accepts the reports from the Task Teams on Disaster Management and Preparedness and Watch Operations and instructs them to continue efforts for monitoring and responding to tsunamis generated by non-seismic sources and possible integration into tsunami watch operations;

Extends the tenure of the Working Group on Tsunamis and Other Hazards related to Sea-Level Warning and Mitigation Systems and its Task Teams on: (i) Disaster Management & Preparedness (TTDMP), and (ii) Tsunami Watch Operations (TTTWO), with terms of reference as given in IOC Resolution XXIV-14 [for TOWS-WG], report IOC/TOWS-WG-VI/3, Annex II [for TTDMP] and report IOC/TOWS-WG-X/3, Annex II (Appendix 1) [for TTTWO].

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

Annex to Dec. A-31/3.4.1

**Terms of reference  
of the Scientific Committee for the Ocean Decade Tsunami Programme**

The Scientific Committee has an advisory role for the duration of the Ocean Decade Tsunami Programme (referred to as the programme).

Membership:

- Four (4) members nominated by the each of the TOWS-WG Task Teams;
- Three (3) members nominated by the TOWS-WG on the basis of their scientific expertise;
- All members will serve for a period of two years and would be eligible for renewal once.
- In selecting Expert Members, due consideration will be given to geographic, generational and gender balance.

The Scientific Committee will:

- (i) Develop a Draft 10-Year Research, Development and Implementation Plan for the Ocean Decade Tsunami Programme based on the concept paper "Protecting Communities from the World's Most Dangerous Waves: A Framework for Action under the UN Decade of Ocean Science for Sustainable Development";
- (ii) Identify and address gaps in global tsunami hazard assessment as follows:
  - a. comprehensive assessment to include all potential tsunamis, anywhere in the world, regardless of their source,
  - b. strategies to validate historical tsunami sources, through the application of paleotsunami techniques and historical seismology

- (iii) Identify gaps in tsunami detection, measurement, forecasting, with a special emphasis on tsunamis generated close to populated coastlines;
- (iv) Propose to enhance sensing and analysis strategies to enable the rapid characterization of tsunami sources through the combined use of land-based seismic and geodetic sensors, GNSS terminals, coastal sea level gauges, deep-ocean tsunameters, SMART repeaters on deep-ocean fiber-optic cables and satellite-based observations;
- (v) Propose a roadmap for collaboration with the ITU/WMO/IOC SMART Joint Task Force cable initiative to fully explore the feasibility of widespread deployment of scientific instrumentation on deep-ocean fiber-optic cables to improve capability to rapidly detect and characterize tsunami sources as well as propagating tsunami wave fields;
- (vi) Consider and propose strategies, programmes and content to enhance societal resilience for tsunami and other ocean hazards;
  - a. build the framework needed to ensure the training and development of the next generation of technical-scientific expertise,
  - b. identify strategies that allow to characterize structural and social vulnerability in tsunami hazard zones
- (vii) Overview the consolidation of inputs received to IOC [Circular Letter 2825](#) on Inventory of actions being considered under the United Nations Decade of Ocean Science for Sustainable Development (2021–2030) in the field of Tsunamis and Other Sea-Level Related Hazards warning and mitigation;
- (viii) Submit a Draft 10-Year Research, Development and Implementation Plan for endorsement by the TOWS-WG at its 15th meeting.

#### **3.4.2 International Oceanographic Data and Information Exchange: 26th Session of IODE, 20–23 April 2021**

143. Dr Sergey Belov, IODE Co-Chair, introduced this item and informed the Assembly on the outcome of the 26<sup>th</sup> session of the IODE Committee that was held between 20-23 April 2021 as a shortened online session because of the COVID-19 pandemic. Only key issues were discussed.
144. Reporting on the work of the IODE NODCs and ADUs was made available online through a dedicated webpage (<https://surveys.iode.org/2019-2020-nodc-and-adu/>). The IODE-XXVI session was attended by 155 participants from 65 IOC Member States and 9 organizations.
145. The Committee focused its attention on the following key issues: (i) contribution of IODE to the UN Decade of Ocean Science for Sustainable Development; (ii) establishment of the ODIS project and associated partnership centre; (iii) revision of the IOC strategic plan for data and information management (2022–2025); (iv) revision of the IOC oceanographic data exchange policy; (v) future of the IODE Ocean Data and Information Networks (ODINs); (vi) international ocean data conference (February 2022); (vii) review of NODC health status within the IODE network; (viii) IODE project and activity performance evaluation methodology; (ix) performance review of the IOC Project Office for IODE; and (x) work plan and budget for 2021–2022).
146. Within the strategic requirement on promoting global sharing of data and information IODE has been working on expanding the network, but expanding the network requires an understanding of the challenges that interested Member States are facing in terms of resourcing, national buy-in, etc. IODE has over the years established six regional Ocean Data and Information Networks (ODINs) to support the strengthening of capacities for ocean data and information management and encourage the development of data and information products. The Committee, noting the limited and declining financial resources available from



UNESCO Regular Budget to fund each ODIN, decided to continue ODINs as projects. It further decided to link the ODINs more closely to IOC regional subsidiary bodies in an effort to strengthen the regional implementation of IODE projects. In addition, an inter-ODIN forum will be established to provide closer connections between ODINs and other global IOC programmes and facilitate the sharing of best practices.

147. In 2019, the IOC Assembly, through Decision IOC-XXX/7.2.2 (Ocean Data and Information System (ODIS)), endorsed the ODIS Concept, Implementation Plan and Cost Benefit Analysis and invited the IODE Committee to prepare a fully detailed and costed project proposal for the IOC Ocean Data and Information System (ODIS) for submission to the IOC Executive Council at its 53rd session in 2020 which was postponed. Document IOC/A-31/3.4.2.Doc(1) provides the fully detailed and costed project proposal for ODIS. The Committee noted that, as a first step towards the development of ODIS, the Ocean InfoHub (OIH) project was being implemented since April 2020 with funding by the Government of Flanders, Kingdom of Belgium. OIH will make use of advanced interoperability and artificial intelligence technology to support interlinkages and interoperability between distributed resources including existing clearinghouse mechanisms and will establish and anchor a network of regional and thematic nodes (initially in Latin America, Africa and Pacific SIDS) that will improve online access to, and synthesis of existing global, regional and national data, information and knowledge resources. In addition, the Committee decided that the efforts of the Partnership Centre for IODE Ocean Data Portal, hosted by RIHMI-WDC of Roshydromet (Obninsk, Russian Federation) should be concentrated now on OIH/ODIS rather than standalone tools only as it was before, and revised the terms of reference of the Centre accordingly.
148. During the intersessional period, the Ocean Biodiversity Information System (OBIS) increased with 20 million new records from 1,000 new datasets and continues to provide the world's largest open access database on the diversity, distribution and abundance of marine species. The harmful algae data in OBIS is now also served through a new data portal of the Harmful Algal Information System (HAIS), developed by OBIS, and which together with the HAB event data from HAEDAT formed the evidence base for the Global HAB Status Report (GHSR), released in June 2021.
149. The SDG 14.3.1 Data Portal (<https://oa.iode.org/>) has been developed by IODE and has benefitted from NODC's and ADU's data contributions.
150. The IODE established the joint IODE/IAMSLIC AquaDocs project – an e-repository providing high visibility to content and authors, covering ocean, freshwater, brackish and urban water within the coastal zone.
151. Responding to today's technological requirements, IODE, together with NCEI of NOAA, is working on moving the World Ocean Database to the cloud to make it more easily available for Member States to submit as well as extract data.
152. The OceanTeacher Global Academy (OTGA) now has training centres in most regions and can assist with necessary training. Despite the limitations brought about by the COVID-19 pandemic, OTGA's training centres were able to adapt quickly, and many courses were organized online. The IODE Committee thanked the Government of Flanders (Kingdom of Belgium) for its continued support to the OceanTeacher Global Academy and to the national institutions that host an IODE OTGA Regional or Specialized training centre.
153. At its previous session, the IODE Committee established an inter-sessional working group to propose an Ocean Data and Information Stewardship Strategy for the UN Ocean Decade (IWG-SODIS). Two online workshops in 2020 were organized to: (i) familiarize UN agencies with IODE projects and activities; and (ii) to promote enhance collaboration on ocean

data sharing under the Ocean Decade umbrella. In addition, the (First) International Ocean Data Conference is planned to take place February 2022 (Sopot, Poland) as a direct contribution to the Ocean Decade. In this regard, the Committee decided to consider a name change of the Conference to reflect the strong association with the Ocean Decade.

154. The Committee welcomed the invitation extended to IODE to collaborate in several Decade Actions: Evolving ocean observing for a sustainable future; Observing and Predicting the Global Coastal Ocean; A Global Integrated Marine Biodiversity Information Management and Forecasting System for Sustainable Development and Conservation; and the Ocean Biomolecular Observing Network, and called for further cooperation with projects which objectives are close to those of ODIS. The Committee invited the IODE Co-Chairs to explore with the leads of Ocean Decade Actions to what extent the IODE programme could add value to Decade Actions beyond the proposals where IODE is already engaged. The IODE Co-chairs will regularly report on progress to the IODE Management Group. In addition, the Committee decided to establish an IODE Intersessional Working Group to develop an inventory of IODE data and information management assets and tools that could help serving the Ocean Decade data and information needs.
155. Regarding the IOC Oceanographic Data Exchange Policy that was adopted in 2003 and slightly updated in 2019, the Committee agreed that there are enough elements that warrant a revision of the IOC data policy. The result should be an ambitious new data policy that further promotes and supports free and open exchange of data and better alignment with data policies at national, regional and international levels as well as with those existing in other sectors. The new policy should also reflect current international principles (such as FAIR), which did not exist 20 years ago.
156. The Committee recalled that in 2019 it had decided to review the IOC Project Office for IODE (Ostend, Belgium) activities. The objectives of the review were to (i) evaluate the IODE project Office activities and (ii) consider the question of renewing the current Memorandum of Understanding between IOC and the Flanders Marine Institute (VLIZ). The review was carried out by Mr Loic Petit de la Villéon (France) and Mr Adam Leadbetter (Ireland) free of charge to IODE. Their overall recommendation is to renew the MoU between IOC and VLIZ on hosting the IOC Project Office for IODE in Ostend, Belgium. The Committee expressed its great appreciation to the Government of Flanders (Kingdom of Belgium) and VLIZ for the long-term support provided to the IOC Project Office for IODE, stressing that the Office has been crucial for the continuing growth and success of the IODE Programme and IOC activities in general.
157. The Committee welcomed the continued and expanding cooperation of IODE with other IOC programmes and partners through projects like the Harmful Algal Information System and the Global HAB Status Report and activities in relation to ocean acidification. IODE experts and IODE data centres are urged to actively participate in these activities.
158. Regarding IODE staffing, the Committee expressed concern over the considerable dependency on extra-budgetary funding. The Committee, while noting the difficulty to establish new regular positions within IOC and similar needs of other programmes within IOC, called on the Executive Secretary to consider the long-term sustainability of the IODE programme when preparing the IOC staffing plan for the next biennia. The Committee called on Member States to consider offering secondments (on site or through teleworking) to strengthen the IODE Secretariat. The Committee thanked the Government of Flanders (Kingdom of Belgium) for continuing to provide three full-time staff members to the IOC Project Office for IODE. The Committee welcomed the support of the Flanders-UNESCO Trust Fund for Science (2020–2022) for IOC Ocean InfoHub, OceanTeacher Global Academy Phase II, and PacMAN; and the Government of Norway for its support to three new projects focusing on Africa and closely related to the IOC Ocean InfoHub.

159. To conclude, the IODE Co-chair conveyed the concern of the Committee about the continued decline in UNESCO Regular Programme funds made available to IODE. The Committee stated that the current amount available will bring IODE at a critical level, unable to implement its work plan and maintain the global network of data and information centres built over the past six decades. The current level of funding does no longer allow capacity development at the regional level through the regional Ocean Data and Information Networks (ODINs) with adverse consequences on the equitable participation of all Member States in IODE and the level of data and information management activities that is necessary to beneficially contribute to the Ocean Decade. Dr Belov called for the assistance from Member States to ensure the continued work of IODE. He called on all Member States to either begin or continue providing funds, staff as well as in-kind support through NODCs, ADUs, AIUs or through the secondment of staff to IODE.
160. The representatives of 23 Member States and 2 observers took the floor.
161. The Assembly thanked the IODE Co-Chairs for their very clear and detailed report and thanked the members of the IODE Secretariat for all the hard work throughout the intersessional period including the organization of a successful 26<sup>th</sup> session of the IODE Committee, despite the difficulties caused by the pandemic.
162. The Assembly thanked IODE for its long-standing support to Member States in increasing the capacity in managing oceanographic data and information, which has benefited many countries, including LDCs and SIDS. IODE has a leading role in data and information management and developing user-oriented products and services, and Member States are expecting IODE to actively pursue that leadership role also under the UN Decade of Ocean Science for Sustainable Development.
163. The Assembly therefore also strongly supported the establishment of the IOC Ocean Data and Information (ODIS) project, which should play a central role in connecting the data systems and providing access to “the ocean of data and information” resulting from the various UN Ocean Decade actions.
164. The Assembly recognized that a revision of the 20-year-old IOC data exchange policy is timely and advised the intersessional working group that a revised policy should reflect the international, regional and national developments and improvements in data sharing principles and should align with updated policies from other organizations such as WMO. The revised IOC data exchange policy should also serve and be applicable to the variety of data types and applications under the UN Ocean Decade and should consider the increased interest from philanthropic and private or commercial enterprises in using the ocean data collected by our Member States and recovered and stored by IODE.
165. The Assembly expressed its strong appreciation for the financial contributions received from the Government of Flanders (Kingdom of Belgium) to support activities of IODE (including IODE projects such as OIH, OTGA, OBIS and PacMAN) and invited the Government of Flanders to renew the memorandum of understanding to continue its support to the IOC Project for IODE in Oostende (Belgium) hosted by the Flanders Marine Institute (VLIZ).
166. Thailand thanked the IODE secretariat for developing and hosting the SDG 14.3 Ocean Acidification data portal, to which they have contributed data.
167. Several Member States reported on their activities related to their NODC or ADU, OBIS node or OTGA Training Centre and encouraged other Member States to also participate actively in IODE’s regional and global activities and strengthen the IODE Network.

168. Kuwait and Portugal reported that they are considering the recent request from IOC to join the IODE network by establishing a National Oceanographic Data Centre (NODC).
169. Indonesia announced that its NODC will apply for IODE accreditation by the end of 2021.
170. The United Kingdom offered its expertise in ocean data management, controlled vocabularies and other interoperability technologies in addition to contributing to the Steering Group of ODIS and expressed its desire to become an early adopter.
171. The Global Ocean Observing System (GOOS) highlighted that IODE is a major partner for several actions in the GOOS Core Team Implementation Plan, recognizing that the value chains connecting ocean observations to users necessarily flow through data and information management systems. The cooperation between GOOS and IODE has been growing in recent years; through interaction in each other's relevant working groups and activities; through the joint IODE-GOOS Ocean Best Practices System project; through using the OceanTeacher Global Academy platform for training; and through the developing work of IODE's Ocean Biodiversity Information System (OBIS), a close partner and integral part of the GOOS Biology and Ecosystems Panel's work. Recent GOOS work surveying sustained biological observing programmes, has highlighted the need to bolster observations, but also data exchange and interoperability, emphasizing the importance of OBIS as a building block for an integrated observing system.
172. GOOS also reported that the Observation Coordination Group (OCG), and its global ocean observing networks is working towards seamless data and metadata flow to data assembly centres, building on the future ODIS architecture, while OceanOPS plays a central supporting role in developing best practices in quality control and metadata. GOOS supported the establishment of the Ocean Data and Information System (ODIS) Project and expressed its interest in contributing to the revision of the IOC data exchange policy.
173. WMO welcomed the IODE report and looked forward to continuing its close collaboration with IODE activities, mainly through the WMO Information System (WIS 2.0). WMO reported that its Executive Council has just approved a Unified Data Policy which will replace the previous policies such as Resolution 40 and later resolutions on hydrological and climate data. The unified data policy will be submitted for approval at the WMO Extraordinary Congress in October 2021. The data policy covers all Earth system data exchanged between WMO Members, including the ocean domain and defines two categories of data: core data that are freely and openly exchanged, and recommended data that are not mandatory but still required to support Earth system monitoring and prediction activities at the global, regional and national levels. In the case of the Oceans, care was taken to align with the existing data policy of IOC and WMO looks forward to continuing this dialogue as the IOC Data Policy evolves.
174. Mr De Bruin, IODE Co-Chair thanked the Member States for expressing their strong support for the work of IODE and its appreciation of the financial and in-kind support provided by the Government of Flanders (Kingdom of Belgium) and the Flanders Marine Institute (VLIZ) to IODE and its Project Office in Oostende, Belgium. Mr De Bruin welcomed the support for the establishment of the Ocean Data and Information System (ODIS) and ensured the development of ODIS will happen in close cooperation with the relevant stakeholders and experts, such as those involved in WMO/WIS and GOOS, and that ODIS will play a critical role in the UN Ocean Decade. Mr De Bruin also thanked the Member States who offered to submit very specific data layers and data types to the regional data hubs connected to the Ocean InfoHub (OIH) system, as well as those Member States (e.g., Saudi Arabia and Kuwait) who offered to provide access to their (national) research vessels for the collection of new data. Mr De Bruin also confirmed that IODE will invite all Member States and relevant stakeholders

(such as GOOS and WMO) to take active part in the intersessional working group to revise the IOC Data Exchange Policy.

175. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Argentina](#), [Brazil](#), [Canada](#), [Chile](#), [Colombia](#), [France](#), [India](#), [Indonesia](#), [Italy](#), [Japan](#), [Portugal](#), [Thailand](#), [United Kingdom](#), [USA](#), [WMO](#).

176. The Assembly adopted IOC [Decision A-31/3.4.2](#).

### **International Oceanographic Data and Information Exchange**

The Assembly,

#### **I – 26th Session of IODE, 20–23 April 2021**

Having examined the Executive Summary Report of the 26th session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE-XXVI, 20–23 April 2021) ([IOC/IODE-XXVI/3s](#)),

Endorses the report of the 26th session of the IOC Committee on International Oceanographic Data and Information Exchange including the recommendations and workplan for 2021–2022 contained therein;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2);

#### **II – Establishment of the IOC Ocean Data and Information System Project (ODIS)**

Having examined the proposal contained in document IOC/A-31/3.4.2.Doc and document IOC/IODE-XXVI/6.1.1,

Recalling Decision IODE-XXIV.4 on the Ocean Data and Information System,

Recognizing that a significant fraction of the work on ocean data and information system takes place outside IOC and that there is a need to collaborate with those communities/systems in order to achieve improved accessibility, unrestricted use and interoperability of data and information,

Recognizing also the key role that distributed and interoperable data, information, and digitized knowledge resources will have during the UN Decade of Ocean Science for Sustainable Development,

Recalling further that the IOC decided that IODE will work with existing stakeholders, linked and not linked to the IOC, to improve the accessibility and interoperability of existing data and information and to contribute to the development of a global ocean data and information system, to be referred to as the IOC Ocean Data and Information System, leveraging established solutions where possible, including existing IODE systems and others,

Noting with appreciation that IODE has:

- (i) established the IOC Ocean Data and Information System Catalogue of Sources Project (ODISCat) in 2019,
- (ii) started the implementation of the Ocean InfoHub project as a three-year project (2020–2023) funded by the Government of Flanders (Kingdom of Belgium),

Decides to establish the “IOC Ocean Data and Information System (ODIS) project” with the terms of reference as attached in Annex 1, and terms of reference of the Steering Group as attached in Annex 2 to this decision;

Invites all IOC programmes, IOC regional subsidiary bodies and partner organizations to collaborate by mobilizing their stakeholder communities to enter information into the ODIS-Cat system, and to participate in the OIH and ODIS Projects;

Annex 1 to [Dec. A-31/3.4.2](#)

#### **Terms of Reference of the IOC Ocean Data and Information System (ODIS) project**

The objectives of this project are to:

- (i) develop the IOC Ocean Data and Information System (ODIS) as an e-environment where users can discover data, data products, data services, information, information products and services provided by Member States, projects and other partners associated with IOC;
- (ii) work with partners, linked and not linked to the IOC, to improve the accessibility and interoperability of existing data and information. It will contribute to the development of a global ocean data and information system, to be referred to as the IOC Ocean Data and Information System, leveraging established solutions where possible;
- (iii) start its development using existing “ecosystem components” such as, inter alia, the ODIS Catalogue of Sources (ODISCat), the Ocean InfoHub project, and all IODE data and information products and services, and to add components within and outside the IODE programme as these become available to and interoperable with the ODIS ecosystem.

Annex 2 to Dec. A-31/3.4.2

**Terms of Reference of the IODE Steering Group  
for the IOC Ocean Data and Information System (ODIS)**

Objectives:

- (i) Propose the vision, strategy, workplan and timetable for the ODIS Project;
- (ii) Advise on technical aspects;
- (iii) Establish a stakeholder forum to ensure active participation of representatives from ODIS nodes and other contributors;
- (iv) Report to the IOC and to other partners on the progress of the ODIS Project;
- (v) Provide guidance to the project manager and project technical manager;
- (vi) Identify funding sources to further develop the ODIS.

Membership: The Steering Group will be composed, inter alia, of:

- Representatives from IOC Programmes;
- Project Manager;
- Project Technical Manager;
- Invited Experts;
- Representatives of major stakeholder (user) groups including regional/international organizations;
- Representative of the IODE Secretariat;
- Representative of the Decade Coordination Unit.

**III – Revision of the IOC Oceanographic Data Exchange Policy (2003, 2019)**

Having examined the proposed arrangements contained in document IOC/A-31/3.4.2.Doc(2),

Recalling IOC [Resolution XXII-6](#) that established the IOC Oceanographic Data Exchange Policy in 2003 and [Decision IOC-XXX/7.2.1\(II\)](#) that amended Clause 5 in 2019,

Noting that partner and sister organizations are changing their data policies, which can serve as a model for updating the IOC data policy,

Noting further that principles of data sharing and licensing are becoming globally recognized and adopted, e.g., FAIR Principles and Creative Commons licences,

Decides to establish the IOC inter-sessional working group on the Revision of the IOC Oceanographic Data Exchange Policy (2003, 2019) with terms of reference as included in Annex 3 to this decision;

Annex 3 to Dec. A-31/3.4.2

**Terms of Reference of the IOC Inter-sessional Working Group on the Revision of the IOC Oceanographic Data Exchange Policy (IWG-DATAPOLICY)**

Objectives: This working group will:

- (i) create an inventory of existing international, national and organizational data policies,
- (ii) review and compare existing international, national and organizational data policies,
- (iii) develop a glossary with clear definitions (e.g. open vs free and unrestricted; data vs metadata vs information, licence options),
- (iv) investigate the expansion of scope and name of the IOC Oceanographic Data Exchange Policy,
- (v) gather advice from partner/sister organizations and recognized data provider/manager organizations,
- (vi) organize a broad consultation on the proposed revised IOC Ocean Data Policy with Member States, IOC global and regional programmes,
- (vii) submit a revised IOC Oceanographic Data Exchange Policy to the IOC Assembly at its 32nd Session in 2023.

Modalities: The IWG-DATAPOLICY aims to have at least three meetings (second half 2021, first half 2022). The group may meet online, face-to-face or mixed as appropriate. For face-to-face meetings participation will be self-funded.

Membership: The IWG-DATAPOLICY will be composed, inter alia, of:

- Chair of the working group (to be designated by the group)
- Invited experts from the global data and information communities including UN agencies
- Representatives of IOC programmes and projects
- IOC (including IODE) Secretariat

**IV – The UNESCO/IOC Project Office for IODE**

Having examined the Proposal to renew the MoU between VLIZ and the IOC regarding the IOC Project Office for IODE contained in document IOC/A-31/3.4.2.Doc(3),

Recalling:

- (i) IOC Resolution XXII-7 which accepted the offer of the Government of Flanders (Kingdom of Belgium) and the city of Ostend to host the IODE Project Office,
- (ii) IOC Resolution XXII-1 which adopted the Guidelines for the Establishment of IOC Decentralized Offices, subsequently published in Document [IOC/INF-1193](#),

Noting with appreciation:

- (i) the positive results of the review the IOC Project Office for IODE (2020 presented in document is IOC/A-31/3.4.2.Doc(3)),
- (ii) that the IOC Project Office for IODE has been successfully implementing its objectives:
  - the successful development and hosting of data/information products/services such as web sites and databases,
  - the successful development and hosting of the training system OceanTeacher Global Academy,
  - the continued management of an excellent international meeting and conference centre,
- (iii) the considerable financial support provided by the Government of Flanders (Kingdom of Belgium) to the IOC in general and to the IOC Project Office for IODE in particular, and the excellent in-kind support provided by the Flanders Marine Institute (VLIZ),
- (iv) the complementary nature of the activities carried out at the Project Office and the financial support provided by the Government of Flanders (Kingdom of Belgium) through the UNESCO/Flanders Fund-in-Trust for the support of UNESCO's activities in the field of Science

(FUST),

(v) the contribution by the IOC Project Office for IODE (as the IODE secretariat and Meeting & Training Facility) to the further development of Ocean Data and Information Networks in developing regions,

(vi) the efficient and effective management of the Project Office and the professionalism of its Staff,

Expressing its profound gratitude to the Government of Flanders (Kingdom of Belgium) and the Flanders Marine Institute (VLIZ) for the considerable support provided, both financially and by hosting the Project Office since April 2005,

Invites the Government of Flanders to continue hosting the IOC Project Office for IODE as well as its considerable financial and in-kind contributions and support;

Agrees to

(i) the continuation of the IOC Project Office for IODE; and

(ii) the renewal of the Memorandum of Understanding between UNESCO/IOC and the Government of Flanders (Kingdom of Belgium) through the Flanders Marine Institute (VLIZ) that establishes the IOC Project Office for IODE in Ostend, Belgium.

### **3.4.3 Harmful Algal Blooms: 15th Session of IPHAB, 23–25 March 2021**

177. Mr Joe Silke, Chair of the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB), presented the main outputs of the 15th session of the Panel. The Panel took eight decisions and endorsed two recommendations for the consideration of the Assembly at its 31st session. The decisions concern: (i) Regional HAB Programme Development taking into account the difference of support for the various groups and networks depending on whether they are affiliated to a regional IOC subsidiary body or not; (ii) the continuation of the Task Team on the Early Detection, Warning and Forecasting of HAB Events with new terms of reference; (iii) the continuation of the Task Team on the development of the Harmful algal Information System and a periodic Global Harmful Algal Bloom Status Report with new terms of reference; (iv) the continuation of the Task Team on a Global Inter-Agency Ciguatera Strategy for Improved Research and Management with new terms of reference; (v) the continuation of the Task Team on Harmful Algae and Desalination of Seawater to assess and explore the feasibility of a joint FAO-IOC food safety risk assessment (or what available data allow) for toxins in drinking water coming from desalination plants; (vi) the continuation of the Task Team on Biotxin Monitoring, Management and Regulations with new terms of reference; (vii) the continuation of the Task Team on Algal Taxonomy with new terms of reference; and (viii) the continuation of the Task Team on Harmful Algae and Fish Kills with new terms of reference and renamed to Task Team on Fish Killing Microalgae and Ecosystem Effects.

178. In addition to the above, the Intergovernmental Panel submitted to the Assembly its planned intersessional activities in the form of a workplan and budget for the IOC HAB Programme 2022–2023 and recommended to it the continuation of IPHAB as a major technical subsidiary body with unchanged terms of reference.

179. The Chair of IPHAB informed the Assembly that the Memorandum of Understanding between FAO, IAEA, IOC and WHO on Ciguatera Poisoning, presented to the 30th session of the Assembly as IOC-XXX/Inf.4, and subsequently approved by the UNESCO's Executive Board, has not yet been signed due to delays caused by organization changes in WHO.

180. The Assembly was informed that Dr Joe Silke (Ireland) was re-elected as Chair and Dr Alexandra Silva (Portugal) was re-elected as Vice-Chair.

181. Finally, he drew the attention of the Assembly to the interest of FAO to investigate the possibility of returning as a cosponsor of IPHAB as set out in IOC Assembly Resolution XVI-4.



182. The representatives of 13 Member States took the floor.
183. The Assembly acknowledged that the activities under IPHAB provide a valuable resource to the global HAB community including pathways to improve management of HAB impacts.
184. The Assembly noted that the activities, initiatives and programmes of IPHAB are enhancing research on HAB especially in relation to how HAB occurrences may respond to climate change and that this understanding is of key importance in relation to fishery resources, as well as the development of HAB management capacity.
185. The Assembly stressed (i) the importance of early warning systems as of critical importance to HAB affected member states; (ii) the importance of sharing of data in HEADAT and OBIS, as the source of information for all around the world involved in research or management of HAB's; (iii) and that the coordinated activities on Ciguatera are important as Ciguatera may have an increasing impact on world food supply and fishery resources.
186. The Assembly noted the importance of the role of national IPHAB representatives and urged that they be reactivated if not active and that they keep close contact with their IOC national focal points to share information.
187. The Assembly acknowledged the value and importance of regional activities on HAB in particular for capacity enhancement and noted that HAB's continues to impact society at a level of concern to governments and the public. Several Member States referred to *Sargassum* as a challenge and as a high priority to address together with the risk HAB poses for people living on the coast and being dependent on seafood.
188. The Assembly took positive note of the interest of the FAO to investigate the possibility of returning as co-sponsor of IPHAB.
189. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Chile](#), [Colombia](#), [Côte d'Ivoire](#), [Italy](#), [Japan](#), [Malaysia](#), [Spain](#), [Thailand](#), [United Kingdom](#).
190. The Assembly adopted IOC [Decision A-31/3.4.3](#).

### **Harmful Algal Blooms**

The Assembly,

Having considered the Executive Summary Report of the 15th online session (23–25 March 2021) of the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB),

Endorses the Executive Summary Report of IPHAB-XIV and the recommendations contained therein (IOC/IPHAB-XV/3s);

Takes note of the information related to the status of the FAO-WHO-IAEA-IOC Memorandum of Understanding of Ciguatera Poisoning, and commends cooperation between the four UN organizations in this area;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

### 3.5 PROGRAMMATIC DEVELOPMENTS

#### 3.5.1 Biennial assessment to be conducted by the Working Group on User Requirements and Contributions to GEBCO Products

191. IOC Vice-Chairperson, Frederico Saraiva Nogueira, in his capacity as Chairperson of the IOC Working Group on User Requirements and Contributions to General Bathymetric Chart of the Ocean (GEBCO) Products, introduced this item. He recalled that, at its 51st Session in 2018, the IOC Executive Council had decided to reconduct the mandate of the Working Group with a view to: (i) collecting, integrating and assessing user requirements to inform the development of present and future GEBCO products; and (ii) addressing ways to strengthen the contributions of IOC programmes and Member States' activities to GEBCO data and products.
192. The group was established through IOC Circular Letter 2791 of 2020 and included representatives from GEBCO, IOC programmes, IOC Regional Subsidiary Bodies, as well as representatives of Member States. IOC/AP-31/3.5.1.Doc presents the report of the Working Group developed on the basis on an online survey sent to the group and to the wider community.
193. The IOC Vice-Chair informed the Assembly that the GEBCO Survey only received 38 responses. Considering that this survey will be repeated periodically, he encouraged Member States and organizations and even end-users in their individual capacity to increase their participation. In his presentation, the Vice Chair highlighted specific recommendations such as i) the need to increase the provision of high resolution data in shallow areas (depth of less than 200m to the coastal zone); ii) improve spatial resolution on the GEBCO's gridded bathymetric data sets in the South Hemisphere areas; iii) the need to strengthen ocean mapping capacity development, education and outreach through various modalities; iv) increased coordination amongst regional and national entities to share data that contributes to GEBCO products; and v) create incentives for and visibility to institutions that contribute bathymetric data to GEBCO.
194. The IOC Vice-Chair also explained the rationale to moving to a review of GEBCO requirements and needs on triennial basis, building on the need to increase the level of responses, whilst recognizing that an increased interval may also help to detect changes from one assessment to another.
195. The results of the survey and recommendations were prepared by the Secretariat and finally reviewed by the Working Group.
196. The representatives of 7 Member States and one organization took the floor.
197. The Assembly welcomed the conclusions of the Working Group Report and highlighted the need to communicate the multi-purpose relevance to GEBCO products and services to a broad set of stakeholders that goes beyond the ocean research and hydrographic communities, and may include for example academia, government, economic and industrial operators, and conservationists. In this respect, the Assembly encouraged all IOC Member States to take part in the next assessment to be conducted by the Working Group.
198. The Assembly congratulated Mr Evert Flier and Ms Marzia Rovere for their recent election as respectively Chair and Vice-Chair of the GEBCO Guiding Committee.
199. Several Member States expressed support for GEBCO and the Nippon Foundation-GEBCO-Seabed 2030 project, and reported on their national activities that contributes to the goals of GEBCO and ocean mapping more generally.

200. Some Member States stressed the need to build technical capacity in ocean mapping in order to increase data collection in areas poorly studied such as the Indian Ocean.
201. Mr Evert Flier took the floor and thanked the Assembly for providing useful guidance to the work of GEBCO. He invited the Working Group to also focus in the future on potential new, not just existing, GEBCO products that could be developed. He encouraged Member States to increase their provision of bathymetric data to GEBCO, including through the provision of lower resolution data when national constraints exist on the provision of high resolution data.
202. The following Member States and one organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Brazil](#), [Colombia](#), [France](#), [Italy](#), [Kenya](#), [Portugal](#), [USA](#), [WMO](#).
203. The Assembly adopted IOC [Decision A-31/3.5.1](#).

**Triennial assessment to be conducted by the Working Group  
on User Requirements and Contributions to GEBCO Products**

The Assembly,

Recalling [Decision EC-LI/4.5](#) to, inter alia, conduct the Review of User Requirements and Potential Contributions to GEBCO on a biennial basis,

Having examined the report of the working group presented in IOC/A-31/3.5.1.Doc,

Recognizing the continued need of the IOC scientific community for bathymetric products and the fact that access to high quality bathymetry is important not only for navigation, but also for other purposes including ocean science, tsunami warning and preparedness and climate modelling,

Noting that significant amounts of bathymetric data are collected by the scientific and commercial sector for purposes other than chart improvement, but are not easily made discoverable or available for secondary purposes,

Takes note of the conclusions of the Working Group contained in IOC/A-31/3.5.1.Doc;

Requests the Executive Secretary to:

- (i) convey the conclusion of this review to the International Hydrographic Organization (IHO) and the GEBCO Guiding Committee;
- (ii) identify ways and means to increase the participation of respondents, particularly representing the interest of IOC programmes, as well as regional subsidiary organs, in future assessments carried out by the working group;
- (iii) share the findings of the review with relevant IOC communities;

Decides to conduct the Review of User Requirements and Potential Contributions to GEBCO on a triennial basis, with the next assessment to be presented to the IOC Executive Council in 2024;

Encourages Member States to:

- (i) cooperate to advance basin-scale campaign mapping and accelerate the delivery of GEBCO objectives and general knowledge of the ocean in particular by supporting and contributing to the Nippon Foundation–GEBCO Seabed 2030 Project;
- (ii) facilitate GEBCO capacity development, including training opportunities; and
- (iii) actively participate in the next assessment, to be conducted by the Working Group;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

### **3.5.2 Global Ocean Observing System Work Plan**

204. Dr Anya Waite, co-chair of the GOOS Steering Committee, introduced this item. She recalled that the Assembly at its 30<sup>th</sup> session adopted a Global Ocean Observing System 2030

Strategy in 2019 ([IOC/BRO/2019/5/rev.](#)), which 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. Today, GOOS's work is accelerating: the Ocean Decade has opened doors for new partnerships, but has at the same time made integration and coordination of ocean observations more urgent than ever before, increasing demands on the GOOS Core Team.

205. She reviewed the status of the sustained ocean observing system, as revealed in regular reporting of the GOOS networks, as well as in surveys of developing biological and ecological ocean observing networks.
206. The GOOS Steering Committee was focused on a number of priorities, high amongst them She reviewed the status of the sustained ocean observing system, as revealed in regular reporting of the networks through the GOOS Observations Coordination Group and OceanOPS centre. Covid-19 restrictions created a period of unprecedented challenges for ocean observers, and resulted in some lingering data holes in GOOS. But throughout, the ocean observing community also proved quite resilient and creative, with many networks approaching normal performance again. GOOS has also expanded its reach in biological and ecological observations, showing that active long-term monitoring programmes span only about 7% of the ocean surface area, requiring work to promote data access, and to enhance these observations along the coasts of developing countries.
207. The GOOS Core Team has instituted a robust implementation planning process, with the working document for this item capturing the major planned actions. This plan is supported by a GOOS Office with distributed contributions from IOC, WMO, and a large number of Member States and organizations—and Dr. Waite thanked them for their support. The Implementation Plan is ambitious and will require an increase in GOOS's resource base. This will speed innovation and system change, creating more usable ocean information, delivering a step change in the availability of coastal and ecosystem information, and increased return on investment, with more ocean information at lower cost.
208. The GOOS Steering Committee was focused on a number of priorities, high amongst them the development and implementation of three linked GOOS Ocean Decade Programmes that would deliver a more integrated and responsive observing system by 2030. Ocean Observing Co-Design aims to transform the ocean observing system assessment and design process, creating an integrated and agile system co-designed with observing, modelling, and key user stakeholders. CoastPredict, a large programme of which GOOS is a major partner, will transform the science of observing and predicting the Global Coastal Ocean, from river catchments - including urban scales - to the oceanic slope waters. Observing Together aims to transform ocean data access and availability by connecting ocean observers and the communities they serve, through enhanced support to both new and existing community-scale projects. GOOS also intends to play a leading role in supporting all ocean observing and forecasting programmes and projects in the Ocean Decade in a community of practice.
209. The tenth session of the GOOS Steering Committee was held online 26-29 April 2021. Supported by its 2030 Strategy, an Implementation Plan that looks across the Core Team elements, and a stakeholder survey of the support structures to global and regional sustained ocean observing, the Steering Committee is committed to change.
210. It will initiate a three-pronged approach to improving governance and support structures: designing a change process with stakeholders, critically assessing its internal architecture to be more fit for purpose and aligned with key functions, and asking its co-sponsors to design individual or joint ways of examining and evolving their GOOS governance that will be inclusive of additional stakeholders and open to recommendations.

211. The Steering Committee will focus on regional support to GOOS—critically looking at GOOS Regional Alliances, GOOS Projects with a regional scope, and their connection to both global networks and national sustained ocean observing activity—to identify the best scales of activity to effect change and support stakeholders, which will include regional ocean management structures. Dr Waite welcomed the call for a renewed focus on Africa.
212. Dr Waite concluded with an affirmation that GOOS had set a framework and path to ensure that action through GOOS will have the desired impact, maximizing the value of investment, delivering for the UN and the challenges faced by Member States, and building an agile system to serve societal needs.
213. The representatives of 14 Member States and two organizations took the floor.
214. The Assembly thanked Dr Waite for her presentation and congratulated the GOOS Steering Committee and secretariat for the work accomplished, based on the Global Ocean Observing System 2030 Strategy.
215. Member States identified GOOS as an important programme for the IOC, as a backbone infrastructure for science and understanding, and for societal benefit related to weather, climate, disasters, and developing a sustainable marine economy. In a period of irreversible shifts with climate change, monitoring more of the ocean was critical. The Member States also noted the crucial and foundational role that ocean observations under GOOS will play in the success of the Ocean Decade.
216. Member States identified their many national contributions to GOOS, with a number noting plans to sustain or increase support to the GOOS Core Team and GOOS Office.
217. Member States stressed the importance of coastal observations and regional approaches, and the fundamental importance of sharing data and encouraging that sharing, including data from EEZs. Some Member States encouraged an approach that would link with and embrace indigenous knowledge.
218. Member States supported the GOOS Implementation Plan consisting of actions for its Core Team, noting the high ambition and the identified resource gap, with some calling on fellow Member States to help fill this gap. They emphasized the strengthening of partnerships for delivery with downstream partners as a necessary condition for developing the sustainability of GOOS, with some urging a link to Large Marine Ecosystem programmes. They welcomed work with the OECD on economic valuation of ocean observations, as well as the development of best practices across the areas of work of GOOS.
219. The Assembly universally supported the approach of GOOS to the Ocean Decade, with three programmes that had the potential to yield a more integrated and focused observing system.
220. Several Member States welcomed the planned focus on improving governance of the support structures for GOOS.
221. WMO announced that as co-sponsor of GOOS, it will increase its regular programme funding including with two new professional posts for GOOS and further funding for consultants, with an estimated 2022 contribution of over USD 1 million. It will respond with active engagement to the invitation by IOC to co-sponsors to collaborate on a process of governance change for GOOS.

222. SCOR appreciated its partnership with GOOS as co-sponsor of the Biogeochemical Panel through the International Ocean Carbon Coordination Project (IOCCP) and highlighted the contribution of a number of its working groups.
223. Dr Waite thanked the Assembly for their support, including the many national contributions which were invaluable and welcome. She agreed on the importance of sustained support for ocean observations, the development of partnerships to improve delivery and responsiveness, and the need to improve a focus on the coast. She identified the GOOS Ocean Decade programmes as good vehicles for transformational change, and welcomed further dialogue on how to work together.
224. The following Member States and two organizations chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Argentina](#), [Canada](#), [Chile](#), [Colombia](#), [France](#), [Germany](#), [Indonesia](#), [Italy](#), [Japan](#), [New Zealand](#), [Portugal](#), [Spain](#), [USA](#), [SCOR](#), [WMO](#).
225. The Assembly adopted IOC [Decision A-31/3.5.2](#).

### I. Global Ocean Observing System Work Plan

The Assembly,

Having examined IOC/A-31/3.5.2.Doc, the *Executive Summary of the GOOS Implementation Plan*,

Takes note of the re-dynamization of GOOS-AFRICA;

Thanks the GOOS Steering Committee for the identification of proposed strategic actions in the implementation plan;

Expresses its appreciation for the planning for contributions to the Ocean Decade with the GOOS *Ocean Observing Co-Design* and *Observing Together* Programmes (detailed as IOC registered actions in Resolution A-31/1), as well as the *CoastPredict* Programme;

Requests the GOOS Steering Committee to give particular attention to the development of future actions in line with UNESCO's Global Priority Africa, in partnership with GOOS-AFRICA, IOCAFRICA, and other relevant stakeholders;

Requests IOCAFRICA to work closely with the GOOS-AFRICA office in developing and implementing joint activities;

Adopts the *Executive Summary of the GOOS Implementation Plan* (IOC/A-31/3.5.2.Doc) as the GOOS work plan for 2022–2023;

Notes the broad ambition of this implementation plan, its identified resource implications – which if all levels of priority are addressed, would imply a more than doubling of human resources in the medium term – as well as the need to reinforce partnerships and support structures;

Expresses its appreciation for Member States and organizations that have provided direct and in-kind contributions for the distributed GOOS Office;

Invites co-sponsoring organizations of GOOS to consider how they will support implementation, and to work with IOC to design ways of examining and evolving GOOS governance that would lead to improved advice and operational support, be inclusive of additional stakeholders, and be open to advice from a process of governance change;

Urges Member States to work with the GOOS Office to identify how they can help with implementation and what their contributions will enable us to achieve together;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2);

### II. GOOS Steering Committee Regional Membership

Recalling the GOOS SC regional membership appointment defined in IOC Resolution XXVI-8, and further recalling the IOC Circular Letter inviting Member States to the 31<sup>st</sup> Assembly and requesting nominations of experts for appointment by Member State Electoral Groups,

Notes the appointment by the Member State Electoral Groups of a regional expert member of the GOOS SC for 2022–2023:

- Elaine McDonagh (Group I)
- Konstantin Lebedev (Group II)
- Alvaro Scardilli (Group III)
- Balakrishnan Nair (Group IV);

Further notes that Group V did not complete the selection process, and requests the IOC Vice-Chair for Group V to continue consultations to select an expert, to be completed well in advance of the start of the term of the SC member, 1 January 2022.

### 3.5.3 Revision of the IOC Capacity Development Strategy

226. Mr Alan Evans, Co-Chair of the IOC Group of Experts on Capacity Development (GE-CD) introduced this item on behalf also of Mr Ariel Troisi as other Co-Chair of the GE-CD. He started by noting that this agenda item does not cover the results of the 2nd IOC CD needs assessment or full outcome of the 2nd Meeting of the IOC GE-CD due to the limited agenda of this Assembly. He referred to the web site <https://surveys.ioc-cd.org> for the survey results.
227. He referred to Documents IOC/A-31/3.5.3.Doc and IOC/INF-1396. He noted that the current IOC CD strategy was developed for the period 2015–2021 and accordingly, it will “expire” end of December 2021. He recalled Decision IOC-XXX/Dec. 11.1 (IOC Capacity Development Group of Experts). He informed the Assembly that the second session of the GE-CD had taken place on 26 October 2020 as an online meeting. The Group decided to establish a GE-CD Task Team to identify what changes may be needed in the current IOC CD strategy (2015–2021) and submit a report for consideration by the 31st Session of the IOC Assembly (2021). The Task Team took into account: (i) Global Ocean Science Report (GOSR); (ii) outcomes of the 2nd IOC Capacity Development Survey (September 2020–February 2021); (iii) Capacity Development Chapter of the Implementation Plan of the UN Decade of Ocean Science for Sustainable Development (2021-2030); (iv) input of consultations with IOC global and regional programmes related to Capacity Development. The Task met twice online (in December 2020 and February 2021).
228. The results of the Task Team’s review laid out vital elements that should be incorporated in a revised IOC CD Strategy, so that it provides appropriate capacity development in support of existing and emerging initiatives, including the UN Decade for Ocean Science. It should be drafted in a way that has a form and structure that is easily digestible and able to entice target audiences to read through the document. There is also a need to consider how to promote visibility and outreach of a revised IOC CD Strategy so that it becomes a recognized guide in implementing capacity development activities. One possibility could be to create an accompanying summary document incorporating the key messages for a wider outreach.
229. The Task Team recommended that the GE-CD continue its work on revising the IOC CD Strategy for 2023-2030. The current strategy should be extended until 2023 to give sufficient time to develop the updated Strategy. The GE-CD’s ToR should be revised to allow a continuation of the work on the revision of the IOC Capacity Development Strategy and the preparation of a proposal for submission to the 32nd Session of the IOC Assembly in June 2023.
230. The GE-CD subsequently considered the results of the work of the Task Team and its recommendations which resulted in the below draft decision for consideration of the Assembly.
231. The representatives of 18 Member States and four organizations took the floor.

232. The Assembly thanked Mr Evans for his presentation and congratulated the GE-CD for the work accomplished based on the results of the review related to the revision of IOC CD Strategy.
233. Member States recognized the value of Capacity Development as a key element in fulfilling the IOC mandate and appreciated the central role of the IOC CD Strategy as a vital guide in the development of ocean science capacity. Member States also identified their efforts and contributions to the development of capacities such as various training programmes and fellowships for researchers and scientists.
234. Member States agreed with the key elements to justify the revision of the current Strategy. Member States stressed the importance of aligning the revised CD Strategy with the CD objectives of the UN Decade of Ocean Science for Sustainable Development. It was also highlighted that alignment of the IOC CD strategy with other organizations, with other organizations, including those with the UN Oceans family was important, as well as with other international processes such as the BBNJ.
235. The Assembly fully supported the proposed extension of the current strategy to 2023 while the GE-CD works on a proposal for the new IOC CD Strategy 2023-2030 to be submitted to the 32nd Session of the IOC Assembly. They concurred on the revised Terms of Reference to allow the GE-CD to continue working on the revision of the Strategy.
236. The Assembly encouraged the incorporation of capacity development efforts addressing main challenges on a global and local scale that could support efforts to address climate change, biodiversity and habitat loss and their impact on marine resources and services, observation systems, etc. The Assembly invited the GE-CD to look at quality and impact of capacity development activities and to identify strength and weaknesses where gaps can be fixed. The Assembly appreciated the consideration of a holistic approach that should be a central element of the strategy and agree on a shorter reader-friendly version to facilitate wider outreach and strengthen science-policy interface.
237. WMO shared that its Capacity Development Strategy is currently being revised for adoption in 2022. Given the parallel nature of both organisations, the connectivity to the IOC, mutual WMO and IOC interests, and stronger collaboration between these efforts, was very much welcomed and encouraged. WMO looked forward to continuing working with IOC to strengthen marine capacity for improved decision-making in their common Members and Member States.
238. SCOR expressed its support to capacity development, technology transfer, training, and education by building on its ongoing activities and making use of existing training and education facilities. SCOR involves students and early career scientists in its projects and supports visiting scholars, joint POGO-SCOR fellowships, and the participation of scientists and early career ocean professional (ECOPs) from developing countries in international scientific and training events such as summer schools. SCOR will continue support capacity development strategy in marine science within the UN Decade.
239. PICES stressed how essential capacity development is in the delivery of the UN Decade and its objectives to remove intergenerational barriers through support for early career ocean professionals. PICES fully supports the development of long-term retention of expanding partnerships on building ocean science capacity of women and young scientists.
240. IUGG welcomed collaboration with partners and members of the IOC. IUGG expressed its support to developing countries through availability of funding to enable participation in international meetings or attending global conferences and assemblies.



241. Mr Evans thanked the Assembly for their support and agreed with the key points raised in the interventions especially on the need to focus not only on human resources but on the importance of infrastructure. He thanked the offers of funding support from Qatar, Norway and IUGG and encouraged other Member States to consider how they can further support CD delivery, including the enabling resources to help support the delivery of IOC's CD. He noted the important points raised by Kenya, Republic of Korea and Mexico on focusing on the role of the youth, and early career ocean professionals as well as the importance of traditional knowledge and the integration of natural sciences and social sciences.
242. The delegate of Cote d'Ivoire stressed that the participation in IOC's CD activities of local experts and institutions from Africa is an important reference that should be included, and he referred to UNESCO's Priority Africa. The Chair suggested to consider this view when working with the GE-CD in revising the Strategy.
243. The following Member States and organizations chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Argentina](#), [Côte d'Ivoire](#), [France](#), [Germany](#), [Kenya](#), [Norway](#), [Portugal](#), [Republic of Korea](#), [Spain](#), [United Kingdom](#), [USA](#), [SCOR](#), [WMO](#).
244. The Assembly adopted IOC [Decision A-31/3.5.3](#).

### **Revision of the IOC Capacity Development Strategy**

The Assembly,

Recognizing the importance of Capacity Development as one of the six functions of the IOC Medium-Term Strategy (2014–2021), enabling all Member States to participate in, and benefit from, ocean research and services that are vital to sustainable development and human welfare on the planet,

Recalling [Resolution XXVIII-2](#) by which it adopted the IOC Capacity Development Strategy (2015–2021) at its 28th session,

Having examined the Report of the GE-CD Task Team related to the revision of the IOC Capacity Development Strategy 2015–2021,

Decides to extend the current IOC Capacity Development Strategy until July 2023,

Decides also to revise the Terms of Reference of the IOC Group of Experts on Capacity Development as follows:

- (i) assist global and regional programmes with the implementation of capacity development needs assessments in a consistent manner;
- (ii) assist global and regional programmes with the development of programmatic and regionally relevant capacity development work plans based on the IOC CD strategy and related needs assessments, building on ongoing activities and making use of existing training and education facilities;
- (iii) provide advice to global and regional programmes on relevant methods and tools to improve the quality and impact of CD efforts;
- (iv) repeat the CD survey at regular intervals in 2022 and biannually thereafter, possibly including CD implementation impact monitoring/metrics, also taking into account other methods such as regional reviews, science conferences etc.;
- (v) ensure coordination of the work of the Group of Experts and its Task Teams with GOSR and CD aspects of the UN Decade of Ocean Science for Sustainable Development;
- (vi) advise the Assembly on the Transfer of Marine Technology Clearing House Mechanism (CHM) as requested by the *IOC Criteria and Guidelines on the Transfer of Marine Technology* ([IOC/INF-1203](#)), making use, to the largest extent possible, of existing data and information systems and building upon the Ocean InfoHub project (2020–2023);
- (vii) revise the IOC Capacity Development Strategy and prepare a proposal for submission to the IOC Assembly at its 32nd Session;

- (viii) prepare a proposal to promote visibility and reach of the revised IOC CD Strategy so that its target audience will read through and appreciate the document as a guide in implementing capacity development activities for submission and submit it to the IOC Assembly at its 32nd Session;

Calls on IOC's regional subsidiary bodies as well as regional components of global programmes to:

- (i) promote contributions to the CD survey;
- (ii) identify CD efforts of other organizations and seek complementary cooperation;
- (iii) link with other global, regional and national processes and strengthen the relationships with philanthropic, private partnerships and other regional organizations;

Invites Member States to:

- (i) participate actively in the co-development of IOC capacity development by designating focal points for IOC capacity development, and by nominating members of the IOC Group of Experts on Capacity Development;
- (ii) participate actively in IOC programmes, projects and steering groups;
- (iii) involve universities in IOC surveys on capacity development needs;
- (iv) contribute to IOC capacity development activities through financial and/or in-kind contributions;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

### **3.5.4 IOC Ocean Literacy Action Plan and Strategy**

245. Ms Francesca Santoro, programme specialist for ocean literacy, introduced this item. She recalled that increased visibility and awareness is one of the outputs of the IOC Capacity Development Strategy (2015–2021) and fostering the development of an IOC ocean literacy programme to share experience of communities of practice within and across regions is one of the actions to achieve it.
246. She then referred to Decision IOC/EC-LI.4.9 by which the Executive Council requested the Secretariat to develop a plan of action for ocean literacy, and Decision IOC-XXX/11.2 deciding to distribute the Draft IOC Ocean Literacy Plan of Action to Member States, IOC regional subsidiary bodies as well as global programmes for comments. She described the review process, the comments received and how they were incorporated in the new version of the IOC Ocean Literacy Plan of Action as presented in the IOC/EC-53/4.5.doc.
247. Ms Santoro also recalled the role of ocean literacy in the context of the UN Decade of Ocean Science with particular reference to outcome 7 and challenges 9 and 10 of the Ocean Decade Implementation Plan, and presented the main elements of the Ocean Literacy Framework of Action (IOC/2021/ODS/22).
248. Ms Santoro also presented a progress report on IOC Ocean Literacy activities, implemented both at global and regional levels, as well as in collaboration with other UNESCO Sectors. She informed that through the support of the Government of Sweden it was possible to implement the activities included in the “Ocean Literacy for All” initiative put forward to the 2017 UN Ocean Conference as voluntary commitment. Moreover, an Ocean Literacy Virtual Summit was organized at the occasion of the World Ocean Day 2019, and an updated version of the Ocean Literacy Portal was launched to act as global hub for ocean literacy experts and practitioners. The test of the Ocean Literacy for All: A toolkit developed within the framework of the network of the UNESCO Network of Associated Schools (ASPNet) was completed, and through the support of Italian National Commission for UNESCO and of the Secretaria do Meio Ambiente da Prefeitura Municipal de Santos and of the project Maré de Ciência of the Universidade Federal de São Paulo it was possible to produce respectively the Italian and the Portuguese versions of the toolkit.

249. The representatives of 24 Member States took the floor.
250. Member States expressed great support for the ocean literacy Plan of Action and on the proposal to establish an Ocean Literacy Group of Experts. Member States highlighted the importance of further strengthening the collaboration with the Education Sector of UNESCO, through for example the UNESCO Network of Associated Schools but also through the network of UNESCO Chairs. Moreover, Member States informed the Assembly about the national and regional Ocean Literacy initiatives implemented in different countries. Member States also emphasized the key role of ocean literacy for the implementation of the UN Decade of Ocean Science.
251. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Argentina](#), [Colombia](#), [Germany](#), [Indonesia](#), [Italy](#), [Japan](#), [Kenya](#), [Malaysia](#), [Philippines](#), [Portugal](#), [Republic of Korea](#), [Sweden](#), [United Kingdom](#), [USA](#).
252. The Assembly adopted IOC [Decision A-31/3.5.4](#).

### **IOC Ocean Literacy Action Plan and Strategy**

The Assembly,

Having examined the revised draft IOC Ocean Literacy 2018–2021 proposed in document IOC/A-31/3.5.4.Doc and the accompanying review analysis ([IOC/EC-53/4.5.Doc](#)),

Recalling the IOC Capacity Development Strategy 2015–2021 in which ocean literacy is identified as a main activity of the strategy output 5: Visibility and awareness increased,

Taking into account the IOC's progress on ocean literacy and the role it can play in communicating the relevance of IOC's activities for sustainable development, and in the implementation of the UN 2030 Agenda for Sustainable Development,

Also taking into account the role of ocean literacy plays in the context of the UN Decade of Ocean Science for Sustainable Development as described in the Proposed Ocean Literacy Framework of Action ([IOC/2021/ODS/22](#)),

Trustful that Ocean Literacy will remain integral to the IOC Capacity Development Strategy beyond 2021,

Establishes the IOC Group of Experts on Ocean Literacy with the terms of reference presented in the annex to this decision and invites Member States to nominate suitable candidate members for the Group;

Endorses the IOC Ocean Literacy Plan of Action 2018–2021 as contained in document IOC/A-31/3.5.4.Doc as a guidance document for the work of the IOC Group of Experts on Ocean Literacy for the next four years;

Expresses its appreciation to the Government of Sweden for the financial support provided to the IOC's Ocean Literacy activities and encourages other Member States to follow this example;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

#### Annex to Dec. A-31/3.5.4

### **Terms of Reference of the IOC Group of Experts on Ocean Literacy**

- (i) The Group will be composed of 20 experts from diverse and relevant disciplines and interested parties reflecting the multi-stakeholder nature of ocean literacy and taking into consideration geographical and gender balance. Experts will be selected following a call to Member States and partner organizations and suggestions from the IOC Secretariat. The Group of Experts will elect its Chair and Vice-chair;
- (ii) The Group of Experts will provide guidance in the scoping, implementation and monitoring of the IOC Ocean Literacy portfolio of activities, specifically in relation to:

- a. the definition of good practices in Ocean Literacy based on lessons learned in Member States;
  - b. the development of Ocean Literacy global and regional programmes guided by the IOC Ocean Literacy Plan of Action ([IOC/A-31/3.5.4.Doc](#)) and the Ocean Literacy Framework of Action for the UN Decade of Ocean Science (IOC/INF-1400);
  - c. the coordination of Ocean Literacy networks at global, regional, national and local levels;
  - d. the identification of modalities for the mobilization of financial and in-kind resources to enable the implementation of global and regional Ocean Literacy activities;
  - e. the identification of synergies with relevant UNESCO Sectors, international organizations, academic institutions, NGOs and private sector associations;
  - f. the coordination of Ocean Literacy research activities relevant to the development of tools and methodologies and the assessment of impact of Ocean Literacy initiatives;
- (iii) The Group of Experts will produce regular reports and communications to the Ocean Literacy international community through newsletters, side events, etc.;
  - (iv) The Group of Experts will provide guidance on the application and possible evolution of the Ocean Literacy Framework of Action for the UN Decade of Ocean Science in coordination with the Decade Advisory Board and the Decade Coordination Unit;
  - (v) The Group of Experts will be established for an initial period of four years and will report to the IOC Assembly at its 33rd session, which will decide on its continuation or termination.

### **3.5.5 Adoption of a Joint WMO-IOC Collaborative Strategy and Report on the Establishment of the Joint WMO-IOC Collaborative Board**

253. Monika Breuch-Moritz, co-chair of the Joint WMO-IOC Collaborative Board (JCB), introduced this item. She recalled the multi-level terms of reference of the JCB which include providing strategic advice to IOC and WMO governing bodies, encompassing a WMO-IOC Collaborative Strategy, giving scientific and technical recommendations to WMO and IOC bodies including proposing cross-cutting projects, and liaison and consultation with relevant external stakeholders. The JCB met for its first session through nine online meetings from March to July 2020.
254. The proposed WMO-IOC Collaborative Strategy is short and strategic, beginning with a description of the common UN frameworks for disaster risk reduction, climate action, and sustainable development, within which both the IOC and WMO work. The visions, missions, and objectives of the IOC and WMO complement each other. The WMO-IOC Collaborative Strategy identifies key drivers in weather, climate, coastal and ocean economic development, in an open way that allow evaluation and integration of needed biogeochemical and even biological observations and prediction as common needs evolve. It identifies value chains that have a foundation of common infrastructure of observations, data management, and prediction; underpinning both a branch with operational service delivery, and another branch addressing the science-policy interface, with research and other enablers supporting these value chains. The document proposes six approaches to advance joint work. As a next step, the JCB envisions proceeding with the development of an associated action plan, building off the exciting JCB meetings held to discuss the collaborative opportunities that exist throughout the entire ocean, weather, water and climate communities.
255. The representatives of 10 Member States and WMO took the floor.
256. The Assembly thanked Ms Breuch-Moritz, Captain Troisi as the interim JCB co-chair, and Louis Uccellini, the WMO co-chair, as well as members of the JCB and the IOC and WMO secretariats.

257. Member States fully supported the proposed WMO-IOC Collaborative Strategy, putting emphasis on cooperation between oceanography and meteorology, including critically at the national level so that IOC and WMO governing bodies will take parallel decisions. They welcomed the comprehensive approach to common challenges and the expected broadening of collaboration beyond the focus on marine meteorological services under JCOMM, with potential impact for industry, ocean management, and human well-being. They looked forward to strengthening collaboration with WMO, noting the need for balanced partnership interests.
258. Member States stressed the importance of building capacity and of building on existing regional networks where appropriate. They anticipated the development of a clear action plan and the identification of joint projects through continued dialogue.
259. Several Member States recalled IOC Resolution XXX-2's decision to review, in coordination with WMO governing bodies, the performance of the Joint WMO-IOC Collaborative Board, with an initial review in four years and presentation to the IOC Assembly at its 32nd session in 2023, further suggesting the review include consultation with end users.
260. WMO offered their continuing support.
261. Ms Breuch-Moritz welcomed the Member States' support, highlighting how the work of the JCB opened minds and understanding of different but closely connected worlds, and expressing confidence that the WMO-IOC Collaborative Strategy put two organizations on a good future path.
262. Before moving to the proposed decision, the Executive Secretary reported on the outcome of the parallel 73<sup>rd</sup> session of the WMO Executive Council, which the previous day had considered the proposed WMO-IOC Collaborative Strategy. It was approved by WMO, pending the IOC Assembly's approval, with one small amendment that was reflected in a revised version of the WMO-IOC Collaborative Strategy, IOC/A-31/3.5.5.Doc(1) Rev. presented to Member States.
263. The following Member States and one organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Argentina](#), [Colombia](#), [Germany](#), [Indonesia](#), [Italy](#), [Portugal](#), [Spain](#), [United Kingdom](#), [USA](#), [WMO](#).
264. The Assembly adopted IOC [Decision A-31/3.5.5](#).

**Adoption of a WMO-IOC Collaborative Strategy and Report  
on the establishment of the Joint WMO-IOC Collaborative Board**

The Assembly,

Recalling IOC [Resolution XXX-2](#) that created the Joint WMO-IOC Collaborative Board (JCB), and requested the Board to produce a WMO-IOC Collaborative Strategy for adoption in 2021,

Having examined IOC/A-31/3.5.5.Doc(1), *Proposed WMO-IOC Collaborative Strategy*,

Having further examined IOC/A-31/3.5.5.Doc(2), *Proposed Rules of Procedure for the Joint WMO-IOC Collaborative Board*,

Thanks the co-chairs and members of the JCB for their work in developing the proposed strategy;

Adopts the WMO-IOC Collaborative Strategy, subject to its parallel adoption by the WMO Executive Council at its 73<sup>rd</sup> Session (14–25 June 2021) and as amended in IOC/A-31/3.5.5.Doc(1) Rev.;

Adopts the Rules of Procedure of the Joint WMO-IOC collaborative Board as proposed in IOC/A-31/3.5.5.Doc(2), subject to its parallel adoption by the WMO Executive Council at its 73<sup>rd</sup> Session, and agrees to keep these rules of procedure under regular review, jointly with WMO governing bodies;

Requests the JCB to continue work across IOC and WMO to identify and promote priority implementation actions in support of the WMO-IOC Collaborative Strategy;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

### **3.5.6 Status of the Regional Committee of the Central Indian Ocean (IOCINDIO)**

265. As suggested by the IOC Chair, the discussions on this item continued straight after the report of the newly elected IOCINDIO Chair. On Wednesday 16 June, IOCINDIO Chair, having reported on the activities of the Regional Committee and recommendations of IOCINDIO-VIII, requested the Assembly to consider the change of the status of IOCINDIO into Sub Commission as reflected in the proposed decision containing in the Action Paper.
266. The representatives of 20 Member States, the Chair of WESTPAC and the former Chair of the IOCINDIO, Dr M. Atmanand, took the floor. Some interventions touched on the report of the Regional Committee but most of them focussed on the proposal to change its status into a Sub-Commission.
267. Eight IOCINDIO Member States and three IOC Member States from Western Africa expressed support or strong support to the establishment of the IOC Sub-commission. Four IOCINDIO and six IOC Member States, while agreeing with the merit of establishment of the Sub-commission, expressed their concerns about the level of readiness of the proposal and noted issues like uncertain geographical coverage of the new body, financial implications, potential need for a feasibility study, compounded by late delivery of the supporting documents to the Assembly.
268. In his response, the IOCINDIO Chair stressed that regarding the geographical coverage, Member States are sovereign to choose a Sub-commission of their interest. As far as the financial implications are concerned, he recalled that the Government of India offered in-kind contributions to host the Regional Secretariat of the Sub-Commission. He also reminded Member States that there is a requirement for more studies in climate sciences, plastics, cyclones and other ocean-climate related phenomena in the Indian Ocean that call for the establishment of a Sub-Commission.
269. The views of Member States were strongly divided and the discussion, which continued well beyond the allotted time, did not start showing elements of convergence. The decision proposed in the Action Paper was unacceptable for a number delegates. Because of that difficulty, the Executive Secretary suggested that a sessional working group was formed to attempt a consensual decision. The proposal was accepted and the Assembly agreed to resume the consideration of agenda item 3.5.6 after the conclusion of the Working Group deliberations.
270. Three meetings of the Working Group were held, on Friday 18 June, Sunday 20 June and Monday 21 June, under the chairship of the IOC Vice-Chair for Group 4, Dr Satheesh Shenoi. The discussions in the first session were preceded by a PowerPoint presentation by IOCINDIO Chair calling for establishment of the Sub-Commission and by a subsequent powerpoint presentation of the Executive Secretary outlining experiences and history of founding IOCINDIO, IOCARIBE, WESTPAC, which were not known to most of the delegates, and suggesting a consensus/compromise-based approach to an IOC-31 decision that would offer a solid path to enabling an IOC body in the Indian Ocean and its eventual proclamation at the 32<sup>nd</sup> IOC Assembly in 2023. The first meeting of the Working Group largely discussed the issue and position of sides, seeking a way to compromise. The second meeting was held on a Sunday 20 June. It included a smaller group of participants wishing to work on a weekend and was focussed on finding a consensual formulation for the decision. The third meeting on

Monday 21 June with participation of more delegations finetuned and reconfirmed the compromise-based formulation.

271. In the plenary meeting on Tuesday 17 June, the Chair of the IOC informed the Assembly that an intersessional Working Group was established on the 16 June, 2021, after the presentation of the agenda items 3.3.4 and 3.5.6, to find a consensus regarding the establishment of the IOC Sub-Commission for the Indian Ocean. He informed the Assembly that the Working Group drafted a draft decision for discussions and consideration by the Assembly with a view to achieve a consensus. Noting that the Assembly was already in its second week of work, he called on delegates to have the discussions in a constructive manner to avoid a delay in adopting the decision given the risk of the failure to reach a decision at this Assembly. He then called on the Chair of the intersessional Working Group, Dr Satheesh Shenoi, to report back to the Plenary.
272. Before the presentation of the Chair of the Working Group, the IOCINDIO Chair asked the floor and expressed an objection to the opening remark of the IOC Chair, implying that the item would be delayed if no decision is reached after a lot of consultations. He requested his objection to be recorded. The IOC Chair responded that it was recorded.
273. The IOC Chair called again the Chair of the Working Group to the floor. The Chair of the Working Group informed the Assembly that the Working Group met three times on Friday 18 June, morning for about 1 hour and 30 min, Sunday, 20 June for about 4 hours and Monday, 21 June morning for about 2 hours. He reported that most of the delegations that had a specific substantiated position expressed prior to the establishment of the Working Group participated in the group discussions. He stated eight reasons of concern that various Member States expressed in the course of all discussions and described the process that led to the consensual decision crafted. He then requested to project the new proposed decision.
274. The Representatives of Côte d'Ivoire, India, Islamic Republic of Iran, Kenya, Kuwait, Qatar and United Arab Emirates took the floor.
275. Before the presentation of the draft decision started, the Representatives of Kuwait and Qatar expressed their disappointment and that the voice of the IOCINDIO Member States was not heard as a follow-up to the recommendation of IOCINDIO-VIII.
276. During the presentation of the draft decision that had been prepared by the Working Group, the IOCINDIO Chair stated that he dissociated from the decision, in particular, its item 6.
277. Kuwait requested clarifications to understand the ongoing discussions, asking if the process is consensual after the declaration of the IOCINDIO Chair. Representative of the United Arab Emirates took the floor and expressed support to the position of the IOCINDIO Chair. Representative of Iran (Islamic Republic of) spoke in favour of a decision that would establish a Sub-Commission.
278. The Representative of India clarified the fact that the in-kind support that had been offered to host the Regional Secretariat was intended for the Sub-Commission and not for the current Regional Committee.
279. [France](#), [India](#), [Indonesia](#), [Japan](#), [Kenya](#), [Kuwait](#), [Malaysia](#), [Philippines](#), [Qatar](#), [Thailand](#), [USA](#), [IOCINDIO](#), the Chair of [IOCINDIO](#) and the Chair of [WESTPAC](#) chose to provide records of their plenary interventions on this agenda item for the informational annex to the meeting report.

280. The Assembly amended the text proposed by the Working Group and adopted IOC Decision A-31/3.5.6.

### **Status of the Regional Committee of the Central Indian Ocean (IOCINDIO)**

The Assembly,

Having examined the proposal for changing the status of IOCINDIO into an IOC Sub-Commission, as a follow-up to Decision IOC-XXX/3.3.4, by which the IOC Assembly at its 30th session requested the IOCINDIO Chair to prepare, with the help of the IOC Secretariat, the said proposal,

Thanks the former IOCINDIO Officers, notably, the Chair (India) and the Vice-Chairs (Kuwait and Bangladesh) and the IOC Vice-Chair for Group IV (India), for their sustained efforts and commitments to IOC in general and IOCINDIO in particular;

Expresses gratitude to the Government of India for its offer to provide in-kind support for the operation of a Regional Secretariat for the IOCINDIO Sub-Commission;

Thanks the IOCINDIO and IOC Member States and other partners that supported and contributed to the reactivation of the Regional Committee;

Welcomes the IOCINDIO-VIII Recommendation for changing the status of IOCINDIO into an IOC Sub-Commission and the responsive views of Member States, following the provisions of the IOC Manual (IOC/INF-785) with the Guidelines for the Structure and Responsibilities of the Subsidiary Bodies of the Commission (Chapter 5 of Part 1 of the Manual) and its section 5 on Sub-Commissions;

Decides to pursue further towards the establishment of the IOC Sub-Commission for the Indian Ocean, taking into account the proposal for changing the status of IOCINDIO into an IOC Sub-Commission, as a framework to improve coordination of IOC Member States in the region and to ensure implementation of IOC programmes in the Indian Ocean with a view to presenting a draft resolution to the Assembly of IOC at its 32<sup>nd</sup> Session;

Decides to undertake the remaining steps towards establishment of the IOCINDIO Sub-Commission through an intersessional Working Group in order to complete the work on: terms of reference; determination of the geographic scope; programme of work; the proposed projects and funding support; and mechanisms for coordination with adjacent Sub-Commissions; etc.

Requests the Executive Secretary to:

- (i) establish an open-ended intersessional Working Group and invite interested Member States to participate in the working group;
- (ii) work closely with the Government of India to explore appropriate arrangements for the establishment of the Regional Secretariat of the IOCINDIO Sub-Commission; and
- (iii) report to the Executive Council, at its 55<sup>th</sup> session, on the status of implementation of this decision.

### **3.6 IOC REPORT TO THE 41<sup>ST</sup> GENERAL CONFERENCE OF UNESCO**

281. The Executive Secretary briefly introduced this item, considering that the essence of the information contained in the draft report presented for Assembly's consideration have already been covered in his presentation under item 3.2.

282. No Member States took the floor.

283. The Assembly adopted IOC Decision A-31/3.5.6.

### **IOC Report to the Forty-first General Conference of UNESCO**

The Assembly,

Recalling [Article 3.2](#) of the Statutes and Rule of Procedure [49.2](#),

Having examined document IOC/A-31/3.6.Doc,



Takes note of the report to be presented to the 41<sup>st</sup> session of the General Conference of UNESCO, and requests the Executive Secretary to submit the report on IOC activities (2020–2021) to the 41<sup>st</sup> General Conference of UNESCO as document 41 C/REP.9.

### 3.7 REPORT ON THE DECADE IMPLEMENTATION PLAN

284. The IOC Executive Secretary introduced this item recalling that on 31st December 2020, through UNGA Resolution 75/239, the United Nations General Assembly (UNGA) *inter alia* ‘took note with appreciation’ of the Implementation Plan of the UN Decade of Ocean Science for Sustainable Development (the Ocean Decade) and confirmed the role of the IOC as the coordinating agency for the implementation of the Decade.
285. Following Executive Secretary’s introduction, Mr Julian Barbière, Ocean Decade Focal Point supported by Ms Alison Clausen, Programme Specialist, presented an overview of the progress in operationalizing the Implementation Plan. Mr Barbière reported on the outcome of the Call for Decade Actions No. 01/2020, highlighting that more than 200 submissions were received presenting a great diversity both in terms of geography, themes and type of proponents. He explained the process to assess the submissions and make decisions on endorsement, including the role of the Interim Decade Advisory Board that led to the endorsement of 28 programmes and 33 contributions. He emphasised that the IOC Secretariat will continue to analyse the remaining submissions of Decade projects and contribution, and that further announcements regarding the endorsement of these will be made in the second half of the year.
286. Mr Barbière reminded Member States that many IOC activities will directly contribute to the Decade and that several IOC-led programmes from GOOS, IODE and Ocean Literacy programmes have been registered as Decade Actions. IOC Regional Subsidiary Bodies are also increasingly involved in coordinating Decade activities and catalysing the co-design of Decade Actions.
287. Mr Barbière introduced and invited the Assembly to consider the Terms of Reference of the Decade Advisory Board as presented in IOC/A-31/3.7.Doc(1). He informed Member States that the Secretariat will launch a call for nominations in coming weeks with the aim of formally establishing the Board before the end of the year. He reminded Member States that the Board is conceived as a strategic advisory body to both the Secretariat and IOC Governing Bodies and will not exercise policy-making functions.
288. He identified the staffing needs for the Decade Coordination Unit which is housed in the IOC Secretariat and highlighted the development of operational guidelines for the establishment of Decade Collaborative Centres and Implementing Partners that will provide important support to the Decade Coordination Unit.
289. Ms Clausen continued the presentation and provided an overview of the monitoring and evaluation framework that is being developed to measure progress of the Decade. She informed Member States of the significant efforts that have been made in stakeholder engagement and highlighted the emergence of a number of regional taskforces and National Decade Committees. She provided updated information on engagement with UN entities, philanthropic Foundations and private sector partners and informed Member States that the Global Stakeholder Forum that will be deployed before the end of the year will be a major mechanism for stakeholder collaboration throughout the Decade. She highlighted the success of communications efforts over the last 12 months including the high-level launch of the Decade on 1 June 2021 hosted by Germany, and invited Member States to review the Advisory Framework for the Ocean Decade Communications Strategy. Finally, Ms Clausen provided an overview of the key elements of the Preliminary Framework for Resource Mobilisation that was presented as part of the supporting documents to the Assembly. In this regard she emphasised the role of the Ocean

Decade Alliance and highlighted that resource mobilisation remained the single biggest challenge both for the coordination of the Ocean Decade and the impact of Decade Actions.

290. The Executive Secretary concluded the Secretariat's presentation by thanking Member States that have provided support towards the coordination work of the Secretariat, and emphasised the need for on-going efforts to ensure that a fully staffed and operational Decade Coordination Unit. Recognizing the challenge that the Ocean Decade represents for both the Secretariat and all Member States, he invited Member States to work with the Secretariat to identify priorities and contributions and build partnerships with diverse resource providers.
291. The US Delegate introduced the draft resolution pertaining to this item on behalf of India, Colombia, Russian Federation, Germany, Brazil, Morocco, Portugal, United Kingdom, France, Uruguay, and Philippines.
292. Thirty-six Member States took the floor, as well as the representatives of SCOR, FAO and GOOS.
293. The Assembly welcomed the progress report and congratulated the Secretariat for the Implementation Plan and activities conducted to date. There was general support for the Resolution in particular as it relates to the Terms of Reference for the Decade Advisory Board.
294. Several Member States briefly reported on their respective activities, including establishment of National Decade Committees and kick-off events.
295. Several Member States stressed the need for capacity development to be an integral part of the Decade, the importance of partnerships, the need to use existing structures to support the Decade coordination, as well as the need to mobilize resources. Some Member States highlighted the importance of indigenous and local knowledge as part of the Decade. The Delegates of Kenya, Korea and Portugal recalled that they are members of the Ocean Decade Alliance and invited others to join. India recalled that they submitted a proposal to host a Decade Collaborative Centre and announced that they will provide support to Ocean Decade implementation through a financial contribution of USD 50,000. France and the United States expressed their intent to support the Decade Coordination Unit through the secondment or loans of staff. The Republic of Korea indicated that it was exploring options to provide significant support to priority research programmes through its Ministry of Fisheries and Oceans.
296. Several Member States stressed the importance of ensuring that IOC programmes and projects had strong visibility as Decade Actions, and of the need to increase the capacity and role of IOC Regional Subsidiary Bodies to support implementation of Decade. Some Member States also reminded the Assembly of the importance of strong engagement by SIDS in the Decade. The Delegate from the Philippines suggested to explore the potential roles of Regional Subsidiary Bodies in the endorsement of Decade Actions, whilst the Delegate of Australia suggested that the Terms of Reference for the Board should make explicit reference to the staggered rollover of Board members.
297. In response to these interventions, Julian Barbière acknowledged the development of many activities at national and regional level and took note of the general support to the Draft Resolution and Terms of Reference for the Decade Advisory Board. He thanked the many Member States who have supported the implementation of the Decade or who have made offers to do so. He recalled that the Implementation Plan accepted by the United Nations General Assembly mandates the IOC Executive Secretary as the decision maker on endorsement of Actions. He highlighted that the endorsement of Actions needs a holistic and global vision of the overall landscape of the Decade and the other existing and planned Actions in order to ensure synergies and facilitate international as well as inter- and intra-regional collaborations, including links to funding partner. For this reason, as well as operational factors, the endorsement process

cannot be delegated. He also confirmed that the Paris-based Secretariat works closely with the RSBs Secretariats and will further engage these in the technical review of Decade Action submissions relevant to their respective regions.

298. Stressing the importance of leaving no one behind, he recalled that regional taskforces and National Decade Committees provide opportunities for SIDS to include their priorities in Decade Actions and noted the focus of the IOC Secretariat and numerous Decade Actions on capacity development. He also noted that the Secretariat is working with Member States and partners to develop mechanisms to increase the place of indigenous and local knowledge in the Decade. He confirmed that the Secretariat will continue to work through IOC programmes and governing bodies to identify future IOC contributions to the Decade. He reminded the Assembly that the Decade Collaborative Centre and Decade Implementing Partner mechanisms will optimise the use of existing structures to support Decade coordination.

299. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Argentina](#), [Brazil](#), [Canada](#), [Chile](#), [Colombia](#), [Côte d'Ivoire](#), [France](#), [Germany](#), [India](#), [Italy](#), [Japan](#), [Kenya](#), [Malaysia](#), [Nigeria](#), [Philippines](#), [Portugal](#), [Republic of Korea](#), [Sweden](#), [Thailand](#), [Turkey](#), [United Kingdom](#), [USA](#), [Venezuela](#), [FAO](#), [SCOR](#).

300. The Assembly adopted **IOC Resolution A-31/1** submitted by Brazil, Colombia, France, Germany, India, Italy, Kenya, Monaco, Morocco, Philippines, Portugal, United Kingdom of Great Britain and Northern Ireland, Uruguay, Russian Federation and USA.

#### IOC Resolution A-31/1

#### **Implementation of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030)**

The Intergovernmental Oceanographic Commission,

**Recalling** IOC Assembly [Resolution XXIX-1](#) proposing the establishment of an international (UN) Decade of Ocean Science for Sustainable Development (2021–2030), the subsequent proclamation of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030) by the United Nations General Assembly (UNGA) at its 72<sup>nd</sup> session through Resolution [A/RES/72/73](#) (therein the Decade), and the invitation to the IOC to prepare an implementation plan for the Decade in consultation with Member States, specialized agencies, funds, programmes, and bodies of the United Nations (UN), as well as other intergovernmental organizations, non-governmental organizations and relevant stakeholders,

**Further recalling** IOC Assembly [Resolution XXX-1](#) on Progress Report on the Preparation of the United Nations Decade of Ocean Science for Sustainable Development and the call on IOC by the UNGA through Resolution [A/RES/74/19](#) to:

- (i) continue to provide information on the development of the implementation plan and present it to the UNGA at its 75<sup>th</sup> session,
- (ii) regularly consult with, and report to, (UN) Member States on the Decade and its implementation,

**Also further recalling** the consultation with IOC Member States in 2020 on the modalities of completion and submission of the Decade Implementation Plan (DIP) to the UNGA at its 75<sup>th</sup> session and that the UNGA through Resolution [A/RES/75/239](#) welcomed the steps taken by IOC in the preparation of the Implementation Plan and took note with appreciation of that Plan (para 304),

**Noting** [IOC Resolution EC-53/1](#) on Implementation of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030),

**Welcoming** the Report on the Implementation of the UN Ocean Decade (Document [IOC/A-31/3.7.Doc\(2\)](#)) and, in particular, the outcomes of the global consultation meetings, regional workshops, the inclusive review process of the DIP by Member States, members of UN-Oceans, and stakeholders,

the engagement activities with UN and non-UN ocean stakeholders, as well as the launch of the 1<sup>st</sup> Call for Actions under the Decade;

**Expressing** confidence in the IOC Secretariat's ability to continue coordinating the Decade during its implementation phase (2021–2030) in consultation with Member States, specialized agencies, funds, programmes, and bodies of the United Nations, as well as other intergovernmental organizations, non-governmental organizations and relevant stakeholders;

### **Part I Decade Coordination matters**

**Takes note** of the DIP as the basis for launching the Decade and establishing the governance arrangements and engagement mechanisms described therein;

**Acknowledges** the outcome of the 1<sup>st</sup> Call for Action and the endorsed Decade Programmes as presented in Document [IOC/INF-1417](#);

**Supports** the establishment of the Decade Coordination Unit (DCU) within the IOC Secretariat as the primary mechanism to achieve orderly, impactful, inclusive and effective implementation of the Decade;

**Invites** institutional partners to act as Decade Collaborative Centres or Decade Implementing Partners on the basis of the guidance provided in Document [IOC/2021/ODS/23](#) and **requests** the IOC Secretariat to report to IOC Governing Bodies on the establishment of such arrangements;

**Invites** Member States and partners to:

- (i) provide voluntary financial contributions to support the work of the IOC Secretariat in coordinating the Decade including in-kind support such as staff loans and secondments to the DCU;
- (ii) offer to host and fund Decade Actions, Decade Coordination Offices, and Decade Collaborative Centres as described in the DIP;
- (iii) establish national multi-stakeholder Decade coordination mechanisms with a view to stimulating national activities and international cooperation; and
- (iv) host regional or international Decade stakeholders events, including in the context of the International Ocean Decade Conference Series.

**Further invites** UN-Oceans partners, UN Member States, international scientific and academic organizations, non-governmental organizations and other relevant stakeholders to support the Decade, and contribute to its implementation by proposing Decade Actions in accordance with the DIP;

**Thanks** the Governments of Canada, the Republic of Korea, Japan, the Kingdom of Belgium (Government of Flanders), Norway, Sweden, Portugal, the United Kingdom of Great Britain & Northern Ireland, and the People's Republic of China as well as REV-Ocean for their financial contribution to the Decade and further **thanks** Germany for their hosting of the High Level Launch of the Ocean Decade – First International Ocean Decade Conference, and the UN Ocean Decade Laboratories;

### **Part II Establishment of the Decade Advisory Board**

**Thanks** members of the Decade Executive Planning Group for their work in supporting the preparation phase of the Decade in 2018–2020 and for acting as *Interim Decade Advisory Board* in 2021 in accordance with the revised terms of reference of the group adopted by IOC Executive Council at its 53<sup>rd</sup> session through Resolution EC-53/1;

**Approves** the terms of reference for the Decade Advisory Board as presented in the Annex therein, including the selection process of its members envisaged for the balanced constitution of such a group, to be established under the coordination of the IOC Executive Secretary;

### **Part III IOC Contribution to the Decade**

**Emphasizes** the unique position of IOC to make a substantial contribution to the Decade through the implementation of High-Level Objectives (HLOs) as reflected in its Draft IOC Medium Term Strategy for 2022–2029 (41 C/4) and Draft Programme and Budget for 2022–2025 (41 C/5);

**Works closely** and in concert with IOCAFRICA Member States, the GOOS-AFRICA Regional Alliance, the African Union, and specialized African institutions, to ensure that the implementation of the Decade in Africa contributes to the priorities of the Decade of African Seas and Oceans (2015–2025);

**Further works** through multi-stakeholder collaboration and IOC's Regional Subsidiary Bodies to ensure that the tangible initiatives and endeavours that will be implemented will mobilize support towards Small Island Developing States (SIDS), enable them to achieve their ocean-related 2030 Agenda priorities and contribute to the implementation of the SIDS Accelerated Modalities of Action (SAMOA) Pathway;

**Invites** IOC Subsidiary Bodies, relevant IOC governance structures, and relevant UNESCO Category 2 Centres to continue identifying programmatic contributions to the Decade during the intersessional period;

**Welcomes** the active role of the IOC Regional Subsidiary Bodies in facilitating Decade regional coordination and engagement activities;

**Supports** the registration or planned registration of IOC-led Decade Actions, specifically:

- (i) "Ocean Observing Co-Design" Programme by the Global Ocean Observing System (GOOS), which will build the process, infrastructure and tools for ocean observing co-design necessary to support the Decade;
- (ii) "Observing Together" Programme by GOOS, which will transform ocean data access and availability by connecting ocean observers and the communities they serve through enhanced support to both new and existing community-scale projects;
- (iii) the establishment of a Decade Tsunami Programme aimed at achieving transformational advances in tsunami detection, observing and warning, including tsunamis generated by non-seismic sources, making 100% of communities at risk of tsunami prepared for and resilient to tsunamis by 2030 through the implementation of the UNESCO/IOC Tsunami Ready Programme, as reflected in decision Dec. A-31/3.4.1 of the Assembly;
- (iv) the "Ocean Literacy With All (OLWA)" Programme to respond to priorities identified in the Ocean Decade Ocean Literacy Action Framework (Document [IOC/2021/ODS/22](#)); and
- (v) "Ocean Practices for the Decade" as a Programme connected to the IODE-GOOS Ocean Best Practices System;
- (vi) the registration of Ocean Data and Information System (ODIS), Ocean Biodiversity Information System (OBIS), OceanTeacher Global Academy (OTGA), World Ocean Database (WOD), and Pacific Islands Marine Bioinvasions Alert Network (PacMAN) as Ocean Decade Actions;

**Further invites** Member States, partners, and donor organizations to support these Decade Actions including through allocation of extra-budgetary resources to relevant IOC programmes to achieve their transformative ambitions, guide their respective communities, and act as a catalyser of further actions within and beyond the Decade.

*[Note: find the annex of IOC Resolution A-31/1 at the end of this section]*

## **4 GOVERNANCE, PROGRAMMING AND BUDGETING**

### **4.1 DRAFT IOC MEDIUM TERM STRATEGY FOR 2022–2029 (41 C/4)**

301. The Executive Secretary introduced this item. He reminded Member States that the document, already reviewed by the IOC Assembly at its 30th session in 2019 and by the Executive Council at its 53rd session in February 2021, builds on the current IOC Medium-term Strategy, 2014–2021 ([IOC/INF-1314](#)), preserving the comprehensive framework of six functions for its implementation, while at the same time attempting to further clarify and sharpen the proposed vision statement and five High-Level Objectives of the Commission. The version proposed for Member States consideration in document IOC/A-31/4.1.Doc(1) was revised in accordance with [Resolution EC-53.2](#).

302. The Executive Secretary stressed the importance of a constructive and inclusive discussion of the document, both in the plenary and in the Financial Committee, with a view of

endorsing this key document that will define the Commission's strategy in the next eight-year period, largely concordant with the UN Decade of Ocean Science for Sustainable Development.

303. The representatives of 9 Member States and 1 organization took the floor.
304. The Assembly was unanimous in appreciating the quality of the Draft Medium-term Strategy proposed for its consideration. The draft is the result of a long and inclusive process, but this is indeed an important work, as the strategy will apply directions to the work of the IOC in the crucial decade ahead.
305. The addition of a new high-level objective concerning scientifically-founded services for the sustainable ocean economy, is very well aligned with the objectives of both the High-Level Panel for a Sustainable Ocean Economy and, not least, of the UN Decade of Ocean Science.
306. Member States welcomed IOC's stated focus on six functions, which contains essential ways for fighting against major global challenges including climate change. Ocean science, inclusive of indigenous, local and traditional knowledge, needs to become the basis for solutions not only as regards climate change but also for the sustainable ocean economy. The Assembly highlighted capacity development as the key function of the IOC, including the promotion of ocean literacy toward every citizen, and fostering early career ocean professionals.
307. The following Member States and one organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Indonesia](#), [Norway](#), [Philippines](#), [Republic of Korea](#), [WMO](#).
308. The Assembly adopted IOC [Decision A-31/4.1](#).

#### **Draft IOC Medium-Term Strategy for 2022–2029**

The Assembly,

Having examined documents IOC/A-31/4.1.Doc(1) and [Resolution EC-53/2](#),

Takes note of the documents IOC/A-31/4.1.Doc(1) and [Resolution EC-53/2](#) and Annexes subject to further examination by the Financial Committee with a view of formulating a draft resolution for discussion and adoption in plenary.

#### **4.2 DRAFT PROGRAMME AND BUDGET FOR 2022–2025 (41 C/5)**

309. The Executive Secretary introduced this item. He reminded the Assembly that while the programme of UNESCO is defined for the quadrennial period 2022–2025, the General Conference of UNESCO decided to maintain the biennial cycle for the appropriation of the budget. The proposal for the Draft Programme and Budget for 2022–2025, first biennium: 2022–2023 ([41 C/5](#)) submitted to UNESCO Executive Board at its 211th session (April 2021) was based on the same amount of Member States assessed contributions (regular budget) as in 2020–2021, or US\$534.6 million. This scenario included an allocation of \$11.2 million from the assessed contributions to the IOC (compared to \$10.9 million in 2020–2021). There is an expectation and ambition for the IOC to raise \$20,6 million in voluntary contributions (\$15.8 million in 2020–2021), of which \$4,4 million are already in hand (\$2.6 million in 2020–2021). Despite the fact that the overall regular budget for the biennium is nominally a little higher than the figures for 2020–2021 (\$11.2 M vs \$10.9 M), budget available for operations in the new biennium is expected to be lower due to an increase in staff costs. With the new comprehensive and transparent approach to presenting staff costs, the full anticipated costs of staff are now reflected under the Sectors/Bureaux where they are working and delivering results. This is expected to support more flexibility in the ability of Sectors/Bureaux to manage their staff costs as needed throughout the biennium.

310. At the same time, the opportunity and the responsibility presented by the Decade, required a strategic assessment and a decision on where to invest. The volume of work for the IOC Secretariat is increasing. The resources for activities originating from assessed contributions of UNESCO Member States are decreasing. The only rationale for adequate delivery is to reinforce the Commission's capacity to mobilise additional resources. In this context, the Executive Secretary's choice is to invest in the human resources of the IOC, its greatest asset, in anticipation that a stronger team will be able to adequately respond to a higher demand on IOC's critical work in enabling science-based ocean management. A corporate investment in IOC staffing, elevating its profile to the level commensurate with our vision for a truly transformative Decade is required in order to raise more resources for an effective and efficient Decade Coordination Unit and strengthen all IOC programme activities. It is this vision that enables the increased projections for voluntary contributions.
311. The Executive Secretary stressed that the IOC programme and budget for the period 2022–2023, the starting biennium of the IOC Medium-Term Strategy for 2022–2029, requires a deep reflection of its Member States.
312. At its 30th Session the Assembly adopted [Resolution XXX-3](#), requesting the Executive Secretary to produce an “estimate of the necessary budget to effectively operate the IOC at an optimum level, to help identify how and what additional resources might be secured”.
313. Secretariat's considerations in this regard focused on two options:
- (i) the “healthy IOC” scenario ensuring the ability of the Secretariat to support the current portfolio of activities (now including coordination of the Decade, pursuit of IOC work on ocean planning, including maritime spatial planning, more resourceful work in the regions and activities in the areas of ocean literacy and communication);
  - (ii) and a hypothetical sketch of “optimal IOC” that would be able to support the emerging alliance of ocean science and management. This configuration is still not clear due to emerging negotiations at the United Nations and evolving developments in ocean governance. Consultations with Member States will be needed to complete this crucial strategic planning exercise.
314. The Executive Secretary also referred Member States to the [IOC Statutes](#)' Article 11.3 outlining the possibility for the IOC to act as a joint specialized mechanism in the UN system and to Article 10.4 allowing the Commission to establish additional financial arrangements for the implementation of its programme of work. He shared his view that modern leadership can only be achieved through partnership. Seeking adequate strategic partnerships will allow IOC to keep and strengthen its role of as a coordinator and facilitator of ocean science at the service of sustainable development.
315. The representatives of 9 Member States and 1 observer took the floor.
316. The Assembly recognized the increased responsibilities and workload that IOC faces. The UN Decade is an unprecedented endeavour that requires resources. Member States supported the Executive Secretary's choice to invest in human resources of the IOC in order to meet the increasing demands, but also in order to strengthen the commission's fundraising capacity and increase the volume of voluntary contributions. Furthermore, the Assembly appreciated the efforts to develop partnerships with the private sector and with other multilateral organisations, as partnerships are vital to achieve the ambitious global transformation agenda for the ocean.

317. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [France](#), [Norway](#), [Philippines](#), [Republic of Korea](#).

318. The Assembly adopted IOC [Decision A-31/4.2](#).

#### **Draft Programme and Budget for 2022–2025 (41 C/5)**

The Assembly,

Having examined document IOC/A-31/4.2.Doc(1) and Resolution [EC-53/2](#),

Takes note of document IOC/A-31/4.2.Doc(1) and [Resolution EC-53/2](#) and Annexes subject to further examination by the Financial Committee with a view of formulating a draft resolution for discussion and adoption in plenary.

#### **4.3 FOLLOW-UP TO RESOLUTION EC-53/2 ON REVIEW & UPDATE OF THE RULES OF PROCEDURE TO ADAPT THEM TO ONLINE MEETINGS AND GUIDELINES FOR REPORTING ON IN-KIND CONTRIBUTIONS**

319. The Chair of the Intersessional Financial Advisory Group, Prof. Karim Hilmi, introduced this item.

320. The Assembly adopted IOC [Decision A-31/4.3](#).

#### **Follow-up to Resolution EC-53/2 on Review and Update of the Rules of Procedure to Adapt them to Online Meetings and Guidelines for Reporting on in-kind Contributions**

The Assembly,

Having examined document IOC/A-31/4.3.Doc,

Takes note of the document IOC/A-31/4.3.Doc subject to further examination by the Financial Committee with a view of formulating a draft resolution for discussion and adoption in plenary.

#### **4.4 REPORT BY THE CHAIRPERSON OF THE FINANCIAL COMMITTEE**

321. The Chair of the Financial Committee, Prof. Karim Hilmi, reported to the Assembly on the results of the Committee's examination of the items entrusted to it by the plenary in addition to the statutory ones foreseen in the Rule of Procedure 8.1(c), as reflected in Draft Resolution IOC-31/DR[4.4].

322. The Assembly expressed its high appreciation to the Chair of the Financial Committee Prof. Karim Hilmi, for his effective and efficient way of leading the work of the Financial Committee in a truly inclusive and collegial spirit. Once again, this constructive approach allowed the Committee to complete its expanded and challenging mandate in a very limited period of time.

323. The Assembly adopted **IOC Resolution A-31/2** submitted by the following Member States: Afghanistan, Algeria, Argentina, Australia, Azerbaijan, Bangladesh, Belgium, Benin, Brazil, Bulgaria, Canada, China, Colombia, Cote d'Ivoire, Cuba, Djibouti, Dominican Republic, Egypt, El Salvador, Finland, France, Germany, Greece, Grenada, Italy, India, Indonesia, Iran (Islamic Republic of), Japan, Kenya, Korea (Republic of), Kuwait, Libya, Madagascar, Malaysia, Mexico, Monaco, Morocco, Mozambique, Netherlands, Nigeria, Norway, Panama, Peru, Philippines, Portugal, Qatar, Romania, Russian Federation, Saint Vincent and the Grenadines, Senegal, Serbia, Seychelles, Singapore, Somalia, South Africa, Sri Lanka,



Sweden, Tanzania, Thailand, Timor Leste, Togo, Tunisia, Turkey, Turkmenistan, UAE, United Kingdom of Great Britain and Northern Ireland, Uruguay, USA, Viet Nam and Venezuela.

### IOC Resolution A-31/2

#### **Governance, programming and budgeting matters of the Commission**

The Intergovernmental Oceanographic Commission,

**Having examined** documents:

- (i) IOC/A-31/3.2.Doc(2) – Report on 2020–2021 (40 C/5) budget implementation as at 31 December 2020,
- (ii) IOC/A-31/3.2.Doc(3) – Financial situation of the IOC Special Account as at year end 2020 and Forecast for 2021,
- (iii) IOC/A-31/4.1.Doc – Draft IOC Medium Term Strategy for 2022–2029 (41 C/4),
- (iv) IOC/A-31/4.2.Doc – Draft Programme and Budget for 2022–2025 (41 C/5) – First Biennium 2022–2023,
- (v) IOC/A-31/4.3.Doc – Report of the Chairperson of the IOC Intersessional Financial Advisory Group (2021),

#### **I. 2020–2021 budget implementation as at 31 December 2020 and Financial situation of the IOC Special Account as at year end 2020 and Forecast for 2021**

**Confirms** that the IOC workplans for 2020–2021, as reported in IOC/A-31/3.2.Doc(2), have been implemented in accordance with the budgetary allocations approved by the IOC Assembly at its 30<sup>th</sup> session through Resolution XXX-3, as presented in document IOC-XXX/2 Annex 9;

**Notes** the slightly lower than usual implementation rate in the first year of the 2020–2021 biennium, due to the working conditions under the COVID-19 pandemic, as well as the Secretariat's intention to fully implement the biennial programme of work by the end of 2021;

**Further notes** that as at 31 December 2020, the extrabudgetary resource mobilisation targets set for the 2020–2021 biennium have been achieved to the level of 76% overall, but with considerable variance between the Commission's Functions;

**Acknowledges** the information on the financial situation of the IOC Special Account as at year end 2020 and Forecast for 2021 as provided in IOC/A-31/3.2.Doc(3);

**Approves** the adjustments to the 2020–2021 budgetary appropriations as proposed in Table 1 of IOC/A-31/3.2.Doc(3);

**Thanks** Member States who have already contributed or committed to contributing extrabudgetary funds for the 2020–2021 programme implementation;

**Encourages** all Member States to provide voluntary contributions to ensure full achievement of the collectively agreed extrabudgetary resource mobilization targets for 2020–2021, preferably to the IOC Special Account;

**Requests** the IOC Executive Secretary to continue efforts to obtain further voluntary contributions, including from private sector donors and other partners and to achieve full implementation of the IOC's programmatic targets for 2020–2021;

#### **II. Draft Medium-Term Strategy for 2022–2029**

**Welcomes** the revisions and improvements introduced by the Secretariat in the IOC's Draft Medium-Term Strategy for 2022–2029, in response to the recommendations of the IOC Executive Council at its 53<sup>rd</sup> session through [Resolution EC-53/2](#);

**Endorses** the IOC Medium-Term Strategy for 2022–2029 with the amendments to IOC/A-31/4.1.Doc as contained in Annex I to this Resolution;

#### **III. Draft Programme and Budget for 2022–2025**

**Expresses its appreciation** to the IOC Secretariat for the proposal contained in IOC/A-31/4.2.Doc as consistent with the guiding principles set out in Resolution EC-53/2 and the high level objectives defined in the Draft IOC Medium-Term Strategy for 2022–2029;

**Takes note** of the Executive Secretary's programmatic choices, while also expressing concern regarding the decrease in the regular programme budget for operations;

**Highlights** the importance of ensuring that the IOC has the strategy and the necessary resources, both in terms of regular programme budget and voluntary contributions, to fulfil its role in the implementation of the UN Decade of Ocean Science for Sustainable Development (2021–2030), hereafter the Decade;

**Invites** the Director-General of UNESCO to:

- (i) reinforce the human resources of the IOC in the 41 C/5, to enable the IOC to fulfil its increasing mandate and to address current and emerging priorities, including those related to the implementation of the UN Sustainable Development Goals and the Decade;
- (ii) continue every effort to enhance the financial resources available to the IOC in the 41 C/5;
- (iii) ensure that the budgetary appropriation for the IOC approved in the 41 C/5 shall not be decreased by transfers of funds to other parts of UNESCO's budget;

**Invites** IOC Member States to:

- (i) continue to advocate to the Director-General of UNESCO and the Governing Bodies of UNESCO on the importance of the IOC as a body with functional autonomy within UNESCO, focusing in particular on the value that the IOC provides to UNESCO and to sustainable development;
- (ii) support the reinforcement of the IOC in the consultation process for the UNESCO Draft Medium-Term Strategy for 2022–2029 (Draft 41 C/4) and the Draft Programme and Budget for 2022–2025 (Draft 41 C/5);
- (iii) increase their voluntary contributions to support the IOC in the face of its increasing responsibilities, preferably to the IOC Special Account, as well as, *inter alia*, by providing in-kind support such as staff loans (either in-person or via telework arrangements) to the IOC Secretariat;
- (iv) further increase their non-earmarked contributions to enable the IOC to cover the collectively agreed priorities of IOC programmes;

**Requests** the IOC Executive Secretary to:

- (i) keep the IOC Officers and Member States updated on the 41 C/5 adoption process by UNESCO;
- (ii) following the approval of the 2022–2023 budget by the General Conference of UNESCO, develop the workplans based on the overall approach set out in IOC/A-31/4.2.Doc;
- (iii) support the work of the Intersessional Financial Advisory Group (IFAG) by providing timely information on the relevant programming and budgetary planning process, in order to facilitate informed decision-making by Member States at the 55<sup>th</sup> session of the IOC Executive Council in 2022;

#### **IV. Governance and Working Methods**

**Recalling** that the IOC Assembly at its 30<sup>th</sup> session through Resolution XXX-3 invited the IFAG 'to continue reflecting on the best practices to further enhance the efficiency of the IOC Governing Bodies' meetings',

**Acknowledging** that the COVID-19 pandemic highlighted the need to review and possibly update the IOC's Rules of Procedure in order to align them with the prevailing United Nations' best practices facilitating informed and timely decision-making by IOC Member States,

**Noting** that the IOC Executive Council at its 53<sup>rd</sup> session through Resolution EC-53/2 acknowledged the need to adapt the IOC's Rules of Procedure to on-line meetings,

**Welcomes** the information provided in the Report of the Chairperson of the Intersessional Financial Advisory Group (2021), (IOC/A-31/4.3.Doc) regarding the consultations held on this matter with the UNESCO Legal Advisor;

**Requests** the IOC Executive Secretary to prepare, in consultation with the UNESCO Legal Advisor and IFAG, a preliminary proposal for the revised separate sets of Rules of Procedure for the IOC Assembly and Rules of Procedure for the IOC Executive Council, making the necessary clarifications and aligning

language versions, for review and adoption by these two bodies, in accordance with the following timeline:

- (i) the first draft of the Rules of Procedure of the IOC Executive Council will be reviewed by the IOC Executive Council at its 55<sup>th</sup> session in 2022;
- (ii) draft Rules of Procedure of the IOC Assembly will be presented for review and adoption by the IOC Assembly at its 32<sup>nd</sup> session in 2023;
- (iii) the IOC Assembly at its 32<sup>nd</sup> session will also review the draft Rules of Procedure for the IOC Executive Council;
- (iv) the IOC Executive Council will hold an extraordinary session immediately following the 32<sup>nd</sup> session of the IOC Assembly in order to adopt its Rules of Procedure;

**Agrees** that each IOC governing body will adopt the recommendations on the working methods for online sessions at the same time as the Rules of Procedure, following the practice of the UNESCO Executive Board;

**Invites** IFAG to develop a proposal for a systematic approach and methodology for reporting in-kind contributions, consistent with the updated Guiding Principles for Programming and Budgeting (Annex I to Resolution EC-53/2) and Article 10 of the IOC Statutes, to be considered by the IOC Assembly at its 32<sup>nd</sup> session.

*[Note: find the text of the IOC Medium-term Strategy for 2022–2029 (41 C/4) at the end of this section]*

#### 4.5 ELECTIONS OF THE OFFICERS OF THE COMMISSION AND MEMBERS OF THE EXECUTIVE COUNCIL

324. The Chair of the Nominations Committee reported on this item (IOC/A-31/4.5.NOM).
325. The Nominations Committee met three times, on 15, 16 and 18 June 2021. 29 Member States attended the meetings of the Nominations Committee, representing all five IOC electoral groups.
326. The Committee considered the candidatures for the positions of the Chairperson of IOC and for the five Vice-Chairpersons of the Commission; as well as the candidatures for the five electoral groups other than the seats of the Chairperson and the Chairpersons, that is to say: 9 for electoral group I; 2 for electoral group II; 7 for electoral group III; and 8 for electoral groups IV and V.
327. The Chair of the Nominations Committee expressed his thanks to all the delegations who showed a maximum level of cooperation and consensual spirit that led to clean slate in all the electoral groups and the first election by acclamation in years. He directed his special gratitude and appreciation to Greece and Sri Lanka for opening the floor for a clean slate in their respective groups by withdrawing their candidatures. The Chair also thanked all IOC Member States for their highly cooperative attitude in light of the current special sanitary measures. He finally thanked the Chairperson of IOC for his continuous support to the work of the Nominations Committee and also acknowledged the valuable work of the IOC Secretariat in supporting the work of the Committee.
328. The Chair of the Nominations Committee declared that, because the number of candidates had equaled the number of elective places to be filled, on the basis of provision 2.8 of Appendix I to the Rules of Procedure of IOC, the candidates shall be declared elected.
329. The Chairperson of IOC thanked the Chair of the Nominations Committee for having brought the elections process to a success, by managing a full election by acclamation in years, and recognized this as the result as of the spirit of compromise of this assembly.

330. The membership of the Executive Council for the next intersessional period and the 31th session of the Assembly is given in Annex V to the present report.
331. The Assembly adopted IOC Decision A-31/4.5.1.

### IOC Elections 2021

The Assembly,

#### I. Election of the Chair of the Commission

Elects Mr Ariel H. Troisi (Argentina)

#### II. Election of the Vice-chairs of the Commission

Elects:

- Ms Marie-Alexandrine Sicre (France) (Group 1)
- Mr Alexander Frolov (Russian Federation) (Group 2)
- Mr Frederico Antonio Saraiva Nogueira (Brazil) (Group 3)
- Mr Srinivasa Kumar Tummala (India) (Group 4)
- Mr Karim Hilmi (Morocco) (Group 5)

#### III. Election of the other Members of the Executive Council

Elects

- Canada, Germany, Italy, Portugal, Spain, Sweden, Turkey, the United Kingdom of Great Britain and Northern Ireland, and the United States of America for Group 1;
- Bulgaria and Romania for Group 2;
- Chile, Colombia, Grenada, Panama, Peru, Saint Vincent and the Grenadines, and Uruguay for Group 3;
- Australia, China, the Islamic Republic of Iran, Japan, the Philippines, the Republic of Korea, Thailand and Turkmenistan for Group 4; and
- Côte d'Ivoire, Egypt, Gabon, Guinea, Kenya, Libya, Saudi Arabia, and South Africa for Group 5.

#### 4.6 32ND SESSION OF THE ASSEMBLY AND 55TH SESSION OF THE EXECUTIVE COUNCIL

332. Dr Ryabinin reminded the Assembly of the recommendations of the 54th session of the Executive Council, acting as the Steering Committee for this Assembly, on the dates and duration of the 55th session of the Council in 2022 and duration of the 32nd session of the Assembly in 2023.
333. The Secretariat has pre-reserved meeting rooms at Headquarters one week from 13 to 17 June in 2022 and two weeks from 19 to 30 June in 2023. He expressed the pleasure it would be to welcome again IOC delegates in UNESCO premises and to revive the tradition of the IOC Memorial Lectures during the Executive Council and Assembly sessions.
334. Based on the experience gained from holding two successive sessions of governing bodies in 2021, the Executive Secretary anticipated the requests to hold future sessions in hybrid mode in order to facilitate a broader participation of Member States, in a time set-up yet to be defined.
335. The Executive Secretary also informed the Assembly of the main events/conferences that will need to be taken into account when choosing the dates for the next sessions include the WMO Congress in 2022 and the First International Ocean Decade Conference in June 2022.

336. Japan regretted that only three Member States had provided national reports for this Assembly (India, Japan and Russian Federation) and inquired whether the secretariat will encourage Member States to do so in future sessions of IOC governing bodies.

337. The Assembly adopted IOC Decision A-31/4.6.

**32nd session of the Assembly  
and 55th session of the Executive Council**

The Assembly,

Recalling the recommendations of the Executive Council at its 54th session (Dec. EC-54/4),

Decides to hold:

- (i) The 55th session of the Executive Council for 3.5 days in UNESCO Headquarters, Paris over the period of 13 to 17 June 2022,
- (ii) The 32nd session of the Assembly for a duration of 6.5 days plus one Ocean Science Day, at UNESCO Headquarters, over the period from 19 to 30 June 2023, preceded by a one-day session of the Executive Council (56th session) acting as the steering committee of the Assembly and followed by an extraordinary session of the Executive Council dedicated to the adoption of a separated set of Rules of Procedure for the Executive Council.

**5 ADOPTION OF RESOLUTIONS AND MODALITIES  
FOR THE FINALISATION OF THE REPORT**

338. The Chair of the Resolutions Committee reported to the Assembly on the work of the Committee during the session (Annex IIIb to the present report).

339. After noting that decisions had been adopted during the discussion of each agenda item, the IOC Chair then invited the Executive Council to adopt two resolutions on the Ocean Decade Implementation (item 3.7) and the Governance, Programming and Budgeting Matters of the Commission (item 4.4). Both draft resolutions were adopted without any changes.

340. The Executive Secretary expressed satisfaction that the session would end its work one day before it was initially scheduled, only pointing to the fact that the Draft Summary Report prepared by the Secretariat would only be completed and made available to delegations the following day. He then proposed to the Assembly the timeline of adoption of the narrative report by correspondence.

341. The Chairperson thanked the Rapporteur Dr G.A. Ramadass from India for his excellent work in support of the work of the session. Dr Ramadass confirmed he had reviewed the draft summary report of the 54th session of the Executive Council and would be ready to oversee the completion of the Assembly report with the Secretariat and its adoption by correspondence.

342. The Assembly adopted IOC Decision A-31/5.

**Adoption of Resolutions and Modalities  
for the finalisation of the Report**

The Assembly,

Having considered the recommendations of the Executive Council at its 54th session (Dec. EC-54/3.1) on organization matters,

Adopts the decisions and two resolutions of the session;

Requests the Executive Secretary to circulate the narrative part of the report to Member States in the four working languages of the Commission by 30 July 2021 at the latest for its adoption by correspondence by 15 September 2021.

## 6 CLOSURE

343. The Assembly met in plenary session during 9 days from 14 to 24 June 2021, considered 31 items on its agenda and approved 22 decisions and 2 resolutions. The session encompassed a meeting of the Executive Council, four meetings of the Financial Committee, three meetings of the Resolutions Committee, three meetings of the Nominations Committee and three meetings of the sessional Working Group on IOCINDIO Status. It was preceded by 10 informational thematic webinars, which are still available online for watching in four different languages. The Secretariat prepared 94 documents. The Chair reported that some 700 participants registered for the session with some 300-340 delegates connected daily.
344. The Chair and the Executive Secretary expressed their personal appreciation to the outgoing Officers, Ms Monika Breuch-Moritz (Vice-chair group I) and Dr Satheesh Shenoi (Vice-chair group IV).
345. The Chair of the Commission thanked all behind the scene who made this exceptional session of the Assembly possible and closed the 31st Session of the Assembly at 15:55 hours on Thursday 24 June 2021.

### IOC Resolution A-31/1

#### **Implementation of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030)**

The Intergovernmental Oceanographic Commission,

**Recalling** IOC Assembly [Resolution XXIX-1](#) proposing the establishment of an international (UN) Decade of Ocean Science for Sustainable Development (2021–2030), the subsequent proclamation of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030) by the United Nations General Assembly (UNGA) at its 72<sup>nd</sup> session through Resolution [A/RES/72/73](#) (therein the Decade), and the invitation to the IOC to prepare an implementation plan for the Decade in consultation with Member States, specialized agencies, funds, programmes, and bodies of the United Nations (UN), as well as other intergovernmental organizations, non-governmental organizations and relevant stakeholders,

**Further recalling** IOC Assembly [Resolution XXX-1](#) on Progress Report on the Preparation of the United Nations Decade of Ocean Science for Sustainable Development and the call on IOC by the UNGA through Resolution [A/RES/74/19](#) to:

- (v) continue to provide information on the development of the implementation plan and present it to the UNGA at its 75<sup>th</sup> session,
- (vi) regularly consult with, and report to, (UN) Member States on the Decade and its implementation,

**Also further recalling** the consultation with IOC Member States in 2020 on the modalities of completion and submission of the Decade Implementation Plan (DIP) to the UNGA at its 75<sup>th</sup> session and that the UNGA through Resolution [A/RES/75/239](#) welcomed the steps taken by IOC in the preparation of the Implementation Plan and took note with appreciation of that Plan (para 304),

**Noting** [IOC Resolution EC-53/1](#) on Implementation of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030),

**Welcoming** the Report on the Implementation of the UN Ocean Decade (Document [IOC/A-31/3.7.Doc\(2\)](#)) and, in particular, the outcomes of the global consultation meetings, regional workshops, the inclusive review process of the DIP by Member States, members of UN-Oceans, and stakeholders, the engagement activities with UN and non-UN ocean stakeholders, as well as the launch of the 1<sup>st</sup> Call for Actions under the Decade;

**Expressing** confidence in the IOC Secretariat's ability to continue coordinating the Decade during its implementation phase (2021–2030) in consultation with Member States, specialized agencies, funds, programmes, and bodies of the United Nations, as well as other intergovernmental organizations, non-governmental organizations and relevant stakeholders;

## **Part I Decade Coordination matters**

**Takes note** of the DIP as the basis for launching the Decade and establishing the governance arrangements and engagement mechanisms described therein;

**Acknowledges** the outcome of the 1<sup>st</sup> Call for Action and the endorsed Decade Programmes as presented in Document [IOC/INF-1417](#);

**Supports** the establishment of the Decade Coordination Unit (DCU) within the IOC Secretariat as the primary mechanism to achieve orderly, impactful, inclusive and effective implementation of the Decade;

**Invites** institutional partners to act as Decade Collaborative Centres or Decade Implementing Partners on the basis of the guidance provided in Document [IOC/2021/ODS/23](#) and **requests** the IOC Secretariat to report to IOC Governing Bodies on the establishment of such arrangements;

**Invites** Member States and partners to:

- (i) provide voluntary financial contributions to support the work of the IOC Secretariat in coordinating the Decade including in-kind support such as staff loans and secondments to the DCU;
- (ii) offer to host and fund Decade Actions, Decade Coordination Offices, and Decade Collaborative Centres as described in the DIP;
- (vii) establish national multi-stakeholder Decade coordination mechanisms with a view to stimulating national activities and international cooperation; and
- (viii) host regional or international Decade stakeholders events, including in the context of the International Ocean Decade Conference Series.

**Further invites** UN-Oceans partners, UN Member States, international scientific and academic organizations, non-governmental organizations and other relevant stakeholders to support the Decade, and contribute to its implementation by proposing Decade Actions in accordance with the DIP;

**Thanks** the Governments of Canada, the Republic of Korea, Japan, the Kingdom of Belgium (Government of Flanders), Norway, Sweden, Portugal, the United Kingdom of Great Britain & Northern Ireland, and the People's Republic of China as well as REV-Ocean for their financial contribution to the Decade and further **thanks** Germany for their hosting of the High Level Launch of the Ocean Decade – First International Ocean Decade Conference, and the UN Ocean Decade Laboratories;

## **Part II Establishment of the Decade Advisory Board**

**Thanks** members of the Decade Executive Planning Group for their work in supporting the preparation phase of the Decade in 2018–2020 and for acting as *Interim Decade Advisory Board* in 2021 in accordance with the revised terms of reference of the group adopted by IOC Executive Council at its 53<sup>rd</sup> session through Resolution EC-53/1;

**Approves** the terms of reference for the Decade Advisory Board as presented in the Annex therein, including the selection process of its members envisaged for the balanced constitution of such a group, to be established under the coordination of the IOC Executive Secretary;

### **Part III** **IOC Contribution to the Decade**

**Emphasizes** the unique position of IOC to make a substantial contribution to the Decade through the implementation of High-Level Objectives (HLOs) as reflected in its Draft IOC Medium Term Strategy for 2022–2029 (41 C/4) and Draft Programme and Budget for 2022–2025 (41 C/5);

**Works closely** and in concert with IOCAFRICA Member States, the GOOS-AFRICA Regional Alliance, the African Union, and specialized African institutions, to ensure that the implementation of the Decade in Africa contributes to the priorities of the Decade of African Seas and Oceans (2015–2025);

**Further works** through multi-stakeholder collaboration and IOC's Regional Subsidiary Bodies to ensure that the tangible initiatives and endeavours that will be implemented will mobilize support towards Small Island Developing States (SIDS), enable them to achieve their ocean-related 2030 Agenda priorities and contribute to the implementation of the SIDS Accelerated Modalities of Action (SAMOA) Pathway;

**Invites** IOC Subsidiary Bodies, relevant IOC governance structures, and relevant UNESCO Category 2 Centres to continue identifying programmatic contributions to the Decade during the intersessional period;

**Welcomes** the active role of the IOC Regional Subsidiary Bodies in facilitating Decade regional coordination and engagement activities;

**Supports** the registration or planned registration of IOC-led Decade Actions, specifically:

- (iv) “Ocean Observing Co-Design” Programme by the Global Ocean Observing System (GOOS), which will build the process, infrastructure and tools for ocean observing co-design necessary to support the Decade;
- (v) “Observing Together” Programme by GOOS, which will transform ocean data access and availability by connecting ocean observers and the communities they serve through enhanced support to both new and existing community-scale projects;
- (vi) the establishment of a Decade Tsunami Programme aimed at achieving transformational advances in tsunami detection, observing and warning, including tsunamis generated by non-seismic sources, making 100% of communities at risk of tsunami prepared for and resilient to tsunamis by 2030 through the implementation of the UNESCO/IOC Tsunami Ready Programme, as reflected in decision Dec. A-31/3.4.1 of the Assembly;
- (vii) the “Ocean Literacy With All (OLWA)” Programme to respond to priorities identified in the Ocean Decade Ocean Literacy Action Framework (Document [IOC/2021/ODS/22](#)); and
- (viii) “Ocean Practices for the Decade” as a Programme connected to the IODE-GOOS Ocean Best Practices System;
- (ix) the registration of Ocean Data and Information System (ODIS), Ocean Biodiversity Information System (OBIS), OceanTeacher Global Academy (OTGA), World Ocean



Database (WOD), and Pacific islands Marine bioinvasions Alert Network (PacMAN) as Ocean Decade Actions;

**Further invites** Member States, partners, and donor organizations to support these Decade Actions including through allocation of extra-budgetary resources to relevant IOC programmes to achieve their transformative ambitions, guide their respective communities, and act as a catalyser of further actions within and beyond the Decade.

#### Annex 1 to IOC Resolution A-31/1

### **Advisory Board of the UN Decade of Ocean Science for Sustainable Development (the Decade Advisory Board)**

#### Terms of Reference

The Advisory Board of the UN Decade of Ocean Science for Sustainable Development (the “Decade Advisory Board”) is established as a technical advisory body to the Secretariat and Governing Bodies of the Intergovernmental Oceanographic Commission (IOC) of UNESCO.

#### **Role of the Decade Advisory Board**

The Decade Advisory Board is responsible for providing direct advice to the IOC Executive Secretary on the implementation of the UN Decade of Ocean Science for Sustainable Development (‘the Ocean Decade’) over its ten-year implementation phase (2021–2030) with a focus on the endorsement of Decade Actions and scoping of Calls for Decade Actions, and reports to IOC Governing Bodies on strategic matters related to implementation of the Ocean Decade. Specifically, and in accordance with the Ocean Decade Implementation Plan, the Decade Advisory Board will:

- (i) Review and make recommendations to the IOC Executive Secretary on the endorsement of Decade Programmes;
- (ii) Advise the IOC Executive Secretary on the scope of Calls for Actions under the Decade to support the mobilisation of proponents worldwide;
- (iii) Review the regular resource needs assessments prepared by the Decade Coordination Unit and recommend approaches for resource mobilisation and support outreach efforts to potential funders, including Member States, multilateral development banks, climate financing mechanisms, philanthropic foundations, and the private sector in order to help create the enabling environment needed to achieve the ambitions of the Decade;
- (iv) Advise on the engagement and outreach strategy of the Decade in order to help catalyse high-level interest and engagement among key stakeholders, including leaders from Member States, UN Agencies, business, civil society and academia to ensure that the scientific outputs of the Decade support the successful achievement of the UN Sustainable Development Goals;
- (v) Advise on the regular reviews to be undertaken subject to decision by IOC Governing Bodies, during the implementation phase, including review of the scientific objectives and orientations of the Implementation Plan, annual progress reports, and the mid-term and final reviews, and make recommendations on the results of such reviews, as requested;
- (vi) Advise on the engagement of relevant communities regarding contributions to the objectives of the Decade, with priority given to engaging early career ocean professionals and disadvantaged groups and regions and to the science-policy interface;

- (vii) Monitor the progress and review the outputs of any working groups established by the IOC Secretariat related to structural and cross-cutting operational elements of the Decade Implementation Plan;
- (viii) Provide information to the IOC Executive Secretary to enable his reporting to the IOC Governing Bodies;
- (ix) Report as needed to the Governing Bodies in relation to strategic issues.

### **Chairing of the Decade Advisory Board**

The Decade Advisory Board will appoint two Co-chairs amongst its members, ideally one representing the science fields and another one representing the societal end-users of the Decade. The Co-chairs will be appointed by the IOC Executive Secretary for one year with the possibility of a second one-year term.

### **Decision-making process and organization of work**

The Decade Advisory Board will strive for consensus on all issues in providing recommendations and advice to the IOC Executive Secretary. The minutes of the meeting will record any instances when consensus was not reached.

The working language of the Board will be English. No interpretation will be provided.

### **Decade Advisory Board Composition**

The Decade Advisory Board will comprise up to 15 expert members serving in their individual capacity drawn from government, private sector, philanthropy, civil society, and the scientific community, as well as representatives of UN Agencies. In total, the Decade Advisory Board should not exceed 20 members, including Expert members and UN representatives. Expert members will be nominated through open calls for nominations. The calls will be circulated through the following means:

- IOC Member States via IOC Circular Letters;
- Relevant UN bodies via UN-Oceans;
- Scientific networks using formal and informal communication mechanisms;
- Dedicated ocean policy, business, and sustainable development networks through announcements; and
- The Ocean Decade and IOC website.

Proposals for nominations can be made by IOC-UNESCO and United Nations Member States or United Nations entities, as well as intergovernmental organizations. Self-nomination will also be possible to encourage nominations from non-governmental entities.

Expert members will be selected with due consideration to expertise, geographic, generational, and gender balance and will serve on a voluntary basis in their personal capacities. Decade Advisory Board members do not represent their institutions or countries. They should be able to commit sufficient time to the work of the Decade Advisory Board and will take the responsibility to request the authorization of their employer to participate in this process.

Membership on the Decade Advisory Board will be for a two-year term, renewable for a second mandate. Members' terms will be staggered to ensure there is information exchange and mentoring between current and new Board members. Operational procedures for this process will be defined with the Board and its co-chairs.

Each Member shall comply with the Conflict of Interest guidelines to be prepared by the Secretariat and notify the Decade Coordination Unit with respect to any such potential conflicts.

A Selection Panel convened by the IOC Executive Secretary and composed of the IOC Chair and elected IOC Officers representing the five IOC electoral groups, with the technical support of the Decade Coordination Unit, will be tasked with selecting the members of the Decade Advisory Board.

The Selection Panel will ensure that the proposed members have sufficient skills, knowledge, influence and impartiality regarding the vision and objectives of the Decade and are able to undertake the work outlined in the terms of reference. Their skills and expertise should cover at least one of the following areas:

- (i) Intergovernmental processes and coordination;
- (ii) The ocean aspects of sustainable development;
- (iii) Ocean science (natural / social dimensions);
- (iv) Science-policy / decision / end-user interface and engagement;
- (v) Ocean Economy / finance/ partnerships;
- (vi) Innovation / technology/ infrastructure development;
- (vii) Capacity development, training and transfer of marine technology, education, communications and outreach; and/or
- (viii) Development of large-scale multi/inter-disciplinary international programmes / projects.

### **UN Agencies representation on the Decade Advisory Board**

UN Legal Counsel/DOALOS, which is the Secretariat and focal point of UN-Oceans and the United Nations Convention on the Laws of the Sea, will have one permanent seat on the Decade Advisory Board. The IOC Secretariat as coordinator of the Decade will also have a permanent seat on the Board. Three more seats will be reserved for UN Agencies and will be identified through consultations via UN-Oceans.

### **Secretariat of the Decade Advisory Board**

The Decade Coordination Unit located within the IOC Secretariat will be the Secretariat for the Decade Advisory Board.

### **Meetings of the Decade Advisory Board**

The Decade Advisory Board shall meet four (4) times per year, with at least one (1) in presentia meeting annually when possible. Additional in-person or virtual meetings will be held as necessary. The Co-chairs of the Decade Advisory Board will be primarily responsible for the development of the Board Meeting Agenda and directing the Decade Advisory Board meetings. All Decade Advisory Board Members can recommend agenda items. The Decade Advisory Board may invite external experts as needed to address specific issues or tasks. The decision to invite these external experts would be a decision of the Board.

Minutes of the Board meetings will be developed and distributed by the Secretariat for the Decade Advisory Board. These will be made public on the Ocean Decade website. Expert Members of the Decade Advisory Board are expected to attend all meetings of the Board in person, without replacement.

IOC Resolution A-31/2

**Governance, programming and budgeting matters of the Commission**

The Intergovernmental Oceanographic Commission,

**Having examined** documents:

- (vi) IOC/A-31/3.2.Doc(2) – Report on 2020–2021 (40 C/5) budget implementation as at 31 December 2020,
- (vii) IOC/A-31/3.2.Doc(3) – Financial situation of the IOC Special Account as at year end 2020 and Forecast for 2021,
- (viii) IOC/A-31/4.1.Doc – Draft IOC Medium Term Strategy for 2022–2029 (41 C/4),
- (ix) IOC/A-31/4.2.Doc – Draft Programme and Budget for 2022–2025 (41 C/5) – First Biennium 2022–2023,
- (x) IOC/A-31/4.3.Doc – Report of the Chairperson of the IOC Intersessional Financial Advisory Group (2021),

**I. 2020–2021 budget implementation as at 31 December 2020 and Financial situation of the IOC Special Account as at year end 2020 and Forecast for 2021**

**Confirms** that the IOC workplans for 2020–2021, as reported in IOC/A-31/3.2.Doc(2), have been implemented in accordance with the budgetary allocations approved by the IOC Assembly at its 30<sup>th</sup> session through Resolution XXX-3, as presented in document IOC-XXX/2 Annex 9;

**Notes** the slightly lower than usual implementation rate in the first year of the 2020–2021 biennium, due to the working conditions under the COVID-19 pandemic, as well as the Secretariat’s intention to fully implement the biennial programme of work by the end of 2021;

**Further notes** that as at 31 December 2020, the extrabudgetary resource mobilisation targets set for the 2020–2021 biennium have been achieved to the level of 76% overall, but with considerable variance between the Commission’s Functions;

**Acknowledges** the information on the financial situation of the IOC Special Account as at year end 2020 and Forecast for 2021 as provided in IOC/A-31/3.2.Doc(3);

**Approves** the adjustments to the 2020–2021 budgetary appropriations as proposed in Table 1 of IOC/A-31/3.2.Doc(3);

**Thanks** Member States who have already contributed or committed to contributing extrabudgetary funds for the 2020–2021 programme implementation;

**Encourages** all Member States to provide voluntary contributions to ensure full achievement of the collectively agreed extrabudgetary resource mobilization targets for 2020–2021, preferably to the IOC Special Account;

**Requests** the IOC Executive Secretary to continue efforts to obtain further voluntary contributions, including from private sector donors and other partners and to achieve full implementation of the IOC’s programmatic targets for 2020–2021;

**II. Draft Medium-Term Strategy for 2022–2029**

**Welcomes** the revisions and improvements introduced by the Secretariat in the IOC’s Draft Medium-Term Strategy for 2022–2029, in response to the recommendations of the IOC Executive Council at its 53<sup>rd</sup> session through [Resolution EC-53/2](#);

**Endorses** the IOC Medium-Term Strategy for 2022–2029 with the amendments to IOC/A-31/4.1.Doc as contained in Annex I to this Resolution;

### III. Draft Programme and Budget for 2022–2025

**Expresses its appreciation** to the IOC Secretariat for the proposal contained in IOC/A-31/4.2.Doc as consistent with the guiding principles set out in Resolution EC-53/2 and the high level objectives defined in the Draft IOC Medium-Term Strategy for 2022–2029;

**Takes note** of the Executive Secretary's programmatic choices, while also expressing concern regarding the decrease in the regular programme budget for operations;

**Highlights** the importance of ensuring that the IOC has the strategy and the necessary resources, both in terms of regular programme budget and voluntary contributions, to fulfil its role in the implementation of the UN Decade of Ocean Science for Sustainable Development (2021–2030), hereafter the Decade;

**Invites** the Director-General of UNESCO to:

- (iv) reinforce the human resources of the IOC in the 41 C/5, to enable the IOC to fulfil its increasing mandate and to address current and emerging priorities, including those related to the implementation of the UN Sustainable Development Goals and the Decade;
- (v) continue every effort to enhance the financial resources available to the IOC in the 41 C/5;
- (vi) ensure that the budgetary appropriation for the IOC approved in the 41 C/5 shall not be decreased by transfers of funds to other parts of UNESCO's budget;

**Invites** IOC Member States to:

- (v) continue to advocate to the Director-General of UNESCO and the Governing Bodies of UNESCO on the importance of the IOC as a body with functional autonomy within UNESCO, focusing in particular on the value that the IOC provides to UNESCO and to sustainable development;
- (vi) support the reinforcement of the IOC in the consultation process for the UNESCO Draft Medium-Term Strategy for 2022–2029 (Draft 41 C/4) and the Draft Programme and Budget for 2022–2025 (Draft 41 C/5);
- (vii) increase their voluntary contributions to support the IOC in the face of its increasing responsibilities, preferably to the IOC Special Account, as well as, *inter alia*, by providing in-kind support such as staff loans (either in-person or via telework arrangements) to the IOC Secretariat;
- (viii) further increase their non-earmarked contributions to enable the IOC to cover the collectively agreed priorities of IOC programmes;

**Requests** the IOC Executive Secretary to:

- (iv) keep the IOC Officers and Member States updated on the 41 C/5 adoption process by UNESCO;
- (v) following the approval of the 2022–2023 budget by the General Conference of UNESCO, develop the workplans based on the overall approach set out in IOC/A-31/4.2.Doc;
- (vi) support the work of the Intersessional Financial Advisory Group (IFAG) by providing timely information on the relevant programming and budgetary planning process, in order to facilitate informed decision-making by Member States at the 55<sup>th</sup> session of the IOC Executive Council in 2022;

## V. Governance and Working Methods

**Recalling** that the IOC Assembly at its 30<sup>th</sup> session through Resolution XXX-3 invited the IFAG ‘to continue reflecting on the best practices to further enhance the efficiency of the IOC Governing Bodies’ meetings’,

**Acknowledging** that the COVID-19 pandemic highlighted the need to review and possibly update the IOC’s Rules of Procedure in order to align them with the prevailing United Nations’ best practices facilitating informed and timely decision-making by IOC Member States,

**Noting** that the IOC Executive Council at its 53<sup>rd</sup> session through Resolution EC-53/2 acknowledged the need to adapt the IOC’s Rules of Procedure to on-line meetings,

**Welcomes** the information provided in the Report of the Chairperson of the Intersessional Financial Advisory Group (2021), (IOC/A-31/4.3.Doc) regarding the consultations held on this matter with the UNESCO Legal Advisor;

**Requests** the IOC Executive Secretary to prepare, in consultation with the UNESCO Legal Advisor and IFAG, a preliminary proposal for the revised separate sets of Rules of Procedure for the IOC Assembly and Rules of Procedure for the IOC Executive Council, making the necessary clarifications and aligning language versions, for review and adoption by these two bodies, in accordance with the following timeline:

- (v) the first draft of the Rules of Procedure of the IOC Executive Council will be reviewed by the IOC Executive Council at its 55<sup>th</sup> session in 2022;
- (vi) draft Rules of Procedure of the IOC Assembly will be presented for review and adoption by the IOC Assembly at its 32<sup>nd</sup> session in 2023;
- (vii) the IOC Assembly at its 32<sup>nd</sup> session will also review the draft Rules of Procedure for the IOC Executive Council;
- (viii) the IOC Executive Council will hold an extraordinary session immediately following the 32<sup>nd</sup> session of the IOC Assembly in order to adopt its Rules of Procedure;

**Agrees** that each IOC governing body will adopt the recommendations on the working methods for online sessions at the same time as the Rules of Procedure, following the practice of the UNESCO Executive Board;

**Invites** IFAG to develop a proposal for a systematic approach and methodology for reporting in-kind contributions, consistent with the updated Guiding Principles for Programming and Budgeting (Annex I to Resolution EC-53/2) and Article 10 of the IOC Statutes, to be considered by the IOC Assembly at its 32<sup>nd</sup> session.

### Annex to Resolution A-31/2

## IOC Medium-Term Strategy for 2022–2029 (41 C/4)

### CONTENTS

#### PREFACE

1. IOC HIGH-LEVEL OBJECTIVES & PRIORITIES
2. IMPLEMENTING THE STRATEGY
3. WORKING CLOSER TO THE FIELD
4. ENGAGEMENT WITH KEY PARTNERS & STAKEHOLDERS



## IOC MISSION

The purpose of the Commission is to promote international cooperation and to coordinate programmes in research, services and capacity-building, in order to learn more about the nature and resources of the ocean and coastal areas and to apply that knowledge for the improvement of management, sustainable development, the protection of the marine environment, and the decision-making processes of its Member States.

(IOC [Statutes](#), Article 2.1)

## IOC VISION STATEMENT

To bring together governments and the science community in achieving the 'Ocean We Need for the Future We Want.'

## Preface

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The ocean is the largest ecosystem on the planet Earth. It is also the key feature of how our planet looks from the Space. Humans have to find harmony in living with the ocean. To continue benefitting from the ocean life-supporting function, an equilibrium must be sought between the continuously increasing use of ocean space and resources and restoring and maintaining the ocean's health, which is currently in rapid decline. This understanding is captured in the formulation of the Sustainable Development Goal 14 of the 2030 Agenda: *Conserve and sustainably use the oceans, seas and marine resources for sustainable development.*

The role of the ocean for climate, disaster risk reduction, future of island States is reflected in the Paris Agreement of UNFCCC, the Convention on Biological Diversity, the UN Sendai Framework for Disaster Risk Reduction, and the SIDS Accelerated Modalities of Action

(SAMOA Pathway) and a number of regional, sub-regional and national action frameworks or development strategies. In the complex world we live in, with continuing and accelerating climate change, the success of all these frameworks depends on capacity of science to deliver needed solutions and on the ability and will of stakeholders to effectively use these solutions.

The pivotal role of the Intergovernmental Oceanographic Commission of UNESCO is therefore to bring together the scientific communities, the governmental decision-making system, and a broader set of stakeholders within our Member States, including the private sector and the civil society as a whole, to develop efficient, science-based integrated ocean and coastal management and corresponding solutions., taking in consideration relevant indigenous, local and traditional knowledge. Never in the history of our civilization has such cooperation been so urgently required.

There is a need to mainstream ocean science for managing the ocean, The emergence of an international legally-binding instrument on conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ) under the UN Convention of the Law of the Sea (UNCLOS) means that legally-binding obligations of nations are becoming increasingly ocean science-dependent. Successful execution of the IOC programme during the period of Medium-Term Strategy 2014–2021 and the IOC-led planning and coordination of the UN Decade of Ocean Science for Sustainable Development (2021–2030) brought IOC to the leading position in the work on systematic provision of ocean-related solutions to the global challenges of our time. However, the ability of IOC to deliver on its expanding mandate and respond both to the ambitions placed on the Decade and its Member States' aspirations and needs will require, in turn, stronger support from governments, more authoritative decision-making capacity of IOC governing bodies, and adequate and reliable co-design of and investment in the whole value chain of modern ocean science.

Ariel Hernan Troisi  
Chairperson

Vladimir Ryabinin  
Executive Secretary

## **IOC HIGH-LEVEL OBJECTIVES AND PRIORITIES**

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Through international cooperation, IOC aspires to build and apply scientific knowledge to achieve the following High-Level Objectives (HLOs), with particular attention to ensuring that all Member States have the capacity to meet them:

1. Healthy ocean and sustained ocean ecosystem services;
2. Effective warning systems and preparedness for tsunamis and other ocean-related hazards;
3. Resilience to climate change and contribution to its mitigation;
4. Scientifically-founded services for the sustainable ocean economy; and
5. Foresight on emerging ocean science issues.

### **Objective 1 – Healthy ocean and sustained ocean ecosystem services**

Improving scientific understanding of ocean ecosystems, identifying robust indicators of their health, and understanding ecosystem vulnerability, e.g., to multi-stressors, are vital for monitoring and predicting the ecosystem health and resilience and developing ecosystem-



based management, underpinning sustainable ocean economy and improved ocean governance. Current ecosystem research and management require stronger coordination and cooperation between key stakeholders.

**Objective 2 – Effective warning systems and preparedness for tsunamis and other ocean-related hazards**

With accelerating coastal development and changing environment, society becomes increasingly vulnerable to coastal hazards such as harmful algal blooms, coastal flooding, tsunamis and tropical cyclones. Nations should be aware of the hazards and have access to the necessary information for coastal planning, hazard mitigation, adaptation to climate change, and for safe operations at sea. This calls for continued implementation of ocean and coastal observing systems, improvements in the ocean, meteorological and climate models, and the development of a suite of local decision-support tools, including early warning systems.

**Objective 3 – Resilience to climate change and contribution to its mitigation**

Climate change and variability encompass temperature changes, altered patterns and intensities of tropical cyclones, storms, rainfall and droughts, sea-level rise, etc. Carbon emissions lead also to ocean acidification. Combined effects manifest themselves in ocean deoxygenation, coastal erosion, etc. Many human development goals, such as food security and health, access to water resources, and preparedness for disasters, are threatened by climate change. Ocean is a key regulator of climate. Coordinated global and regional efforts, including through the assistance of the WMO-IOC Joint Collaborative Board, are needed therefore to comprehensively include the ocean dimension in our improved capacity to understand and predict climate change, its impacts on the ocean, guiding the development and accelerated implementation of effective adaptation and mitigation strategies.

**Objective 4 – Scientifically-founded services for the sustainable ocean economy**

Sustainability of ocean economy relates to the long-term capacity of ocean ecosystems to support human activities. Maintaining this equilibrium requires ocean observations, fit-for-purpose data products and services, scientific assessments, and monitoring and forecasting of ocean ecosystem health. Knowledge-based ocean management tools such as marine spatial planning, coastal zone management, marine protected areas, and management of Large Marine Ecosystems (LMEs) can help ocean stakeholders to set environmental and socio-economic objectives, develop operational plans, define safe boundaries and guidelines for operations, as well as reduce conflicts among multiple uses of ocean space.

**Objective 5 – Foresight on emerging ocean science issues**

The ocean remains one of the least studied environmental domains of the Earth System. Oceanographic discoveries are still possible. New issues constantly emerge in the ocean that may potentially affect the health of ocean ecosystems as well as human wellbeing. New stressors, e.g. contaminants or pressures from emerging activities or industries, may combine with known stressors such as ocean acidification, altered patterns of the ocean carbon cycle, de-oxygenation, and climate change, and create complex impact on ecosystems. Cutting-edge research, innovation, technological development, including in observations and in developing a global “data and information ecosystem”, should augment our capacity to anticipate such emerging issues, inform policy-making, including in the context of relevant regional and global conventions, and advance timely solutions involving relevant stakeholders.

**Global Priority Africa:** Africa is an overarching priority for UNESCO, and IOC will ensure that it is mainstreamed into all its programmes and reflected in its performance indicators. The *2050 Africa’s Integrated Maritime Strategy* (AIMS) specifically recognizes the role of IOC/UNESCO

in the promotion of scientific research and capacity development (CD) as well as in transfer of marine technology (TMT). IOC will provide the science base for the development of the sustainable Ocean Economy in Africa as outlined in the African Union's Agenda 2063 (*The Africa We Want: A shared strategic framework for inclusive growth and sustainable development*) and the AIMS.

**Global Priority of Gender Equality:** The IOC contribution to Global Priority of Gender Equality will focus on ensuring that international science cooperation for peace and sustainability promotes equal representation and voice for women and men and that conditions for both women and men to be agents of mitigation, adaptation, resilience and sustainability are equally enabled. The IOC *Global Ocean Science Report* will continue to monitor progress and assist Member States in achieving parity of men and women in the marine sciences community.

**Small Island Developing States (SIDS):** The SIDS Accelerated Modalities of Action (SAMOA) Pathway of 2014 has a strong bearing on the ocean and draws increased attention of the international community to extreme weather events, sea-level rise, coastal erosion and ocean acidification. The Pathway calls for heightened support in technology, finance and capacity-development for climate change adaptation, including need to assist in baseline monitoring of island environment. IOC will continue to help building a wide scope of SIDS actions including related to tsunami early warning systems and strengthening resilience of coastal communities through the Tsunami Ready programme, development of marine scientific and technological capacity of SIDS, and enhancing cooperation to manage all aspects of the ocean health including ocean acidification impacts.

**Early Career Ocean Professionals:** Ocean sustainability and ocean science require human resources that are balanced across generations. IOC will actively engage talents and energy of early career ocean professionals and strive to offer them opportunities for professional development. This will be done through the establishment of networks of early career professionals and their equitable and gender-balanced engagement in ocean affairs.

**Increased understanding of the value of IOC work including its socio-economic benefits:** The work of IOC concerns all aspects of human relations with the ocean: the economy, policy and politics, and social, cultural, spiritual, and emotional connections. It will continue to result in multiple tangible and intangible benefits to society. Above all, the work of IOC will continue to directly save lives, e.g., through tsunami warnings. International cooperation in ocean sciences and services is a significant factor of supporting multilateralism and maintaining peace in the world. IOC will also contribute to informing international political decisions that shape the future of our civilization, e.g., through the climate change debate. Knowledge of the marine environment enables the ocean economy, which annually generates monetary value measured in trillions of US dollars. It will be advantageous therefore to link the benefits of IOC work to national economy accounts. Through ocean-climate risk assessments, it will be possible to demonstrate the value of investments in nature-based climate adaptation solutions and mainstream the ocean considerations in sustainable economic development plans. This will lead to new business opportunities and perspectives of increased prosperity and safety of people. To understand and demonstrate the full value of the IOC work, assessments of tangible value of ocean ecosystems and their delivered goods and services, can be sustainably utilized. The role of IOC will only continue to increase in the future, because maintaining vital life-support functions of the ocean is becoming more and more science-intensive. Thus, to realise the full current and future potential of IOC and maximize benefits stemming from IOC activities in a large number of socio-economic domains, IOC will have to further strengthen its collaboration and partnerships within the UN system and beyond it, with many stakeholders and partners.

## UNITED NATIONS DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT (2021–2030)

The UN Decade of Ocean Science for Sustainable Development (the “Decade”) will run from 2021 to 2030. The aim of this unique long-term high-level campaign is to bring ocean science to the new level of readiness to deliver that is required to inform decisions and to catalyse efficient actions and policies for sustainable use and protection of the ocean.

The Decade offers an exceptional opportunity to highlight the societal benefits of IOC and its programmes. During the years 2022–2029, a major responsibility of IOC will be to support and facilitate the Decade implementation and to regularly report progress to the United Nations Secretary General and General Assembly.

The Decade will be guided by a vision of “the Ocean we need for the future we want”, namely:

- **a clean ocean** where sources of pollution are identified, reduced or removed;
- **a healthy and resilient** ocean where marine ecosystems are understood and managed;
- **a productive ocean** supporting sustainable food supply and a sustainable ocean economy;
- **a predicted ocean** where society understands and can respond to changing ocean conditions;
- **a safe ocean** where life and livelihoods are protected from ocean-related hazards;
- **an accessible ocean** with open and equitable access to data, information and technology, and innovation; and
- **an inspiring and engaging ocean** where society understands and values the ocean in relation to human wellbeing and sustainable development.

The main transformation to be achieved in the course of the Decade is to make the science able to deliver not only diagnostics of existing or emerging problems but to offer effective solutions and to motivate the society and elevate its readiness to implement them. The Decade will aim therefore to build science capacity, mobilize scientists, facilitate an enabling environment for engagement of practitioners, decision-makers and the private sector in the development and use of science-based solutions to start managing the ocean sustainably.

The Decade will also provide a powerful stimulus for IOC to contribute to implementing collectively-agreed global and regional priorities. Successful realization of the Decade will rely on true ownership by many partners and stakeholders who will use the Decade framework and the opportunities it generates to deliver on their own mandates in sustainable development.

### IMPLEMENTING THE STRATEGY

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When working towards the high-level objectives, IOC will focus on the broad areas of:

- strengthening scientific knowledge of the ocean and human impact on it;
- applying that knowledge for societal benefit; and
- building institutional, human, and technical capacities for sound management and governance of the ocean and human activities.

This strategy is organized as a framework of six *functions*, distinct types of relatively uniform sets of processes, actions or tasks, that help the Commission to fulfil its purpose and achieve its High-Level Objectives. The ‘IOC Functions’ are to:

- A. Foster research to strengthen knowledge of ocean and coastal processes and human impacts upon them [*Ocean research*]
- B. Maintain, strengthen and integrate global ocean observing, data, prediction and informationsystems [*Observingsystem / data management*];
- C. Develop early warning systems, services, and preparedness for risks of tsunamis and ocean-related hazards [*Early warning and services*];
- D. Support assessment and provision of information through the science-policy interface [*Assessment and Information for policy*];
- E. Enhance ocean governance through a shared knowledge base and improved regional cooperation [*Sustainable management and governance*]; and
- F. Develop the institutional capacity in all of the functions above, as a cross-cutting function [*Capacity Development*].



These functions are realized through existing IOC and co-sponsored programmes, work of IOC regional subsidiary bodies and various mechanisms of cooperation.

**The value chain of IOC:** IOC generates value through interaction of all its functions. In order to maximize the value, the IOC should work as an end-to-end system, in which observations and research enable various services and assessments, leading to informed decisions and guidance to policy and culminating in multiple societal and economic uses. Feedback from various functions in the system should lead to evolving and, generally, increasingly more and more demanding requirements for observations, science and services. The capacity development will act as the catalyst of the whole system, working both at the cutting edge and leaving no one behind.

The IOC functions will be realised through the continuously developing programmes, acting globally, regionally, nationally and locally, through activities of regional subsidiary bodies, and by undertaking shorter-term project activities. In reality, all the programmes, constituencies and projects act as co-design and coordination mechanisms, while the true groundwork is done in and by Member States. The Decade will provide an opportunity to mainstream IOC programmes and activities internationally and within Member States. The work will be directed towards achieving IOC High-Level Objectives, as described below.

**Achieving Objective 1 (Healthy Ocean Ecosystems):** The IOC will strengthen sustainable management of ecosystem health and services through coordinated actions in research,

observations, assessments, design and implementation of management tools and CD, with specific activities to:

- coordinate and catalyse research on ocean acidification, de-oxygenation, biogeochemistry, and contaminants; identifying ecosystem indicators and tipping points and the impacts of multiple stressors on marine biodiversity and ecosystem functioning;
- improve and augment sustained global observations of essential biological, biogeochemical, and ecosystem variables of relevance and necessity to describing the ecosystem state, as part of GOOS;
- strengthen the IODE data and information centres and networks including OBIS, ensuring resources and best practices are available to advance standardized collection of species and ecosystem data and development of data products and services contributing to the continuous monitoring of identified indicators of ecosystem state, as well as the long-term preservation and availability of high-quality ocean data and information;
- support global and regional marine assessments through the United Nations World Ocean Assessment and other scientific assessments, e.g., of Large Marine Ecosystems and those under IPBES;
- assist Member States in developing the necessary capacity and ecosystem-based management tools, such as maritime spatial plans, coastal area management; marine protected areas, and
- use the IOC convening authority for strengthening cooperation and coordination between key stakeholders in the domain of ecosystem management and for building an effective science-policy-society interface.
- Contribute to the UN Decade of Ecosystem Restoration (2021-2030)

**Achieving Objective 2 (Early Warning for Ocean Hazards):** The IOC will help coastal communities and operators at sea to manage risks from ocean-related hazards and to increase preparedness for them. IOC will work with Member States and UN partners to increase the understanding of ocean-related risks and to implement effective multi-hazard early warning systems. IOC will:

- support closer intergovernmental coordination of multi-level regional tsunami warning systems;
- promote the involvement of key stakeholders in the tsunami warning systems, including civil defence authorities and national hydrometeorological services;
- accelerate implementation of the Tsunami Ready programme;
- promote research and development of more technically developed tsunami detection and warning systems capable of addressing non-seismic sources of tsunami;
- strengthen the regional Tsunami Information Centres and augment their ability to provide a clearinghouse for the development of educational and preparedness materials;
- coordinate research, monitoring, and development of management tools for Harmful Algal Blooms;
- increase technical and scientific capacity of early detection and warning of marine invasive species (e.g., by applying novel observing technologies such as DNA metabarcoding);

- target CD and technical assistance to enhance Member States' abilities to develop preparedness, mitigation and awareness in a multi-hazard framework;
- ensure that the ocean observing system responds to requirements for ocean data, exchanged in real time, for operational early warning of ocean-related hazards; and
- support modelling, research, data processing tools, policy development and planning tools contributing to improved warning systems, preparedness for ocean hazards, and ocean information services.

**Achieving Objective 3 (Resilience to Climate Change and Variability):** The IOC will work towards increased resilience to climate change and variability through an end-to-end approach that:

- begins with an ocean observing system to monitor global to regional scale drivers of climate and its change and variability; measure essential variables of the ocean, e.g., ocean physics and climate, biogeochemistry, biology and ecosystems; quantify climate impacts on the ocean manifesting, for example, through ocean warming, including ocean heatwaves; characterize ocean acidification and deoxygenation; describe climate's influence on marine and coastal ecosystems, including biodiversity loss; and contribute to an advanced data management enterprise built on global standards and best practices;
- coordinates and guides ocean climate research, including through WCRP, that improves the understanding of ocean processes and climate change, ocean carbon cycle, skill of predictions of climate variability and change, and builds a knowledge base of ocean ecosystem changes and adaptation strategies;
- informs IOC-affiliated and other assessment processes;
- also informs the UNFCCC process on the full range of ocean-related aspects of climate;
- contributes to the development of next-generation ocean and climate services, including the Global Framework for Climate Services coordinated by the WMO;
- applies the scientific knowledge to inform and strengthen ocean governance, coastal management, development and implementation of climate adaptation and mitigation strategies; and
- builds capacity through training, demonstration projects, and shared tools.

**Achieving Objective 4 (Scientific Services for a Sustainable Ocean Economy):** The IOC will develop scientific and technical information, services, and management tools for the responsible growth of a sustainable ocean economy. By 2030, the ocean economy, buoyed *inter alia* by growth in ocean renewable energy, aquaculture, and tourism is predicted to be a much more significant component of national economies. Open access to information and a sound ocean knowledge base will promote economic opportunities and job growth while also protecting the marine environment and ensuring sustainable use of ocean resources. The IOC will deepen its engagement and partnership with the maritime sector by:

- delivering ocean observations and data for operational services to marine industries and for biogeochemical and biological study/research and assessments of the sustainability of ecosystem services;
- delivering fit-for-purpose data and information products and services through the Ocean Data and Information System and Ocean InfoHub including their regional nodes;

- coordinating scientific assessments required to define ecosystem thresholds for safe operations and to identify sustainable pathways;
- facilitating the development of ecosystem-based approaches to environmental protection and transboundary management approaches such as Large Marine Ecosystems;
- promoting coastal zone management and marine spatial planning globally as effective processes to facilitate sustainable economic activities and resolve conflicts among competing users of ocean space;
- promoting the economic value of the IOC end-to-end chain of activities, with an evaluation of return on investment into ocean research and observations; and
- assisting Member States in developing their capacity to responsibly manage and sustainably exploit ocean resources.

**Achieving Objective 5 (Foresight of Emerging Ocean Issues):** In order to identify, and, if possible, anticipate emerging issues, IOC will coordinate scientific research at the cutting edge of science and act as a platform to call out such issues in a policy-relevant manner. Strengthened and expanded ocean observation and associated global data/information management systems will support research on emerging issues and further develop the capacity to address knowledge gaps. With partners, IOC will foster necessary international collaboration to support research on emerging ocean environmental issues, including:

- coordinated scientific research on the marine ecosystem impacts by new contaminants and multiple new stressors resulting from changing climate and anthropogenic influence;
- an ocean observing system, with technologically advanced autonomous instruments and global data/information processing and management systems that are adaptable to new needs;
- scientific syntheses and assessments that provide actionable information about new threats or opportunities; and
- communication of results to decision-makers and providing a platform for Member States to bring emerging national and regional issues for the attention of UN and other intergovernmental fora.

## CAPACITY DEVELOPMENT

The United Nations Convention on the Law of the Sea (UNCLOS) recognizes IOC as a competent international organization in the fields of Marine Scientific Research (Part XIII of UNCLOS) and TMT (Part XIV).

The IOC efforts in Capacity Development (CD) will continue to be guided by the IOC Capacity Development Strategy. These efforts will be further strengthened in the course of implementation of the Decade. The *Global Ocean Science Report 2020* will serve as a key benchmark for the IOC's work, and further editions of the Report will allow monitoring progress. The IOC will continue to systematically enhance the capacity of all IOC Member States to conduct scientific research and benefit from its results, leaving no one behind. This pillar of the IOC CD work will include the operationalization of the IOC Criteria and Guidelines on the Transfer of Marine Technology (TMT) and the TMT Clearing House Mechanism.

Specifically, IOC will establish a network of regional and thematic TMT nodes and enhance sharing scientific and technical capacities between Member States helping them render a wider range of data and information products and services. The IODE Ocean InfoHub project will be the starting point for building the IOC future Ocean Data and Information System delivering

interoperable local, regional and thematic data and information and connecting contributors and users with required resources. These developments will be implemented taking into account the IOC Strategic Plan for data and information management and in compliance with the IOC oceanographic data exchange policy. Regular surveys of CD needs will be conducted, and a united online database of training opportunities will be created to capitalise on bilateral and multilateral relationships including contributions by intergovernmental organizations.

The work of the IOC Group of Experts on Capacity Development will continue and intensify. IOC will contribute substantially to the development of Member States' capacities in relation to the new international legally-binding instrument on BBNJ, while simultaneously working towards achieving Target 14.a of the 2030 Agenda<sup>1</sup>. International multilingual training on diverse aspects of ocean management will continue through the new generation of the IOC OceanTeacher Global Academy with its network of regional and specialized Training Centres, Regional Training and Research Centres of WESTPAC and UNESCO Category 2 Centres in marine sciences.

IOC will continue to expand its activities in the area of ocean literacy by implementing a dedicated strategy. This work will enhance appreciation for the ocean by key stakeholders, including general public. It will deepen the understanding of the role of the ocean for people and the human impact on the ocean, and the value of science to ensure human impacts are understood and addressed as necessary to ensure sustainable use of the ocean for all. Working within UNESCO and partners, IOC will strive to include basic knowledge of the ocean into school curricula.

## **WORKING CLOSER TO THE GROUND**

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To achieve the ambitions of the 2030 Agenda and better respond to the needs of its Member States, the United Nations is reforming itself, strengthening the emphasis on regional dimension and coordinated work of all UN agencies through the UN Regional Collaborative Platforms and Country Teams. The IOC will also step up its assistance and delivery of services at the level of Member States.

To embrace the needed global scope of activities, IOC will work through Member States, and seek partnerships and synergies with ocean-related organizations including those with a regional focus. IOC will also aim to build visibly on the activities of its Member States, acknowledging their significant capacities, often already deployed in many of the global and regional IOC programmes. IOC will liaise with relevant national, regional and large-scale international initiatives of those Member States with a view to involve them in the execution of its various functions and ensure that they contribute to and take advantage of the UN Decade of Ocean Science for Sustainable Development.

The regional and local development is most efficiently achieved through the work of IOC regional subsidiary bodies and focussing both on Member States' particular development goals and on internationally-agreed development priorities. The four IOC regional subsidiary bodies (WESTPAC, IOCARIBE, IOCAFRICA, and IOCINDIO) are of paramount importance to the IOC mission, adding value and ensuring solid ownership of programmes by Member States. The IOC regional subsidiary bodies adapt their approach and agenda based on the specific needs and opportunities existing in their respective regions. In addition to carrying out IOC global programmes in the regions, they foster partnerships to execute and coordinate regional programmes, projects and activities. Amongst their other activities, they are the most efficient

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<sup>1</sup> Target 14.a: "Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission *Criteria and Guidelines on the Transfer of Marine Technology*, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing "



platforms for co-designing and co-delivering IOC CD activities with Member States, leaving no one behind.

People and Member States of the IOC Sub-Commission for the Western Pacific (**WESTPAC**), a highly populous and rapidly technologically advancing region, in which the ocean is characterized by the richest marine biodiversity, need solutions to balance the development with ocean sustainability. WESTPAC aims to further strengthen the science-policy interface, foster multi-disciplinary solution-oriented ocean research and innovations, enhance ocean forecasting services and applications, and build and mobilize long-term partnerships. The Sub-Commission will continue to co-develop its programme priorities among Member States and carry out a broad range of activities underpinning ocean sustainability across, but not limited to, ocean and climate change, marine biodiversity, seafood safety and security, health of ocean ecosystems and other emerging issues. To accelerate the CD and transfer of marine technology, the Sub-Commission will keep empowering individuals, institutions and Member States, notably through integrated and sustainable CD structures such as the WESTPAC Regional Network of Training and Research Centres on Marine Science (RTRCs), inclusion of CD into its international research programmes, development and conduct of tailored national and international training, engagement of early-career ocean professionals into international research programmes and encouragement of their research work. WESTPAC will assist the IOC to coordinate regional engagement in the Decade.

The IOC's Sub-Commission for Africa and the Adjacent Island States (**IOCAFRICA**) will focus its work and energy on providing the ocean science base for solving societal challenges and contributing to development of the sustainable ocean economy in the region. CD will continue to be a priority, in particular the improvement of infrastructure and facilities for research, provision of training for scientific and technical staff, as well as translation of science to policy. In line with the Implementation Plan for the Decade, IOCAFRICA will develop and implement programmes in ocean monitoring and forecasting, coastal vulnerability and disaster risk reduction, climate change impacts on coastal zones, marine spatial planning, marine biodiversity and biogeography, ocean literacy and the translation of research results to policy required for sustainable management of the ocean and coastal areas. IOCAFRICA will strive to develop "home grown solutions" through the involvement of African innovators and support for locally developed technology. In this regard, IOCAFRICA will in particular engage African youth and early career professionals. The programmes of IOCAFRICA will be aligned with the initiatives of the African Union such as its Agenda 2063, which recognizes the ocean economy as a major contributor to continental transformation and growth, and the 2050 African Integrated Marine Strategy, which provides a road for increased wealth creation from Africa's oceans and seas by developing a sustainably thriving ocean economy.

The IOC Sub-Commission for the Caribbean and Adjacent Regions (**IOCARIBE**) will continue to be a strong regional contributor to the work of all IOC programmes and will align its activities with the strategic framework of the Decade. The main objective will be to assist the continental coastal Latin-American and the Caribbean SIDS Member States to achieve sustainable use of the ocean and coastal resources. In doing so, IOCARIBE will capitalize on the advantages of its region, which is rich in biodiversity and resources and is a key world's tourism destination. Ocean science will be central for addressing major regional challenges of IOCARIBE, where manifestations of climate change, such as hurricanes, severe storms, coastal inundation, coastal erosion, and Sargasso beaching, occur on the background of generally low resilience of island countries. The main avenue will be strengthening Member States' capacity of managing the ocean, in national and transboundary context, through an ecosystem-based management approach, continuing to implement the CLME Strategic Action Programme and supporting the creation of a Coordination Mechanism and sustainable financing plan for ocean governance. The Sub-commission will also assist Member States in formulating national and regional policies and plans to develop ocean science and technology. IOCARIBE will reinforce and broaden scientific cooperation, regionally and internationally, through regional networking

and institutional arrangements between organizations of the UN system, IGOs, NGOs, and the scientific community. Recognizing Member States asymmetry in CD and technology, IOCARIBE will undertake projects to enhance transfer of marine technology.

The IOC Regional Committee for the Central Indian Ocean (**IOCINDIO**) will unite governments of the region and communities of global and regional scientists towards sustainable management of Indian Ocean space and resources. It will capitalize on the activities of existing and active IOC-affiliated programmes and structures in the region, including but not limited to the Second International Indian Ocean Expedition (IIOE-2), regional components of GOOS, and the work of communities engaged in sustainable management of marine ecosystems of Indian Ocean. Such alliance should be able to address regional specifics, such as dominance of monsoons, the Indian Ocean dipole, Madden-Julian oscillations, strong upwellings, etc. Advantages of maritime spatial planning and coastal zone management will be promoted to address coastal development and mitigate coastal vulnerability in a focused manner, considering impacts of the global change on the ocean. IOCINDIO will be coordinating its programme and cooperating with IOCAFRICA and WESTPAC and will also reinforce cooperation with regional institutions in Indian Ocean. The region will continue to build the capacity of its Member States, with the help of IOC global facilities, such as centres of OceanTeacher Global Academy and the two active UNESCO Category 2 Centres. Successful strengthening and expansion of activities of IOCINDIO will aim to reach the level of activity, positive influence, and role in the ocean governance commensurate with the ones of an IOC Sub-Commission, leading to its transformation into a Sub-Commission.

## **ENGAGEMENT WITH KEY PARTNERS & STAKEHOLDERS**

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The IOC has been established as a body with functional autonomy within UNESCO. The Commission defines and implements its programme according to its stated purposes and functions, with the budget framework adopted by its Assembly and the budget envelope agreed by the General Conference of UNESCO. In accordance with its Statutes, the *'Commission will collaborate with international organizations concerned with the work of the Commission, and especially with those organizations of the United Nations system which are willing and prepared to contribute to the purpose and functions of the Commission and/or to seek advice and cooperation in the field of ocean and coastal area scientific research, related services and capacity-building'*.<sup>2</sup>

## **IOC WITHIN UNESCO, UN SYSTEM, AND BEYOND**

Within UNESCO, IOC will continue to cooperate with many UNESCO programmes and field offices, and maximize the comparative advantage of UNESCO's multidisciplinary approach to key societal issues. IOC will work with several UNESCO programmes towards their strong contribution to the UN Decade of Ocean Science for Sustainable Development. This concerns the marine programme of the World Heritage Centre, the Education Sector's leading role in SDG-4 on Education for Sustainable Development, the Convention on the Protection of the Underwater Cultural Heritage, and the Science Sector's priority areas in SIDS and Indigenous Knowledge, the Man and Biosphere Programme, the Intergovernmental Hydrological Programme, and programmes in Disaster Preparedness and Risk Management. IOC will continue to act as part of the Task Force on Climate Change, a consultative forum of more than 30 programmes in the sciences, education, culture and communication spheres.

IOC enjoys a recognized role in the UN system, in accordance with its Statutes. As a competent international organization in the fields of Marine Scientific Research and TMT, IOC contributes to various UNCLOS processes, including the emerging international legally binding instrument on the conservation and sustainable use of marine biological diversity of areas beyond national

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<sup>2</sup> Article 2.2 of the IOC Statutes

jurisdiction. The IOC will continue collaboration at the programmatic level and/or via co-sponsorship of joint programmes with many UN agencies including FAO, IAEA, IMO, ISA, ITU, UNDP, ESCAP, UNEP (including CBD), WHO and WMO.

The IOC will continue to contribute to major UN global agreements and frameworks including: the UN 2030 Agenda and its Sustainable Development Goals (SDGs), in particular of the stand-alone Goal 14 on the ocean, also acting as a custodian UN agency for reporting on SDG Targets 14.3 and 14.a; the UNFCCC Paris Agreement by advocating for the increasing role of the ocean; the Sendai Framework for Disaster Risk Reduction, the Convention on Biological Diversity and the Samoa Pathway.

The IOC will continue to contribute, as the UN's core body for ocean science, to the UN-Oceans, a UN interagency collaboration mechanism on ocean and coastal issues, focussing, *inter alia*, on the development of "SDG enabling activities".

New forms of cooperation and, potentially, stronger formal links of IOC with other UN organizations will be explored based on the understanding that ocean science represents a cross-cutting, underpinning necessity for fulfilling mandates of UN agencies. Such cooperative agreements will be especially promising for successful implementation of the Decade. The enhanced role of ocean science in assisting Member States to achieve the goals of sustainable development, to implement international agreements and to address national priorities may warrant a reinforced coordination between UN agencies and a review of the IOC role and position in the UN system.

In addition to fulfilling its role in the UN system, IOC also enjoys strong collaboration with a large number of non-UN global and regional, intergovernmental and non-governmental organizations, such as GBIF, GEO, IHO, ICES, PICES, ISC and its SCOR, and IUCN. Through its global programmes and regional subsidiary bodies, IOC will also foster partnership with regional ocean management organizations such as the UNEP Regional Seas Conventions, Regional Fisheries Organizations, and LME Commissions.

## **EXPANDING PARTNERSHIPS & RESOURCE MOBILIZATION**

The ability of IOC to implement this Medium-Term Strategy and provide an authoritative platform for science-based sustainable ocean management will require significant human and financial resources deployed in all core IOC programmes and regional subsidiary bodies. The capacity of the IOC's programmes and regions to deliver on priorities approved by IOC governing bodies will necessarily require raising the level of extra-budgetary funding, especially in periods of financial constraints. The IOC will work to develop new public-private partnerships and intensify resource mobilization from Member States, institutional partners, and the private sector. The UN Decade of Ocean Science for Sustainable Development presents an unprecedented opportunity to expand IOC's partnership base and boost fund-raising.

## **COMMUNICATION AND VISIBILITY**

IOC is providing the scientific foundation for using the ocean sustainably and in doing so benefits multiple "end users". The value of fundamental up-stream service of IOC is, however, not apparent to beneficiaries such as decision-makers, funders, and general public. This warrants investment into dedicated, active, and well-targeted communications. IOC will need to implement an efficient and tailored communication strategy enabling it to fully and convincingly demonstrate the positive impact of its work on society and to attract new extra-budgetary support. An efficient and attractive website and active presence on the web will be maintained and further improved.



## ANNEX I

### AGENDA

#### 1. OPENING

#### 2. ORGANIZATION OF THE SESSION

- 2.1 ADOPTION OF THE AGENDA AND OTHER ORGANIZATIONAL MATTERS  
[Rule of Procedure 8]
- 2.2 DESIGNATION OF THE RAPPORTEUR  
[Rule of Procedure 25.4]
- 2.3 ESTABLISHMENT OF INTRASESSIONAL COMMITTEES AND WORKING  
GROUPS  
[Rule of Procedure 12]
- 2.4 INTRODUCTION OF DOCUMENTATION, TIMETABLE AND MEMORIAL  
LECTURES  
[Rule of Procedure 11]

#### 3. IOC MATTERS AND REPORTS

- 3.1 STATEMENT OF THE CHAIRPERSON  
[Rule of Procedure 8.1(a)]
- 3.2 REPORT OF THE EXECUTIVE SECRETARY ON THE WORK  
ACCOMPLISHED SINCE THE FIFTY-FIRST SESSION OF THE EXECUTIVE  
COUNCIL AND ON BUDGET IMPLEMENTATION (JULY 2018–MAY 2019)  
[Rule of Procedure 8.1(b) and (c) 8.1(g), 49.1; Res; EC-XLIX.2. EC-LI/Dec.4.3]
- 3.3 REPORTS BY THE CHAIRS OF THE IOC SUB-COMMISSIONS  
AND REGIONAL COMMITTEES  
[Rule of Procedure 48.3]
  - 3.3.1 **IOC Sub-commission for the Western Pacific: 12th Session  
of WESTPAC, Manila, Philippines, 2–5 April 2019**
  - 3.3.2 **IOC Sub-commission for the Caribbean and Adjacent Regions:  
15th Session of IOCARIBE, Oranjestad, Aruba, 6–10 May 2019**
  - 3.3.3 **IOC Sub-commission for Africa and the Adjacent Island States:  
5th Session of IOCAFRICA, Nairobi, Kenya, 25–27 March 2019**
  - 3.3.4 **IOC Regional Committee for the Central Indian Ocean:  
7th Session of IOCINDIO, Hyderabad, India, 25–26 April 2019**
- 3.4 REPORT OF THE IOC ON ITS ACTIVITIES (2018–2019) TO THE  
FORTIETH GENERAL CONFERENCE OF UNESCO  
[Statutes Art. 3.2; Rule 6.1 of Procedure 49.2]

#### 4. IOC AND THE FUTURE OF THE OCEAN: STRATEGIC DEVELOPMENTS

[Dec. EC-XLVII.4 & 7.2; IOC-XXVII/Dec.5.1; EC-XLIX.5]

Item 4 will be preceded by a special Ocean Science half-Day opening a discussion on science questions in the context of the Decade

- 4.1 PROGRESS REPORT ON THE PREPARATION OF THE UNITED NATIONS DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT [IOC Res. EC-LI.1]
  - 4.2 ENHANCED COHERENCE, IMPACT AND FUTURE ORIENTATIONS OF THE IOC IN SUPPORT OF THE UN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT AND 2030 AGENDA
- 5. UNITED NATIONS PARTNERSHIPS**
- 5.1 COOPERATION WITH WMO [EC-LI/Dec.5.1]
  - 5.2 IOC CONTRIBUTION TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC) [Rule of Procedure 8.1(g)]
- 6. OCEAN RESEARCH**  
[Res. XXVII-2(B)]
- 6.1 HARMFUL ALGAL BLOOMS: 14TH SESSION OF IPHAB, UNESCO, PARIS, 20–26 April 2019 [Rule of Procedure 48.3]
  - 6.2 REPORT OF THE WMO-IOC-ISC WORLD CLIMATE RESEARCH PROGRAMME (WCRP) [Rule of Procedure 48.3; IOC-XXVII/Dec.5.4.1; EC-LI/Dec.5.2]
- 7. OBSERVING SYSTEMS AND DATA MANAGEMENT**  
[Res. XXVII-2(B)]
- 7.1 OBSERVING SYSTEMS
    - 7.1.1 **GOOS: Strategy, Implementation, and Governance**  
[Rule of Procedure 8.1(j); EC-LI/Dec.5.3]
    - 7.1.2 **WMO-ISC-IOC-UNEP Global Climate Observing System (GCOS) workplan**  
[Rule of Procedure 8.1(j)]
    - 7.1.3 **Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)**  
[Rule of Procedure 48.3]
  - 7.2 DATA MANAGEMENT
    - 7.2.1 **International Oceanographic Data and Information Exchange: 25<sup>th</sup> Session of IODE, Tokyo, Japan, 18–22 February 2019**  
[Rule of Procedure 48.3]
    - 7.2.2 **Draft Concept for an Ocean Data and Information System (ODIS)**  
[Rule of Procedure 8(1g, j); IOC-XXIX/Dec. 6.2.1]

## **8. EARLY WARNING AND SERVICES**

[Res. XXVII-2(B)]

### **8.1 REGIONAL TSUNAMI WARNING SYSTEMS**

[Rule of Procedure 48.3]

**8.1.1 Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System: 28<sup>th</sup> Session of ICG/PTWS, Montelimar, Nicaragua, 2–5 April 2019**

**8.1.2 Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System: 12<sup>th</sup> Session of ICG/IOTWMS, Kish Island, Iran (I.R.), 9–12 March 2019**

**8.1.3 Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions: 14<sup>th</sup> Session of the ICG/CARIBE-EWS, Punta Leona, Costa Rica, 8–11 April 2019**

**8.1.4 Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas: 15<sup>th</sup> Session of ICG/NEAMTWS, UNESCO, Paris, 26–28 November 2018**

### **8.2 GLOBAL COORDINATION OF WARNING AND MITIGATION SYSTEMS FOR OCEAN HAZARDS**

**8.2.1 Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems: 12<sup>th</sup> Meeting of TOWS-WG, UNESCO, Paris, 21–22 February 2019**

[Rule of Procedure 48.3; IOC-XXVII/Dec.5.2.2(IV); EC-XLIX/Dec.3.4; EC-LI/Dec.3.3(III)]

## **9. ASSESSMENT AND INFORMATION FOR POLICY**

[Res. XXVII-2(B)]

### **9.1 REPORT OF THE IHO-IOC GEBCO GUIDING COMMITTEE**

[Rule of Procedure 48.3; IOC-XXVIII/Dec.6.2; EC-XLIX/Dec.4.3.3, 4.3.4]

## **10. SUSTAINABLE MANAGEMENT AND GOVERNANCE**

[Res. XXVII-2(B)]

**10.1 IOC RELEVANT ISSUES RELATED TO THE INTERGOVERNMENTAL CONFERENCE ON AN INTERNATIONAL LEGALLY BINDING INSTRUMENT UNDER THE UN CONVENTION ON THE LAW OF THE SEA ON THE CONSERVATION AND SUSTAINABLE USE OF BIOLOGICAL DIVERSITY OF AREAS BEYOND NATIONAL JURISDICTION**  
[EC-LI/Dec.4.6]

**10.2 INTEGRATED COASTAL AREA MANAGEMENT PROGRAMME (ICAM) STRATEGY IMPLEMENTATION**  
[IOC-XXVI/Dec. 8.2]

## **11. CAPACITY DEVELOPMENT**

[Res. XXVII-2(B)]

- 11.1 REPORT OF THE IOC CAPACITY DEVELOPMENT GROUP OF EXPERTS  
[IOC-XXIX/Dec. 10.1]
- 11.2 IOC'S CONTRIBUTION TO OCEAN LITERACY IN 2018–2021:  
ACTION PLAN  
[EC-LI/Dec.4.9]
- 12. ADMINISTRATION, FINANCE AND MANAGEMENT**  
[Statutes Art. 6B]
  - 12.1 FOLLOW-UP TO RESOLUTION EC-LI.2: FINANCE AND REGULATIONS,  
GOVERNANCE, WORKING METHODS & PROCEDURES – REPORT OF  
THE CHAIR OF THE INTERSESSIONAL FINANCIAL ADVISORY GROUP
  - 12.2 DRAFT PROGRAMME AND BUDGET FOR 2020–2021 (DRAFT 40 C/5)
  - 12.3 DRAFT MEDIUM-TERM STRATEGY 2022–2029: PRELIMINARY  
PROPOSALS  
BY THE SECRETARIAT
  - 12.4 REPORT BY THE CHAIRPERSON OF THE FINANCIAL COMMITTEE  
[Statutes Art. 1.2]
  - 12.5 PREPARATION FOR THE COMMEMORATION  
OF THE 60TH ANNIVERSARY OF THE IOC (1960–2020)  
[Rule of Procedure 8.1(g)]
  - 12.6 ELECTIONS OF THE OFFICERS OF THE COMMISSION  
AND MEMBERS OF THE EXECUTIVE COUNCIL  
[Statutes Art. 6.B.5 and 7; Annex I to the Rules of Procedure]
    - 12.6.1 Election of the Chairperson of the Commission**
    - 12.6.2 Election of the Vice-Chairpersons of the Commission**
    - 12.6.3 Election of the Members of the Executive Council**
  - 12.7 31<sup>TH</sup> SESSION OF THE ASSEMBLY AND 53<sup>RD</sup> AND 54<sup>TH</sup> SESSIONS  
OF THE EXECUTIVE COUNCIL  
[Statutes, Art. C.7; Rule of procedure 19.2; EC-LI/Dec.6.3]
- 13. ADOPTION OF RESOLUTIONS AND SUMMARY REPORT**
- 14. CLOSURE**



ANNEX II

**REPORT OF THE 54TH SESSION OF THE IOC EXECUTIVE COUNCIL  
ACTING AS THE STEERING COMMITTEE OF THE ASSEMBLY**

UNESCO, Paris, 14 June 2021  
(IOC/EC-54/SR)

**1. OPENING**

1 The Chair, Mr Ariel Hernan Troisi, opened the 54th online session of the Executive Council at 13.00 h Paris time on Monday 14 June 2021. He welcomed the participants and briefly referred to the documentation prepared for this session. He reminded delegates that the Council was acting as the Steering Committee for the 31<sup>st</sup> session of the Assembly, in accordance with Rule of Procedure No. 12(2), with no other substantial discussions on its agenda. This session of the Executive Council was immediately followed by the opening of the 31<sup>st</sup> session of the Assembly also held as an online session from 14 to 25 June 2021. The Executive Secretary shared guidance and modalities about the conferencing platform and procedures to ensure an effective management of the online Executive Council and Assembly.

**2. ORGANIZATION OF THE SESSION**

2.1 ADOPTION OF THE AGENDA

2 The Executive Secretary quickly introduced this item and reminded that, under exceptional circumstances, the Executive Council and the Assembly sessions were held consecutively.

3 The Executive Council met online from 13.00 to 14:03 with full interpretation and did not plan to reconvene later during the day to adopt the narrative part of its summary report. Decisions under each agenda item were to be adopted during the session. The narrative part of the report was prepared by the Secretariat during the session of the Assembly and was to be adopted by correspondence together with the draft summary report of the 31<sup>st</sup> session of the Assembly.

EC-54, Dec. 2.1

The Executive Council

**I. Agenda**

Adopts the agenda as set out in document IOC/EC-54/2.1Doc.Prov;

2.2 DESIGNATION OF THE RAPPORTEUR

4 The Chair invited the Executive Council to designate the Rapporteur for the present session.

EC-54, Dec. 2.2

**II. Rapporteur**

Upon a proposal from Portugal, seconded by the Russian Federation,

The Executive Council designates Dr A. Ramadas (India) Rapporteur for its present session to assist the Chair and the Executive Secretary in the preparation of the summary report of the session.

### 3. ARRANGEMENTS FOR THE 31st SESSION OF THE ASSEMBLY

#### 3.1 DESIGNATION OF STATUTORY COMMITTEES AND SESSIONAL WORKING GROUPS

5 With reference to the revised Action Paper for the Assembly, the Chair reminded the Executive Council of the role of each sessional committee (Nominations, Resolutions and Financial) and proposed that some items be furthered examined by the Financial Committee after their discussion in plenary.

6 He also reminded the Council that it could submit proposals on their chairpersonship and composition, but that the ultimate decision remains entirely with the Assembly. He invited Member States to consider participating in the work of committees. The three committees (Nominations, Resolutions and Financial) were scheduled as online meetings in the Provisional Timetable for the Assembly session. The timing of the Nominations and the Resolutions Committees were subject to change to adapt to the progress of work of the Assembly considering that both sessional committees were to work without interpretation.

7 The Financial Committee is open-ended and its meetings would have English/French interpretation. The Chair reminded the Executive Council that the Financial Committee would be facing a now customary heavy workload. In addition to the items (budget implementation, Draft Medium-term Strategy and Draft Programme and Budget) under its purview, it will be considering the follow-up to resolution EC-53.2 on review and update of the Rules of Procedure to adapt them to online meetings and guidelines for reporting on in-kind contributions.

8 Chairman Troisi reminded the Assembly that only the names of the Member States present and participating in the sessional committees and sessional working groups, if any, were to be listed in the final report of the Assembly.

9 Mr Ariel Troisi informed the Council that break-out Zoom meetings would be set up on an ad hoc basis to provide for discussion or drafting groups.

10 The Chair then invited Member States and the Executive Secretary to express views on the need for sessional working groups during the Assembly on any item on its agenda, by briefly explaining the scope of their work expected. None were proposed.

#### EC-54, Dec. 3.1

The Executive Council,

#### **I. Sessional Committees**

Pursuant to Rule of Procedure No. 12(2) the Executive Council, acting as the Steering Committee of the Assembly, recommends to the Assembly the formation of each of the following committees:

- Financial Committee: under the chairship of Dr Karim Hilmi (Morocco, Vice-chair). Ksenia Yvinec provides the Secretariat support to the Financial Committee.
- Resolutions Committee: under the chairship of Prof. Yutaka Michida (Japan). Julian Barbière provides the Secretariat support to the Resolutions Committee.

- Nominations Committee: under the chairship of Mr Amr Morsy (Egypt). Salvatore Aricò provide the Secretariat support to the Nominations Committee.

## II. Sessional Working Groups

Having examined the revised provisional agenda for the 31<sup>st</sup> session of the Assembly, With no prejudice to decision of the Assembly and its chair on establishing a sessional working group as needed during the discussion of any agenda item, Recommends to the Assembly the establishment of no working group.

### 3.2 TIMETABLE AND ORGANIZATIONAL MATTERS

- 11 The Executive Secretary briefly presented the provisional agenda and timetable for the Assembly. He reminded the Executive Council that no side event or lecture was scheduled during the Assembly session considering the difficulty to organize the session online.
- 12 The IOC Executive Secretary then expanded on the draft resolutions received by 10 June and the volume of the documentation prepared for the Assembly session. He particularly highlighted that all draft decisions and two draft recommendations were contained in the Action Paper for the session. While decisions were to be adopted at the end of the discussion under the relevant agenda item, the narrative part of the Draft Summary Report would be prepared and published by the secretariat in English and adopted in all languages after the session as it has been customary for the past two years.
- 13 Dr Salvatore Aricò, as Technical Secretary of the Nominations Committee was invited to briefly elaborate on the IOC elections scheduled on 21 June at UNESCO Headquarters.

#### EC-54, Dec. 3.2

### **Timetable for the 31<sup>st</sup> session of the Assembly and organizational matters**

The Executive Council,

Taking into consideration the comments made by the Officers, the need to accommodate time for the reporting of sessional working groups and committees in plenary and scheduled invitation of speakers,

Accepts the provisional timetable for the 31<sup>st</sup> session of the Assembly as set out in document IOC/A-31/2.1Doc Add.Rev. with the following modification:

- to switch the meeting of the Financial Committee (III) and the meeting of the Nominations Committee (III) on Friday 18 June;

Considering the financial and time constraints related to the adoption of the report of the Assembly in four languages in-session,

Recommends to adopt the narrative part of its report in four languages by correspondence after the session and the decisions in four languages during the session;

Invites the Assembly to proceed in the same manner for the adoption of its report.

**4. DATES AND PLACE OF THE 55th SESSION OF THE EXECUTIVE COUNCIL AND PROPOSAL FOR DATES AND PLACE OF THE 32nd SESSION OF THE ASSEMBLY**

14 In introducing this item, the Chair expressed confidence that the next sessions of the Council and the Assembly could be organized at UNESCO Headquarters in 2022 and 2023. The Officers recommended that the Assembly should adopt the same scheme as for the past biennium.

15 The Chair invited delegates to make general comments on the perspective of their participation to face-to-face governing body sessions at UNESCO Headquarters for 3.5 days in June 2022 (EC-55) and 7 days (A-32) in June 2023.

16 The Chair concluded that the IOC had gained considerable experience in organizing online sessions of the Executive Council and the Assembly in 2021 recalling the commitment of the Commission to further adapt its working methods to on-line meetings and to develop specific rules of procedure for both the Council and the Assembly.

EC-54, Dec. 4

**Dates and places of next sessions of the Executive Council and Assembly**

The Executive Council,

Confident that the next sessions of the IOC governing bodies could be held at UNESCO Headquarters in 2022 and 2023,

Considering the experience gained during the 2020–2021 biennium,

Recommends to the Assembly to identify a period of 3.5 working days in June 2022 for the 55<sup>th</sup> session of the Executive Council and a period of six working days for the 32<sup>nd</sup> session of the Assembly in June/July 2023, preceded by a one-day session of the 56<sup>th</sup> Executive Council, avoiding any potential calendar conflicts with important meetings or cultural days.

**5. ADOPTION OF THE SUMMARY REPORT**

EC-54, Dec. 5

**Report**

The Executive Council,

Having adopted its decisions during discussion in its plenary meeting on 14 June 2021, as the Executive Council recommendations to the Assembly at its 31st session,

Accepts to consider the summary report of its 54th session prepared by the Secretariat for its adoption by correspondence after the session within the same period scheduled by the Assembly for the adoption of its summary report.

**6. CLOSURE**

17 The Chair closed the 54<sup>th</sup> session of the Executive Council at 14:03 on 14 June 2021.

ANNEX III

**STATEMENTS**

**A- Statement by the Chairperson of the IOC, Mr Ariel Hernan Troisi**

14 June 2021

Dear delegates.

In accordance with rule of procedure 8.1(a), this agenda item corresponds to the statement of the Chair on recent developments in the work of the Commission and perspectives for the coming years.

As I expressed at the opening of this Assembly, reality turned out to be very different from what we expected. Nevertheless, despite the difficult circumstances, our commitment to the ocean remained the main driver for our actions in order to fulfil our mandate.

In our own IOC, we analysed each case, each circumstance, and came forward with alternatives not only to continue but to expand our work. The new normal in which we are living, with its virtual platforms, created additional opportunities for increased communication, and our ability to participate in multiple subjects and debates. Just the simple exercise of counting virtual meetings, webinars, information sessions, provides a clear indication of how much our communications have increased. This shift from meeting in person to remote participation has allowed us all to be present in multiple and almost synchronic events around the world. Remote sessions were implemented not only for our 53<sup>rd</sup> Executive Council last February, but also for meetings of our primary subsidiary bodies, projects, and activities.

Through IOC Circular Letter 2835, I proposed holding this 31st session of our Assembly following a hybrid model, with remote plenary sessions combined with *in praesentia* elections of the Board of Officers and members of the Executive Council. We have carefully prepared and crafted this meeting to ensure the quality of the debate and to allow the decision-making process to be inclusive, transparent, and effective, complying with our Rules of Procedure in full.

Begging your indulgence, I will repeat here what I stated at the opening of the 53<sup>rd</sup> session of the Executive Council last February. We can execute our mandate and act as one for the benefit of all only if we continue to operate as we traditionally do: in a transparent, participatory, and constructive manner, working together to be a better scientific and technical body.

Current circumstances have significantly reduced the time available compared to past sessions of the Assembly. Traditionally, our Assembly represented the opportunity for our programmes, subsidiary bodies as well as Member States to present the key developments during the intersessional period, propose activities and projects and promote synergies. We have therefore created a [series of webinars](#) held between 31<sup>st</sup> of May and 11<sup>th</sup> of June as an additional mechanism to inform our Member States .

Throughout these months of remote work, we have accumulated extremely valuable experience and it is highly probable that some of the incorporated methodologies have come to stay with us. That is why I proposed to the 53 Executive Council entrusting the Financial Committee, as part of its duties pertaining to IOC governance, methods of work and procedures, with the initial analysis of a review and possible updating of the Commission's Rules of Procedure, with a view to adjusting them to the existing possibilities and current reality, possible future scenarios, and capitalizing on the experience gathered and best practices within UNESCO and the UN system.

The financial situation remains challenging and, despite the support of the Director-General of UNESCO, the support and contributions of the Member States, and the contributions of various donors and actors involved in ocean issues, this is a matter of utmost concern. IOC's involvements keep growing, but available human and financial resources have not kept the same pace. We owe to ourselves an in-depth analysis of the overall situation and perspectives as well as our strategy, business model and narrative to attract additional donors. We risk otherwise to turn our actions more opportunistic than strategic, with the implications such a change has.

In 2005, we were challenged by a document under the title "[We have a Problem](#)". In the aftermath of the terrible tsunami on 26 December 2004 in the Indian Ocean, and in face of a significant reduction of our budget, the document was putting the light on our decisions and their impact in determining our future, not through a mere change in the balance of issues of interest, but by affecting our identity as an intergovernmental oceanographic commission. We were then asked to take a break in our daily routine to think about: "where we are", "where we want to go", being a unique scientific and technical body within the UN system dedicated to ocean science and services.

All recent audits and assessments of the IOC have indicated that while it represents a most productive and highly-returning investment of Member States into the future knowledge-based sustainable ocean services, this investment is drastically insufficient, and that IOC is understaffed and under-resourced to achieve its expanding mandate. This is a very clear call to action that we cannot and must not ignore.

Our Commission is seen as a valued partner by UN frameworks related or with links to the ocean and recognised as an authoritative source of clear technical contributions, scientific knowledge, and uniquely positioned to bridge the science-to-policy gap.

Some examples stem out of our active contribution in the Preparatory Meeting of the Twenty-Fifth Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC), organized in Costa Rica, and COP 25 (the 25th Conference of the Parties of the UNFCCC, the "blue COP"), the third session of the intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ) and the subsequent online activities, in all of which I worked together with our dedicated Secretariat and represented this ocean community. More recent developments include my participation in International Seabed Authority events such as the introduction of its Marine Scientific Research Action Plan in support of the UN Decade for Ocean Science for Sustainable Development or the webinar on occasion of the World Ocean Day on the cooperation with OBIS (IOC-UNESCO) focusing on the partnership recently announced to expand, through ISA DeepData, access to biodiversity data. Within UNESCO, last November, we had an extremely productive meeting with the Scientific and Technical Advisory Body to the 2001 Convention, Underwater Cultural Heritage, where we discussed matters related to the Ocean Decade and our common and shared interests and responsibilities.

On November 2020, I joined other experts in a webinar organised by the World Maritime University on Empowering women in the Ocean Decade. This was an opportunity to share IOC's experience and initiatives and join forces to bridge the existing barriers. Our [Global Ocean Science Report 2020](#) shows that, on average, 39% of ocean scientists are women. This is about 10% higher than the general average for science overall. The Ocean Decade will provide an enabling environment to overcome gender, generation as well as regional barriers.

On January 1st, we kicked off an unprecedented period, the United Nations Decade of Ocean Science for Sustainable Development 2021–2030, crystallizing an idea that saw the light in this Commission. Throughout the past three years we have devoted the required time and effort, and more, to propose, discuss and consolidate an implementation plan to address the Decade

challenges and achieve the agreed goals. On 31 December 2020, the General Assembly of the United Nations adopted resolution 75/239, wherein it welcomes the preparatory work conducted by the IOC and takes note with appreciation of the implementation plan for the United Nations Decade of Ocean Science for Sustainable Development. We have been further entrusted with coordinating the implementation of the Decade and report back periodically. This requires proper attention for we need to equip ourselves in terms of human and financial resources to fulfil the requirements associated to such tasks.

Quoting a member of the Executive Planning Group, following the announcement of endorsement of programmes and contributions made last week on occasion of the World Ocean Day, cheers were heard from all over the world about the fantastic array of programmes that have been endorsed to begin the Ocean Decade. There was great excitement to see programmes related to expanding participation in the Decade, looking at historic and cultural aspects of the ocean, and other activities that will bolster participation and recognize the many ways that the ocean affects us all.

At the same time, there might be a perception that despite investing our best efforts in preparing for the Ocean Decade, we have left on the backburner the adequate development, or discussion, or agreement on our own IOC specific contributions to the Decade. And even we would all agree that there are great opportunities for IOC to contribute even more within the context of the Ocean Decade, and that the Decade is a unique source for developing and further strengthening partnerships and synergies, some members of our community may be of the view that the Decade actions constitute possible competitors, or even a blurring factor of IOCs role and responsibilities. The latter perceptions are something we need to avert through proper discussions and a proactive attitude.

Among our different contributions, last December we published the GOSR 2020. This report constitutes a critical step in identifying capabilities, resources, and constraints in our Member States, providing invaluable information to decision-makers.

Despite the challenging circumstances, our global programmes, regional subsidiary bodies and other subsidiary bodies were able to meet remotely, report on the key developments during the intersessional period, agree on future steps and recommend actions to this Assembly, clearly demonstrating the resilience and commitment of this community dedicated to ocean matters. We continued the development of the Ocean Data and Information System (ODIS), we launched projects such as the Ocean InfoHub, a system of transfer of marine technology; the second phase of the OceanTeacher Global Academy (OTGA-2) and its network of training centres, or the Pacific islands Marine bioinvasions Alert Network, thanks to the kind support of the Government of Flanders (Kingdom of Belgium).

Capacity development remains one of the fundamental tenets of our Commission, and it is properly portrayed at the centre of our six core functions. It enables all Member States to participate in and benefit from ocean research and services which are meaningful drivers to sustain development and human welfare on the planet. Several of our initiatives have a specific focus on Africa, Latin America and the Caribbean, and Pacific Small Island Developing States. I wish to take advantage of this opportunity to remind Member States who have not done so yet, to designate your IOC Capacity Development Focal Point, since after the Circular Letters issued in 2018 and 2020, only one third of our Member States has designated a CD Focal Point.

Going through the documents prepared for this Assembly, after having followed the thematic webinars, we can certainly see very good progress, and yet I firmly believe we can do even more to continue positioning IOC in the global context.

It is now time for acknowledgements. A special thank you to our whole Secretariat for their impressive work and dedication, in the forefront and in the background, at Headquarters and in

the field. My thanks also go to my fellow Officers who have taken on board multiple tasks and carried them out with great professionalism and commitment for the common good. Finally, allow me to acknowledge the always sound advice and wisdom of our previous distinguished Chairperson, Professor Peter Haugan of Norway.

**B- Report by the Chairperson of the sessional Nominations Committee,  
Mr Amr MORSY**

Chair of the IOC,  
Distinguished Delegates,

The Nominations Committee met three times, on 15, 16 and 18 June 2021. 29 Member States attended the meetings of the Nominations Committee, representing all five IOC electoral groups.

The Committee considered the candidatures for the positions of the Chairperson of IOC and for the five Vice-Chairpersons of the Commission; as well as the candidatures for the five electoral groups other than the seats of the Chairperson and the Chairpersons, that is to say: 9 for electoral group I; 2 for electoral group II; and 8 for each of the other electoral groups, namely: III, IV and V.

While a “clean slate”, that is to say, an equal number of candidatures for the positions of Chairperson and Vice-Chairpersons of the Executive Council, as well as for electoral groups I, II, III and V had been reached, until yesterday, Sunday 20 June, in the early afternoon, there was not a clean slate for electoral group IV. I am very pleased to report that the gracious withdrawal of Sri Lanka yesterday in the afternoon has allowed to reach a clean slate also in electoral group IV. I wish once again to express my appreciation to Sri Lanka and also to the whole electoral group IV for their flexibility with regard to the elections process and for allowing this to proceed very smoothly.

Mr Chairperson, Distinguished Delegates,

I would like to express my thanks to all the delegations who showed a maximum level of cooperation and consensual spirit that led to clean slate in all the electoral groups and the first election by acclamation in years. special gratitude and appreciation goes to Greece and Sri Lanka for opening the floor for a clean slate in their respective groups by withdrawing. you made our work very fruitful and we are proud of the results.

In my capacity as Chairperson of the Nominations Committee, I wish to thank all IOC Member States for their highly cooperative attitude, especially considering the current special sanitary measures.

It is against this background that I am very pleased to report as follows:

Because the number of candidates has equaled the number of elective places to be filled, specifically:

- o One only for the election of the Chairperson
- o One only for each of the five electoral groups for the election of the five Vice-Chairpersons
- o Up to the maximum number of the remaining seats on the Executive Council per electoral group, namely:
  - 9 seats for electoral group I
  - 2 seats for electoral group II
  - 7 seats for electoral group III



□ and 8 seats for electoral groups IV and V

I, in my capacity as Chairperson of the Nominations Committee and on the basis of provision 2.8 of Appendix I to the Rules of Procedure of IOC, shall declare the candidates elected:

I. Election of the Chair of the Commission

- Elects Mr Ariel Troisi (Argentina)

II. Election of the Vice-chairs of the Commission

- Elects:

- Ms Marie-Alexandrine Sicre (France) (Group 1)

- Mr Alexander Frolov (Russian Federation) (Group 2)

- Mr Frederico Antonio Saraiva Nogueira (Brazil) (Group 3)

- Mr Srinivasa Kumar Tummala (India) (Group 4)

- Mr Karim Hilmi (Morocco) (Group 5)

III. Election of the Members of the Executive Council

Elects:

Canada, Germany, Italy, Portugal, Spain, Sweden, Turkey, the United Kingdom of Great Britain and Northern Ireland, and the United States of America for Group 1;

Bulgaria and Romania for Group 2;

Chile, Colombia, Grenada, Panama, Peru, Saint Vincent and the Grenadines, and Uruguay for Group 3;

Australia, China, the Islamic Republic of Iran, Japan, the Philippines, the Republic of Korea, Thailand and Turkmenistan for Group 4; and

Côte d'Ivoire, Egypt, Gabon, Guinea, Kenya, Libya, Saudi Arabia, and South Africa for Group 5.

I would like to take this opportunity to thank the chair of IOC Ariel Troisi for the continuous support to the work of our committee and recognize the valuable work of the IOC Secretariat in supporting the work of the Nominations Committee.

May I suggest, Mr Chair, that the IOC Assembly greets the elected Chair, Vice-Chairpersons and remaining seats of the IOC Executive Council for the period 2021–2023.



## ANNEX IV

### INFORMATIONAL ANNEX

Record of Member States' interventions at the 31st session of the IOC Assembly that were provided to the IOC Secretariat by the respective Member States. Interventions are reprinted without review or verification.

#### 1. Opening

##### Chile

La Delegación de Chile, en nombre de la familia del Dr. Stuardo y de toda la comunidad científica marina nacional quiere agradecer este sentido y merecido homenaje y reconocimiento hecho al Profesor Don José Stuardo (Q.E.P.D.), por parte de esta Asamblea de la COI.

La COI, como todas las estructuras que establece la sociedad, está integrada por personas, las que constituyen el más valioso capital que puedan exhibir. El Profesor Stuardo fue una de esas personas y como chilenos nos sentimos orgullosos que la Comisión Oceanográfica Intergubernamental recuerde hoy a este prominente hombre.

#### 3.1 Statement of the Chairperson

##### Kenya

Chairperson of the IOC, in fostering the mandate of the IOC. We also appreciate the efforts to communicate on the role of the IOC as well as strengthen its visibility and impact.

Kenya further commends the Chairperson of the IOC and all the officers for the exemplary work accomplished in steering the activities of the IOC. We note with gratitude the efforts made by the Chairperson and all the IOC officers to address the challenges and seize the opportunities in particular during the COVID-19 Pandemic.

We thank the Chairperson for his thought-provoking statement and the emphasis on how we can collectively empower and expand on the IOC's ability to deliver. Kenya concurs with the Chairperson on the importance of pursuing strategies that will further strengthen the IOC.

Finally, Kenya appreciates the activities undertaken by the Chairperson and the IOC officers to contribute to the United Nations Decade of Ocean Science for Sustainable Development (2021-2030).

##### Republic of Korea

The Republic of Korea would like to sincerely thank the IOC secretariat and chair who showed much diligence to achieve unity within IOC under difficult circumstances with the worldwide COVID-19 pandemic that occurred during the period after the 30th IOC Assembly.

Due to COVID-19, major events such as the 60th anniversary of the IOC, and the 52nd Executive Council were forced to be held online. Other seminars, conferences, and training sessions were also delayed, which restricted the opportunity for scientists worldwide to engage in meaningful cooperation.

The Republic of Korea has actively supported the preparation phase of the UN Ocean Decade and the publication of the GOSR-II, and made financial support in the form of trust funds. The Republic of Korea will continue to provide extended participation and assistance in order to achieve the common goal of the IOC member states.

##### United States of America

I recognize how thoughtful and how exacting your recommendations are. The work we have been able to accomplish while on televideo seclusion because of COVID has denied us the opportunity to break bread and to further our personal relationships, and that is the reality that we have suffered. As you have wisely pointed out, and as many member states have offered in the past, the opportunity to work in the intersessional period and achieve a lot of work outside of our historic routine presents a great opportunity with this technology. I appreciate your leadership, and thank you for reminding us of this opportunity. Additionally, as you have pointed out, Mr. Chair, in the Statutes, Article 10.4 regarding financial arrangements, I think there is great opportunity to take this section seriously and pursue what this could mean, although I understand the complications of the UNESCO parentage of IOC and how

the finances have historically run. We are at least one delegation that would like to work with you to open the gate and apply Article 10.4.

### **3.2 Report of the Executive Secretary**

#### **Argentina**

la Secretaría por la exitosa implementación del programa en un contexto difícil, como ha sido la crisis del COVID-19, y con una estructura pequeña y recursos limitados. Cabe destacar que desde el GRULAC hemos tratado de fortalecer dicha estructura en ocasión de la discusión de los documentos C/4 y C/5.

Cuando vemos este “extracto” de COI, tal como fuera presentado por el Secretario Ejecutivo, con todas las actividades y programas implementandos, vemos la real magnitud del enorme trabajo que lleva adelante la COI y resulta difícil destacar una sola actividad.

Sin perjuicio de ello, si debiéramos destacar algunas áreas del trabajo de la COI que nos parecen importantes, destacamos la de continuar con la creación de capacidades y con la transferencia de tecnología marina; el desarrollo de datos para que nuestros Estados puedan adoptar políticas informadas; la lucha contra el cambio climático, que nos afecta a todos; la alfabetización oceánica, porque es la herramienta para generar conciencia en las futuras generaciones; el trabajo que realiza la COI en el marco de la Década y el potencial de la COI en otros procesos como el de BBNJ.

Ratificamos el compromiso de la Argentina con las actividades de la COI. En ese sentido, cabe señalar, entre otras cosas, que nuestro país ha sido elegido como sede de un nuevo Centro Especializado de Ciencias Oceánicas de la UNESCO en el marco del programa OTGA (Ocean Teacher Global Academy) de la COI; y también es el líder del Plan de Acción de la Autoridad de Fondos Marinos en apoyo a la Década.

Nuevamente nuestras felicitaciones a la COI por el excelente trabajo realizado.

#### **Brazil**

Brazil’s long-standing engagement with the IOC, in the regional and global levels, was reiterated with the recent election of the Brazilian representative, Dr Claudia Magalhães, to one of the vice-presidencies of the IOC Caribe, as one of the few women to assume such a position, and with the current candidature of Captain Frederico Saraiva Nogueira to the vice-presidency of the IOC, representing our regional group, in the elections to be held during this Assembly– and to which we hope to count with the support of other delegations.

Brazil continues committed to the UN Decade of Ocean Sciences for Sustainable Development, and we will be happy to share with you the most recent developments of the Decade’s implementation in Brazil, when we discuss the issue under item 3.7.

We also commend IOC’s capacity-building activities, including the reorganization of IOC’s Ocean Teacher Global Academy e-learning platform. And we’re happy to announce that the Brazilian-Uruguayan joint Regional Training Center has just started its first online course on Coastal and Marine Spatial Planning and received a great number of applications from more than 20 countries.

Finally, we’d like to express our support to two important initiatives that will be discussed during this session of the Assembly: the Oceans Literacy Action Plan, which we consider essential to raise awareness of society at large on ocean matters; and the State of the Ocean Report, to which our experts had sent comments and which we welcome as a very relevant project of the IOC, as we know that reliable data is key to ensure the sustainable use and management of the oceans.

#### **Colombia**

Colombia agradece el detallado informe presentado por Vladimir Ryabinin, Secretario de la Comisión Oceanográfica Intergubernamental (COI/UNESCO). El cual ha demostrado el exitoso trabajo de la organización en estos dos años.

Colombia, seguirá apoyando los esfuerzos mundiales de la COI, como lo ha venido haciendo por medio de programas y proyectos como IODE, OTGA, planificación espacial marina, tsunamis y Florecimientos Algales Nocivos.

Para Colombia, el informe de la COI/UNESCO sobre el estado del océano, debe propender por no duplicar información y esfuerzos de otros procesos e informes que se están desarrollando y dicho esto,

será una contribución importante, especialmente en la inclusión de actores necesarios para el desarrollo sostenible de los océanos, tales como los tomadores de decisiones y los creadores de políticas públicas.

Finalmente, el país, reitera su compromiso para seguir siendo anfitriones de IOCARIBE, así como trabajar para la implementación del Decenio, y continuar cooperando en pro de la transferencia de tecnología marina y del desarrollo de capacidades en la región.

### **Côte d'Ivoire**

La Côte d'Ivoire se réjouit que le Secrétaire exécutif soit sur la même longueur d'onde qu'elle. En effet en soulignant que l'indicateur de la réussite d'une opération de renforcement des capacités réside dans la possibilité du bénéficiaire à former d'autres personnes.

Cela suppose que le renforcement des capacités et la formation qui le sous-tend doit être située à un haut niveau (Master, Ingénieur ou PhD).

C'est s'appuyant sur ce principe que le Président de la Côte d'Ivoire Dr Alassane OUATTARA a donné des instructions à l'effet de construire une Université dédiée aux sciences océaniques.

Cette université ouvrira ses portes en Côte d'Ivoire en octobre 2021.

La Côte d'Ivoire se félicite par ailleurs que le Secrétaire exécutif fasse de la priorité Afrique son cheval de bataille. La RCI espère que cette volonté affichée se matérialisera dans le budget régulier de la COI.

Enfin un dernier commentaire sur le résultat du questionnaire sur le renforcement des capacités. Le Secrétaire Exécutif a mentionné que le retour des pays en développement s'élève à 1%.

Un tel record emmène la Côte d'Ivoire à imaginer que les points focaux de la COI dans les différents pays en voie de Développement ne sont pas forcément en première ligne dans le renforcement des capacités. Aussi la suggestion serait-elle d'associer les Universités dans ce type d'opération

### **Gabon**

C'est particulièrement important, alors que nous sommes entrés dans la phase opérationnelle de la Décennie des Nations Unies pour les sciences océaniques au service du développement durable (2021-2030). Une décennie qui vise à une gestion durable des océans et des côtes fondée sur les connaissances scientifiques.

Car l'Océan reste encore trop souvent dans l'angle mort des investissements dans la recherche scientifique, des consciences environnementales et des politiques publiques, alors que seulement un pays sur cinq a une stratégie spécifique de préservation et de gestion de l'océan.

Pourtant l'océan est au carrefour des grands enjeux de notre temps, qu'ils soient liés à la réduction de la pauvreté, aux changements climatiques ou à l'érosion de la biodiversité. Des enjeux particulièrement aigus dans le golfe de Guinée où se trouve le Gabon.

Nous savons que sans un océan en bonne santé, la vie sur Terre est menacée.

En effet, 40% de l'océan est altéré par la pollution, par une pêche intensive et par la dégradation des zones côtières.

Autre chiffre préoccupant : un tiers des émissions de dioxyde de carbone dues aux activités humaines depuis les révolutions industrielles ont été absorbés par l'océan. L'océan pourrait ainsi ne plus jouer le rôle d'éponge à carbone qu'il joue depuis des décennies.

Cela entraîne aujourd'hui toute une série de conséquences nocives pour la biodiversité, le climat, mais aussi pour toute la vie sous-marine et côtière.

Nous savons aussi que l'océan est une source de subsistance pour trois milliards de personnes qui dépendent de la pêche, du tourisme, de l'énergie, du commerce – car les plus grandes routes commerciales sont aujourd'hui des routes maritimes.

À ce titre, aucun développement économique ne pourra être réellement durable, s'il néglige l'océan. C'est pourquoi l'Afrique, et le Gabon en particulier, appelle à un plus grand investissement de la COI sur le continent.

Car l'Afrique, dont la jeunesse est débordante d'innovation, de modernité et de résilience, est résolument tournée vers le futur. Un futur qui se fera avec un océan en bonne santé.

Ce futur doit se construire maintenant, à travers nos programmes d'éducation à l'océan, de développement des capacités, de renforcement des activités de recherche océaniques ou encore de collecte et d'utilisation des données d'observation marine. Il se construit aussi à travers l'accompagnement apporté par la COI à nos pays, dans la mise en place de politiques de gestion et de préservation de l'océan.

Car nous avons le devoir de léguer à la jeunesse africaine et mondiale une Terre et un océan sains.

C'est le sens de l'engagement sans faille de mon pays, le Gabon, pour la cause environnementale, comme le rappelait récemment Son Excellence Monsieur Ali BONGO ONDIMBA, Président de la République gabonaise, lors du Sommet des leaders sur le climat organisé par le Président américain en avril dernier.

L'Afrique comme futur de l'humanité de par sa jeunesse ne peut se réaliser pleinement qu'à travers l'océan. C'est la raison pour laquelle le Gabon sollicite son entrée comme membre du Conseil de la COI afin d'y jouer sa partition, au service de tous les Etats membres.

Permettez-moi de conclure mon propos avec un proverbe africain qui nous dit que: « C'est en mer agitée qu'on reconnaît la qualité du bois du bateau. »

## **India**

We would like to compliment the Chair, Officers, Executive Secretary and the Secretariat for the excellent preparatory work in organising the thirty-first session of the Assembly in virtual mode, including the pre-assembly thematic webinars that have been extremely useful. We join the other Member States in congratulating the Executive Secretary for a detailed report and the substantive progress made across all functions of the IOC specially the UN Ocean Decade, in spite of the difficult times brought on by the COVID -19 Pandemic.

Mr. President, during the inter-sessional period, India continued to partner with IOC and several Member States across a spectrum of activities spanning Ocean Observations; Ocean Modelling & Forecasting; Ocean Data & Information Services; Ocean & Coastal Hazards; Coastal pollution, Ocean Energy & Desalination; Deep Sea Exploration & Mining; Coastal Zone Mapping & Management; Ocean Biodiversity; Polar Science; Fisheries; and Capacity Building.

Mr. President, India sustained a wide array of ocean observing platforms in the Indian Ocean that directly contribute to the GOOS & IndOOS, though new deployments and maintenance activities got impacted during the pandemic. India continued to support the JPO of IIOE2 together with the JPO in IOC Perth, in addition to the hosting of Secretariat for the IGOOS. A new interactive web-based portal entitled "Digital Ocean", was launched in December 2020 that caters to ocean data related needs of a wide range of users and interfaces with the National Oceanographic Data Centre (NODC).

India continued to provide Tsunami Service Provider support for the IOTWMS. A major achievement during the pandemic was the conduct of the IOWave20 exercise and the recognition of two communities in India as UNESCO-IOC "Tsunami Ready" in line with the IOC indicators, a first in the Indian Ocean.

Mr. President, India appreciates the opportunity to actively participate in the planning of the UN Decade of Ocean Science for Sustainable Development (UN Ocean Decade) and established a National Decade Coordination Committee to coordinate amongst multiple national institutions and engage them in the Ocean Decade. India hosted the Regional Planning Workshop for the Northern/Central Indian Ocean countries as well as ROPME Sea Area towards the UN Decade hosted by India (2020).

India remained an active stakeholder in IOCINDIO activities. India sponsored two programs of IOCINDIO, one on Coastal Vulnerability Assessment and the other, a Leadership Workshop on Developing a Regional Framework for Coastal Vulnerability. An international symposium on Advances in Coastal Research with special reference to Indo Pacific specifically focusing on role of India in pursuing the SDG 14 goals was hosted by India in December 2019.

India continues to be active in BBNJ, initiated Marine spatial planning activity in two coastal states of the country that is rooted strongly in the best practices and guidelines of the IOC. We sustained efforts to map the ocean bathymetry through comprehensive surveys by Indian ships.

Mr. Chair, India continued to provide regional capacity building support to Member States through the UNESCO Category 2 Centre. This centre is one of the RTCs of the OTGA. During the inter-sessional period, the centre organised 11 in-person and 7 virtual training programmes reaching 2,688 participants from 85 countries.

## **Italy**

The new recognized role of the ocean on climate change and global economy is a challenge for IOC and it requires support from all the Member States also in terms of in-kind contribution.

On this end, Italy is actively contributing to the IOC regular mandate by maintaining the national Ocean Observing System as contribution to GOOS and contributing to the OceanObs White Papers. Moreover, Italy is actively supporting UNESCO ICG/NEAMTWS as service provider, collaborating IOC HAB, GEBCO and IODE groups, the MSP global initiative, within which Italy welcomes the pilot on the Western Mediterranean. Italy is promoting several OL initiatives in collaboration with UNESCO Office in Venice.

In particular Italy believes that the Ocean Decade will be a transformation challenge for ocean science community. Italy agree with importance of the regions in the development the IOC programmes, as pursued in contributing to the co-design of the Mediterranean regional initiative for the Decade. We think that the Mediterranean is also a key region to implement cooperation including ocean transformation and capacity development. Italy wishes to thanks all the countries that contributed to the Mediterranean program codesign. Italy will continue to support the Decade. Italy is strongly in favour of improving the current environmental condition of the coastal and off seas and duly considers the negotiations on new International implementing agreement. We are supportive the development of the State Of Ocean Report as an instrument to highlight key aspects of the state of ocean, OL activation plan changing the paradigm of capacity building and communication.

## **Japan**

Japan congratulates also the Executive Secretary on his excellent leadership during the last intersessional period in the progress made for outstanding achievements, despite such really difficult and challenging situation with COVID-19 pandemic.

Having picked up a couple of items what the Executive Secretary reported in his comprehensive presentation, Japan highlights following two points.

With regard to the preparation and implementation of the UN Decade, Japan has been pleased to contribute to them by providing financial support through Japan Funds-in-Trust (JFiT) to UNESCO, and is pleased to inform the Commission that Japan will continue its support in the implementation phase as well.

Japan secondly points out that UN has just started its 3rd cycle of regular process for the World Ocean Assessment (WOA-III), which is essentially important for ocean related community in the world including IOC, and that the IOC should actively participate in and contribute to the process as a competent organization for ocean affairs in UN system. In this connection, Japan emphasizes that one of our newly proposed activities, namely State of Ocean Report (StOR) should fully take into account the progress of WOA-III that will be made during the next couple of years, to avoid any possible duplication with such activity, with careful consideration and designs of StOR including its interval, volume, and most importantly its contents, so that the StOR can be of significant contribution from IOC to WOA-III.

## **Kenya**

Kenya commends the development on the global mapping process and the initiative on the State of the Ocean Report which will guide the needed action.

Kenya continues to strongly support the work of the IOC:

- Kenya collaborated with the IOCAfrica Sub-Commission and other partners in organizing the Regional Consultations for Africa and Adjacent Island States held in February 2020.
- Kenya is pleased to host one of the academies of the OceanTeacher Global Academy which has been instrumental in fostering ocean literacy not only in Kenya but in the region. Kenya notes the capacity development gap and need to energise the focal points as well as the increasing diverse regional representation in panels.
- The Government of Kenya continues to promote SDG-14 and related SDGs including through initiatives leading up to the 2nd United Nations Ocean Conference to be co-hosted by Kenya and Portugal in Lisbon in 2022.

- Kenya's Cabinet Secretary for Foreign Affairs participated in the high-level thematic debate on the ocean and sustainable development goal 14 convened by the President of the United Nations General Assembly two weeks ago.

Kenya appreciates the priority given to Africa and welcome efforts to strengthen capacity development as well synergies with the African Union initiatives. Kenya also welcomes the efforts to pursue the implementation of all the functions of the IOC including the promotion of ocean literacy, outreach and communication. In this regard, we applaud the launch of the 2nd Global Ocean Science Report and the robust IOC social media presence.

Kenya further appreciates the increased intersectoral and interdisciplinary collaboration established between the IOC and UNESCO's programmes. Kenya equally welcomes the strengthened synergies with other UN agencies and partners. We view this collaboration as critical to developing a holistic approach to the implementation of SDGs.

Finally, Kenya particularly welcomes the efforts by the Secretariat to foster the engagement and participation of young scientists and young people. Fostering youth engagement and participation is critical to the design, ownership and implementation of solutions that for sustainable use and conservation of the Ocean.

### **Norway**

IOC has high ambitions, and rightly so. These ambitions are to be met with limited resources, and we are well aware of the increased responsibilities and workload that IOC faces. Therefore, we would like to echo the Executive Secretary's urgent request for support from the member states – may it be financially, in kind or through activities around the world. For the IOC to be able to operate as flexible as needed in order to achieve common goals, non-earmarked means are of course particularly appreciated. This is indeed a crucial moment in time for our ocean, and we must take advantage of the opportunity presented by the ocean decade.

Norway appreciates the IOC as a trustworthy key partner, when it comes to joint efforts in several areas of work:

Among these, we acknowledge IOC's valuable contributions to realize the action agenda of the High-Level Panel for a Sustainable Ocean Economy, including capacity development to strengthen understanding and management of our ocean and seas, coasts and marine ecosystems. And this work will be strengthened even further by yesterday's announcement of France joining the High-Level Panel! The IOC is very well placed to promote the broad transformations needed to advance a sustainable ocean economy, prioritizing a healthy ocean alongside sustainable production to benefit people everywhere.

Norway certainly also appreciates the IOC as a key partner in Norwegian development cooperation aimed to promote a strengthened, sustainable, and inclusive ocean economy in cooperating countries.

We appreciate in particular the initiative of IOC to develop a State of the Ocean report, that will include analysis of changes in the ocean environment as well as developments regarding integrated ocean management. Such a report could become a valuable contribution to following progress worldwide on the crucial transformation of human interaction with the ocean towards sustainability.

### **Portugal**

We all aspire that the IOC budget can be reinforced, and we fully share the view of our Chairperson, seconded today by our distinguished colleague from the USA Delegation, on revisiting Article 10 and in particular 10.4 of the IOC Statutes, a point often raised by our dear Prof. Mário Ruivo, with a view to effectively use all the means we have at our disposal.

The comprehensive report of the Executive Secretariat clearly reflects how effectively IOC has been using the opportunities presented by the Decade to expand the global scientific and observational programs, ocean literacy and capacity development, in line with the High-Level Objectives and Priorities of its Draft Medium-Term Strategy 2022-2029. We are fully confident of the capacity of IOC to ensure that the Decade does make a difference.

Portugal is strongly committed to the IOC and the Decade and is a member of the Ocean Decade Alliance. The UN Ocean Conference in Lisbon in June 2022, jointly organized by Kenya and Portugal under the theme Scaling up Ocean Action Based on Science and Innovation for the Implementation of Goal 14: Stocktaking, Partnerships and Solutions, will be another major step to boost worldwide efforts



in scaling up science and innovation for the implementation of SDG 14, in line with the Decade goals, towards a Sustainable global Ocean Management, supported by the best available science.

### **Spain**

España se congratula de felicitarle y agradecerle, una asamblea más, por su excelente labor al frente de la COI y por la detallada e interesante información resumida en su presentación y en su informe. Nuestra felicitación y agradecimiento también para todo el personal de la COI, sin cuyo trabajo y profesionalidad no serían posibles ni la actividad y ni los éxitos cosechados. Aprovechamos esta intervención para extender el agradecimiento y la felicitación de España también a nuestro Presidente, a los Vice-Presidentes y en definitiva a todos los países miembros, que, cada uno dentro de sus posibilidades, contribuyen a la extensa relación de actividades en multitud de programas e iniciativas.

España quisiera destacar lo importante que es que la COI esté involucrada al más alto nivel y con liderazgo en toda la extensa lista de programas e iniciativas internacionales que ha detallado en su informe: Carbono azul, acidificación, desoxigenación, el papel del océano en el clima, observación del océano, algas tóxicas, planificación espacial marina, mapeado de los fondos marinos, gestión de datos, biodiversidad en zonas fuera de la jurisdicción nacional, y un extenso etc. La lista y la magnitud del esfuerzo son abrumadora. Muchas de estas actividades se realizan con la contribución de investigadores y personal de instituciones de países miembros, en muchos casos como parte de su interés investigador, pero es importante que la COI, por su carácter intergubernamental, se implique en esa labor de coordinación sobre la base del mandato que ejerce esta asamblea. No solo se trata de intervenir en la coordinación de esos programas, sino, y sobre todo, en la coordinación entre esos programas a través de una visión integrada de la ciencia que necesitamos para resolver los retos y los problemas a los que se enfrentan los países miembros y la humanidad en su conjunto, tal y como ha destacado el Secretario Ejecutivo en su intervención.

Una mención aparte y destacada al Decenio de las Ciencias Oceánicas para el Desarrollo Sostenible que pensamos que está siendo excelentemente desarrollada por la COI y que abre grandes expectativas para el necesario papel de la Ciencia sobre la gestión de la multitud de aspectos relacionados con el océano y enormemente trascendentes a nivel global, pero ya haremos una intervención más detallada cuando se trate este tema durante la asamblea. También aplaudimos la propuesta de un Informe sobre el Estado de los Océanos.

España agradece la iniciativa de la COI de presentar un nuevo proyecto en la Corriente de Canarias que en esta ocasión se centrará en especies invasoras y otros factores de estrés sobre este importante ecosistema, especialmente relevante para la seguridad alimentaria y para la economía de los países de la zona. España se compromete, de nuevo, a financiar un proyecto en esta zona, aunque hemos notado que este apoyo no aparece reflejado ni en su informe ni fue mencionado durante la presentación. Este proyecto tiene entre sus principales objetivos, contribuir al desarrollo de capacidades científicas en los países del noroeste de África. Es el cuarto proyecto de una serie sobre este ecosistema, y tal como establece el propio Plan de Implementación de la Década, las acciones continuadas, sostenidas en el tiempo sobre una misma zona, son más efectivas. El proyecto también contribuirá a la difusión y accesibilidad de datos e información mejorando la herramienta desarrollado durante la fase 2 o segundo proyecto de la serie.

### **Thailand**

In response to the call for Decade Actions, two of the highlighted activities will be hosted by Thailand in cooperation with the WESTPAC during the first two years of the Decade are the virtual UN Decade Regional Kick-off Conference, to be held in August this year, and followed by the 11th WESTPAC International Marine Science Conference in next year, 2022.

It is clearly seen that we have adapted to the new normal mode of online communication, as evidenced by a growing numbers of online workshops, trainings and webinars those were successfully organised. This brings us a lot more opportunities on capacity development and communication platforms, especially for our early career scientists.

Mr. Chair, Thailand reiterates our commitment to support and actively participate with the IOC Regional Subsidiary Bodies and Member States, in close collaboration with the WESTPAC

Sub-Commission, on ocean related activities, particularly the development of plans and activities in order to support the IOC's global and regional programs.

### **United Kingdom of Great Britain and Northern Ireland**

During this period it is important to maintain transparency in consultations and the OpenCities consultation was an excellent example. We also note the value of timely information for the Assembly as needed to support important Decisions.

We look forward to the outcome of deliberations on the pilot State of the Ocean Report at the 55th Session of the Executive Council and trust that concerns about its scope and the level of resources required to deliver it will have been duly considered and that there will be an opportunity for evaluation after the proposed pilot.

And finally Mr Chairman, we note the Executive Secretary's comments on the challenges faced due to an increasing workload with limited financial resource. Given this the UK would like to suggest that following what has been a very busy two years establishing the Decade we now take stock and undertake a period of reflection to carefully consider priorities.

### **United States of America**

Focusing on 3.2, I have to say that the report of the Secretariat leaves me absolutely breathless, as I'm sure it was to him after sixty-some slides. But the content contained and the level of activity that has been achieved by the Secretariat is absolutely and positively astounding. It makes us very proud to be part of such an organization and to be providing the degrees of support which we have. We recognize that there is a global climate crisis that has been pronounced for our nation, and it is pronounced sufficiently for the world. As the Special Envoy for Climate Mr. John Kerry might offer, if you get climate, you get the ocean, and if you get the ocean, you get climate. The two are inextricably linked, and the focus of the IOC in bringing science forward to deal with these elements is very appropriate.

Given the scale and scope of the challenge and given the small size of the Secretariat, I offer heralding support for the Secretariat, who is remarkably overworked, having put on the Decade and made not just a dream that came out of a meeting in Utrecht and other locations, but a reality for the entire UN General Assembly. I don't think we could lavish sufficient praise on the small staff of the IOC Secretariat sufficiently to reach the heights that they have attained. If we look at the confirmation of the IOC and the success of the IOC, by these many items that have been raised - observations, tsunami, ocean carbon, the data enterprise, mapping - we're very proud of that work. We're also very proud of the U.S. contributions to support that work, which are actually ongoing as we speak now.

The State of the Ocean Report is an excellent idea, and we look forward to the experience in evaluating the first edition of it. I also want to highlight the Early Career Ocean Professional concept that came out of the Decade and the IOC vision. It is being adopted universally and is a very important opportunity for our future. We bring these youthful people forward not just because they're young; we bring them forward because of what they know and how they were trained. Lastly, the evaluation exercise that the Secretariat mentioned gives us great opportunity to look for recommendations in a studied way for how we could be expanding under our statutes - once again, 10.4 (Financial Arrangements) and 11.3 (The Role of the IOC) - across multiple components of the UN community. The IOC is a success and we're very proud to be supportive thereof.

### **World Meteorological Organization (WMO)**

WMO and IOC have an enduring special partnership. We appreciate all those involved and supported the new WMO-IOC Joint Collaborative Board (JCB) and we value its truly collaborative effort to draft a joint WMO-IOC Collaborative Strategy. It would be great to see it referenced in the IOC Strategy.

We acknowledge and value our strong partnership in many areas including the WCRP, GCOS and GOOS, and our joint OceanOps office in Brest. We also work together for tsunami early warnings, and WMO Member States emphasize the urgent need to integrate this within a coastal multi hazard early warning system.

Cross-institutional discussions continue with WMO Observer status in IODE, and capacity development, while the JCB is represented on the WMO Capacity Development Panel. Also, IOC experts are working within both of WMO intergovernmental technical commissions on Infrastructure and Services, IOC is represented on the WMO Research Board and has experts in IPCC Working Groups. This helps us advancing progress in ocean observations, data assimilation and coupled Earth system modelling, research and scientific assessments, operational impact-based forecasting, and early warning services for effective decision-support systems. WMO is concerned with the major gap in

ocean data and recommends stronger emphasis in the IOC Strategy on the use of data in decision-making.

We wish to coordinate even closer our contributions to the UNFCCC and other major conventions and international mechanisms. We thank the IOC for valuable contribution to WMO flagship publications - the Global and Regional Climate Statements, the United in Science Report, and the latest WMO Bulletin dedicated to ocean. IOC's participation was welcomed in the recent WMO Data Conference, and in Ocean events we organized in WMO Regional Associations to better connect national meteorological, hydrological, and oceanographic services. We believe this is crucial to fully realize IOC strategic objectives (especially 2 and 3).

For the Ocean Decade Implementation Plan, WMO recommended strengthened focus on the ocean-climate nexus and ocean hazards. We look forward to co-design with IOC our contributions to the Decade as called in joint Collaborative Strategy. And we believe it would be mutually beneficial to have WMO JCB Co-Chair in the Decade Advisory Board.

This year the World Meteorological Day celebrated the Ocean theme, that was positioned as a formal Ocean Decade activity, marking the start of the Decade, and promoting the close link between the ocean, weather, and climate.

Finally, last year when we both celebrated our 70th and 60th Anniversaries, we published the JCOMM History article authored by Dr Peter Dexter, former Co-President of JCOMM (was NOT on the cartoon!). This is wonderful account of the long-standing cooperation and collaboration between our organizations. WMO looks forward to continuing, broadening, and enriching its partnership brotherhood with the IOC.

We should be seen as one single voice on the Earth system!

### **3.3.1 Report of the IOC Sub-Commission for Africa and the Adjacent Island States (IOCAFRICA)**

#### **Côte d'Ivoire**

La Côte d'Ivoire pour sa part, s'est fortement engagé dans la mise en oeuvre de la décennie, notamment dans sa composante renforcement des capacités par la construction d'une Université dédiée aux sciences océaniques voulue par le Président de la République (Dr Alassane OUATTARA)

La Côte d'Ivoire suggère qu'un encadrement plus concret pour la mise en place des comités nationaux soient proposé. Cela est important car les parties prenantes en charge de la décennie est tellement large que la question de l'encrage institutionnel se pose.

Le dernier point concerne le financement. Ne dit-on pas que l'argent est le nerf de la guerre? Dans son rapport Le Secrétaire Exécutif a indiqué que sur l'exercice d'une année sur 2,5 Millions requis 10% sont disponibles. De même les Etats ont été informés que certains programmes acceptés n'ont pas de financement. Au total la Côte d'Ivoire demande à la COI de s'investir davantage dans la recherche de financement.

#### **Kenya**

Kenya, through the Kenya Marine and Fisheries institute (KMFRI) has been actively collaborating with IOCAfrica to promote the mandate of the IOC not only in Kenya but the region.

Latest engagement involved the World Ocean day on 8th June 2021 celebration where IOC-UNESCO, KMFRI, Kenya National Commission for UNESCO (KNATCOM), Technical University of Mombasa (TUM), Pwani University (PU), and other partners held a very success virtual workshop.

Kenya is convinced that IOC sub-commissions are important for the visibility and impact of the IOC at the global, regional and national levels. We therefore consider the IOCAfrica Sub-commission as essential in supporting Member States achieve the UN 2030 Agenda for Sustainable Development and the African Union's Agenda 2063.

We further welcome the African kick-off Conference of the UN Decade of Ocean Science and Sustainable Development to be hosted by Egypt in December 2021. We view this conference as key in building synergies with the Africa Union's Blue Economy Strategy, the Decade of the African Seas and Oceans (2015 – 2025) and the 2050 African Integrated Maritime Strategy (AIMS).

Kenya also underscores the importance of IOC's capacity development function. We welcome and encourage the pursuit of the role of the IOCAfrica Sub-commission in bringing together existing capacities and promoting collaboration in the region.

Finally, Kenya commends the work undertaken by WESTPAC, IOCARIBE and IOCINDIO. We note that some of the challenges are cross-cutting and therefore welcome efforts to foster inter-regional cooperation. Kenya considers that there is great opportunity to further strengthen cooperation and sharing of good practices.

### **Spain**

España mantiene su compromiso de colaboración en las actividades de la COI en África, a través de los proyectos sobre el Gran Ecosistema Marino de la Corriente de Canarias (CCLME), financiados a través del fondo fiduciario de España en la UNESCO. Durante el periodo de ejecución del informe, y tal como se refleja en el mismo, se desarrolló la tercera fase o tercero de estos proyectos. Así mismo, agradecemos la propuesta de la COI liderada por el Sr Salvatore Arico para desarrollar un cuarto proyecto enfocado a especies invasoras y otras presiones antropogénicas sobre el ecosistema de la Corriente de Canarias, que como en ocasiones anteriores contará con una participación activa de la comunidad científica española. Todos estos proyectos tienen como objetivo el desarrollo de capacidades e incrementar la colaboración de la comunidad científica de los países rivereños a través de abordar objetivos científicos de interés común en la zona.

Apoyamos también el desarrollo de la iniciativa de la generación de bases de datos marinos en África, y en este sentido nos gustaría recordar que durante las fases anteriores del proyecto Gran Ecosistema Marino de la Corriente de Canarias (CCLME) se desarrolló un directorio de sistemas de observación del océano y un visor en red que deberían ser tenidos en cuenta y aprovechados para no duplicar esfuerzos.

### **United States of America**

In the interest of time, we are going to cover all Regional Sub-Commission agenda items with this intervention. As a member of both IOCARIBE and WESTPAC, the United States is very pleased that the draft Medium Term Strategy emphasizes working closer to the field. This underscores the importance of the work of the Sub-Commissions. We commend all of the Sub-Commission reports and we fully support the Assembly Decisions to accept these reports. In particular, we note the critically important sargassum work of both IOCARIBE and IOCAFRICA and we also wanted to note WESTPAC's successful development of a regional programme on ocean acidification. We applaud the Sub-Commissions for coordinating the Decade across the regions and for incorporating Decade goals and principles into biennial work plans. There are many other highlights that we could flag but in the interest of time, we will end there.

### **World Meteorological Organization (WMO)**

WMO congratulates all of the IOC regional reports and the impressive work especially during the global pandemic.

Last year, the WMO-IOC Joint Collaborative Board (JCB) investigated the commonalties and complementary activities between the WMO and IOC regions, identifying areas of current and potential engagement.

Advancing this effort, this year, during the WMO's Regional Association IV, 18th Session – involving the Caribbean, and Central and North Americas - an Ocean Side Event was organized with experts and multiple stakeholders from that region, including the IOC. Setting out a road map for ocean activities in that region was identified as a necessary step forward by several members.

Emphasis was given to implement coastal and marine services in the Caribbean region, enhancing the observing systems, data processing to improve modelling and forecasting operations and with active participation of the public and private sectors.

## **3.3.2 Report of the IOC Sub-Commission for the Western Pacific(WESTPAC)**

### **China**

As the member state of WESTPAC, China would like to join other member states to express our satisfaction and appreciation to the work of WESTPAC, thanks to the leading team and regional office for the efforts to coordinate and improve the member states' participation in the relevant programs and

initiatives by IOC. WESTPAC has now become one of the most active and prosperous sub-commission of IOC through the joint efforts of its member states and hard work of WESTPAC Office in the past years. We also notice the Executive Secretary's highly evaluation to WESTPAC with the appreciation in his presentation on 15th of June.

China highly values the role of WESTPAC in implementing IOC activities in the region and we will continue to provide necessary support to WESTPAC through multiple means.

Also, we will support WESTPAC to play the leading role during the implementation of Ocean Decade at regional level, and we also would like to take this opportunity to call for more support from IOC headquarters to WESTPAC and further strengthen the WESTPAC Office.

### **Indonesia**

Indonesia confirming its commitment to play a role as an active member state in IOC family (in capacity development and research cooperation).

### **Japan**

In association of WESTPAC with UN Decade of Ocean Science, not only global actions but also regional actions are key to successes of UN Decade of Ocean Science, and WESTPAC has to have strong functions to promote and coordinate actions related to UN Decade of Ocean Science in our region.

In this regard, Japan express thanks to the government of Thailand to their kind offer to host the UN Decade Coordination Office in support of the WESTPAC Office and also to the offer to host the kick-off regional conference for UN Decade of Ocean science to be held in August this year. Japan will conduct further collaborations on expert and intellectual supports to develop and carry out proposals of Decade Actions, in cooperation with our WESTPAC member states.

In addition, the promotion of Capacity Development is a key in this region. In a regional scale, it is necessary to get clear pictures of Capacity Development needs, and WESTPAC has conducted effective operations of RTRC with member states. During the UN Decade era, WESTPAC will further need to develop Capacity Development and related activities in collaborations with regional activities of IODE and so on. WESTPAC should play a leading role in regional cooperation for ocean science and promotion of UN Decade of Ocean Science through collaborations with various bodies in the next Decade.

Japan will continue to make our efforts to promote ocean science in the region in collaboration with member states and the office, through various supports such as Japan Funds-in-Trust(J-FiT), in-kind supports, and conducting and joining projects/working groups/activities of WESTPAC.

### **Malaysia**

WESTPAC has been playing a key role in assisting countries in the region in developing knowledge and solutions to ocean issues as well as supporting various capacity development activities. We would like to stress that human resource, capacity and information as well as technologies are the building blocks to support the meaningful translation of science into actions on the grounds - for the people, communities and society at large. WESTPAC has also contributed in successfully bridging the gaps between scientists and policy makers through its effective implementation in policy and governance. As a member to this region, Malaysia will continue to support WESTPAC in its future works and activities

### **Philippines**

Despite its efficient operation, we continue to note with concern that the Sub-Commission is understaffed, in the face of the continuing need to respond to even more initiatives of the member states, and shepherding ongoing activities of WESTPAC. This may impact and be a major stumbling block in our efforts to position the IOC as the lead agency in the region for ocean research and the coordinating agency for the UN Ocean Decade.

The Philippines is committed to contributing to IOC's regional and global initiatives, especially in the area of capacity building. We will be happy to join efforts to craft other programs or projects that WESTPAC can contribute to the Ocean Decade. Among others, we see the opportunity of developing a programme that integrates the thematic areas of HABs, ocean acidification, and deoxygenation in targeted study sites that may be economically or environmentally important in our countries.

As shared in the report by WESTPAC Chair Vo Si Tuan and noted by Executive Secretary Ryabinin, "WESTPAC Regional Training and Research Centres in Asia and Pacific continue and is acquiring

momentum." The Philippines' RTRC on Reef Restoration and Management of the Marine Science Institute, University of the Philippines, once officially endorsed and after this pandemic, should be able to accept students and researchers for short-term training courses from the region and other parts of the world, and complement the other RTRCs of WESTPAC.

### **Republic of Korea**

The regional commission activity of the IOC, which aims to solve pending issues within a region, is in accordance with the UN Ocean Decade's vision of the "Science we need for the ocean we want," and thus the Republic of Korea strongly supports Westpac's activities including capacity building for the region, and the upcoming Decade regional kick-off conference for Western Pacific and Adjacent Areas to be held in Bangkok.

The DRMREEF Project that the Republic of Korea has supported since 2013 has contributed to the build-up of the data on ocean biodiversity of the East Asia region. Moreover, the Asian Marginal Seas program led Korean and Japanese co-chairs will lead to the advancement of our understanding of the marine environment and biological productivity responding to increased global warming and human activities in the AMS while contributing to the Ocean Decade through the exchange of information and knowledge on the key phenomena and processes in the individual marginal seas and their interactions.

The Republic of Korea expects the IOC-WESTPAC to continuously engage in activities that will solve regional issue in the Pacific region, and we will continue to provide as much support as possible.

### **Russian Federation**

In recent years, at each session of the IOC Assembly, we have noted the continued development of WESTPAC. The number and relevance of projects carried out by the sub-commission is increasing, and the number of participants involved in its activities is growing. WESTPAC shows a good example of how to organize successful international cooperation. WESTPAC's experience can be extended to neighboring regions, particularly the Indian Ocean.

For the successful implementation of all the plans of WESTPAC, the strengthening of the technical secretariat and greater financial support of the IOC are certainly required. Currently, many of the projects are being implemented thanks to the financial support of the participating countries.

Russia supports WESTPAC projects related to maritime services, in particular, NEAR-GOOS, as well as research projects on the most pressing problems of the Indo-Pacific region and the marginal seas of Asia. But I would especially like to note the high results of WESTPAC in the field of organizing a network of research and educational centers. Capacity development and alignment is most important for the WESTPAC region, and may be one of the key activities during the Decade of Ocean Sciences. Russia is interested in preparing such projects.

### **Thailand**

Thailand recognizes with appreciation the overall effort put by the WESTPAC Member States and the WESTPAC Office during the past intersessional period, which contributed to the achievement of the Sub-Commission as a whole.

Thailand emphasizes the significant role of existing regional platforms and bodies and would like to reiterate their priorities to be enhanced and strengthened. Thus, we offer to host a Decade Coordination Office, building on the current WESTPAC Office, with a mandate to develop, coordinate and implement the Decade Action in the region.

Furthermore, Thailand by the Department of Marine and Coastal Recourses, Ministry of Natural Resources and Environment, in Cooperation with The Marine Science Association of Thailand in cooperation with the WESTPAC will host the virtual UN Decade Regional

Kick-off Conference in August this year, and followed by the 11th WESTPAC International Marine Science Conference in next year, 2022.

### **United States of America**

See 3.3.1

### **Viet Nam**

Viet Nam wishes to thank WESTPAC for its support in the establishment of a Keylab on Marine Toxins and Seafood Safety, as well as other projects on Ocean Acidification and microplastic pollution.

Viet Nam will continue to work closely with WESTPAC in the future for a stronger region and new brave ocean.

### **World Meteorological Organization (WMO)**

See 3.3.1

### **3.3.3 Report of the IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE)**

#### **Colombia**

Asimismo, queremos resaltar que nuestro país continúa comprometido con hospedar la oficina en Cartagena, aportar con personal nacional para el funcionamiento de la Subcomisión y con el desarrollo de los programas y proyectos de la Subcomisión.

El término reciente de “Economía Azul” como estrategia para salvaguardar los océanos y recursos hídricos del mundo, surge de la necesidad de equilibrar las actividades económicas vs la capacidad de los océanos. No obstante, las actividades deben ser sostenibles, balanceando el crecimiento, desarrollo y protección a largo plazo de los ecosistemas y recursos oceánicos. De esta manera, y teniendo en cuenta lo establecido por los Objetivos de Desarrollo Sostenible y la Agenda 2030, Colombia se permite solicitar se pueda tener en cuenta el término “Crecimiento Económico Sostenible, Inclusivo y Sostenido”, en consonancia con lo solicitado por los Estados Miembros en el Consejo Ejecutivo de la Comisión Oceanográfica Intergubernamental.

Nuestro país, se compromete a seguir aportando sus capacidades para la región de Latinoamérica y el Caribe, en particular las acciones encaminadas a potenciar y desarrollar el Decenio de las Ciencias Oceánicas para el Desarrollo Sostenible.

#### **France**

La France informe qu'elle a contacté le responsable de IOCARIBE et le responsable du groupe ANCA (Algas Nocivas en Caraïbe) de IOCARIBE afin de faire partie de ce réseau sur les algues toxiques et nuisibles via l'Ifremer en Martinique. Le projet CARMINA (2021-2026) porté par l'Ifremer et cofinancé par l'Agence Française de Développement (AFD) va permettre de former les membres d'ANCA sur les prélèvements, l'identification et la mise en culture des microalgues potentiellement productrices de ciguatoxines et ainsi aider à avancer les connaissances sur la ciguatera dans les Caraïbes.

#### **Jamaica**

Jamaica wishes to express appreciation for the strong support provided by the Sub-Commission to Jamaica over the last two years in areas such as Sargassum and oil spill monitoring, the development of the Caribbean Marine Atlas and training and capacity development through the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+) project.

As a member of the High-Level Panel for a Sustainable Ocean Economy, Jamaica is deeply committed to the sustainable management of 100 percent of the country's national waters to aid in protecting the ocean's resources globally. We urge all IOC member States to respond to the Panel's call to Ocean-Based Climate Action which provides a pathway to a low carbon, climate resilient future that secures a healthy ocean and human wellbeing.

As a small island developing state, climate change remains a very real and fundamental issue of concern for us and the effects remain unrelenting even while we continue to face the ravages of the COVID-19 pandemic. As we speak, Jamaica and the rest of the Caribbean have commenced what is expected to be an above-average hurricane season. Earthquakes, including as a result of volcanic activity in the region, further pose the threat of tsunamis, while sargassum invasion on once-pristine beaches proves a disincentive to tourists, on whom our economy is heavily reliant. We, therefore, support the recommendation for the IOCARIBE to continue its catalytic role in building partnerships to address, among others, sargassum and harmful algal bloom (HABs), marine and coastal hazard forecasting including tsunamis and the improvement of hurricane observing forecasting capacity. We further wish to highlight our support for the recommendation to create an IOCARIBE-focused Community of Practice to help strengthen capacity in addressing ocean acidification.

Addressing the challenges that confront our marine environment will be impossible if we do not seize the opportunities for coordination and cooperation. In this context, we welcome the creation of the IODE InfoHub project and the Ocean Teacher Global Academy, both established with a special emphasis on

SIDS. We seize the opportunity to thank partner countries and organisations that have supported the work of IOCARIBE, but also urge increased financial and in-kind support to enable IOCARIBE to effectively implement the SDGs and the Ocean Decade. We look forward to continued cooperation with all relevant actors. We further look forward to the acceptance of the IOCARIBE report.

#### **United States of America**

See 3.3.1

#### **World Meteorological Organization (WMO)**

See 3.3.1

### **3.3.4 IOC Regional Committee for the Central Indian Ocean (IOCINDIO)**

#### **United States of America**

See 3.5.6

#### **WESTPAC**

See 3.5.6

#### **World Meteorological Organization (WMO)**

See 3.5.6

### **3.4.1.1 Warning and Mitigation Systems for Ocean Hazards: Regional Services**

#### **Colombia**

En ese sentido, el país manifiesta su intención de mejorar el proceso de generación de información técnica de tsunamis, con una nueva herramienta para la evaluación y pronóstico de amplitud de tsunamis para las costas Colombianas. De igual manera, se continuará apoyando a los municipios costeros e insulares en el desarrollo de sus protocolos de respuesta ante tsunamis, además de seguir promoviendo espacios de capacitación y sensibilización, tanto en las entidades territoriales como a la población vulnerable a este fenómeno.

Frente a la estrecha colaboración entre la COI y la UNDRR para el Día Mundial de Concienciación sobre los Tsunamis de 2020, Colombia ha apoyado el desarrollo de las iniciativas en conmemoración a ese día. Para este año, se espera realizar una serie de actividades que promuevan la concienciación sobre los tsunamis a nivel nacional, en el marco del Comité Técnico Nacional de Alerta por Tsunami, y a nivel internacional se participará en las acciones que se establezcan a través del CARIBE EWS, PTWS y la Comisión Permanente del Pacífico Sur.

Colombia respalda la iniciativa de la creación del Programa de Tsunami en el marco de acción del Decenio, que permita contribuir a la meta de tener un océano seguro y pone a disposición, personal técnico para hacer parte del Comité Técnico que se establezca para la preparación del proyecto decenal de investigación, desarrollo y ejecución, el cual será puesto a consideración por el TOWS-WG en su 15a reunión del 2022. Asimismo nuestro Comité Técnico Nacional apoyará la difusión en el territorio de la documentación y guías técnicas que el mencionado programa genere a través de los diferentes grupos de trabajo de la COI.

Finalmente, como lo destaca el documento del Programa, es necesario mejorar el desarrollo de capacidades para comprender el peligro de tsunamis y mejorar la alerta, la respuesta y la resiliencia, para lo cual Colombia acogiendo la recomendación de la 16a reunión de IOCARIBE, pone a disposición la participación del Centro Regional de Formación en Colombia y su colaboración con otros RTC y Centros Especializados de Formación (STC), para facilitar las capacitaciones de interés a los Estados Miembros.

#### **India**

We are glad to note the progress with respect to Wave Exercises organised in all the regions and most importantly the proposal for the Ocean Decade Tsunami Programme.

India is an integral part of the Indian Ocean Tsunami warning and Mitigation System (ICG/IOTWMS) and continues to provide services to the region as one of the Tsunami Service Provider, together with Australia and Indonesia. During the inter-sessional period, India sustained its observational networks



(Seismic, Tsunameter and Tide Gauges) and also established new capabilities with respect to GNSS network in the A & N Islands. India participated in the IOWave20 exercise, contributed to the regional surveys conducted by the IOTWMS on the impact of Covid-19 on tsunami observing networks and warning centres, development of regional guidelines developed by IOTWMS for handling tsunami evacuations in the backdrop of Covid and strengthening warning system in the Makran region as part of the UNESCAP funded project being implemented by the ICG/IOTWMS.

Mr. Chair, another notable achievement is related to the recognition of 2 communities in Odisha province of India (Noliasahi and Venkatraipur) as UNESCO-IOC Tsunami Ready, a first in the Indian Ocean Region. This was made possible through the efforts of the Indian National Tsunami Ready Board spearheaded by the Ministry of Earth Sciences (MoES-INCOIS) working together with the Indian Ocean Tsunami Information Centre (IOTIC) and the IOTWMS Secretariat. Plans are afoot to expand this important initiative to other communities in Odisha as well as other Indian Provinces.

Mr. Chair, Recent tsunami events have highlighted the importance of enhancing the capabilities of tsunami warning systems beyond their capability to handle seismic sources. India reiterates the importance of developing capabilities to assess hazards, detect, warn and respond for tsunamis triggered by non-seismic sources and more importantly near-field events that give very less response time.

In this backdrop, India fully supports the establishment of the Ocean Decade Tsunami Programme, scientific committee proposed to prepare a draft 10-year development and implementation plan as well as the governance structure for the Ocean Decade Tsunami Programme. This programme will contribute to the safe ocean outcome of the decade and will strengthen both the upstream technical component and the downstream community preparedness components of the end-to-end Tsunami Warning and Mitigation Systems.

### **Italy**

Italy will continue to operate in the NEAM framework, contributing to the Ocean Decade in the Mediterranean also to achieve multi-hazard EWS.

Main lines along which Italy will work on include:

- Improvement of the tsunami science and of the warning system. Italy is one of the Tsunami Service Providers (TSPs) of the NEAM region since 2016, and has coordinated the first probabilistic tsunami hazard model for the NEAM region, namely TSUMAPS-NEAM, whose results were used in Italy to define the inundation/evacuation areas. Italy will be happy to share this experience with other countries of the NEAM region.
- A strong link between scientific Institutions (National Institute of Geophysics and Volcanology - INGV, Italian Institute for Environmental Protection and Research- ISPRA, etc.) and Civil Protection authorities at national and local levels is fundamental to achieve tsunami risk reduction.
- Involvement of citizens, local authorities, schoolteachers and students (through web, social media, exercises, etc.)

Italy is now increasing its efforts along several lines:

1) Working towards the creation of a Thematic Core Service within EPOS, the European Plate Observing system, that will allow to make data and services more easily available to the scientific community. Also, Italy is working to reach a higher interoperability of the TSPs operating in the NEAM region, to better harmonize information and alert messages towards the member States in case of potential tsunamigenic earthquakes.

2) Improving the knowledge of historical tsunami data and the hazard estimates, exploring also non-seismic sources.

3) Improving observational networks, such as the national sea level network by ISPRA, with new tide gauges, high quality instruments, high sampling rate, transmission redundancy, and installing new GNSS stations (in collaboration with NOA) for improving the early characterization of large earthquakes.

Also, Italy is exploring the feasibility of using SMART cables and offshore observatories in the Ionian Sea, as well as offshore buoys.

4) Italy is striving to increase the rapidity of the TEWS computing faster earthquake locations and magnitudes but maintaining accuracy. All alert messages for the Mediterranean since 2017 were issued

by Italy within 7 to 10 minutes after the earthquake's origin time. Also, Italy is testing new ways of probabilistic tsunami forecasting that makes explicit uncertainty treatment available to the decision makers.

Finally, Italy feels the need of filling the last mile portion of the alerting chain. For this reason, Italy will continue working on:

5) A systematic analysis of tsunami risk perception, started in 2018 on a stratified sample of more than 6,000 interviews through CATI (Computer-Assisted Telephone Interviews) representing 9 million citizens living on the coasts of Italy, and still ongoing, both along the coastal population and at national level. This will help in defining a communication strategy, including the CAT web site (<https://www.ingv.it/cat/en/>) opened in 2020 in Italian and English.

6) Last but not least, Italy started in 2020 the path towards community engagement in the tsunami risk reduction strategy, by officially adopting the Tsunami Ready program, in response to a very important IOC Circular Letter (n. 2821) sent in December 2020.

Three pilot municipalities were identified last year in 3 different regions of Italy (namely Calabria, Latium, Sicily): all have joined the program enthusiastically. The Tsunami Ready National Board was nominated this year (2021). Two Local Committees were also nominated recently and have started to work for the recognition.

## **Portugal**

Portugal considers of extreme importance the existence of Tsunami Early Warning Systems, and has been actively involved in the implementation of the Tsunami Warning System for the NE Atlantic and Mediterranean region since its inception.

In late 2017 Portugal created its National Tsunami Warning Center, based at the Portuguese Institute for Sea and Atmosphere (IPMA), and started to provide tsunami services at national level, having declared its operational status during the ICG/NEAMTWS-XIV in Lisbon, in November. This implementation has been conducted in coordination with the National Emergency and Civil Protection Authority (ANEPC), which is a crucial entity in the process. We also highlight the contribution of several institutions, at national and international level, namely in the seismic and sea level data sharing process. In December 2019, during the ICG/NEAMTWS-XVI session, IPMA was accredited and recognized as a Tsunami Service Provider, now providing services to several countries in the NE Atlantic.

Following a decision of the Portuguese Government, we are preparing a major contribution to the monitoring system in the NE Atlantic, which is the implementation of a SMART Cable (Telecommunication cable instrumented with sensors) in the Azores-Madeira-PT mainland region that will significantly improve the monitoring and detection capability.

Due to the low frequency of tsunami events in the NEAM region, more and more exercises are essential for the preparation of the system, and we highlight initiatives as the NEAMWave21, which are crucial to test and validate the operational procedures; this includes modelling tsunami impact in coastal areas and setting up escape routes in case of warning. Several outreach initiatives and local exercises in coordination with civil authorities have been regularly organized, which are considered extremely useful for the success of the whole system.

We would also like to highlight the importance of the timely creation of the Decade Tsunami Programme.

## **Spain**

Durante el último período intersesional del IOC, además del mantenimiento operativo del sistema de alerta temprana, coordinado por la oficina de alerta sísmica del Instituto Geográfico Nacional (IGN) y las autoridades de Protección Civil, que también reciben las alertas y avisos emitidos en el marco de las actividades de IOC-NEAMTWS, los avances de España en el ámbito de la alerta temprana de tsunamis incluyen la reciente aprobación de una política de actuación (Resolución BOE 19 de mayo de 2021, Acuerdo del Consejo de Ministros, por el que se aprueba el Plan Estatal de Protección Civil frente a Maremotos).

España también participa en el proyecto piloto del IOC TsunamiReady (Municipio de Chipiona, IH-Cantabria, EDANYAgroup-Univ.Malaga) que tiene como objetivo mejorar el sistema de planificación, educación y comunicación de alertas de tsunami. Esto se puede utilizar como modelo para la implementación de este tipo de sistema integrado de alerta temprana en otros municipios costeros, mejorando la respuesta de las comunidades ante el riesgo de tsunami. En este sentido, EDANYAgroup

colabora en otros proyectos internacionales relacionados como ARISTOTLE-eHNSP y AGITAR Cost Action. También España participa en otros proyectos relacionados con alerta de tsunamis que se encuentran en fase de evaluación.

### **Turkey**

Tsunami Warning Systems are essential components of coastal community sustainable resilience and we are honoured to host one of the NEAMTWS Tsunami Service Providers, namely the Regional Earthquake and Tsunami Monitoring Centre of Boğaziçi University-Kandilli Observatory and Earthquake Research Institute, in Istanbul-Turkey, which provides 24/7 tsunami warnings to Eastern Mediterranean, Aegean, Marmara and Black Seas since 2012. It should be noted that the corresponding in-kind contribution of Turkey related to operation of the Centre and maintenance of tide-gauges operated by the General Directorate of Mapping and transmission of the sea-level data amounts to approximately 650.000 USD, annually.

The tsunami generated on 30 October 2020 by the offshore Samos Island and Kuşadası/Turkey earthquake in the Eastern Aegean Sea with a magnitude of 6.9 is the largest in the Aegean Sea since 1956 Amorgos and the third largest in the Mediterranean since the 1908 Messina Strait earthquakes, and highlighted once more the importance of the NEAMTWS. The tsunami arrived within ten minutes to the north-west coast of Samos Island and within 20 minutes to the coast of Turkey, where one person died due to the tsunami. Significant damage occurred to coastal infrastructure. While the upstream component of the NEAMTWS functioned in a satisfactory manner, this event reminded on its limitations with respect to local and near-field tsunami events, and the need to focus more in the downstream components, namely, awareness, preparedness and effective integration of civil protection mechanism to ensure a successful end-to-end tsunami warning system is in place.

In light of the similar lessons learnt from the 20 June 2017 Bodrum-Kos earthquake and tsunami, KOERI was the coordinator of the "Last Mile - Turkey" project in 2019 in partnership with the Middle East Technical University. The project was funded by European Commission-Joint Research Centre targeting Bodrum in Turkey and included the installation of a local prototype earthquake monitoring-tsunami warning system, preparation of high-resolution tsunami inundation and evacuation maps, awareness and preparations activities, such as seminars, workshops and a table-top tsunami exercise. This project was a first example of its kind at the national level, and in our assessment, it was an important step towards realization of a possible "Tsunami Ready" program in Turkey. KOERI contributed to the NEAMTWS Regional Webinar for the World Tsunami Awareness Day 2020, focusing on overview and national advances in strategies in mitigating and preparing for tsunamis in NEAM region, emerging tsunami risk reduction strategies at the local level, and opportunities in implementing local community recognition programmes such as the Tsunami Ready in NEAM region. In this regard, we welcome the initiation of a dedicated Tsunami Ready sub-working group within ICG/NEAMTWS, which aims to adapt Global Tsunami Ready Standards and Guidelines for use in the NEAMTWS region and pilot Tsunami Ready within the framework of the NEAMTWS.

At the national level, 18 out of 20 tide-gauge radar type stations operated by the General Directorate of Mapping are integrated in the KOERI-TSP operations. Four Inexpensive Sea-Level Devices (IDSLs) provided by European Commission-Joint Research Centre had already been installed in Fethiye, Bozcaada, Samsun, and Bodrum. KOERI is in the process of establishing its own multi-hazard monitoring network in the Marmara Sea and 3 such systems including radar type mareographs have been installed this year. Thanks to the bilateral agreement between INGV (Italy) and KOERI, and availability of other sea-level stations from Central and Eastern Mediterranean, more than 75 sea-level stations are available for KOERI-TSP operations, which demonstrates significant improvement in its operational capability. Recalling the recognition of the importance of real-time sea-level data exchange by the ICG/NEAMTWS at its various sessions, we would like to encourage all TSPs to make bilateral agreements for sea-level data exchange, similar to the one between INGV and KOERI.

Tsunamis are transboundary events which makes the intergovernmental governance of relevant activities more important. In that regard, we are pleased to see the improvements in the collaboration among TSPs in recent years, such as between KOERI and INGV for the real-time sea-level data exchange and between KOERI and NOA for the joint Eastern Mediterranean Scenario during the NEAMWave21 Tsunami Exercise conducted on 8 March 2021.

### **United Kingdom of Great Britain and Northern Ireland**

The UK wholeheartedly supports the recommendations of ICG/CARIBE-EWS-XV WG on Tsunami Monitoring and Detection Systems and recognises the need for member states to maintain their sea

level stations to an operational standard. To this end, the UK has continued to provide technical support and instrumentation to the member states of Belize, Dominica and St Lucia in order to preserve operational availability of their sea level monitoring systems.

The UK also welcomes the recommendation for development of GNSS-reflectometry in real time. The UK is presently working towards this goal for some UK and European gauges and sees this as a promising means of achieving another of the WG recommendations to improve resilience of instrumentation to hurricanes, since GNSS instrumentation can often be installed in less exposed locations than conventional tide gauge instrumentation.

The UK supports the recommendation of ICG/NEANTWS XVI/3 to explore and support initiatives regarding the use of ocean bottom platforms to supplement network coverage. The UK is working to upgrade certain key UK sea level monitoring stations to offer the sampling and latency required for tsunami warning purposes and is working with European partners through the Horizon EuroSea Project to develop low maintenance monitoring systems in the Mediterranean and North Africa.

### **United States of America**

The United States would like to thank the ICGs for their reports and congratulates Portugal for achieving IOC Tsunami Service Provider Designation. We're also pleased to learn of the addition of new IOC-designated Tsunami Ready communities and pilot sites as well as the continued success of important readiness exercises such as NEAMWAVE and CARIBE WAVE given the challenges of the global Pandemic.

As an IOC-designated Tsunami Service Provider for both the Pacific and Caribbean regions, the US firmly underscores the need for co-designed, multidisciplinary partnerships to ensure a science-informed "whole of society" approach to addressing the Global Tsunami Risk. The US therefore specifically commends the decision put forth by Dr. Frolov and the TOWS Working Group to establish a dedicated Tsunami Programme under the UN Decade of Ocean Science for Sustainable Development. There are important and exciting operational capabilities that such a Programme can help bring within reach. These include developing techniques to incorporate data from the Global Navigation Satellite System and potentially partnering with industry to derive critical observations from deep-ocean fiber optic cable networks. We are confident that these and other scientific advances will dramatically improve the timeliness, accuracy and precision of tsunami threat information provided to at-risk IOC member states.

Similarly, as we look to improve tsunami resilience, we view a dedicated UN Decade-level Tsunami Programme, as a critical enabler to the Global effort to "scale-up" the IOC's Tsunami Ready Programme, with specific focus on the most vulnerable coastal communities. To this end, the US is pleased to announce that over \$660K of new funding is being made available through USAID's Bureau for Humanitarian Assistance to support Tsunami Ready-related preparedness efforts in the Caribbean and Pacific. We are also pleased to confirm that the US-hosted International Tsunami Information Center will serve as an Ocean Teacher Global Academy Specialized Training Center, focusing on tsunamis. The US would particularly like to recognize and thank Dr. Maria Ana Baptista from Portugal, and Chair of the ICG/North-East Atlantic and Mediterranean Tsunami Warning System, for her expert assistance helping ITIC and IOC create this first course focused on tsunami awareness.

### **3.4.1.2 Warning and Mitigation Systems for Ocean Hazards: Global Coordination**

#### **Chile**

Chile estima que el Programa de Tsunami de la COI ha tenido un muy buen avance y que las tareas identificadas como pendientes podrán precisarse al trabajar el Borrador del Programa de 10 años sobre Investigación, Desarrollo y Plan de Implementación de Tsunami para el Decenio de los Océanos; tarea encomendada al Comité Científico para el Programa de Tsunamis de la Década de los Océanos. Estamos confiados que este Plan, dedicado a lograr avances transformadores en la detección, medición y previsión de Tsunamis, incluidos los Tsunamis generados por fuentes no sísmicas, constituirá un recurso valiosísimo para el programa.

Chile aprueba la propuesta de establecer un Comité Científico y la preparación de un Plan.

## **France**

La France soutient la recommandation de compléter les réseaux de mesure du niveau de la mer et une acquisition haute fréquence (1 Hz) pour pouvoir mesurer les tsunamis de toute origine (sismique, volcanique, glissements de terrain...).

La France soutient la demande de prolongation des deux équipes spéciales établies par le groupe de travail TOWS.

## **Indonesia**

As a country which is prone to coastal disasters/hazards including tsunami, and to reduce total disaster loss caused by tsunami, Indonesia is strongly support the development of a Tsunami Programme under the UN Decade of Ocean Science for Sustainable Development. This must include the tsunami literacy program, such as the Earthquake field school for communities, as part of the ocean literacy programme in National, Regional, and Global levels.

What we have learned from Palu Tsunami that there was insufficient time to reach the community with tsunami warning so we are fully agree that we must educate the vulnerable community in coastal area to be ready to act after they feel the earthquake and not to wait for the warning from the authority.

We also notice the important to promote research and development of more technically developed tsunami detection and warning systems capable of addressing seismic and non-seismic sources of tsunami as our lesson learnt from Palu and Sunda Strait Tsunamis which is relating to the partial collapse of Anak Krakatau volcano and sub marine land slide.

We are also noting that the national meteorological services of some Member States in many cases are responsible as well for the tsunami early warnings, therefore we support to promote the role of meteorological services in tsunami early warning in World Tsunami Awareness Day 2021. Furthermore, we promote to incorporate tsunami warnings into an inclusive multi hazard early warning system to be integrated into the multi hazard early warning system available in coastal zones for all inundation resources, such as the Coastal Inundation Forecasting system that has been developed in some countries under the collaborative support from WMO. We would like to highly encourage IOC to working together with WMO and the Members in integrating the Tsunami Early Warning in that inclusive early warning system in coastal zones.

## **Japan**

Japan has contributed to International Tsunami Warning and Mitigation System continuously. This year, Japan planned to host the 29th session of ICG/PTWS in March, which is the 10th anniversary of the 2011 off the Pacific coast of Tohoku Earthquake. Unfortunately, it has been postponed due to the expansion of COVID19. The chairperson of the ICG/CARIBE-EWS reported that their 15th session was held with full online meeting in April 2021. Japan would like to welcome to their proactive efforts in the pandemic.

Japan would like to support the Ocean Decade Tsunami Program that has been proposed and also make possible contributions towards achievement of the program in order to reduce tsunami disasters based on our experiences and knowledge obtained for a long time.

## **New Zealand**

We would like to draw the Assembly's attention to the establishment of a New Zealand Tsunami Monitoring and Detection Network in the south-west Pacific Ocean. This network of 12 Deep-ocean Assessment and Reporting of Tsunami Buoys, commonly known as DART buoys, provides new capacity to detect and report tsunami of all sizes. The network provides an important additional information source for both confirming the presence or absence of a tsunami and when any risk from a tsunami.

Information from this network is being actively shared across the south-west Pacific through the Pacific Tsunami Warning Service to enable all states in the region to benefit from the network. New Zealand sees the establishment of the network in the south west Pacific Ocean as a timely contribution to the UN Decade of Ocean Sciences for sustainable development.

## **Thailand**

Thailand has actively participated in the warning and mitigation system for ocean hazards since the early period. We have continuously operated and maintained of the 2 tsunami buoys in the eastern

Indian Ocean including the tide gauges those are able to operate in tsunami detection mode in the eastern Indian ocean and the Gulf of Thailand.

We appreciate IOC for the support on capacity building, especially on the information and communication system for the Indian and the Pacific Oceans as well as the South China Sea, including Webinar and exercise of IOWave20 in September and October 2020. The knowledge achieved will be benefit to several government agencies in Thailand especially the National Surveillance of Maritime Disasters and related agencies.

Key Activities of National Disaster Warning Center of Thailand during 2019 to 2021 include;

First, we have repaired and maintained 2 tsunami buoys in the Indian Ocean, which are utilized by countries of the ocean rim.

Second, the National Disaster Warning Center and Hydrographic Department have improved and maintained tide gauges in Phuket and Phang Nga provinces for collecting information on tsunami detection in conjunction with other IOC's tide gauges in the Indian Ocean and the Gulf of Thailand.

Third, we have participated in the trainings of information communication system with the following groups: the Indian Ocean's countries, the Pacific Ocean's countries, the South China Sea's countries

Mr. Chair, The Thai government gives priority in the continual development and maintenance of our early warning system in order to save lives and properties in the risk areas. We will continue our support and participation with the IOC in this issue.

### **United States of America**

We're also pleased to learn of the addition of new IOC-designated Tsunami Ready communities and pilot sites as well as the continued success of important readiness exercises such as NEAMWAVE and CARIBE WAVE given the challenges of the global Pandemic.

As an IOC-designated Tsunami Service Provider for both the Pacific and Caribbean regions, the US firmly underscores the need for co-designed, multidisciplinary partnerships to ensure a science-informed "whole of society" approach to addressing the Global Tsunami Risk. The US therefore specifically commends the decision put forth by Dr. Frolov and the TOWS Working Group to establish a dedicated Tsunami Programme under the UN Decade of Ocean Science for Sustainable Development. There are important and exciting operational capabilities that such a Programme can help bring within reach. These include developing techniques to incorporate data from the Global Navigation Satellite System and potentially partnering with industry to derive critical observations from deep-ocean fiber optic cable networks. We are confident that these and other scientific advances will dramatically improve the timeliness, accuracy and precision of tsunami threat information provided to at-risk IOC member states.

Similarly, as we look to improve tsunami resilience, we view a dedicated UN Decade-level Tsunami Programme, as a critical enabler to the Global effort to "scale-up" the IOC's Tsunami Ready Programme, with specific focus on the most vulnerable coastal communities. To this end, the US is pleased to announce that over \$660K of new funding is being made available through USAID's Bureau for Humanitarian Assistance to support Tsunami Ready-related preparedness efforts in the Caribbean and Pacific. We are also pleased to confirm that the US-hosted International Tsunami Information Center will serve as an Ocean Teacher Global Academy Specialized Training Center, focusing on tsunamis. The US would particularly like to recognize and thank Dr. Maria Ana Baptista from Portugal, and Chair of the ICG/North-East Atlantic and Mediterranean Tsunami Warning System, for her expert assistance helping ITIC and IOC create this first course focused on tsunami awareness.

### **World Meteorological Organization (WMO)**

WMO acknowledge all stakeholders involved in tsunami early warning. National Meteorological Services (NMHS) are mandated to provide early warning services for flooding from various sources including impacts of severe weather such as tropical cyclones, and in many cases, NMHS are responsible for tsunami early warnings. As such, WMO welcomes the theme of partnerships, for World Tsunami Awareness Day 2021: an opportunity to promote the role of meteorological services in tsunami early warning, and, collaboration with ready weather nation initiatives.

WMO's Coastal Inundation Forecasting Initiative (CIFI) shares similar goals with the tsunami program, including improved high-res bathymetry and topography data, capacity development and public awareness for coastal flooding hazards including tsunami and storm surges. WMO Congress agreed

to combine early warning in coastal zones for all inundation sources and endorsed WMO working jointly with the IOC to incorporate tsunami warnings into an inclusive multi hazard early warning system (MHEWS).

The WMO Global Multi-hazard alert system (GMAS) concept, is such an approach, building on and combining capacity development, technological initiatives and components from various disciplines, to create an integrated framework. An underlying component is the implementation of the Common Alerting protocol (CAP) that allows emergency alerting for all hazards across all media. IOC is welcome to endorse the Emergency Alerting Call to Action recently launched by WMO, ITU, IFRC and partners, and also endorsed by UNDRR.

WMO Data Policy emphasises easy access to open data. The WMO Information System 2.0 (WIS 2.0) is implementing new data exchange protocols supporting GMAS for immediate and reliable delivery of warning messages. This will replace the current WIS/GTS systems, with better performance and reliability of transmissions, reaching wider audiences. WMO welcomes collaboration with the IOC through demonstration projects (see <https://community.wmo.int/activity-areas/wis/evolution/wis2-demonstration-projects> ) and eventually new projects around warning transmission to strengthen the implementation of warning messages delivery.

WMO also welcomes support in efforts to progress undersea cables for tsunami warning.

### **3.4.2 International Oceanographic Data and Information Exchange**

#### **Argentina**

Para Argentina la propuesta del Sistema de Datos e Información Oceanográficos (ODIS) es de total interés y queremos expresar nuestro compromiso de participación. Entendemos que la experiencia acumulada en nuestro país con el Centro Argentino de Datos Oceanográficos, así como la iniciativa del Sistema Nacional de Datos del Mar son de utilidad para alcanzar los objetivos del ODIS.

Asimismo, Argentina confirma su interés por participar en la revisión de la política de datos y sobre todo teniendo en cuenta las discusiones en marcha de similares revisiones en el marco de la Organización Meteorológica Mundial.

Del análisis de los documentos presentados se destaca la necesidad de marcar un rumbo que sirva para atender la gestión de datos a lo largo del Decenio del Océano y queremos expresar nuestra voluntad de participar en el correspondiente grupo de trabajo

En otro orden, queremos destacar la evolución del proyecto OceanInfoHub que cataliza las aspiraciones y necesidades de la comunidad del océano en línea con lo indicado en las Directrices de la COI para la transferencia de tecnología marina. Este proyecto OceanInfoHub pone el foco inicial en América Latina y el Caribe, África y los Estados Insulares del Pacífico y permitirá conectar capacidades y oportunidades con necesidades y requerimientos.

Desde el año 2020 se configuró en nuestro país un Centro Especializado del Ocean Teacher Global Academy y ya hemos impartido el primer curso bajo modalidad virtual sobre la delimitación del límite exterior de la plataforma continental, capitalizando y difundiendo la experiencia argentina, El curso ha tenido un gran éxito de concurrencia y nos encontramos definiendo la oportunidad para repetirlo. Paralelamente, se encuentra en preparación un nuevo curso en temas de observaciones de hielo marino y témpanos, una cuestión de gran importancia a ser considerada por los países en cercanías o con intereses en las regiones polares. De esta manera se consolida rápida y efectivamente una de las iniciativas más novedosas al respecto.

Finalmente, Argentina quiere expresar su agradecimiento especial a la oficina de proyecto IODE y al Gobierno de Flandes, Reino de Bélgica por el apoyo y gestiones en el mantenimiento de estas actividades.

#### **Brazil**

Brazil has a long-standing tradition of supporting international efforts to better map, understand, and disseminate vital oceanographic information, for the good of humanity.

We acknowledge the Ocean Data and Information System (ODIS) as a valuable tool for discovering and sharing ocean data, products, services, and oceanic information. Brazil continuously seeks to improve the accessibility and interoperability of its data, metadata and information, including through the participation of the Directorate of Hydrography and Navigation (DHN) in the Brazilian National

Spatial Data Infrastructure (INDE) initiative. We have recently uploaded several information layers to contribute to the Marine Spatial Planning (MSP), on issues such as Brazilian EEZ Jurisdictional Limits, Physiography of the Continental Margin, among others, and we have also supported the publication of marine data and information for disseminating it to the scientific community, private sector, and general public. As a major achievement, we managed to insert our Marine Spatial Data Infrastructure (IDEM-DHN) as a prototype geoportal form in the web. As a structure itself, and as it develops, it will certainly constitute an important part of the ODIS system.

When publishing this kind of information in the web, we aim at contributing to the well-being of coastal communities and the promotion of scientific studies, sustainable economic development and safety of life at sea. We also make our best efforts to ensure the highest quality of the data and information available in an operational manner, following the FAIR Principles, aimed at ensuring Findability, Accessibility, Interoperability, and Reusability.

We believe that ODIS can bring important contributions to the UN Decade of Ocean Sciences for Sustainable Development, as a tool to improve the cooperation among countries and to promote sustainable development.

### **Canada**

Le Canada reconnaît la valeur de l'IODE et recommande la révision de la politique de la COI en matière de données afin de s'assurer que cette politique est conforme aux principes internationaux actuels. Compte tenu de la complexité des données prises en compte par la COI/IODE, le Canada propose que le groupe de travail sur la révision de la politique des données travaille avec d'autres partenaires internationaux, comme l'OMM, pour assurer le succès de la nouvelle politique. La proposition d'élaborer une nouvelle politique en matière de données s'inscrit dans le cadre de la mise en œuvre de la Décennie des Nations Unies pour l'océanologie et l'IODE devrait envisager d'élargir la portée des données prises en compte par la politique afin d'accroître l'influence de la COI/IODE dans son rôle de chef de file des sciences océaniques mondiales. Le Canada appuie la création d'ODIS en tant que projet pouvant apporter une contribution majeure au résultat d' un océan transparent et accessible de la Décennie.

### **Chile**

Chile, es miembro de IODE y su vínculo principalmente es a través de su Centro Nacional de Datos Hidrográficos y Oceanográficos (CENDHOC). Quisiéramos sumarnos al agradecimiento expresado al Gobierno de Flandes por ser el anfitrión de la Oficina del Proyecto IODE de la COI y su continuo apoyo financiero a éste. En otro aspecto, apoyamos la idea de revisar el Plan Estratégico para la Gestión de Datos e Información Oceanográfica de la OHI y la revisión de la Política de Intercambio de Datos Oceanográficos de la COI.

### **Colombia**

El Gobierno de Colombia agradece el minucioso informe de los resultados de la reunión del Comité Directivo No. 26, asimismo, expresa un agradecimiento a todo el personal de IODE que ha trabajado arduamente para enfrentar los retos que ha implicado la pandemia.

En los próximos dos años, nuestro Comité Técnico de Datos e Información, escenario nacional que busca ampliar los criterios de operatividad de la coordinación nacional del programa IODE y procedimientos referentes al mismo en el país, estará orientado a unificar y reportar métricas de acceso a datos abiertos y promover el desarrollo de iniciativas de datos para la toma de decisiones informadas.

Como país, estamos convencidos de que el acceso a la información de manera transparente contribuye a tener unos océanos seguros y sostenibles. Por ello reconocemos los progresos realizados por el Ocean Info Hub (OIH), basado en el avance del piloto del Clearing House Mechanism para Latinoamérica (CHM-LAC) que continuará siendo la base para el nodo en ésta región.

Colombia apoya la Decisión A-31/3.4.2 especialmente en el establecimiento del Proyecto de Sistema de Datos e Información Oceanográficos de la COI (ODIS), tomando en cuenta el Catálogo de Fuentes del Sistema de Datos e Información Oceanográficos de la COI (ODISCat) y el inicio del proyecto OIH. También, respalda la revisión de la política de intercambio de datos oceanográficos de la COI (2013, 2019), permitiendo promover y fortalecer el intercambio de datos, de actividades y programas de la COI.

Para finalizar, agradecemos de manera especial al Gobierno de Flandes por el apoyo brindado al IODE y sus actividades regionales, como OIH, OBIS y OTGA. Destacando la contribución del Centro



Regional de Formación de la OTGA en Colombia al desarrollo de las capacidades de los Estados Miembros en materia de ciencias oceánicas, particularmente durante la Pandemia Covid-19 (Abril 2020-Enero 2021), coadyuvando con 5 de los 9 cursos virtuales. Adicionalmente, es importante que se pueda establecer el mecanismo para el reporte de las contribuciones en especie que hacen los Estados Miembros a IODE-IOC.

Para finalizar, apoyamos la renovación del Memorando de Entendimiento entre la UNESCO/COI y el Gobierno de Flandes (Reino de Bélgica) a través del Instituto Marino de Flandes (VLIZ).

### **France**

La France soutient les recommandations présentées par le comité IODE, visant à renouveler le partenariat pour le Portail des données marines IODE (Partnership Center for IODE Ocean Data Portal) et à réviser les termes de références [Decision IODE-XXVI.6.1.2].

### **India**

India (INCOIS, MoES) maintains a large network of observing platforms, the data from which is acquired, managed and disseminated by a centralized Data Centre at the Indian National Centre for Ocean Information Services. This center has had a long-standing association with IODE, acting as as one of the National Oceanographic Data Centre (NODC) since 2004. India also manages the IIOE-2 Data Portal. Recently, India developed and launched an interactive web-based portal entitled 'Digital Ocean', that serves as one-stop-solution for all ocean data and information related needs of a wide range of users, as it integrates heterogeneous marine and met data from in situ, remote sensing and modelling onto a single platform.

The International Training Centre for Operational Oceanography (ITCOOcean) which is a UNESCO Category 2 Centre is also one of the Regional Training Centre (RTC) recognized under the Ocean Teacher Global Academy (OTGA) Framework of IODE.

- 11 training courses (in-person) of 1 to 2-weeks duration and trained 267 trainees from 23 countries during 2019-20. 3 of these were funded by the OTGA
- 07 training programmes in virtual mode, and trained 2421 participants from 85 countries during 2020-21.

Recently the RTC status was renewed for the period 2020-2023 and we will continue to deliver programmes tailored to meet UN decade outcomes.

As we move towards the UN Ocean Decade, greater international sharing and exchange of ocean data is extremely important for sustainable management of the oceans and most importantly for delivery of operational oceanographic services.

India supports the establishment of the (i) IOC Ocean Data and Information System (ODIS) and Ocean Info Hub project and (ii) IOC inter-sessional working group on the revision of the IOC Oceanographic Data Exchange Policy

### **Indonesia**

This intervention is referred to statement 13 within the IOC/A-31/3.4.2.Doc(1) in the subject of Partnership Centre for ODIS.

Since 2017, Indonesia as a maritime continent, has long been trying to build an NODC as a vehicle to integrate data, both observations and modelling results, from various national institutions.

In 2018, the NODC was launched during Our Ocean Conference in Bali. However, the development is not smooth, both in terms of technology and coordination. We are happy to report that in August 2020, a formal agreement among eleven Indonesian institutions was reached on the planning, acquisition, and dissemination of ocean data and information, which include data sharing through the national portal networks, where the Indonesia NODC is one of them.

Currently, precisely during the Covid-19 pandemic, coordination of resources and networks has become much smoother and easier. Referring to NODC health status, since its launch in 2018, Ina-NODC have undergone modifications both in the portal infrastructure and augment of data type and content. Ina-NODC is available on: [nodc.id](http://nodc.id)

For this reason, allow me to report on the readiness of Ina-NODC (or NODC Indonesia) to take part and participate in supporting IOC Data portal activities and embark actively on the Ocean Decade program.

By the end of this year, we are gladly to announce that Ina-NODC will be certified under ISO 9001:2015 (Quality Management), ISO 20000-1 (Service management), and ISO 27001 (Information security management), and IODE accreditation.

Ina-NODC in 2022, Ina-NODC planned to continue upgrade its capacity and capability as well as data inventory.

We hope that Ina-NODC may receive the IOC endorsements to be ADU --- Associate Data Unit in the Asia Pacific region. Furthermore, referring to IOC/A-31/342.Doc(1), Ina-NODC supports the establishment of ODIS and is ready to be the partner.

### **Italy**

Italy recognises the tremendous effort required to keep and expand the IODE network of data centres and associated units and ensures its contribution to the IODE progress through its national representative Ms. Alessandra Giorgetti that will foster these activities in the member state.

The Italian scientific community recognized the need to properly coordinate at national level and decided to establish the Italian Oceanographic Data Committee IODC composed of all stakeholders involved in data collection and management, under the auspices of the Italian Oceanographic Commission. To share data and information, the workplan aims at a national federated and distributed system, increasing data interoperability towards the National Oceanographic Data Centre.

Italy supports the establishment of the IOC Ocean Data and Information System (ODIS), recognising the initial efforts undertaken through the Ocean InfoHub (OIH) Project aiming to improve access to global ocean information, data and digitised knowledge products for management and sustainable development, the Catalogue of Sources ODISCat. Italy contributes with its data resources and will continue supporting the IODE activities for improving data discovery and access following FAIR principles. Italy will keep fostering the liaison with EMODnet thematic network and the SeaDataNet, key European components of the new data ecosystem.

Italy acknowledges the importance of financial support provided by the Government of Flanders (Kingdom of Belgium) through the Flanders Marine Institute (VLIZ) to the UNESCO/IOC Project Office for IODE.

Italy recognises the high relevance of the establishment of the Intersessional Working Group for the revision of the IOC Oceanographic Data Exchange Policy which represents a crucial element in data sharing and is contributing with its expert.

### **Japan**

Highlighting a couple of points, Japan considers that the IODE is certainly one of the most important driving forces for effective implementation of the UN Decade of Ocean Science, and in this regard, the community of oceanographic data and information management should enhance its contribution to and commitments to the work of IODE to make it more powerful infrastructure for further successful Decade implementation.

Japan continues its contributions to whole IODE activities through those by Japan Oceanographic Data Center (JODC) and other national organizations including an Associate Data Unit for OBIS, and Japan is willing to further contributes to enhancing the cooperation and collaboration in Oceanographic Data and Information Management at regional level between IODE and regional subsidiary bodies including WESTPAC and other partners such as PICES.

Japan supports the draft decision on the agenda item 3.4.2.

### **Portugal**

We fully support the proposed arrangements to revise the IOC oceanographic data exchange policy in light of new realities and new paradigms regarding data availability.

We also support the Ocean Data and Information System initiative (ODIS) and will closely follow its developments. We do expect to be able to link our national marine spatial data infrastructures to this system, contributing to easy discovery, access and use of oceanographic data.

Regarding the IODE network of data centres expansion, Portugal took good note of the IOC committee invitation. Inter-institutional arrangements are underway concerning the creation of an integrated Portuguese NODC/ADU (National Oceanographic Data Centre/Associate Data Unit) to be communicated to the IOC.

Finally, we appreciate the continuous support of the Government of Flanders, Kingdom of Belgium, on the renewal of the Memorandum of Understanding with the Flanders Marine Institute regarding the IOC project office for IODE.

### **Thailand**

The IODE is dedicated in playing a key role in facilitating system and environment for international exchange of oceanographic data and information, as strengthening capacities for ocean data and information management is a significant component for enhancing collaboration among Member States within the regions.

Thailand, in close collaboration with WESTPAC related Ocean Acidification (OA) programme, has supported activities of the IODE, for example, providing continued observations of Ocean Acidification in the regional seas carried out by the Department of Marine and Coastal Resources, Ministry of Natural Resources and Environment, to the SDG 14.3.1 data portal. The SDG 14.3.1 data portal is an example of a technological support provided by the IODE for an exchange of the information that directly contribute to the UN Decade of Ocean Science for Sustainable Development.

Recognizing contributions made by the IODE, and as we are moving forward to the UN Decade of Action, Thailand will continue our eager collaboration with the WESTPAC as a regional subsidiary body in their programme and activities particularly those related to the SDG 14 in order to contribute the UN Decade and SDG in the future.

### **United Kingdom of Great Britain and Northern Ireland**

The 26th session of the IODE Committee was clearly a very productive meeting addressing a broad portfolio of data management activities. It is especially pleasing to see how the UN Decade of Ocean Science for Sustainable Development is providing a healthy focus for many IODE activities, both new and well established.

Recognising the importance of data to IOC and the UN Decade, the UK would like to make two comments:

(i) It is now nearly 20 years since the IOC Assembly approved the IOC Oceanographic Data Exchange Policy, so a review is timely, if not overdue. Significant developments and improvements in data sharing principles have taken place in the meantime and sister and partner organisations (notably WMO) are revising their data policies. The UK commends IODE for establishing an intersessional working group (IWG) to review and update the Policy, but in view of the importance of this to IOC, and indeed to the UN Decade, suggests that member states might wish to nominate further members to broaden and strengthen the IWG. The UK would be willing to contribute.

(ii) The UK notes with appreciation that the Ocean Data and Information System (ODIS) and its Ocean Information Hub (OIH) will play an important role in IODE's contribution to the UN Decade and supports the decision to establish this formally as a project. The UK would like to offer its expertise in ocean data management, controlled vocabularies and other interoperability technologies in addition to contributing to the Steering Group. The UK will also look for further opportunities to contribute, potentially becoming an early adopter.

### **United States of America**

The report is very encouraging. We also thank the Kingdom of Belgium, Government of Flanders, for their support for IODE. The United States remains committed to our support for the World Ocean Database and providing the stewardship of deposited ocean data, and we recognize the opportunities before us with the UN Decade of Ocean Science. The IODE has done a very fine job in anticipating the Decade. We often forget the data portions of scientific undertakings, and we are grateful for this dedicated group in IODE that is reminding us of the importance of the data and its stewardship.

I note that there are philanthropic interests and commercial interests emerging that would like to be utilizing the ocean data that the IOC has been, in a dedicated way, recovering and stewarding over a long period of time. We will be opening up a new decade of ocean information, which will be another part of the ways in which the UN Decade of Ocean Science for Sustainable Development is celebrated and contributes to society's advancement. It is therefore very important that we look further at our data policy in the IOC. The US is very interested in participating in the data policy working group. We recognize, as the UK had mentioned in their intervention, that the WMO is in the process of reviewing their data policy, which of course we understand to be rather well-defined and categorically identifies classes of data. I think it would be a great irony if there was a more compelling data policy in the WMO

on ocean data than we might have ourselves in the IOC. So, we look forward to working towards a policy with the most free, open, and not just available data, but a policy that inspires all collectors of ocean data to deposit deliberately into the IOC repositories, so that all data is available for use immediately.

### **World Meteorological Organization (WMO)**

WMO has promoted the free and open exchange of weather, climate and water data since 1873, and has created a global standardized system spanning observations through to data products, which provides the foundation of weather, climate and hydrological services.

The international data exchange practice and policy, which defines the free flow of observations around the globe, has evolved significantly over this period. WMO Executive Council yesterday approved a Unified Data Policy which will replace the previous policies such as Resolution 40 and later resolutions on hydrological and climate data. The unified data policy will be submitted for approval at the WMO Extraordinary Congress in October 2021.

The data policy covers all Earth system data exchanged between WMO Members, including the ocean domain and defines two categories of data: core data that are freely and openly exchanged, and recommended data that are not mandatory but still required to support Earth system monitoring and prediction activities at the global, regional and national levels. In the case of the Oceans, care was taken to align with the existing data policy of IOC and we look forward to continuing this dialogue as the IOC Data Policy evolves.

The WMO Executive Council also approved the WMO Information System 2.0 Implementation Plan, its Functional Architecture and a list of WIS2.0 demonstration projects. A key project is the development and implementation of improved methodologies for the distribution and access of near-real-time ocean and marine meteorological data through the WMO GTS. We look forward to continued close collaboration between WIS and IODE activities.

### **3.4.3 Harmful Algal Blooms**

#### **Chile**

Chile forma parte activa en este Panel, pues a nivel nacional se le da alta prioridad al fenómeno de Floración de Algas Nocivas. El riesgo que conlleva para la salud de la población costera y consumidor de productos del mar, no advertidos de su contaminación; el duro efecto socio - económico que generan estas floraciones en una parte importante de quienes realizan actividades de pesca y recolección de moluscos; el tremendo daño que puede generar el transporte de organismos desde lugares contaminados a otros libres de ello a través de las aguas de lastre, por nombrar algunos, nos mantiene en alerta permanente.

Apoyamos firmemente este programa, por su trascendental y fundamental importancia y las recomendaciones hechas por el Panel en su última reunión.

#### **Colombia**

Colombia, ha realizado acciones sobre la Decisión IPHAB-XV.2 “Detección temprana, advertencia y pronóstico de eventos algales perjudiciales”, las cuales incluyen:

1) La identificación de florecimientos fitoplanctónicos operativos y su evolución a través del Índice bio-óptico. Este Índice ha sido validado para aguas naturales con baja intervención antropogénica y en aguas costeras con alta intervención antropogénica. Por lo tanto, se presenta como una nueva herramienta que puede ser incorporada en los programas de monitoreo del fitoplancton para la detección de florecimiento.

2) El desarrollo de actividades de muestreo y caracterización de eventos de florecimientos en la Bahía de Cartagena con una periodicidad de muestreo bimensual.

En el marco de la mesa interinstitucional que aborda el tema de los Florecimientos Algales Nocivos en Colombia, se trabaja en ampliar la red de monitoreo a nivel nacional sobre FAN, de manera participativa, considerando el enfoque ambiental, de salud y económico, e incluyendo el sistema de gestión de datos y difusión, para lo cual se avanza en la elaboración de una propuesta de protocolo nacional para la atención de este tipo de eventos.

### **Côte d'Ivoire**

La fluorescence algale est une préoccupation pour la Côte d'Ivoire en ce sens que de façon récurrente et à des dates précises cette fluorescence s'observe sur la partie est de la côte ivoirienne, bien que les activités agricoles dont faisait allusion le comité qui a été mis en place pour traiter cette question, n'est pas l'apanage de cette région.

C'est pourquoi la Côte d'Ivoire fait un plaidoyer à l'endroit du comité d'expert pour qu'une piste de recherche soit ouverte sur la trajectoire que suit la fluorescence algale. Cela pourrait aider à retrouver l'origine de ces algues nuisibles.

### **Italy**

Italy acknowledges the important role that the IPHAB (Intergovernmental Panel of Harmful Algal bloom) has played over the three last decades. Italy actively participate to this panel and as chaired of the task team on the Global HAB Status Report. In this regard, I would like to highlight the importance you that thanks to this effort a paper on the global analysis of HABs data will be published this year as well as special issue collects 12 regional overviews on the status of HABs. These publications on the findings as well as the effort to prepare a Scientific Summary for Policy Makers are essential are a crucial importance. Despite the ascertained presence of numerous potentially toxic microalgae in the Italian Seas, damages related to toxicity are limited thanks to an effective surveillance system that has been developed based on improved knowledge in this field over the years. Italy will continue support the IPHAB in the next years promoting scientific development, training and capacity building as contribution to Ocean Decade Mediterranean Sea Programme.

### **Japan**

In the WESTPAC region, seafood plays a major role in food supply and economic activity. Impacts of harmful algal blooms are serious for safe food supply, fisheries and seafood related industries, and sustainable development in this region.

In the view of the serious negative impact of HABs, Japan has consistently contributed to scientific and capacity development activities of IPHAB through IOC sub-commission WESTPAC. Japan will continue to support IPHAB collaborating with other members by promoting basic natural science of harmful algal blooms. Also, social science that contributes to the evaluation of the impact of HABs on marine environment and fisheries resources, and to the mitigation of damage induced by HABs.

Japan takes note of the interest of FAO to investigate the possibility of returning as a Co-Sponsor of IPHAB. From the perspective of promoting studies of harmful algal blooms and also UN Ocean Decade, Japan considers it meaningful if FAO return to be a co-sponsor of IPHAB.

### **Malaysia**

Malaysia commends the outstanding quality of the Global HAB Status Report. Our appreciation goes to IOC Intergovernmental Panel on Harmful Algae Bloom (IPHAB). We also would like to thank the effort of the IPHAB in formulating strategies and effort to address HABs related issues. We will continue to support IPHAB through the various task teams and plans/programmes in the seasonal period.

Our Malaysian researchers will continue to participate actively in various regional and international programmes and activities as part of our commitment to address ocean issues especially with regards to safe ocean in line with the UN Decade of Ocean Science for Sustainable Development.

### **Spain**

España agradece el trabajo realizado en el seno de IPHAB, por el detallado informe y por la presentación realizada por el Dr Herik Enelvoldsen. España tiene un elevado interés en este programa y la comunidad científica española ha estado muy involucrada en él desde su creación. Destacamos la importancia de las acciones e iniciativas encaminadas a profundizar en la investigación sobre proliferaciones de algas tóxicas, especialmente en su relación con el cambio climático, su importancia sobre la salud humana y los recursos pesqueros, el desarrollo de capacidades y de la gestión de datos. Destacamos la importancia de las actividades sobre la ciguatera, que está incrementando su impacto a nivel mundial y tiene importantes consecuencias sobre la salud y la gestión de los recursos pesqueros.

## **Thailand**

Thailand has also been facing the eutrophication and phytoplankton bloom in several coastal city areas and river mouths that are enrich of marine living resources and habitats, similar to other part of the globe. Intensity and often occurrence of the phenomena are more observed during recently years that have been concerning by Government and public.

The Thai Government gives a high priority on the management and mitigation of its impacts including support monitoring water quality and observing phytoplankton bloom programme, particular on the potential biotoxin producing species, to ensure that we could assist mitigating the impacts on coastal ecosystem, particular on those related to public health, fisheries, and live and livelihood. With strong support of Thai Government, we will keep work closely with the WESTPAC, particular on the multidisciplinary ocean science approach, to build up the our better understand blooming mechanisms that is a basic knowledge for further development of prediction or forecast phytoplankton bloom. It will be benefit to serve the need of the country directly. In this regard, we will keep our active participation in all related to eutrophication and phytoplankton bloom activities of the WESTPAC such as HAB, hypoxia, and ocean acidification programmes.

We trust that the strong cooperation in the WESTPAC region could enhance our knowledge and capability through regional capacity development and exchange knowledge to reach our goal to support not only the country need, but also to the region and the globe concerns. Thailand will keep our engagement with the WESTPAC-HABs and other related activities such as WESTPAC-Toxic Marine Organisms Programme and biotoxins programme.

## **United Kingdom of Great Britain and Northern Ireland**

The United Kingdom recommends adoption of the recommendations from IPHAB XV (Fifteenth Session of the IOC Intergovernmental Panel on Harmful Algal Blooms 23–25 March 2021).

HABs continue to pose a risk to industries in many nations and can present a real risk to human health and food security. The UK aquaculture industry experiences impacts from HABs annually. The recommendations from IPHAB XV provide a resource to the global HAB community and beyond via the Harmful Algal Information System, the Global HAB Status Report, the latest information on HAB taxonomy and toxins and the report on Early Warning Systems for HABs. The recommendations also provide a pathway to improve management of different HAB impacts e.g. Ciguatera Poisoning, desalination, fish kills. The recommendations will also provide HAB input into UN Decade for Ocean Science for Sustainable Development.

### **3.5.1 Biennial assessment to be conducted by the Working Group on User Requirements and Contributions to GEBCO Products**

#### **Brazil**

Brazil has long supported the GEBCO program. We have contributed with bathymetric data collected by our research vessels and for many years we have compiled the bathymetry received by all ships in transit in the Brazilian jurisdictional waters into bathymetric maps.

More recently, Brazil has shared the bathymetric data available in its Electronic Navigational Charts (ENC) to IHO Data Centre for Digital Bathymetry (DCDB) and the bathymetry resulting from the Brazilian submission was approved by the UN's Commission on the Limits of the Continental Shelf (CLCS).

This year, Brazil provided bathymetric datasets obtained by our research vessels to the IHO DCDB and provided a 1-km resolution bathymetric grid that covers the Brazilian jurisdictional waters for the Nippon Foundation-GEBCO Seabed 2030 Project.

We are pleased to contribute to this important international effort to map the oceans and we reiterate our will to continue contributing to it.

#### **Colombia**

Colombia reconoce la importancia de producir levantamientos batimétricos con los más altos estándares de calidad, en beneficio de nuestros países y la seguridad, así como aporte y soporte de muchos otros programas e iniciativas de interés general que nos congregan. En ese sentido, ha sido entregada a la GEBCO, la información batimétrica de levantamientos efectuados en la Antártica.

Finalmente, Colombia se encuentra presidiendo el proyecto de la Carta Batimétrica Internacional del Mar Caribe y el Golfo de México (IBCCA), el cual terminó su primera fase y cuyos productos se encuentran disponibles para la comunidad, aportando 16 cartas que incluyen la cobertura territorial, de acuerdo con las especificaciones del proyecto. Igualmente, el país lidera la elaboración de la segunda fase, la cual iniciará en el segundo semestre del 2021 y tendrá (06) seis años de duración, finalizando en 2026.

### **France**

La France, à travers son service hydrographique national, contribue pleinement au programme GEBCO en participant à deux sous-comités. Le Technical Subcommittee on Ocean Mapping (TSCOMM) est actuellement présidé par un hydrographe français. Le service hydrographique national de la marine représente l'OHI au sein du Subcommittee on Undersea Feature Name (SCUFN). La France soutient également l'initiative Seabed2030 qui est désormais un projet de la Décennie des Nations Unies pour les sciences océaniques dont l'objectif est de couvrir l'ensemble des océans par des mesures de sondages bathymétriques à haute résolution. La France contribue également à ces initiatives en fournissant des données bathymétriques à l'échelle régionale, en contribuant au projet Emodnet porté par l'Europe.

La France approuve la recommandation s'agissant de l'évaluation bisannuelle du groupe de travail sur les besoins des utilisateurs et les contributions aux produits de la GEBCO et appelle les organisations à favoriser le partage des données bathymétriques.

### **Italy**

The Italian scientific community recognizes the high relevance of the bathymetric data and ocean mapping within oceanography and will continue supporting the GEBCO activities for improving GEBCO products as member of the Technical Sub-Committee on Ocean Mapping (TSCOM), the Sub-Committee on Regional Undersea Mapping (SCRUM). Italy will continue fostering the liaison with EMODNET bathymetry mapping project contributing also with new bathymetric data. Italy also supports the idea of improving the shallow areas of the GEBCO grid expanding to data gathering in shallow water areas to support activities such as coastal zone management.

Italy shares the importance of the GEBCO products such as the digital ALTAS and GEBCO Cook Book and will support its continuation and enrichment.

Italy also supports the importance of the outreach education about ocean mapping and will foster these activities in the member state and the participation to GEBCO international educational programmes.

Italy welcomes the second round of efforts made by the Working Group on User Requirements and Contributions to GEBCO Products, first established in 2015 at the 28th Assembly, to assess and review the user needs and requirements. Italy recognizes the instrumental role of this WG to enhance the access and use of GEBCO data and products in the oceanographic community. Italy welcomes the biennial assessment made by the WG and prepared by the IOC Secretariat in which an interest in updated web services, higher resolution data in coastal waters and polar regions and shoreline definition has been clearly expressed by users from the oceanographic community. Italy acknowledges that these provisions require important efforts in terms of data acquisition and accessibility by Member States that should make publicly available bathymetric data collected in their Exclusive Economic Zones (EEZs). Italy commits itself to continue to significantly contribute to GEBCO especially through EMODnet and other regional mapping initiatives such as IBCAO and IBCSO. In accordance with the terms of reference of the Working Group, the recipient of the questionnaire are the members of the Working group as well as officers/experts nominated by relevant IOC programmes and regional subsidiary bodies. Italy suggests the future survey, to be conducted in a couple of years from now, be more widely distributed and commits themselves to answer more proactively to the questionnaire as member state.

### **Kenya**

Kenya appreciates the important contribution of the General Bathymetric Chart of the Oceans (GEBCO) in availing high quality bathymetric data. We believe that the contribution by GEBCO will go a long way to facilitate the complete mapping of the ocean floor by the year 2030 and also form a major contribution to the United Nations Decade of Ocean Science for Sustainable Development (2021 -2030).

Kenya thanks the GEBCO Working group under the chairship of IOC Vice-Chair, Frederico Antonio Saraiva Nogueira (Brazil). Kenya notes that the Review of User Requirements and Potential

Contributions to GEBCO on a biennial basis was done through responses from questionnaire conducted during the intersessional period. Indeed, the Working group did a splendid job in addressing ways of potential increase contributions to GEBCO data and products from the IOC community.

Deep oceans are the least studied areas and contribution that enhances knowledge towards bathymetric map of the World Ocean is very critical. We also wish to highlight that the Indian Ocean remains one of the poorly mapped regions.

Kenya welcomes efforts to strengthen cooperation to enhance mapping and accelerate the general knowledge of the ocean. Kenya therefore appreciates the fact that the draft decision has taken due consideration of the importance of GEBCO capacity development including training opportunities.

Finally, we note that the survey intended for the members of the Working Group as well as officers/experts nominated by relevant IOC programmes and regional subsidiary did not receive the anticipated feedback with only 38 responses. Kenya notes the need to actively participate in the next assessment and joins the call to support this endeavor during future responses.

### **Portugal**

Portugal recognizes the added value of the establishment of the Regular Working Group on User Requirements and Contributions to GEBCO Products and is committed to its objectives and recommendations.

Besides participating in the working group, Portugal has developed a program (SEAMAP 2030) for high resolution surveys of the maritime space under national jurisdiction until 2030. These data will be shared with the GEBCO/NIPPON Foundation SEABED 2030 project, which is itself a significant contribution to the Decade of the Oceans objectives. We strongly consider that supplementing and completing the science base with holistic mapping of the ocean is key to its scientific understanding.

Also, just recently, Portugal and Brazil jointly translated to Portuguese the IOC/IHO (International Hydrographic Organization) publication B-6 which is dedicated to the Standardization of Undersea Feature Names. This effort aims to break some existing language barriers on Portuguese speaking countries and for sure will be extended to other relevant hydrographic related publications.

As concerns capacity development needs in relation to GEBCO data and products, Portugal has recently set up an OTGA-RTC (Ocean Teacher Global Academy Regional Training Center) and is preparing some courses on using GEBCO data and products.

Finally, to increase data collection with relevance also to the GEBCO program, Portugal has been networking with several scientific partners from countries and international organizations regarding hydrographic data sharing.

### **United States of America**

The United States supports the draft decision, in particular the request to the Secretariat to identify ways and means to increase participation of respondents in future Reviews of User Requirements and Potential Contributions to GEBCO. A comprehensive digital representation of the ocean itself is important, but it is also crucial to sustaining and advancing other ocean related activities that would benefit from new data. Such as good ocean governance, tracking progress on SDG 14, resource management, ocean productivity, the Blue Economy, and societal resilience. Data collection through GEBCO-Seabed 2030 will ultimately make data freely available to the public worldwide, including academia, private sector, governments and the general public. The United States is very pleased with the new partnership between IOC and IHO to cooperate in mapping and capacity development in the Tropical Atlantic and Caribbean. This collaboration will catalyze efforts to complete the bathymetric map of the region which will inform the sustainable, multi-purpose use of the regional ocean. We also recognize the 100th anniversary of the IHO as a historic milestone in global hydrography and the importance of applying hydrographic standards to all ocean mapping whether done by the research community or credentialed hydrographers. The United States is committed to continue our EEZ and open ocean mapping programs including the North Atlantic work under the Galway Statement, and to sharing all data through GEBCO and the Seabed 2030 project. Thank you very much, Mr. Chair and happy World Hydrography Day to everyone.

### **World Meteorological Organization (WMO)**

WMO also would like to thank GEBCO and both the IOC and the IHO for their hard work and efforts. WMO continues to support the outcomes of GEBCO, noting that coastal bathymetric data, is vital for



developing ocean and coastal models that contribute to accurate prediction of coastal inundation including storm surges, and the marine weather state, especially in ports and harbours. This has direct relevance to the protection of life and property on the coast and at sea. As ocean and coastal models move to higher resolution, there is an increased demand for high resolution coastal bathymetry. GEBCO is critical to this effort and WMO looks forward to seeing these excellent efforts gain momentum in the future, for the benefit of our common WMO, IOC and IHO Members and Member States.

WMOs communities in operational forecasting and research, especially related to tropical cyclones, are pursuing synergies among partners to collect bathymetry for helping improve modelling and warnings of coastal hazards. As well, bathymetry is useful ancillary data for improved monitoring of some Essential Climate and Ocean Variables.

The sparseness of medium to high resolution bathymetry for areas of interest requires the use of various technologies and techniques to acquire better datasets. One of these is extracting bathymetric data from satellite imagery. This has been the focus of recent recommendations to the Coordination Group for Meteorological Satellites (CGMS) and the Committee on Earth Observation Satellites (CEOS).

Finally, WMO would like to take this opportunity, and with much pleasure to congratulate the IHO, for its 100th birthday yesterday.

### **3.5.2 Global Ocean Observing System Work Plan**

#### **Argentina**

Argentina desea expresar sus felicitaciones al Comité Directivo del Sistema Global de Observación del Océano por una labor destacada, no sólo a lo largo de su trayectoria, sino especialmente a partir de sus propuestas y avances para la participación en el Decenio del Océano y la concreción de proyectos con real impacto en las observaciones oceanográficas y en las poblaciones que se ven afectadas por fenómenos ambientales en las regiones costeras e insulares, en un contexto de Cambio Climático.

Además, la adecuación de su Estrategia 2030 a fin de completar numerosas acciones que se llevan a cabo con distintos niveles de complejidad, es el reflejo de un trabajo conjunto entre los miembros de diferentes países, en el cual Argentina desea renovar su compromiso y nivel de actividad.

Si bien no todos los Objetivos Estratégicos han alcanzado el mismo nivel de desarrollo, sabemos que hay un trabajo permanente en alcanzar nuevos logros y mantener el ritmo de trabajo para cumplir con su misión.

Nuestra experiencia en el trabajo con el Comité Directivo de GOOS ha sido muy positiva, impulsando acciones dentro de nuestro país para favorecer las campañas de observación. Como ejemplo, hemos concretado en pocas semanas el lanzamiento de boyas derivantes de producción local de un investigador independiente desde buques de la Marina Argentina.

Las necesidades de recursos planteadas en el informe son realistas y justificadas a partir de las decisiones que se han tomado en torno a profundizar los Proyectos y Programas vinculados al Decenio del Océano. Somos conscientes de todo esto por la activa participación de nuestro país en el Comité Directivo. Agradecemos a los organismos y Estados Miembros que hacen posible el desarrollo de estas acciones con sus aportes de fondos.

Finalmente, mencionar que Argentina desea extender su apoyo a la adopción de la Decisión 3.5.2.

#### **Canada**

Canada appreciates the work accomplished to date by GOOS and the valuable support that the GOOS Core team provides. Recognizing the numerous contributions that she has made to furthering ocean science, we are proud to have Dr. Anya Waite as a co-chair of the GOOS Steering Committee. Canada supports the GOOS Implementation Plan, and through the Canadian Integrated Ocean Observing System (CIOOS), will work to focus on priorities established by the GOOS Steering Committee. This support from Canadian Integrated Ocean Observing System will help to stimulate engagement, strengthen the Canadian ocean observing community, contribute to the international visibility of ocean observing, and make linkages to user needs. We would also like to stress the importance of maintaining and expanding the strategic links to partner programmes and organizations that are identified in the actions.

## **Chile**

Chile, en su calidad de Presidente del Comité de la Alianza Regional de GOOS para el Pacífico Sur (GRASP), quiere informar a la Asamblea del importante avance en la materialización de un visualizador Web de variables oceanográficas Regionales, el cual inicialmente presenta información de 64 estaciones de nivel mar, proyectándose incluir posteriormente otras variables oceanográficas, así como meteorológicas costeras. Esta herramienta permite tener una visión general de los 4 países del Pacífico Sudeste, el cual considera a Chile, Colombia, Ecuador y Perú. Esta es una contribución de GRASP al Decenio de las Ciencias Oceánicas para el Desarrollo Sostenible. [http://coos.inocar.mil.ec/visores/red\\_mareografica/](http://coos.inocar.mil.ec/visores/red_mareografica/)

## **Colombia**

Igualmente, Colombia manifiesta su gratitud por los esfuerzos de la COI para el desarrollo de las Alianzas Regionales del GOOS – GRA's, las cuales le han permitido a nuestro país contribuir de manera significativa mediante la Red de Medición de Parámetros Oceanográficos y de Meteorología Marina de Colombia, a las alianzas regionales GRASP e IOCARIBEGOOS. Nuestro país ha compilado, durante más de 14 años, los datos meteorológicos marinos y oceanográficos de nuestras aguas jurisdiccionales, que representan cerca del 50% de territorio nacional, teniendo así insumos para el desarrollo de las ciencias oceánicas y contribuyendo de manera significativa al conocimiento en IOCARIBE y la Comisión Permanente del Pacífico Sur.

Por último, consideramos importante compartir la información de estaciones mareográficas, mediante la plataforma Sea Level Monitoring, en aras de entregar información en tiempo real de estaciones costeras e insulares de nuestro territorio marítimo, como un aporte a la generación de conocimiento, coadyuvando a los sistemas de alerta de tsunamis en América Latina y el Caribe.

## **France**

La France tient à remercier le secrétariat du GOOS pour le rapport du plan de mise en oeuvre du système mondial d'observation de l'océan ainsi que pour la présentation qui vient d'être faite. Elle souligne et soutient la grande ambition de ce plan.

La France tient à souligner qu'elle est très active concernant le GOOS tant à l'international qu'au niveau européen. La France, par l'intermédiaire du Shom et de l'Ifremer, a par exemple organisé la dernière conférence et assemblée générale d'Eurogoos en mai 2021.

## **Germany**

Germany would like to emphasize once again that sustained long-term ocean observations are the backbone and cornerstone of ocean forecasting, ocean state assessment, marine research and sustainable ocean management. The benefits of ocean observations extend far beyond the maritime and coastal communities. For example, it is critical for weather forecasting, understanding and modeling of the climate system, and disaster preparedness, such as tsunami warnings, harmful algae blooms and the execution of sustainable blue economy activities.

Germany is therefore pleased to hear that the use and accessibility of ocean data is evaluated together with the OECD to demonstrate the enormous economic value of ocean observing, data gathering and information development.

In addition, Germany welcomes the three decade programmes proposed by GOOS and the other endorsed decade programmes that contribute to sustained observations. In order to realize the vision of a "a truly integrated global ocean observing system that delivers the essential information needed for our sustainable development, safety, wellbeing and prosperity" the Decade is the right framework as it offers the opportunity to tackle major goals.

## **Indonesia**

We would like to strongly support this GOOS Work Plan and its implementation. The GOOS Program is very crucial for the Members taking into consideration the ocean observation are sparse and I believe this GOOS Program will help Members in meeting the gaps/challenges in our ocean observation.

Concerning that Indonesia as an archipelagic country consisting of over 17 thousand islands with a coastline of nearly 100 thousand kilo meters, our country is very prone to coastal disaster and we do realize that the behavior of the ocean is the key driver of our weather and climate phenomena especially for maritime continent like Indonesia, therefore we strongly support the implementation of GOOS Work Plan. For Indonesia, sustain of ocean observation is our major key role to provide better weather

forecasting and climate prediction in local, national, regional as well as in global level and also ocean observation is very crucial for coastal disaster information especially in our case for tsunami information and storm.

We are also noting that the development and implementation of three linked GOOS Ocean Decade Programmes, namely Ocean Observing Co-Design, CoastPredict, and Observing Together, would deliver a more integrated and responsive observing system by 2030. In national and regional level, we do support the improvement and strengthening of national and regional engagement, in this regard, we need to pay attention to the role of the GOOS National Focal Points and GOOS Regional Alliance (GRA). Therefore, we need to reinforce and promote partnerships from Member States, co-sponsoring organization-IOC, WMO, UNEP and ISC- and other potential partner/organization to work closely together to achieve the goals.

### **Italy**

Italy welcomes the GOOS 2030 Strategy and thanks the authors for their helpful document. This well identifies the mission and the new capacity required for global ocean observing system to respond to the expected growing number and variety of stakeholders and to contribute to a sustainable use of the ocean and to the Ocean Decade.

The strategic objectives are consistent with the necessary requirements of the future ocean observing system that should meet the needs of a variety of users and speed up the blue economy.

Italy believes that the sustainability of the observing system is a crucial point. It is not clear how this sustainability will be ensured. Italy believes that the sustainability can be ensure only if the ocean observing system will be not founded by research project, but it will become research infrastructures to be maintained and updates. Italy believes that the role nation in the general framework is crucial. Italy believes that a bottom up and top-down approaches could be to encourage nations and regions to share their ambitions, based on more local needs and facilitate the sustainability of the observing system. Italy is strongly involved in GOOS and it will continue to support the GOOS effort and it is also working on to support GOOS office in the framework of the G7 effort. Italy is contributing to effort towards the integration of the bio-chemical and biological component supporting at national level BGC-Argo as well as Augmented Observatory and Ecological Observatory. Italy contributed to the new effort for GOOS for the Decade coordinating the codesign of CoastPredict and it will continue to support its implementation in collaboration with GOOS. In addition, Italy believes the implementation of GOOS strategy 2030 requires a coordination at regional level. The Mediterranean regional Decade Programme SciNMeet submitted by Italy aims to reduce Northern-Southern Shores observation gaps and SciNMeet coordination team would like to work with GOOS during the decade to reach this goal defining common actions.

### **Japan**

Japan appreciates the great efforts of the GOOS Steering Committee in preparing the implementation plan and supports this plan. GOOS is one of the most important programs of IOC which aims for the establishment of the sustainable ocean observation networks. In addition, launching of the Ocean Decade has made GOOS's work more important. It will be necessary to provide adequate supports to GOOS continuously. Japan has contributed to the establishment of GOOS through various programs such as GO-SHIP, Argo, GLOSS and NEAR-GOOS. Japan will contribute to GOOS also in the future.

### **New Zealand**

New Zealand would like to acknowledge the importance of the Global Ocean Observing System, and its three programmes for all countries interested in the ocean. We would also like to emphasize the shared benefits all nations receive from open access to observations of the ocean, and encourages the continued sharing of data within GOOS and IOC frameworks and mechanisms.

New Zealand would like to emphasise the need for observations in all seasons of the year over the global ocean, and encourage those designing observational networks to strive to achieve both the temporal and spatial coverage needed to provide a full picture of the ocean and how it is changing. We further emphasise the importance of co-design in observational networks with stakeholders to ensure the full benefits of observations are able to be understood and utilised by communities.

New Zealand also encourages the incorporation of indigenous knowledge, including Mātauranga Māori and Pacific knowledge, with observational data to give a broader understanding of how our oceans are

changing. This multidisciplinary approach is particularly important given the key issues facing the ocean and its future sustainability.

### **Portugal**

We stress our strong commitment to the Global Ocean Observing System 2030 Strategy, which we see as the main driver for the establishment of an articulated global capacity for sustainable Ocean observation, simultaneously responding to operational needs as well as to the Global Challenges and Threats affecting the marine environment and coastal populations.

During the last decade, Portugal strongly invested in the development of the national capacities for ocean observation. This resulted in the implementation of a broad range of permanent observing systems (such as multisystem real-time monitoring infrastructures), by the large involvement of Portuguese research groups and private companies in areas of development of innovative technologies for ocean observation (such as marine robotics), and by the national participation in various major initiatives concerning European Marine Research Infrastructures (such as EMSO, EUROFLEETS, and JERICO, among others) and main European projects such as AtlantOS. All these efforts translated into an extensive articulation between the various Portuguese teams and institutions as well as with their counterparts in other countries, building a solid ground in areas such as procedures harmonization and best practices that are at the core of a global observing capacity.

We believe these capacities contribute significantly to the global effort envisaged under the Global Ocean Observing Strategy 2030, in particularly to the several actions expressed in the Implementation Plan. The continued effort to expand this observation capacity should be built on the main guidelines emanating from this Implementation Plan.

### **Spain**

España agradece a la Secretaría de GOOS por el Plan de Ejecución y no puede coincidir más en el papel central de GOOS en las actividades y para la consecución de los objetivos del Decenio. España tiene una participación activa en las Alianzas Regionales y en programas internacionales como Argo y en iniciativas como CoastPredict. Todo ello es reflejo del importante sistema de observación que tiene España en sus aguas jurisdiccionales e internacionales y de su integración en a nivel regional y regional.

El Plan de Ejecución de GOOS y toda su actividad son fundamentales para transformar las observaciones del océano desde una mayoría de observaciones basadas en proyectos de investigación a corto plazo hacia un sistemas permanentes y sostenidos de observación.

### **United States of America**

We note the reality of a growing resource gap in undertaking the actions outlined in the Plan and encourage IOC member states to join the US and other nations in addressing this gap as we have advocated for and appreciate expansion of the ARGO and are investing heavily in that expansion, as well. The US recognizes the steadfast work that has led to the remarkable resilience of this system but we also recognize that some data gaps have emerged during the course of the COVID situation, and we want to make sure that we replace and restore but also keep our very valued global workforce at sea safe.

We support the GOOS sponsored Decade Programmes and congratulate GOOS on that work. We further appreciate the focus of GOOS on governance, and encourage a model that reaches beyond the coalition of the willing, but anticipates the needs of a future where ocean forecasts will daily influence the decisions of a global community for health, safety, food security, prosperity and environmental understanding. But please note that future is now as the ocean ecosystem is changing faster than we can thoroughly measure.

This is a critical moment in time; climate induced changes of our ocean have already led to irreversible shifts that have impacted marine ecosystems. A robust ocean observing system provides fundamental information on the physical, biogeochemical, biological and ecological state of the ocean. Open sharing of these data - deliberately depositing data including EEZ acquired data into IOC data centers so it is available for all - is absolutely necessary and we encourage all Member States to follow.

Finally, regionally focused efforts through GOOS Regional Alliances will enable more communities to become better informed and more resilient in the face of our changing planet.

### **Scientific Committee on Oceanic Research (SCOR)**

The Scientific Committee on Oceanic Research, SCOR, appreciates its partnership on strengthening the global ocean observing system under the programme GOOS.

SCOR contributes to the Global Ocean Observing System through the activities of several of its working groups and large-scale projects. SCOR sponsors the GOOS Biogeochemistry Panel through the International Ocean Carbon Coordination Project (IOCCP), which coordinates a global network of ocean carbon observations.

SCOR also sponsors working groups addressing the integration of plankton-observing sensor systems to existing global sampling programs, promoting global observation of primary productivity, the coordination of global assessments of seagrasses, and the development of a unified observing air-sea interaction strategy among other topics.

SCOR is looking forward to continuing its collaboration with GOOS.

### **World Meteorological Organization (WMO)**

As a Co-sponsor of GOOS, WMO thanks the GOOS Co-Chair for the comprehensive report and as well, the support from the Steering Committee and the distributed GOOS Office working alongside WMO secretariat.

The GOOS Implementation Plan is ambitious and as noted, has resource implications. In this regard, WMO is increasing its Regular Budget commitment to GOOS, with the approval of two new professional posts, in addition to boosted focus from existing WMO secretariat, and further funding for consultancies. For 2022, the overall WMO contribution to GOOS is estimated at over 1 mill USD. This is in addition to the extrabudgetary funds from USA and other sources.

The joint WMO-IOC OceanOps Office in Brest (formerly known as JCOMMOPS), appears in this report as a key centre of capability supporting the GOOS infrastructure. The OceanOps new 5-year strategic plan sets the vision to provide vital services in monitoring, coordinating, and integrating data and metadata, across the global network of oceanographic and marine meteorological communities. It also calls on its stakeholders to sustain and increase their contributions. In this, WMO thanks France, the host country to the OceanOps Office, for its support via the French Minister for Europe and Foreign Affairs. WMO is preparing an inauguration and communication event late 2021 in Brest, in coordination with French national and local authorities.

In response to IOC's invitation to co-sponsors to support and collaborate over the process of governance change, WMO will actively engage in this dialogue, and in continued meetings of the GOOS Steering Committee. We acknowledge Prof Kanawati, distinguished delegate for Indonesia in the IOC Assembly, in a dual role as WMO Permanent Representative from Indonesia, who represents the WMO on the GOOS Steering Committee.

### **3.5.3 Revision of the IOC Capacity Development Strategy**

#### **Argentina**

Argentina quiere inicialmente agradecer al Sr Evans por su presentación y felicitar al Grupo de Expertos en Desarrollo de Capacidades por su trabajo en la revisión de la estrategia en este tema fundamental para la comunidad oceanográfica y en especial en el marco del Decenio del Océano.

En este sentido, Argentina expresa su apoyo en prorrogar la estrategia actual hasta 2023 para asegurar la continuidad de las actividades y otorgar el tiempo suficiente que les permita una revisión completa de lo propuesto. Apoyamos asimismo la propuesta de adaptación del mandato del grupo de expertos para que pueda llevar a cabo esta tarea y presentar una propuesta a la próxima Asamblea.

Queremos agradecer también a este Grupo de Expertos por la valiosa información colectada a través de la segunda encuesta sobre capacidades, el análisis efectuado de las mismas y la síntesis presentada a esta Asamblea.

#### **Côte d'Ivoire**

Au niveau des ressources humaines, la côte d'ivoire a toujours défendu l'idée que le renforcement des capacités doit conduire à former des ressources à un niveau élevé (Master ou PhD). De sorte que ceux qui sont formés, forment à leur tour d'autres apprenants. C'est en accord avec cette vision que le

Président de la République Alassane OUATTARA a faire construire université dédiée aux sciences marines qui ouvrira ses portes en octobre 2021

En tenant compte de la priorité Afrique proclamée par la COI et l'UNESCO, la Côte d'Ivoire souhaite qu'un effort supplémentaire soit fait en faveur de la formation en Afrique et invite le secretariat de la COI à faire participer les africains qui ont une compétence avérée dans ses formations.

Au niveau des infrastructures, tout le monde sait que le matériels de recherche en mer coute cher. C'est pourquoi la Côte d'Ivoire appelle à mutualisation des infrastructures disponibles et recommande que dans les différents projets, un point soit mis sur l'investissement dans le matériel d'observation

### **France**

La France contribue au développement des capacités de l'OHI avec son service hydrographique national et notamment en travaillant sur les normes indispensables au partage des données ainsi que sur l'assistance aux pays (PEID) ne disposant pas d'un service hydrographique développé.

La contribution de la France intervient également avec la mise en place d'une formation en hydrographie, qui est ouverte à tous les publics francophones, et qui peut être suivie en école d'ingénieur ou à l'université avec un diplôme en hydrographie récemment créé.

La France soutient les recommandations du groupe d'experts concernant la révision de la stratégie sur le développement des capacités de la COI.

### **Germany**

Germany welcomes the extension of the IOC Capacity Development Strategy and the proposed revision of the Terms of Reference for the IOC Group of Experts on Capacity Development.

These decisions create the opportunity to work on the current strategy in depth, preserving its many good components and, in addition, incorporating the opportunities created by the Ocean Decade.

Since 2015, a variety of capacity development initiatives have emerged, some regional, some global, some focused on specific issues. It is therefore important for IOC to identify its own strengths and weaknesses in order to help shape the existing environment and adapt to it, as appropriate.

Germany would like to take this opportunity to thank IOC for its active participation in the All-Atlantic 2021 Conference. The All-Atlantic Research Alliance aims to gather all key stakeholders, including in the area of capacity development, in the Atlantic basin, and can serve as a role model for mapping various initiatives.

### **Kenya**

We welcome efforts to take due consideration of the capacity development needs related to the UN Ocean Decade, the outcomes of the Global Ocean Science report and the input from stakeholders. Kenya notes that there is unfinished business in developing the new Strategy and concurs with the recommendation to extend the current Capacity Development Strategy to 2023. Kenya also welcomes the revised Terms of References of the Group of Experts.

Kenya further appreciates the efforts to take into consideration regional capacity development specificities and the emphasis made on the importance of leaving no one behind.

Kenya concurs on the proposal to develop shorter reader-friendly versions of the IOC Capacity Development Strategy. We are convinced that this would facilitate outreach to stakeholders and strengthen the science-policy interface. Kenya also agrees with the emphasis that has been placed on partnerships which remain essential for effective capacity development as well as sharing of good practices.

Finally, we note that the working document has made little reference to the specific capacity development needs of the young people. Addressing the capacity development needs of the youth is critical in achieving the ocean-related Sustainable Development Goals (SDGs) and the objective of the UN Ocean Decade. We encourage the IOC Group of Experts on Capacity Development to take particular attention to the needs of the young people in the revision of the IOC Capacity Development Strategy.

### **Norway**

Norway appreciates IOC as a key partner, as mentioned in our intervention under agenda item 3.2, and in particular for Norwegian development cooperation aimed to promote a strengthened, sustainable, and inclusive ocean economy in cooperating countries.

Norway acknowledges IOCs valuable contributions to the work of the High-Level Panel for a Sustainable Ocean Economy, including capacity development to strengthen understanding and management of our ocean, coasts and marine ecosystems. The IOC is very well placed to promote the broad transformations needed to advance a sustainable ocean economy, prioritizing a healthy ocean alongside sustainable production to benefit people everywhere.

The mandate, experiences and knowledge make IOC vital in promoting the UN Convention of the Law of the Sea as a basis for sustainable ocean management. IOC is in a unique position to deliver effective capacity development to strengthen scientific, legal and institutional structures in ocean states.

Norway is pleased to see the concrete results of IOC on increasing ocean literacy in cooperating countries, in particular related to Marine Spatial Planning and science support to ocean governance. Levelling the playing-field will remain crucial for realising Sustainable Ocean Planning worldwide.

Norway is currently contributing with 2,4 million USD for the period 2020-2021 to support the implementation of the capacity development strategy and the Ocean Decade, and we urge other member states to contribute with funding as well.

### **Portugal**

Capacity Development is one of the key functions of IOC that we consider is of utmost importance. Portugal participated in the Task Team that analyzed the issue of the justification for a revision of the current IOC Strategy. We fully agree with the elements presented that justify the need for this revision. Further, we also support the proposal that the current IOC CD Strategy is extended until 2023 and that its revision for the period 2023-2030 is prepared by the Group of Experts on Capacity Development, to be submitted for approval at the 32nd session of the IOC Assembly.

The recent creation of an Ocean Teacher Global Academy Regional Training Center – Portugal, will certainly contribute to Capacity Development, in particular for Portuguese Speaking Countries.

### **Republic of Korea**

The Republic of Korea appreciates the hard work of the CD Task Team and takes note of the outcomes identified, which are expected to be well reflected in the revised IOC Capacity Development Strategy.

We believe that the aim of the capacity development is to address and to contribute to tackling global challenges including climate change, biodiversity and habitat loss, especially in SIDS and LDC. Therefore, we would like to emphasize science-policy linkage and integration of natural sciences and societal disciplines to develop capacity in policies and decision-making. Efforts for understanding of the ocean and its role and value related to climate change and biodiversity conservation are also being made through school education and informal education in relation to ocean literacy.

Further, we also request a CD strategy to fully reflect UNESCO global priorities, Africa and gender equality, as well as priority groups, SIDS and youth. The development of strategies and implementation plans to support the career needs of women and young scientists would be welcome.

Again, I would like to thank the Group of Experts on Capacity Development and support their efforts for revision process.

### **Spain**

España felicita a la COI por la actividad desarrollada en el desarrollo de capacidades relacionadas con las Ciencias Marinas durante este periodo y agradece el informe y la presentación. Son de especial relevancia las acciones acometidas para una revisión de la Estrategia de Capacidades de la COI, que consideramos muy necesaria sobre todo para su alineamiento con la Estrategia de Desarrollo de Capacidades del Plan de Implementación del Decenio. La estrategia de la COI es un elemento muy útil como guía para el desarrollo de estrategias de desarrollo capacidades de los Países Miembros. El informe del grupo de expertos recoge algunos aspectos que consideramos particularmente importantes y que deberían ser centrales en la revisión de la Estrategia de la COI. Criterios:

- Alinear la Estrategia de Desarrollo de Capacidades de la COI con el Plan de Implementación del Decenio.

- La importancia de desarrollar Estrategias de Desarrollo Capacidades sostenidas a largo plazo, no solo en cuanto a su financiación, sino por ejemplo en cuanto a la continuidad del personal responsable de diferentes iniciativas.
- Deben reforzar los recursos y redes existentes a nivel nacional y regional. Las iniciativas deben aprovechar y hacer uso de los institutos educativos y universidades nacionales, tal como ya destacó el representante de Costa de Marfil en su respuesta al informe presentado por el Secretario Ejecutivo, impulsando la integración del nuevo conocimiento a los currículos existentes y evitando crear nuevas iniciativas externas, que aunque sean valiosas, pueden comprometer las estructuras existentes a nivel nacional.
- Desarrollar sistemas de monitorización y evaluación de la calidad y el impacto de las actividades de desarrollo de capacidades. Esto incluye identificar lagunas que necesitan ser solucionadas.

#### Objetivos:

- Incorporar los principales retos a escala global y local en relación con el cambio climático, la pérdida de hábitats y biodiversidad y su impacto en los recursos y servicios marinos, sistemas de observación, etc.
- La integración de disciplinas sociales y ciencias naturales en una aproximación holística debe ser un elemento central de estas estrategias.
- Orientación hacia responsables políticos, como primer paso para facilitar el resto de los elementos de la estrategia. Estas iniciativas deben incorporar una clara relación de los beneficios socio-económicos derivados de los servicios y recursos de los océanos.

#### **United Kingdom of Great Britain and Northern Ireland**

We recognise the value of the IOC's capacity development efforts and how these are being referred to by other initiatives, including at the BBNJ negotiations. It is therefore important to ensure that the IOC's capacity development efforts are developed in a manner that is consistent with current and anticipated needs and should be aspirational, to highlight it as a key component of delivering capacity development in the marine space. It will be important to recognise capacity development efforts undertaken by others, including within the broader UN Oceans family to ensure alignment and to recognise especially that funding the enabling of CD is critical. As such Mr Chairman, we support the proposal to update the current strategy.

#### **United States of America**

The United States commends Chair Troisi and Mr. Alan Evans for their leadership in the Experts Group, and we thank the members of the Experts Group and the Task Team. The continued work of the Experts Group is essential to scaling up IOC implementation of capacity development at global, regional and national levels. We recognize the challenges posed by the COVID-19 pandemic, and the need to ensure alignment of capacity development objectives as we move into the Implementation Phase of the Decade. We therefore support the draft decision to extend the current IOC Capacity Development Strategy through 2023, and to revise the Terms of Reference to reflect the extension, thus allowing the Experts Group to continue its work.

#### **Scientific Committee on Oceanic Research (SCOR)**

The Scientific Committee on Oceanic Research, SCOR, important mission is on promoting the development of global and regional capacity development in marine science.

SCOR supports capacity development, technology transfer, training, and education by building on its ongoing activities and making use of existing training and education facilities. SCOR involves students and early career scientists in its projects and supports visiting scholars, joint POGO-SCOR fellowships, and the participation of scientists and early careers from developing countries in international scientific and training events such as summer schools. SCOR promotes equity, diversity, inclusion in oceans sciences. SCOR will continue support capacity development strategy in marine science within the UN Decade.

#### **World Meteorological Organization (WMO)**

WMO thanks the IOC for the invitation as an Observer on the IOC Capacity Development Group of Experts. The Chair of the WMO Capacity Development Panel has participated in their meeting in 2020.



Similar to the IOC, WMO is also revising its Capacity Development Strategy, anticipated for adoption next year. Revision is currently underway by the WMO Capacity Development Panel, of which one Member is from the WMO-IOC Joint Collaborative Board, to ensure the connectivity to the IOC and consideration of mutual WMO and IOC interests, and complementarity of the two Strategies.

During drafting of the WMO Capacity Development Strategy, subject matter experts will also be called on to contribute, which includes reaching out to the relevant ocean experts of both WMO and IOC. Given the parallel nature of both of our organisations revising respective Capacity Development Strategies, we welcome and encourage stronger collaboration between these efforts, which aligns with the intentions set out within the WMO-IOC Collaborative Strategy, adopted yesterday.

WMO looks forward to continuing our work together to strengthen marine capacity for improved decision-making in our common Members and Member States.

### **3.5.4 IOC Ocean Literacy Action Plan and Strategy**

#### **Argentina**

Apoyamos el Plan de acción y estrategia de alfabetización oceánica de la COI, y expresamos nuestro interés por contribuir de forma activa en el Grupo de Expertos que se propone establecer. La alfabetización oceánica es una de las herramientas centrales que pueden utilizarse para alcanzar varios de los objetivos de la Comisión y en particular de la Década de las Ciencias Oceánicas.

Nuestro país se encuentra desarrollando acciones que van en línea con dichas prioridades, como por ejemplo a través de la iniciativa "Escuelas Azules", lanzada recientemente, en el marco del objetivo del proyecto Pampa Azul de aumentar las capacidades humanas orientadas al mar y del Decenio de las Ciencias Oceánicas para el Desarrollo Sostenible. Esta iniciativa, coordinada por el Centro Cultural de Ciencia en colaboración con la Iniciativa Pampa Azul y la comunidad científica, consiste en un programa educativo para promover proyectos escolares que buscan generar nuevas experiencias de aprendizaje sobre la conservación y utilización sostenible del océano, los mares y sus recursos, a partir de la vinculación con la comunidad científica especializada, un mayor acceso a la información y el trabajo en red para desarrollar experiencias locales y comunitarias. Asimismo, se pretende que "Escuelas Azules" funcione en 2021 en modalidad piloto, involucrando al menos a 25 establecimientos educativos de todo el país.

En relación con el Informe IOC/2021/ODS/22, las páginas 10, 14, 20 y 21 de dicho documento refieren al concepto de "economía azul". En línea con anteriores intervenciones de esta Delegación y de otras (Colombia), destacamos que no existe acuerdo a nivel internacional en relación a dicho concepto, respecto del cual se desconoce su sentido, alcance y potenciales impactos. Asimismo, la Agenda 2030 no incluye este término ni de manera general ni tampoco en el ODS 14. Con relación a lo señalado por la distinguida Delegación de Seychelles en una intervención anterior sobre la cuestión, deseamos destacar, con todo respeto, que dicho concepto no ha sido recogido por el documento final de la Conferencia de Río + 20 ("El futuro que queremos") ni tampoco por la resolución que aprueba dicho documento final. Si bien algunas delegaciones, durante sus intervenciones en dicha Conferencia, han hecho referencia a dicho concepto, el mismo no ha sido aceptado en el documento final justamente por la falta de acuerdo sobre su sentido y alcances. Si bien entendemos que se trata de un concepto que puede ser actualmente utilizado en algunas regiones, no existe acuerdo al respecto a nivel global. Atento a ello, reiteramos nuestra solicitud de que el término sea reemplazado en ese documento y a futuro por el de "economías oceánicas sostenibles e inclusivas" ("sustainable and inclusive ocean economies") que sí ha sido aceptado en foros multilaterales globales como FAO.

#### **Colombia**

Colombia seguirá trabajando por propender la educación oceánica en el país, a través del Comité Técnico Nacional de Educación del Océano, el cual tiene como propósito servir de punto focal de diferentes instituciones con el fin de aunar esfuerzos, recursos y capacidad institucional para establecer mecanismos de cooperación y asesoría en la formulación y ejecución de propuestas, planes y proyectos direccionados al fortalecimiento de la formación académica y profesional en temas del océano a nivel local, nacional y regional.

Como resultado de lo anterior, se han creado doctorados, diplomados, cátedras y eventos académicos. Además se ha fortalecido la relación con los colegios y universidades en aras de promover la cultura oceánica a nivel nacional. Asimismo, el país se encuentra en constante comunicación con la iniciativas regionales, como la Red de Educación Latinoamericana para el Océano.

Es preciso resaltar la adaptación del centro regional de la estrategia OTGA atendido por Colombia que logró en tiempos de pandemia la realización de 5 cursos virtuales llevando capacitación a cerca de 170 científicos de la región sobre principios de balance de género y jóvenes investigadores, acciones que contribuyen a generar las bases de conocimiento necesarias para la estrategia de alfabetización de la COI.

Por esta razón, Colombia se encuentra interesada en apoyar las iniciativas que se realicen en el marco del programa de alfabetización oceánica y está de acuerdo en la creación de un grupo de trabajo que considere los mecanismos de coordinación y gobernanza ya creados por los Estados para el desarrollo de la alfabetización oceánica.

### **Germany**

Germany considers ocean literacy to be a priority issue of the Ocean Decade and is therefore pleased that ocean literacy is playing a prominent role as Decade Outcome 7. We trust that it will continue to play an important role in the IOC capacity development strategy.

Germany has initiated a process through the German Ocean Research Alliance to coordinate and shape its contributions to ocean literacy. Besides the existing efforts, like for example the World Ocean Review and the Ocean MOOC, a number of projects are in the pipeline, including a digital and interactive map of the ocean that will allow users to dive into the ocean through interlinked videos. The project will be open to the scientific community, but may also be used to engage the public in citizen science.

Germany would therefore like to engage with the other member states active in ocean literacy through the proposed expert group or in general in the implementation process of Decade Outcome 7, to contribute to the diverse and extensive experience and to find ways to jointly achieve Outcome 7.

### **Indonesia**

Indonesia strongly support the IOC Ocean Literacy Action Plan and Strategy. We believe this strategy will leverage our capacities and efforts to increase public awareness and encourage a more responsible and informed behavior towards the ocean and its resources especially regarding the Decade of the Ocean Science.

As the archipelagic country with surrounding waters approximately 70 percent of its total area, Indonesia relies heavily on marine activities. To support the safety of maritime activities in Indonesia, the provision of maritime information is really challenging as it is depend on the user's understanding of the information.

Realizing the above-mentioned challenges, it is essential to set up the ocean literacy program for the fishermen community to enhance their level of understanding on the maritime weather and climate forecasting and information. Indonesia since 2016 has conducted the ocean literacy program that we called Fisherman Weather Field School. We has also conducted the Earthquake Field School to strengthen community resilience in vulnerable coastal areas. The program promotes the integration of local knowledge into the natural warning approach for near-field tsunami, and trains participants to evacuate immediately to the safe tsunami zone whenever they feel the shaking of a quake.

Indonesia also encourage local governments through cooperation with universities, research institutions and NGOs as well as national media outlet to provide campaign on reducing marine litter for young generation, fishermen communities and villages in support to SDG14. In effort to protect and save coastal ecosystems, coral reef rehabilitation and management program was established in early 2000; the program including public awareness by development of educational material with local content on marine environment.

Considering the importance impact of the program to the safety of the communities, it is necessary to emulate and implement this program in others Member states who are facing the same challenges with Indonesia in maritime sectors.

### **Italy**

Thus, recognizing the work of the Secretariat, Italy endorses the IOC OL Action Plan and welcomes the establishment of the group of experts as well as the IOC-Decade Action Ocean Literacy With All (OLWA) Programme. In the framework of the Decade, Italy highlights also that OL is addressed as key branch of the Mediterranean Programme SciNMeet.

Recently, triggered by the EuroGOOS survey, Italy performed a preliminary analysis on national positioning towards OL, mapping 89 different activities and events in the time frame 2016-2020, of which 46 addressed to schools, with more than 300 students engaged on average per event, the remaining ones to the general public.

Italy is member of the EU4Ocean Coalition Platform, regularly participates to the European Researchers' Night during which several national institutions organize events for the dissemination of knowledge of the sea and marine research, as well as specific initiatives promoted at the local level.

Italy also regularly participates to the World Oceans Day and Ocean Sampling Day<sup>21</sup> in synergy with IOC, organizing several activities, such as sampling at sea, open days, social communication campaigns, initiatives targeting science & arts, as well as educational workshops and presentations for schools. As additional remarks of fruitful collaboration, Italy:

- hosted the Master Class in Communication promoted by the UNESCO Office of Venice back-to-back with the Regional Workshop to prepare the Decade activities held in January 2020;
- participated to the launch event of the Italian version of the Ocean Literacy for All toolkit, and fully support its further promotion;
- and will participate to the summer schools for schoolteachers organized by the Ministry of Research in early July 2021.

### **Japan**

Japan would like to express our appreciation to the IOC secretariat for their excellent preparation of the revised action plan and the new expert group mechanism which will further promote active participation of various stakeholders and contribute to the UN Decade of Ocean Sciences. With recognition of the importance of promoting ocean literacy, Japan committed positively to the review process of the Ocean Literacy Plan of Action.

At a national level, various educational activities related to ocean and ocean literacy have been implemented even in the formal education, as some regional Boards of Education organize their curricula in strong consciousness of the UN Ocean Decade.

In addition, several UNESCO associated schools in Japan participated in the IOC pilot project using the Ocean Literacy Toolkit and some of their activities are introduced in the book of Japan's Practices for UN Ocean Decade published by the National Committee in March this year

Japan, as a nation surrounded by the oceans, will continue to promote ocean literacy towards coexistence with the ocean and looks forward to further cooperation with IOC, member states and other stakeholders.

In this context, Japan expects that the IOC Group of Experts will provide guidance on the coordination of Ocean Literacy networks not only at regional, national and local levels but also at a global level, by adding a word 'global' in its ToR.

### **Kenya**

Kenya concurs on the importance of strengthening visibility and awareness within the IOC ocean literacy programme and as a contribution to the Ocean Decade. We view this as essential in promoting public understanding and participation on ocean issues.

Kenya welcomes the activities undertaken to foster ocean literacy and appreciates the support provided by Member States and partners. We further welcome the revised Ocean literacy Action Plan. We are pleased to see that due consideration has been taken to strengthen coherence between the ocean literacy activities and the IOC global programmes and regional activities.

Kenya supports the proposal to establish the IOC Group of Experts on Ocean Literacy. We also welcome the draft terms of reference presented in the annex to the draft decision.

We also note that the UNESCO Education Sector is strongly engaged in promoting literacy and encourage the IOC Secretariat to continue strengthening cooperation with the Sector in order to harness the opportunities for collaboration.

Finally, Kenya continues to contribute to ocean literacy most recently being during the World Ocean Day during which we mobilized various stakeholders to organize an online workshop and various public sensitization activities.

## **Malaysia**

Ocean literacy is one of the important dimensions of the IOC. It raises awareness in various level of societies on the importance of ocean. Malaysia thank the Secretariat and all that were behind the work in developing the action plan for ocean literacy and we think it is timely that we have a global action plan that member states can use as a benchmark in carrying out their local ocean literacy activities.

In Malaysia, efforts to impart knowledge on ocean have been conducted through various institutional capacities based on resources available, in the current absence of a coherence overarching communication, education and public awareness plan.

As the national focal point for IOC, the Ministry of Environment and Water, Malaysia, notes with appreciation the various awareness activities conducted in the past, related to ocean literacy involving various stakeholders such as government, private sector, teachers and students as well as local communities. The subject is garnering interests - thanks to the effort by our agencies, local universities, NGOs, funders and regional partners that have supported us in this endeavour.

In welcoming this action plan, Malaysia will align our focus to institutionalise a focused and targeted Ocean Literacy Plan focusing on targeted segments of society and utilising various platforms and resources especially online and social media as our focus. We too support the establishment of group of experts to effectively steer the implementation plan.

My delegation again underscores the importance of literacy by deploying the whole spectrum of knowledge systems including ethno-knowledge systems for a holistic and inclusive approach.

## **Philippines**

The Philippines reiterates its appreciation to the Executive Secretary and the Secretariat for their work on the new version of the IOC Ocean Literacy Plan and for spearheading and facilitating activities both at the global and regional levels. The Philippines supports the draft decision on the IOC Ocean Literacy Action Strategy 2021-2030.

The Philippines strongly advocates for the implementation of ocean literacy actions to support several ocean-related research and management interventions. It is our pleasure to share that since 1999, the Philippines has celebrated the Month of the Ocean every month of May. This is to highlight the vast coastal and ocean resources, alluring seascapes, and rare marine flora and fauna, all of which provide both economic and ecological benefits to the nation. This year's celebration served as a take-off point of the many programs that will support the implementation of The Decade in the country. While still in the midst of the pandemic, all activities were tailored and executed via several social media platforms.

The Philippines endeavored to bring the festivities online through:

1. Ocean jam, a musical performance by selected artists and bands, featuring keynotes and discussions in between about what is The Decade all about and valuable information and call to action on the protection and conservation of the ocean and marine life;
2. Ocean dance coined as "Motions of the Oceans" showcasing an originally composed song called, Agos ng Buhay (Flow of Life) for ocean management in the country and featuring all mascots of the flagship species that are found in the nationally managed marine protected areas of the country;
3. Ocean storytelling for the younger audiences through an interactive role-playing method, giving life to tiny marine lifeforms, the cryptobionts; and,
4. Ocean patrol, featuring kids who act as reporters of significant stories about the seas and the life it supports.

The Philippines would like to take this opportunity to express our appreciation to the IOC for its support of this endeavor, listing the celebration as one of the activities under the observance of the Decade.

These key activities form part of the overall Social Marketing and Mobilization strategy of the Coastal and Marine Ecosystems Management Program of the Philippines focusing mainly on behavior change interventions and stakeholder engagements through citizen science approaches. Such activities put a premium on empowering and engaging the youth, local communities, indigenous peoples, women, and children to take action in conserving and protecting the marine environment and promote an environment-friendly and sustainable way of life.

Upcoming celebrations such as the Annual Maritime and Archipelagic Nation Awareness Month, International Coastal Cleanup, Fish Conservation Week, and National Maritime Day are also geared towards promoting the implementation of The Decade in the Philippines. The Philippines aspires to maintain the momentum and synergy with all sectors of society to build and solidify actions towards science-to-policy interface and mainstream more proactive ocean conservation actions.

### **Portugal**

Portugal recognizes the major importance of ocean literacy in the IOC Strategy for capacity development, and its relevance in the activities of the Commission, namely as concerns the implementation of the Ocean Decade and the achievement of the 2030 Agenda SDGs. We endorse the proposed IOC Literacy Plan, and are willing to engage with other member states and contribute in the context of the IOC group of Experts on Ocean Literacy. We also endorse the Terms of Reference proposed in the annex to the decision.

Portugal is strongly committed to promoting an ocean literate society. Examples of specific national actions include the Blue Schools Program, promoted by the Ministry of the Sea, joining 256 Portuguese schools at various teaching levels, and also the numerous outreach actions promoted for schools and to the general public, by our Live Science (Ciência Viva) Programme, of the Ministry of Science, Technology and Higher Education. The national Blue Schools Program inspired the recent development of the All-Atlantic Blue Schools and the EU Blue School network, both co-coordinated by Portuguese entities. Portugal is also preparing a series of infographic films directed to a wide audience, with a summary of the main results of the World Ocean Assessment, as a voluntary contribution to the IOC, in the context of the UN Ocean Decade.

### **Republic of Korea**

First, we welcome IOC's plan of Actions for ocean literacy, and we fully support the comprehensive report presented by Ms. Santoro. We hope that IOC and its new expert group continue to provide much guidance on the way of promoting ocean literacy for IOC Member states.

Recognizing the significance of ocean literacy, The Republic of Korea has opened its National Ocean Science Museum in July 2020 to conduct a programmatic and objective oceanographic education based on ocean literacy. The museum embraces its central theme as ocean literacy, which is one of the first kind in the world, focusing on a software-based ocean education program, apart from the past hardware-based exhibitions. We believe that the museum will contribute to the fostering of ocean literacy by discovering the importance and value of the ocean through understanding the scientific fundamentals on various phenomenon in the ocean and human relationship.

In addition, the Republic of Korea holds the Future Generation Ocean Scientist Workshop every year, targeted towards undergraduate students as a means to contribute to Ocean Literacy and Capacity Development. The Republic of Korea also published an SDG-14 guidebook by collaborating with the Korean National Commission for UNESCO. We hope that these efforts extend far beyond the Korean Peninsula, contributing to the value of ocean literacy worldwide.

### **Sweden**

We would like to reiterate our statement regarding agenda item 3.7 on the Decade regarding Ocean Literacy as an integrated and important part of implementing the Ocean decade and regarding our continued support for the work on Ocean literacy.

Ocean literacy is a key to encourage all citizens and a wide range of stakeholders to have an active role in the implementation of the decade connecting ocean science and education for sustainable development, - not least among women and youth.

Ocean literacy also increases the capacity to manage ocean resources in a sustainable manner by using ecosystem-based approaches. It increases knowledge of the ocean, the capacity to communicate about the ocean in a meaningful way and to deliver co-designed, solution-oriented research that will lead to transformative actions with long-lasting benefits to the ocean and society.

Sweden therefore supports the establishment of the IOC Group of Experts on Ocean Literacy and the endorsement of the IOC Ocean Literacy Plan of Action 2018–2021 as a guidance document for the work of the Expert Group for the next four years.

### **United Kingdom of Great Britain and Northern Ireland**

The UK recognises the importance of ocean literacy in bringing attention to society of the value of the ocean. Numerous natural history programmes produced in the UK such as the Blue Planet series by Sir David Attenborough have done much to raise awareness of ocean issues. However, it is increasingly recognised that ocean literacy must be considered as being not only about increasing public ‘awareness of the state of the ocean, our impacts upon it and its impacts upon us’, but also about other dimensions such as ‘attitude’, ‘communication’, ‘behaviour’ and ‘action’.

Throughout 2020-2021, with funding provided by the UK Department for Environment, Food and Rural Affairs (Defra), an evidence synthesis review was undertaken to see how ocean literacy can more effectively connect the public with Ocean and Climate. It examined links between ocean literacy and behaviour change and recommended revisiting aspects of the definition of ocean literacy and identified additional dimensions of ocean literacy which are not currently addressed.

The largest ever ocean literacy survey of people in England & Wales published on World Oceans Day 2021 and showed that:

- 85% said protecting the marine environment was personally very important or important.
- Of those who had visited our coastlines, 80% said it was good for their physical health and 84% said it was good for their mental health.
- 47% of people said they received information on the state of the ocean from wildlife documentaries.
- 78% said they had or plan to make lifestyle changes to protect the marine environment.

The UK welcomes the establishment of a group of experts on ocean literacy and will endeavour to identify a suitable candidate for membership.

### **United States of America**

We commend the level of ambition encompassed in the Action Strategy, and we are supportive of its objectives and actions. We also support the proposal to develop an Experts Group on Ocean Literacy, as well as the Terms of Reference for the Group. We acknowledge the challenges associated with implementation given current constrained financial and human resources, though we are hopeful that ocean literacy will be a flagship of the Decade to grow public support for the Decade and for funding critical Decade programmes. Coordination and communication among member states’ ocean literacy organizations and the IOC will leverage diverse expertise and heighten the impact of implementing the Action Strategy and the Decade programme. The United States looks forward to strengthened collaboration with the IOC to ensure that relevant stakeholders and content expertise within all of our communities are engaged.

### **3.5.5 Adoption of a Joint WMO-IOC Collaborative Strategy and Report on the Establishment of the Joint WMO-IOC Collaborative Board**

#### **Argentina**

La elaboración de una estrategia colaborativa entre la OMM y la COI y el éxito de las primeras reuniones virtuales y acciones llevadas a cabo por la Junta Colaborativa Mixta son mérito de los participantes en estas actividades y hacemos extensivas nuestras felicitaciones a tan ardua labor.

Ante la desaparición de JCOMM, esta nueva estructura organizativa resulta en sus objetivos como superadora y permite continuar con diversos temas de colaboración entre los dos organismos, a través de su rol asesor. Por ejemplo, las valiosas acciones que desarrollaron los Grupos de Expertos de JCOMM pueden ahora continuar sus actividades como consecuencia de las coordinaciones y aportes de la Junta Colaborativa Mixta.

Habiéndose concretado el diseño de una estrategia y consolidado el funcionamiento de la Junta Colaborativa, incluso con las dificultades a las que la pandemia nos ha enfrentado, queda por delante mucho trabajo para afianzar las decisiones adoptadas y en particular en temas de sistemas de observación integrados e interoperables, sistemas de predicción sin discontinuidad e investigaciones interdisciplinarias.

Es muy importante destacar que los integrantes de esta Junta no tuvieron la oportunidad de reunirse en persona en ningún momento y todo el trabajo realizado ha sido fruto de un gran esfuerzo de

videollamadas e intercambio de documentos hasta lograr la estrategia deseada. Un especial agradecimiento a la Sra Monika Breuch-Moritz y al Sr. Louis Uccellini por su liderazgo y apoyo en las propuestas realizadas, Nuestro agradecimiento también al Sr Albert Fischer del Secretariado por su incansable labor.

Finalmente, he de mencionar que Argentina desea expresar su compromiso con la Junta Colaborativa Mixta y mantener un rol activo en la misma. Del mismo modo, extender su apoyo a la adopción de la Decisión 3.5.5.

## **Colombia**

Colombia con beneplácito respalda la adopción de la estrategia de colaboración OMM – COI y espera que esta permita a la Junta de Colaboración Mixta de la OMM y la COI dar cumplimiento a su mandato descrito en la Resolución XXX-2 con el fin de facilitar la mejora de la prestación de servicios meteorológicos y oceanográficos marinos en apoyo de la seguridad de la vida humana en el mar y en las zonas costeras, además de gestionar y coordinar las zonas marinas y costeras; mejorando la provisión de datos, información, productos y servicios necesarios, que permitan el apoyo a la investigación climática y la detección y predicción de la variabilidad climática.

El país, para el establecimiento de su Servicio Meteorológico Marino ha implementado las guías OMM 447 y OMM 558 de la Organización Meteorológica Mundial, lo que permite tener la capacidad de organizar de manera efectiva todos los esfuerzos nacionales para el desarrollo de sistemas operacionales que brinden servicios climáticos marinos a las comunidades y a los usuarios a nivel nacional e internacional y en ese sentido encuentra valioso dar continuidad a la alianza estratégica entre la COI y OMM que tenga como fin dar apoyo técnico a los Estados para dar cumplimiento a la regla 5 del Convenio SOLAS “servicios y avisos meteorológicos”

Celebramos que se promueva la adopción de enfoques regionales sintetizados en prioridades y estrategias específicas, así como la promoción de cooperación entre regiones con características comparables. En este sentido, se sugiere que las estrategias de comunicación y colaboración de la OMM y la COI consideren las redes temáticas ya existentes en las regiones, como LAOCA y REMARCO en Latinoamérica y el Caribe, contribuyendo a compartir, documentar y replicar los casos exitosos a nivel regional.

Así mismo, Colombia está de acuerdo que la cooperación para el desarrollo de capacidades debe ser una prioridad, por lo cual el país ofrece su colaboración, en calidad de Nodo del Ocean Info Hub y Centro Regional de Formación para la Región Latinoamericana y del Caribe en idioma Español, del Intercambio Internacional de Datos e Información Oceanográficos (IODE) de la COI. Lo anterior, con el fin de crear cursos con un currículo común concertado con casos de estudio específicos para regiones con características comparables como las zonas tropicales, que adicionalmente puedan impartirse simultáneamente en diferentes Centros Regionales de Formación de la IODE en el idioma propio de cada región.

Colombia sugiere incluir en el párrafo 25 línea 7 de la Estrategia de Colaboración, la frase “transferencia de tecnología e información”, después de la palabra “infraestructuras”. Esto teniendo en cuenta la experiencia en sistemas de información para el intercambio de datos de la IODE.

Quedando:

“El desarrollo de capacidad, la formación y la transferencia de tecnologías son elementos fundamentales en los que se basan los intereses comunes, los productos finales y los beneficiarios de la OMM y la COI. En los ámbitos de interés mutuo, tanto los Miembros como los Estados Miembros se beneficiarían considerablemente de las iniciativas conjuntas de desarrollo de capacidad y formación. Debería prestarse especial atención a los organismos nacionales conjuntos de la COI y la OMM para reducir el número de actividades duplicadas. Se necesita una cooperación más estrecha entre las iniciativas y las infraestructuras de transferencia de tecnologías e información, formación y desarrollo de capacidad vigentes, por ejemplo, entre los Centros Regionales de Formación de la OMM y los Centros de Formación del Intercambio Internacional de Datos e Información Oceanográficos (IODE). Deberían priorizarse los pequeños Estados insulares en desarrollo y los países menos adelantados con grandes comunidades costeras y que dependen de la economía marina.”

Para finalizar, Colombia respalda la adopción de esta estrategia de colaboración, y espera que también se logre adoptar en el Consejo Ejecutivo de la OMM en su 73ava reunión que está ocurriendo en paralelo a esta Asamblea.

## **Germany**

Germany welcomes the good success achieved in restructuring and strengthening the cooperation between IOC and WMO. It was indeed a daunting task to maintain the established structures of cooperation and at the same time to create a new umbrella for it. However, the task was mastered by a dedicated group of people. Germany would like to thank the JCB and the preparatory group consisting of partnering IOC and WMO experts, and the two co-chairs Luis Uccellini and Monika Breuch-Moritz for their hard work and achievements and hopes for a successful continuation of this collaboration in JCB. Germany is optimistic that IOC and WMO will deepen and strengthen their cooperation through the new JCB. In this context, it is important to realize that JCB reports to the governing bodies of both organizations where the final decisions are taken by their member states, that are for the most part identical in the two organizations. So it is crucial that the national delegations and representatives of WMO and IOC cooperate, keep each other informed and ideally work hand in hand to really make this collaboration a success story.

The Strategy is a very concise document that reflects the shared future of IOC-WMO collaboration. The strategy will, of course, evolve as we bring it to life. It is important to note that JCB and the collaboration is no longer limited to marine meteorology, but now encompasses all the roles and responsibilities of the two organizations. So we can now look at the ocean and atmosphere as a whole and explore ways to best support the conservation of our climate and oceans, not just focusing on the physical parameters, but going beyond that. The first steps have been taken, but more lie ahead. The working groups need to be aligned into the new structure. Where this has not yet happened, Germany trusts that this step will follow, because the most important sentence of the beginning of the collaboration was: "no one will be left behind."

## **Indonesia**

Considering Indonesia sits in the middle of the warmest body of water known as the Indian and West Pacific warm pool, the Maritime Continent plays a pivotal role in the global weather-climate continuum. As an archipelagic country, the complex land-sea distribution and topography make the prediction of high-impact events in this region extremely challenging. We also notice that the Indonesian Throughflow (ITF), the artery connecting the tropical Pacific and Indian Oceans, is a crucial link of the ocean general circulation that affects not only properties of these two oceans but also global climate. Multi-scale interactions in the atmosphere and ocean have a profound impact on air-sea thermal exchanges, modulating climate variability over a wide range of time scales. On the other hand Indonesia is also considered as one of the zone prone to earthquake. This situation comes up due to the position of Indonesia in boundary of 3 major tectonic plates, therefore our country is also very prone to tsunami event.

Considering those fact, for Indonesia, WMO and IOC has played a critical role in assisting us to provide better services as we can not separate weather-climate-ocean, therefore we would like to fully support this WMO-IOC Collaborative Strategy as we do believe this Strategy will become a guide to leverage the process in enhancing our countries' capacity especially in the provision of accurate, fast, reliable coastal hazards including tsunami as well as the provision of weather and climate information.

## **Italy**

The strategy is sound, but more should be done to cooperate with IOC UN Decade Programs in the next years. Furthermore, it is recommended that a stronger dialog is undertaken by the JCB (Joint Collaborative Board) with their respective internal groups to advance the planning of joint IOC-WMO projects under the relevant IOC bodies and WMO standing committees or groups.

## **Portugal**

Portugal recognizes the major importance of the Joint WMO-IOC Collaborative Board towards the strengthening of the long history of collaboration between these two intergovernmental bodies, which we consider fundamental, acknowledging their complementarities. We fully support and are committed to the proposed WMO-IOC Collaborative Strategy and vision, support the new editing of Point 11, and welcome the proposed Rules of Procedure now presented to this Assembly, which will govern its functioning, clarifies the duties of the co-chairs, the specifics of sessions, substructures and the arrangements for a joint secretariat, including the provision for a potential need of virtual meetings, if necessary.

## **Spain**



España, durante este largo proceso de negociación entre la COI y la OMM hemos manifestado la importancia que damos a la colaboración entre estas dos organizaciones. Ahora tan solo queremos agradecer el trabajo de la Secretaría general, del Presidente Ariel Troisi y, en esta ocasión, muy especialmente, a la Vice-presidenta alemana, Monika Breuch-Moritz, por su excelente liderazgo en el proceso de constitución de la Joint Collaborative Board.

#### **United Kingdom of Great Britain and Northern Ireland**

The UK would like to thank the vice-Chair of Group 1 and the Secretariat for their excellent work with officers and the secretariat of WMO in establishing the Joint WMO-IOC Collaborative Board (JCB), including its Strategy and Rules of Procedure. The relationship between the IOC and WMO is of vital importance in relation to a range of matters covered in the strategy.

The UK looks forward to continuing productive engagement between IOC and WMO in implementing the strategy and, in line with IOC Resolution XXX-2 which established JCB, also looks forward to the report of the initial review of the new arrangements to be presented to the IOC Assembly at its 32nd session in 2023

#### **United States of America**

The United States is very pleased with the outcome, including the Strategy and the Rules of Procedure - and the single word change is certainly not a distraction. The US reiterates our appreciation for our Vice Chair, Monika Breuch-Moritz, and also the Chair of the IOC, as, Captain Troisi, you originally bore some responsibility for the creation of this success.

I also want to mention, as others have, Dr. Louis Uccellini, who is the Director of the National Weather Service in the United States. Through this joint experience, he has become quite an ocean advocate, which brings me a great deal of pride.

I reflect upon the intervention of our distinguished colleague from Germany, and very much agree with everything that was expressed. I remember the mood on the floor of the IOC when we first started to discuss this engagement with WMO, and there was much recognition of the rather large structure and staffing of the WMO and also the rather lean staffing we have in the IOC. The balance of partnership interests is something that we need to both celebrate and be attentive to, to make sure that it is maintained through the course of this engagement.

I do look forward with optimism, and I have great appreciation for all the parties, including the Secretariat, who have made this venture very successful so far.

#### **World Meteorological Organization (WMO)**

WMO thanks the IOC JCB Co-Chair, Ms Monika Breuch Moritz, for this excellent report, and we'd also like to extend thanks to Captain Ariel Troisi as interim IOC Co-Chair, along with the WMO Co-Chair, Dr Louis Uccellini, and all the JCB Members - interim and current from both IOC and WMO sides, along with the supporting secretariats, especially Dr Albert Fischer from IOC, for this great accomplishment. The JCB meetings in 2020 elicited exciting discussions, highlighting future collaboration potential, reinforcing an already strong partnership aligned with mutual interests for both WMO and IOC Member/Member States, and culminating in this Draft Strategy – which as noted is cross-cutting along the shared value chain of research, obs, data, forecasting, services, with attention to capacity development and regional activities.

As mentioned by IOC Executive Secretary, Dr Vladimir Ryabinin, yesterday, the draft Strategy was presented by WMO JCB Co-Chair, Dr Louis Uccellini to the WMO, and with one minor edit the WMO EC accepted this subject to acceptance by the IOC Assembly.

Similarly, the WMO Executive Council has also approved the Rules of Procedure, pending acceptance by the IOC Assembly.

WMO is very encouraged by all these positive comments from Member States, and we are looking forward to moving forward together in stronger partnership and especially, the next stage of implementation.

### **3.5.6 Status of the Regional Committee of the Central Indian Ocean (IOCINDIO)**

#### **France**

La France accueille favorablement le projet de transformation du comité régional de la COI pour l’océan indien central (IOCINDIO) en sous-commission. Nous souhaitons rappeler l’importance de favoriser des projets de coopération régionaux en matière de développement des sciences océaniques, particulièrement en cette année de démarrage de la Décennie des Nations Unies pour les sciences océaniques au service du développement durable.

Nous avons noté avec satisfaction dans le document 3.5.6 mis à disposition ce matin la précision sur la localisation du nouveau secrétariat et remercions l’Inde pour sa proposition.

Avec cette transformation, la France attend que le budget de la sous-commission soit géré de manière exemplaire en le consacrant essentiellement à des projets scientifiques et non à des dépenses administratives. [...]

La France remercie les Etats membres qui ont consacré du temps pendant le week-end et à des heures difficiles pour proposer un projet de décision.

Elle salue ce projet de texte de décision qu’elle soutient. La France souhaite souligner et insister sur les conditions de réussite qui sont de son point de vue déjà bien engagées notamment par la mise à disposition d’un secrétariat temporaire par l’Inde et par la dynamique d’échanges et de coordination scientifique engagées comme on a pu le voir au cours du sommet de l’économie bleue.

Afin de ne pas perdre cette dynamique et pour capitaliser sur les bonnes coopérations en cours elle suggère d’envisager un jalon de mi-parcours en vue de la prochaine Assemblée où pourraient être présentés le projet consolidé d’élévation en sous-commission, dont le plan de travail scientifique.

La France participera activement au groupe travail proposé dans le projet de décision pour aider à cette évolution.

## **India**

On behalf of the Indian Delegation, we would like to compliment the Chair, Officers and Member States of IOCINDIO for the excellent progress as presented in the report of the 8th session of IOCINDIO meeting, including the progress made towards elevation of IOCINDIO to a Sub-commission of the IOC.

The proposal for the elevation of the status of the IOCINDIO to an IOC Sub-commission has been a long-standing desire and need expressed by several Member States in the central Indian Ocean Region. We take cognisance of the extensive discussions during the virtual consultation meetings organised by the IOC on the subject on 16 February 2021 and the IOCINDIO 8th session held during 17-19 May 2021 during which several Member States including India reiterated their support to the elevation, followed by discussions on the geographical scope, mechanism for collaboration with other sub-commissions in the region, assessment process, etc

Mr. Chair, the commission in collaboration with several Member States including India has been playing a key role in understanding the Indian Ocean right from the days of the First International Indian Ocean Expedition in 1962 – 65. Over the years, this engagement has led to important collaborative mechanisms such as the Indian Ocean GOOS, Indian Ocean Tsunami Warning and Mitigation System, IIOE-2, Indian Ocean Panel, SIBER, IRF, etc. all of which are contributing immensely and directly to the functions of the commission. The region is also host to two UNESCO Category 2 Centres operating out of India and IR of Iran. In addition, there are several other important regional collaborative mechanisms such as the IORA, BOBLME, SACEP, etc.

Mr. Chair, as we move toward implementation of the UN Decade of Ocean Science for Sustainable Development (2021-2030) and achieving the SDG targets, India believes that the transformation of IOCINDIO into an IOC sub-commission will provide the urgently-needed intergovernmental framework in the central Indian Ocean region, that will facilitate stronger coordination of all existing activities and foster new collaborations with other regional partners and programmes in the Indian Ocean. India fully supports such a move by the Commission.

Mr. Chair, after decades of being inactive, the key sessions of the IOCINDIO 5 and 7 in India (2016, 2019), IOCINDIO 6 in Kuwait (2017) and the UN Decade regional planning workshop in India (2020) led to resurgence of interest by the Member States and the development of a work plan for IOCINDIO. India believes that time is now right for IOCINDIO to progress to the next level, and that the success story of IOC-AFRICA, IOC-WESTPAC and IOC-CARIBE can be replicated in the Indian Ocean region with the transformation of IOCINDIO from a regional-committee to a sub-commission and collaborate amongst each other.

Mr. Chair, we appreciate that one of the reasons for the unsustainability of IOCINDIO since its establishment in 1982 is the lack of a regional secretariat with full time staff and seed funds for its activities. Responding to the call for support from Member States for the transformation, at the 8th session of IOCINDIO, India offered “in-kind” support for the operation of a regional secretariat for the IOCINDIO Sub-commission, without prejudice to the final decision of the 31st Session of the Assembly in this regard, through appropriate formal arrangements with the IOC.

In conclusion, Mr. Chair India supports the transformation of IOCINDIO from a regional-committee to a sub-commission.

### **Indonesia**

Indonesia is currently a member and founding member of IOC WESTPAC regional office. The establishment of IOCINDIO will directly affect the IOC Africa and IOC WESTPAC where the geographical area potentially overlap. Therefore, the geographical area shall be clearly defined. We are also concerned about the regular budget within IOC UNESCO office that will be also potentially affect the IOC operational budget.

Hence, Indonesia suggest to establish a open-ended working group with the objective to have a discussion and consultation among concerned member states. The WG would potentially improve open and fair discussion on research cooperation among concerned member states. Indonesia also would like to see a written mechanism on the development of program among the IOC sub-commission.

### **Japan**

Japan expresses its deep appreciation to the Chair of IOCINDIO and experts involved in promoting and re-vitalizing the activities on oceanographic studies in the Indian Ocean, and congratulate Rear Admiral Kushed Alam on being newly elected as the Chair. Japan also has been very much interested in the ocean processes in the Indian Ocean, particularly in terms of climate system, marine ecosystem, and geophysical aspects in the tectonically active zones, and Japan stresses the importance of the Indian Ocean in the whole earth system.

Again Japan would fully support the idea to promote oceanographic research and services in the Indian Ocean. Because of such importance of the Indian Ocean to the Commission, Japan considers that we need to remove any possible conflicts, concerns, potential and foreseeable difficulties including the ambiguity in the geographic coverage, and would suggest that the definition of the geographic coverage should be agreed among Member States before launching regional subsidiary bodies.

### **Kenya**

Kenya welcomes the elevation of IOCINDIO to a sub commission. Kenya further notes the role robust and active international collaboration can play in offering opportunities through different skill sets.

However, given the potential overlap with areas covered by IOCAFRICA and WESTPAC, it is important to establish an inter-regional committee bringing together IOCAFRICA, WESTPAC and IOCINDIO which will act as a mechanism to develop and coordinate the implementation of basin-wide programmes and initiatives for the Indian Ocean.

Kenya therefore proposes the establishment of a regional committee to address the grey areas which are of concern to member states and which may be potential cause for difficulties unless addressed.

### **Kuwait**

1. Is the consultation meeting that was held in February obligatory as per the standard IOC system; is it a must to have the other sub-commissions' approval concerning the IOCINDIO transformation.

2. Did all the other subcommissions go through the same process that is being now applied to IOCINDIO, e.g., the consultation meeting before the approval to a subcommission level. Are there reports to document that.

3. Regarding the issue of the IOCINDIO report of its May 2021 online meeting, please note that the meeting was held less than one month before this IOC Assembly, and the standard period given for reports is 2 months before the assembly meeting. My question is did IOC receive all the relevant reports from the other sub-commissions as per the deadline, and were these reports made available to all member states in advance

4. Did all the other IOC Regional Bodies developed a roadmap before their transformation?

5. Concerning countries who raised some concerns about IOCINDIO being transformed to a sub-commission, Is there any written rule in IOC stating that that IOC member states can prescribe or object to the right of IOCINDIO being a subcommission.

6. Financial matter is not the key issue, especially that India has agreed to cover the expense and in-kind contribution for hosting IOCINDIO secretariat, and we are very appreciative of that.

7. The countries of IOCINDIO have shown their seriousness and cooperation. Many countries support IOCINDIO. It is not acceptable that some countries block the move forward of IOCINDIO to subcommission.

8. The Indian Ocean is an important entity of the Global ocean and it is only fair to recognize that by supporting IOCINDIO becoming a sub-commission. have IOCINDIO Kuwait as a member state of IOC did not find an available opportunity to link with any past or ongoing activities involving the Gulf marginal sea. It is important that IOCINDIO be given the same attention as the other subcommissions, with equity, equality and justice.

[...]

I was very optimistic that the approval of the transformation would happen during this assembly

I would like to convey My overall Impression: With great disappointment, I followed the drafting of the statements concerning the status of IO-CINDIO being made, and truly as a scientist and representative of Kuwait, I felt that our efforts were not appreciated and went in vain.

We are like the other countries that belong to the other sub-commissions, looking very much for advancement in scientific knowledge and benefits to our region.

We do not understand the fear and hesitancy by member states who raised concerns about the transformation.

The scientists in the Northern and Central Indian Ocean and its associated marginal seas are as capable as other scientists in the world. We are doing the same quality and caliber of science as the countries in the other sub-commission. Moreover, we are keen in cooperating with them.

The countries of the IOCINDIO have well-established marine and oceanographic institutions and state-of-the-art infrastructure and facilities. They have knowledgeable, experienced, and trained scientists. Example The International INDIAN OCEAN II. We have the needed resources and willingness to support the planned upcoming activities.

The upgrading of IOCINDIO will encourage the concerned member states to seriously commit in terms of resources and required support, and NOW. In this quickly changing world, no one can afford the loss of time, especially that the region's capabilities and seriousness exist, the TOR and the needed plan already exist. We produced several tangible deliverables. Near future initiatives have been approved and supported by several countries of the region.

Two years waiting period for transformation is a very long time for our region.

Could the secretariat please project on the screen the original decision concerning the IO-CINDIO status so that member states decide on the matter?

### **Malaysia**

Malaysia takes note with appreciation the recommendation made by the IOCINDIO Chair on transforming the IOC Regional Committee for the Central Indian Ocean (IOCINDIO) into a new IOC Sub-Commission for the whole Indian Ocean.

Similar to many delegations who took the floor, while we feel this proposal is important, my delegation echoing some of our colleagues such as Thailand and China, would like to seek clarification in the potential overlap with IOC/WESTPAC on the East Indian Ocean, and IOCAFRICA on the West Indian Ocean.

### **Philippines**

The Philippines takes note of the desire of IOCINDIO to transform into a sub-commission and commends the work it has been doing in the past and congratulates its new chair.

Having listened to the presentation and the ensuing discussion, we, however, share the views of other member states and would like ask if we can raise procedural points, Mr. Chair?

If important documents related to an item in the Agenda of the General Assembly are made available very late to the member states, instead of the specified period as stipulated in Rule 11 of the Rules of Procedure, affording little time for member states to review and appreciate fully the substance of the reports but especially the recommendations, is this acceptable?

Second, we note that the minutes of the May meeting states that “the Session unanimously recommended that the status of the Committee should be changed into an IOC Subcommission.” Yet, we were made aware that not all IOC member states present in the meeting endorsed the recommendation. If this is true, can the assembly act on a recommendation that was not reached by consensus by the member states concerned?

#### **Qatar**

As mentioned in my intervention, I as representative of The State of Qatar, would like to reiterate Qatar's disappointment at the unnecessary delay in the setting up of IOCINDIO Sub-Commission at the Assembly.

It is a pity that the proposal was blocked on procedure grounds by those several Member States that had never shown any interest in the IOCINDIO activities .

The UNESCO IOC circulation letter No.2524 consultation meeting on transition of IOCINDIO to Sub-Commission was held on 16 February. There were 104 participants attend the online meeting including all 19 MS of IOCINDIO namely Australia, Bangladesh, France, India, Indonesia, Iran, Iraq, Kuwait, Malaysia, Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, UAE and UK. There were observer from nongovernment agencies from America ,Asian and Africa countries. Representative from IOC Africa MS include Central Africa, South Africa, Tanzania, Cameroon, Cote-d'Ivoire, Benin, Angola. Almost everyone attended spoke out to support the proposal.

On 6th May IOCINDIO Indian Ocean Blue Economy Summit Towards the UN Decade of Ocean Science for Sustainable Development (2021-2030). It was attended by representatives from Bangladesh, France, India, Iran, Iraq, Kuwait, Oman, Pakistan, Qatar, South Africa, Sri Lanka and UK. As well as the IOC Ex. Sec. and Program officer.

Then the IOCINDIO-VIII Intergovernmental Session meeting in 17-19 May was attended by representative from MS of Australia, Bangladesh, France, India, Indonesia, Iran, Iraq, Kuwait, Madagascar, Maldives, Malaysia, Morocco, Myanmar, Pakistan, Qatar, Saudi Arabia, IOC Africa Chair, IOC West Pac chair, IOC Exe. Secretary and IOC Program officer.

Although IOC INDIO subcommittee was established in 1982. In the past because of lack of a full time IOC staff in the IOC Indian Ocean region, there had been long period (1982-1988),( 2005-2016) and (2019-2021) of inactivity . This cause so much concern and intention to reactivation of IOCINDIO was raised in Resolution XXV-2 at the 25th IOC Assembly in June 2009. And again in IOC Circular Letter 2546 of October 2014 call for Member States to support the revitalization of IOCINDIO.

Further delay of providing the support of a full time staff of a Sub-Commission will definitely have adverse impact on the development of IOC in the Indian Ocean region. Which deprive the Member States in the Indian Ocean region of the benefits and support enjoy from UNECO IOC by MS of other regions. Further delay will risk IOCINDIO become inactive again. This will hinder the implementation of Decade Ocean Science for sustainable development in this region.

The decision on upgrading the IOC INDIO to Sub-Commission should not be decided by a hand fold of Member States that show no interest in the region as indicated by their absence in the IOCINDIO activities mentioned above. The delay of establish IODINDIO Sub-Commission will not be two years. It has been overdue since 2009. Consider the benefits to IOC development in the Indian Ocean Region and humanity as well as marine resources protection and management, IOCINDIO Sub- Commission should be endorsed in this Assembly, accommodating the Pandemic time lost and excessive workload on the IOC Secretariat making translation of documents into 4 languages almost impossible to meet the time required to the Members State within the time frame in normal times. I hope the strict time frame be waived in this special case.

#### **Thailand**

I acknowledge the enthusiastic effort of the IOCINDIO's officers on the proposal for changing status of the Regional Committee into a new IOC Sub-commission, in order to strengthen the scientific cooperation in the Indian Ocean.

However, we have some points of concern that I did share during the consultation in February. And in the 8th Session of the IOCINDIO in May we clearly stated that Thailand reserved our position in this issue, due to lacking appropriate documents and no clear terms of reference to the new proposed sub-commission. Unfortunately, I found that my reserved position was not included to in the summary report submitted to the IOC just last night.

Mr. Chair, being an inter-governmental body, Thailand believes that the IOC Rules of Procedure is needed to be fully respected. We trust the IOC Secretariat as the Rules keeper in all administrative processes, and we have experienced the common standard during our engagement in the Statutory Meetings of the IOC and its Subsidiary Bodies.

I would like to clarify my points of concern here to share with the IOC Member States in this Thirty First IOC Assembly.

First on Documentations: The Documents for IOC Executive Council and Assembly, including its secondary bodies' session, are very important, particular in making such important decision, as internal consultative meeting at national level is needed to be done in advance. Member States should have their right to carefully go through documents prior to any meetings, as well as the right to review and adopt the summary report before its submission to the IOC Secretariat.

Secondly, the term of references of the new Sub-Commission is needed to be clarified and agreed before the IOC secretariat can issue an official letter to invite Member States to join. Geographical boundary is needed to be clearly identified. And in case the present IOCINDIO is to be dissolved, its membership in the Regional Program should also be terminated.

Mr. Chair, Thailand agree that the momentum of this issue is not to be paused, but it should be developed with full respect to the IOC Rules of procedure in a complete and transparent processes.

#### **United States of America**

This is a very important area of the world and ocean. It is climate-relevant and relevant to the economic health and prosperity of the populations that live along the coast of the Indian Ocean, and beyond. It seems to me, Mr. Chair, that in regard to the great work that has been done, we seem to have several governance questions remaining here, we have rules questions, we have geographic coverage questions, and we also have questions about finances. I think the finances are contained, at least to my satisfaction, in the answer of the distinguished delegates from India, and we could also look forward to extrabudgetary contributions but we also recognize the budgetary challenges. The United States has travelled a great distance from our homeland to work in the Indian Ocean on RAMA- OMNI, Argo, IIOE-2, tsunami warning and many other components. It is an important region for us and we would like to see success here. If we were in our normal working condition, we could probably have a session in the evening to work on a sessional discussion that may be a sooner answer than having to set up a long-term intersessional working group, although I understand the value of that proposition. I'm curious if we would be able to hear further from the delegations that represent the proposal for IOCINDIO as to how the geography would play out, or if it is perhaps already settled. If that could be worked out while the Assembly is in progress, we might be able to reach a conclusion rather than taking a longer period of time to resolve these issues. I wish I had a solution, Mr. Chair, but we would very much like to see a way in which this could be resolved favourably. This is a very important area of the world, of the world's ocean, and the populations that live therein.

#### **IOCINDIO**

Let me as Chair IOCINDIO register our strong objection against the chairperson Mr Ariel Troisi. When he introduced the agenda at the start of the meeting, he categorically said that the item Dec. A..31/3.5.6 will be tabled at the last and it has been prepared after a lot of deliberations and it is up to member states of IOCINDIO to accept it otherwise it will be delayed by another two years. Chair IOCINDIO stated that he has never heard such a biased statement from an official while tabling the agenda, in fact he does not have the authority to use such threatening language to sovereign member states, its the assembly which can decide the fate of IOCINDIO and not the chairperson. His Statement is an insult to the sovereign member states of the IOCINDIO and has encouraged some member states not to talk about it any more and some states who would have talked in favour of us, have refrained from doing so hearing such warning from the chairperson. Chair IOCINDIO also requested to put his objection on record.to which he has agreed.

Again while discussing para 6 of the resolution, the Chair IOCINDIO has stated the following;

1. The procedure matters: the point 3.5.6. was not discussed at the plenary and the original decision was not shown on the screen and discussed by Members States. Therefore, we request that the original decision be shown on the screen so that the Member state has the chance to see the 2 Decisions and make an informed choice.
2. There are countries that consider that they did not have the time to read our documents because they were posted late. Fine, but our IOCINDIO-8 Session was organised out of the delay of 2 months ahead of the Assembly, thus the rest is only details to block the will and the right of our region, the most populated billion people of the world to have the same right as the other regions by only a group of à few countries of which some never attended any IOCINDIO meeting since 2016. How do these countries have time and are happy to consider a new draft decision provided to them overnight?
3. We have developed Terms of Reference, Workplan. Now Executive Secretary offered himself to develop a Roadmap for our region while the Assembly has already adopted our work plan on the 16 June. Our question is to know if the other Regions have developed Roadmap before being transformed into Submission?
4. First of all this para 6 starts with 'decides to pursue further' as if we were trying to pursue some kids to go for swimming in the Indian Ocean, the third largest ocean of the world. The Executive Secretary requested us at the WG to trust him that our proposal will be taken forward for the next Assembly in 2023. We have been told the same last year when the 53rd Session did not approve our proposal. This is not a matter of personal trust, it is a matter of institutional building.  
  
We trust the Executive Secretary and we do trust our friend Vladimir Ryabinin, but we stand for equity and universal values within the IOC for all regions to be treated in equality. We are treated like a child not as sovereign member states: if we behave well, the big brothers will give us some sweets.
5. Why is there a need to have a consultant to develop à plan for us when our Member States developed their own work programme adopted at IOCINDIO-8 presented and adopted at this Assembly on line on 16 June. This fund should go to implement our work programme.
6. All this process is à permanent delaying mode to deprive the most populated region of the world from having a Subcommission because there is no will from some to share the IOC Regular Budget.
7. You are making a decision against our region even though it was promised to us to be adopted in 31st session and we do not accept it and the Chair IOCINDIO do not associate with it as the member states will suffer for another long two years and the scientific programmes along with the aspirations of the billion people will also be curtailed just because some countries from thousands of nautical miles away from the Indian ocean are deciding our fate.

## **WESTPAC**

WESTPAC as a regional sub-commission has been mandated to cover the area of the western Pacific and its adjacent region, in which eastern Indian Ocean is covered (e.g. Resolution XII-14, An IOC Programme Group for the Central Indian Ocean (PG/CINDIO)). WESTPAC has been advancing ocean science development and cooperation in the area for many years with a number of programmes and activities in the east Indian Ocean, in which several of its Member States in the eastern Indian Ocean have been playing active roles.

I would recall that a number of member states expressed their concerns at the consultation meeting in Feb 2021, on issues for the proposed Sub-Commission, including geographic areas, which may overlap with other two Sub-Commissions in the Indian Ocean, and how the new sub-commission cooperates with existing international bodies relevant to the Indian Ocean. I further recall that a number of member states also proposed a feasibility study before the consideration of the IOC Assembly.

Regretfully until very recent, there was no summary reports available in advance for considerations, either of the consultation meeting in February, or the recent 8th Session of IOCINDIO.

As one of subsidiary bodies of IOC, we believe respecting IOC Rules of Procedure is of importance for IOC as a whole to ensure a transparent, equitable and productive discussion by all of our member states and relevant bodies and partners.

In this regard, WESTPAC suggests that necessary documents should be prepared well and shared in advance, then for the considerations by IOC Member States and bodies/programmes concerned.

### **3.7 Report on the Decade Implementation Plan**

#### **Argentina**

La Argentina se encuentra comprometida con la Década de las Ciencias Oceánicas y participa activamente en tareas que cubren diferentes aspectos de los 7 objetivos principales del Decenio. Muchos de los proyectos científicos y de observaciones en el mar que realizan los institutos de investigación y universidades de Argentina, tienen directa relación con los resultados que se anhelan obtener al final del Decenio. Las acciones que debemos proveer deben ser nuevas y específicamente orientadas, dedicadas a cumplir con el lema integrador “La ciencia que necesitamos para el Océano que queremos”.

Como ejemplo de esto, el proyecto Pampa Azul, que ha relanzado nuestro país, cuenta con la participación de organismos estatales, universidades, institutos de investigación y científicos de diferentes disciplinas; en un esfuerzo nacional para el estudio, comprensión, aprovechamiento y mejor adaptación del océano Atlántico Sudoccidental.

También se destaca que nuestro país ha sido elegido como sede de un nuevo Centro Especializado de Ciencias Oceánicas de la UNESCO en el marco del programa OTGA (Ocean Teacher Global Academy) de la COI. La Argentina es también el líder en el Plan de Acción de la Autoridad Internacional de Fondos Marinos en apoyo a la Década promoviendo con la Autoridad los objetivos de la Década en la Zona.

En cuanto a la Composición de la Junta Asesora del Decenio, nos gustaría solicitar precisiones sobre su composición y sobre la representación de las agencias de Naciones Unidas, y confirmar que las agencias de Naciones Unidas poseen 5 vacantes reservadas solamente. Expresamos el interés de la Argentina de contribuir con nuestros expertos.

En relación con la participación de expertos provenientes de organizaciones no gubernamentales en la Junta Asesora, consideramos que dicha participación debería estar circunscripta a expertos de organizaciones que ya se encuentren trabajando con Naciones Unidas, como aquéllas que cuentan con estatuto consultivo en el ECOSOC.

Para finalizar, advertimos que en la página 4, párrafo 16, del Documento IOC/A-31/3.7.Doc(2) se hace referencia al concepto de “blue economy” o “economía azul”. Sugerimos, como lo hicieramos en anteriores oportunidades, que se reemplace dicho concepto por el de “economías oceánicas sostenibles e inclusivas”, que ya ha sido acordado en otros foros especializados como la FAO.

#### **Brazil**

Since 2019, when the Brazilian government organized the South Atlantic Regional Workshop in preparation for the Decade in Rio de Janeiro, with 123 participants from more than 20 countries, a lot has been done. In 2020, we established the National Steering Committee for the Decade, with several sub-national Groups, and we organized two webinars and 5 sub-national workshops, one for each region of the country. Those weeklong workshops had the same structure of the South Atlantic Workshop, with 7 working groups corresponding to each of the expected results for the Decade. The workshops included participants from different sectors of society and professional experiences, and gender diversity. Moreover, the initial and final sessions of the workshops were webcasted, to ensure the broadest participation possible.

Throughout this process, the need for a transformative ocean science became evident. That means it must go beyond the conventional, seeking for a true revolution in ocean science. It must be solution-focused and it must remove all barriers to the participation of women and other groups under-represented in science, and not only in terms of capacity development.

To support the Decade and give visibility to these events, an exclusive website for the Decade was created, as well as a YouTube channel. As of December 2020, the site had more than 40,000 page views. In the same period, the YouTube channel, which already has more than 20 videos, registered nearly 11,000 video views.

This year, we expect to establish a Youth Mobilization Group and to launch the Brazilian National Implementation Plan as well as to host several Ocean Decade activities.

In short, Brazil is actively engaged in the Decade and we look forward to continue contributing regionally and globally to the success of the Decade.

#### **Canada**



With respect to the proposed Terms of Reference for the Decade Advisory Board, we appreciate the clarity they provide regarding diversity of composition and expectations for the role of this group, in particular as it relates to its efficient operation and relationship to the IOC Executive Secretary.

Mindful of the request to keep our comments as brief as possible, Canada would like highlight two specific points.

Earlier this year, Canada hosted national workshops with the ocean community to launch and begin to co-design a Canadian Blueprint to advance the Ocean Decade -- and the events highlighted a number of themes including reinforcing the important role of Indigenous knowledge in contributing to Decade outcomes.

Secondly, with respect to gender equity in ocean science, Canada has worked in 2020 and 2021, with the IOC Secretariat and other partners to bring attention to this ambition through a number of events. These have collectively had over 2000 participants from approximately 100 countries and so appreciate the support of Member States in these efforts.

Further, at the Global launch event on June 1st hosted by Germany, Canada's Minister of Fisheries, Oceans and the Canadian Coast Guard, introduced a video that showcases the importance of gender representation in ocean science.

This video – which features role models from a number of countries including Canada, the United States, Martinique, Bahrain, Russia, and Kenya---will be highlighted as part of Canada's satellite event on gender equity at the upcoming Ocean Decade Laboratory in July.

The video is currently available in English and French on Canada's Ocean Decade website, and will soon be available in four additional languages. We would be happy to share these and other tools with Member States and appreciate the support of the IOC in continuing to advance the importance of gender equity in ocean science including in the context of the Decade.

## **Chile**

Chile quiere agradecer el informe entregado por los distintos expositores, sobre el progreso del Plan de Implementación del Decenio, junto a otras informaciones relevantes, como también el Proyecto de Resolución presentado.

El Comité Oceanográfico Nacional – CONA -, de carácter público, que tiene como principal función coordinar a las instituciones que realizan actividades relacionadas con las Ciencias del Océano en Chile, pese a la Pandemia del COVID-19, dio pasos significativos desde la última Asamblea, estableciendo el Grupo de Tarea Decenio, integrado por 24 personas, nominadas por las instituciones del CONA, que resolvió elaborar y proponer un “Programa Nacional de Investigación 2021-2030” a ejecutar por la comunidad científica marina nacional, como parte del Decenio de las Ciencias Oceánicas para el Desarrollo Sostenible, siguiendo las directivas de la COI en su documento “Hoja de Ruta”.

El Plan fue terminado en Diciembre del 2020 y distribuido a principios del 2021, constituyéndose en el “Plan Oceanográfico Nacional 2021-2030”, luego de haberse definido el proceso de seguimiento anual para su cumplimiento, que en lo esencial incluye la identificación de las líneas de acción desarrolladas; los avances; los resultados obtenidos y las dificultades encontradas.

El rol de Comité Nacional del Decenio, lo cumplirá la Secretaria Ejecutiva del CONA, considerando el expreso llamado de las Naciones Unidas, de que el Decenio debía ser desarrollado “en el marco de las estructuras existentes y los recursos disponibles”. La Secretaría de la COI ya fue informada de esta resolución.

El referido Plan constituirá el documento central de orientación del esfuerzo en Investigación Científica Marina para el período del Decenio, sin perjuicio de que puedan existir otras iniciativas que también contribuyan a los objetivos del Decenio, a los que Chile se encuentra voluntariamente comprometido.

## **Colombia**

Colombia, en su compromiso de implementar el Decenio a nivel nacional, creó un Comité Técnico Nacional que sigue las guías operativas emanadas de la COI, y que actuará como punto focal para la promoción del desarrollo sostenible del territorio marino-costero del país, involucrando a las distintas partes interesadas, con el propósito de potenciar el acceso a los beneficios del Decenio. De la misma manera, desde Colombia estamos dispuesto a apoyar a otros Estados Miembros, con el intercambio

de experiencias. Asimismo, el país agradece el apoyo de la COI para el lanzamiento nacional del Decenio.

Por otra parte, respaldamos el borrador del Informe Consultivo sobre la Estrategia De Comunicación y considera relevante orientar esfuerzos de comunicación científica regional. Las acciones del CAG, plantean la figura de Embajadores del Decenio, para lo cual se recomienda contar con invitación oficial desde la COI que describa el rol de estas figuras, que permita visibilizar al Decenio a través de su capacidad de convocatoria y prestigio y así movilizar potenciales socios y recursos.

Así mismo, consideramos necesario que la estrategia de comunicaciones contemple las lenguas nativas, indígenas y otras formas de comunicación para personas en condición de discapacidad, buscando ser más inclusivos y con ello, resaltar y visibilizar las experiencias de vida y el conocimiento de comunidades ancestrales ligadas al océano.

Finalmente, Colombia felicita a la Secretaría por el primer Llamado a la Acción para el Decenio e informa que ha acogido con entusiasmo esta iniciativa y se encuentra preparando, con sus entidades nacionales, las actividades que contribuyan al mismo. Asimismo, apoyamos el proyecto de resolución A-31 (3.7), sin embargo, proponemos realizar el siguiente cambio en su versión en español:

“Recordando la resolución XXX-1 de la Asamblea de la COI relativa al informe sobre la puesta en marcha de los preparativos del Decenio de las Naciones Unidas de las Ciencias Oceánicas para el Desarrollo Sostenible y el llamamiento hecho a la COI por la Asamblea General de las Naciones Unidas, mediante la Resolución A/RES/74/19 a “Igualmente en el numeral 11, literal (i), cambiar la palabra “adscripciones de personal” por “personal a disposición”, quedando: “aporten contribuciones financieras voluntarias para respaldar la labor de la Secretaría de la COI de coordinación del Decenio, incluido apoyo en especie en forma de préstamos y personal a disposición de la Unidad de Coordinación del Decenio;”

### **Côte d’Ivoire**

Quelques observations méritent d’être faites:

1. l’importance de l’océan pour l’humanité, c’est un fait scientifique avéré;
2. la pertinence de la décennie des sciences océaniques au service du Développement Durable a été attestée par la communauté internationale puisque ça été adopté à la 75ème session de l’Assemblée des Nations unies.
3. L’énorme travail effectué par la COI pour concevoir un plan d’action a été présenté et personne ne doute de la qualité du travail.

La Côte d’Ivoire pour sa part, s’est fortement engagé dans la mise en œuvre de la décennie, notamment dans sa composante renforcement des capacités par la construction d’une Université dédiée aux sciences océaniques voulue par le Président de la République (Dr Alassane OUATTARA).

### **France**

La France apprécie les progrès réalisés par la COI et ses partenaires dans cette dernière séquence de la phase préparatoire de la Décennie et depuis son lancement. Elle souligne l’intérêt que suscite déjà cette entreprise et le dialogue initié entre des différents acteurs du développement durable des océans pour se doter des moyens nécessaires pour atteindre les 7 enjeux sociétaux et les 10 défis de la Décennie et de renforcement de capacité.

Pour cela, la France a lancé un Programme pluriannuel de recherche intitulé « océan et Climat » au niveau national dont les livrables permettront de contribuer aux objectifs de la Décennie. Ce programme pluriannuel de recherche a été labellisé comme une contribution à la Décennie à la suite du premier appel à l’action de la Décennie. Le premier appel à proposition de recherche, qui s’adresse à tous les océans du globe, a été lancé le 8 juin dernier, lors de la journée mondiale des océans.

Les organismes de recherche français sont activement engagés dans les Programmes de la Décennie, notamment « One Deep Ocean » coordonné par l’Ifremer pour développer les capacités d’observation de l’océan profond, ou encore « COASTPREDICT » pour l’observation côtière.

L’association « Esprit de Velox » et son projet de voilier de recherche innovant, est aussi une contribution notable à la Décennie.

La France à l’intention de soutenir l’Unité de coordination de la Décennie, qui est hébergée au sein du secrétariat de la COI en détachant un expert de haut niveau.

Des réflexions sont en cours pour proposer deux centres collaboratifs. Le premier concerne l'Océan KAN, puisqu'à partir de cette année, la France hébergera le bureau international du Ocean Knowledge Action Network de Future Earth. Cette structure est appelée à jouer un rôle essentiel pour faciliter le dialogue, l'échange et la co-production de connaissances pour relever les défis de développement durable des océans.

Le deuxième concerne la prévision des océans et Mercator Ocean International encouragé par le secrétariat de la COI, les réflexions sont engagées au niveau français pour étudier la faisabilité de cette mise en place d'un centre collaboratif

Concernant le conseil consultatif de la Décennie, La France a pris acte des termes de référence et de la date limite du 5 septembre 2021 pour le dépôt des candidatures. La France relaiera l'appel à candidature auprès de sa communauté scientifique et incitera les experts français de haut niveau pour qu'ils portent leur candidature.

### **Germany**

In particular, Germany is pleased with the good outcome of the First call for Decade Actions, and welcomes the programmes presented on the occasion of World Oceans Day. These programs will help to bring together the various ideas, contributions and needs of the different stakeholders of the Decade.

Germany hopes that the enthusiasm shown and created in and through the High-Level Launch of the Decade and the Virtual ECOPS Day on June 1 and 2 will lead to ambitious, well-designed and jointly implemented contributions to the Decade programs. Germany would like to take this opportunity to thank all participants and the organizing and support team of these two events and to emphasize that the High-Level Launch was only the first step. Germany is proud to support a series of seven Ocean Decade Laboratories addressing the societal outcomes of the Decade during the coming ten months. A call for contributions for the first laboratories has already been launched, and more calls will follow later on.

Germany used the inspiration and momentum from the events just mentioned, to conduct its national German launch event on June 2, organized by the German Ocean Decade Committee, to broadly engage all stakeholders and foster collaboration with all relevant actors. Further national meetings will follow. The German Ocean Decade Committee, together with the other national committees and the Decade Coordination Office, will explore all possibilities to support the implementation of the Decade in the best possible way.

Germany would like to take this opportunity to compliment the Nippon Foundation-GEBCO Seabed 2030 project on what has been achieved so far. It is amazing that within a few years of joint and concerted action, the proportion of seabed mapped at good resolution has more than tripled. These are very encouraging figures that show that even big goals can be achieved if they are tackled together. The Seabed 2030 is truly an inspiring model for the Decade.

### **India**

India joins all Member States in complementing the Chair, Officers, Executive Secretary and Secretariat for their excellent work with respect to the United Nations Decade of Ocean Science for Sustainable Development (2021-2030). We reiterate India's strong support for the "Ocean Decade" and continued contributions in partnership with all stakeholders for advancement of scientific knowledge, and achieving the societal outcomes.

Mr. Chair, India participated actively in the preparatory phase on the Decade and hosted a Regional Planning Workshop for the Northern/Central Indian Ocean countries as well as ROPME sea area in January 2020. India constituted a National Decade Coordination Committee (NDCC) to coordinate activities and explore opportunities at the national level that could contribute to the goals of the Decade. India proactively responded to the first "Call for Decade Actions" and is glad to be part of multiple programmes along with international partners, that were successfully endorsed by the IOC, and also for supporting regional coordination functions by hosting a Decade Collaborative Centre at INCOIS, Hyderabad.

Mr. Chair, India will continue to work with other Member States to strengthen ocean observing, modelling and forecasting, data and information services including tsunamis and multi-hazard early warning capacity in the region. The facilities of the International Training Centre for Operational Oceanography which is one of the category-2 centers of UNESCO and a Regional Training Centre (RTC) under the OTGA will continue to be used to offer theme-based training programs to both national

and international stakeholders in areas that contribute to decade outcomes. India is committed to work towards achieving SDG 14 goals and continue to make concerted efforts to develop national plans and strategies to address marine pollution, marine spatial planning and plastic pollution.

Earlier this week, the Indian Government approved implementation of an ambitious “Deep Ocean Mission” at a cost of USD 550 Million (INR 4077 Cr) over the next five years (2021-26). This multi-stakeholder National Mission being spearheaded by the Ministry of Earth Sciences (MoES) will catalyse research and innovation in the areas of deep-sea exploration, deep sea biodiversity conservation, ocean energy and fresh water, ocean climate change advisories and capacity development. Coinciding with the start of the UN Ocean Decade, we are confident that this mission will contribute immensely to enhancing our collective understanding of the Indian Ocean and develop transformative solutions for sustainable blue economy.

Mr. Chair, India, as one of the co-sponsors of the draft resolution IOC/31[3.7], welcomes the implementation of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030), and looks forward to contributing to achieving the “Decade Goals”.

In conclusion Mr. Chair, India is pleased to announce a funding contribution of 50,000 USD to support the UNESCO's activities related to the IOC and in particular "The UN Decade of Ocean Science for Sustainable Development".

### **Italy**

Italy recognizes the great and successful effort by the IOC and deeply thanks the Secretariat and the Decade team for the concrete achievements reached so far as well as the support provided in the number of activities Italy has been directed engaged. Italy contributed to the Decade preparatory activities by organizing in 2020 the Mediterranean regional Workshop in Venice, at UNESCO Bureau, and the virtual co-design workshop, highlighting the importance and coordinating the submission of three programmes to the First call for Decade Actions. I

Italy participated to the first call for proposal. Two programmes have been endorsed: the CoastPredict Program, launched at the regional meeting in Venice last year. CoastPredict contributes to the UN Ocean Decade outcome “A predicted ocean” by improving the understanding of the coastal area processes using a multi-disciplinary and integrated approach and focusing on the many common worldwide features of the coastal ocean. The second one is the Italian Navy HIGH NORTH Program that follows the Pluriannual Joint Research Program in the Arctic launched by the Italian Navy.

Italy also coordinated the preparation of the Program Science We Need for the Mediterranean Sea We Want (SciNMeet) valued as a pipeline programme. SciNMeet will address major Mediterranean challenges and gaps in scientific knowledge with the aim to better understand and manage impacts of climate change, pollution, overexploitation of resources, and marine hazards on the marine environment to contribute to maintenance of ecosystems' functioning and the sustainability of relevant economic operations. Increasing education, awareness and international collaboration, narrowing the gap between the North and South shores, by mobilizing the scientific community, policy-makers, private sector and society at large, the Programme will address the Ocean Decade's seven outcomes and contribute to the implementation of the Agenda 2030. The Agenda is recognized as a central framework, including to identify and address the questions that are most important for society. The SciNMeet programme is promoted by Spain, Portugal, Slovenia, Egypt, Morocco, Israel and by international organizations including UNEP / MAP, BlueMed, EuroGOOS / MONGOOS, ESA, FAO, JRC, as well as supported by 150 experts from 27 countries.

In this framework, the Mediterranean Community prepared a White Paper submitted in response to the Special Issue of Ocean Decade Community White Papers (CWPs) on the Global South at Ocean and Coastal Research Journal; the White Paper has been approved and will be published shortly and is a the first step toward the Mediterranean implantation plan.

As far as concern the Mediterranean Programme for the Decade and in general activities carried out in the Basin, Italy is committed to ensure due North-South balance and welcomes relevant outcome of the works of the IOC AFRICA, with particular reference to the blue economy and capacity development. On this Italy recognizes the results of the R&I Initiative BlueMed on sustainable blue economy, whose the recently delivered Implementation Plan was endorsed by Mediterranean countries. Italy is actively contributing to the G7 Decade Program announced by UK. Italy is committed in Ocean Literacy activities and Capacity Development. The training ship Amerigo Vespucci is officially received the UN-Decade Logo.

At national level, the Italian Oceanography Commission is establishing the National Ocean Decade Committee, that will coordinate the activities at national level, will provide national inputs for the formulation of Decade Actions across groups of stakeholders and/or nations. The Terms of Reference have been finalized and will be soon undersigned by a first core group of stakeholders. Italy supports the resolution.

### **Japan**

The Decade is certainly once in a life opportunity for all of us to intensively promote all aspects of ocean sciences, services and related actions toward Sustainable Development Goals. In such situation, Japan has contributed to its preparation, in particular, of the aspect of public relations by providing financial supports through Japan Funds-in-Trust (JFiT). This support will continue in the implementation phase, too.

Japan already established the national committee for the Decade on Feb. 25 this year. As one of the national committee's initial activities, it has published a booklet describing a wide spectrum of national activities contributing to the Decade implementation, which will be updated regularly. Such publication will effectively summarize national activities as a baseline information for the Decade. English version of this publication has already been made available on June 8, at the occasion of the World Oceans Day. Having mentioned above, Japan fully supports the proposed Draft Resolution including Terms of Reference for the Decade Advisory Board therein.

### **Kenya**

Kenya applauds the excellent work undertaken by the IOC Secretariat in the preparation and coordination of the UN Decade of Ocean Science for Sustainable Development. We wish to express our profound appreciation to the Secretariat for the numerous initiatives to raise awareness and mobilize stakeholder despite the human and financial challenges.

The preparatory process was inclusive and gave a clear path to for the implementation of the Ocean Decade. We express our appreciation to all Member States and partners organizing or hosting Ocean Decade events and activities including the first ocean Decade endorsed programmes, and note that the success of the Ocean Decade also strongly depends on our ability to engage the youth in the co-design and implementations of solutions.

Kenya recognizes the critical role of collaboration and synergies from all stakeholders in order achieve the goals of the Decade. We shall play our role as a member of the Ocean Decade Alliance. President Uhuru Kenyatta is strongly committed to fostering collaboration with other partners in championing the goals of the Decade. Kenya and Portugal will co-host the Second UN Ocean Conference in Lisbon in 2022. The Conference will also be key in the pursuit of the Ocean Decade objectives.

Kenya also thanks the members of the Interim Decade Advisory Board for their invaluable contribution throughout this process. We support the draft resolution that will be examined under this agenda item. Kenya also welcomes the Terms of References of the Decade Advisory Board and appreciates that the selection process will, amongst other criteria, take due consideration of geographical and gender representation.

The reports by the IOC regional subsidiary bodies have clearly highlighted the important role of these bodies towards the success of the Ocean Decade. We urge for greater interregional cooperation.

Finally, we wish to highlight that there is great convergence between the Ocean Decade and the African Union's Agenda 2063. Kenya appreciates the strong emphasis that has been placed on capacity development as well as alignment to the African Union initiatives. The success of the Ocean Decade largely depends on our ability to leave no one behind in the implementation of its transformative objectives. Kenya therefore welcomes efforts to strengthen partnerships within the Ocean Decade.

### **Malaysia**

Malaysia appreciates and congratulates all in particular the Secretariat for putting in place this UN ocean decade. Malaysia fully committed and supports the Ocean Decade as we need to augment our joint work on this ecosystem - among others bridge the science policy gap. Malaysia's support and domestic activities have been reflected in our statement on the first day of this meeting while deliberating agenda 3.1.

Malaysia commends and supports the establishment of the Decade Advisory Board. This is an assurance of commitment from the IOC to support member countries to implement activities under the UN Decade. We agree with the draft resolution and TOR as presented to us.

However, we urge to have a balanced representation from all regions in the Board. This will ensure voices from different regions are heard, in line with the spirit of “Leaving No One Behind” in UN Decade.

On another note, Malaysia would like to express our appreciation to IOC/WESTPAC for carrying out a leading role in the region in promoting and mobilizing actions for the UN Decade by co-designing and co-implementing its programmes with Member States in the region.

Therefore, Malaysia would like to request the IOC Executive Secretary to continue to lend support to WESTPAC in carrying out its mandate and activities to support the region and to make this UN Decade a success.

### **Nigeria**

Nigeria joins other member States to congratulate IOC for preparing the Decade activities and step by step procedure to achieve success in the Decade implementation plans. Nigeria has set up the National Stakeholder for the Decade activities taking into consideration all the necessary professionals, experts, students, NGO and ensuring gender balance.

Considering the salient aspect of the Decade activities, Nigeria proposes a review of the “Top-down” approach to be integrated in “Down-Up” approach and also suggest the establishment of Regional Hubs for a complete success.

### **Philippines**

The Philippines considers the UN Decade of Ocean Science for Sustainable Development as an opportunity to integrate ocean science, indigenous knowledge and innovation in policy-making for sustainable ocean management. Being a maritime and archipelagic nation, we are committed to making the Ocean Decade a reality.

The Philippines recognizes our reliance on the ocean and its ecosystem services. Thus, we join the call for the global effort to translate ocean knowledge and transform ocean science solutions into actions for sustainable development. Therefore, as encouraged during the 53rd Session of the IOC Executive Council, the Philippines is establishing a National Committee for the Ocean Decade this year.

In WESTPAC, the Philippines has been actively involved in its various programmes, projects, working groups, and capacity-building initiatives for many years. In all the WESTPAC thematic areas, we have scientists taking part or even leading projects and working groups. The Philippines commits to continue with these engagements and further explore even greater participation during the Ocean Decade.

The Philippines sees the opportunity of capacity building for the region on two fronts - non-degree training and post-graduate degree offerings. Examples are the RTRCs in WESTPAC, such as Reef Restoration and Management at the Marine Science Institute, University of the Philippines for short-term and targeted training, and the emergence of a strong network of universities offering MSc. and Ph.D. degrees in marine science and oceanography for young scientists in the region.

While considering activities for the Decade, the Philippines would also like to invite the Secretariat as well as Member States to imagine IOC activities in a post-Covid 19 world. Could we possibly envisage as part of the Decade activities the following:

1. Webinars and talks on demand;
2. K to 12 materials and activities on ocean science available on-demand for schools in the region;
3. Conferences with on-site and off-site participation;
4. Training lectures live-streamed and available on demand; and
5. Certain ship-board activities to be shared real-time and online.

Finally, given the increasing interest of IOC Member States and stakeholders in the Decade, the Philippines and the WESTPAC Member States strongly suggest a certain level of authority, for instance, the endorsement of Decade activities to be organized in the region, be delegated to its Sub-Commission to ensure the timely conduct of Decade activities and the ownerships of Member States over the Decade.

### **Portugal**

We will focus this intervention in the Ocean Decade Draft Resolution only, of which Portugal is one of the co-sponsors.

We consider of particular importance the co-design of Global Observation Systems, the definition of the Terms of Reference of the Decade Advisory Board, the creation of a Decade Coordination Unit within the IOC Secretariat, and the establishment of two major programmes: the Decade Tsunami Programme and the Ocean Literacy With All Programme, to address the priorities identified by the Implementation Plan for the Decade.

The Portuguese Directorate General of Maritime Policy, which runs the Blue School initiative, that recently got our young students across the country to come up with a large number of proposed solutions for a better ocean in 2030, is a dedicated partner of this recently endorsed Ocean Literacy programme, led by the IOC.

Portugal, being a member of the Ocean Decade Alliance, as recently announced by our President, Prof. Marcelo Rebelo de Sousa, strongly supports and remains fully committed to the Decade of Ocean Science for Sustainable Development since its inception. The arrangements and final details are now being finalized to set up the Portuguese National Decade Committee.

As demonstrated by the efficient, inclusive and holistic way in which concrete actions for the Decade are being planned, coordinated and carried out, in spite of all known difficulties, and quoting our dear Professor Mário Ruivo, we are fully confident that the “raft” of the Ocean Decade, launched with the support and commitment from all of us, under the efficient guidance of the IOC, will float and safely arrive at port in 2030.

### **Republic of Korea**

The Republic of Korea hails the hard work of the IOC Secretariat and the Interim Decade Advisory Board for reviewing the contents of the first Decade Call for Actions, and Thank US and other countries for the resolution. We believe that the six themes approved in the Call for Actions are extremely important for the global observation of the ocean, and this classification is certainly a good starting point.

The Republic of Korea was one of the countries that initiated the UN Ocean Decade and has actively participated in its preparation process. We have also made financial contribution of more than 400 thousand US dollars in the form of a trust fund for successful creation of the Decade implementation plan.

At the launch of the UN Ocean Decade, the Republic of Korea joined the Decade Alliance in order to support the successful implementation of the Decade by sharing our financial resources, personnel, and infrastructures. As a member of Alliance Member, The Ministry of Oceans and Fisheries is currently consulting with the financial authorities on providing a support of about 3 million US dollars that are related to the approved research programs and projects. We will complete this discussion in short time. Also, the Republic of Korea is working to publish the Decade Implementation Plan in Korean language, with endorsement from the IOC Secretariat. This initiative is to provide Korean citizens with as much information on the details of the UN Ocean Decade.

The Republic of Korea sincerely hope the successful implementation of the UN Ocean Decade, encouraging IOC member states to engage and prepare together not only the global programs but also projects at the regional level that are directly connected to our everyday lives. By doing so, we will be able to make a transformative change in carrying out the ocean sciences, achieve the goal of the ocean we want, and find solutions for sustainable development in the next decade.

### **Sweden**

Despite your encouragement to skip the compliments chair, Sweden would briefly like to commend the secretariat, officers and team for the preparation of the Decade as well as for launching the implementation phase with impressive results.

Sweden welcomes and supports the work of the IOC on the Ocean Decade. We have been and will continue to be an active partner in the Decade.

This is why we continue with our support of voluntary contributions to the IOC in its work with the Decade, together with Ocean Literacy and Marine Spatial planning. Strengthening capacity of individuals and institutions in developing countries is key to improve ocean governance, stewardship and sustainable development.

We support the establishment of the Decade Coordination Unit within the IOC but note with concern the lack of a sustainable financing of the extensive work in progress.

At the World Ocean Day on the 8th of June, Sweden launched the National Decade Committee with a mandate throughout the decade up until 2030.

We would like to extend our thanks to the members of the Interim Decade Advisory Board for their engagement. It's now timely to establish a Decade Advisory Board for the implementation phase for which Sweden approves the Draft Terms of Reference.

To conclude, Sweden welcomes the significantly increased visibility and attention that the ocean has received throughout the planning and implementation of the decade. We will remain an active partner in the decade, nationally, regionally and internationally and look forward to the future work.

### **Thailand**

Thailand would like to join all Member States to congratulate the IOC Secretariat and officers on the approval of the Decade Implementation Plan by the UN General Assembly last December. We sincerely thank members of the Decade Executive Planning Group for their work in supporting the preparation phase of the Decade in 2018–2020, and for acting as Interim Decade Advisory Board in 2021.

Thailand congratulates the Government of Germany for successfully hosted the High-Level Launch of the Ocean Decade and the First International Ocean Decade Conference. Such extraordinary arrangement has inspired us on the preparation of our regional Decade kick-off in August this year.

Thailand would like to express our support to the draft resolution, especially the proposed Terms of Reference of the Decade Advisory Board.

We are now in the process of setting up a National Committee for the Decade, under the National Policy and Plan Committee on Marine and Coastal Resources Management. We fully commit to actively engage in the Decade Implementation Plan, at global and regional level, not only in activities we have mentioned in the earlier agendas, but also in the future programs and activities to be arisen in the subsequent call for actions.

### **Turkey**

We believe that all components of Decade will have a key role to reach the desired results. Member States contributions and dedications to the decade are also indispensable. We would like to inform you that Turkey has already established "National Decade Coordination Committee" and has one endorsed "Decade Activity" so far. We are ready to work in close coordination with "Decade Coordination Unit" and other National Committees in a collaborative manner and open to any regional or global cooperation.

### **United Kingdom of Great Britain and Northern Ireland**

The United Kingdom would like to congratulate the Secretariat for the successful planning and development of the Decade Implementation Plan and delivery of the first Call for Actions. We are mindful of the ongoing efforts to develop governance structures and financial support and hope that both are soon resolved. In doing so the UK would like to see minimal bureaucracy and use of existing structures where possible. The UK is thankful for the Secretariat's efforts in bringing together nascent National Decade Committees to share best practice, which have resulted in improving the framework for the UK NDC.

The UK has been an ardent supporter of the Decade ever since supporting its concept at the 2017 UNGA. To this end and under the UK Presidency of the G7 the UK has led the development of a G7 Decade Navigation Plan, within which supporting the Decade is its key tenet, including supporting a number of the proposed "Invites" in Resolution A-31/3.7, namely:

- (ii) offer to host and fund Decade Actions, Decade Coordination Offices, and Decade Collaborative Centres as described in the Implementation Plan;
- (iii) establish national multi-stakeholder Decade coordination mechanisms with a view to stimulating national activities and international cooperation; and
- (iv) Host regional or international convenings of Decade stakeholders including events in the International Ocean Decade Conference Series.



A second component of the G7 Navigation Plan, which supports ocean observations in particular, is the continued delivery of the G7 Future of the Seas and Oceans Initiative, where During the UK's G7 Presidency, the G7 will endeavour to advance three key areas of the Future of the Seas and Oceans Initiative's global ocean observing work to support the UN Ocean Decade societal outcomes of a 'predicted', 'accessible', and an 'inspiring and engaging' ocean, namely in:

**Net-Zero:** A commitment to share best practices from G7 national initiatives, to achieve net-zero carbon emissions from research infrastructure. The National Oceanography Centre, UK is currently leading on a Net Zero Oceanographic Capability (NZOC) project funded by the UK's Natural Environment Research Council of UK Research and Innovation (NERC-UKRI).

**Digital Twin Ocean:** To bring together G7 digital ocean initiatives, including their relationship to wider digital earth initiatives, evaluate capabilities and share best practices in developing digital twin ocean capability.

**Ocean Indicator Framework:** To advance scoping activities and facilitate coordination, working with all stakeholders to identify ocean information knowledge gaps and work towards solutions, to enhance global scientific ocean monitoring and reporting.

The UK would like to comment on the terms of reference for the Decade Advisory Board. Whilst we welcome the sharing of the proposed terms of reference we are mindful that we have not had an opportunity to review, before their upload to the Documents website on the 9th June. Whilst it would have been preferable to have had an opportunity to comment before the Assembly adopt Resolution A-31/3.7, we appreciate the need to expedite their acceptance in order to move along the process for supporting the delivery of the Decade.

And finally, Mr Chairman, following yesterday's Resolutions Committee, where the UK became aware of additional proposed text for Resolution A-31/3.4 as provided by African MS, the UK will provide comments to the secretariat and as suggested by yourself, Mr Chairman.

### **United States of America**

The United States is proud of our contributions to the Decade since its inception, and I have to say that the hard-working members of the IOC Secretariat are my heroes. Please know the Decade enjoys the full support of our government. Our President has identified the Decade as an example of the priorities for this Administration. A challenge for the Decade is co-design. Scientists enjoy talking to scientists, often not talking to constituents. Many intended co-design constituents do not realize that they are the benefactors of the ocean's services. To address this, the U.S. quickly formed a National Committee on the Decade under our National Academy of Sciences, Engineering, and Medicine. This broad, multidisciplinary body has assisted this Delegation's reach in landing seventy participating nexus organizations, two dozen federal agencies, and more than a dozen philanthropic organizations ready to support the Decade. As we speak, we are at sea performing the work of the recently endorsed IOC programmes. The United States will continue our customary role of investment, leadership, and partnership in global ocean science under the IOC Statutes 10.2, and through Secondments, and we welcome the contributions of the many Member states, including Germany's co-sponsorship of the IOC Decade kick-off event.

### **Venezuela**

Venezuela quiere destacar la importancia de IOCARIBE y así de sus logros, para nuestra región. Y en este contexto comprometemos intensificar nuestra participación. Asumimos con satisfacción y plena identificación el espíritu transformador e inclusivo del Decenio de las Ciencias Oceánicas. Apoyamos el Plan de implementación del Decenio y el Proyecto de resolución que se ha presentado. Estamos participado y nos proponemos seguir participando en sus actividades. Venezuela esta trabajando para próximamente conformar el Comité Nacional del Decenio y en varias actividades que serán implementadas en este marco.

### **Food and Agriculture Organization of the United Nations (FAO)**

Today the ocean makes a significant contribution to food security and nutrition, and it holds the potential to play an even bigger role in the global food system. To realize the ocean's potential for sustainably producing aquatic foods, it is necessary to apply scientific knowledge toward innovative solutions and to inform sound decision-making.

This past February, the 34th session of the FAO Committee on Fisheries endorsed the 2021 COFI Declaration for Sustainable Fisheries and Aquaculture, renewing its commitment to secure the long-

term sustainability and resilience of the fisheries and aquaculture sectors in the face of emerging threats such as climate change, pollution and biodiversity loss, and taking into account the opportunity afforded by United Nations Decade of Ocean Science for Sustainable Development.

The Declaration recognizes the need to strengthen the scientific basis in support of fisheries and aquaculture, including through the use of new technology, the promotion of international scientific cooperation - especially transdisciplinary research, capacity-building, education and training, and by ensuring that the best available scientific advice is used to inform decision-making.

The Decade is a 'once in a lifetime' opportunity to increase awareness about the importance of the ocean, generate new scientific knowledge, build and reinforce infrastructures and partnerships, enhance the scientific capacity of countries in the global south, and to make strides toward achieving gender equality, in support of the 2030 Agenda for Sustainable Development.

FAO applauds the IOC for its leadership in coordinating the Decade.

FAO is fully committed to this important endeavor and we look forward to continuing to work with our members, the IOC and other partners to ensure the Decade realizes its potential to harness the power of science to improve our understanding of the ocean toward achieving a world without hunger.

### **Scientific Committee on Oceanic Research (SCOR)**

The Scientific Committee on Oceanic Research, SCOR, appreciates IOC's leadership on promoting the UN Decade of Ocean Science for Sustainable Development and congratulates on the first selection of endorsed programmes and contributions to support transformative Decade Actions.

SCOR supports the endorsed programme OASIS, a SCOR Working Group aimed at developing an Observing Air-Sea Interactions Strategy and also the Working Group DeepSeaDecade, a key contributor to the Challenger 150 - A Decade to Study Deep-Sea Life endorsed programme. SCOR will continue to support GEOTRACES, an international program designed to improve the understanding of marine biogeochemical cycles and distribution of trace elements and their isotopes. SCOR will also continue to support the SCOR /IOC co-sponsored International Indian Ocean Expedition 2, IIOE-2 until 2025.

SCOR is looking forward to continuing its collaboration with IOC on the UN Ocean -Decade and other endeavours.

## **4.1 Draft IOC Medium Term Strategy for 2022–2029 (41 C/4)**

### **Indonesia**

Indonesia would like to express our highly appreciation to the concerted effort from the Executive Secretary IOC Secretariat in implementing the work plan and to prepare the assembly during this challenging pandemic situation. Indonesia would like to continue our collaborative work with the IOC and other international partners especially on the ocean literacy to educate the community.

Considering the increased number of ocean-related multi-hazards events globally, such as storm surge, tropical cyclone, tsunami, and coastal inundation or flooding, the early warning system for the multi-hazards events is highly required. And since these multi-hazards events known no boundary, the international cooperation and partnership among the Members States, UN organization, and other international organization partners are highly required to ensure the safety and welfare of the people in the community.

Considering also some Member States are providing early warning systems for ocean hazards including tsunami early warning information through their national meteorological services authority and furthermore information related to climate and climate change, then we think that therefore we also need to augment the role of the Meteorological Services Authority in the Mid Term Strategy of IOC.

Therefore it is crucial that this Mid Term Strategy also emphasizes the need for a strong partnership between the IOC and WMO where the meteorological services authority of the Members States are working under its coordination framework.

With regard to that, we would like to send our proposal for the draft text for inclusion in the document 4.1 IOC Medium-Term Strategy 2022-2029 to the Secretariat.

### **Norway**

Norway supports the draft presented for a new Medium Term Strategy (2022-2029). The draft is the result of a long and inclusive process, but this is indeed important work as the strategy will apply directions to the work of the IOC in the crucial decade ahead.

The addition of a new high-level objective concerning scientifically-founded services for the sustainable ocean economy, is very well aligned with the objectives of both the high-level panel for a sustainable ocean economy and, not least, of the UN Decade of Ocean Science.

The UN Decade is extensively referred to in the draft strategy, which we find natural considering its strong impact on the work of the IOC and the coincidence in time.

### **Philippines**

The Philippines would like to express its appreciation to the Officers, Executive Secretary, the Secretariat, and the Member States for the excellent work on the 41 C/4 and the 41 C/5.

The Philippines, being a maritime and archipelagic state, is deeply aware of the importance of the oceans and recognizes our reliance on the ocean and its ecosystem services. However, it is not enough to possess the desire to protect our oceans and implement plans and projects to this effect. Our actions and understanding of the oceans and how they are negatively affected by human-made stressors need to be backed up by scientific knowledge and processes.

Thus, the Philippines joins the call for the global effort to translate ocean knowledge and transform ocean science solutions into actions for sustainable development. The Philippines also fully supports the objectives laid out in the Ocean Decade Implementation Plan and is committed to contributing in our own way and with member states of WESTPAC to meeting these objectives in support of the UN Decade of Ocean Science for Sustainable Development 2021-2030.

IOC's very unique role in raising awareness on the value of ocean science is clear and its technical contribution to bridging the science and policy gap has been acknowledged. Unfortunately, the IOC remains understaffed and under-resourced. The Philippines, therefore, supports the enhancement of the decision-making capacity of IOC governing bodies and an increased funding allocation to implement the Commission's work, particularly during the Decade of Ocean.

We particularly welcome the inclusion in the 41 C/4 of Objective 5 - foresight on emerging ocean science issues where Global Priorities Africa and Gender Equality, Small Island Developing States (SIDS), and the socio-economic benefits of the work of IOC are highlighted.

Further, the Philippines wishes to highlight that utilizing the best available scientific information and relevant Indigenous Knowledge must be a general approach to the process of establishing an international legally binding instrument on the BBNJ. The instrument should recognize the important role of Indigenous Knowledge in light of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the Convention on Biological Diversity (CBD). IOC can also create opportunities for Indigenous Peoples to develop their own scientific infrastructure bridging both ocean science and Indigenous Knowledge.

Finally, the Philippines aims to contribute to the Commission's work on the development of national ocean economy accounts and ocean-climate risk assessments, demonstrating the value of investments in nature-based climate adaptation solutions, and the mainstreaming of the ocean considerations in sustainable economic development plans.

### **Republic of Korea**

We welcome IOC's stated focus on six functions, which contains essential ways for fighting against major global challenges including climate change.

The Republic of Korea takes note of the important role of the ocean in responding to climate change, and Korea aims for an action-based ocean science in which knowledge can actually help to solve the long-pending issues.

Last year, the Korea government declared Carbon Neutral 2050, by expressing strong will towards climate change on the government level.

Ocean science needs to become the basis for not only climate change but also for the blue economy including marine energy and resources, and science-based fisheries management system for sustainable fisheries.

### **World Meteorological Organization (WMO)**

WMO congratulates the IOC on its Draft Medium Strategy to 2029, which has been a guide in drafting the WMO-IOC Collaborative Strategy, to be presented to the IOC Assembly next week.

The aligned missions driving both WMO and IOC are well articulated in the Draft WMO-IOC Collaborative Strategy, which we believe is a key supporting and complementary document to the IOC Medium Strategy. WMO therefore suggests IOC to consider to reference it within the IOC Strategy.

With extreme events becoming more frequent, especially driven by ocean-atmosphere interaction, the close cooperation between the WMO and IOC is imperative, especially across the end-to-end value chain of ocean research, observations, forecasting, early warning services, and capacity development within an Earth System approach. This particularly is important to IOC Objectives 2 and 3, which relate directly to early warning systems for ocean hazards, and climate resilience. To achieve these objectives, cooperation with WMO and the National Meteorological and Hydrological Meteorological Services are vital, and WMO is very keen to enable and broaden this cooperation.

Additionally, the major gap in ocean data – emphasised at the recent WMO Data Conference – highlights the dire need for more ocean observations to contribute to ocean, weather and climate forecasting and early warning services, especially supporting areas vulnerable to ocean-related extreme weather, such as SIDS, least developed and developing countries. The WMO recommends stronger emphasis on the use of data for decision-making referenced in the Strategy. WMO proceeds with a major development of a new Unified Policy on International Exchange of Earth System Data for adoption by the Extraordinary Congress in October 2021.

The IOC mandate is ambitious and benefits from strong partnerships. It would be beneficial to see tailored wording within the Draft IOC Strategy, that acknowledges further the partnerships required for working towards the objectives and goals, especially with co-sponsored activities (like GOOS, GCOS; WCRP, etc.).

#### **4.2 Draft Programme and Budget for 2022–2025 (41 C/5)**

##### **France**

La France remercie la COI pour ce travail ainsi que pour la présentation du budget prévisionnel pour 2022-2023. Elle soutient donc cette épure budgétaire telle qu'elle est présentée. La France a en outre l'intention de soutenir la COI, sur ses contributions volontaires de 2022 et/ou par le biais d'une mise à disposition.

##### **Norway**

Norway supports the draft programme and budget for 2022-2029.

Norway recognizes the increased responsibilities and workload that IOC faces. The UN Decade is an unprecedented endeavour that requires resources. Norway will continue to support IOC, and we urge UNESCO to maintain or preferably increase the high priority given to IOC.

Furthermore, Norway appreciates the efforts of IOC to develop partnerships with the private sector and with other multilateral organisations, as partnerships are vital to achieve the ambitious global transformation agenda for the ocean.

Norway supports the Executive Secretary's choice to invest in human resources of the IOC in order to meet the increasing demands, but also in order to strengthen the commission's fundraising capacity and increase the volume of voluntary contributions. As stated in our intervention under agenda point 3.2, we strongly support the Executive Secretary's urgent request for the support from member states.

##### **Philippines**

*See item 4.1*

##### **Republic of Korea**

*See item 4.1*

ANNEX V

**RESULTS OF ELECTIONS AND LIST OF IOC MEMBER STATES**

**I. Officers**

<b>Chair</b>	Mr Ariel Hernán Troisi (Argentina)	(Group III)
<b>Vice Chairs</b>	Ms Marie-Alexandrine Sicre (France)	Group I
	Alexander Frolov (Russian Federation)	Group II
	Frederico Antonio Saraiva Nogueira (Brazil)	Group III
	Mr Srinivasa Kumar Tummala (India)	Group IV
	Mr Karim Hilmi (Morocco)	Group V

**II. Seats on the Executive Council**

Electoral Group I:	Canada, France, Germany, Italy, Portugal, Spain, Sweden, Turkey, the United Kingdom of Great Britain and Northern Ireland, and the United States of America
Electoral Group II:	Bulgaria, Romania and Russian Federation
Electoral Group III:	Brazil, Chile, Colombia, Grenada, Panama, Peru, Saint Vincent and the Grenadines, and Uruguay
Electoral Group IV:	Australia, China, India, the Islamic Republic of Iran, Japan, the Philippines, the Republic of Korea, Thailand and Turkmenistan
Electoral Group V:	Côte d'Ivoire, Egypt, Gabon, Guinea, Kenya, Libya, Morocco, Saudi Arabia, and South Africa

**Member States of the Commission (150)**  
(as of 25 June 2021)

AFGHANISTAN	(11 March	1991)	JORDAN	(06 April	1975)
ALBANIA	(26 January	1993)	KAZAKHSTAN	(24 March	2005)
ALGERIA	(Jul. 1964/Nov.	1965)	* KENYA	(Nov. 1971/Nov.	1973)
ANGOLA	(26 October	1982)	KIRIBATI	(10 May	2012)
* ARGENTINA	(Before November	1961)	KUWAIT	(13 November	1974)
* AUSTRALIA	(Before November	1961)	LEBANON	(Oct. 1962/Jun.	1964)
AUSTRIA	(Oct. 1962/Jun.	1964)	* LIBYA	(11 March	1974)
AZERBAIJAN	(27 January	1998)	MADAGASCAR	(Dec. 1965/Oct.	1967)
BAHAMAS	(29 January	1979)	MALAYSIA	(Jul. 1964/Nov.	1965)
BANGLADESH	(29 October	1982)	MALDIVES	(20 May	1987)
BARBADOS	(18 December	1985)	MALTA	(Oct. 1969/Nov.	1971)
BELGIUM	(Before November	1961)	MAURITANIA	(Before November	1961)
BELIZE	(22 September	1995)	MAURITIUS	(Oct. 1969/Nov.	1971)
BENIN	(23 October	1986)	MEXICO	(Before November	1961)
* BRAZIL	(Before November	1961)	MONACO	(Before November	1961)
* BULGARIA	(Oct. 1967/Dec.	1969)	MONTENEGRO	(04 October	2011)
CABO VERDE	(20 August	1984)	* MOROCCO	(Before November	1961)
CAMEROON	(Nov. 1971/Nov.	1973)	MOZAMBIQUE	(08 April	1981)
* CANADA	(Before November	1961)	MYANMAR	(07 June	1988)
* CHILE	(Before November	1961)	NAMIBIA	(25 April	2001)
* CHINA	(Before November	1961)	NAURU	(11 February	2016)
* COLOMBIA	(Oct. 1967/Dec.	1969)	NETHERLANDS	(Before November	1961)
COMOROS	(08 February	2000)	NEW ZEALAND	(Nov. 1961/Sep.	1962)
CONGO	(Nov. 1961/Sep.	1962)	NICARAGUA	(17 November	1977)
COOK ISLANDS	(25 Jan.	2006)	NIGERIA	(Nov. 1971/Nov.	1973)
COSTA RICA	(28 February	1975)	NIUE	(01 March	2011)
* CÔTE D'IVOIRE	(Before November	1961)	NORWAY	(Before November	1961)
CROATIA	(24 December	1992)	OMAN	(16 November	1982)
CUBA	(Before November	1961)	PAKISTAN	(Before November	1961)
CYPRUS	(05 December	1977)	PALAU	(24 March	2014)
CZECHIA	(20 June	2005)	* PANAMA	(Oct. 1967/Sep.	1969)
DEMOCRATIC PEOPLE'S			PAPUA NEW GUINEA	(10 April	2006)
REPUBLIC OF KOREA	(31 October	1978)	* PERU	(Dec. 1965/Oct.	1967)
DEMOCRATIC REPUBLIC	(23 April	2010)	* PHILIPPINES	(Oct. 62/Jun.	1964)
OF THE CONGO			POLAND	(Before November	1961)
DENMARK	(Before November	1961)	* PORTUGAL	(Oct. 1969/Nov.	1971)
DJIBOUTI	(6 January	2006)	QATAR	(20 July	1976)
DOMINICA	(21 September	1999)	* REPUBLIC OF KOREA	(Before November	1961)
DOMINICAN REPUBLIC	(Before November	1961)	* ROMANIA	(Before November	1961)
ECUADOR	(Before November	1961)	* RUSSIAN FEDERATION	(Before Nov.	1961)
* EGYPT	(Oct. 1969/Nov.	1971)	SAINT KITTS AND NEVIS	(28 June	2011)
EL SALVADOR	(16 February	1993)	SAINT LUCIA	(14 September	1992)
EQUATORIAL GUINEA	(5 April	2019)	* SAINT VINCENT AND		
ERITREA	(12 November	1993)	THE GRENADINES	(21 January	2013)
ESTONIA	(10 March	1992)	SAMOA	(10 April	1978)
ETHIOPIA	(05 March	1976)	* SAUDI ARABIA	(14 June	1978)
FIJI	(09 July	1974)	SENEGAL	(Oct. 1967/Sep.	1969)
FINLAND	(Before November	1961)	SERBIA	(23 May	2005)
* FRANCE	(Before November	1961)	SEYCHELLES	(27 February	1979)
* GABON	(26 October	1977)	SIERRA LEONE	(19 April	1974)
GAMBIA	(30 August	1985)	SINGAPORE	(Dec. 1965/Oct.	1967)
GEORGIA	(09 July	1993)	SLOVENIA	(16 June	1994)
* GERMANY	(Before November	1961)	SOLOMON ISLANDS	(11 May	1982)
GHANA	(Before November	1961)	SOMALIA	(10 July	1974)
GREECE	(Oct. 1962/Jun.	1964)	* SOUTH AFRICA	(Oct. 1967/Sep.	1969)
* GRENADA	(10 November	2009)	* SPAIN	(Before Nov.	1961)
GUATEMALA	(Dec. 1965/Oct.	1967)	SRI LANKA	(Jun. 76/Jan.	1977)
* GUINEA	(01 May	1982)	SUDAN	(26 August	1974)
GUINEA-BISSAU	(26 January	1984)	SURINAME	(21 January	1977)
GUYANA	(20 July	1977)	* SWEDEN	(Jul. 1964/Nov.	1965)
HAITI	(23 March	1976)	SWITZERLAND	(Before Nov.	1961)
HONDURAS	(15 March	2012)	SYRIAN ARAB REPUBLIC	(Oct. 1969/Nov.	1971)
ICELAND	(Oct. 1962/Jun.	1964)	* THAILAND	(Before Nov.	1961)
* INDIA	(Before November	1961)	TIMOR-LESTE	(19 October	2005)
INDONESIA	(Oct. 1962/Jun.	1964)	TOGO	(22 October	1975)
* IRAN, Islamic Republic of	(03 June	1975)	TONGA	(03 January	1974)
IRAQ	(Oct. 1969/Nov.	1971)	TRINIDAD & TOBAGO	(Oct. 1967/Sep.	1969)
IRELAND	(07 November	1978)	TUNISIA	(Before Nov.	1961)
ISRAEL	(Before November	1961)	* TURKEY	(Nov. 1961/Sep.	1962)
* ITALY	(Before November	1961)	* TURKMENISTAN	(8 January	2018)
JAMAICA	(Oct. 1967/Dec.	1969)	TUVALU	(20 June	2011)
* JAPAN	(Before November	1961)	UKRAINE	(Nov. 1961/Sep.	1962)

UNITED ARAB EMIRATES	(02 June	1976)
* UNITED KINGDOM OF GREAT BRITAIN & NORTHERN IRELAND	(Before Nov.	1961)
UNITED REPUBLIC OF TANZANIA	(Oct. 1967/Sep.	1969)
* UNITED STATES OF AMERICA	(Before Nov.	1961)
* URUGUAY	(Before Nov.	1961)
VANUATU	(2 September	2013)
VENEZUELA, Bolivarian Republic of	(Oct. 1962/Jun.	1964)
VIET NAM	(Before Nov.	1961)
YEMEN	(Before Nov.	1961)

**MEMBERS OF THE EXECUTIVE COUNCIL ARE INDICATED WITH AN ASTERISK \***





## ANNEX VI

## LIST OF DOCUMENTS

Document Code	Title	Agenda Items	Languages available
<b>WORKING DOCUMENTS</b>			
<a href="#">IOC/A-31/2.1.Doc Prov.</a>	Revised Provisional Agenda	2.1, 2.4	E F R S
<a href="#">IOC/A-31/2.1.Doc Add. Prov.</a>	Revised Provisional Timetable	2.1, 2.4	E only
<a href="#">IOC/A-31/AP Rev 2</a>	Action Paper (second revised)	All	E F R S
<a href="#">IOC/A-31/DocList Prov.</a>	Provisional List of Documents	2.4	E only
<a href="#">IOC/A-31/3.2.Doc(1)</a>	Report of the IOC Executive Secretary on the work accomplished since the previous session	3.2	E F R S
<a href="#">IOC/A-31/3.2.Doc(1)Add</a>	Report of the IOC Executive Secretary on the work accomplished since the Thirtieth session of the Assembly (Addendum)	3.2	E only
<a href="#">IOC/A-31/3.2.Doc(2)</a>	Report on 2020–2021 (40 C/5) budget implementation as at 31 December 2020	3.2	E F R S
<a href="#">IOC/A-31/3.2.Doc(3)</a>	Financial situation of the IOC Special Account as at year end 2020 and Forecast for 2021	3.2	E F R S
<a href="#">IOC/A-31/3.4.1.Doc(1)</a>	Warning and Mitigation Systems for Ocean Hazards: Towards an Ocean Decade Tsunami Programme	3.4.1	E F R S
<a href="#">IOC/A-31/3.4.2.Doc(1)</a>	Proposal to establish Ocean Data and Information System (ODIS) as a Project	3.4.2	E F R S
<a href="#">IOC/A-31/3.4.2.Doc(2)</a>	Proposed Arrangements to Revise the IOC Ocean Data Policy and Data and Information Management	3.4.2	E F R S
<a href="#">IOC/A-31/3.4.2.Doc(3)</a>	Proposal to renew the MoU between the Flanders Marine Institute (VLIZ) and the IOC regarding the IOC Project Office for IODE	3.4.2	E F R S
<a href="#">IOC/A-31/3.5.1.Doc</a>	Biennial assessment of the Working Group on User Requirements and Contributions to GEBCO Products, 2021	3.5.1	E F R S
<a href="#">IOC/A-31/3.5.2.Doc</a>	Executive Summary of Global Ocean Observing System Implementation Plan	3.5.2	E F R S
<a href="#">IOC/A-31/3.5.3.Doc</a>	Outlines of the Findings and Recommendations of the Group of Experts on Capacity Development for the Revision of the IOC Capacity Development Strategy	3.5.3	E F R S
<a href="#">IOC/A-31/3.5.4.Doc</a>	Revised Draft IOC Ocean Literacy Plan of Action 2018–2021	3.5.4	E F R S
<a href="#">IOC/A-31/3.5.5.Doc(1)</a>	Proposed Joint WMO-IOC Collaborative Strategy	3.5.5	E F R S
<a href="#">IOC/A-31/3.5.5.Doc(2)</a>	Proposed Rules of Procedure for the Joint WMO-IOC Collaborative Board	3.5.5	E F R S
<a href="#">IOC/A-31/3.5.6.Doc</a>	The Case for a New Governance for IOCINDIO: A Revised Proposal for Changing the Status of IOCINDIO in a Sub-Commission of IOC	3.5.6	E F R S
<a href="#">IOC/A-31/3.6.Doc</a>	Report of the IOC activities (2020–2021) to the Forty-first General Conference of UNESCO	3.6	E F R S

Document Code	Title	Agenda Items	Languages available
<a href="#">IOC/A-31/3.7.Doc(1)</a>	Draft Terms of Reference of the Decade Advisory Board	3.7	E F R S
<a href="#">IOC/A-31/3.7.Doc(2)</a>	Report on the Implementation of the UN Ocean Decade (including outcome of 1st Call for Action)	3.7	E only
<a href="#">IOC/A-31/4.1.Doc</a>	Revised Draft IOC Medium Term Strategy for 2022–2029 (41 C/4)	4.1	E F R S
<a href="#">IOC/A-31/4.2.Doc</a>	Draft Programme and Budget for 2022–2025 (41 C/5) – First Biennium 2022–2023	4.2, 4.4	E F R S
<a href="#">IOC/A-31/4.3.Doc</a>	Report of the Chairperson of the IOC Intersessional Financial Advisory Group (2021)	4.3	E F R S
<b>REPORTS OF IOC AND COOPERATIVE BODIES</b>			
<a href="#">IOC/EC-54/SR Prov.</a>	Provisional Executive Summary Report of the 54th Session of the IOC Executive Council, online, 14 June 2021	2.1	E F S R
<a href="#">IOC/SC-IOCAFRICA-VI/3s</a>	Executive Summary Report of the 6th Session of the IOC Sub-Commission for the for Africa and the Adjacent Island States, online, 13–16 April 2021	3.3.1	E F S R
<a href="#">IOC/SC-WESTPAC-XIII/3s</a>	Executive Summary Report of the 13th Intergovernmental Session of the IOC Sub-Commission for the Western Pacific (WESTPAC), 27–29 April 2021 (online)	3.3.2	E only
<a href="#">IOC/SC-IOCARIBE-XVI/3s</a>	Executive Summary Report of the 15th Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE), online, 3–6 May 2021	3.3.3	E only
<a href="#">IOCINDIO-VIII/3s</a>	Executive Summary Report of the 8th Session of the IOC Regional Committee for the Central Indian Ocean, 17–19 May 2021 (online)	3.3.4	E only
<a href="#">ICG/CARIBE-EWS-XV/3s</a>	Executive Summary Report of the 15th Session of the IOC Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-XIV), 27–29 April 2021 (online)	3.4.1.1	E F S R
<a href="#">ICG/NEAMTWS-XVI/3</a>	Report of the 16th Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS-XVI), Cannes, France, 2–4 December 2019	3.4.1.1	E ( <i>summary in F R S</i> )
<a href="#">IOC/TOWS-WG-XIV/3</a>	Working Group on Tsunamis and other Hazards related to Sea-level Warning and Mitigation Systems (TOWS-WG), 14th meeting, online, 25–26 February 2021	3.4.1.2	E ( <i>summary in F R S</i> )
<a href="#">IOC/TOWS-WG-XIII/3</a>	Working Group on Tsunamis and other Hazards related to Sea-level Warning and Mitigation Systems (TOWS-WG), 13th meeting, Paris, 20–21 February 2020	3.4.1.2	E ( <i>summary in F R S</i> )

Document Code	Title	Agenda Items	Languages available
<a href="#">IOC/IODE-XXVI/3s</a>	Executive Summary Report of the 26th session of the International Oceanographic Data and Information Exchange Committee, online, 20–23 April 2021	3.4.2	E F S R
<a href="#">IOC/IPHAB-XV/3s</a>	Executive Summary Report of the 15th Session of Intergovernmental Panel on Harmful Algal Blooms, online, 23–25 March 2021	3.4.3	E F S R
<b>INFORMATION DOCUMENTS</b>			
<a href="#">IOC/A-31/2.4.Inf.1</a>	Working Arrangements for the session	2.1	E only
<a href="#">IOC/A-31/2.4.Inf.1 Add.</a>	Template for submission of written records to the Assembly summary report	2.1	E only
<a href="#">IOC/A-31/3.1.Inf</a>	Statement from the IOC Chairperson on the Occasion of the 31st Session of the Assembly, online, 14–25 June 2021 [to be published during the session]	3.1	E F S R
<a href="#">IOC/INF-1400</a>	Evaluation report by the Internal Oversight Service and OpenCities Ltd on IOC's Strategic Positioning (2021)	3.2	E only
<a href="#">IOC/INF-1401</a>	Update on IOC Custodianship Role in relation to SDG 14 Indicators, 2021	3.2	E only
<a href="#">IOC/INF-1402</a>	Update on IOC co-sponsorship of World Climate Research Programme (WCRP), 2021	3.2	E only
<a href="#">IOC/INF-1405</a>	IOC Commitments in International and UN Processes (BBNJ, CBD, WOA-III, UNFCCC)	3.2	E only
<a href="#">IOC/INF-1406</a>	Report of the Chair of the General Bathymetric Chart of the Oceans (GEBCO) Guiding Committee, 2021	3.2	E only
<a href="#">IOC/INF-1351</a>	The Second International Indian Ocean Expedition (IIOE-2), update on activities 2017, part 4: update on activities, 2020	3.2	E only
<a href="#">IOC/INF-1397</a>	Reports of Category 2 centre and institutes of UNESCO related to Oceanography, 2020–2021	3.2	E only
<a href="#">IOC/INF-1407</a>	Progress in the implementation of the Integrated Coastal Area Management (ICAM) Strategy, including new Marine Spatial Planning (MSP), Sustainable Blue Economy and Large Marine Ecosystems.	3.2	E only
<a href="#">IOC/INF-1393 Rev.</a>	Revised Concept proposal for an 'IOC-coordinated State of the Ocean Report' (IOC StOR)	3.2	E only
<a href="#">IOC/INF-1408</a>	New IOC Communication Plan 2021	3.2	E only
<a href="#">IOC/INF-1399</a>	Global HAB Status Report. A Scientific Summary for Policy Makers (2021)	3.4.3	E only
<a href="#">IOC/INF-1396</a>	GE-CD Task Team report relating to the revision of the IOC Capacity Development Strategy 2015–202	3.5.3	E only

Document Code	Title	Agenda Items	Languages available
<a href="#">IOC/2021/ODS/22</a>	Ocean Literacy Framework for the UN Decade of Ocean Science for Sustainable Development 2021–2030	3.5.4, 3.7	E only
<a href="#">IOC/INF-1410</a>	Report on the online Consultation on the potential transformation of the IOC Regional Committee for the Central Indian Ocean (IOCINDIO) into an IOC Sub-Commission, 16 February 2021 (online)	3.5.6	E only
<a href="#">IOC/INF-1411</a>	Summary Report of the IOCINDIO Blue Economy Webinar, 6 May 2021	3.5.6	E only
<a href="#">IOC/2021/ODS/24</a>	National Decade Committees Operational Guidelines	3.7	E only
<a href="#">IOC/2021/ODS/23</a>	Operational guidelines for the establishment of Decade Collaborative Centres and Implementing Partners	3.7	E only
<a href="#">IOC/INF-1417</a>	List of endorsed Programmes (outcome of 1st Call for Action)	3.7	E only
<a href="#">IOC/INF-1416</a>	IOC contributions to the UN Decade of Ocean Science for Sustainable Development (2021–2030) including resource needs	3.7	E only
<a href="#">IOC/2021/ODS/25</a>	Advisory Report on the Communication Strategy for the Ocean Decade	3.7	E only
<a href="#">IOC/INF-1415</a>	UN Decade of Ocean Science for Sustainable Development Preliminary Framework for the Ocean Decade Resource Mobilisation Strategy	3.7	E only
<a href="#">IOC/2021/ODS/21</a>	Report of the 1st Meeting of the Interim Decade Advisory Board (6–8 April 2021)	3.7	E only
<a href="#">IOC/2021/ODS/20</a> <a href="#">IOC/2021/ODS/19</a>	and The United Nations Decade of Ocean Science for Sustainable Development (2021-2030) Implementation Plan (full text, 2021) and Summary	3.7	E only
<a href="#">IOC/2021/ODS/28</a>	Report of the 2nd Meeting of the Interim Decade Advisory Board (19 May 2021)	3.7	E only
IOC/A-31/4.5.Inf(1)	Updated listing of the IOC electoral groups and listing of the distribution of seats on the Executive Council among the electoral groups	4.5	E only
IOC/A-31/4.5.Inf(2)	List of candidates for Elections	4.5	E only
IOC/A-31/4.5.NOM	Report of the Chair of the Nominations Committee	4.5	E only
<b>REFERENCE DOCUMENTS</b>			
<a href="#">IOC/EC-53/3.1.Doc(1)</a>	Report of the IOC Executive Secretary on the work accomplished since the Thirtieth Session of the Assembly	3.2	E F R S

<b>Document Code</b>	<b>Title</b>	<b>Agenda Items</b>	<b>Languages available</b>
<a href="#">IOC/EC-53/3.1.Doc(1) Part2</a>	Brief update by the IOC Executive Secretary on the work accomplished since the Thirtieth Session of the Assembly	3.2	E F R S
<a href="#">IOC/EC-53/3.1.Doc(2)</a>	Report on budget execution 2018–2019 and outline of 2020–2021 budget	3.2	E F R S
<a href="#">IOC/2020/TS/143</a>	Capacity Assessment of Tsunami Preparedness in the Indian Ocean: Status Report, 2018	3.4.2.1	E only
<a href="#">IOC/BRO/2020/1</a>	Summary Statement from the International Symposium on lessons learnt of the 2018 Tsunamis in Palu and Sunda Strait, Jakarta, Indonesia, 26–28 September 2019	3.4.2.1	E only
<a href="#">IOC/2020/MG/82</a>	Preparing for Community Tsunami Evacuations: from inundation to evacuation maps, response plans and exercises	3.4.2.1	E S
<a href="#">A/RES/75/239</a>	UN General Assembly Resolution: Oceans and the law of the sea (2 December 2020)	3.7	All UN languages



ANNEX VII

**LIST OF PARTICIPANTS**

*Note: Delegates who attended both the Assembly session and the preceding short session of the Executive Council are marked with an asterisk.*

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<b>ADUs</b>	Associate Data Units
<b>AECID</b>	Spanish Agency for International Development Cooperation
<b>AIUs</b>	Associate Information Units
<b>ANAMAR</b>	National Authority of Marine Affairs
<b>AOML</b>	Atlantic Oceanographic and Meteorological Laboratory
<b>ASEAN</b>	Association of South-East Asian Nations
<b>BBNJ</b>	Biodiversity Beyond National Jurisdiction
<b>CARI-Coast</b>	Climate change Impacts, Adaptation and Resilience for IOCINDIO Coastal areas
<b>CATAC</b>	Central America Tsunami Advisory Center
<b>CCLME</b>	Canary Current Large Marine Ecosystem
<b>CD</b>	capacity development
<b>CHM</b>	Clearing House Mechanism
<b>CIFDP-C</b>	Coastal Inundation Forecasting Demonstration Project in the Caribbean
<b>CMA2</b>	Caribbean Marine Atlas Phase 2
<b>COP</b>	United Nations Climate Change Conference
<b>CSK-2</b>	2nd Cooperative Study of Kuroshio
<b>DEA</b>	South African Department of Environmental Affairs
<b>DIPECHO</b>	European Union Directorate-General for European Civil Protection and Humanitarian Aid Operations
<b>DMPA</b>	Data Management Programme Area
<b>EC</b>	Executive Council
<b>EEZ</b>	Exclusive Economic Zone
<b>EPG</b>	Executive Planning Group
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>GCOS</b>	Global Climate Observing System
<b>GEBCO</b>	General Bathymetric Chart of the Oceans
<b>GESAMP</b>	Group of Experts on the Scientific Aspects of Marine Environmental Protection
<b>GGC</b>	GEBCO Guiding Committee
<b>GOA-ON</b>	IOC-coordinated Global Ocean Acidification Observing Network
<b>GOOS</b>	Global Ocean Observing System
<b>GOSR</b>	Global Ocean Science Report
<b>HAB-ANCA</b>	Harmful Algae Blooms for the Caribbean and Adjacent Regions
<b>IAEA</b>	International Atomic Energy Agency

<b>IBCCA</b>	International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico
<b>ICAM</b>	Integrated Coastal Area Management Programme
<b>ICG/CARIBE-EWS</b>	Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions
<b>ICG/IOTWMS</b>	Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System
<b>ICG/NEAMTWS</b>	Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas:
<b>ICG/PTWS</b>	Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System
<b>IFAG</b>	Intersessional Financial Advisory Group
<b>IHO</b>	International Hydrographic Organization
<b>IIOE-2</b>	Second International Indian Ocean Expedition
<b>IMO</b>	International Maritime Organization
<b>INCOIS</b>	Indian Centre for Ocean Information Services
<b>INVEMAR</b>	Marine and Coastal Research Institute
<b>IOC</b>	Intergovernmental Oceanographic Commission
<b>IOCAFRICA</b>	IOC Sub-Commission for Africa and the Adjacent Island States
<b>IOCARIBE</b>	IOC Sub-Commission for the Caribbean and Adjacent Regions
<b>IOCINDIO</b>	IOC Regional Committee for the Central Indian Ocean
<b>IODE</b>	International Oceanographic Data and Information Exchange
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>IPHAB</b>	IOC Intergovernmental Panel on Harmful Algal Blooms
<b>ISA</b>	International Seabed Authority
<b>ITCOOcean</b>	International Training Centre on Operational Oceanography
<b>ITIC</b>	International Tsunami Information Center
<b>JCOMM</b>	Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology
<b>JCOMMOPS</b>	JCOMM in situ Observations Programme Support Centre
<b>JICA</b>	Japan International Cooperation Agency
<b>KIMST</b>	Korea Institute of Marine Science & Technology promotion
<b>LAOCA</b>	Latin American Ocean Acidification Network
<b>LME</b>	Large Marine Ecosystems
<b>MCDS</b>	JCOMM Marine Climate Data System
<b>MEXT</b>	Ministry of Education, Culture, Sports, Science and Technology of Japan
<b>MoU</b>	Memorandum of Understanding

<b>MSP</b>	Marine Spatial Planning
<b>NDCs</b>	Nationally Determined Contributions
<b>NEAM</b>	the North-Eastern Atlantic, the Mediterranean and Connected Seas
<b>NEAMTIC</b>	NEAM Tsunami Information Centre
<b>NGO</b>	non-governmental organization
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NODCs</b>	National Oceanographic Data Centres
<b>NTWC</b>	National Tsunami Warning Centre
<b>NWPTAC</b>	North West Pacific Tsunami Advisory Center
<b>OBIS</b>	Ocean Biogeographic Information System
<b>ODINAFRICA</b>	Ocean Data and Information Network for Africa
<b>ODINCARSA</b>	Ocean Data and Information Network for the IOCARIBE and South America Regions
<b>ODIS</b>	Ocean Data and Information System
<b>ODISCat</b>	IOC Ocean Data and Information System Catalogue of Sources Project
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>ONAMET</b>	Dominican Republic National Office for Meteorology
<b>OTGA</b>	Ocean Teacher Global Academy
<b>PCCOS</b>	Pacific Community Centre for Ocean Science
<b>PICES</b>	North Pacific Marine Science Organization
<b>QMF</b>	Quality Management Framework
<b>RCVF</b>	Regional Coastal Vulnerability Framework
<b>RTRC</b>	Training and Research Centre
<b>RTRC-MarBEST</b>	First Institute of Oceanography, State Oceanographic Administration of China, and Regional Training and Research Center on Marine Biodiversity and Ecosystem Health
<b>RTRC-ODC</b>	Regional Training and Research Center on Ocean Dynamics and Climate
<b>SBSTA</b>	Subsidiary Body for Scientific and Technological Advice
<b>SC</b>	Steering Committee
<b>SCOR</b>	Scientific Committee on Oceanic Research
<b>SCSTAC</b>	South China Sea Tsunami Advisory Center
<b>SDG</b>	Sustainable Development Goal
<b>SOPs</b>	Standard Operating Procedures
<b>SPINCAM</b>	Southeast Pacific Data and Information Network in support to Integrated Coastal Area Management
<b>SROCC</b>	Special Report on Oceans and the Cryosphere in a Changing Climate
<b>TEMPP</b>	Tsunami Evacuation Maps, Plans and Procedures

<b>TMT-CHM</b>	Transfer of Marine Technology Clearing-House Mechanism
<b>TOWS-WG</b>	Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems
<b>TPOS 2020</b>	Tropical Pacific Observing System in 2020
<b>TSP</b>	Tsunami Service Provider
<b>TT</b>	Task Team
<b>UN</b>	United Nations
<b>UNCLOS</b>	United Nations Convention on the Law of the Sea
<b>UNDP</b>	United Nations Development Programme
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>UNFCCC</b>	UN Framework Convention on Climate Change
<b>VMDC</b>	Flanders Marine Institute
<b>WCRP</b>	World Climate Research Programme
<b>WESTPAC</b>	IOC Sub-Commission for the Western Pacific
<b>WHO</b>	World Health Organization
<b>WIOMSA</b>	Western Indian Ocean Marine Science Association
<b>WMO</b>	World Meteorological Organization