Covers all items of the Revised Provisional Agenda

PROVISIONAL ACTION PAPER

The Action Paper provides the information necessary for effective participation in the discussion of the agenda items. This information includes: (i) identification of relevant documentation; (ii) identification, under each substantive agenda item, of the issue before the Assembly and the expected decision or draft resolution when available to date; (iii) background information (if the relevant background includes a separate document, it is issued as an Annex to the Action Paper).

The Action Paper also provides the basis of the draft summary report of the session. It is written in past tense to streamline the reporting process. A summary of the discussion that led to decisions under each agenda item will be prepared by the Secretariat and the Rapporteur and will be included in the draft summary report. Draft decisions and resolutions are proposed in the document in order to focus on decisions during the discussion of each agenda item without prejudice to the prerogatives of any Member State, partner organization, Officer or the Executive Secretary.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. OPENING</td>
<td>1</td>
</tr>
<tr>
<td>2. ORGANIZATION OF THE SESSION</td>
<td>1</td>
</tr>
<tr>
<td>2.1. ADOPATION OF THE AGENDA AND OTHER ORGANIZATIONAL MATTERS</td>
<td>1</td>
</tr>
<tr>
<td>2.2. DESIGNATION OF THE RAPPORTEUR</td>
<td>2</td>
</tr>
<tr>
<td>2.3. ESTABLISHMENT OF SESSIONAL COMMITTEES AND WORKING GROUPS</td>
<td>2</td>
</tr>
<tr>
<td>2.4. INTRODUCTION OF DOCUMENTATION, TIMETABLE AND MEMORIAL LECTURES</td>
<td>3</td>
</tr>
<tr>
<td>3. IOC MATTERS AND REPORTS</td>
<td>4</td>
</tr>
<tr>
<td>3.1. STATEMENT OF THE CHAIRPERSON</td>
<td>4</td>
</tr>
<tr>
<td>3.2. REPORT BY THE EXECUTIVE SECRETARY ON THE WORK ACCOMPLISHED</td>
<td>5</td>
</tr>
<tr>
<td>3.3. REPORTS BY THE CHAIRS OF THE IOC SUB-COMMISSIONS AND REGIONAL COMMITTEES</td>
<td>8</td>
</tr>
<tr>
<td>3.3.1. IOC Sub-Commission for the Western Pacific:</td>
<td>8</td>
</tr>
<tr>
<td>12th Session of WESTPAC, Manila, Philippines, 2–5 April 2019</td>
<td>8</td>
</tr>
<tr>
<td>3.3.2. IOC Sub-Commission for the Caribbean and Adjacent Regions:</td>
<td>11</td>
</tr>
<tr>
<td>15th Session of IOCARIBE, Oranjestad, Aruba, 6–10 May 2019</td>
<td>11</td>
</tr>
<tr>
<td>3.3.3. IOC Sub-Commission for Africa and the Adjacent Island States:</td>
<td>13</td>
</tr>
<tr>
<td>5th Session of IOCAFRIA, Nairobi, Kenya, 25–27 March 2019</td>
<td>13</td>
</tr>
<tr>
<td>3.3.4. IOC Regional Committee for the Central Indian Ocean:</td>
<td>16</td>
</tr>
<tr>
<td>7th Session of IOCINDIO, Hyderabad, India, 25–26 April 2019</td>
<td>16</td>
</tr>
<tr>
<td>4. IOC AND THE FUTURE OF THE OCEAN: STRATEGIC DEVELOPMENTS</td>
<td>19</td>
</tr>
<tr>
<td>4.1. PROGRESS REPORT ON THE PREPARATION OF THE UNITED NATIONS DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT</td>
<td>19</td>
</tr>
<tr>
<td>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</td>
<td>22</td>
</tr>
<tr>
<td>5. UNITED NATIONS PARTNERSHIPS</td>
<td>24</td>
</tr>
<tr>
<td>5.1. COOPERATION WITH WMO</td>
<td>24</td>
</tr>
<tr>
<td>5.2. IOC CONTRIBUTION TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)</td>
<td>29</td>
</tr>
</tbody>
</table>
6. OCEAN RESEARCH

6.1. HARMFUL ALGAL BLOOMS: 14TH SESSION OF IPHAB, UNESCO, PARIS, 20–26 April 2019

6.2. REPORT OF THE WMO-IOC-ISC WORLD CLIMATE RESEARCH PROGRAMME (WCRP)

7. OBSERVING SYSTEMS AND DATA MANAGEMENT

7.1. OBSERVING SYSTEMS

7.1.1. GOOS: Strategy, Implementation, and Governance

7.1.2. WMO-ISC-IOC-UNEP Global Climate Observing System (GCOS) Workplan

7.1.3. Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)

7.2. DATA MANAGEMENT

7.2.1. International Oceanographic Data and Information Exchange: 25th Session of IODE, Tokyo, Japan, 18–22 February 2019

7.2.2. Draft Concept for an Ocean Data and Information System (ODIS)

8. EARLY WARNING AND SERVICES

8.1. REGIONAL TSUNAMI WARNING SYSTEMS

8.1.1. Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System: 28th 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: 12th 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: 14th 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: 13th Session of ICG/NEAMTWS, UNESCO, Paris, 26–28 November 2018

8.2. GLOBAL COORDINATION OF WARNING AND MITIGATION SYSTEMS FOR OCEAN HAZARDS


9. ASSESSMENT AND INFORMATION FOR POLICY

9.1. REPORT OF THE IHO-IOC GEBCO GUIDING COMMITTEE

10. SUSTAINABLE MANAGEMENT AND GOVERNANCE

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 ................................................................. 55

10.2. INTEGRATED COASTAL AREA MANAGEMENT PROGRAMME (ICAM) STRATEGY IMPLEMENTATION .......................................................... 57

11. CAPACITY DEVELOPMENT .................................................................................................................. 58

11.1. REPORT OF THE IOC CAPACITY DEVELOPMENT GROUP OF EXPERTS ........................................................................................................ 58

11.2. IOC’S CONTRIBUTION TO OCEAN LITERACY IN 2018–2021: ACTION PLAN ............................................................... 61

12. ADMINISTRATION, FINANCE AND MANAGEMENT ................................................................................. 63


12.2. DRAFT PROGRAMME AND BUDGET FOR 2020–2021 (DRAFT 40 C/5)................................................. 64

12.3. DRAFT MEDIUM-TERM STRATEGY 2022–2029: PRELIMINARY PROPOSALS BY THE SECRETARIAT ......................................................... 66

12.4. REPORT BY THE CHAIRPERSON OF THE FINANCIAL COMMITTEE ................................................. 67

12.5. PREPARATION FOR THE COMMEMORATION OF THE 60TH ANNIVERSARY OF THE IOC (1960–2020) ........................................................................................................ 68

12.6. ELECTIONS OF THE OFFICERS OF THE COMMISSION AND MEMBERS OF THE EXECUTIVE COUNCIL ........................................................................................................ 68

12.6.1. Election of the Chairperson of the Commission ........................................................................... 69

12.6.2. Election of the Vice-Chairpersons of the Commission .................................................... 69

12.6.3. Election of the Members of the Executive Council ........................................................................ 69

12.7. 31th SESSION OF THE ASSEMBLY AND 53rd and 54th SESSIONS OF THE EXECUTIVE COUNCIL ........................................................................................................ 69

13. ADOPTION OF RESOLUTIONS AND SUMMARY REPORT .......................................................... 70

14. CLOSURE ............................................................................................................................................ 71
1. OPENING

The Chair, Professor Peter M. Haugan, opened the 30th session of the IOC Assembly at 10:00 on Wednesday 26 June 2019 in Room I at UNESCO Headquarters. He expressed great appreciation to welcome IOC delegations and representatives of partner organizations in the main conference hall in UNESCO for the first time in the history of Assembly plenary sessions. He announced that one new IOC Member State joined the IOC since the last Executive Council in 2019: Equatorial Guinea as from 5 April 2019, taking the IOC membership to 150. He welcomed the new officers recently elected in the following subsidiary bodies of the Commission: ICG/IOTMWS, ICG/PTWS, IOCAFRICTA, IOCARIBE, IOCE, IPHAB, WESTPAC.

2. The Deputy Director-General of UNESCO Mr Qu Xing addressed the Assembly on behalf of the Director-General Ms Audrey Azoulay. He highlighted the pivotal role of the IOC in bringing 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 create an efficient science-based integrated ocean management. IOC’s strong contribution to the sustainable development agenda and the planning of the UN Decade of Ocean Science for Sustainable Development (2021–2030) have shown that the IOC can play a key role in ocean-related approaches to global challenges of our time. He stressed that the Decade will offer an exceptional opportunity to highlight the societal benefits of all IOC programmes through a transformative approach to generating actionable scientific knowledge at the service of decision-makers. Full text of the address is available 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 past year: Dr Fauzi (Indonesia, –2018), J. Frederick M. Grassle (USA, 1939–2018), Angus McEwan (Australia, 1937–2018), Walter Munk (USA, 1917–2017) and Joanna Toole (U.K., 1983–2019).

4. The Chair invited participants to visit the exhibition in the Foyer. On behalf of the Assembly, he thanked several partners and sponsors for supporting the session in various ways: ______________. The traditional IOC reception was organized by the IOC Secretariat.

5. The representatives of ___ Member States 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: ______________.

2. ORGANIZATION OF THE SESSION

2.1. ADOPTION OF THE AGENDA AND OTHER ORGANIZATIONAL MATTERS
[Rule of Procedure, 8, 11; Dec. EC-XLIX/6.2(1)]

<table>
<thead>
<tr>
<th>Working documents:</th>
<th>IOC-XXX/1 Prov. Rev.</th>
<th>Revised Provisional Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOC-XXX/1 Add. Prov. Rev.</td>
<td>Revised Provisional Timetable</td>
<td></td>
</tr>
<tr>
<td>IOC-XXX/2 prov.</td>
<td>Provisional Action Paper (this document)</td>
<td></td>
</tr>
</tbody>
</table>

6. 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.

**IOC-XXX, Dec. 2(I)**

The Assembly,

**I. Agenda**

1. Adopts the agenda and the timetable of work as set out in document IOC-XXX/1 Prov. Rev. and Add. Rev. [with the following additional modifications:]

7. The representatives of ___ Member States 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: ____________.

**2.2. DESIGNATION OF THE RAPPORTEUR**

[Rule of Procedure 25.4]

**IOC-XXX, Dec. 2(II)**

The Assembly,

**II. Rapporteur**

2. On a proposal of [country], seconded by [countries],

3. Designates _____________ of [country] Rapporteur for its present session to assist the Chairperson and the Executive Secretary in the preparation of the draft provisional report of the Session;

8. The representatives of ___ Member States 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: ____________.

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

[Rule of Procedure 12]

**Report:**


9. Referring to the recommendations made by the Executive Council (EC-LII, 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, the open-ended composition thereof, and the working arrangements made for their meetings.
The Assembly,

III. Sessional Committees and Working Groups

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

Financial Committee: to examine the financial implications of draft decisions/resolutions, workplans of subsidiary bodies and prepare a resolution under items 3.2, 3.3 and 12.1-4; under the chairship of Ariel H. Troisi (Argentina, Vice-chair) with the following Member States participating: ______________. 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 [name (country)] with the following Member States participating: ______________. 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 12.6): under the chairship of [name] (country) with the following Member States participating: ______________. Dr Thorkild Aarup and Dr Salvatore Aricò provided the Secretariat support to the Nominations Committee.

10. The representatives of __ Member States 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: ___________.

2.4. INTRODUCTION OF DOCUMENTATION, TIMETABLE AND MEMORIAL LECTURES
[Rule of Procedure 11]

<table>
<thead>
<tr>
<th>Working documents:</th>
<th>IOC-XXX/1 Add. Prov. Rev.</th>
<th>Revised Provisional Timetable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IOC-XXX/1 Prov. Rev.</td>
<td>Revised Provisional Agenda</td>
</tr>
<tr>
<td></td>
<td>IOC-XXX/4 Prov.</td>
<td>Provisional List of Documents</td>
</tr>
<tr>
<td></td>
<td>IOC-XXX/2 Prov.</td>
<td>Provisional Action Paper</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information:</th>
<th>IOC-XXX/Inf.1</th>
<th>Working Arrangements for the session</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IOC-XXX/Inf.1 Add.</td>
<td>Template for submission of written records to the Executive Council summary report</td>
</tr>
<tr>
<td></td>
<td>IOC-XXX/Inf.2</td>
<td>Programme of the IOC Memorial Lectures 2019</td>
</tr>
</tbody>
</table>

11. The Executive Secretary introduced this item. He explained that it was a deliberate choice to welcome the Assembly in room I of UNESCO for the first two days of its plenary session. The Assembly would then continue its work in room II until the end of the session. He then reviewed briefly the list of working documents and reminded the Assembly that the report would be focused on decisions. Referring to IOC-XXIX/Inf.1, the Executive Secretary reminded that draft decisions would be agreed upon during the discussion of each agenda item and draft resolutions would be adopted at the end of the session under item 13. The complete set of
adopted decisions and resolutions in all four languages would be made available at the end of the session, in line with the established UNESCO practices. The translation and the adoption of the narrative part of the report will be done after the session. He then referred to his presentation to the Executive Council under item 3.3 to explain the reasons that led the Secretariat to propose this approach. Dr Ryabinin reminded the Assembly that ___ Draft Resolution(s) were received by the deadline of 21 June. Member States that wished to have specific, particularly important, plenary interventions recorded, were invited to provide written records thereof in one of the four working languages of the Commission, to be annexed to the report, in their original language as an informational annex to this report. A template and a dedicated e-mail address (iocgovbody@unesco.org) was set up to this end (IOC-XXX/Inf.1 Add.).

12. With reference to the timetable for the session, the Executive Secretary informed about the interpretation arrangements during the session. Meetings of the Financial Committee benefitted from English/French interpretation.

13. The Executive Secretary informed the Assembly that the second day of the session (Thursday 27 June) was dedicated to the UN Decade of Ocean Science for Sustainable Development (2021–2030) and therefore open to a wider audience, in particular during the Ocean Science Day event in the morning. That event will take the form of round table discussions around the three first strategic objectives of the Decade: Filling Gaps in Current Knowledge; Knowledge on Multiple Ocean Stressors for Ecosystem-based Management; and Ocean Science for Saving Lives.

14. The IOC Anton Bruun Memorial Lecture on ‘Time Series and their Contribution to the Prediction of the State of the Ocean’ was delivered by Professor Peter A. Thompson (CSIRO, Australia), who had also contributed to Ocean Science Day 2019. The IOC N.K. Panikkar Memorial Lecture on the theme ‘Science Capacity Development in support of Societal Goals in Western Africa’ was delivered by videoconference by Dr Jacqueline Uku, President of the Western Indian Ocean Marine Science Association (WIOMSA). Following their presentation, Professor Thompson and Dr Uku were awarded the IOC Anton Bruun Medal and the IOC N.K. Panikkar Medal, respectively.

No decision is proposed under this item. [Any changes to the timetable would be reflected in IOC-XXX, Dec.2.]

15. The representatives of ___ Member States 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: ____________.

3. IOC MATTERS AND REPORTS

3.1. STATEMENT OF THE CHAIRPERSON
[Rule of Procedure 8.1(a)]

16. In accordance with rule of procedure 8.1(a), Chair Peter M. Haugan delivered an oral statement on recent developments in the work of the Commission and perspectives for the coming years (Annex ____).

17. The decision of the 2017 United Nations General Assembly to proclaim the United Nations Decade of Ocean Science for Sustainable Development (2021–2030) was truly historic. It rewarded the leading efforts by the IOC of UNESCO to bridge ocean science and policy – to go from research to action. IOC is now bringing all stakeholders together to design an ambitious and transformative Implementation Plan for the Decade, which has the potential
to grow into one of the largest targeted scientific campaigns in Earth sciences ever. The importance of a healthy ocean for eradicating poverty; ensuring food security; generating employment, from the artisanal to the industrial level; and protecting coastal communities from natural disasters, among many others, has now been highlighted and understood by key players. To maintain this momentum and make the Decade truly transformative, we need to build relationships of trust and mutual benefit between governments, businesses, academic institutions, civil society and international organizations across different fields and regions.

18. In this context, the Chair highlighted his attendance on behalf of the IOC in a number of high level meetings, engaging with senior stakeholders on the importance of the IOC programmes to the global ocean agenda.

19. The Assembly thanked the Chair for his remarks and leadership that was critical to the recent achievements, placing the ocean at the heart of the sustainable development agenda and opening avenues for the Commission for further collaboration thereby fulfilling its mission in the best possible way.

*No decision is proposed under this item.*

20. The representatives of ___ Member States 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: ____________.

3.2. REPORT BY THE EXECUTIVE SECRETARY ON THE WORK ACCOMPLISHED SINCE THE FIFTY-FIRST SESSION OF THE EXECUTIVE COUNCIL AND ON BUDGET IMPLEMENTATION (JULY 2018–MAY 2019)

<table>
<thead>
<tr>
<th>Working documents:</th>
<th>IOC-XXX/2 Annex 1</th>
<th>Report of the IOC Executive Secretary on the work accomplished since the Twenty-ninth Session of the Assembly (July 2017–May 2019)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IOC/INF-1367</td>
<td>Policy Brief on Multiple Ocean Stressors</td>
</tr>
<tr>
<td></td>
<td>IOC/INF-1368</td>
<td>Update on IOC Custodianship Role in Relation to SDG 14 Indicators, 2019</td>
</tr>
<tr>
<td></td>
<td>IOC/INF-1370</td>
<td>Reports of Category 2 centres and institutes of UNESCO related to the Ocean and the activities of IOC</td>
</tr>
<tr>
<td></td>
<td>IOC/INF-1382</td>
<td>Report of the Executive Secretary on the Work accomplished since the Twenty-ninth Session of the Assembly (July 2017–June 2018)</td>
</tr>
</tbody>
</table>

21. The Executive Secretary introduced this item using a PowerPoint presentation. He reminded that the end of the year 2017 was very special for the Commission with the
endorsement by the UN General Assembly at its 72nd session of the IOC’s proposal to proclaim the years 2021–2030 the United Nations Decade of Ocean Science for Sustainable Development (the Decade). IOC has now less than two years to work with Members States, UN, all partners and stakeholders to develop an implementation plan for the Decade. This is a once-in-a-life-time opportunity for all to achieve a breakthrough in the capacity of oceanography to serve people and the planet. Steadily, a very promising image of the Decade emerges including a number of proactively designed revolutionary developments in ocean observations, sciences and services, matched by their large-scale uptake in all activities related to increased but sustainable use of the ocean space and resources.

22. Significant progress was made in the development of the methodology to support Member States’ implementation of and reporting on SDG Indicator 14.3.1 and Target 14.a, for which the IOC has been assigned the custodianship role. Based on the work of the IOCoordinated Global Ocean Acidification Observing Network (GOA-ON) and the IOC’s first Global Ocean Science Report, both indicators have been upgraded to Tier 2 status. After more than four years of international collaboration, coordinated by IOC, the South China Sea region has now its own dedicated Tsunami Advisory Centre. The Palu tsunami on 28 September 2018 caused significant loss of lives and property damage. Post-tsunami field investigations by the International Tsunami Survey Team, assisted by IOC at the request of Indonesia, were conducted.

23. Through three flagship events at the Sustainable Blue Economy conference organized by Kenya and Canada, 26–28 November in Nairobi, the IOC also put forward its experience in supporting nations in the implementation of maritime spatial planning. As part of its awareness raising strategy with regard to gender equality, the side event ‘Making waves: Women in Ocean Science’ was organized with the support of Canada at the High-Level Scientific Conference ‘From COP21 towards the UN Decade of Ocean Science for Sustainable Development’. The event focused on the role of women in ocean science, in improving global ocean knowledge and in supporting informed and inclusive decision-making.

24. Among other key achievements, the Executive Secretary highlighted the progress made in the preparation of the 2nd edition of the IOC’s Global Ocean Science Report, including the joint efforts of the IOC and OECD to advance on the valuation of the societal benefits from ocean science and services. He attracted Member States’ attention to the IOCSCOR policy brief on Multiple Ocean Stressors and its potential significant contribution in informing Strategic Objective 2 of the UN Decade of Ocean Science for Sustainable Development, which focuses on the science of multiple ocean stressors as a basis for ecosystem-based management. He also welcomed the IIOE-2 Steering Committee’s resolution at its third annual meeting of 12–13 March 2019 to continue the IIOE-2 to at least 2025, which will allow a strong and tangible contribution, at both regional and global levels, to the UN Decade of Ocean Science for Sustainable Development 2021–2030.

25. Having stressed main IOC achievements, successes, and issues during the reporting period, he then provided a detailed update on each of the six IOC functions, including the work of the regional and technical subsidiary bodies of the Commission, and relevant UNESCO Category 2 Centres.

26. The Executive Secretary also updated the Assembly on status of negotiations with Australia of the formal seat agreement for the Perth Programme Office and the ICG/IOTWMS Secretariat, hosted by the Australian Bureau of Meteorology.

27. With regard to the Commission’s financial situation, he confirmed that the Secretariat has been implementing the workplans in accordance with the budgetary allocations and resource mobilization targets approved by the IOC Executive Council’s Resolution EC-LI.2 as presented in document IOC/EC-LI/2 Annex 2 and IOC/EC-LI/2 Annex 2 Add.
Overall, the main challenge for the Commission’s small Secretariat is 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 Decade preparation phase. A new approach to fund-raising and outreach, based on highlighting the societal benefits of IOC’s work and demonstrating the return on investment in ocean science and observation is being developed. In this context, the Executive Secretary highlighted the key role of outreach and communication, both to the Commission’s core constituencies but also to the society at large, and the increased need to invest in this area in the context of a truly inclusive and transformative approach to the Decade.

IOC-XXX, Dec. 3.2

Report of the Executive Secretary

The Assembly,

1. Having examined documents IOC-XXX/2 Annex 1 & 2, IOC/INF-1366, 1367, 1368, 1369 & 1370,

2. Takes note of the report of the Executive Secretary on the work accomplished since the 29th session of the Assembly (July 2017–May 2019), including the report on 2018 budget implementation and the overview of the 2019 budget;

3. Welcomes the progress made with the preparation of the second edition of the Global Ocean Science Report (GOSR) since the 51st session of the IOC Executive Council (IOC/INF-1366);

4. Invites the IOC Secretariat to present the second edition of the GOSR at the 53rd session of the IOC Executive Council in 2020;

5. Calls upon the IOC Secretariat and OECD to further expand cooperation related to activities on the scientific approaches of valuation of ocean sources and services, and the contribution of ocean science to sustain these;

6. Welcomes the IOC-SCOR policy brief on Multiple Ocean Stressors (IOC/INF-1367) and its potential significant contribution in informing Strategic Objective 2 of the UN Decade of Ocean Science for Sustainable Development, which focuses on the science of multiple ocean stressors as a basis for ecosystem-based management;

7. Encourages the IOC Secretariat to continue technical cooperation with the Scientific Committee on Ocean Research (SCOR) Working Group 149 in the area of changing ocean biological systems in a multiple-driver world;

8. Acknowledges the continuous support by Member States to the IOC Secretariat with respect to the SDG indicator development and data collection, specifically, with respect to 14.1.1, 14.2.1, 14.3.1 and 14.a.1 (IOC/INF-1368);

9. Acknowledges with appreciation the SDG-IAEG decision to reclassify SDG indicator 14.3.1 from Tier 3 to Tier 2, which means that the indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries and encourages the IOC expert groups on ocean acidification to further pursue their work towards the ultimate reclassification of SDG Indicator 14.3.1 to Tier 1;

10. Invites the IOC Secretariat to establish and continue the regular data collection for
indicators 14.3.1 and 14.a.1 and report the progress to the IOC Executive Council at its 53rd session in 2020;

11. Acknowledges the progress made by the Second International Indian Ocean Expedition (IIOE-2) in reference to its alignment with both the IIOE-2 Science Plan and Implementation Strategy (IOC/INF-1369);

12. Notes the request of IIOE-2 Steering Committee, adopted at its third annual meeting of 12–13 March 2019, to the Expedition Sponsors to continue to support the IIOE-2 to at least 2025 in recognition of its many current and prospective projects that will reach well into the UN Decade of Ocean Science for Sustainable Development 2021–2030;

13. Notes that a continued IIOE-2 would also contribute tangibly and strongly at both regional and global levels to the Decade;

14. Invites the IOC Secretariat to continue to support the IIOE-2 through continuing its role on and for the IIOE-2 Steering Committee and to facilitate the alignment of the IIOE-2’s extended tenure with the goals and objectives of the Decade and report back to the IOC Executive Council at its 53rd session in 2019;

15. Accepts the proposal by the IOC Secretariat to extend the Terms of Reference of the Perth Programme Office as endorsed in the Annex to Resolution XXVII-1 to June 2021.

The representatives of ___ Member States 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: ____________.

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

Report

IOC/SC-WESTPAC-XII/3s

Executive Summary Report of the 12th Session of the IOC Sub-Commission for the Western Pacific (WESTPAC), Manila, Philippines, 2–5 April 2019

30. 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 12th WESTPAC Intergovernmental Session (2–5 April 2019, Manila, the Philippines).

31. He summarized that a total of 2012 (41% female) marine scientists, governmental officials and resource managers directly took part in a variety of WESTPAC activities in 2017–2018 through its triennial WESTPAC International Marine Science Conference, biennial intergovernmental session, two regional observing systems; fourteen research projects/programmes/working groups, and a regional network of Training and Research Centres (RTRCs).

32. Highlights over the last intersessional period include: fostering of the largest gathering in the region for marine scientists (WESTPAC International Marine Science Conference), development and launching of a new version of the SEAGOOS Ocean Forecasting System, conduct of a feasibility study on the 2nd Cooperative Study of Kuroshio and its adjacent
regions (CSK-2), transfer of molecular techniques for marine biodiversity conservation and resource management, joint research on marine toxins with the first paper published from the Southeast Asia on ciguatera toxin confirmed case, strengthening of the regional research and monitoring network on the ecological impacts of ocean acidification on coral reefs, development of microplastic research and monitoring network and synergy with the ASEAN’s effort in combating marine debris.

33. He appreciated the IOC Member States in the region for their great contribution to the implementation of IOC Capacity Development Strategy (2015–2021), in particular, for the regular training and research opportunities offered by the Regional Training and Research Center on Ocean Dynamics and Climate (RTRC-ODC) at the First Institute of Oceanography, State Oceanographic Administration of China, and Regional Training and Research Center on Marine Biodiversity and Ecosystem Health (RTRC-MarBEST) at the Indonesian Institutes of Sciences, Indonesia.

34. Dr Vo Si Tuan further presented the key results of the 12th WESTPAC Intergovernmental session (2–5 April 2019, Manila, the Philippines). The 12th Session was attended by close to 100 delegates from 16 countries and representatives from international programmes/organizations within and outside the region. The 12th session serves as a timely starting point for the Sub-Commission to prepare for the UN Decade of Ocean Science. He informed the Assembly that WESTPAC will actively engage in and contribute to the Decade, through advocating and communicating the UN Decade of Ocean Science with various stakeholders; organizing and hosting regional and global workshop(s) for the UN Decade; contributing capacity building opportunities and transferring marine technology, for instance via its regional network of Training and Research Centres (RTRCs); developing and strengthening Centres of Excellences in marine sciences to serve the Decade’s objectives; and developing, coordinating and aligning international programmes/activities to meet the UN Decade’s objectives; and forging triennial WESTPAC International Marine Science Conference as an essential regional platform to ensure a timely response to, and examine the outputs of the UN Decade.

35. He drew the attention of the Assembly to the Regional Consultative and Planning Workshop for the North Pacific and Western Pacific Marginal Seas, which the Sub-Commission will organize in Tokyo on 31 July–2 August 2019 in close cooperation with the North Pacific Marine Science Organization (PICES) and other partners in the region. He thanked the Government of Japan for its generous support to this important event. The regional workshop provides a valuable forum for international, interdisciplinary and multi-stakeholder dialogues to contribute to the preparation phase of the Decade.

36. Dr Vo Si Tuan reported that the Sub-Commission will continuously attach great importance to capacity development in the UN Decade of Ocean Science, and employ inclusive, adaptive and self-driven approaches to capacity development with guiding principles to focus on countries’ needs, to foster North-South and South-South collaboration, and to link trainings to the attainment of research goals addressing critical development challenges in the region. He highlighted that the initiative of the “IOC Regional Network of Training and Research Centers on Marine Science in the Western Pacific and adjacent regions” has been recognized by countries in the region as a best practice for capacity development in the region. He further informed the Assembly that there are other three new RTRCs being established to serve the demands of countries in the region, respectively on Reef Management and Restoration at the Marine Science Institute, University of Philippines Diliman; Marine Toxin and Food Security at the Institute of Oceanography, Vietnam Academy of Science and Technology; and Plastic Marine Debris and Microplastics at the East China Normal University. He invited the audience to attend a side event scheduled for 27 July 2019 on the role & contribution of UNESCO/IOC Regional Network of Training and Research Centres to marine science.
37. He informed the meeting that a total of six recommendations were adopted at the 12th WESTPAC session, covering the engagement of WESTPAC into the UN Decade of Ocean Science, the conduct of a feasibility study on the 2nd Cooperative Study on Kuroshio and its adjacent regions, the IOC Regional Network of Training and Research Centers on Marine Science in the Western Pacific, the 12th WESTPAC International Marine Science Conference 2020, the 13th WESTPAC Intergovernmental session 2021, and its Programme and Budget for the next intersessional period which will serve mainly as guidance on the activities that Member States would like to jointly promote and seek funding from various sources in support of their implementation.

38. Dr Vo Si Tuan expressed his great appreciation to all Member States for their contribution, either in kind or in cash, to the development of a variety of WESTPAC programmes and activities, in particular, the Government of the Philippines for having hosted the 12th WESTPAC intergovernmental session, to the Government of Indonesia for its kind offer to host the 11th WESTPAC International Marine Science Conference 2020, and to the Government of Indonesia and Bangladesh for their strong willingness to host the 13th WESTPAC session in 2021.

39. He invited all delegates and partners to the UN Decade Regional Workshop in Tokyo, Japan and the 11th WESTPAC International Marine Science Conference 2020 in Jakarta, Indonesia. Notwithstanding, the Sub-Commission expressed its concern over the incompatibility of the current size of the WESTPAC Office and the scope of IOC activities in the region. The incompatibility of the current size of the secretariat compared to the unprecedented demands are the main risk for positioning IOC in the region as the lead for ocean research.

IOC-XXX, Dec. 3.3.1

IOC Sub-Commission for the Western Pacific

The Assembly,

1. Having considered the executive summary report of the 12th Session of the IOC Sub-Commission for the Western Pacific, Manila, the Philippines, 2–5 April 2019 (IOC/WESTPAC-XII/3s),

2. Expresses its deep appreciation to:

- The Government of Thailand, through its Department of Marine and Coastal Resources, for the provision of office space and facilities for the WESTPAC Office; and its National Commission for UNESCO for the financial support to the WESTPAC activities on ocean acidification monitoring, microplastic research, scientific diving and dinoflagellate sampling and processing;

- The Government of the Philippines, through its Department of Foreign Affairs, National Commission for UNESCO, the University of the Philippines and its Marine Science Institute for hosting the 12th Intergovernmental session of the Sub-Commission (Manila, the Philippines, 2–5 April 2019);

- The Government of Japan for hosting and co-organizing the Regional Planning Workshop for the North Pacific and Western Pacific marginal seas towards the UN Decade of Ocean Science (Tokyo, Japan, 31 July–2 August 2019);

- The Government of China, through its State Oceanic Administration and First Institute of Oceanography for hosting the Regional Training and Research Centre on Ocean Dynamics and Climate, with annual trainings since 2011 that have attracted a total of
359 young scientists from 43 countries;

- The Government of Indonesia, through its Indonesian Institute of Sciences, for hosting the Regional Training and Research Center on Marine Biodiversity and Ecosystem Health with annual trainings provided since 2016;
- Member States for their either in-cash or in-kind support, such as China via its voluntary contribution to the IOC Special Account, Japan via the UNESCO/Japanese Funds-in-Trust, and the Republic of Korea via the UNESCO/Korean Funds-in-Trust. A significant in-kind support was also provided by China, Thailand, Indonesia, Japan, Republic of Korea, Malaysia, the Philippines, USA and Viet Nam for various WESTPAC programmes and activities;

3. **Taking** into account the pivotal role of the WESTPAC Office in IOC’s achievements in the region over the past decade and in the preparations and implementation of the UN Decade of Ocean Science for Sustainable Development (2021–2030), with concerns over the increasing difficulty in maintaining IOC’s visibility and leadership in the region as a result of the incompatibility of the current size of the WESTPAC Office and the scope of IOC activities in the region,

4. **Requests** the Executive Secretary IOC to reinforce the Sub-Commissions’ Secretariat;

5. **Invites** all Member States, and relevant international organizations/programmes to participate in the 11th WESTPAC International Marine Science Conference 2020 (Jakarta, Indonesia, 25–28 August 2020);

6. **Accepts** the report of WESTPAC-XII and the recommendations therein, including the workplan of the Sub-Commission for May 2019–April 2021;

7. **Agrees** that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget draft resolution XXX-(12).

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40. The representatives of __ Member States 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: ____________.

3.3.2. **IOC Sub-Commission for the Caribbean and Adjacent Regions:**

**15th Session of IOCARIBE, Oranjestad, Aruba, 6–10 May 2019**

**Report**

IOC/SC-IOCARIBE-XV/3s

Executive Summary Report of the 15th Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE), Oranjestad, Aruba, 6–10 May 2019

41. The IOCARIBE Chair, Mr Arnulfo Sanchez (Panama), reported on the progress achieved in IOCARIBE focal programmes in 2017–2019: Harmful Algae Blooms in the Caribbean and Adjacent Regions (HAB-ANCA), IODE and related Ocean Data and Information Network for the IOCARIBE and South America Regions (ODINCARSA); the Caribbean Marine Atlas Phase 2 (CMA2); IOCARIBE-GOOS; ICAM and MSP; “CLME+: Catalyzing 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”; implementation of the IOCARIBE Medium-Term Strategic Science Plan (2017–2026); the advances of the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico (IBCCA); and capacity-development implementation plan, including the work and activities carried out in the Ocean Teacher Global Academy Centre Invemar
(Colombia); and the decisions and recommendations on projects and activities planned to respond to Ocean Literacy and Ocean Acidification in the IOCARIBE Region.

42. Mr Sanchez stressed the importance of prioritising IOCARIBE programme and project implementation responding to Member State needs in the Region, and to proactively engage the scientific, academic communities, universities and research institutions, and civil society as collaborators in and beneficiaries of IOCARIBE programme development.

43. He recognized the importance of and the need to support and be engaged with the UN Decade of Ocean Science for Sustainable Development (2021–2030), and highlighted the importance of the consultative process through global and regional workshops and thanked Mexico and Brazil who are planning to host the UN Decade regional workshops in IOCARIBE Region in 2019.

44. While reporting on the implementation of the CLME+ Project; and of the Caribbean Marine Atlas phase 2 (CMA2, he recognized their contribution in increasing Member States capacities to ecosystem management. As well, he reported on the Sub-Commission decision to remain actively engaged in and promote IOCARIBE Member States participation in the UN World Ocean Assessment.

45. Mr Sanchez expressed the importance of re-organising IOCARIBE-GOOS coordination and networking role to respond to Member States’ regional priorities and re-invigorate it by continuing working with the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (CARIBE-EWS), the “CIFDP-C Coastal Inundation Forecasting Demonstration Project in the Caribbean” and more importantly by partnering with existing ocean observing initiatives and GOOS Regional Alliances in the Atlantic Ocean, especially with the AtlantOS Programme—“An All-Atlantic Ocean Observing System.”

46. He referred to the progress achieved in the development of the Sargassum and Oil Spills Information and Forecasting System for the Wider Caribbean as a tool to minimize the impact of Sargassum rafts on its coastlines and promoting best practices for managing/utilizing any sargassum; as well as to address oil spills that are a critical issue in this region with a high traffic shipping lanes; and recognized the collaboration between IOCARIBE-GOOS, GEO Blue Planet and other partners for the development of the system.

47. Mr Sanchez highlighted and stressed the importance of IOCARIBE-GOOS establishment of a pilot project on improvement of Hurricane Observing Forecasting Capacity jointly with national institutions and universities, including NOAA, its AOML, Meteorological Institute, The Marine Sciences Institute of Cuba, Texas A&M University, and Rutgers, The State University of New Jersey, Dominican Republic National Office for Meteorology (ONAMET) and National Authority of Marine Affairs (ANAMAR).

48. He also noted plans for implementing the CIFDP-C in other countries of the region, after a successful implementation of the pilot in Hispiniola Island (Dominican Republic and Haiti) in 2018.

49. Mr Sanchez referred to HAB-ANCA work and main recommendations including to enhance regional participation in, and the implementation of the IOC Ciguatera Strategy; to foster regional collaboration, and to carry out its Action Plan, 2019–2021, including preparation of a project focused on Ciguatera-causing organisms, toxins, contaminated seafood and the epidemiology that will include guidance to reduce the risks associated with benthic HABs in the IOCARIBE region.

50. He recognized the importance of marine and coastal science and ocean literacy in developing a science-based IOCARIBE programme to support critical capacity development in
the region, and to incorporate ocean literacy curricula in formal education, and to develop a national and regional strategy for ocean literacy.

51. Noting the concern of IOCARIBE Member States in understanding the extent of the ocean acidification (OA) impact on marine ecosystems and the need for soundly based observational data and ecosystem response, Mr Sanchez referred to the coordination with UN Environment, Caribbean Environment Programme (CEP), and other partners to implement ocean acidification monitoring and mitigation projects as part of the Latin American Ocean Acidification Network (LAOCA)—a regional network of the Global Ocean Acidification Observation Network (GOA-ON), in member countries, and to seek collaboration to expand funding opportunities to create an operational ocean acidification observing system.

IOC-XXX, Dec. 3.3.2

IOC Sub-commission for the Caribbean and Adjacent Regions

The Assembly,

1. Having considered the Executive Summary Report of the 15th session of the IOC Sub-Commission for the Caribbean and Adjacent Region (IOCARIBE), Oranjestad Aruba, 5–10 May 2019 (IOC/SC-IOCARIBE-XV/3s),

2. Accepts the report of IOCARIBE-XV and the recommendations therein;

3. Expresses its deep appreciation to:
   - the Government of Colombia for continued hosting of the Secretariat and for its support by seconding experts working as IOCARIBE staff;
   - the Government of Flanders (Kingdom of Belgium) for their continuous support to IOCARIBE programmes;
   - the Government of Barbados, Mexico, and Panama for their support to IOCARIBE Programmes;
   - the Government of Aruba Kingdom of The Netherlands for their support to and hosting IOCARIBE XV;
   - All other IOCARIBE Member States for their financial and in-kind support provided to IOCARIBE programme activities implementation;

4. Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget draft resolution XXX-(12).

52. The representatives of __ Member States 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: ____________.

3.3.3. IOC Sub-Commission for Africa and the Adjacent Island States:

5th Session of IOCAFICA, Nairobi, Kenya, 25–27 March 2019

53. The IOCAFRICA Chair, Prof. Mohamed Said (Egypt), presented an overview of the activities implemented by the Sub Commission during the intersessional period 2017–2019, and the major outcomes of the Fifth session of the IOCAFRICA which was held in Nairobi, Kenya on 25–27 March 2019.

54. He reported that capacity development continues to be a key area of focus for the Sub-Commission, with the Ocean Teacher Global Academy (OTGA) regional training centres in Africa providing training to more than 100 trainees from 20 African Member States on a wide range of topics, including: Research Data Management, Marine Biodiversity and Biogeography, Application of Remote Sensing and GIS for Marine and Coastal Zone Management, and Hydrodynamic and Environmental Modelling. IOCAFRICA also provided support to enable experts from the region to participate in training courses organized by IOC outside the region.

55. IOCAFRICA and the South African Department of Environmental Affairs (DEA) organized two regional cruises on board the South African oceanographic research vessel, the SA Agulhas II in the framework of the Second International Indian Ocean Expedition in October/November 2017 and June/July 2018. The vessel undertook surveys in the waters off Comoros, Madagascar, Mozambique, South Africa and Tanzania.

56. The Sub Commission finalized the implementation of the project on Responses of Biological Productivity and Fisheries to Changes in Atmospheric and Oceanographic Conditions in the Upwelling region associated with the East African Coastal Current”, implemented jointly with WIOMSA. The third phase of the project on “Enhancing oceanography capacities in Canary Current Large Marine Ecosystem (CCLME) Western Africa countries, funded by the Spanish Agency for International Development Cooperation (AECID) was launched in 2018. IOCAFRICA is also leading the development of a regional framework to support the Western Indian Ocean island states of Comoros, Madagascar, Mauritius, and Seychelles to respond to transboundary Challenges and Opportunities Resulting from Climate Change.

57. The development of the African Coastal and Marine Atlas continued with the migration of the contents of African Coastal and Marine Atlas from SmartAtlas to Geonode at a workshop in Swakopmund, Namibia on 12–16 March 2018. The development of the African node for the Ocean Data portal is ongoing, and the information collected on Indian Ocean cruises and datasets from 1965 to current data have already been incorporated in the portal.

58. IOCAFRICA also focused on the development of capacities for Marine Spatial Planning, with four workshops on Marine Spatial Planning organized in Mindelo, Cabo Verde, 5–7 February 2018 (Portuguese), in Dakar, Senegal, 5–7 September 2018 (English), in Mombasa, Kenya, 10–14 September 2018 (English), and in Mauritius, 8–12 October 2018 (French). The workshops, which were organized with various partners were attended by more than 75 participants from 20 African Member States and enabled participants to develop a common understanding of Marine Spatial Planning in order to support the implementation of sustainable resource use planning.

59. IOCAFRICA continues to explore opportunities for strengthening collaboration with the Chinese marine institutions and participated in the third session of the China-Africa Forum on Marine Science and Technology, 28–30 November 2017 in Hangzhou, China.

60. He expressed his appreciation to the Member States and partners that had provided support for implementation of activities in the inter-sessional period.

61. Prof. Said informed the Assembly that the Fifth Session of IOCAFRICA (25–27 March 2019, Nairobi, Kenya) had adopted four Recommendations on (i) Pan African Conference on Ocean Sciences for Sustainable Development, (ii) Establishment of IOCAFRICA Strategic
62. He highlighted some of the activities proposed during the session, including: (i) undertaking a new survey on the capacity availability and requirements for ocean science in the region; (ii) the establishment of a regional hub for CHM/TMT; (iii) strengthening linkages and collaboration between universities and research institutions in the region and between them and institutions from outside the region; (iv) establishment and strengthening of regional training centres; (v) organization of training courses and workshops on priority topics; (vi) reviving and restructuring GOOS-AFRICA so that it can support IOCAFRICA in responding to the ocean observations requirements of Member States; and (vii) the development of a proposal for a follow-up to the Ocean Data and Information Network for Africa (ODINAFRICA) project.

63. Prof. Said recognized the limited regular programme resources available for implementation of these programmes and urged Member States to increase extra-budgetary funding to enable the Sub-Commission to implement its programme and strengthen capacities for marine science and technology in the region.

64. He emphasized in particular the importance of the planned Pan-African Conference on Ocean Sciences for Sustainable Development (October 2020, Egypt) as a platform to re-energize ocean sciences in the region by bringing new players such as the regional economic communities and the private sector.

IOC Sub-Commission for Africa and the Adjacent Island States

The Assembly,

1. Having examined the Executive Summary report of the 5th session of the IOC’s Sub Commission for Africa and the Adjacent Island States, Nairobi, Kenya, 25–27 March 2019 (IOCAFRICA-V/3s),

2. Takes note of the progress made in the implementation of the IOCAFRICA work programme 2017–2019;

3. 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, China, Kenya, Mozambique, Senegal, South Africa and Spain;

4. Accepts the report of IOCAFRICA-V and the recommendations therein, including the work programme for the Sub Commission for 2019–2021;

5. Request the IOC Executive Secretary to provide support for the organization of the Pan-African Conference on Ocean Science for Sustainable Development (Sharm El Sheikh, Egypt, 19–22 October 2020);

6. Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme Budget draft resolution XXX-(12).
The representatives of ___ Member States 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: ___________.

3.3.4. IOC Regional Committee for the Central Indian Ocean:
7th Session of IOCINDIO, Hyderabad, India, 25–26 April 2019

The IOCINDIO Chair, Dr M. A. Atmanand presented an overview of the activities by the regional committee in the intersessional period (2017–2019), and the major outcomes of the 7th session of IOCINDIO hosted by the Government of India at the newly established UNESCO Category-2 International Training Centre on Operational Oceanography, (ITCOcean), a centre under the auspices of the Indian Centre for Ocean Information Services (INCOIS) in Hyderabad, India, 31 May–1 June 2019. His report was rooted in the IOC functions as the fundamental pillars of the IOCINDIO workplan since IOCINDIO-VI. Based on the successful implementation of the priority programmes of IOCINDIO with an active contribution to international initiatives, he demonstrated that IOCINDIO is definitely back on rail and that its revitalization has been achieved at the right time when IIOE-2 and the UN Decade of Ocean Science for Sustainable Development are being taken up actively.

At its 7th session, IOCINDIO reviewed the activities conducted since IOCINDIO-VI (Kuwait City, 24–25 May 2017). A set of project proposals was refined, completed and endorsed as the workplan for 2020–2021 giving a priority status to coastal vulnerability and capacity development in the IOCINDIO region.

Regarding the United Nations Decade of Ocean Science for Sustainable Development, IOCINDIO expressed the full support and commitment of IOCINDIO Member States through their massive mobilisation with partners. The offer of the Government of India to host a regional workshop related to the Indian Ocean in the context of the UN Decade of Ocean Science for Sustainable Development in India was endorsed. IOCINDIO further noted with appreciation the membership of its Chairperson, Dr M. A. Atmanand, in the Executive Planning Group of the Decade and commended his efforts in support to the preparatory phase of the Decade.

Dr M. A. Atmanand also informed the Assembly that the IOCINDIO Scientific, Technical and Institutional Innovations Workshop for National and Regional Framework on Coastal Vulnerability Assessment and Monitoring for Sea-Level Rise and Storm Surges in the Indian Ocean Region was organized in connection with the IOCINDIO session. The implementation of the above regional project proposal on Coastal Vulnerability was mentioned as an unprecedented joint initiative in the region and a milestone of the IOCINDIO work programme during the reporting period. The workshop attracted a great number of accomplished senior scientists as well as young professionals and students both from the IOCINDIO region, IOCAFRICA and WESTPAC (9 countries and several institutions such as the World Bank, NOAA, IPE Global Limited, Odisha State Programme (India), Kenya Marine Fisheries Research Institute were represented). As the main workshop result, participants developed a regional framework to establish a reference baseline to facilitate harmonization and standardization of methods in the region. IOCINDIO-VII endorsed the organization of a follow-up leadership workshop with the view to bring together leading experts from the region and outside to review progress with requisite technical guidelines and advices.
The IOCINDIO Chair commended the support of a number of Member States, notably; India, Indonesia, Kuwait and the ongoing arrangements with the Government of United Kingdom and the Northern Ireland for a financial support to IOCINDIO.

Dr M. A. Atmanand commended the reinforced cooperation with IIOE-2. He recalled that it was at the joint IIOE-2/IOCINDIO workshops in the context of both International Indian Ocean Science Conferences (Jakarta, 20 March 2018 and Port Elisabeth, South Africa, 13 March 2019) that IOCINDIO stakeholders proceeded on one hand with the selection of priority actions for implementation during the ongoing biennium (2017–2019) and on the other hand refined the arrangements for IOCINDIO-VII and the related workshop on coastal vulnerability with a wider perspective including contributions from major overseas partners such as NOAA and IIOE-2 partners.

He recalled that while the entire IOCINDIO workplan remains important for Member States, the prioritization became imperative taking into consideration the limited financial resources and the fact that IOCINDIO, as an IOC regional committee, does not have a permanent decentralised secretariat as the IOC Sub-Commissions like IOCAFRICA, IOCARIBE and WESTPAC.

Regarding Capacity Development, he stressed the key role played by the two UNESCO Category 2 Centres located in the region, namely, the Regional Education and Research Centre on Oceanography for West Asia at the Iranian National Institute for Oceanography and Atmospheric Science in Teheran, Islamic Republic of Iran and the International Training Centre on Operational Oceanography, (ITCOcean) at the Indian Centre for Ocean Information Services (INCOIS) in Hyderabad, India (see IOC/INF-1370).

He further indicated that under the IOCINDIO Capacity Development project proposal entitled IOCINDIO Networking Research Infrastructures, Facilities and Human Resources, dedicated institutions in the region initiated the establishment of a database of existing ocean science research infrastructures, facilities and human resources with a development of relevant website in progress.

The IOCINDIO Chair informed the Assembly that the Committee contributed also to the second of the two regional workshops under the auspices of the United Nations Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects for the Indian Ocean (including the Arabian Sea and the Bay of Bengal), the Red Sea and Gulf of Aden and the ROPME/RECOFI Area), Doha, 26 November–1 December 2018.

IOC Regional Committee for the Central Indian Ocean

The Assembly,

1. Having examined the Executive Summary report of the 7th session of the IOC Regional Committee for the Central Indian Ocean, Hyderabad, India, 31 May–1 June 2019, including its Scientific, Technical and Institutional Innovations Workshop for National and Regional Framework on Coastal Vulnerability Assessment and Monitoring for Sea-Level Rise and Storm Surges in the Indian Ocean Region;

2. Takes note of the summary report of IOCINDIO-VII including the recommendations therein, the work programme with the project proposals and the working group established during the IOCINDIO-VII Workshop with the view to serve as the intersessional working group to support the IOCINDIO Officers and the IOC
Secretariat towards the implementation of the work programme;

3. **Supports** the efforts of the regional committee to strengthen its national coordinating bodies for liaison with the IOC and focal points;

4. **Expresses its appreciation** to:
   - the Government of India, which mobilised national public institutions for hosting the preceding workshop and the IOCINDIO-VII session with in-kind contributions covering the full board accommodation to all participants and local logistics, and for its offer to host the regional workshop related to the Indian Ocean in the context of the UN Decade of Ocean Science for Sustainable Development;
   - the two UNESCO Category-2 centres in the region, namely the Regional Education and Research Centre on Oceanography for West Asia at the Iranian National Institute for Oceanography and Atmospheric Science in Teheran, and the International Training Centre on Operational Oceanography, (ITCOOcean) at the Indian Centre for Ocean Information Services (INCOIS) in Hyderabad, India, for supporting capacity building activities and capacity in the region;

5. **Agrees** that the regular budget for these activities will be identified as part of the overall IOC Programme Budget draft resolution XXX-(12).

76. The representatives of ___ Member States 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: ____________.

3.4 REPORT ON THE IOC ACTIVITIES (2018–2019) TO THE FORTIETH GENERAL CONFERENCE OF UNESCO [Statutes Art. 3.2; Rule 6.1 of Procedure 49.2]

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.
78. The representatives of Member States 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: ____________.

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

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

4.1. PROGRESS REPORT ON THE PREPARATION OF THE UNITED NATIONS DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT

[IOC Res. EC-LI.1]

**Working documents:**

- IOC-XXX/2 Annex 3
- IOC-XXX/2 Annex 3 Add.

**Progress of the Implementation Plan of the Decade Roadmap**


**Information:**

- The UN Decade Series, 1
- The UN Decade Series, 2
- The UN Decade Series, 3
- IOC/INF-1371


**Outcome of the First Global Planning Meeting (13–15 May 2019, Copenhagen, Denmark)**

**Accelerating Ocean Science for a Better World: The UN Decade of Ocean Science for Sustainable Development 2021–2030**

**Proposed Modification to the Decade Roadmap**

**References:**

- IOC/CL-2760


79. The IOC Executive Secretary introduced this item recalling that in December 2017 the United Nations General Assembly had proclaimed the United Nations Decade of Ocean Science for Sustainable Development from 2021 to 2030, building on the efforts of IOC Member States and the IOC Secretariat. The period from 2018 to 2020 is focusing on the preparation of the Decade Implementation Plan. This work is led by IOC, in consultation with Member States and all relevant stakeholders. He recalled that the IOC Executive Council took note of the ‘Roadmap’ document (IOC/EC-LI/2 Annex 3 & Corr.) as an initial guide to the steps and processes to develop a Decade Implementation Plan. The IOC Secretariat acted upon the decision of the Executive Council and established an Executive Planning Group (EPG) consisting of 19 high-level experts to advise the IOC Secretariat. The Group was formed in November 2018 and held its first meeting on 17–19 December 2018 to brainstorm on scientific, governance, communications, and engagement elements of the Decade (The UN Decade Series, 1).

80. The EPG will support the development of the Implementation plan. A second meeting is foreseen at the end of 2019 or early 2020, and a number of tasks have been assigned and/or completed including: the provision of inputs to the Roadmap, the development of guidelines for the regional consultation workshops, guidance for the Global Planning Meeting, the development of a high-level science plan, the definition of criteria for endorsement of Decade activities, the development of a business case for investing in ocean science, and the development of a model for the governance of the Decade implementation phase.
81. The Executive Secretary presented the main outcomes of the 1st Global Planning Meeting for the preparation of the UN Decade that took place in Copenhagen on 13–15 May 2019 (The UN Decade Series, 2). This foundational meeting brought together institutional representatives working at the science-policy interface, as well as ocean businesses and philanthropic organizations committed to ocean sustainability, to start crafting science-based solutions and partnerships that the Decade will deliver.

82. Some progress with the organisation of regional consultation workshops as foreseen in the Roadmap document have been achieved thanks to the hosting offers received from Member States. The first two regional workshops will focus on the Pacific Ocean and will be hosted respectively by the Government of Japan (31 July–2 August 2019) and the Pacific Community (SPC) in July 2019. Other workshops are foreseen in 2019 and early 2020.

83. The Executive Secretary recalled that pursuant to paragraph 358 of UN General Assembly resolution 73/124 of 11 December 2018, the 20th meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, in 2019 focused on “Ocean Science and the United Nations Decade of Ocean Science for Sustainable Development”. This meeting provided an additional opportunity to consult and engage with UN Member States in the preparation of the UN Decade. In terms of engaging other UN entities in the Decade, the Executive Secretary highlighted a number of bilateral consultations initiated with ISA, IMO, FAO, WMO, UNFCCC, and UN Environment, as well as the decision of UN-Oceans, at its 19th meeting (7–8 February 2019, Geneva) to establish a contact group to facilitate inputs to the UN Decade process.

84. Thanks to extra-budgetary support, communication and outreach efforts have intensified to present the objectives of the Decade in a number of fora (international and regional conferences, private sector events, etc.) and engage various stakeholders (UN entities, ocean related networks, etc.) and through different means (presentations, videos, newsletters, website, press releases, and social media).

85. The Executive Secretary recalled that the draft implementation plan will be finalised following the second global planning meeting in 2020, and will be circulated widely for comments, prior to its finalisation and transmission to the UNGA. The 2nd UN Ocean Conference, to be hosted by Portugal in early June 2020, with its focus on the progress from science to actions, will also provide a strategic opportunity to present the draft plan and forge partnerships around programmes and initiatives.

86. The Executive Secretary noted that despite the great opportunities that the Decade brings to ocean science, it also represents a challenge to the IOC in terms of fulfilling its coordinating role within the UN system, whilst sustaining its core programmes. The Commission relies primarily on extra-budgetary funds for its work on the Decade, and in this respect, the continuation of this coordination role beyond 2020 should be carefully assessed in light of available resources both at programmatic and staffing levels. The contribution of Member States and partners will be essential to successfully start the implementation of the Decade. As highlighted in the Roadmap document, Member States are encouraged to establish mechanisms to stimulate engagement of national stakeholders in the UN Decade. This also includes establishment of Decade support offices that could underpin the implementation of thematic and/or regional aspects of the Decade, and in liaison with IOC acting as global coordinator. With regards to the latter, the Assembly was invited to consider the draft guidance for the establishment of Decade support offices and national coordination structures (Implementation phase) as proposed in IOC-XXX/2 Annex 3 Add.: Post-2020 Coordination and Implementation Mechanisms.

87. H.E. Peter Thomson, UN Special Envoy on the Ocean addressed the Assembly and exposed the plans for the organisation of the 2nd UN Ocean Conference, to be hosted by Portugal and Kenya, in Lisbon, on 2–6 June 2020, with its focus on the progress from science
to actions. It will also provide a strategic opportunity to present the Decade’s plan and forge partnerships and commitments around programmes and initiatives.

88. Heads of UN agencies and their representatives were also invited to provide a statement under this item.

Draft Resolution XXX/DR.(4.1)

Submitted by Norway and Republic of Korea

PROGRESS REPORT ON THE PREPARATION OF THE UNITED NATIONS DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT

The Intergovernmental Oceanographic Commission,

1. Recalling Resolution XXIX-1 proposing the establishment of an International (UN) Decade of Ocean Science for Sustainable Development and requesting the IOC Executive Secretary to convey this resolution to the UN General Assembly for consideration at its 72nd session,

2. Also recalling the proclamation by the United Nations General Assembly (UNGA) at its 72nd session of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030), through Resolution A/RES/72/73 (therein the Decade),

3. Further recalling the invitation made by the UNGA to the IOC to:
   (i) prepare an implementation plan for the Decade 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,
   (ii) provide information on the implementation of the Decade to the Secretary-General for his report on oceans and the law of the sea,

4. Considering Resolution EC-LI.1 that inter alia took note of the revised and current version of the Roadmap document (IOC/EC-LI/2 Annex 3) and decided to establish an Executive Planning Group under the coordination of the IOC Executive Secretary,

5. Having examined documents IOC-XXX/2 Annex 3 – Progress of the implementation plan of the Decade Roadmap, and Addendum – Post-2020 Coordination and Implementation Mechanisms,

6. Having further considered the Report of the First Executive Planning Group (EPG) Meeting (17–19 December 2018) and the Outcome of the First Global Planning Meeting (13–15 May 2019, Copenhagen, Denmark), respectively The UN Decade Series, 1 & 2; and proposed modification to the Roadmap (IOC/INF-1371),

7. Takes note of the progress achieved during the intersessional period, and in particular of: the outcomes of the 1st EPG meeting and Global Planning Meeting; the report on the implementation of the current version of the Roadmap and its proposed modifications;

8. Thanks the Executive Planning Group for its work in support of the preparation of the Implementation Plan and requests that it continues its work until the presentation of the Implementation Plan to the United Nations General Assembly for consideration during its 75th session in September 2020;
9. **Requests** the Executive Secretary to:

(i) report on the implementation of the current version of Roadmap at the 53rd session of the IOC Executive Council in 2020;

(ii) further develop the governance arrangements of the implementation phase (2021–2030) based on inputs received on documents IOC-XXX/2 Annex 3 and Addendum;

(iii) make the draft implementation plan available and invite its reviews from Member States;

(iv) report to the IOC Executive Council at its 53rd session, on comments received and plans for finalising the implementation plan, prior to its transmission to the UN General Assembly;

10. **Further invites** the IOC subsidiary bodies to engage in the work of the Decade, in particular through the regional consultation workshops, and identify potential contributions during the next intersessional period;

11. **Invites** United Nations agencies and programmes, international scientific and academic organizations, governments, non-governmental organizations and other stakeholders to support the Decade, contribute to its preparation, and review the draft implementation plan once available;

12. **Urges** Member States and partners to:

   (i) provide voluntary financial contributions to IOC for the preparation of the Decade as well as in-kind support such as staff secondments to the Secretariat;

   (ii) host and/or fund regional and global consultation workshops, thematic meetings and communication activities;

13. **Thanks** the Governments of the Republic of Korea, Japan, the Kingdom of Belgium (Government of Flanders), Norway and the United Kingdom for their financial contribution to the preparatory phase of the Decade.

**Financial implication:**

Seed funding is identified under the most favourable budget scenario ($534.6M) of 40 C/5 Programme and Budget. Resources are needed in order to facilitate the coordination and implementation of the preparatory activities, as well as the launch of the Decade in 2021. Correspondingly, the Assembly may invite Member States and partners to contribute resources to the IOC Special Account and/or through in-kind contributions (such as secondment).

89. The representatives of ___ Member States 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: ______________.

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**

**Information:**

IOC/INF-1372 Overview of the IOC Programmatic Integration with, and Contributions to, the Decade
90. The Executive Secretary presented the efforts made by the IOC Secretariat in the intersessional period to inform IOC expert networks and groups about the developments related to the Decade. These efforts aimed to collect input to the science plan of the Decade, with a view to stimulate discussions, including at the first Planning Meeting in Copenhagen in May 2019. Contributions from IOC expert networks also assisted in the alignment and cross-fertilization of IOC programmes and activities with the societal and strategic objectives of the Decade. This synergy-oriented exercise also allows to mobilize the expertise and optimize efforts of the IOC Secretariat in coordinating the Decade preparations.

IOC-XXX, Dec. 4.2

Enhanced coherence, impact and future orientations of the IOC in support of the UN Decade of Ocean Science for Sustainable Development and the 2030 Agenda

The Assembly,

1. Taking into account that the IOC is expected to contribute to the UN Decade of Ocean Science for Sustainable Development beyond its overall coordinating role, including through the mobilization and direct efforts of relevant IOC programmes and expert networks,

2. Commending the inputs to the scoping of the high-level science plan of the Decade received from relevant IOC expert networks and scientific organizations collaborating with IOC,

3. Recalling a need for continuous alignment and cross-fertilization of IOC programmes and activities with the societal and strategic objectives of the Decade,

4. Calls upon the Executive Secretary to continue mainstreaming the objectives of the Decade into IOC programmes and activities, with a special focus on those programmes and activities that deal with critical gaps in scientific knowledge, knowledge of multiple ocean stressors of relevance to ecosystem-based management, prediction of the ocean state, adaptation to climate change, and warning of ocean hazards threatening lives of people;

5. Encourages the Secretariat to enter into collaborative programmatic arrangements with partner organizations in the design and implementation of joint activities in support of the science plan of the Decade;

6. Urges Member States and partner organizations to provide voluntary financial contributions to IOC for the implementation of substantive activities in support of the Decade and its science plan, including through in-kind support such as staff secondments to the IOC Secretariat;

7. Requests the Executive Secretary to report to the IOC Executive Council at its 53rd session in 2020 on the status and modalities of IOC’s programmatic contribution to the Decade.

91. The representatives of __ Member States 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: ____________.
5. UNITED NATIONS PARTNERSHIPS

5.1. COOPERATION WITH THE WORLD METEOROGICAL ORGANIZATION
[EC-LI/Dec.5.1]

Information: IOC/INF-1373 Report of the co-chairs of the Joint WMO-IOC Consultation Group on the Future of JCOMM
IOC-XXX/Inf.3 Letter of Intent and Draft five-year Memorandum of Understanding between WMO and IOC

Reference: WMO Draft Resolution 4(4)/3 (Cg-18) Joint WMO-IOC Collaborative Board

92. Petteri Taalas, Secretary-General of WMO introduced the decisions by the 18th World Meteorological Congress (3–14 June 2019), including adoption of a WMO Strategic Plan and reform of WMO constituent bodies in order to achieve more effectiveness and efficiency of the use of the resources of WMO Members, with the minimal level of bureaucracy and without disrupting partnerships. He emphasized that the WMO Strategic Plan took an Earth Systems approach to observations and forecasting and that ocean observations, data, forecasting systems and research, and therefore the whole work of the IOC was an important contribution to achieving WMO objectives.

93. Ariel Troisi, Vice-chairperson of IOC (Group III), recalled IOC/EC-LI Decision 5.1 which created a Joint WMO-IOC Consultation Group on the reform of JCOMM, which he co-chaired along with Louis Uccellini (WMO Permanent Representative of the USA). He recalled that weather, water, ocean, and climate linkages require us to foster interdisciplinary and collaborative work. In particular, more comprehensive models of the whole Earth system are needed, including coupling between the ocean and atmosphere, to advance scientific understanding, prediction, and services. IOC and WMO must position themselves to address these future challenges and opportunities that will require greater collaboration between them.

94. The Joint WMO-IOC Consultation Group proposes the creation of a Joint WMO-IOC Collaborative Board (Draft Resolution below), which will maximize opportunities to co-design, co-develop and implement joint scientific and technical work, across oceanography and meteorology, which ultimately will improve the provision of information and services for societal benefit. The Board will have the mandate to provide strategic advice to the governing bodies of IOC and WMO for final decision, focussing on joint collaborative strategies, advise on joint work to achieve relevant objectives, and prepare coordinated draft resolutions and decisions for ultimate decision by the IOC and WMO governing bodies.

95. The Consultation Group also made recommendations about the continuation of the cooperative work developed under JCOMM in the domains of observations, data management, forecasting systems and services. Members of the Joint WMO-IOC Collaborative Board are proposed to be designated by the IOC Chairperson and WMO President, in order to ensure an overall balance and representation across IOC and WMO activities and geographic regions. The Board will be co-led by an IOC Vice-Chairperson and a WMO Vice-President. All recommendations of the Board will be subject to final decision by IOC and WMO governing bodies.

96. Mr Troisi noted that as the WMO had already adopted a parallel version of this resolution, and that since it concerns a joint body, any changes would also need to be adopted by the WMO President on behalf the WMO Executive Council.

97. Following the recommendation expressed at a joint meeting of the IOC Officers and WMO Bureau in 2018, the Secretariats of the two organizations have been working on a Draft
WMO-IOC Memorandum of Understanding for cooperation. In this context, during the UN Oceans meeting, held at WMO Headquarters in February 2019, the WMO Secretary General and the IOC Executive Secretary signed the Letter of Intent included in IOC-XXX/Inf.3.

The Draft MOU presented to the Assembly in the same document, in line with the IOC status as a body with functional autonomy within UNESCO, has undergone an extensive review by the relevant services of both organizations. In accordance with Article XI.1 of UNESCO’s Constitution, which requires that formal arrangements with specialized intergovernmental organizations and agencies be subject to the approval of UNESCO’s Executive Board, the Draft MOU will be presented to the fall 2019 session of the Board, prior to signature.

**IOC-XXX, Decision 5.1**

**Cooperation with WMO**

The Assembly,

1. Taking note of the Draft WMO-IOC Memorandum of Understanding (IOC-XXX/Inf.3),

2. Requests the Executive Secretary to complete preparations for its joint signature with WMO.

**Draft Resolution XXX/DR.(5.1)**

Submitted by Argentina and Germany

**JOINT WMO-IOC COLLABORATIVE BOARD**

The Intergovernmental Oceanographic Commission,

1. Recalling:
   
   (i) WMO Resolution 14 (Cg-XIII) – Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM),

   (ii) IOC Resolution XX-12 – Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM),

2. Considering WMO Resolution 4(4)/1 (Cg-18), which entails the disbandment of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology in the context of a reform of WMO governing structures,

3. Further considering the parallel WMO Resolution 4(4)/3 (Cg-18),

4. Considering also the expanded collaboration between WMO and IOC in marine meteorology, oceanography and climatology, including in services, observation and information management, research and capacity building,

5. Considering further the evolving needs of a coordinating mechanism between WMO and IOC to support such collaborative activities,

6. Having examined the recommendations of the Joint WMO-IOC Consultation Group on the Reform of JCOMM established by Decision 58 (EC-70) and IOC Decision EC-
7. **Expresses appreciation** to the Co-chairs and the members of the Joint WMO-IOC Consultation Group on the Reform of JCOMM for their work;

8. Decides to:

   (i) incorporate appropriate JCOMM functions and activities on observation and operational ocean forecasting systems into the IOC-WMO-UN Environment-ISCC Global Ocean Observing System (GOOS), with functional connections to the WMO Commission for Observation, Infrastructure and Information Systems;

   (ii) incorporate appropriate JCOMM functions and activities on data and information management into the International Oceanographic Data and Information Exchange (IODE), with a close connection to the work of the WMO Commission for Observation, Infrastructure and Information Systems;

   (iii) incorporate appropriate JCOMM functions and activities on services into the WMO Commission for Services and Applications, with a close connection to relevant IOC activities in early warning and services;

   (iv) establish the Joint WMO-IOC Collaborative Board, as a high-level coordination mechanism with broader engagement of the key relevant bodies of the WMO and IOC, with the terms of reference as given in the Annex to this resolution;

9. **Decides also** that for the first intersessional period following the adoption of this resolution, the Joint WMO-IOC Collaborative Board will be co-chaired by the current co-chairs of the Joint WMO-IOC Consultation Group on the Reform of JCOMM, with the technical advice of the current JCOMM co-presidents, noting that these co-chairs would have flexibility to adjust the length of initial appointment terms defined in the Terms of Reference, in order to stagger future rotation of members;

10. **Decides further** to review, in coordination with WMO governing bodies, the performance of the Joint WMO-IOC Collaborative Board, with an initial review in four years;

11. **Requests** the Joint WMO-IOC Collaborative Board to:

   (i) facilitate the continued work of all JCOMM functions and activities by recommending connections to appropriate working structures on both sides;

   (ii) make recommendations on evolving the governance for the Global Ocean Observing System, in consultation with all co-sponsors, to further develop the partnership and functional connections between GOOS and WMO WIGOS;

   (iii) prepare, in consultation with WMO and IOC technical, scientific and regional bodies, a comprehensive and coordinated WMO-IOC Collaborative Strategy, based on existing sectoral strategies, and submit it in two years to the governing bodies of WMO and IOC for adoption;

12. **Encourage** WMO Members and IOC Member States to coordinate national response to the advice of the Joint WMO-IOC Collaborative Board brought to WMO and IOC governing bodies;

13. **Invites** the Executive Secretary to:

   (i) define, in consultation with the WMO Secretary-General, the working arrangements for the sponsorship of current JCOMM bodies and for the Joint WMO-IOC Collaborative Board and to report on implementation at the 53rd
session of the IOC Executive Council in 2020;

(ii) evaluate, in consultation with the WMO Secretary-General, the financial and secretariat support requirements for the Joint WMO-IOC Collaborative Board, and make adequate provisions in the budget;

14. **Decides** to disband the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology upon completion of a transition period ending in April 2020, as defined in WMO Resolution 36 (EC-70).

Annex to Draft Resolution XXX/DR.(5.1)

**Terms of Reference of the Joint WMO-IOC Collaborative Board**

The terms of reference of the Joint WMO-IOC Collaborative Board shall be:

**Purpose statement**

The Joint WMO-IOC Collaborative Board will maximize opportunities to co-design, co-develop and implement joint scientific and technical work, across oceanography and meteorology, that ultimately will improve the provision of information and services for societal benefit.

It will suggest initiatives to improve end-to-end links in the value chain from observations, through data management, to forecasting systems and Earth system prediction, to services and end user engagement; and enhance connections with research programmes to promote innovation.

By collaborating across both the oceanographic and meteorological communities, the Collaborative Board will provide strategic advice on programme co-design, implementation, and governance in light of relevant long-term goals and objectives. The Collaborative Board will influence how the WMO and IOC jointly enable the delivery of relevant meteorological and oceanographic information and services on the open ocean, in coastal zones and in high latitudes. In addition, while respecting governance, it will provide guidance and advice around technical and scientific issues to optimize the complementarity of activities, including through generating common projects.

The terms of reference of the Joint WMO-IOC Collaborative Board shall be:

**Mandate**

(a) To coordinate, through a quadrennial WMO-IOC collaborative strategy, the collaborative development, integration and implementation of the activities related to oceanographic and meteorological observation, data and information management, services, modelling and forecasting systems as well as research and capacity development carried out by WMO and IOC,

(b) To provide the WMO and IOC governing bodies with strategic advice on joint work between WMO and IOC to achieve relevant objectives, including proposing new actions, as required, e.g. by preparing coordinated draft resolutions and/or decisions for both the WMO and IOC governing bodies,

(c) To review work plans and provide technical and scientific recommendations for WMO and IOC subsidiary bodies and programmes, including proposing cross-cutting projects, and

(d) To engage in liaison or consultation required with relevant intergovernmental and international stakeholders.
Membership

The membership of the Collaborative Board shall be constituted by:

(a) Ten representatives of WMO and IOC scientific and technical bodies and programmes, including co-sponsored entities:
   
   (i) Five designated by the WMO President, representing the leadership of activities in observing system, data processing and management, forecasting systems, services and applications, and research; from a meteorological perspective,

   (ii) Five designated by the IOC Chairperson, representing the leadership of activities in observing system, data and information management, forecasting systems, early warning and services, and research; from an oceanographic perspective;

(b) At large members of the WMO Executive Council and representatives of IOC Member States, taking into account overall geographical balance:
   
   (i) Three members of the WMO Executive Council designated by the WMO President,

   (ii) Three representatives of IOC Member States designated by the IOC Chairperson;

(c) Two co-chairs:
   
   (i) a WMO Vice-President, designated by the WMO President, and

   (ii) an IOC Vice-Chairperson, designated by the IOC Chairperson.

Working procedures

The co-chairs shall hold their office for two years, with the possibility to be re-appointed for a second term.

Other members shall hold their office for four years, or based on the duration of their term as leader in a WMO, IOC, or joint activity.

The co-chairs shall represent the Collaborative Board in the sessions of the WMO and IOC governing bodies.

In principle, the Collaborative Board shall meet in person every year, in order to prepare recommendations for WMO and IOC governing bodies. Intersessional work should be carried out by correspondence or virtual means.

Members of the Collaborative Board will work collaboratively across and within their respective constituent bodies and activities on WMO and IOC observations, data, forecasting systems, services, and research activities, to achieve the objectives stated in the Collaborative Board’s mandate.

The Collaborative Board may establish time-bound substructures for the discharge of specific tasks during an intersessional period. Such temporary substructures shall be discontinued at the end of every intersessional period, or may be re-established.

Chairs of other relevant WMO and IOC regional structures, working groups, panels and expert teams, as well as individual experts, may be invited by either co-chair in consultation with the other to attend meetings of the Collaborative Board as required by the agenda.

Representatives from other United Nations or international organizations may be invited as observers to the Collaborative Board as deemed appropriate by either co-chair in consultation with the other.
The representatives of __ Member States 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: ___________.

5.2. IOC CONTRIBUTION TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC) [Rule of Procedure 8.1(g)]

Information: IOC/INF-1374 Update of the IOC Contribution to the UNFCCC

The Executive Secretary presented developments related to the on-going collaboration between IOC and the UNFCCC. IOC is an active and leading contributor to the process of informing the sessions of the Conference of UNFCCC parties (COP) about the role of the ocean in climate change, including opportunities for scientific and technical cooperation in support of the Convention. Flagship events include the Ocean Day of the Conference. These activities are conducted in coordination with the Global Ocean Forum, many other partners, and in the context of the Roadmap to Oceans and Climate Action. IOC also informs the UNFCCC process through its contribution to work of the Ocean and Climate Platform. In addition, IOC contributes to the Blue Carbon Partnership. Further, IOC takes part in the work of the Convention’s Subsidiary Body for Scientific and Technological Advice (SBSTA), including its Research Dialogues. For example, the 51st session of the Research Dialogue (Bonn, June 2019) dealt with the need for further research and observations in order to reduce the uncertainty in the ocean CO$_2$ sink estimate and its variability on time-scales. The COP process has unfolded in such a way that some Parties to the Convention and its Paris Agreement are now calling for a dedicated ocean chapter of the climate change international regime. These developments call for a reinforced IOC programme in ocean climate and the effects of climate change on the world ocean, as well as synergistic ties between the Commission and the UNFCCC. Finally, reference was made to the IOC contribution to the pool of authors of the IPCC Special Report on Oceans and the Cryosphere in a Changing Climate and its forthcoming launch in Monaco in September 2019.

IOC-XXX, Dec.5.2

IOC Contribution to the United Nations Framework Convention on Climate Change (UNFCCC)

The Assembly,

1. Recalling the central role of the world ocean in the regulation of climate and in the mitigation of, and adaptation to, climate change,

2. Recalling also that climate change is called by the United Nations Secretary General as one of the major threats to humanity,

3. Having considered the report of the IOC Secretariat on collaboration between the Commission and the UNFCCC process (IOC/INF-1374),

4. Reiterates that the Commission is in virtue of its mandate and expertise well placed to provide technical assistance in ocean-related scientific, observational and technical aspects of climate change and advocate for their importance in terms of addressing the climate change threat;

5. Further recalling also the synergies between IOC expert groups, such as the IOC Working Group on Integrated Ocean Carbon Research, and the scientific and
technical debates at the UNFCCC, including, the Research Dialogues under the auspices of the Convention’s Subsidiary Body on Scientific and Technological Advice,

6. Invites the Executive Secretary to continue and reinforce cooperation with the Intergovernmental Panel on Climate Change and to explore further opportunities for joint technical work in support of the IPCC Assessment Reports and relevant IPCC special reports;

7. Decides that IOC shall be represented at the 25th session of the Conference of the Parties to the UNFCCC, also referred to as the Santiago Climate Change Conference, by taking an active part in ocean-related dialogues in support of the Conference as well as in related preparatory meetings leading to COP 25;

8. Expresses its belief that the UN Decade of Ocean Science for Sustainable Development will bring together the scientific communities working on climate change and ocean science and encourages the Executive Planning Group for the Decade to provide guidance on how the scoping process of the Decade can take into due account needs related to the science of climate change, specifically by reflecting these considerations in the science plan of the Decade.

101. The representatives of __ Member States 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: ________________.

6. OCEAN RESEARCH
[Res. XXVII-2(B)]

6.1. HARMFUL ALGAL BLOOMS: 14TH SESSION OF IPHAB,
UNESCO, PARIS, 24–26 April 2019
[Rule of Procedure 48.3]


Information: IOC-XXX/Inf.4 Draft FAO-IAEA-WHO-IOC Memorandum of Understanding on Ciguatera Poisoning

102. Mr Henrik Enevoldsen, Head of the IOC Science and Communication Centre on Harmful Algae, presented the main outputs of the 14th session of the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB). He also informed the Assembly that upon negotiations, FAO, IAEA, IOC and WHO agreed to sign a Memorandum of Understanding on Ciguatera Poisoning. The document, presented to the Assembly as IOC-XXX/Inf.4, in line with the IOC status as a body with functional autonomy within UNESCO, has undergone an extensive review by the relevant services of these organizations. In accordance with Article XI.1 of UNESCO’s Constitution, which requires that formal arrangements with specialized intergovernmental organizations and agencies be subject to the approval of UNESCO’s Executive Board, the Draft MOU will be presented to the fall 2019 session of the Board, prior to signature.

IOC-XXX, Dec. 6.1
Harmful Algal Blooms

The Assembly,

1. Having considered the Executive Summary Report of the 14th session of the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB), its 8 Decisions and 2 Recommendations and the workplan for 2020–2021 adopted at the session (IOC/IPHAB-XIV/3s);

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

3. Agrees to the HAB workplan for 2020–2021 (Recommendation IPHAB-XIV.1) and to consider it in the overall IOC Programme and Budget resolution XXX-(12).

4. Requests the Executive Secretary to complete preparations for the signature of the FAO-WHO-IAEA-IOC Memorandum of Understanding of Ciguatera Poisoning.

103. The representatives of __ Member States 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: ____________.

6.2. REPORT OF THE WMO-IOC-ISCI WORLD CLIMATE RESEARCH PROGRAMME (WCRP)
[Rule of Procedure 48.3; IOC-XXVII/Dec.5.4.1; EC-LI/Dec.5.2]

Information: IOC/INF-1375 Report of the WMO-IOC-ISCI World Climate Research Programme (WCRP)

104. Mr Salvatore Aricò, Head of the Ocean Science Section, presented developments related to the World Climate Research Programme and the role of IOC therein. Since the conclusion of the independent review of WCRP, WCRP Strategic and Implementation Plans have been developed. Inter alia, these will be instrumental in informing the potential contributions by the climate change science community to the objectives of the UN Decade of Ocean Science for Sustainable Development. From the point of view of the institutional role of IOC, as a co-sponsor of WCRP, in consultation with the other co-sponsors—WMO and International Science Council—it was proposed that the three-partite co-sponsoring agreement be renewed in 2020 to provide a continuing institutional, framework for the existence and implementation of WCRP. IOC will keep its sponsorship of and guidance to WCRP with regard to its Strategic and Implementation Plans, the work of WCRP Joint Scientific Committee. It will do so in consultation with the other co-Sponsors of the Programme, as well as taking into account the science and implementation plans of the UN Decade.
constituency represented by the Commission in climate research,

3. Reiterating the importance of the continuum that goes from bedrock climate science to sustained observations, data and information products, and assessments,

4. Noting with appreciation the continuing strong cooperation between IOC, WMO and ISC in their capacity as co-sponsors of WCRP,

5. Takes note of the timeline and modalities for the development of the WCRP Implementation Plan associated with the Strategic Plan and of the timeline for the finalization of a renewed co-sponsoring agreement between WMO, IOC and ISC;

6. Encourages scientists participating in WCRP to take an interest in the UN Decade of Ocean Science for Sustainable Development and specifically in how the Decade can leverage further relevant foci of the WCRP Strategic and Implementation Plans;

7. Requests the Executive Secretary to monitor the alignment of the WCRP Strategic Plan 2019–2029 with work priorities of the IOC, including engagement with the UN Decade of Ocean Science for Sustainable Development;

8. Encourages IOC Member States to mobilize extrabudgetary resources in support of the IOC contribution to WCRP.

105. The representatives of __ Member States 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: ___________.

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(a); EC-LI/Dec.5.3]

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<td>Information:</td>
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<td>IOC/INF-1376</td>
<td>Initial Global Ocean Observation System Implementation Plan</td>
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<tr>
<td>WMO Draft Resolution 6.1(3)/4 (Cg-18)</td>
<td>Ocean observations in support of Earth System Prediction and WMO support to GOOS Strategy 2030 (incl. Tropical Pacific Observing System 2020)</td>
<td></td>
</tr>
<tr>
<td>WMO Draft Resolution 6.1(3)/2 (Cg-18)</td>
<td>Ensuring Adequate Marine Meteorological and Oceanographic Observations and Data Coverage for the Safety of Navigation and the Protection of Life and Property in Coastal and Offshore Areas</td>
<td></td>
</tr>
<tr>
<td>WMO Draft Resolution 6.1(3)/3 (Cg-18)</td>
<td>Future Collaboration Between WMO and IOC on Facilitating Oceanographic Observations in Coastal Regions in Support of Earth System Prediction and Climate Services</td>
<td></td>
</tr>
</tbody>
</table>
Drs Toste Tanhua, co-chair of the GOOS Steering Committee (SC), introduced this item.

He recalled that a draft Global Ocean Observing System 2030 Strategy (IOC/EC-LI/2 Annex 8) was presented to the IOC Executive Council at its 51st session in 2018, and Member States were asked to provide comments on it through IOC Circular Letter 2726 (8 August 2018). The revised strategy, now presented for final approval as IOC-XXX/2 Annex 4, has a broad vision for a fully integrated global ocean observing system that delivers the essential information needed for our sustainable development, safety, wellbeing and prosperity. The strategy details a more focused mission to lead the ocean observing community and create the partnerships to grow GOOS. Eleven Strategic Objectives provide guidance on priorities for the work of GOOS at global and regional levels, and in interactions with national ocean observing activities.

GOOS continues to develop an Implementation Plan (IOC/INF-1376) against the Strategic Objectives, which would be an evolving document focused on GOOS programme and partner actions. In accordance with IOC Resolution XXVI-8 (2011), this draft implementation plan (IOC/INF-1376) is presented for approval as the GOOS workplan for 2020–2021, and is focused on priority strategic objectives.

Building on existing close links between GOOS and the JCOMM Observations Coordination Group, GOOS stands ready to incorporate appropriate JCOMM functions and activities on observation and operational ocean forecasting systems (See Draft Resolution IOC-XXX-(5.1). In the context of the reform of WMO constituent bodies including JCOMM (item 5.1) and an ocean observing community-wide reflection on the organization of ocean observations at global, regional, and national levels at the OceanObs’19 Conference (16–20 September 2019, Honolulu, USA), and recognizing the challenges in achieving the ambitious strategic objectives outlined in the GOOS 2030 Strategy, the GOOS Steering Committee is preparing to engage in a broader reflection on the governance of GOOS with its co-sponsors, to be brought to future IOC governing body meetings for decision.

Dr Tanhua described two GOOS-related projects: the EC H2020 funded AtlantOS project and the Tropical Pacific Observing System in 2020 (TPOS 2020) project. AtlantOS has contributed to the development of a vision for an All-Atlantic Ocean Observing System as a contribution to GOOS, and was seeking to develop mechanisms to engage with Member State agencies and organizations around the Atlantic Basin. The TPOS 2020 Second Report (GOOS reports, 234) focused on design recommendations for tropical Pacific observations, with the primary goals of improving climate outlook and forecasts, as well as detecting climate change and its consequences.

Dr Tanhua highlighted three resolutions adopted by the 18th World Meteorological Congress. The first is focused on GOOS: approves the GOOS 2030 Strategy, subject to its parallel approval by this Assembly; decides to contribute to implementation of the strategy; and supports establishment of a node of a distributed GOOS Office located within the WMO Secretariat. It also supports the recommendations of the Second Report of TPOS 2020. The second resolutions reaffirms the importance of marine meteorological observations, including those in Exclusive Economic Zones (EEZs), used operationally by WMO Members to provide services in support of safety of navigation and the protection of life and property in coastal and offshore areas, and clarifies the legal regime under which the Voluntary Operating Ship...
Scheme and surface observing platforms operate. The third one notes a 20-year history of work by the IOC to develop a cooperative framework regarding the sharing of ocean data in EEZs (IOC Resolutions XX-6 and EC-XLI.4, and IOC Decision EC-LI.4.8), recognizes that WMO's operational forecast models and services increasingly rely on sustained global data streams of subsurface observations, and decides to identify the requirements for subsurface ocean variables to improve the quality of these forecasts and services, work closely with IOC in order to explore mechanisms that make the highest-impact subsurface ocean data freely available, and build the capacity of all WMO Members to use the resulting forecast systems and services. He noted work by the JCOMM Observations Coordination Group and GOOS that surveyed ocean observing networks on the impediments they faced in taking observations within EEZs in full compliance with the provisions of UNCLOS.

**IOC-XXX, Dec. 7.1.1**

**The Global Ocean Observing System**

The Assembly,

1. Noting the 18th World Meteorological Congress Resolution 6.1(3)/4 which approved the GOOS 2030 Strategy, subject to its parallel approval this Assembly, supports establishment of a node of a distributed GOOS Office located within WMO, and asks WMO Members to take the the TPOS 2020 report and its recommendations into account when planning their contribution to the Tropical Pacific Observing System,

2. Further noting IOC Resolution XXX-(5.1), which proposes GOOS taking on primary sponsorship of present observing programme area and operational ocean forecast system bodies in JCOMM, after a transition period and JCOMM disbandment in 2020,

I. **GOOS 2030 Strategy**

3. Having examined IOC-XXX/2 Annex 4,

4. Accepts the Global Ocean Observing System 2030 Strategy;

5. Calls on other sponsors of GOOS—the World Meteorological Organization, United Nations Environment, and the International Science Council—to consider how they will help implement the strategy, and

6. Urges Member States to take actions to facilitate its implementation;

II. **GOOS Workplan**

7. Noting the broad ambition of the GOOS 2030 Strategy,

8. Further noting IOC's recognized role as lead agency for GOOS, and the fundamental role of observations in supporting IOC's Medium-Term Strategy and the developing UN Decade of Ocean Science for Sustainable Development,

9. Having examined the initial GOOS Implementation Plan (IOC/INF-1376),

10. Accepts with appreciation the initial Implementation Plan as the GOOS Workplan for the coming intersessional period;

11. Notes the resourcing requirements that are laid out in the initial Implementation Plan,
and that only a fraction of these can be supported from draft IOC Programme and Budget allocation for GOOS;

12. Further notes the need to incorporate appropriate JCOMM decisions and processes regarding observations into GOOS during the transition period leading up to the disbandment of JCOMM;

13. Expresses its appreciation for the in-kind contributions of Member States that have enabled the development of a distributed GOOS Office;

14. Welcomes the proposed establishment of a node of the GOOS Office hosted by WMO, and of a G7-GOOS coordination centre to be hosted by the IOC;

15. Urges Member States to support GOOS through contributions to the IOC Special Account for GOOS, secondments of staff members to the GOOS Office, in-kind support such as hosting meetings or workshops with participant funding, the establishment of GOOS support offices, the funding of GOOS projects, or other means as agreed by the GOOS Steering Committee (SC);

III. Legacy of Basin-scale observing projects

16. Noting the vision for an All-Atlantic Ocean Observing System and the TPOS 2020 Second Report (GOOS Reports, 234),

17. Calls on Member States to take the TPOS 2020 Second Report and its recommendations into account when planning their contribution to the Tropical Pacific Observing System;

18. Calls on interested Member States to engage in the development of an All-Atlantic Ocean Observing System as a contribution to GOOS;

19. Requests the GOOS Steering Committee to consider the legacy of GOOS projects in future proposals to IOC and co-sponsors on the evolution of GOOS;

IV. GOOS SC Regional Membership

20. Recalling the GOOS SC regional membership appointment defined in IOC Resolution XXVI-8, and further recalling IOC Circular Letter 2762 requesting nominations of experts for appointment by Member State Electoral Groups,

21. Notes the appointment by each of the Member State Electoral Groups of a regional expert member of the GOOS SC for 2020–2021:
   • ___ (Group I)
   • ___ (Group II)
   • ___ (Group III)
   • ___ (Group IV)
   • ___ (Group V)
112. The representatives of Member States 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: ____________.

7.1.2. WMO-ISC-IOC-UNEP Global Climate Observing System (GCOS) Workplan

[Rule of Procedure 8.1(j)]

Information: IOC/INF-1377 WMO-ISC-IOC-UNEP Global Climate Observing System (GCOS) Status Report and Work Plan

113. Carolin Richter, Director of the WMO-ISC-IOC-UNEP Global Climate Observing System (GCOS), introduced a status report and work plan for GCOS (IOC/INF-1377). This GCOS work plan is based on the following three major strategic goals.

114. Identify user needs. In particular, identify observations that more fully meet the needs of adaptation and mitigation to climate change, support sustainable development, the requirements of the UNFCCC and other multilateral environmental agreements (MEA).

115. In order to meet these needs, GCOS works towards climate observations being enhanced and continued into the future to provide the empirical evidence needed to understand and predict the evolution of the climate, to guide mitigation and adaptation measures, to assess risks and enable attribution of climatic events to underlying causes, and to underpin climate services. GCOS will need to encourage integrated observations of the physical, chemical and biological properties and processes across the atmospheric, oceanic and terrestrial domains, in order to more fully monitor the Earth’s water and carbon cycles and energy.

116. Promote free and open access to relevant data according to WMO and UNFCCC requirements.

117. GCOS operates through a cycle of specifying needs; providing support; observations (performed by independent systems and networks); monitoring performance of observations; and back to specifying needs. In the past, this sequence has been unfolding on a roughly 10-year cycle (with an update mid-way). From now on, GCOS will aim to synchronise this cycle on the dates of the Paris Agreement’s Global Stocktake, the first of which is in 2023.

IOC-XXX, Dec. 7.1.2

WMO-ISC-IOC-UNEP Global Climate Observing System (GCOS) Work Plan

The Assembly,

1. Having examined the proposed Global Climate Observing System (GCOS) status report and work plan (IOC/INF-1377);

2. Accepts the GCOS work plan;

3. Calls on the other sponsors of GCOS - the World Meteorological Organization, United Nations Environment, and the International Science Council - to finalize and consider how they will help implement a GCOS Strategy, as well as this work plan; and

4. Urges Member States to take actions to facilitate its implementation.
The representatives of Member States 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: __________.

7.1.3. Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)  
[Rule of Procedure 48.3]

Information:  


Prof. Nadia Pinardi, Co-President of JCOMM, introduced this item.

The JCOMM Management Committee at its 15th meeting (31 October–3 November 2018, Paris) made a series of recommendations on the future cooperation between oceanography and meteorology and between IOC and WMO that were then taken up by the Joint WMO-IOC Consultation Group on the Future of JCOMM. Dr Pinardi emphasized the opportunities created by the new proposed structure adopted under item 5.1.

Recalling Decision 19 (JCOMM-5) "Joint World Meteorological Organization and Intergovernmental Oceanographic Commission Strategy for Marine Meteorological and Oceanographic Data Management (2018–2021)", which authorized the JCOMM Co-Presidents to recommend that an updated draft Strategy (JCOMM Technical Report No. 40, Revision 5) be adopted by the WMO and IOC governing bodies, and the outcomes of the 25th session of the IODE (item 7.2.1), Dr Pinardi introduced the vision and mechanism of the joint strategy. The vision is assuring the collection, processing, integration, dissemination and archiving of as much as possible fit-for-purpose relevant data of known quality, to deliver to current demands for integrated oceanographic and marine meteorological information to the research and operational communities.

Prof. Pinardi presented the results of a review of the JCOMM in situ Observation Programmes Support Centre (JCOMMOPS). The Review found that JCOMMOPS has generated a high level of interest and support from its stakeholders, all of whom view JCOMMOPS as important to the success of their own activities. As a direct consequence, expectations across the various stakeholders are on the increase. Overall, the cumulative demand for JCOMMOPS services far exceeds its current capacity. Key findings of the review are as follows: given the strategic directions of both WMO through WIGOS and IOC through GOOS, there is a clear and growing need for an in situ Observing Programmes Support Centre. It requires a system-level focus, rather than a sum-of-networks approach. The distinctive role of JCOMMOPS does however need to be more clearly defined. The expectations of various stakeholders, and the JCOMMOPS team itself, need to be more actively managed and matched to available resources. Stable funding and staffing of the small core JCOMMOPS team needs to be secured in the long term. The financial situation is urgent as JCOMMOPS expenditure continues to exceed revenue, and its trust-fund balances are close to being exhausted. Skills of the JCOMMOPS team need to be matched to a clearly defined scope.
IOC-XXX, Dec. 7.1.3

Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)

The Assembly,

I. Joint WMO and IOC Strategy for Marine Meteorological and Oceanographic Data Management (2018-2021)


2. Noting the IOC Medium Term Strategy 2014–2021 and the IOC Strategic Plan for Data and Information Management (2017–2021),

3. Further noting the decision of IODE at its 25th session (19–22 February 2019, Tokyo) to endorse the Joint Strategy, inviting JCOMM to submit it to the IOC Assembly at its 30th session,

4. Recalling the parallel WMO Resolution 6.1(3)/1 adopted at the 18th World Meteorological Congress, which proposed renaming the Joint Strategy to “Joint World Meteorological Organization (WMO) and Intergovernmental Oceanographic Commission (IOC) of UNESCO Strategy for Marine Meteorological and Oceanographic Data Management (2018–2021)”, and to update it to reflect Congress Decisions with regard to the WMO Constituent Body Reform,

5. Concurs with the changes proposed by the World Meteorological Congress;

6. Adopts the Joint WMO and IOC Strategy for Marine Meteorological and Oceanographic Data Management (2018–2021); and

7. Requests the Joint WMO-IOC Collaborative Board to: (i) take steps, in liaison with IODE and the WMO Infrastructure Commission, for updating the Joint Strategy according to the WMO Strategic Plan period 2020–2023, and have it submitted to IODE-XXVI and EC-73 (2021) for approval; and (ii) develop an implementation plan responding to the Joint Strategy, with support of the WMO Infrastructure Commission;

II. JCOMMOPS

8. Having examined the JCOMMOPS Review 2018 (JCOMM TR-93) and its key findings and recommendations,

9. Commends the work of the review panel;

10. Notes in particular the recommendation that "JCOMMOPS core services at the system-level (vs network-level) should be clearly defined and adequately funded on a programmatic basis through the intergovernmental systems, i.e. WMO and IOC. The core services need to serve the needs expressed by these bodies, through WIGOS and GOOS";

11. Welcomes the proposed creation by WMO of a regular programme funded post for
12. **Decides** to consider the financial implications of the review recommendations in the context of the overall IOC Programme and Budget;

13. **Urges** Member States to investigate how they could strengthen their support to JCOMMOPS and assist in making the funding of JCOMMOPS more stable and sustainable.

123. The representatives of __ Member States 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: ____________.

7.2. DATA MANAGEMENT

7.2.1. International Oceanographic Data and Information Exchange: 25th Session of IODE, Tokyo, Japan, 18–22 February 2019

[Rule of Procedure 48.3]

<table>
<thead>
<tr>
<th>Report:</th>
<th>IOC/IODE-XXV/3s</th>
<th>Executive Summary Report of the 25th Session of the IOC Committee on International Oceanographic Data and Information Exchange, Tokyo, 18–22 February 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IOC/IODE-XXV/3</td>
<td>(full report)</td>
</tr>
</tbody>
</table>

124. Dr Sergey Belov, IODE Co-Chair, introduced this item and informed the Assembly on the outcome of the 25th session of the IODE Committee and draft decisions submitted to the Assembly regarding the revision of the IOC Oceanographic Data Exchange policy, and the establishment of the IOC Ocean Best Practices System project.

125. During its 25th session the Committee focused its attention mainly on the possible contribution of IODE to the United Nations Decade of Ocean Science for Sustainable Development (2021–2030). The Decade was also the main theme of the Scientific Conference held on 18–19 February 2019, which was attended by 150 participants from 40 countries. The conference concluded with the recommendation that it is critical for IODE to be further strengthened and expanded for it is to play an essential role in supporting the flow from data to information to knowledge. The oceanographic community needs to build a global ocean forecasting system delivering society relevant services, by focusing on managing the data streams of essential ocean variables, both in the climate, operational services and ocean health space. To realize this, IODE and GOOS will need to continue their strong partnership and engage with regional bodies and stakeholders including the private sector. Important steps have been taken by the development of a prototype global Ocean Data and Information System (ODIS).

126. The Committee welcomed the continued growth of the IODE network that now includes 66 National Oceanographic Data Centres (NODCs) (3 added), 29 Associate Data Units (ADUs) (9 added) and 3 Associate Information Units (AIUs). Within the framework of the IODE Quality Management Framework implementation, an additional 6 NODCs had successfully applied for accreditation: BODC (United Kingdom), Flanders Marine Institute – VMDC (Belgium), INOS (Malaysia), JODC (Japan), KODC (Republic of Korea), Marine Institute (Ireland).
127. The Committee continued the reform of IODE towards ensuring that all NODCs, ADUs and AIUs comply with the IODE Quality Management Framework (QMF) and adopted a decision on the establishment of an inter-sessional working group on the review of NODC health status within the IODE network. The Committee also adopted a decision to further improve the management of IODE. In addition, taking into account that the current IOC Strategic Plan for Data and Information Management will expire in 2021, the Committee adopted a decision to establish an inter-sessional working group to revise the Plan.

128. The Committee welcomed the increasing IODE cooperation with IOC Ocean Science (GOSR, HAEDAT, Ocean acidification), GOOS biology, Marine Policy and Regions, and its contribution to SDG indicator reporting and the SPINCAM project. Several of these make use of OceanExpert, OBIS and the OceanTeacher Global Academy. In addition, cooperation has started between GOOS and IODE on the Ocean Best Practices System project. The Committee welcomed the existing cooperation and called on other IOC programmes to collaborate with IODE for their ocean data and information management requirements.

129. Regarding the reform of WMO and the future of JCOMM, the Committee, referring to the ongoing development of WMO WIS 2.0 and IOC ODIS, remarked that many changes are taking place, which challenges the long-term strategic planning regarding collaboration between WMO and IOC/IODE. The Committee entrusted the IODE Management Group to reflect the comments by the Committee in the discussions of the Joint WMO-IOC Consultation Group on the reform of JCOMM. The Committee recommended: (i) continued collaboration between IOC and WMO regarding data management and capacity development activities; (ii) to assure that activities related to interoperability of IOC ODIS and WMO WIS 2.0, both under development, will be maintained in the proposed future structure of JCOMM; and (iii) that IOC Member States promote the IODE OceanExpert database as a joint pool of experts within IOC and invite WMO to contribute to it. Regarding cooperation of IODE in the JCOMM Marine Climate Data System (MCDS) the IODE Committee invited JCOMM to jointly elaborate on MCDS structural elements, such as DACs, noting that they could be functional elements of IODE. The IODE Committee urged the Joint WMO-IOC Consultation Group on the Reform of JCOMM to take into consideration the MCDS when discussing the future of JCOMM.

130. The IODE Committee welcomed the Vision, Mission, Outcomes and Activities outlined in the draft Joint WMO and IOC strategy for marine meteorological and oceanographic data management for the period 2018 to 2021. It decided to: (i) assist JCOMM to develop the implementation Plan responding to the Data Management Strategy and to collaborate in the implementation of the Strategy; (ii) promote the Strategy and its implementation within IODE projects, activities and members; (iii) assist DMPA to review and update the strategy and the implementation plan as necessary; (iv) endorse the Strategy and invited JCOMM to submit it to the 30th Session of the IOC Assembly (2019) for approval.

131. The IODE Committee welcomed the progress achieved by the Ocean Biogeographic Information System (OBIS) and specifically in supporting the development of scientific applications and global and regional assessments, through projects such as OBIS-Event-Data and DIPS-4 Ocean Assessments. The Committee stressed the importance to create a regular programme post for the OBIS data manager to secure the continuation of OBIS beyond 2019 and invited the Government of Flanders (Kingdom of Belgium) through the FUST, as well as other Member States and donor agencies, to consider providing financial support to OBIS (and its community network) to ensure OBIS can facilitate the co-development of a data and analytics platform for policy relevant applications, involving relevant partners, as well as to create specific training packages in collaboration with the OceanTeacher Global Academy.

132. The Committee welcomed the positive results obtained by the (OceanTeacher Global Academy) Regional Training Centres and the growing collaboration with other IOC programmes using the OTGA. However, the Committee noted that other IOC Programmes making use of OTGA should also contribute to the related Secretariat tasks. The Committee
invited IOC regional subsidiary bodies to jointly, with OTGA, plan and implement courses through the RTCs in their region. The Committee thanked the Government of Flanders (Kingdom of Belgium) for the substantial support provided to the OTGA project. The Committee welcomed the planned submission of a new proposal to FUST.

133. The IODE Committee, (i) considering the need to derive the greatest benefit from the observations collected and information from the UN decade of the ocean science; (ii) considering the complexity and use of international observing systems during the UN decade of the ocean without overarching data and information access and use, recommended to the IOC to include, as part of preparatory process, the formulation of common guidelines/principles on flow, discovery, access, and re/use of data collected during the decade. The IODE Committee offered its assistance in this regard. The Committee also established an inter-sessional working group to propose a strategy on ocean data and information stewardship for the UN Decade.

134. The Committee expressed its appreciation to the Government of Flanders (Kingdom of Belgium) for the considerable support provided to IODE in the past and for the decision to continue support through FUST. The Committee expressed its appreciation to the Government of Japan for providing an intern and invited Japan as well as other Member States to provide interns or seconded staff.

IOC-XXX, Dec. 7.2.1

IOC Committee on International Oceanographic Data and Information Exchange

The Assembly,

I

25th Session of IODE, 20–22 February 2019, Tokyo, Japan

1. Having examined the Executive Summary and Report of the 25th session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE-XXV) (20–22 March 2017, Tokyo, Japan), the recommendations and the decisions contained therein (IOC/IODE-XXV/3s),

2. Agrees to the IODE Workplan for 2019–2020 (Recommendation IODE-XXV.7.3) and to consider it in the overall IOC Programme and Budget draft resolution XXX-(12);

3. Endorses the report of the 25th session of the IOC Committee on International Oceanographic Data and Information Exchange and the recommendations contained therein;

II

Revision of the IOC Oceanographic Data Exchange Policy

4. Recalling Assembly Resolution IOC-XXII-6 entitled ‘IOC Oceanographic Data Exchange Policy’,

5. Recognizing the need for free and open access to oceanographic data for the global common good,

6. Noting the World Data System (WDS) has superseded the World Data Centres (WDC),

7. Further noting the Ocean Biogeographic Information System (OBIS) is a global open-access data and information clearing-house on ocean biodiversity for science, conservation and sustainable development,

8. Decides to revise Clause 5 of the Annex to Resolution XXII-6 (IOC Oceanographic
Data Exchange Policy) to the revision attached in Annex 1 of this decision;

9. Invites all Member States to contribute oceanographic data to the IODE network of data centres, the Ocean Biogeographic Information System (OBIS), and the World Ocean Database or the World Data System;

III

Establishment of the IOC Ocean Best Practices System Project (OBPS)

10. Recalling Recommendation IODE-XXII.19 for the establishment of the IODE Clearing House Service for Data/Information Management Practices Project, which replaced the JCOMM Catalogue of Best Practices,

11. Recognizing that:

(i) the dissemination and use of rigorously tested best practice methods in ocean observing promote and facilitate activity within and across disciplinary boundaries of ocean science,

(ii) IODE has successfully established a permanent repository offering the scientific community a platform to publish their ocean-related best practices and find practices of others using innovative search and access technology, a peer review journal publishing outlet and community forum, and a training resource leveraging community capabilities,

(iii) IOC and JCOMM have established close, efficient and effective collaboration in ocean best practices,

12. Noting that the Ocean Best Practices System Repository (OBPS-R) of best practices will support all IOC programmes and contribute to the UN Decade of the Ocean and UN Sustainable Development Goals by a providing permanent curated archive of best practices in ocean sciences,

13. Noting further that within the context of the project, a best practice is defined¹ as a methodology that has repeatedly produced superior results relative to other methodologies with the same objective; to be fully elevated to a best practice, a promising method will have been adopted and employed by multiple organizations,

14. Noting also that best practices can be in many forms including standard operating procedures, manuals, etc.,

15. Decides to:

(i) establish the IOC Ocean Best Practices System (OBPS) as a joint IODE-GOOS project with the terms of reference as attached in Annex 2 to this decision;

(ii) establish the IOC Steering Group for the Ocean Best Practices System (OBPS) project with the terms of reference as attached in Annex 3 to this decision;

16. Urges Member States to actively participate in the OBPS project by submitting relevant community practices on ocean observation, data management, products and

services, and by promoting the use of practices contained in the OBPS at the national, regional and global level;

17. Invites relevant stakeholders to contribute community practices and collaborate with the OBPS.

Annex 1 to IOC-XXX, Dec. 7.2.1

Clause 5 (Use of IODE system)

Member States shall, to the best practicable degree, use data centres linked to the World Data System (WDS) and IODE’s NODCs, such as the World Ocean Database (WOD) and the Ocean Biogeographic Information System (OBIS), as long-term repositories for oceanographic data and associated metadata.

Annex 2 to IOC-XXX, Dec. 7.2.1

Terms of Reference of the IOC Ocean Best Practices System Project (OBPS)

Objectives: The objectives of this project are to:

(i) Increase efficiency, reproducibility and interoperability of the entire ocean observing value chain by providing the community with a unified, sustained and readily accessible knowledge base of interdisciplinary best practices;

(ii) Provide coordinated and sustained global access to best practices in ocean observing to foster innovation and excellence by developing a system and engaging ocean observing communities in a joint and coordinated effort in producing, reviewing and sustaining best practice documents.

Annex 3 to IOC-XXX, Dec. 7.2.1

Terms of Reference of the IOC Steering Group for the Ocean Best Practices System (SG-OBPS)

Objectives: The SG-OBPS will have the following Terms of Reference:

(i) Propose the vision, strategy, work plan and timetable for the Ocean Best Practices System Project;

(ii) Advise on technical aspects such as user interface, back office, etc. to the project technical task team;

(iii) Report to the IOC and to other partners on the progress of the Ocean Best Practices System Project;

(iv) Provide guidance to the project manager and project technical manager;

(v) Identify funding sources to further develop the OBPS.

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

(i) Representatives from IOC Programmes and JCOMM;

(ii) Project Manager/Chief Editor;

(iii) Project Technical Manager;

(iv) Invited Experts from the ocean observing community;

(v) Representatives of the IODE and GOOS Secretariats.
The representatives of Member States 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: ____________.

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]


Mr Taco de Bruin (The Netherlands), IODE Co-Chair introduced this item referring to Document IOC-XXX/2 Annex 7. He recalled that IODE at its 24th session in 2016 adopted Decision IODE-XXIV.4 by which it established the Inter-sessional Working Group to develop a concept paper for the Ocean Data and Information System, with deadlines in June 2017 for a brief introductory to the IOC Assembly in 2017 and March 2019 for submission of the Concept Paper to the 25th session of IODE.

IODE-XXV reviewed and approved Document IOC/IODE-XXV/5.2 as the revised concept paper. It furthermore adopted Recommendation IODE-XXV.5.2.1 (Establishment of the IOC Ocean Data and Information System Catalogue of Sources Project – ODISCat) as well as Decision IODE-XXV.5.2.3 (Establishment of the Inter-Sessional Working Group to develop the Implementation Plan and cost-benefit analysis for the IOC Ocean Data and Information System).

Mr de Bruin introduced the ODIS concept statement as follows: “The IOC Ocean Data and Information System (ODIS) will be an e-environment where users can discover and access data, information and associated products or services provided by Member States, projects and other partners associated with IOC”. 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. The IOC ODIS will target scientists, government agencies/policy-makers, IOC global and regional programmes, IODE National Oceanographic Data Centres, Associate Data Units, Associate Information Units, UN agencies, IGOSs, and Industrial and commercial enterprises.

The cost benefit analysis reveals that the most realistic option for implementing ODIS will be the stepwise development of ODIS leveraging existing infrastructures (ODISstep). This option will build on the proposed ODIS Repository of Sources (ODISCat). The stepwise approach will aim at identifying and bringing together communities that each have existing activities related to one or more of the 16 content/source types that are currently covered by ODISCat. As such ODIS will be able, to a large extent, to build upon existing investments, infrastructure and expertise already committed (including private sector) to developing products and services related to the 16 content/source types. It is important to note that this option will leverage work already in progress in the ocean community, rather than imposing new requirements or tasks. This is in keeping with the emerging paradigm of distributed but interoperable informatics, in aid of robustness and sustainability. A prototype of ODISCat has been developed over the period 2018–2019 and the system has been launched on 1 February 2019 (https://catalogue.odis.org). Mr de Bruin noted that, using ODISCat as a basis, additional products and services can be developed for most of the content (knowledge) types described in ODISCat. Mr de Bruin referred to Recommendation IODE-XXV.5.2.1 (Establishment of the IOC Data and Information System Catalogue of Sources Project (ODISCat)) submitted to the Assembly under Agenda Item 7.2.1.
Mr de Bruin noted that collaboration with the IT industry may provide assistance with the development of ODIS. This could, and should, be deeper than simply making use of infrastructure and the donation of development time. IODE is not the global technical leader in search and discovery of data and information but is in an excellent position to coordinate linkage between existing, community-built infrastructures and private industry. ODIS could make use of the lightweight standards promoted by commercial search engines for the structured representation of discovery metadata and the emerging encodings for data themselves. Mr de Bruin noted that, even though IOC ODIS is being designed in the most efficient and modular way leveraging existing resources, it is fair to inform the Assembly at this stage of the process that the envisaged full functionality of IOC ODIS cannot be achieved without adequate resources both in manpower as well as in additional funding.

Mr de Bruin concluded by stating that the first steps towards an IOC Ocean Data and Information System (ODIS) had now been made and invited the Assembly to consider the next steps.

IOC Ocean Data and Information System (ODIS)

The Assembly,

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

2. Recognizing that a major component of the ocean data and information system landscape is not linked to the IOC and the need to collaborate with those communities/systems in order to achieve improved accessibility, unrestricted use and interoperability of data and information,

3. Recalling 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,

4. Noting with appreciation that the IODE has developed a prototype ODIS Catalogue of Sources and that the IODE Committee, at its 25th session, has recommended the establishment of the IOC Ocean Data and Information System Catalogue of Sources Project (ODISCat),

5. Having examined Document IOC/XXX/2 Annex 6,

6. Endorses the ODIS Concept, Implementation Plan and Cost Benefit Analysis;

7. Invites 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.

The representatives of Member States 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: ____________.
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: 28th Session of ICG/PTWS, Montelimar, Nicaragua, 2–5 April 2019**

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<tr>
<th>Report:</th>
<th>ICG/PTWS-XXVIII/3s</th>
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<tr>
<td>Executive Summary Report of the 28th Session of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS-XXVIII), Montelimar, Nicaragua, 2–5 April 2019</td>
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143. Dr Wilfried Strauch (Nicaragua), Chair of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS), introduced this item. He reported on recent progress of the ICG/PTWS, including the full transition to North West Pacific Tsunami Advisory Center (NWPTAC) Enhanced Products as from 28 February 2019 and the proposed starting of full operations of the South China Sea Tsunami Advisory Center (SCSTAC) on 5 November 2019.

144. He then reported on other results of the 28th Session of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS-XXVIII), Montelimar, Nicaragua, 2–5 April 2019, [to be completed after the session].

[see decision IOC-XXX, Dec. 8. 2. below]

145. The representatives of __ Member States 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: ____________.

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

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<tr>
<th>Report:</th>
<th>ICG/IOTWMS-XII/3s</th>
</tr>
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<tbody>
<tr>
<td>Executive Summary Report of the 12th Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS-XII), Kish Island, Iran (I.R.), 9–12 March 2019</td>
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146. Prof. Dr Dwikorita Karnawati, Chair of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS), introduced this item. She reported on the key intersessional activities of the ICG/IOTWMS. She highlighted the results of IOWave18 exercise (4–5 September 2018) indicating that all 24 active Member States participated in the exercise involving evacuation of about 116,000 people from 11 Member States. Capacity development initiatives in the intersessional period included 3 regional trainings on Tsunami Evacuation Maps, Plans and Procedures (TEMPP) involving 22 Member States, 2 regional workshops on Standard Operating Procedures for Tsunami Warning and Emergency Response involving 21 Member States, workshop on Indian Ocean
Tsunami Ready and a post-IOWave18 lessons learnt workshop. In efforts to enhance community preparedness in the IOTWMS, India and Oman successfully piloted Indian Ocean Tsunami Ready indicators in seven communities. A survey on Capacity Development of Tsunami Preparedness was completed with 21 Member States submitting inputs to an online survey, leading to the preparation of the IOTWMS Status Report. Palu and Sunda Strait tsunamis of 28 September 2018 and 22 December 2018 caused significant loss of lives highlighting the need to strengthen early warning systems and enhancing public awareness and response. IOC coordinated International post-Tsunami Survey Teams (ITST) comprising 60 scientists from 19 countries and Indonesia to survey the impact of Palu tsunami.

Prof. Dr Karnawati also reported on the other results of the 12th session of the ICG/IOTWMS held in Kish Island, Islamic Republic of Iran on 9–12 March 2019 [tbc].

[see decision IOC-XXX, Dec. 8. 2. below]

The representatives of ___ Member States 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: ____________.

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

Mr Gérard Métayer (Haiti), Vice-chair of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS), on behalf of the Chairperson Dr Silvia Chacon (Costa Rica), introduced this item. He highlighted the results of the CARIBEWave 19 exercise that mobilized over 775,000 people on 14 March 2019.

Mr Métayer reported on other results of the 14th Session of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS-XIV), hosted in Puntaleona, Costa Rica, 8–11 April 2019, including the planning of the CARIBEWave 20 exercise for Thursday 19 March 2020, which will consist of the following two scenarios: a teleseismic source off the coast of Portugal and a source near Jamaica. A third scenario might be defined at the Nicaragua rise.

[see decision IOC-XXX, Dec. 8. 2. below]

The representatives of ___ Member States 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: ____________.
8.1.4. Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas: 15th Session of ICG/NEAMTWS, UNESCO, Paris, 26–28 November 2018

Mr Gerassimos Papadopoulos, Chair of the ICG/NEAMTWS, introduced this item. He informed about recent developments in NEAMTWS including the intention of Portugal to apply for accreditation to become Tsunami Service Provider (TSP) in the next intersessional period (2019). A final report on NEAMWave 17 evaluation has been prepared. He emphasised several aspects to be taken into account for further improvement of the next exercise, to be organised and conducted in 2020 (NEAMWave 20).

Mr Papadopoulos highlighted that over the last four years several tsunamis have been recorded in the Mediterranean region, e.g. Lithakia (26 October 2018), Aegean Sea (21 July 2017), Alboran Sea (25 January 2016) and Ionian Sea (17 November 2015). Although moderate in size, these events highlighted the tsunami threat and challenges in the NEAM region in light of increasing coastal activities, including growing tourism and blue economy activities, and the need to further improve the Tsunami Warning and Mitigation System, in particular for local tsunamis with short travel time. There continue 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.

He noted the national efforts to increase awareness on tsunami hazards and preparedness in line with and as contributions to the World Tsunami Awareness Day, 5 November 2018. Mr Papadopoulos highlighted the continued effort in organising workshops in North-African countries to support the further development of national tsunami early warning and mitigation capacities. He also emphasized a survey, analysis and proposed new strategy for revitalising the NEAM Tsunami Information Centre (NEAMTIC), which works in tandem with the NEAMTWS. The first phase of the strategy (maintenance) is now being implemented. He stressed that the future of NEAMTIC is dependent on the commitment of the ICG/NEAMTWS Member States. Without it NEAMTIC will not be able to develop and evolve into a Centre that provides training and capacity building services as is the case in all other regional IOC tsunami warning and mitigation systems.

[see decision IOC-XXX, Dec. 8. 2. below]

The representatives of ___ Member States 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: ____________.
8.2. GLOBAL COORDINATION OF WARNING AND MITIGATION SYSTEMS FOR OCEAN HAZARDS


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

Report: IOC/TOWS-WG-XII/3

156. Mr Alexander Postnov, Chair of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG) introduced this item. He reported on the decisions and recommendations of the 12th meeting of TOWS-WG.

IOC-XXX, Dec. 8.2

Tsunami and Other Coastal Hazards Warning Systems

The Assembly,

1. Having considered the executive summary reports of the recent sessions of the Intergovernmental Coordination Groups for: the Pacific Ocean Tsunami Warning and Mitigation System (ICG/PTWS-XXVIII), The Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS-XII), the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-XIV), the North-Eastern Atlantic, the Mediterranean and Connected Seas Tsunami Warning and Mitigation System (ICG/NEAMTWS-XV), and the report of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-XIII),

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

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

   • Three exercises carried out (CARIBE WAVE 18, IOWave18, PacWave18) and regular communication tests performed, CARIBE WAVE 19 (March 2019) to include a volcanic scenario as a first,
   • Recovery and reconstruction of observation networks in Caribbean following recent hurricanes,
   • CARIBE-EWS Implementation Plan for 2018–2023 adopted,
   • Methodological guidelines “How to prepare, conduct, and evaluate a community-based tsunami response exercise” has been completed and is available in French, Spanish and English and under consideration of CARIBE EWS for final publication,
   • Two communities in the Caribbean and Adjacent Regions (St. Patrick, Grenada, and Fort Liberté, Haiti) achieved UNESCO-IOC Tsunami Ready recognition, India and Oman testing Tsunami Ready and growing interest for piloting Tsunami Ready expressed in NEAMTWS,
   • Instituto Português do Mar e da Atmosfera (IPMA, Portugal) seeking accreditation as a Tsunami Service Provider in NEAMTWS,
South China Sea Tsunami Advisory Centre (SCSTAC) intent to go to full operation, North West Pacific Tsunami Advisory Center (NWPTAC) to have made a full changeover to Enhanced Products at end of February 2019 and the Central American Tsunami Advisory Center (CATA) plans to start trial operation,

ITIC Training activities including the ITP-Hawaii course in Chile August 2018 as a first,

European Commission support towards projects contributing to NEAMTWS, ESCAP funding for Strengthening Tsunami Early Waming in the North West Indian Ocean Region, JICA and DIPECHO support for CATA and Tsunami Ready and preparedness in Central America, new funding from DIPECHO and USAID/OFDA towards piloting Tsunami Ready program in the Caribbean and Central America,

PTWS completion of its Key Performance Indicators Framework,

Progress in sharing the results of Tsunami exercises and communication tests with World Meteorological Organization (WMO) and the improvements in alert message delivery rates for IOTWMS,

Completion and submission of a Community White Paper “Ocean Observations Required to Minimize Uncertainty in Global Tsunami Forecasts, Warnings, and Emergency Response” to the OceanObs19 conference;

Pacific Tsunami Warning and Mitigation System (PTWS)

4. Notes the establishment of a Working Group 2 Task Team to propose minimum competency levels for National Tsunami Warning Centre (NTWC) operations staff;

5. Notes the establishment a Working Group 2 Task Team to propose an optimal multi-instrument sensor network that integrates existing and emerging techniques and sensor technologies, for tsunami detection and characterisation;

6. Welcomes the decision to organise and conduct the exercise Pacific Wave 2020 (PacWave 2020) in the months September to November 2020 and that it will be conducted as a series of regional exercises organised through the PTWS regional working groups;

7. Recommends Member States with GNSS data to investigate the means of sharing this data in real time, with a view towards and benefits of improved tsunami impact forecasts for coastlines particularly for near-field events;

8. Decides to commence the full operation of SCSTAC on 5 November 2019, to be announced by the IOC Secretariat to WG-SCS Member States through IOC circular letter at least 60 days in advance;

9. Decides to support the efforts and progress made by Nicaragua in the creation of the Central America Tsunami Advisory Centre (CATAC), as a tsunami service provider (TSP) within the framework of the ICG/PTWS;

10. Also decides to support the proposal to begin sending trial tsunami messages as of August 2019, based on the progress made in capacity-building for the establishment of the Central America Tsunami Advisory Centre (CATA) using the official IOC ICG/PTWS list of NTWCs and TWFPs;

Indian Ocean Tsunami Warning and Mitigation System (IOTWMS)

11. Notes with appreciation, the adoption of the IOTWMS Medium Term Strategy (2019-
24) and conduct of Capacity Assessment of Tsunami Preparedness of the IOTWMS Member States;

12. Notes, the technical limitations of warning systems in producing timely and accurate forecasts for tsunamis from near-field and “atypical” sources (e.g. aerial landslides, submarine landslides, volcanoes), especially in light of the Palu and Sunda Strait tsunamis in Indonesia;

13. Notes with concern the continuing instances of Tsunami Buoy Vandalism in the IOTWMS region;

14. Notes with appreciation, the progress made in bilateral exchange of seismic data among some Member States in the North West Indian Ocean and urges Member States to provide relevant seismic data in real-time to TSPs for accurate determination of tsunami threats;

15. Welcomes the establishment of two new inter-sessional Task Teams on “Tsunami Preparedness for a near-field Tsunami Hazard” and “Scientific Tsunami Hazard Assessment of the Makran Subduction Zone”;

16. Congratulates IOTWMS Member States for the success of IOWave18 exercise involving 116,00 participants and the piloting of Indian Ocean Tsunami Ready (IOTR) programme by India and Oman, and welcomes the priority to expand IOTR programme in vulnerable communities to enhance community preparedness and response;

17. Welcomes the decision to organise and conduct Indian Ocean Wave Exercise in 2020 (IOWave20);

III. Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (CARIBE-EWS)

18. Notes that the Caribe Wave 19 exercise included a volcano-generated tsunami and it brought to light that effective PTWC procedures for such an event would likely require being alerted to an unexpected tsunami signal on a coastal sea-level gauge;

19. Further notes that a similar capability at PTWC would also likely be needed to respond to a landslide-induced tsunami;

20. Recommends that PTWC explore new techniques that would alert its duty staff to the arrival of potential tsunami signals on sea level gauges;

21. Urges the Member States to continue to support the long-term operations of their national and local seismic, sea level, and Global Navigation Satellite System (GNSS) networks including accurate metadata so they can continue to sustain and improve the quality, timeliness and usefulness of the data for the delivery of optimal tsunami services;

22. Recommends CARIBE-EWS Working Group 1 to develop a strategy for all Member States who own and operate a Deep-ocean Assessment and Reporting of Tsunami (DART) buoy or DART-like system to ensure that both, data and metadata or these systems is pro-actively shared by the owner States every time there is a new deployment, re-deployment, or simply on a regular basis to confirm no changes to their national array.

23. Appreciates Monaco for the funding it provides annually and which has been instrumental to increasing the number of sea-level stations and enhancing the capability of station operators through training;

24. Welcomes the decision to organise and conduct Caribe Wave 20 exercise on 19
25. Notes the progress and decides to continue to support the efforts of Nicaragua in the establishment of the Central America Tsunami Advisory Centre (CATAC), as a Subregional Tsunami Service Provider (SRTSP) within the framework of the ICG/CARIBE EWS;

26. Decides to support the proposal to begin sending trial tsunami messages to the Central American countries within the area of service of the CARIBE-EWS by subscription as of August 2019, using the official list of National Tsunami Warning Centers (NTWCs) and Tsunami Warning Focal Points (TWFPs) of the ICG/CARIBE-EWS;

IV. North-Eastern Atlantic, the Mediterranean and Connected Seas Tsunami Warning and Mitigation System (NEAMTWS)

27. Recognizing the sub-optimal performance of the NEAMTWS due to lack of seismic and sea-level network notably in North Africa and difficulties of Member States in sharing observations due to national policy,

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

29. Noting the important future role of NEAM Tsunami Information Center (NEAMTIC) in providing training and capacity building services,

30. Invites Member States to contribute to the further development of NEAMTIC through funding and secondments;

31. Welcomes the decision to organise and conduct the fourth NEAMTWS exercise in 2020 (NEAMWave20);

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

32. Reiterates the importance of collecting event data strictly in accordance with the International Tsunami Survey Team (ITST) protocols, while continuing to be respectful of the country’s needs and requirements, encourage timely data and information sharing by the Survey Teams to facilitate immediate submission of a consolidated summary report to the host country to assist with response and recovery planning and request ICGs to facilitate, in coordination with existing science organizations, special sessions at meetings/workshops to promote sharing of lessons learnt and compilation of all event data;

33. Encourages Member States to:
   - increase and sustain technical and financial support of the tsunami and other coastal hazards warning systems in their respective regions;
   - emphasize to national civil protection/disaster management agencies the role they play in strengthening the warning chain to ensure optimal community response and stress the importance that the agencies participate in regional Tsunami governance and technical forums;
   - continue to strengthen tsunami awareness and preparedness in communities and among authorities through communication, evacuation planning, tsunami exercises, training, information, and piloting recognition programmes such as Tsunami Ready;
• densify sea-level networks capable of Tsunami detection as well as seismic network particularly nearby tsunamigenic sources;
• extend sharing of real time tsunami source and tsunami detection observations;
• collect high resolution coastal bathymetry and extend the data sharing for improved characterization of tsunami and other coastal hazards and risks, and also advocate this through IHO and regional hydrographic commissions;
• 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 letter;

34. Instructs ICGs:
• to advocate the Fourth edition of World Tsunami Awareness Day (WTAD 2019) among Member States and highlight target [d] of the Sendai Framework that stress substantial reduction of disaster damage to critical infrastructure and disruption of basic services and with an emphasis of ports, harbours and vertical evacuation;
• to consider the PTWS Key Performance Indicator Framework and provide input to a consolidated report for the 13th TOWS-WG meeting;
• to continue the Tsunami Ready pilot activities with UNESCO-IOC recognition, including conducting surveys on Member State status, interest and feedback in the implementation of Tsunami Ready;

35. Advocates that the UN Decade of Ocean Science for Sustainable Development (2021–2030) adopts an initiative aimed at developing a comprehensive global tsunami hazard assessment including all potential tsunamis, anywhere in the world, regardless of its source; enhancing sensing and analysis strategies to enable the rapid characterization of tsunami sources which we hold as fundamental in transforming our ability to forecast and warn of local and/or non-seismic source tsunami threats; and strengthening community preparedness to enable efficient response to tsunamis from all sources;

36. Extends the tenure of TOWS-WG and its Task Teams on (i) Disaster Management and Preparedness and (ii) Tsunami Watch Operations, with Terms of Reference as given in IOC Resolution XXIV-4 [for TOWS-WG] and IOC/TOWS-WG-VI/3 [Annex II; for TTDMP] and ToRs for TTTWO as given in IOC/TOWS-WG-X Appendix I.

9. ASSESSMENT AND INFORMATION FOR POLICY
[Res. XXVII-2(B)]

9.1. REPORT OF THE IHO-IOC GECBO GUIDING COMMITTEE
[Rule of Procedure 48.3; IOC-XXVIII/Dec.6.2; EC-XLIX/Dec.4.3.3, 4.3.4]

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<td>GGS35/13</td>
<td>Thirty Fifth Meeting of the GECBO Guiding Committee (GGC35), 15–16 November 2018, Canberra, Australia</td>
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Dr Shin Tani, Chair of the GEBCO Guiding Committee, presented a report of activities for the period 2017–2019 (IOC/INF-1381). He reviewed the various activities undertaken by GEBCO and in particular highlighted the implementation of the Nippon Foundation–GEBCO Seabed 2030 project aimed at boosting ocean mapping activities globally, hence ensuring that all undersea features larger than 100 m are mapped by 2030. He highlighted the proposal of the Guiding Committee to establish a Sub-Committee to coordinate the communications, outreach and external relations strategy and activities being conducted to support and raise awareness of the GEBCO Project and to complement the focused outreach activities of the Seabed 2030 Initiative. Terms of reference will be developed by the Guiding Committee and reviewed at its next meeting. The GEBCO Chair also informed the Assembly of the proposal of the Guiding Committee to reduce the length of terms of the Chair and vice-Chair from five to three years, renewable for one further term. A proposal to amend of the GEBCO Guiding Committee Terms of Reference to reflect such proposal is presented in the GEBCO report.

Finally, the Chair informed the Assembly that the GEBCO Guiding Committee welcomed the outcome of the IOC Working Group on User Requirements and Contributions to GEBCO Products which was presented to the 51st session of the IOC Executive Council. He identified possible GEBCO activities to be funded through the IOC regular programme funds for the biennium 2020–2021.

**IHO-IOC GEBCO Guiding Committee**

The Assembly,

1. 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,

2. Having examined documents IOC/INF-1381 and GGS35/13 that report on the activity of the GGC during the intersessional period (2017–2019),

3. Recalling Decision EC-LI/4.5 on the Review of User Requirements and Potential Contributions to GEBCO on a biennial basis, with the next assessment to be presented to the IOC governing body in 2020,


5. Recalling Decision IOC-XXVIII/6.2(I) by which it adopted the current terms of reference of the GEBCO Guiding Committee in 2015,

6. Endorses the amendment to the GEBCO Guiding Committee Terms of Reference and Rules of Procedure proposed by the GGC at its 35th meeting and presented in annex to document IOC/INF-1381, in particular paragraph 2.1 (Office bearers) in annex to this decision.

7. 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,
facilitate GECBO capacity development, including training opportunities, and
actively participate in the next assessment, to be conducted by the Working
Group on User Requirements and Contributions to GECBO Products.

Annex to Decision IOC-XXX/9.1

Amendment to the General Bathymetric Chart of the Ocean (GECBO) Project – Terms of Reference and rules of procedure for the Joint IHO-IOC GECBO Guiding Committee

2. Office Bearers

2.1 The Chair and Vice-Chair shall be elected by the Committee from the voting Members of the Committee and normally should be from different parent organizations. The Chair and Vice-Chair are each elected for up to a five three-year term, but not exceeding their current membership of the Committee. They can be re-elected for a maximum of one additional term by the Committee. The Chair shall conduct the business of the Committee. If the Chair is unable to carry out the duties of the office, the Vice-Chair shall assume the Chair with the same powers and duties. […]

159. The representatives of ___ Member States 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: ____________.

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]

Information: IOC/INF-1378 Update on the UN Process on Conservation and Sustainable Use of Biological Diversity in Areas Beyond National Jurisdiction Process

References: A/CONF.232/2019/1 President’s aid to negotiations (3 December 2018)

160. Mr Ariel Troisi, Vice-Chairperson of IOC, introduced this item. He reported on the recent developments related to the negotiation of a new legally-binding instrument to conserve and sustainably use marine biodiversity in areas beyond national jurisdiction (the High Seas and the Area) under the United Nations Convention on the Law of the Sea (UNCLOS). He recalled that in December 2017, the United Nations General Assembly had decided, through Resolution 72/249, to organize an intergovernmental conference, scheduled over four meetings to be held over a three-year period (2018–2020), with the aim of finalizing the BBNJ legal instrument. Negotiations are to address topics identified in the package agreed upon in 2011, namely environmental impact assessments and area-based management tools, including the establishment of marine protected areas in areas beyond national jurisdiction. They would also provide a governance mechanism that regulated access to and benefited sharing derived from marine genetic resources. Capacity development and the transfer of marine technology were also being considered to serve all future Parties, including developing countries.
161. He also reported on the participation of the IOC Officers and Secretariat in the first two meetings of the Intergovernmental Conference that took place in September 2018 and March-April 2019 at the UN Headquarters, where IOC co-organized several side events. He stressed that many items to be negotiated under the intergovernmental conference touched on areas of IOC’s competency, particularly the use of the best available scientific information as the basis for management decisions and conservation policies, the potential contribution of the Ocean Biogeographic Information System (OBIS) as an effective global platform for the sharing of research data and information, the application of IOC Criteria and Guidelines on the Transfer of Marine Technology (TMT) as a guiding principle, and the establishment of a clearing house mechanism to support capacity development and TMT. Regarding the later, as reported under agenda item 11.1, IOC is advancing with the conceptualisation of clearing house mechanism for TMT and CD under the guidance of the IOC Group of Experts on Capacity Development.

IOC-XXX, Dec. 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

The Assembly,

1. Recalling United Nations General Assembly resolution 72/249, which decided to convene, commencing in 2018, 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,

2. Recalling also that IOC is a competent international organization under UNCLOS and has a long history in promoting international cooperation in ocean science within and beyond national jurisdiction,

3. Further recalling United Nations General Assembly resolution 69/292, which recognizes that the BBNJ process should not undermine existing, relevant, legal instruments and frameworks and relevant global, regional and sectoral bodies,

4. Takes note of and welcomes the active role of the Commission at the organisational stage and in the course of the first two meetings of the Intergovernmental Conference, in accordance with its mandate in areas related to marine scientific research, capacity development and the transfer of marine technology, as well as data and information management;

5. Requests the Executive Secretary, Chairperson or a designated Officer of IOC to represent the Commission in the remaining meetings of the Intergovernmental Conference scheduled for 2019 and 2020;

6. Invites IOC Member States to continue supporting the role of the Commission through their preparation and statements at forthcoming meetings of the intergovernmental conference;

7. Requests the Executive Secretary and Officers of IOC to report on developments in this area to the IOC Executive Council at its 53rd session in 2020.
The representatives of __ Member States 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: ____________.

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

Information:
- IOC/INF-1379: Progress in the implementation of the ICAM Strategy, including marine spatial planning, sustainable blue economy and large marine ecosystems
- IOC/INF-1380: Strengthening Global Governance Of Large Marine Ecosystems and their coasts in the context of IOC Activities

Mr Alejandro Iglesias Campos, ICAM Technical Secretary, introduced this item and provided a progress report on the implementation of the ICAM Strategy, covering activities that are being developed in the last biennium in the field of Integrated Coastal Area Management, Marine Spatial Planning, Sustainable Blue Economy, Decision support tools for coastal and ocean management, and Large Marine Ecosystems (LME).

He highlighted the IOC leading work in supporting ecosystem-based management practices and the implementation of the Joint Roadmap on Marine/Maritime Spatial Planning developed by the European Commission and IOC as the general framework for promoting MSP and building related technical capacities in all ocean basins. The Technical Secretary finally recalled the role of IOC in providing technical support to the community of Large Marine Ecosystems (LME) projects funded by the Global Environment Facility. Since 2016, a dedicated project coordination unit has been established at IOC to facilitate the sharing of knowledge and scientific applications amongst LME projects related to transboundary water management, the building of technical capacity, as well as supporting South-to-South and North-to-South cooperation through effective regional networks of marine practitioners.

IOC-XXX, Dec. 10.2

Integrated Coastal Area Management Programme (ICAM) Strategy Implementation

The Assembly,

1. Having examined Documents IOC/INF-1379 and IOC/INF-1380,

2. Takes note of the progress in implementing IOC Integrated Coastal Area Management (ICAM) Strategy, including activities related to marine spatial planning, Large Marine Ecosystems (LMEs) and sustainable blue economy;

3. Takes note also of the progress in implementing the IOC and European Commission Joint Roadmap to accelerate Marine/Maritime Spatial Planning processes worldwide and its corresponding commitment to the 1st UN Ocean Conference (2017) and Our Ocean Conference (Malta, 2017);

4. Welcomes the new MSP global initiative (2018–2021) co-financed by the European Fund of Maritime Affairs and Fisheries of the European Union, to be implemented by the Secretariat at global scale, with pilot case studies in the Western Mediterranean
and the Southeast Pacific;

5. **Further welcomes** the role of IOC in executing the GEF-UNDP IW/LME Learn project and in particular the technical and scientific support it provides to the global LME community;

6. **Encourages** IOC science, observation, tsunami and data programmes to further collaborate with the ICAM programme in the operationalisation of ecosystem-based management approaches;

7. **Supports** the preparation of multilingual internationally accepted guidance on marine spatial planning and the continuing strengthening of capacity development activities jointly organized with national authorities, regional and international partners;

8. **Expresses its deep appreciation** to the Kingdom of Belgium (Government of Flanders), the Kingdom of the Netherlands (Ministry of Infrastructures and Waters), the Kingdom of Spain (Government of Spain, Government of Andalusia, Tarifa and Facinas), the Kingdom of Morocco (Government of Morocco and Regional Authorities of Tanger, Tetouan, Al-Hoceima) and the Man and Biosphere Programme of UNESCO, the Kingdom of Sweden (Government Offices); the Republic of Turkmenistan (Government of Turkmenistan), the European Commission’s Directorate General for Maritime Affairs and Fisheries; and the Secretariat of the Permanent Commission of the Southeast Pacific (CPPS) and its Member States, the Priority Actions Programme/Regional Activity Centre (PAP/RAC) of the Mediterranean Action Plan, the Global Environment Facility and United Nations Development Programme, for their valuable contributions to the work of IOC in these areas;

9. **Invites** Member States to support, through extra-budgetary resources as well as in-kind contributions, the ICAM Strategy and relevant initiatives related to integrated coastal area management, marine spatial planning, sustainable blue economy, coastal hazards mitigation, and development of decision-support tools for management of large marine ecosystems;

10. **Further invites** Member States to sustain the role of IOC in providing technical support to the LME project community, including in the next phase of the GEF IW:Learn project (2020–2024).

165. The representatives of ___ Member States 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: ____________.

11. **CAPACITY DEVELOPMENT**  
[Res. XXVII-2(B)]

11.1. **REPORT OF THE IOC CAPACITY DEVELOPMENT GROUP OF EXPERTS**  
[IOC-XXIX/Dec. 10.1]

| References:   | IOC/INF-1203     | IOC Criteria and Guidelines on the Transfer of Marine Technology |
Vice-Chair Ariel Troisi, Chair of the IOC Group of Experts on Capacity Development, introduced this item. He referred to Documents IOC/INF-1203, IOC/INF-1332 and IOC/GE-CD-TT-I/3. He recalled that during its 29th session, the IOC Assembly adopted Decision IOC-XXIX/10.1 establishing the IOC Group of Experts on Capacity Development.

The main objectives of the Group of Experts are to assist the global and regional programmes with the implementation of capacity development (CD) needs assessments, the development of related workplans, mobilization of resources, and provide advice on relevant methods and tools to deliver CD. The Group also advises the Assembly on implementation of 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 extent possible, of existing IOC data and information systems.

Mr Troisi informed the Assembly that the First Session of the Group was held at UNESCO Headquarters, Paris, France on 21–23 March 2018. The meeting was attended by 41 participants including members of the group, representatives of partner projects and organizations, and staff of the IOC Secretariat. The meeting updated the need assessments and gap analyses that had been submitted, in draft form, to the IOC Assembly at its 29th session in 2017. In addition, the meeting split into three regional sub-groups (IOCAFRICA, IOCARIBE, WESTPAC) and one special group on the planned Clearing-House Mechanism (CHM) for the Transfer of Marine Technology (TMT). The three regional sub-groups discussed priority needs, ways how the global programmes can assist the regions, as well as common use of existing IOC methods and tools that can contribute to CD.

The Group established two task teams. The Task Team on Implementation of a TMT/CHM portal (TT TMT/CHM) and related activities will seek answers on the questions and issues formulated by the sessional working group on TMT/CHM taking into account the Decade preparations. The Task Team will develop the scoping and need assessment for the CHM, which should be developed, as much as possible, using existing information systems and sources. The Task Team to identify CD Requirements of Member States in relation to the IOC CD Strategy will take into account the work already done and will focus on needs of SIDS, LDCs and the Member States that are currently not member of any of the IOC regional subsidiary bodies.

The Task Teams decided to develop a joint online survey to collect the necessary information. IOC Circular Letter 2738 issued on 5 October 2018 also invited Member States to designate an IOC National Focal Point for CD to enable more effective communication with the IOC on CD and CHM issues and to assist Member States with the future implementation of the IOC CD Strategy. A total of 49 responses were received (12 from IOCAFRICA, 12 from IOCARIBE, 12 from WESTPAC and 11 from other Member States not included in IOC regional bodies). Only two responses were received from IOCINDIO Member States, so these were not considered representative of the region in the framework of the analysis. Considering the relatively small sample size, results need to be interpreted with some caution. The survey results were reviewed and analysed during a meeting of both Task Teams, held at UNESCO Headquarters on 13–14 March 2019.

Regarding the development of a CHM, all regions reported that such a mechanism would be instrumental to the further development of ocean science capacity in your country. All regions expressed preference for an online central portal integrating the data and information harvested from regional/sectoral CHM portals. The respondents identified the need for a series of nodes rather than one global central node but using technology that allows interoperability between the nodes. The question on marine technologies that should be covered in the CHM resulted in regional differences. IOCAFRICA and WESTPAC ranked “Equipment for in situ and laboratory observations, analysis and experimentation” the highest, while IOCARIBE preferred “Information and data”. The question on the kind of information that should be included in the CHM also showed regional differences: IOCAFRICA listed a
“Directory of marine research institutes offering laboratory facilities, equipment and opportunities for research and training” first, while IOCARIBE and WESTPAC ranked first “Universities and other organizations offering study grants and facilities in marine science”.

172. Regarding CD requirements of Member States, the survey revealed the following key results: the question on the most important national CD needs revealed differences between the regions: IOCAFRICA respondents request first of all “Ocean science sampling equipment and instrumentation” while IOCARIBE and WESTPAC place “Advanced professional development training (specific short courses, technical training, etc.)” and “Qualified ocean science professionals” first. The same applies for IOCARIBE SIDS and WESTPAC SIDS.

173. In terms of developing capacity in human resources, respondents from all three regions recommend “Establishment of an internship/fellowship programme” and “Support for organization of training courses, workshops and summer schools relevant to the IOC mandate”. All regions call for reinforcing budgeting of the regional sub-commissions but also for establishing an effective coordination and communication mechanism between the regional sub-commissions and the global programmes. From all IOC “information portals” all respondents identified http://www.goosocean.org as the best known.

174. In the context of priority areas of research and development for the UN Decade of Ocean Science for Sustainable Development 2021–2030, almost all respondents across all regions identified “Capacity development and accelerated technology transfer, training and education, ocean literacy” as top priority.

175. The results obtained by the survey have meanwhile been shared with the IOC regional subsidiary bodies during their 2019 sessions, with the objective of inviting them to take these results into account when drafting their workplans including capacity development. The Task Teams prepared 11 suggestions/recommendations that were forwarded to the Group of Experts for review and further action. The Group of Experts worked on this by email and formulated a draft decision for consideration of Assembly.

IOC-XXX/2 Prov. – page 60

IOC Capacity Development Group of Experts

The Assembly,

1. 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,

2. Recalling the adoption, at its 28th session, of the IOC Capacity Development Strategy (2015–2021),

3. Recalling further its Decision IOC-XXIX/10.1, establishing the IOC Group of Experts on Capacity Development,

4. Welcoming the contributions of its Member States to capacity development at the global and regional level through financial and in-kind contributions,

5. Welcoming further the implementation, through IOCARIBE (and its CMA2 project), of a regional prototype for the IOC Clearing-House Mechanism for the Transfer of Marine Technology (CHM/TMT),
6. **Stressing** the need to share, across programmes and regions, experience and expertise in capacity development, and to coordinate efforts to increase efficiency and maximize impact,

7. **Urges** Member States to nominate an "IOC CD focal point" who will be responsible for the coordination of their country's participation in IOC's CD activities;

8. **Invites** the IOC Group of Experts on Capacity Development to:
   
   (i) repeat the CD survey at regular intervals [biannually], possibly including CD implementation impact monitoring/metrics, also taking into account other methods such as regional reviews, science conferences etc.;
   
   (ii) 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;
   
   (iii) organize a regional conference on capacity development requirements of Pacific SIDS involving IOC Member States as well as other stakeholders active in the region;
   
   (iv) prepare a detailed and costed proposal for the development of an IOC Clearing-House Mechanism for the Transfer of Marine Technology using a hybrid model of interoperable nodes as well as a central access point, to be developed in a step-wise modular approach, in collaboration with IODE and its Project Office, and taking into account the regional prototype developed as well as evolving requirements, for submission to the IOC Executive Council at its 53rd session in 2020;

9. **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 organisations;

10. **Invites** Member States to actively contribute to the surveys and contribute to the IOC's Capacity Development activities through financial and/or in-kind contributions.

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176. The representatives of ___ Member States 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: ___________.

11.2. **IOC’S CONTRIBUTION TO OCEAN LITERACY IN 2018–2021: ACTION PLAN**
[EC-LI/Dec.4.9]

**Working document:** IOC-XXX/2 Annex 7  IOC’s Contribution to Ocean Literacy in 2018–2021: Action Plan

177. Ms Francesca Santoro, programme specialist for ocean literacy, introduced the item. She recalled that increased visibility and awareness is one of the foreseen 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. Furthermore, she recalled the increasing role of the IOC in ocean literacy, following the IOC’s voluntary commitment in the context of the UN Oceans Conference (New York, June 2017), as well as the role of ocean literacy in the framework of the UN Decade of Ocean Science for Sustainable Development.

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. She described the main elements of the draft plan that was elaborated in consultation within the Secretariat in order to ensure coherence with the IOC activities and programmes. Through international collaboration, exchange of good practices and creation of partnerships, IOC will assist its Member States to reinforce the work on ocean literacy, so that ocean knowledge is fully leveraged to advance ocean sustainability. Ocean literacy is an evolving concept that is being transformed from being a tool for formal education to a tool that can be used at the interface between science, society and policy. Ocean literacy has the potential to convey the message of the importance of ocean science and knowledge for sustainable development to different segments of the society. Actions will be focussed on reinforcing the presence of ocean science in formal education, in collaboration with the UNESCO education sector, on enhancing the dialogue and the collaboration with different stakeholders, and on enhancing the accessibility to ocean literacy resources. Good practices and tools already existing in different Member States will be taken into account, and the ocean literacy resources to be developed will pay particular attention to different cultural approaches and different target groups, including disadvantaged or under-represented groups.

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. An IOC conference on ocean literacy was held in Venice in December 2017. In addition, the Sea Change project, funded by the European Commission Horizon2020 programme, was successfully completed.

IOC’s Contribution to Ocean Literacy in 2018–2021

The Assembly,

1. Having considered Document IOC-XXX/2 Annex 7,

2. Recalling:
   (i) 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,
   (ii) the UNESCO/IOC’s voluntary commitment #OceanAction15187: Ocean Literacy for All: a global strategy to raise the awareness for the conservation, restoration, and sustainable use of our ocean,

3. 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,

4. Also taking into account the expected role of ocean literacy in the context of the UN
5. **Decides** to distribute the Draft IOC Ocean Literacy Plan of Action, as detailed in Document IOC-XXX/2 Annex 7, to Member States, IOC regional subsidiary bodies as well as global programmes for comments;

**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.

180. The representatives of __ Member States 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: ____________.

12. **ADMINISTRATION, FINANCE AND MANAGEMENT**

[Statutes Art. 6B]


181. Vice-Chair Ariel H. Troisi, Chair of the Intersessional Financial Advisory Group (IFAG), introduced this item. He updated the Assembly on the work of the group in follow-up to Resolution EC-LI.2, which endorsed the Implementation Plan of the Recommendations of the UNESCO Open-ended Working Group on Governance. He highlighted that the intersessional work focused on the review of the proposed new referencing approach for the IOC Governing Bodies documentation, in order to make it more user-friendly, as well as on the review of the Draft Guidelines for the IOC Officers, prepared by the Secretariat in accordance with the Executive Council’s recommendations. Prior to being shared with the IFAG, both documents benefitted from a discussion at the annual meeting of the IOC Officers, 15-17 January 2019. He also informed the Assembly of the correspondence on this issue between the IOC Chair and the UNESCO General Conference President, as well as of the IOC Chair’s participation in the Meeting of the UNESCO Working Group on Governance on 27 March 2019, which gave the opportunity to all International/Intergovernmental Bodies, including IOC, to exchange views and information on their approaches to the implementation of the recommendations.

182. Vice-Chair Ariel H. Troisi reminded the Assembly that the Executive Council at its 51st session in July 2018 also reviewed the Revised Financial Regulations for the IOC Special Account aimed at addressing 38 C/Resolution 86 and at aligning, to the extent possible, the existing financial regulations with the new standard Financial Regulations as approved by the Executive Board of UNESCO at its 200th session. The Council was satisfied that ‘the Revised
Financial Regulations fully reflect the specificity of the IOC’s governance and its status as a body with functional autonomy within UNESCO. The Executive Council then recommended that ‘the IOC Assembly formally adopt the Revised Financial Regulations for the IOC Special Account as presented in Annex 2 to resolution EC-LI.2 at its 30th session.

IOC-XXX, Dec. 12.1

Follow-up to Resolution EC-LI.2

The Assembly,

1. Having examined documents IOC-XXX.2 Annex 12 and Resolution EC-LI.2,

2. Thanks Vice-Chair, Ariel H. Troisi, and all Member States having contributed to the work of the Intersessional Financial Advisory Group;

3. Further thanks the IOC Chair Peter Haugan for maintaining the dialogue with the UNESCO General Conference President and the UNESCO Working Group on Governance with a view of exchanging ideas and experiences in the implementation of the recommendations and improving IOC’s effectiveness and efficiency;

4. Takes note of the documents IOC-XXX/2 Annex 12 and Resolution EC-LI.2 and Annexes subject to further examination by the Financial Committee with a view of formulating draft resolution for discussion and adoption in plenary.

183. The representatives of ___ Member States 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: ___________.

12.2. DRAFT PROGRAMME AND BUDGET FOR 2020–2021 (DRAFT 40 C/5)

Working document: IOC-XXX/2 Annex 9 Draft Programme and Budget for 2020–2021 (Draft 40 C/5)

184. The Executive Secretary introduced this item. He clarified that the UNESCO Draft Programme and Budget for 2020–2021 is the second part of the quadrennial Programme adopted by the General Conference at its 39th session (39 C/5). It will close the cycle of the Organization’s Medium-Term Strategy for 2014–2021 (37 C/4). The working document in front of the Assembly contains the Secretariat’s proposal for the Draft 40 C/5, with programmatic targets and budget scenarios for the second biennium (2020–2021) of the quadrennial programme (2018–2021), as approved by the IOC Assembly at its 29th session in 2017.

185. In keeping with the decision of the Executive Board at its 205th session, draft document 40 C/5 has been drawn up within an integrated budget framework; it presents four UNESCO and three IOC budget scenarios, as requested by the Member States, based on the appropriated regular programme budget of:

- $507 million ($10,276,200 for the IOC),
- $518 million and $523.6 million ($10,776,100 for the IOC),
- $534.6 million ($11,075,500 for the IOC).

186. The Executive Secretary then went on to briefly explain the impact of various budgetary scenarios on the work of the Commission.

187. Building on work launched in the current 2018–2019 biennium (39 C/5 approved), IOC has now less than two years to work with Members States, UN, partners and stakeholders to develop an implementation plan for the Decade.

188. For the IOC Secretariat, which is quite small, the challenge is now to raise not only extrabudgetary resources necessary to maintain its core operational programmes but also significant additional resources to lead and coordinate the Decade preparation phase. Critical understaffing, already highlighted by the UNESCO External Auditor in 2016, undermines these fund-raising efforts and threatens the sustainability of the Secretariat.

189. None of the proposed budgetary scenarios allows to adequately address the situation. The critical need to provide at least basic support to all programmatic sections by creating one additional general service staff position, implies an 11 % cut to IOC programmatic activities in the 40 C/5 $518 million (and $523.6 million) budget scenario. While every effort will be made to offset the impact of this cut through extra budgetary resource mobilization, one must be conscious that increased reliance on extra budgetary support brings with it a number of constraints. Even with full alignment of extra budgetary projects’ objectives with the IOC programmatic goals, the project-oriented approach often leads to shifts in focus and does not facilitate harmonious and continuous implementation based on the collectively agreed priorities. This is of particular concern for the IOC operational programmes in ocean observations and services and for data and information management, which require stable investment in core system design and maintenance. The reduced resources will also harm the capacity to work regionally, in particular as regards the operationalization of the IOC Capacity Development strategy. Lack of sufficient staff at the regional level but also at the central coordination level threatens to transform the IOC’s capacity development activities into donor-prioritized and less coordinated efforts.

190. The $534.6 million scenario allows for some seed funding for the Decade coordination and fund-raising activities, while maintaining the rest of the programme at the same level as in 2018-2019. Without the minimal breathing space allowed by the $534.6 million scenario only, the Secretariat may not be in a position to deliver a Decade plan, which fully reflects the needs of all nations, mainly because it would not be possible to hold thorough consultations in all regions. The $534.6 million scenario would also allow for the operationalization of a global clearing house mechanism to facilitate the transfer of marine technology, in response to regional needs of developing nations, including LDCs and SIDS. This would be central to the implementation of the IOC capacity development strategy and would allow to respond to various international calls on IOC to take the lead on this topic (e.g. UNGA, SDG 14, and UNCLOS in the context of the future international legally binding agreement on the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction, currently under negotiation).

191. As regards the $507 million scenario, it was prepared based on the re-costed 39 C/5 staff establishment without any change, and with the 19% cut to programme activities distributed across the board. Given the impact of such a cut, should such a scenario become a reality, the IOC would need to undertake a major re-prioritization exercise. This would likely

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2 Proposed regular programme budget appropriations for all programme sectors, including IOC, are the same under the $518M and $523.6M scenarios)
require discontinuation or considerable downscaling of certain programs and cuts in their supporting staff. Core programmes of the IOC would then operate below the sustainability level and may even face closing down. The Assembly’s general guidance is sought on the approach to be followed by the Secretariat in the face of such scenario, including as to the validity of the budgeting criteria adopted in Resolution XXVII-2 (C), Annex 2.

IOC-XXX, Dec. 12.2

**Draft Programme and Budget for 2020–2021**

(Draft 40 C/5)

The Assembly,

1. Having examined document IOC-XXX/2 Annex 9,

2. Shares the concerns expressed by the Executive Secretary over the financial situation of the Organization and the impact of the proposed budgetary scenarios, none of which reflect the actual needs of the Commission;

3. Takes due note of the Secretariat’s proposals for three budget scenarios and accompanying programmatic targets, subject to further examination by the Financial Committee with a view of formulating draft resolution for discussion and adoption in plenary.

192. The representatives of __ Member States 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: ____________.

12.3. **DRAFT MEDIUM-TERM STRATEGY 2022–2029:**

PRELIMINARY PROPOSALS BY THE SECRETARIAT


193. The Executive Secretary introduced this item. He highlighted that the first version of the document was tabled during the annual meeting of the IOC Officers, 15–17 January 2019, and the version in front of the Assembly benefitted from the Officers’ initial review and inputs. The document was also shared with the IFAG so as to facilitate the work of the Assembly and its sessional Financial Committee.

194. The Executive Secretary explained that the document builds on the current Medium Term Strategy 2014–2021, preserving the comprehensive framework of six functions for its implementation, while at the same time attempting to further clarify and sharpen the High-Level Objectives of the Commission. He stressed the importance of a constructive and inclusive discussion of these preliminary proposals, both in the plenary and in the Financial Committee, with a view of guiding the future work of the Secretariat on this key document. He reminded the Assembly that the next draft will be circulated to IFAG in the intersessional period leading to the 43rd session of the Executive Council in 2020 and the final adoption of the IOC Medium-Term Strategy 2022–2029 by the 31st session of the IOC Assembly in 2021.
Preliminary Proposals by the Secretariat

The Assembly,

1. Having examined document IOC-XXX/2 Annex 10,

2. Thanks the Executive Secretary for the preliminary proposals developed by the Secretariat for the Draft Medium-Term Strategy for 2022–2029;

3. Expresses its appreciation that the document could benefit from inputs of the IOC Officers at their annual meeting, 15–17 January 2019, and from intersessional consultations through IFAG;

4. Takes note of the documents IOC-XXX/2 Annex 10 Rev. subject to further examination by the Financial Committee with a view of formulating draft resolution for discussion and adoption in plenary.

The representatives of ___ Member States 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: ____________.

12.4. REPORT BY THE CHAIRPERSON OF THE FINANCIAL COMMITTEE
[Statutes Art. 1.2]

The Chair of the Financial Committee Ariel H. Troisi 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). He informed that the Financial Committee’s discussions have been extremely constructive and thanked all Member States that participated in the work of the Committee for their commitment and collaboration. He then proceeded to a detailed presentation of the draft resolution prepared by the Financial Committee for consideration by the Assembly.

The Assembly expressed its high appreciation to the Chair of the Financial Committee Ariel H. Troisi 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.

Draft Resolution XXX-(12)

Financial Matters of the Commission

The Intergovernmental Oceanographic Commission,

[Draft Resolution to be finalised prepared during the session]

The representatives of ___ Member States 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: ____________.
12.5. PREPARATION FOR THE COMMEMORATION OF THE 60TH ANNIVERSARY OF THE IOC (1960–2020)  
[Rule of Procedure 8.1(g)]

The IOC Chair briefly introduced this item. He informed that the matter was discussed by the IOC Officers at their annual meeting at UNESCO Headquarters, 15–17 January 2019. A range of possible activities was discussed. IOC Circular letter 2767 dated 25 April was issued to solicit information from Member States on archival sources as well as photos and other visual documents of interest for compiling the IOC’s history. The Assembly may wish to invite the new team of Officers to lead the preparations, informing and consulting all Member States along the process.

IOC-XXX, Dec. 12.5

Preparation for the Commemoration of the 60th Anniversary of the IOC (1960–2020)

The Assembly,

1. Taking note of the oral report by the Chairperson of IOC,

2. Encourages Member States to contribute to the IOC History Project by responding to IOC Circular Letter 2767 by 15 September 2019;

3. Invites Member States and subsidiary bodies to inform the Secretariat about commemoration activities planned and to exchange ideas for national and regional activities.

The representatives of __ Member States 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: ____________.

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]

Information:

IOC-XXX/NOM/Inf.1 Updated listing of the IOC electoral groups and listing of the distribution of seats on the Executive Council among the electoral groups

IOC-XXX/NOM/Inf.2 List of candidates for Elections

IOC-XXX/NOM/1 Report of the Chair of the Nominations Committee

The Chair of the Nominations Committee reported on this item (IOC-XXX/NOM/1). [to be completed]

The membership of the Executive Council for the next intersessional period and the 31th session of the Assembly is given in Annex _____ to the present report.
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

IOC-XXX, Dec.12.6

IOC Elections 2019

The Assembly,

I. Election of the Chair of the Commission

1. Taking note that:
   (i) 
   (ii) 
   2. Elects __________ (country)

II. Election of the Vice-chairs of the Commission

3. Taking note that:
   (i) 
   (ii) 
   4. Elects
   - __________ (country) (Group 1)
   - __________ (country) (Group 2)
   - __________ (country) (Group 3)
   - __________ (country) (Group 4)
   - __________ (country) (Group 5)

III. Election of the Members of the Executive Council

5. Taking note that:
   (i) 
   (ii) 
   6. Elects ______________

12.7. 31th SESSION OF THE ASSEMBLY AND 53rd and 54th SESSIONS
OF THE EXECUTIVE COUNCIL
[Statutes, Art. C.7; Rule of procedure 19.2; EC-LI/Dec.6.3]

Dr Ryabinin reminded the Assembly of the recommendations of the 52nd session of the Executive Council, acting as the Steering Committee for this Assembly, on the dates and duration of the 53rd session of the Council in 2020 and duration of the 31st session of the Assembly in 2021.
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 [to be completed].

IOC-XXX, Dec. 12.7

Dates and Places of next Sessions of the Executive Council and Assembly

The Assembly,

1. Recalling the recommendations of the Executive Council at its 52nd session (EC-LII, Dec.4),

2. Decides to hold:
   (i) The 53rd session of the Executive Council for [number to be completed] days in UNESCO Headquarters, Paris over the period of [to be completed],
   (ii) The 31st session of the Assembly for a duration of six [or days 6.5] plus one Ocean Science Day, at UNESCO Headquarters, over the period from _________ to __________ in June-July 2021, preceded by a one-day session of the Executive Council (54th session) acting as the steering committee of the Assembly.

The representatives of ___ Member States 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: __________.

13. ADOPTION OF RESOLUTIONS AND SUMMARY REPORT

206. [to be completed]

IOC-XXX, Dec. 13

Adoption of Resolutions and the Summary Report

The Assembly,

1. Having considered the recommendations of the Executive Council at its 52nd session (EC-LII, Dec.3.4(II)) on organization matters,

2. Adopts the decisions and ___ resolutions of the session;

3. Takes note of the draft summary report of the session; and

4. Requests the Executive Secretary to circulate the narrative part of the report to Member States in the four working languages of the Commission by 31 August 2019 at the latest for its adoption by correspondence by 15 October 2019.

5. Further requests the Executive Secretary to inform the Officers of the results of the evaluation questionnaire in order to analyse Member States’ expectations and concern and to pursue the reflection on the ways to further optimise the organisation of governing bodies’ meetings.
14. CLOSURE

207. The Assembly met in plenary session during ___ days from ___, considered ___ items on its agenda and approved ___ decisions and ___ resolutions. The plenary meeting was supported by some ___ preparatory meetings and ___ information side meetings during the session. The Chair of the Commission closed the 30th Session of the Assembly at ___ on ___ 2019.