

Intergovernmental Oceanographic Commission
Reports of Meetings of Experts and Equivalent Bodies



IOC Group of Experts on Capacity Development

Fifth Meeting

Paris, France

27-29 February 2024

UNESCO

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ANNEXES

- I. Agenda
- II. List of Participants

DAY 1 - Tuesday 27 February

1000-1015

1. OPENING OF THE MEETING

The Fifth Session of the Group of Experts on Capacity Development was held on 27-29 February 2024 at the UNESCO-IOC Headquarters in Paris, France. The meeting was opened at 1000 CET by Mr Alan Evans, Chair of the Group of Experts on Capacity Development (GE-CD).

1.1 ADDRESS BY THE CHAIR

Mr Alan Evans thanked all the participants for joining the fifth session of the GE-CD and highlighted the important role of the Group as capacity development plays a central role as one of the core functions of the IOC. He looked back at the first four sessions of the Group and their important contributions in delivering critical work on capacity development, especially in the adoption of the new IOC Capacity Development Strategy 2023-2030.

1.2 ADOPTION OF THE AGENDA

Ms Johanna Diwa, IOC CD Secretariat, introduced the provisional agenda of the meeting. She invited the Group to review and adopt the provisional agenda available from the meeting page on <https://oceanexpert.org/event/4043#agenda>. The Group was requested to note that all working documents were made available only as on-line documents. The list of participants is attached as Annex II.

No other business was proposed.

The Group adopted the agenda. It is attached to this report as Annex I.
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1.3 ADOPTION OF THE TIMETABLE

Ms Diwa then presented the provisional timetable and invited the Group to review and adopt the timetable ([Document IOC/GECD-V/1 Timetable](#)) She informed the Group that the meeting would be held for 2.5 days from Tuesday to Thursday. The morning session will be between 1000 and 1300 with 30-minute coffee break and then between 1500 and 1630 in the afternoon on Day 1 and Day 2 while Day 3 will end at 1230.

She then reviewed the arrangements for the session and presented the List of Documents available online through <https://oceanexpert.org/event/4043#overview>. She noted that the main working document for the Session would be the Action Paper.

She also reminded the Group that a zoom connection is arranged for this meeting. She informed the Group that as earlier requested, the comments/questions that were received from the advance perusal of the Action Paper were lined up for discussion at the plenary. Accordingly, as the time allotted for the discussion is limited, participants were urged to carefully read this Action Paper and working documents in advance for the preparation for the Session.

All draft Recommendations and draft Decisions were included in the Action Paper and were briefly reviewed during the concerned agenda item for final adoption at the end of the Session.

The Group adopted the timetable for the session.

1015-1100

2. REPORT ON STATUS OF GE-CD-IV WORKPLAN

This agenda item was introduced by Mr Alan Evans. He referred to the workplan discussed at the 4th Session of the GE-CD ([Document IOC/GECD-IV/Fin. Report](#)) and asked the Secretariat to report on the status of tasks related to Ocean Info-Hub, Ocean CD-Hub and the IOC Capacity Development Needs Assessment Survey.

2.1 OCEAN INFOHUB PROJECT

This agenda item was reported by Lucy Scott.

She recalled that the First Session of the IOC Group of Experts on Capacity Development was held in Paris between 21-23 March 2018. A Task Team on the implementation of a TMT/CHM "portal" and related activities was convened and held its first meeting in March 2019. The meeting discussed the results of a survey (on CD needs assessment and on the clearing house mechanism – ([IOC Circular Letter 2738](#)) which was launched on 5 October 2018 until 14 February 2019. It focused on the three regional sub-commissions (IOCAFRICA, IOCARIBE, WESTPAC) and regional committee IOCIDIO, including SIDS.

All regions reported that such a mechanism would be instrumental to the further development of ocean science capacity in the countries. 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 majority of respondents had recommended a “A hybrid model: online central portal with deep-links to regional/sectoral CHM portals”.

Based on this, INVEMAR (Colombia) developed a pilot CHM for the Latin America and Caribbean region, in the context of the Caribbean Marine Atlas (CMA-II) project. The pilot “Clearing-House Mechanism LAC) (<http://portete.invemar.org.co/chm>) is a hybrid model, with a centralized portal that provides access to information sources identified by the users as most relevant (Databases on Training and Education resources, List of experts, Research vessels,..) and integrated from a number of existing web sources developed and maintained under IOC (OceanExpert, Ocean Teacher Global Academy, ODISCat)

From these and several other preparatory activities, the OIH Project was designed and approved and was implemented, starting in April 2020, funded by the Government of Flanders (Kingdom of Belgium).

1. Challenges identified

- A proliferation of online sources of data and information
- A diversity of online data systems
- Member states may have very valuable and useful resources, but they are difficult to find
- Global data and information resources have useful content, but local users might not know about them
- Challenges of trust in some regions

2. The objective of the OIH Project is to:

- respond to the global challenges of understanding and managing marine ecosystems in a rapidly changing world
- develop interoperability between existing information systems, thus improving the flow of information to end users.
- Improve access to marine and coastal data for multiple purposes, but especially to inform sustainable management and informed policy development.
- Facilitate equitable access to Ocean information and knowledge products
- By harnessing digital revolutions, and facilitating the sharing of new technologies between countries and institutions
- Connect independent digital initiatives to form a diverse, but interoperable and inclusive, Ocean Data and Information System.
- Mitigate challenges of access to technology by providing access to other resources

The overall aim was proof of concept.

3. This was undertaken through the following approach:

We worked with a number of founding partners, including the University of Ghent, WIOMSA, SPREP, SPC, EUROCEAN, EMODNET and other sister projects within IODE :

- Ocean and Data information system Catalogue of data sources (ODISCAT)
- OceanExpert: People, institutions and events
- AquaDocs: Documents and Publications
- The GOOS/IODE Ocean Best Practices System (OBPS)
- The Ocean Biodiversity Information System (OBIS)

We also worked within three pilot regions:

- Africa,
- Latin America and the Caribbean,
- Pacific Small Island Developing States

4. What was developed:

4.1 The ODIS-architecture

The OIH Project thus developed the first phase of the architecture underpinning the Ocean Data and Information system (ODIS-arch), together with partners and user communities, in a co-design process.

ODIS links partners, or nodes through a lightweight, schema.org based, decentralized interoperability architecture. As with natural ecosystems, ODIS will be resilient to the gain or loss of parts, and accommodate a high diversity of products and services, while maintaining its core functions.

The data are labelled according to different patterns or specifications, created based on the focal areas of the IOC and requests from its community of users (e.g. for sensors and instrumentation, software applications, event series, EOVs).

It was an important objective, in working with existing systems, that the barriers to joining be LOW and that we should not require re-design of any existing systems.

And these are all explained fully in the online, openly accessible Documentation <https://book.oceaninfohub.org>

4.2 Regional and thematic working groups, and communities of practice

- Although OIH first worked with global IOC partners and our three pilot regions, OIH gradually expanded over time so that now we are engaging with over 90 organisations at some level, to enable them to expose their metadata and to join the growing network and continue the ongoing process of co-design.
- The ODIS-architecture has been established and currently indexes 32 databases from 28 partner organisations these 32 nodes are contributing openly discoverable content to the Ocean InfoHub knowledge graph.
- With the assistance of co-financing from NORAD, OIH has been able to work beyond the three initial focus regions and bring in additional partners.
- Many other data-sharing initiatives work primarily in Europe or North America, but the Ocean InfoHub and ODIS is demonstrating interoperability between highly diverse themes, regions, and capacities across the globe.

4.3 An Ocean InfoHub Global Search portal has been developed as a demonstration of ODIS (<https://oceaninfohub.org>). The portal currently (December 2023) contains over 130,000 content items in seven content categories: (i) Experts (27,000); (ii) Institutions (13,000); (iii) Documents (42,000); (iv) Training (1,500); (v) Vessels (113); (vi) Projects (3,600); and (vii) Datasets (48,000).

4.4 Cross domain interoperability technology

Other UN agencies, global data systems, and initiatives in other domains and sectors have also expressed an interest in adopting the ODIS technology.

Interoperability solutions with organisations were discussed including GEO BON, the Helmholtz Metadata Collaboration (HMC), the Earth Science Information Partners (ESIP), and the Polar Data Discovery Enhancement Research (POLDER) project). OIH/ODIS is also a case study in the ongoing WorldFAIR project representing the ocean domain in a constellation of 11 case studies.

Underpinning all these activities, are capacity development activities, contributing also to the IOC's CD strategy.

5. The Ocean InfoHub, through ODIS, now provides a:

- **Sustainable, interoperable, inclusive, and openly accessible ODIS infrastructure**
 - Composed of **nodes**, through which data providers and partners can share (meta) data
 - Does not depend on a central Hub, the **web** is our **collective Hub**;
 - **Nodes have complete ownership and control, and choose** which metadata they would like to share.
 - Anyone can develop thematic or regional **portals**.
 - Provenance is maintained: linking back to the **original, authoritative source**
 - Architecture is a **lightweight**, minimal layer and workflows should not need to change.

6. OIH Project contributions to the IOC CD strategy

- The OIH is needs driven, with investment in tools that have been requested by regions
- The OIH will optimise the exchange of knowledge, information and learning
- It responds to national and regional priorities
- It will respect cultural and geographic diversity (regional identity of hubs, including language)
- Targets knowledge generators and users
- Builds on and strengthens existing resources
- Focuses on the transfer of local knowledge,
- on supporting early career scientists,
- and on remedying gender disparity by increasing access to information, technologies and opportunities.
- Facilitates equitable access to Ocean metadata.
- The low barriers to joining enable the inclusion of very simple, to highly complex systems.

OIH partnership with OTGA is very important. To reach the thousands of partners that would ultimately need to connect to, bilateral and in-person training is just not practical. The project has an online documentation, and also has been developing a Getting Started Toolkit for ODIS, which will be instrumental in getting new partners on board, to be used in conjunction with our online documentation, OTGA courses and hands-on bilateral meetings.

The IOC/OTGA/OIH Training course: **Implementing the Ocean Data and Information System (ODIS) architecture** was held in 2021 in English and then in 2023 in four languages. It was held online over a week-long period, and then made available as a self-paced course. [9 courses in total]

- 2021: 59 in English
- 2023: 81 across English, Spanish, Portuguese, French

OIH have worked closely with the International Coastal Atlas Network (ICAN), to support GeoNode training in association with the activities supporting the African Coastal and Marine Atlas.

OIH does bilateral training as it has a consultant on board who holds 1:1 meetings with partners to walk them through the joining process. This also has a two way feedback as he uses the interactions to improve the documentation as well as to develop a Getting Started manual that is currently in process.

OIH has supported the three pilot regions in the specific ways they wanted to link to OIH.

INVEMAR has a regional node of OIH, which links to datasets from 12 countries in the LAC region as well as regional partners that include CLME+ Training and Capacity Development Portal, The Sargassum Information Hub and the Caribbean Marine Atlas.

Africa has developed three thematic portals that link to the global OIH, and the Pacific has linked its two existing regional portals to OIH.

The project's open-source philosophy ensures its software and extensive documentation is available online, promoting reuse and adaptation by any institution, whether or not they are an

OIH project partner. This will build resilience and sustainability of ODIS as it becomes adopted and implemented by more partners beyond the life of the OIH Project.

The Ocean InfoHub Project and ODIS have already succeeded in creating a self-sustaining network of partners, but there remains much work to do to widen the collaboration to other regions and nations, build capacity and digital equity in regions with low resourcing, and continually upgrade the capabilities of the network.

7. The Future

ODIS offers a **long-term solution for NODCs, ADUs and new partners** to keep ownership and complete control over their data holdings, while choosing which (meta)data to share with a growing global ocean digital ecosystem.

The OIH Project will close in June 2024 but the ODIS Programme will continue to support core services seamlessly with IODE RP funding. OIH Africa will also continue with RP funding and resources will be actively sought for other regions and further development of ODIS.

8. Links to the UN Decade of Ocean Science for Sustainable Development

A Programme called An Ocean Data and Information System supporting the UN Decade of Ocean Science for Sustainable Development (OceanData-2030) has been registered with the UN Decade for Ocean Science for Sustainable Development.

The “ocean digital ecosystem” concept promoted and developed through OIH/ODIS is adopted also by the UN Decade of Ocean Science for Sustainable Development and is referred to in the “Data & Information Strategy for the UN Ocean Decade”. A Decade Coordination Office (DCO) for Data Sharing, is hosted by the IOC Project Office for IODE, Oostende, Belgium.

Ms Lescrauwaet commended the progress made by OIH which was one of the important deliverables of the GE-CD through the initiative of its Task Team on the Transfer of Marine Technology Clearing House Mechanism (TMTCHM) which she used to co-chair from the first sessions of the GE-CD. She then raised an important point about making these capacity development efforts more known and visible to make sure that they are aligned and that there is complementarity with other groups who are working on capacity development. She referred to the importance of the national level to facilitate and mobilise resources since data show that a substantial part of R&I resources is managed at national level. The National Decade Committees (NDCs) are important vehicle to deliver the Ocean decade objectives at the national level, including capacity development. Most NDCs are (co)coordinated by IOC NFPs, or NFP participate in NDCs. She mentioned that a special working session of the NDC network was dedicated to CD and Olivier Dufournaud coordinates 38 NDCs worldwide. She suggested that targeting groups which may not be specifically aiming at capacity development such as the ECOPs can help leverage visibility of CD resources such as OIH, OTGA, CD-Hub, etc. Mr Pissierssens suggested organizing a meeting between the IOC CD Secretariat and NDCs, involving also WG9 of the 2030 Vision, CDF and Olivier so everyone will be updated with the resources and tools that are currently available.

Mr Pinheiro suggested contacting Olivier Dufournaud to bring to the attention of the NDCs to the CD resources in place.

Mr Naughton reported a broken link on the African portal in the OIH website. Ms Scott will check and have the broken link repaired.

Mr Hamouda enquired about the programme for Africa and asked Ms Scott to send the information mentioned on database of training opportunities, database of vessels, links to

database partners and NODCs/ADUs in Africa. Mr Pissierssens shared that CD workplans are currently being discussed with the regions and there have been meetings on this in the past few weeks where these activities were identified in the 2024-2025 workplan.

The Group commended the developments made by the OIH project and **encouraged** further promotion to make it more visible and known to a wider audience.

The Group recommended promotion of IOC CD resources at meetings and with other important groups on CD and giving presentations on the developments and available resources such as OIH, OTGA, CD-Hub, etc in these meetings.

2.2 OCEAN CD-HUB PROJECT

Ms Johanna Diwa introduced the agenda item.

She recalled that in response to a request made at the First Meeting of the Working Group on the Revision of the IOC CD Strategy to develop a compendium of CD activities by other global and regional programmes, UN specialized agencies, intergovernmental organizations, non-governmental organizations and national aid programmes, etc. to be maintained as an online portal (Document IOC/GECD/WG Strategy/1), the IOC Ocean Capacity Development Hub (oceancd.org) was launched last year.

In developing the Ocean CD-Hub, it was recognized that what was needed for equitable capacity development is an online central database to help individuals and organizations access information about existing capacity development opportunities around the world. Bringing these information together from various resources and organizations offering these opportunities, and putting them in one place for easier search and retrieval of CD opportunities, contribute to an increased access to information on CD programmes for the wider range of users from various stakeholder groups.

The home page lists 13 buttons representing different categories of CD Activities which also correspond to the outputs, actions and activities in the IOC CD strategic framework such as training and higher education, onboard expeditions, research and training, fellowships, internships, mentorships, visiting lecturers, visiting scholars and exchanges, professional networks and community building, awards, travel grants, access to infrastructure, ocean literacy public information and communication among others.

A simple user-friendly platform that contains information on ongoing continuous CD programmes offered by national, regional and global organizations. It is important to note that the CD Hub does not provide details on individual training courses instead it lists important information that leads to the webpage or contact person in charge of the activity.

As the Ocean CD-Hub is continuously and regularly updated with new entries as opportunities are shared and discovered, it is hoped that the region and the member states will benefit from the platform, not only in searching for available CD opportunities but also in identifying synergies and potential partnerships between and among different organizations.

This way, resources can be mutualized and capitalized on existing expertise in the region. This is very useful, especially in matchmaking efforts looking at not only at the needs but also recognize what capacity already exists and what opportunities are already available in the region so as to tap potential partnerships or collaboration. This can contribute more not only to Global North to Global South but also, Global South-to-South capacity development.

One of the improvements made in the platform is the ability for contributors to add their own entries anytime by logging in the system using their Ocean Expert credentials. Additional

improvements such as making the page more interactive are being planned for the new biennium, including the expansion of the entries to include the CD elements of the Decade and contribute to matchmaking efforts of CD needs and opportunities available.

In promoting the Ocean CD-Hub, some webinar series were organized and conducted starting with IOCARIBE last year. A brief demonstration was provided to various stakeholder groups in the region to show how entries can be accessed and filtered depending on the specific needs of the user groups. It is envisioned to organize and conduct more webinars and demo sessions with other regions, to further promote the use of this tool.

Mr Naughton commended the development of the Ocean CD-Hub and asked for more details about the regional webinar series, such as that with IOCARIBE, and if there are other webinar series planned for the other regions as well. Ms Diwa responded that the IOC CD Secretariat aims to organize similar regional webinar series in close collaboration with IOCAFRICA, IOCWESTPAC and IOCINDIO soon. The report on the IOCARIBE regional webinar series has been uploaded on the meeting page for further reference as requested earlier by the Group: <https://oceanexpert.org/document/33936>.

The Group commended the progress made with the Ocean CD-Hub **and urged** the global and regional programmes to promote the use and reach of the tool especially for matchmaking efforts of capacity development priorities in the regions.

2.3 IOC CAPACITY DEVELOPMENT NEEDS ASSESSMENT SURVEY

This agenda item was introduced by Ms Johanna Diwa.

She recalled that the IOC Capacity Development Needs Assessment 2022 Survey was the third iteration of the biennial exercise which started in 2018 ([Annex VI of IOC/GE-CD-TT-I/3](#)) followed by the 2020 survey (<https://surveys.ioc-cd.org/index.php/2020-survey>).

1. Background

As instructed by the 31st Session of the IOC Assembly (2021) the IOC GE-CD has implemented the revised 2022 CD survey. Informed by the experience and learnings from the first two versions of the CD Needs Assessment Survey, the 2022 survey questionnaire was closely reviewed and revised in close collaboration with the GOSR team as recommended by the Fourth Session of the GE-CD. While the GOSR Ocean Science Tracker aimed to collect basic information on current ocean science capacity in a given country, the Capacity Development Needs Assessment Survey was organised to assess the capacity development requirements of member countries in order to contribute to the implementation of the IOC CD Strategy.

Based on the earlier version of the questionnaire used in 2018, the 2020 survey expanded overall the scope of CD stakeholder groups while the third survey sought contributions from Member States through their IOC national focal points. The online survey was opened on 4 January 2023 at <https://www.surveymonkey.com/r/JQLDQK8> and closed on 10 March 2023. Some respondents who had difficulty accessing the online questionnaire requested for pdf copies of the questions. These were submitted to the Secretariat and manually encoded their responses in the database.

The CD Needs Assessment survey consisted two main parts: the first was for personal information of the respondents, while the second part contained questions focusing on capacity development based largely on the IOC CD Strategy framework of outputs and activities. The survey was actively promoted through joint Circular Letter 2919 in English, French and Spanish. The information gathered by this survey were expected to contribute to assessing the capacity development needs in ocean science related issues and will also contribute to addressing

capacity needs related to the UN Decade of Ocean Science for Sustainable Development 2021-2030.

2. Results

The survey sought official representations with only one national authorized response, thus only IOC National Focal Points were targeted as respondents. They were encouraged to submit consolidated responses through internal consultation so as to submit only ONE national response per Member State. Responses came from 17 out of 150 IOC member states (11%); 13 out of 115 developing country IOC member states (12%).

From responses received from 17 countries as of April 2023, the gender breakdown was 56% male, 44% women. Each Member State of the IOC has one or more official contact points who receive all official communications from the Commission. The IOC National Contact Manual (National Focal Points contact list) is available from [THIS LINK](#).

The data presented on ranking of top CD needs were based on general responses. However, due to the relatively small sample sizes care must therefore be taken when interpreting the results and making assumptions based on the data presented. Full report of the survey is available at <https://surveys.ioc-cd.org>.

3. Top critical CD needs:

Based on the inputs from IOC focal points, the top 3 CD needs included funding and investment, strengthened international partnerships and regional networks for collaboration, and research vessels and inshore boats.

In terms of developing capacity in human resources, the top priorities were higher education degree (BSc-PhD) programmes in ocean science, advanced professional development training courses, management training for senior researchers and heads of institutions, and access to on-board, research vessel-based training.

In terms of increased access to physical infrastructure, the top priorities were establishment and maintenance of a register of regional scientific research infrastructure (facilities, instruments, vessels), observation facilities and equipments (remote sensing equipment, buoys, tide gauges, shipboard and other means of ocean observation) and technical training for ocean science related to ocean observation.

In terms of strengthened coordination with global, regional or sub-regional IOC communities and local networks, the priorities were establishing an effective coordination and communication mechanism between the regional sub-commissions and the global programmes, and reinforced budgeting of regional sub-commissions.

In terms of development of ocean research policies in support of sustainable development, the top priorities were assistance with the development of national marine science management procedures and national policies and sharing information on existing ocean research priorities among government and other organizations.

In terms of increasing visibility and awareness of ocean research, the top priorities were support for communicating ocean science research to policy makers and technical training for ocean science communication.

In terms of mobilizing sustained (long-term) resources, the top priority that didn't receive low ranking was assistance in fostering partnerships to increase in-kind support opportunities.

Regarding Ocean Decade:

In the context of the Ocean Decade Challenges, the top challenges with greatest CD needs were CHALLENGE 1: *Understand and map land and sea-based sources of pollutants and contaminants and their potential impacts on human health and ocean ecosystems and develop solutions to remove or mitigate them*, CHALLENGE 6: *Enhance multi-hazard early warning services for all geophysical, ecological, biological, weather, climate and anthropogenic related ocean and coastal hazards, and mainstream community preparedness and resilience*, and CHALLENGE 2: *Understand the effects of multiple stressors on ocean ecosystems, and develop solutions to monitor, protect, manage and restore ecosystems and their biodiversity under changing environmental, social and climate conditions*.

As for the Ocean Decade objectives, the top objective considered highly relevant was *Objective 3: Increase the use of ocean knowledge and understanding, and develop the capacity to contribute to sustainable development solutions which was ranked consistently as the greatest capacity development needs across regions and groups.*

Regarding SDG14:

More than half (53%) of the focal points responded that the capacity most lacking to achieve SDG 14 in their country relates to the 'capacity to translate science to policy'.

Regarding national CD Strategy and needs assessment:

About half (50%) of the focal points respondents indicated the absence of a national ocean science capacity development strategy. Almost half (43%) of the focal points respondents answered that there has not been any capacity needs assessment conducted in their country.

4. Outcomes

Ms Diwa recalled the recommendations made by the Group for regional subsidiary bodies and IOC programmes to consider the survey outcomes when drafting their CD work plans and activities. A mapping exercise was initiated by the IOC CD Secretariat, incorporating the CD needs identified through the responses received in the past two surveys. This was supplemented by regional webinar series consultation targeting specific key stakeholder groups in identifying needs and opportunities in their respective organizations, etc. So far this has been done with IOCARIBE (to be reported fully under 4.2.1) and is intended to be conducted in other regions as well.

5. Recommendations for the 4TH CD needs assessment survey (2024-2025)

Informed by the lessons learned from three past CD needs assessment survey, Ms Diwa presented several recommendations for the 2024 CD Needs Assessment survey:

- design the structure and methodology of the survey in close collaboration with global and regional programmes to capture specific CD needs in the regions;
- conduct the CD survey through the regional secretariats, especially in identifying and reaching out to key stakeholder groups as targeted respondents in their respective regions;
- collaborate with other survey requirements of other programmes, e.g. GEBCO, CD Facility, Ocean Policies, GOSR, etc.

Mr Evans highlighted the disappointing number of only 13 from 115 developing countries who responded to the survey. He sought suggestions from the Group on how to generate more responses as this low rate has always been an issue with CD needs assessment surveys. Mr Pinheiro asked about the procedures and whether it involved direct contact with national focal

points. Ms Diwa responded that a Circular Letter was released to Member States via the national focal points. Ms Barrow suggested giving a clear deadline and Dr Jebri commented whether interviews can be organized to reach out to more respondents.

Ms Diwa emphasized the important role of the regional secretariats in organizing and conducting the survey as they are the ones who usually have direct connection to various groups in the regions. Mr Naughton agreed on the strong role of regional bodies in mapping the CD needs and it is interesting to see the matrix of needs and opportunities that was alluded to in the presentations. He asked how is the approach so far in working with the regions. Mr Pisserssens explained the collaborative approach in organizing meetings between each region and global programmes in identifying the CD needs, priorities and gaps. This also makes co-designing of proposals for funding of projects relevant to the identified needs of the regions possible as the CD Secretariat usually assists the regions in the process. Mr Evans noted that the Group must not overlook that other priority regions are not represented by a Regional Subsidiary Body (RSB) e.g. Pacific SIDS, as such there needs to be a multifaceted approach.

The Group recognized the value of a regional-focused approach to identify CD needs and priorities in the regions.

The Group recommended jointly organizing and implementing the 2024-2025 CD needs assessment survey in close collaboration with the Regional Subsidiary Bodies (RSBs) to increase the reach of targeted respondents in their respective regions.

1100 – 1115 COFFEE BREAK

1115 – 1230

3. 32ND SESSION OF THE IOC ASSEMBLY (2023) OUTCOMES AND INSTRUCTIONS

This agenda item was introduced by Mr Alan Evans.

3.1 IOC CAPACITY DEVELOPMENT STRATEGY 2023-2030

This agenda item was presented by Mr Alan Evans, Chair GE-CD. He recalled that the Assembly, at its 31st session, through Decision A-31/3.5.3, had instructed the Group to submit the final draft of the IOC Capacity Development Strategy for 2023–2030, together with a proposed outreach and communication plan to the 32nd session of the Assembly last June 2023. He referred to three documents submitted to the 32nd Assembly, as [Document IOC/A-32/4.3.Doc\(1\)](#) 'IOC Capacity Development Strategy for 2023–2030' for the main body of the Strategy, [IOC-32/4.3.Doc\(1\) Addendum](#) for extensive background information related to the process of reviewing and revising the strategy towards the IOC Capacity Development Strategy for 2023–2030, and [IOC-32/4.3.Doc\(2\)](#) on Outreach and Communications Plan to Promote its Visibility and Reach.

The key updates made in the strategy resulted in a slightly shortened version, removed references relating to selected projects, and were instead captured by the Ocean CD-Hub, an online compendium of CD opportunities worldwide. The Executive Summary incorporated an increased recognition that the ocean plays in political, commercial, science circles and society and the importance of capacity development in the delivery of the UN Ocean Decade. It also highlighted IOC's critical role in fostering international cooperation while using the strategy as the motivation to develop an implementation plan, such that IOC Capacity Development activities are clearly articulated and that the benefits are more readily identified.

The resulting IOC Capacity Development Strategy for 2023–2030 framework maintained the original six outputs, with 16 activities detailed in 31 actions. Mr Evans noted that while this framework provides general guidance on elements of capacity development, an implementation plan is yet to be developed and venues for elevating IOC's impact to the required scale to be further explored.

Mr Evans presented the actions and decisions adopted by the Assembly through IOC Decision A-32/4.3, which includes the follow-up actions expected by the 33rd IOC Assembly in 2025.

IOC Decision A-32/4.3

**IOC Capacity Development Strategy (2023–2030)
and related Outreach and Communication Plan**

The Assembly,

Recognizing the importance of Capacity Development as one of the six functions of the IOC Medium-Term Strategy (2022–2029), enabling all Member States to participate in, and benefit from, ocean research and services that are vital to sustainable development and human welfare on the planet,

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

Noting that the current Strategy will expire in July 2023,

Noting also that through IOC Decision A-31/3.5.3, the Assembly revised the Terms of Reference of the Group of Experts on Capacity Development (GE-CD), instructing the Group to submit an updated IOC Capacity Development Strategy and a proposed outreach and communications plan to the Assembly,

Having examined documents IOC/A-32/4.3.Doc(1) and IOC/A-32/4.3.Doc(2),

Adopts the IOC Capacity Development Strategy, 2023–2030 as contained in document IOC/A-32/4.3.Doc(1);

Also adopts the Outreach and Communications plan for the IOC Capacity Development Strategy, 2023–2030 as contained in document IOC/A-32/4.3.Doc(2);

Agrees that, by the 33rd Session of the IOC Assembly, IOC Primary Subsidiary Bodies (global programmes and Regional Subsidiary Bodies) should take the following actions:

- (i) develop programmatic and regionally relevant capacity development work plans based on this strategy and related needs assessments conducted in a consistent manner, building on on-going activities and making use of existing training and education facilities;
- (ii) mobilize resources in order to reinforce the Secretariat staffing of the regional Sub-Commissions, other subsidiary bodies and global programmes;
- (iii) promote the visibility and reach of the IOC Capacity Development Strategy 2023– 2030 in accordance to the outreach and communications plan to reach its target audience and appreciate the document as a guide in implementing capacity development activities;
- (iv) catalyze capacity development through global, regional, and national programme development; and
- (v) enhance collaboration and communication between its global programmes and Regional Subsidiary Bodies, to contribute to (i) and (ii) above;

Urges IOC Member States to:

- (i) identify new opportunities to participate in, and benefit from, reinforced partnerships through the IOC to achieve their capacity development goals in marine science and ocean governance;
- (ii) mobilize the knowledge, personnel, infrastructural and financial resources to support IOC's catalytic role in helping Member States achieve these goals; and
- (iii) raise the visibility of IOC's unique niche in capacity development.

Mr Evans shared that the Assembly recognized the central role of Capacity Development as a core function of the IOC and expressed full support in the IOC Capacity Development Strategy for 2023–2030. They welcomed the incorporation of important priorities such as data sharing, gender equality, SIDS, indigenous communities, ocean literacy and early career professionals in the strategy. They also encouraged the strengthening and synergizing of efforts through close collaboration and partnership with other existing initiatives to avoid duplication and mutualize resources. The Assembly called for adequate and sustainable regular programme funding for capacity development and its coordination to ensure robust and sustainable delivery of capacity development and help position the IOC strategically within the broader UN Oceans family.

Mr Hamouda suggested a roadmap is needed for the things that need to be done including those for this year and the next three years. Mr Evans agreed that the ongoing efforts of reaching out to and engaging with the regional groups is a good initiative that has already started since the adoption of the CD Strategy. The discussions and meetings with the regions are important steps in identifying their capacity development needs and priorities as well as in understanding the expertise, opportunities and resources that are available. The CD matrix maybe then a good resource to guide the development of the implementation plan for targeted CD strategy.

The Group called on IOC global programmes and regional subsidiary bodies and secretariats to deliver capacity development with more systematic approaches to ensure consistency between global, regional and national capacity development.

The Group recommended mapping the CD work plans of the global and regional programmes vis-à-vis the IOC CD Strategy to clearly demonstrate the targeted implementation of the IOC CD Strategy.

3.2 PUBLICATION AND OUTREACH

This agenda item was introduced by Ms Johanna Diwa.

She referred to Document IOC/A-32/4.3.Doc (2) 'Outreach and Communications Plan to Promote the Visibility and Reach of the IOC Capacity Development Strategy' which lays out the recommendations from the Outreach Working Group on concrete plans to highlight the core messages of the IOC Capacity Development Strategy for 2023–2030, and proposed ways for the strategy to reach its target audience. Other than promotional materials and activities, the plan contains strategies for communications in two stages following the launch of the IOC Capacity Development Strategy for 2023-2030, utilizing existing platforms and resources of the IOC.

She reported that the IOC Capacity Development Strategy 2023-2030 document has been published in the IOC CD website and a new strategy booklet will be published soon. The strategy texts were supplemented with actual photos of CD activities that were solicited from various programmes. She expressed appreciation on behalf of the CD Secretariat to colleagues who contributed photos of their CD activities. Brief brochures will also be developed targeting specific stakeholder groups in the regions.

Through regional webinar series, starting with IOCARIBE, the GE-CD Chair and CD Secretariat have been giving webinar briefings to various stakeholder groups about the new strategic framework and the Ocean CD-Hub. Other regions were encouraged to conduct similar webinar series in collaboration with the CD Secretariat to promote the Strategy and Ocean CD-Hub in determining CD workplans in their respective regions.

Mr Pinheiro asked about the policy brief that targets specific stakeholder groups. Ms Diwa responded that policy briefs need careful and straightforward crafting of narrative and should be developed with specific stakeholder groups in mind. A working group would be helpful to guide and advise on the development of specific policy briefs. Mr Evans clarified that the full strategy is

with the designer. A shorter summary document still needs to be prepared, including the policy briefs.

As for promotion, Mr Pinheiro asked about the utilization of the Ocean Expert in sending information through its network. Mr Pissierssens clarified that while we can send emails to the network, we need to be aware of spamming risks so what can instead be done is to ask the global and regional programmes for permission to send to their mailing lists in OE.

Mr Muslim urged that resources like the CD-Hub and Info-Hub should be promoted to reach wider audience especially to young professionals such as the Early Career Ocean Professionals Network who may find these tools very useful to address their needs. Mr Naughton agreed the need to think about how these can be further promoted and leveraged, to further benefit global networks like ECOPs. Ms Mazzuco highlighted that OTGA works closely with ECOPs who try to advertise and engage the ECOPs global community in IOC CD activities, but some may find it difficult to follow what is going on with our activities, so it is worth the effort to promote within and beyond the IOC. Mr Evans noted the challenge in promoting IOC CD as its primary purpose is to make CD visible and bring it to higher prominence starting on the IOC website. Mr Pissierssens also suggested reaching out to other processes such as making IOC activities more visible in the W9 white paper of the Vision 2030, and also through international organizations such as FAO and WMO.

The Group recommended establishing a Working Group on promotion and outreach which will guide the implementation of the outreach plan, including the development of summary documents, policy briefs and other promotional materials.

The Group called upon the regional subsidiary bodies and IOC global programmes to help promote the IOC Capacity Development Strategy 2023-2030 to their respective networks and groups.

3.3 REVISION OF THE GE-CD TERMS OF REFERENCE

This agenda item was introduced Mr Alan Evans.

He recalled that following the adoption of the new Strategy and the completion of the tasks of the past GE-CD membership under its revised Terms of Reference in line with the IOC Decision A-31/3.5.3, and considering the workplan related to the new Strategy, the Group agreed at the 4th session of the GE-CD that the Terms of Reference should again be revised to reflect the work required for the new IOC Capacity Development Strategy 2023-2030, including the development of an implementation plan.

The Group agreed that the work of the new GE-CD could not be started until the Assembly has adopted the IOC CD Strategy 2023-2030 at its 32nd session, thus the GE-CD will submit the revised terms of reference and will seek its adoption by the 57th Session of the Executive Council instead. In theory, this revision and adoption of the new TOR and the start of the GE-CD workplan should have taken place between the interim period of September/October 2023 and September 2024.

As agreed upon during the Fourth Session of the GE-CD, this 5th session of the GE-CD will be able to refine the Terms of Reference according to the requirements of the new IOC Capacity Development Strategy 2023-2030, and the results of close consultation with the Regional Subsidiary Bodies for the regional CD workplans. The draft revised ToR below is submitted for discussion and finalization of the Group in time for submission to the 57th Session of the Executive Council in June 2024.

**(Draft) Terms of Reference
Group of Experts on Capacity Development**

Recognizing the importance of Capacity Development as one of the six functions of the IOC Medium-Term Strategy (2022-2029), enabling all Member States to participate in, and benefit from, ocean research and services that are vital to sustainable development and human welfare on the planet,

Recalling the adoption of the IOC Capacity Development Strategy 2023-2030 through IOC Decision A-32/4.3,

Mindful of the role of the GE-CD in informing and, where relevant, assisting the Secretariat in implementing IOC CD initiatives,

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

- i. assist global and regional programmes with the implementation of capacity development needs assessments in a consistent manner;
- ii. assist global and regional programmes with the development of programmatic and regionally relevant capacity development work plans based on the IOC CD strategy and related needs assessments, building on ongoing activities and making use of existing training and education facilities;
- iii. develop an implementation plan for the current IOC CD Strategy 2023-2030 for submission to the 33rd Assembly of the UNESCO IOC in June 2025;
- iv. provide advice to global and regional programmes on the implementation of the IOC Capacity Development Strategy 2023-2030 and on relevant methods and tools to improve the quality and impact of CD efforts;
- v. advise the design and conduct the biennial CD survey in close collaboration with the regional secretariats, possibly including CD implementation impact monitoring/metrics, also taking into account other methods such as regional reviews, science conferences etc.;
- vi. ensure coordination of the work of the Group of Experts and its Task Teams with GOSR and CD aspects of the United Nations Decade of Ocean Science for Sustainable Development, including the Capacity Development Facility and Working Group 9 of the Vision 2030;
- vii. guide the further development and promotion of the Ocean CD-Hub by highlighting linkages of CD activities and collaboration opportunities between users and providers and among other global, regional and national organizations;
- viii. provide advice to Member States on the promotion of visibility and reach of the IOC Capacity Development Strategy 2023-2030 to assist with the planning and implementation of their capacity development efforts.

Two changes on the draft ToR were suggested:

1. Correct language on:

- (iii) develop an implementation plan for the current IOC CD Strategy 2023-2030 for submission to the **33rd Session of the IOC Assembly** in June 2025;

And following Mr Naughton's clarification on item (v) and subsequent discussions by the Group:

- (v) advise **the IOC CD Secretariat** on **the** design and **implementation of** the biennial CD survey in close collaboration with the regions, possibly including CD implementation impact monitoring/metrics, also taking into account other methods such as regional reviews, science conferences etc.;

The Group approved the draft Terms of Reference with changes as proposed by the Group.

The Group agreed to submit the revised Terms of Reference as documentation for the CD related agenda tabled for the 57th Session of the IOC Executive Council in June 2024.

1230 – 1400 LUNCH BREAK

1400 – 1600

4. IOC CD STRATEGY IMPLEMENTATION

This agenda item was introduced by Mr Alan Evans. He referred to the [IOC Decision A-32/4.3](#) and the actions the IOC Primary Subsidiary Bodies (global programmes and Regional Subsidiary Bodies) should take by the 33rd Session of the IOC Assembly: (i) **develop programmatic and regionally relevant capacity development work plans** based on this strategy and related needs assessments conducted in a consistent manner, building on on-going activities and making use of existing training and education facilities; (ii) **mobilize resources in order to reinforce the Secretariat staffing** of the regional Sub- Commissions, other subsidiary bodies and global programmes; (iii) **promote the visibility and reach** of the IOC Capacity Development Strategy 2023– 2030 in accordance to the outreach and communications plan to reach its target audience and appreciate the document as a guide in implementing capacity development activities; (iv) **catalyze capacity development** through global, regional, and national programme development; and (v) **enhance collaboration and communication** between its global programmes and Regional Subsidiary Bodies, to contribute to (i) and (ii) above. He then invited the global programmes and regional secretariats to report on the capacity development activities and workplan vis-à-vis the outputs of the CD strategy, while considering the actions they should take in preparation for the 33rd Session of the IOC Assembly in June 2025.

4.1 GLOBAL PROGRAMMES

4.1.1 IODE: OTGA

This agenda item was introduced by Ms Ana Carolina Mazzuco, Ocean Teacher Global Academy Coordinator.

She reported that, over the past years, the OceanTeacher Global Academy (OTGA) and its network of 17 Regional and Specialized Training Centres (RTC/STCs) and other partners has successfully supported the implementation of the IOC Capacity Development Strategy by building equitable capacity and delivering high-quality training addressing the priority areas of all IOC Programmes, the UN Decade of Ocean Science for Sustainable Development, and the 2030 Agenda and its SDGs. OTGA supports various formats of training (face-to-face, online, and blended), in four languages (English, Spanish, French, and Portuguese), which are co-designed and delivered with the contribution of ocean experts within and across the regions. These courses cover a wide range of topics in ocean science, observations, and services, such as data management and sharing, marine spatial planning, satellite remote sensing, blue carbon, ocean literacy, weather forecast, and many more. OTGA secretariat provides coordinated management, a common global e-learning platform as well as guidance to the creation of new educational resources meeting global and regional CD needs. OTGA has continuously updated and implemented quality procedures and maintain ISO certification as a learning services provider to ensure the highest quality of training is delivered (reference Document No. OTGA01, Course Management Guidelines). Training and management are provided free of charge for both organizers and users, enabling accessibility also for under-resourced participants and institutions.

OceanTeacher Global Academy has been designated as an IODE programme component, which recognized the importance of its activities and secured RP funding.

Currently, OTGA e-learning platform hosts approximately 380 sets of training material and more than 11200 users, including course participants, facilitators, and trainers. A brief summary of OTGA performance in recent years:

The OTGA-2/FUST project implementation started in the midst of the COVID-19 pandemic, while most countries were under a strict lockdown. Nevertheless, the OTGA Project implementation proceeded even though with some delay given the necessary adaptations. Despite the limitations brought by the pandemic, in 2020, OTGA was able to: call and select new hosting training centres; organize 8 courses (online); redesign and upgrade the e-learning Platform; and review database.

With the re-start of activities in 2021 post-pandemic, OTGA significantly increased its contributions to capacity development with: 32 training courses organized (online); development of new tools in the e-learning platform; production of 2 outreach videos; assessment of quality procedures for ISO; and creation of new courses following standards and guidelines.

In 2022, 29 training courses were delivered by OTGA (online and blended) with a major upgrade of the OceanTeacher e-Learning Platform to provide a single sign-on for participants (resulting from the integration of the OceanExpert Directory of Marine and Freshwater Professionals (OE) with OTGA e-learning platform), provide reporting templates, and implementation of a communication component that allows OTGA alumni to communicate using data stored in OE and OTGA. Creation of an online course for RTC/STC administrators on *Introduction to designing and teaching online courses* and a tutorial on *OTGA Copyright Rules Tutorial*. Implemented *OTGA Course Design Rubric* and *Course Alignment Checklist* to evaluate and improve instructor-led and self-paced OTGA courses

In 2023, OTGA completed a successful year with more than 2,300 learners enrolled in OTGA courses. OTGA delivered 49 courses during this period with 90% of courses being provided online including 13 self-paced courses where learners can progress through the course material at their own speed and on their own schedule. OTGA e-learning platform supports the capacity development activities of other IOC programmes as well as hosting training courses for organizations including VLIZ, BODC/MEDIN, EMODnet, the ECOP programme, and POGO/AWI Centre of Excellence.

It was highlighted that OTGA has already received more than 65 requests for training courses in 2024, reflecting its value to the ocean community and IOC capacity development. OTGA foresees a significant increase in staff demand in the next years, which will require planning, collaboration, and extra-budgetary funds to sustain high-quality operations and incorporate new developments. OTGA Steering group will meet between 11-13 June 2024 to review the achievements of the network in the last years and plan for the future. This meeting agenda includes (1) an assessment of the results of the OTGA-2/FUST project, (2) expectations and agreements within the RTC/STC network, (3) preparation of work plans and budgets for 2025, (4) mapping of funding strategies, and (5) codesign of new training activities. OTGA committed in its workplan to implement action to raise additional resources and secure the financial sustainability of the programme component activities. Full details of the OTGA revised work plan and budget for 2024 can be found in the document IOC/IODE-MG-2024/11.4.

OTGA is working closely with IOC CD secretariat to ensure that the trainings delivered address global and regional needs, and requests from IOC Member States and IOC Regional Sub-Commissions.

Ms Mazzuco also informed the Group that the current project has been extended (no-cost) until the end of 2024 which will allow implementation of additional training courses and related activities.

Ms Lescauwaet asked about the link to field observations in the future workplan of OTGA and at what operational level OTGA will develop this approach. Ms Mazzuco explained that they received requests in two areas: linking of training to other programmes (eg research or observations) that are in the field. There is also request for general training in the field (on ships, etc). There have been practical courses in the past so we will try to repeat these. OTGA can coordinate with its RTCs which are research institutes that can be utilized to provide hands-on training (lab+ships) as well as classroom training. She added that there are similar requests from the regions for courses with practical components such as the eDNA training with OBIS which has a lab component. Mr Evans noted the sustainability plans for OTGA and Ms Mazzuco added that they are talking with Regional Training Centres (RTCs) to engage in more diversified funding and look forward to engaging with other experts in the room.

The Group expressed its thanks to the Government of Flanders for the continued and substantial support to OTGA while also noting with appreciation the increased Regular Programme support to OTGA and considerable support provided by the Regional Training Centres and Specialized Training Centres, partners and experts.

4.1.2 Global Ocean Observing System

This agenda item was introduced by Ms Emily Smith from the Global Ocean Observing System (GOOS). She reported that GOOS is currently working across several sectors regarding Capacity Development. It has developed a wide range of webinar series and hosts in person events for knowledge sharing. The Global Regional Alliances (GRAs) are key to working towards societal needs for specific regions. The regions of interest are the Caribbean, Pacific Islands, Indian Ocean, and Africa. These areas have additional resources in the current biennium to increase their ocean observing capabilities and develop technical guidelines to address forecasting needs.

Mr Chowdhury asked about the lack of activities and communication on Indian Ocean and what are the plans especially now IOCINDIO is nearly formed. Mr Affian commented that the correct official name is GOOS Africa. He asked for more details about the NORAD funding. Mr Pissierssens shared the details of the proposal that was submitted to NORAD to support capacity development activities for GOOS with allocated funding of \$85K.

Mr Evans thanked Ms Smith for the presentation and for addressing capacity development requirements of Challenge 9. He encouraged mapping the CD requirements of the IOC CD Strategy vis-à-vis what GOOS delivers for a bigger picture of GOOS contributions to the CD implementation.

4.1.3 Ocean Science/GOSR

This agenda item was introduced by Ms Katherina Schoo, representative of the Ocean Science section. The Ocean Science section of IOC/UNESCO has developed and established capacity development programmes for each of its core projects, namely for Harmful Algal Blooms, The International Phytoplankton Intercomparison, Ocean Acidification, Deoxygenation and Blue Carbon.

For Harmful Algae, annual courses in close collaboration with the University of Copenhagen have taken place consisting of e-learning in OTGA and practical identification, leading to an exam qualifying for the 'IOC Certificate of Proficiency in Identification of Harmful Marine Microalgae'. The courses on Harmful algae are fully demand-driven by the Member States and primarily user funded. In-country training courses in collaboration with FAO, IAEA and IOC regional capacity development activities in WESTAPC and IOCARIBE further strengthen the IOC's strong position on capacity development in this field.

The International Phytoplankton Intercomparison (IPI), run annually with around 80 participating laboratories by the IOC Science and Communication Centre in collaboration with The Canary Islands Harmful Algal Bloom Observatory at the University of Las Palmas de Gran Canaria, Spain, and the Marine Institute, Ireland, is a proficiency testing scheme for Phytoplankton analysts. IPI working towards accreditation as a Proficiency testing provider under ISO 17043 and ISO13528.

Ocean acidification is one of the core projects of the OSS, with IOC being the custodian agency for the Sustainable Development Goal (SDG) Indicator 14.3.1 calling for "*Average marine acidity (pH) measured at agreed suite of representative sampling stations*". The OSS Secretariat has developed an online introduction course on OTGA, which has been successfully implemented in the Pacific Islands in 2022 with the support of the expert lecturers. Following high demand, the course will be repeated in different Regions, with one training taking place in Africa in 2024. New course content with regional topics and translation of the course into French and Spanish are planned. The Secretariat also runs online trainings and webinars for national agencies and IOC focal points to advance the capacity of Member States to report towards SDG 14.3.1. A capacity development strategy for the Global Ocean Acidification Observing Network (GOA-ON) and the UN Ocean Decade endorsed programme Ocean Acidification Research for Sustainability (OARS) are currently being developed together with partners, to complement ongoing efforts such as the Pier2Peer scientific mentoring programme.

The IOC working group on deoxygenation organizes monthly webinars featuring each time a junior and a senior scientist, with an average of 100 participants. Deoxygenation was the focus of one IOC summer school in September 2019, with a new edition organized in November 2023 as part of the Decade Programmes GOOD/OARS with 33 young researchers from 17 countries and more than 15 world experts in their respective fields. The next summer school is planned for Southeast Asia in 2025/2026.

For Blue Carbon, trainings are and will continue to be conducted under the framework of the GO-BC Decade programme, alongside the development of scientific training material, including an online course on the OTGA platform. Through the International Partnership for Blue Carbon (the IPBC), regular knowledge exchange session on Blue Carbon science and implementation are conducted.

Mr Affian asked about making on-line courses more available for learners in the region. Ms Schoo explained that the Ocean Acidification course has undergone many changes from an originally planned in-person training to an online course, the latter was intended to getting everyone at the same level prior to in-person training. Going forward, a combination of online and in-person trainings is planned. She clarified that the online course required access to feedback from experts in the field to avoid misunderstandings and confusion for the participants, as they may have

questions which would need someone to answer. There are considerations to make the course open access to all wishing to learn about ocean acidification but the best approach is still being discussed.

Mr Affian highlighted that capacity development is a complex process and it will take a lot of effort to build on skills and empower those who already have the skills. Mr Hamouda suggested to get all African countries involved and requested to send him the documents and information for his review.

4.1.4 Tsunami

This agenda item was NOT PRESENTED as there was no representative from the Tsunami unit.

4.1.5 Marine Policy/MSP

This agenda item was introduced by Ms. Michele Quesada da Silva, MSPglobal Project Coordinator.

She referred to the key components of the IOC CD Strategy related to the Marine Spatial Planning (MSP) work of the Marine Policy and Regional Coordination Section (MPR): 1.2.1 Promote and assist with the organisation of **training courses**, workshops; 1.2.5 Promote the development and sharing of **training materials and tools**; 2.2.1 Promote the development and wide use of regional and global data and information systems; and 3.3.1 Organise and conduct biennial **capacity development needs survey**. The IOC activities on MSP are implemented by the MSPglobal project, which is co-funded by the European Union as part of the Joint MSProadmap of IOC-UNESCO and European Commission. Capacity development & Awareness is one of the pillars of this joint framework, thus the work of MSPglobal includes the following: (i) development of an **online training at OTGA** in English, French and Spanish; (ii) implementation of national and regional **in-person trainings using the MSP Challenge board game**; (iii) establishment of a **training network** on MSP through the preparation and donation of the MSP Challenge training material in the six UN languages plus Portuguese; (iv) development of **new knowledge and tools for MSP**, such as How-to databoxes; (v) **assessment of global capacity needs on MSP**. MSPglobal started in 2018 and is currently in its 2nd phase. In case the project is renewed in 2025 for a 3rd phase, the idea is to develop further tools and more specific trainings about themes to be defined according to the assessment of capacity needs on MSP as well as a future IOC-wide Strategy on Sustainable Ocean Planning and Management (SOPM) and Decade Programme on Sustainable Ocean Planning (SOP) under development.

Ms Mazzuco thanked Ms da Silva for the presentation and for the planned continuation of MSP training beyond 2025. Ms da Silva clarified that this it is yet to be confirmed but this is the direction the next phase of project leads to. As the MSP road map goes to 2027, they are hoping to get extension.

Mr Evans noted that there are already CD and TMT activities taking place within each of the Global Programmes and these need to be captured and matrix mapped against the IOC CD Strategy actions in order to build a holistic picture of what IOC CD is already taking place.

4.1.6 UN Ocean Decade (See Agenda Item 5)

4.2 REGIONAL PROGRAMMES

4.2.1 IOCARIBE

Ms Lorna Inniss, Regional Coordinator of IOCARIBE presented this item. Noting the harmony with previous presentations of global programs, she emphasized the need for restructuring the

informal governance process to provide targeted capacity building activities within those programs of IOC-UNESCO in the Tropical Americas and Caribbean region. She noted that the Board was recently presented with new working groups on capacity development, ocean literacy, data and information and marine spatial planning to support the Sub-commission. Chairs/coordinators of existing working groups on harmful algal blooms, sargassum, GOOS, and the Ocean Decade Task Force are expected to meet with the coordinators of these proposed cross-cutting groups, to ensure proper management of capacity development activities in the region. The Board agreed to meet with Coordinators once per year.

She presented the CD work plans for all regional technical working groups, in line with approved decisions of Member States. She requested feedback on whether the proposed groups on CD and data and information should be one or two different groups.

Mr Affian asked about funding to support the activities mentioned in Ms Inniss' presentation and she replied that there is some funding for activities that require funding but still need to mobilize resources. Mr Evans added that having good governance and workplans in place are valuable in attracting funding in the future, but applauded IOCARIBE's pragmatic approach to making things happen with limited resources to date.

Mr Pissierssens responded to Ms Inniss' request for feedback: there should be WG for CD and WG on data. Ms Mazzuco asked about the engagements of Member States in the implementation and Ms Inniss highlighted that there are Member States who are active and they propose them to engage closely with a non-active MS approach on IOC activities in the region. Ms Diwa asked about the dynamics and linkage of the proposed WGs and the other CD groups and focal points. Ms Inniss explained that there is once a month meeting for these groups, dedicated mailing list for all coordinators and invite them in the IOCARIBE regional meetings.

Mr Naughton asked whether the course on ocean observation for decision making is an OTGA course. Ms Inniss clarified that it is an OTGA course and Grenada and Colombia will run the courses with 15 person/course from the region.

Ms Lescauwaet commented that the need for critical mass and need for a structural approach requires exploring different approaches such as what SCOR has done to include a structural approach and criteria for CD actions in their funding scheme. As an example, she referred to data management and the 'by default' requirement to include DM plans in national and EU funding schemes. Although this may not be applicable for all types of (funding) instruments, it maybe good to look at how we can take more structural approach to CD in larger funding schemes.

The Group requested IOCARIBE to share updates on the proposed IOCARIBE Working Group on CD and IOCARIBE Working Group on Data and apprise the Group of its developments.

DAY 2 - Wednesday 28 February

1000-1100

4.2.2 IOCAFRICA

Mr. John Ndarathi, IOCAFRICA, presented this item. Noting that the IOCAFRICA sub-commission had developed a work plan, outlining a list of capacity development initiatives. The workplan was informed by three key reports: Regional gap analysis, The Ocean Decade Africa RoadMap and the IOCAFRICA VII session report (the approved capacity development needs by the Member States). The capacity development activities cut across the different budget line themes i.e. GOOS Projects through IOCAFRICA, Africa InfoHub, Climate Change adaptation in coastal zones Africa, Ocean Literacy and Ocean Sciences.

He presented the CD workplans under these themes, based on the Matrix of CD needs and requested for feedback, especially on synergies with other IOC programmes and Regional Subsidiary Bodies CD plans.

Mr Hamouda asked about the information from the IOC and IOCAFRICA Governing Bodies. Mr Ndarathi explained that they were extracted from the IOCAFRICA-7 report and included in what he presented. The inputs in the matrix were discussed with other IOC programmes and will be submitted to the IOCAFRICA officers as soon as the matrix is completed.

Mr Affian raised that there are capacity development in Africa which must always be based on 2 things: human development and infrastructure. He agreed that having the matrix as a reference is good but it must also be clear how to operationalize it.

4.2.3 IOC WESTPAC

Mr Somkiat Khokiattiwong, delivered a presentation for IOC WESTPAC on behalf of the Regional Secretariat.

The IOC Sub-Commission for the Western Pacific (WESTPAC) endeavors to accelerate transformations in capacity development through the integration of training and research, enhancement of endogenous capacity and ownership of Member States, and the well-established mutual assistance and cooperation in the region.

The Sub-Commission contributed to the development of, and continues to implement the IOC Capacity Development Strategy in the region. To build capacity and further ensure the capacity could be applied into practices and sustained over time, the Sub-Commission considered that capacity development shouldn't stand alone, thus have integrated it into the development and implementation of nearly all WESTPAC programmes and projects, co-designed and co-implemented with Member States in the region in the four key areas of actions: ocean processes and climate change; marine biodiversity, seafood safety and security; ocean ecosystem and public health; and emerging ocean issues.

The Sub-Commission's capacity development was implemented as follows in sum:

(1) IOC [Regional Network of Training and Research Centers \(RTRCs\)](#) on Marine Sciences:

Following the IOC Principles and Strategy for Capacity Building (IOC/INF-1211, adopted at the 23rd Session of IOC Assembly, 21–30 June 2005), the Sub-Commission developed this initiative of RTRCs in 2008, aiming to improve and sustain national and regional research capacity of IOC Member States in the region which is vital to sustainable development. Through the establishment of Regional Training and Research Centers (RTRCs) in national oceanographic institutes or universities, regular training and research opportunities were provided by RTRCs on their specialized areas to young scientists, especially those who come from developing countries in the region. So far, more than 1,500 early career ocean researchers from more than 60 countries have joined the RTRCs' training and research activities.

The RTRCs initiative gained wide recognition and support from Member States in the region. Until now, a total of six [RTRCs](#) have been established, with specialized areas covering ocean dynamics and climate, marine Biodiversity and Ecosystem Health, marine toxins and seafood safety, reef management and restoration, marine plastic debris and microplastics, and coastal contaminant monitoring and marine innovation technology, which is the most recently was established at the WESTPAC's 14th Intergovernmental Session, 4-7 April 2023, hosted by the State Key Laboratory of Marine Pollution (SKLMP), the City University of Hong Kong.

This region-specific initiative has been endorsed as the UN Decade Action 23: “[Accelerating capacity development transformations in the Western Pacific – Regional Network of Training and Research Centers \(RTRCs\) on Marine Science](#)”.

- (2) Tailored national and international training: WESTPAC considers that capacity building could be only more effective and sustained over the long term if people are best empowered to realize their full potential with a combination of capacity building tools that are sustainable – home-grown, long-term, and generated and managed collectively by those who stand to benefit. Following this concept, a series of regional and national trainings and workshops that were tailored to fit the needs of Member States are conducted in the region, for example, ocean remote sensing for habitats mapping, coral restoration and conservation, marine plastic debris and microplastics monitoring, marine spatial planning training for trainers, environmental DNA for marine biodiversity monitoring and research, marine toxin analysis, jellyfish and awareness of communities, etc., including in implementation of [four WESTPAC-led UN Ocean Decade Actions](#).
- (3) International marine science conference: The WESTPAC International Marine Science Conference is a tri-annual recurring conference launched in 1989, it contributes to regional capacity building by providing a platform to present the current status of ocean knowledge, take stock of relevant achievements, identify future priorities, and continuously catalyze partnerships and concrete actions for transformative ocean-based solutions to sustainability challenges in this particular region.

The upcoming WESTPAC Conference, namely the [11th WESTPAC International Marine Science Conference](#), will be organized in conjunction with the 2nd Ocean Decade Regional Conference on 22-25 April 2024 in Bangkok, Thailand. The Conferences comprise (i) 25 Scientific Sessions and 1 Special Forum, (ii) 13 Ocean Decade Workshops for global and regional Ocean Decade Actions to bring together action partners, review their development progress, catalyze new partnerships, and deliberate on action plans, and (iii) 12 Ocean Decade Incubators, which serve as an interactive forum to catalyze partnerships, strengthen dialogue from ocean knowledge generators to knowledge users, initiate co-designing processes, and facilitate the development of potential Decade programmes or projects.

- (4) ECOPs’ empowerment: Encouraging and supporting the Early Career Ocean Professionals (ECOP) is a key element in the WESTPAC’s programs, projects and WESTPAC-led Ocean Decade Actions. WESTPAC has been continuously providing travel grants to the ECOPs to facilitate their participation and engagement in capacity building activities and attending conferences, which significantly empowered the young professionals with meaningful networking and professional development opportunities and incubate and nurture young ocean scientists to benefit this region in the long run.

Specifically, WESTPAC grants travel funds to more than 40 participants to support their participation in the 2nd UN Ocean Decade Regional Conference & 11th WESTPAC International Marine Science Conference, 22-25 April 2024, Bangkok, Thailand.

Moreover, WESTPAC has initiated the Best Young Scientist Awards since the 8th IOC/WESTPAC International Scientific Symposium in 2011. This initiative aims to nurture science leaders and assist young scientists in further dedicating themselves to the sustainable development of ocean and coastal areas to benefit all. In alignment with previous practice, four young professional scientists will be selected at the coming 2nd UN Ocean Decade Regional Conference & 11th WESTPAC International Marine Science Conference, 22-25 April 2024, Bangkok, Thailand.

4.2.4 IOCINDIO

Mr Justin Ahanhanzo, IOC Secretariat, delivered a presentation for IOCINDIO and its capacity development activities and priorities including its proposed actions.

Mr Pinheiro shared the CD activities in Africa as part of all Atlantic network (Floating University) including a cruise in July which will be open for students and teachers from Africa. He suggested looking into addressing requests for remote sensing training courses through OTGA. He also shared other activities available in the Ocean CD-Hub but noted that there are only few applications from Africa. Mr Hamouda confirmed he can send names by the end of the month.

Mr Evans referred to the CD matrix shared by Mr Ndarathi and emphasized that these were needs that had been mapped as they relate to the CD strategy and through the Ocean CD-Hub. The CD activities addressing these needs can also be mapped to get a bigger picture of how to address the gaps and how IOC CD can address these gaps through new initiatives and other proposals such that in the future the needs identified could be replaced by initiatives delivered

Mr Evans asked Mr Somkiat and Mr Ahanhanzo if they plan to do similar efforts in matrix mapping which is useful to target gaps where IOC can provide assistance and guidance. Mr Somkiat mentioned that they do not have the matrix yet but already have mechanism in the region to do it. Mr Ahanhanzo clarified that since IOCINDIO had only recently been upgraded to a Sub-Commission status, they expect more resources and staff to help with the mapping and work with the CD Secretariat. Mr Azam replied that many students are interested in cruises but it requires funding to let students join the cruise. Mr Ahanhanzo shared that Bay of Bengal and Qatar have commitments to bring students into cruise.

The Group urged the global and regional programmes to consider mapping their CD activities vis-à-vis the needs identified to show to which outputs of the IOC CD Strategy 2023-2030 they contribute to, and also to determine the areas where gaps exist. This can then inform the IOC and its programmes where their assistance and guidance will be most needed and useful.

The Group recommended that the global and regional programmes prepare their draft CD workplans to share in the discussions at the next GE-CD session in time for the 33rd Session of the IOC Assembly in June 2025 where these workplans need to be submitted.

1100 – 1115 COFFEE BREAK

1115 – 1230

4.3 OTHER PROPOSALS

This agenda item was introduced by Ms Johanna Diwa

4.3.1 OCEAN TRAINING INTERNSHIP

One of the CD needs that were identified in the CD needs assessment survey and other consultations with the regions pertain to internship opportunities to enhance global human capacity in the operationalization of information systems and delivery of specialized training. A call for proposals was issued by the Norwegian Agency for Development Cooperation (NORAD) at the end of 2023 and a proposal on Ocean Training Internship was submitted and subsequently approved for implementation in 2024.

The OceanTraining Internships aim to promote national and international exchange of professionals to acquire expertise related to the IOC mandate (research, services, and capacity-building). Through a learning-by-doing approach, the participants will have the opportunity to learn from experts in the field and contribute to the development of new resources fit for the global or regional community. The internships will be complementary to the ongoing capacity development activities conducted by the IOC/UNESCO, directly linked to its global programmes. These IOC programme offices (or associated network of regional specialized centres) will host, mentor, and supervise professionals for a short training period and specific product or service delivery, to be incorporated into the current IOC infrastructure. Explicit priority will be given to sponsoring the exchange of early career ocean professionals (ECOPs) from under-resourced nations (e.i., Small Development Island States and Least Developed Countries, SIDS/LDCs), indigenous communities, and other minority groups to contribute to reducing inequality in human and institutional capacity. The ultimate goal of this project is to build expertise for the Ocean, promoting collaborative opportunities for continuous professional development and lifelong learning.

The proposal supports the recently approved IOC Capacity Development Strategy 2023-2030, where is foreseen Establish, or collaborate with other organisations to develop internship/fellowship and on-board training programmes as a recommended action to promote Continuous professional development (Activity 1.2) and Sharing of knowledge and expertise including through community building (Activity 1.3) in Output 1 (Human resources developed at individual and institutional levels). The IOC CD strategy also highlights (items 27 to 30) the importance of internships for professionals to gain on-the-job training and expertise not available in their institution, and explicitly states actions (1.2.2, 1.2.3, 1.3.1 to 1.3.4) to expand and support peer-to-peer exchange and mentoring, which are the focus of this project proposal.

The initial operation of the IOC OceanTraining Internships is proposed for 12 months, to be coordinated by the IOC CD unit. The co-design and organization of administrative procedures started in February 2024. Calls for applications and expressions of interests for potential host institutions will be opened by May-June 2024 with targeted placement and actual conduct from September to November 2024. Total funding available in 2024 is \$85,000.

Ms Stepanova asked for more information on the training internship project. She shared that in the Russian Federation, they organize five expeditions every year for scientists to go on cruises (as part of the Training Through Research – TTR). It was clarified that being a pilot project, targeting SIDS and LDCs, however going forward the Secretariat could look at other targeted approaches in determining its design and approach. The IOC Secretariat will need to work with the regions to call for requests and also to evaluate requests. Mr Ahanhanzo added that IOCINDIO provides sponsorship to allow students to attend. Mr Pinheiro asked whether the RTCs can apply as host institutions, to which Ms Mazzuco responded that this was not the focus of the OceanTraining Internships project at this time.

The Group requested the Secretariat to disseminate the calls and details of the Ocean Training Internships once available so they can promote it to their networks.

4.3.2 OCEAN RESEARCH POLICIES

One of the outputs of the new IOC Capacity Development Strategy 2023-2030 is

Output 4. Development of ocean research policies in support of sustainable development objectives promoted

4.1 Fostering the development of ocean research policies

4.1.1 Compile and compare information on existing ocean research policies, and disseminate to Member States for their use

4.1.2 Assist and enable Member States with the development of ocean research policies, making use of the results of 4.1.1

It is important to gather baseline information on documented ocean research policies of Member States. This can be done through an initial desk research and/or via Circular Letter inviting Member States to share information on their ocean research policies. Alternatively, a dedicated section asking for existing ocean research policies of each country can be integrated **into** the 2024 CD needs assessment survey.

The Group recommended using circular letters to gather insights into ocean research policies from Member States, to ensure comprehensive engagement as well as accountability in data collection efforts.

4.3.3 General Bathymetric Chart of the Oceans (GEBCO)

An IOC Circular Letter No 2981 called on nomination of experts to serve on the IOC Working Group on User Requirements and Contributions to GEBCO Products. This Working Group has been tasked in particular to:

- (i) collect, integrate and assess user requirements to inform the development of present and future GEBCO products; and
- (ii) address ways for strengthening the contributions of IOC programmes and Member States activities to GEBCO data and products. In accordance with its terms and reference, the Working Group is comprised of representatives of IOC Member States and one expert each from the GEBCO Guiding Committee, and relevant IOC technical and regional subsidiary bodies (GLOSS, GOOS-SC, IODE, TOWS-WG, IOCAFRICA, IOCARIBE, IOCINDIO, IPHAB, WESTPAC and GOOS Regional Alliances).

A survey to assess user needs related to GEBCO and also CD needs in relation to GEBCO products will be launched soon. In this regard, it was suggested to include an observer from the IOC CD secretariat or GE-CD in the GEBCO working group.

The Group agreed to be represented by Mr Joe Naughton to the Working Group on User Requirements and Contributions to GEBCO Products and requested the CD Secretariat to inform GEBCO of Mr Naughton's representation in the GEBCO WG.

4.4 EMERGING INITIATIVES

4.4.1 BBNJ CHM

This agenda item was introduced by Ms Lucy Scott. She introduced the **Biodiversity Data Hub for the High Seas**, a project submitted by IODE for NORAD funding.

Budget approved: \$85,000

1. Rationale and background:

Ms Scott recalled that on 19 June 2023, the Conference adopted, by consensus, the Agreement 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 ([A/CONF.232/2023/4](https://www.un.org/bbnj/)) (<https://www.un.org/bbnj/>). This new UN Treaty will require a data and information system, or clearing-house mechanism to manage and access data and information related to the various elements of the agreement including:

1. Capacity building and transfer of marine technology (CBTMT)
2. Area-based management tools including marine protected areas

3. Environmental impact assessments
4. Marine genetic resources.

To produce the basis for delivering meaningful and integrated information at global scale, the BBNJ CBTMT system would need to address access to existing bodies of data, as well as facilitate coordinated entry of new in-situ and other data relevant to the treaty.

Over the past decades, IOC/UNESCO has successfully designed, operated, and connected a network of data and information systems to assist the global community to discover, understand, and manage life in the sea. IOC Ocean data infrastructure interoperates with existing data bodies to provide free and open access to marine biodiversity data through the Ocean Biodiversity Information System ([OBIS](#)), the largest clearinghouse of its kind, also facilitating the connection with other spatial ocean data hubs through the Ocean Data and Information System ([ODIS](#)). These systems, data portals, and associated networks of specialized centres deliver several marine biodiversity data products and services, applied to address a wide range of uses and multiple stakeholders (e.g., [knowledge generated using OBIS datasets](#)).

2. Overall purpose (objectives) and relevance: needs and issues:

The IOC is a recognized competent UN body for CD/TMT and with the current developments under its Ocean Data and Information System (ODIS), IOC is also well positioned to support the to be established BBNJ secretariat by further development and expansion of its data system, and to provide technical support for the CHM managed by the BBNJ secretariat. The IOC-UNESCO Criteria and Guidelines on the Transfer of Marine Technology can provide the guidance and substantive scope of technology needs assessments including its capacity development needs assessment based on its experience from its successful initiatives.

This pilot project intends to demonstrate the utility of the Ocean Data and Information System infrastructure, to support the needs of a **Biodiversity Data Hub for the High Seas**.

3. Implementation strategy:

The **Biodiversity Data Hub for the High Seas** will build on technology developed under the Ocean InfoHub project and will develop a demonstrator for several elements of the BBNJ Clearing-House Mechanism.

This project **will not develop the BBNJ-CHM**, but will use ODIS technology in a pilot project to demonstrate how it can serve a future BBNJ CHM:

Part 1: Development of a pilot biodiversity hub (*this section is under revision given the amended budget*)

ODIS/OIH currently possesses the capability to function as an information hub for discovering and accessing a diverse range of information, including documents, reports, and training opportunities related to various aspects of BBNJ. Nevertheless, there is room for enhancement in both the Linked Open Data specifications and the back- and frontend of ODIS/OIH. This improvement aims to fine-tune the system and create a BBNJ hub or interface on ODIS.

This interface will enable Member States and a prospective BBNJ Secretariat to register, monitor and effectively manage diverse information sources. This includes tasks such as classification or flagging, quality assurance and compliance, among others. Once published, these resources will be easily findable and accessible. Additionally, users will have the capability to receive notifications about new resources, enhancing the overall functionality of the platform.

Furthermore, a consultant will craft comprehensive guidelines and training materials for Member States, ensuring the publication of BBNJ-relevant information in a manner compliant with ODIS standards. This includes the proper registration of these resources in a dedicated 'BBNJ' registry (i.e. the ODIS Catalogue). The consultant will also develop outreach and communication material.

Part 2: Desktop study on CHM requirements and solutions related to Marine Genetic Resources (*this section is under revision given a White Paper just released on MGR*)

Managing data and information related to Marine Genetic Resources (MGR) is complex and requires the involvement of various existing organizations. A consultant will conduct an in-depth study to explore the essential elements for the MGR component of the BBNJ CHM, identify the major stakeholders and recommend technical solutions. The results of this comprehensive study will provide a plan including resource requirements to develop an MGR hub as part of ODIS/OIH.

The Group noted the appropriate change of the BBNJ CHM related project title to “Biodiversity Data Hub for the High Seas”.

1400 - 1600

5. UN OCEAN DECADE

5.1 DECADE CAPACITY DEVELOPMENT FACILITY

Mary Frances Davidson, Project Coordinator of the UN Ocean Decade Capacity Development Facility (CDF) introduced the work of the CDF. She outlined that the project has an initial two years of funding from the donor FUST, and is intended to build upon existing strengths of IOC's Capacity Development activities. The primary target audiences of the CDF are LDCs, SIDS, and ECOPs, and it is built around four main components, namely; identification of priority Capacity Development needs, development and delivery of capacity development initiatives to fill those needs, facilitation of a Capacity Development community of practice on the Ocean Decade Network, and partnership building and resource mobilisation. Mary Frances described the process by which priority needs were established at a global level, and then for the more specific target audiences, using the organisational structures of the Ocean Decade. Mary Frances also described the ongoing work of the CDF to develop a portfolio of existing capacity development activities, and explained that the Ocean CD Hub developed by IOC would be used as one source of this supply, along with existing endorsed Decade Actions, and partners. Major points of discussion included the relationship between the CDF and existing IOC capacity development activities, and it was reiterated that the intention of the CDF project was to enhance and support the work of IOC.

Ms Davidson laid out three questions for the discussions of the Group:

- What are the highest priority capacity development themes at a regional level for our key target groups?
- How can the CDF contribute to the CD needs assessment work of the IOC and the EG on CD?
- What opportunities exist for the CDF to ADD VALUE to the existing CD structures within IOC?

Mr Ahanhanzo asked about the difference between the IOC global CD and the CD Facility and how to avoid duplication of efforts. Ms Davidson highlighted that the work of the CD Facility focuses on the Decade ecosystem. The project duration of the CD Facility is also shorter-term, though the project intends to mobilize resources to sustain the work of the CDF beyond the initial

two years of funding from FUST. Also, the CDF's work is intended to amplify rather than duplicate the CD work of the IOC.

Ms Smith referred to the existing GOOS co-design decade project and asked what does the co-design course entail and how it will connect to the existing one. Ms Davidson responded that since the co-design course will be learner-led and open to all who are interested, it could be used by the co-design project to add value to their work.

Mr Moussa asked how Member States can benefit from the CDF to which Ms Davidson replied that the CDF is intended to support the Decade and not for exclusively for Member State government institutions. As to his question on the involvement of the private sector, academic and civil society, Ms Davidson indicated that the CDF intends to engage all these sectors, provided that they are participating in Decade Actions in some form.

Mr Ahanhanzo raised a point on the inclusivity of the approach in the co-design process as mentioned many times but in the case of Africa, how far and who have been involved in co-design in Africa and other regions. Mary Frances mentioned the later phase of the co-design course, which will be developed and delivered by ZMT first for delivery to Caribbean SIDS countries, and then for Africa. The participants in these courses will be drawn from the list of applicants that submitted co-design ideas during the last Call For Decade Actions (CFDA6) in October 2023.

Mr Naughton asked for elaboration on the collaboration between the CD Facility and the Challenge 9 Working Group, and involvement of IOC CD and DCU. Ms Davidson responded that she sits on the Vision 2030 WG 9 and has contributed to the drafting of the White Paper, and that the internal project group has met once and will meet again in March. Mr Pissierssens, Ms Diwa and MS Mazzuco are part of this group. The CD Facility Steering Group also involved the DCU, IOC CD and OTGA.

Mr Pissierssens explained the background of the CD Facility project and clarified that funding support from FUST was intended to support UNESCO activities in the area of science, and not directly to the Decade. An added value of the CD Facility can then be to amplify other FUST funded activities such as the OTGA, OIH, amongst others.

5.2 WG9 VISION 2030

This agenda item was introduced by Ms Edem Mahu, Co-Chair of the Decade Vision 2030 Working Group 9 on Capacity Development.

Ms Mahu recalled that the UN Ocean Decade Coordinating Unit (DCU) tasked Prof. Brian Arbic and Dr. Edem Mahu to co-chair and establish a working group (i.e Working Group 9) towards developing a strategic Ambition for Ocean Decade Challenge 9: Skills, Knowledge, and Technology for All as part of the Ocean Decade Vision 2030 Process.

Challenge 9 seeks to ensure comprehensive capacity development and equitable access to data, information, knowledge, and technology across all aspects of ocean science and for all stakeholders.

In response to this call, a working group, i.e. Working 9 was formed in addition to nine other Ocean Decade challenge Working Groups. The WG was thoughtfully constituted with support from the DCU to comprise experts from a wide diversity of backgrounds (natural sciences, social sciences, policy, technology, etc.), geographic areas, ages, and career stages.

To develop the strategic ambition for the challenges, each working group was tasked to identify the priority needs for their challenge.

To define the user needs for challenge 9, the team embarked on a clear methodology outlined below.

- *Internal discussions and consultations among the working group members.*
- *Consultation of some IOC regional taskforces and the Decade Capacity Development Facility*
- *Consultation of Past surveys, including the 2017, and 2020 Global Ocean Science Reports, the 2020, and 2022 IOC capacity assessment survey*
- *Regular meetings with co-chairs and the Decade Advisory Board*
- *Public Webinars*

These series of meetings and consultations culminated in the development of a [draft white paper](#) which has been sent for public review.

Mr Naughton sought clarification on the planned version of the draft white paper that will be made available at the Barcelona Conference. Ms Mahu confirmed the timeline with March 25 being the due date for the final version of the paper, which is the version that will be presented in Barcelona.

Mr Evans clarified the timeline for the public review of draft 0 of the white paper. He mentioned that the survey was not flexible enough to accommodate diverse comments on the paper. The GE-CD through the IOC CD Secretariat consulted the W9 Co-Chairs on how the Group could contribute to the review. Mr Pissierssens recalled that when the W9 Co-Chairs and the IOC CD Secretariat met, they agreed to share the document for comments. The comments made by the IOC CD Secretariat were based on the Decade Implementation Plan which features a CD chapter that captures almost similar outputs from the IOC CD Strategy.

Ms Mahu responded that they are looking at those edits and they are trying to address all comments received. The Group was requested by the Chair to express whether they are willing to comment on the document since the public consultation has closed. Ms Mahu agreed to share the document (online) with the rest of the GE-CD and that they could still accept the comments from the Group until 8th of March..

Mr Pinheiro emphasized the critical importance of co-design of CD activities in place at the IOC and those developed in the framework of the UN Ocean Decade. It is critical to ensure that previous works, efforts and discussions are not disconnected, and that work is not duplicated.

Related to discussions under agenda 3 in day 1, the WG9 white paper can be leveraged to make CD efforts of IOC and other international organizations visible.

The Group agreed to contribute to the public review of the draft WG9 Vision 2030 white paper by commenting on the online document by 8 March 2024.

The Group strongly advocated for leveraging the Decade initiatives such as the CD Facility and WG9 Vision 2030 white paper to amplify IOC capacity development delivery.

6. RECONSTITUTION OF GE-CD

6.1 2024 GE-CD RENEWAL PROCESS

This agenda item was introduced by Ms Johanna Diwa.

As the current GE-CD will be completing its tenure as soon as the Executive Council approves the new ToR of the renewed GE-CD membership, a new call will be issued following the 57th

Session of the Executive Council in June 2024. A Circular Letter will be prepared to invite Member States to submit the information of their nominated experts including a brief biography highlighting their experience on capacity development. Current members of the GE-CD who wish to remain in the Group still need to go through the process and secure a renomination from their respective governments. The call will be open until the end of July 2024, and the list of selected experts will be submitted for the approval of the new Executive Secretary ideally in August 2024, with the new Group starting their term by September 2024. Another meeting of the new Group will be organized in October 2024 to enable the new Group to start working on the required actions including the development of an implementation plan for submission to the 33rd IOC Assembly in June 2025.

6.2 GE-CD CHAIRMANSHIP

This agenda item was introduced by Mr Peter Pissierssens.

He noted that as explained in 6.1, the current GE-CD will cease to exist as soon as the Executive Council approves the new Terms of Reference of the renewed GE-CD membership in June 2024. Since the election of the Chair will not occur until the new membership has been created, the Group is invited to consider the continuation of the term of Mr Alan Evans as GE-CD Chair for the next four months.

The Group noted the process and timeline for the renewal process of GE-CD membership.

The Group agreed to postpone the election of Chair to the next session of the GE-CD.

The Group agreed to continue with the term of Mr Alan Evans as the current GE-CD chair until the next Chair has been elected by the renewed membership of the Group.

The Group expressed their thanks to Mr Alan Evans for his leadership in the past GE-CD sessions and for agreeing to continue the Chairmanship.

Day 3 – Thursday, 29 February

1000 - 1100

7. WORKPLAN FOR THE NEXT INTER-SESSIONAL PERIOD

This agenda item was introduced by Mr Alan Evans. He presented the table below with tasks related to the instructions from the 32nd Session of the General Assembly. He asked the members to indicate which tasks they would be willing to contribute to.

Activity	Assigned Roles/Contributors	Timeline
<i>As discussed under agenda item 2.2, the following tasks relating to the Ocean CD-Hub:</i>		
Organize and conduct regional webinar series as part of outreach and promotion of the new IOC CD Strategy 2023-2030 and the utilization of the Ocean CD-Hub	RSB Secretariats and CD Secretariat	
Contribute entries to the Ocean CD-Hub by submitting details of related CD initiatives of their organizations/countries	GE-CD	

Activity	Assigned Roles/Contributors	Timeline
<i>As discussed under agenda item 2.3, the following tasks relating to the 4th CD needs assessment survey:</i>		
Draft the design and methodology and development of survey questionnaires	CD Secretariat	March – April 2024
Identification of targeted key stakeholder respondents	RSB Secretariats	March – April 2024
Review and approve the survey	GE-CD	June 2024
Conduct of the survey	CD Secretariat (CL) and RSB Secretariats	June – July 2024
Analysis	CD Secretariat (overall); RSB Secretariats (regional)	August – September 2024
Report to the GE-CD	CD Secretariat	October 2024
<i>As discussed under agenda 3.1 – 3.3, the following tasks relating to instructions by the IOC-XXXII Assembly:</i>		
Revised GE-CD ToRs approved by the EC, call for GE-CD membership renewal	CD Secretariat (CL)	June 2024
New GE-CD membership inaugurated, WG on Implementation Plan established	New GE-CD (WG on Implementation Plan)	September 2024
Draft CD workplans presented to GE-CD	RSB Secretariats Global programmes	September 2024
Working Group to start on drafting implementation plan/Working Group on promotion and outreach	GE-CD Working Groups	October – December 2024
Review and submission of implementation plan	GE-CD	February 2025
(i) develop programmatic and regionally relevant capacity development work plans based on this strategy and related needs assessments conducted in a	CD Secretariat	April 2025 (Submission of documentation for the

Activity	Assigned Roles/Contributors	Timeline
consistent manner, building on on-going activities and making use of existing training and education facilities; (to be submitted to the IOC-XXXIII Assembly)		Assembly in June 2025)

The Group adopted the workplan for the next intersessional period while noting that some of the planned activities will be implemented by the future GE-CD, subject to the approval of the new Terms of Reference by the IOC Executive Council in June 2024.

1100 – 1130

8. ADOPTION OF THE REPORT AND CLOSING OF THE MEETING

Ms Johanna Diwa circulated the draft summary report for the review of the Group and presented the action items (yellow highlights in this document) for the review of the Group.

The Group adopted the decisions and requested the Secretariat to finalize the report and upload for circulation.

Mr Alan Evans thanked the GE-CD members and all the participants for their active participation in the meeting. He also thanked the Secretariat for all the arrangements. He closed the meeting at 11:35.

Annex I

AGENDA

DAY 1, 27 February, TUESDAY

1000-1100

1. **OPENING OF THE MEETING**
 - 1.1 ADDRESS BY THE CHAIR
 - 1.2 ADOPTION OF THE AGENDA
 - 1.3 ADOPTION OF THE TIMETABLE

2. **REPORT ON THE STATUS OF GE-CD-IV WORKPLAN**
 - 2.1 OCEAN INFOHUB PROJECT
 - 2.2 OCEAN CD-HUB PROJECT
 - 2.3 CAPACITY DEVELOPMENT NEEDS ASSESSMENT SURVEY

1100 – 1115 COFFEE BREAK

1115 - 1230

3. **IOC-XXXII ASSEMBLY (2023) OUTCOMES AND INSTRUCTIONS**
 - 3.1 IOC CD STRATEGY 2023-2030
 - 3.2 PUBLICATION AND OUTREACH
 - 3.3 REVISION OF THE GE-CD TORs

1230 – 1400 LUNCH BREAK

1400 - 1600

4. **IOC CD STRATEGY IMPLEMENTATION**
 - 4.1 GLOBAL PROGRAMMES
 - 4.1.1 IODE: OTGA
 - 4.1.2 Global Ocean Observing System
 - 4.1.3 Ocean Science/GOSR
 - 4.1.4 Tsunami (NO REPORT)
 - 4.1.5 Marine Policy Research
 - 4.1.6 UN Ocean Decade (under 5)

 - 4.2 REGIONAL PROGRAMMES
 - 4.2.1 IOCARIBE

DAY 2, 28 February, WEDNESDAY

1000-1100

Opening and Wrap Up Day 1

- 4.2 REGIONAL PROGRAMMES

- 4.2.1 IOCARIBE (moved to Day 1, 1515 – 1530)
- 4.2.2 IOCAFRICA
- 4.2.3 IOC WESTPAC
- 4.2.4 IOCINDIO

1100 – 1115 COFFEE BREAK

1115 -1230

DISCUSSION/Q&A

- 4.3 OTHER PROPOSALS
 - 4.3.1 OceanTraining Internships
 - 4.3.2 Ocean Research Policies
 - 4.3.3 GEBCO
- 4.4 EMERGING INITIATIVES
 - 4.4.1 BBNJ CHM

1230 – 1400 LUNCH BREAK

1400 – 1600

DISCUSSION/Q&A

5. UN OCEAN DECADE

- 5.1 DECADE CD FACILITY
- 5.2 WG9 VISION 2030

DAY 3, 29 February, THURSDAY

1000 – 1100

6. RECONSTITUTION OF GE-CD

- 6.1 2024 GE-CD RENEWAL PROCESS
- 6.2 GE-CD CHAIRMANSHIP

1100 – 1130 COFFEE BREAK

1130 – 1200

7. WORKPLAN FOR THE NEXT INTERSESSIONAL PERIOD

1200-1230

8. MEETING REPORT AND CLOSING

Annex II

List of Participants

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In this Series, entitled

Reports of Meetings of Experts and Equivalent Bodies, which was initiated in 1984 and which is published in English only, unless otherwise specified, the reports of the following meetings have already been issued:

1. Third Meeting of the Central Editorial Board for the Geological/Geophysical Atlases of the Atlantic and Pacific Oceans
2. Fourth Meeting of the Central Editorial Board for the Geological/Geophysical Atlases of the Atlantic and Pacific Oceans S. Fourth Session of the Joint IOC-WMO-CPPS Working Group on the Investigations of 'El Niño' (**Also printed in Spanish**)
4. First Session of the IOC-FAO Guiding Group of Experts on the Programme of Ocean Science in Relation to Living Resources
5. First Session of the IOC-UN(OETB) Guiding Group of Experts on the Programme of Ocean Science in Relation to Non-Living Resources
6. First Session of the Editorial Board for the International Bathymetric Chart of the Mediterranean and Overlay Sheets
7. First Session of the Joint CCOP(SOPAC)-IOC Working Group on South Pacific Tectonics and Resources
8. First Session of the IODE Group of Experts on Marine Information Management
9. Tenth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies in East Asian Tectonics and Resources
10. Sixth Session of the IOC-UNEP Group of Experts on Methods, Standards and Intercalibration
11. First Session of the IOC Consultative Group on Ocean Mapping (**Also printed in French and Spanish**)
12. Joint 100-WMO Meeting for Implementation of IGOSS XBT Ships-of-Opportunity Programmes
13. Second Session of the Joint CCOP/SOPAC-IOC Working Group on South Pacific Tectonics and Resources
14. Third Session of the Group of Experts on Format Development
15. Eleventh Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of South-East Asian Tectonics and Resources
16. Second Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean and Overlay Sheets
17. Seventh Session of the IOC-UNEP Group of Experts on Methods, Standards and Intercalibration
18. Second Session of the IOC Group of Experts on Effects of Pollutants
19. Primera Reunión del Comité Editorial de la COI para la Carta Batimétrica Internacional del Mar Caribe y Parte del Océano Pacífico frente a Centroamérica (**Spanish only**)
20. Third Session of the Joint CCOP/SOPAC-IOC Working Group on South Pacific Tectonics and Resources
21. Twelfth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of South-East Asian Tectonics and Resources
22. Second Session of the IODE Group of Experts on Marine Information Management
23. First Session of the IOC Group of Experts on Marine Geology and Geophysics in the Western Pacific
24. Second Session of the IOC-UN(OETB) Guiding Group of Experts on the Programme of Ocean Science in Relation to Non-Living Resources (**Also printed in French and Spanish**)
25. Third Session of the IOC Group of Experts on Effects of Pollutants
26. Eighth Session of the IOC-UNEP Group of Experts on Methods, Standards and Intercalibration
27. Eleventh Session of the Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of the Oceans (**Also printed in French**)
28. Second Session of the IOC-FAO Guiding Group of Experts on the Programme of Ocean Science in Relation to Living Resources
29. First Session of the IOC-IAEA-UNEP Group of Experts on Standards and Reference Materials
30. First Session of the IOCARIBE Group of Experts on Recruitment in Tropical Coastal Demersal Communities (**Also printed in Spanish**)
31. Second IOC-WMO Meeting for Implementation of IGOSS XBT Ship-of-Opportunity Programmes
32. Thirteenth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of East Asia Tectonics and Resources
33. Second Session of the IOC Task Team on the Global Sea-Level Observing System
34. Third Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean and Overlay Sheets
35. Fourth Session of the IOC-UNEP-IMO Group of Experts on Effects of Pollutants
36. First Consultative Meeting on RNODCs and Climate Data Services
37. Second Joint IOC-WMO Meeting of Experts on IGOSS-IODE Data Flow
38. Fourth Session of the Joint CCOP/SOPAC-IOC Working Group on South Pacific Tectonics and Resources
39. Fourth Session of the IODE Group of Experts on Technical Aspects of Data Exchange
40. Fourteenth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of East Asian Tectonics and Resources
41. Third Session of the IOC Consultative Group on Ocean Mapping
42. Sixth Session of the Joint IOC-WMO-CCPS Working Group on the Investigations of 'El Niño' (**Also printed in Spanish**)
43. First Session of the IOC Editorial Board for the International Bathymetric Chart of the Western Indian Ocean
44. Third Session of the IOC-UN(OALOS) Guiding Group of Experts on the Programme of Ocean Science in Relation to Non-Living Resources
45. Ninth Session of the IOC-UNEP Group of Experts on Methods, Standards and Intercalibration
46. Second Session of the IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico
47. Cancelled
48. Twelfth Session of the Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of the Oceans
49. Fifteenth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of East Asian Tectonics and Resources
50. Third Joint IOC-WMO Meeting for Implementation of IGOSS XBT Ship-of-Opportunity Programmes
51. First Session of the IOC Group of Experts on the Global Sea-Level Observing System
52. Fourth Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean
53. First Session of the IOC Editorial Board for the International Chart of the Central Eastern Atlantic (**Also printed in French**)
54. Third Session of the IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico (**Also printed in Spanish**)
55. Fifth Session of the IOC-UNEP-IMO Group of Experts on Effects of Pollutants
56. Second Session of the IOC Editorial Board for the International Bathymetric Chart of the Western Indian Ocean
57. First Meeting of the IOC *ad hoc* Group of Experts on Ocean Mapping in the WESTPAC Area
58. Fourth Session of the IOC Consultative Group on Ocean Mapping
59. Second Session of the IOC-WMO/IGOSS Group of Experts on Operations and Technical Applications
60. Second Session of the IOC Group of Experts on the Global Sea-Level Observing System

61. UNEP-IOC-WMO Meeting of Experts on Long-Term Global Monitoring System of Coastal and Near-Shore Phenomena Related to Climate Change
62. Third Session of the IOC-FAO Group of Experts on the Programme of Ocean Science in Relation to Living Resources
63. Second Session of the IOC-IAEA-UNEP Group of Experts on Standards and Reference Materials
64. Joint Meeting of the Group of Experts on Pollutants and the Group of Experts on Methods, Standards and Intercalibration
65. First Meeting of the Working Group on Oceanographic Co-operation in the ROPME Sea Area
66. Fifth Session of the Editorial Board for the International Bathymetric and its Geological/Geophysical Series
67. Thirteenth Session of the IOC-IHO Joint Guiding Committee for the General Bathymetric Chart of the Oceans (**Also printed in French**)
68. International Meeting of Scientific and Technical Experts on Climate Change and Oceans
69. UNEP-IOC-WMO-IUCN Meeting of Experts on a Long-Term Global Monitoring System
70. Fourth Joint IOC-WMO Meeting for Implementation of IGOSS XBT Ship-of-Opportunity Programmes
71. ROPME-IOC Meeting of the Steering Committee on Oceanographic Co-operation in the ROPME Sea Area
72. Seventh Session of the Joint IOC-WMO-CPPS Working Group on the Investigations of 'El Niño' (**Spanish only**)
73. Fourth Session of the IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico (**Also printed in Spanish**)
74. UNEP-IOC-ASPEI Global Task Team on the Implications of Climate Change on Coral Reefs
75. Third Session of the IODE Group of Experts on Marine Information Management
76. Fifth Session of the IODE Group of Experts on Technical Aspects of Data Exchange
77. ROPME-IOC Meeting of the Steering Committee for the Integrated Project Plan for the Coastal and Marine Environment of the ROPME Sea Area
78. Third Session of the IOC Group of Experts on the Global Sea-level Observing System
79. Third Session of the IOC-IAEA-UNEP Group of Experts on Standards and Reference Materials
80. Fourteenth Session of the Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of the Oceans
81. Fifth Joint IOG-WMO Meeting for Implementation of IGOSS XBT Ship-of-Opportunity Programmes
82. Second Meeting of the UNEP-IOC-ASPEI Global Task Team on the Implications of climate Change on Coral Reefs
83. Seventh Session of the JSC Ocean Observing System Development Panel
84. Fourth Session of the IODE Group of Experts on Marine Information Management
85. Sixth Session of the IOC Editorial Board for the International Bathymetric chart of the Mediterranean and its Geological/Geophysical Series
86. Fourth Session of the Joint IOC-JGOFS Panel on Carbon Dioxide
87. First Session of the IOC Editorial Board for the International Bathymetric Chart of the Western Pacific
88. Eighth Session of the JSC Ocean Observing System Development Panel
89. Ninth Session of the JSC Ocean Observing System Development Panel
90. Sixth Session of the IODE Group of Experts on Technical Aspects of Data Exchange
91. First Session of the IOC-FAO Group of Experts on OSLR for the IOCINCWIO Region
92. Fifth Session of the Joint IOC-JGOFS CO₂ Advisory Panel Meeting
93. Tenth Session of the JSC Ocean Observing System Development Panel
94. First Session of the Joint CMM-IGOSS-IODE Sub-group on Ocean Satellites and Remote Sensing
95. Third Session of the IOC Editorial Board for the International Chart of the Western Indian Ocean
96. Fourth Session of the IOC Group of Experts on the Global Sea Level Observing System
97. Joint Meeting of GEMSI and GEEP Core Groups
98. First Session of the Joint Scientific and Technical Committee for Global Ocean Observing System
99. Second International Meeting of Scientific and Technical Experts on Climate Change and the Oceans
100. First Meeting of the Officers of the Editorial Board for the International Bathymetric Chart of the Western Pacific
101. Fifth Session of the IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico
102. Second Session of the Joint Scientific and Technical Committee for Global Ocean Observing System
103. Fifteenth Session of the Joint IOC-IHO Committee for the General Bathymetric Chart of the Oceans
104. Fifth Session of the IOC Consultative Group on Ocean Mapping
105. Fifth Session of the IODE Group of Experts on Marine Information Management
106. IOC-NOAA *Ad hoc* Consultation on Marine Biodiversity
107. Sixth Joint IOC-WMO Meeting for Implementation of IGOSS XBT Ship-of-Opportunity Programmes
108. Third Session of the Health of the Oceans (HOTO) Panel of the Joint Scientific and Technical Committee for GLOSS
109. Second Session of the Strategy Subcommittee (SSC) of the IOC-WMO-UNEP Intergovernmental Committee for the Global Ocean Observing System
110. Third Session of the Joint Scientific and Technical Committee for Global Ocean Observing System
111. First Session of the Joint GCOS-GOOS-WCRP Ocean Observations Panel for Climate
112. Sixth Session of the Joint IOC-JGOFS CO₂ Advisory Panel Meeting
113. First Meeting of the IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional - Global Ocean Observing System (NEAR-GOOS)
114. Eighth Session of the Joint IOC-WMO-CPPS Working Group on the Investigations of "El Niño" (**Spanish only**)
115. Second Session of the IOC Editorial Board of the International Bathymetric Chart of the Central Eastern Atlantic (**Also printed in French**)
116. Tenth Session of the Officers Committee for the Joint IOC-IHO General Bathymetric Chart of the Oceans (GEBCO), USA, 1996
117. IOC Group of Experts on the Global Sea Level Observing System (GLOSS), Fifth Session, USA, 1997
118. Joint Scientific Technical Committee for Global Ocean Observing System (J-GOOS), Fourth Session, USA, 1997
119. First Session of the Joint 100-WMO IGOSS Ship-of-Opportunity Programme Implementation Panel, South Africa, 1997
120. Report of Ocean Climate Time-Series Workshop, Joint GCOS-GOOS-WCRP Ocean Observations Panel for Climate, USA, 1997
121. IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional Global Ocean Observing System (NEAR-GOOS), Second Session, Thailand, 1997
122. First Session of the IOC-IUCN-NOAA *Ad hoc* Consultative Meeting on Large Marine Ecosystems (LME), France, 1997

123. Second Session of the Joint GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC), South Africa, 1997
124. Sixth Session of the IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico, Colombia, 1996 **(also printed in Spanish)**
125. Seventh Session of the IODE Group of Experts on Technical Aspects of Data Exchange, Ireland, 1997
126. IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), First Session, France, 1997
127. Second Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LME), France, 1998
128. Sixth Session of the IOC Consultative Group on Ocean Mapping (CGOM), Monaco, 1997
129. Sixth Session of the Tropical Atmosphere - Ocean Array (TAO) Implementation Panel, United Kingdom, 1997
130. First Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System (GOOS), France, 1998
131. Fourth Session of the Health of the Oceans (HOTO) Panel of the Global Ocean Observing System (GOOS), Singapore, 1997
132. Sixteenth Session of the Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of the Oceans (GEBCO), United Kingdom, 1997
133. First Session of the IOC-WMO-UNEP-ICSU-FAO Living Marine Resources Panel of the Global Ocean Observing System (GOOS), France, 1998
134. Fourth Session of the IOC Editorial Board for the International Bathymetric Chart of the Western Indian Ocean (IOC/EB-IBCWIO-IW3), South Africa, 1997
135. Third Session of the Joint GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC), France, 1998
136. Seventh Session of the Joint IOC-JGOFS C02 Advisory Panel Meeting, Germany, 1997
137. Implementation of Global Ocean Observations for GOOS/GCOS, First Session, Australia, 1998
138. Implementation of Global Ocean Observations for GOOS/GCOS, Second Session, France, 1998
139. Second Session of the IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), Brazil, 1998
140. Third Session of IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional - Global Ocean Observing System (NEAR-GOOS), China, 1998
141. Ninth Session of the Joint IOC-WMO-CPPS Working Group on the Investigations of 'El Niño', Ecuador, 1998 **(Spanish only)**
142. Seventh Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean and its Geological/Geophysical Series, Croatia, 1998
143. Seventh Session of the Tropical Atmosphere-Ocean Array (TAO) Implementation Panel, Abidjan, Côte d'Ivoire, 1998
144. Sixth Session of the IODE Group of Experts on Marine Information Management (GEMIM), USA, 1999
145. Second Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System (GOOS), China, 1999
146. Third Session of the IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), Ghana, 1999
147. Fourth Session of the GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC); Fourth Session of the WCRP CLIVAR Upper Ocean Panel (UOP); Special Joint Session of OOPC and UOP, USA, 1999
148. Second Session of the IOC-WMO-UNEP-ICSU-FAO Living Marine Resources Panel of the Global Ocean Observing System (GOOS), France, 1999
149. Eighth Session of the Joint IOC-JGOFS CO2 Advisory Panel Meeting, Japan, 1999
150. Fourth Session of the IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional – Global Ocean Observing System (NEAR-GOOS), Japan, 1999
151. Seventh Session of the IOC Consultative Group on Ocean Mapping (CGOM), Monaco, 1999
152. Sixth Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), France, 1999
153. Seventeenth Session of the Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of the Oceans (GEBCO), Canada, 1999
154. Comité Editorial de la COI para la Carta Batimétrica Internacional del Mar Caribe y el Golfo de Mexico (IBCCA), Septima Reunión, Mexico, 1998
IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico (IBCCA), Seventh Session, Mexico, 1998
155. Initial Global Ocean Observing System (GOOS) Commitments Meeting, IOC-WMO-UNEP-ICSU/Impl-III/3, France, 1999
156. First Session of the *ad hoc* Advisory Group for IOCARIBE-GOOS, Venezuela, 1999 **(also printed in Spanish and French)**
157. Fourth Session of the IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), China, 1999
158. Eighth Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean and its Geological/Geophysical Series, Russian Federation, 1999
159. Third Session of the IOC-WMO-UNEP-ICSU-FAO Living Marine Resources Panel of the Global Ocean Observing System (GOOS), Chile, 1999
160. Fourth Session of the IOC-WMO-UNEP-ICSU-FAO Living Marine Resources Panel of the Global Ocean Observing System (GOOS). Hawaii, 2000
161. Eighth Session of the IODE Group of Experts on Technical Aspects of Data Exchange, USA, 2000
162. Third Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LME), France, 2000
163. Fifth Session of the IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), Poland, 2000
164. Third Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System (GOOS), France, 2000
165. Second Session of the *ad hoc* Advisory Group for IOCARIBE-GOOS, Cuba, 2000 **(also printed in Spanish and French)**
166. First Session of the Coastal Ocean Observations Panel, Costa Rica, 2000
167. First GOOS Users' Forum, 2000
168. Seventh Session of the Group of Experts on the Global Sea Level Observing System, Honolulu, 2001
169. First Session of the Advisory Body of Experts on the Law of the Sea (ABE-LOS), France, 2001 **(also printed in French)**
170. Fourth Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System, Chile, 2001
171. First Session of the IOC-SCOR Ocean CO₂ Advisory Panel, France, 2000
172. Fifth Session of the GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC), Norway, 2000 **(electronic copy only)**
173. Third Session of the *ad hoc* Advisory Group for IOCARIBE-GOOS, USA, 2001 **(also printed in Spanish and French)**
174. Second Session of the Coastal Ocean Observations Panel and GOOS Users' Forum, Italy, 2001
175. Second Session of the Black Sea GOOS Workshop, Georgia, 2001
176. Fifth Session of the IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional – Global Ocean Observing System (NEAR-GOOS), Republic of Korea, 2000
177. Second Session of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Morocco, 2002 **(also printed in French)**
178. Sixth Session of the Joint GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC), Australia, 2001 **(electronic copy only)**
179. *Cancelled*
180. Second Session of the IOC-SCOR Ocean CO₂ Advisory Panel, Honolulu, Hawaii, U.S.A, 2002 **(electronic copy only)**

181. IOC Workshop on the Establishment of SEAGOOS in the Wider Southeast Asian Region, Seoul, Republic of Korea, 2001 (SEAGOOS preparatory workshop) **(electronic copy only)**
182. First Session of the IODE Steering Group for the Resource Kit, USA, 19–21 March 2001
183. Fourth Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), France, 2002
184. Seventh Session of the IODE Group of Experts on Marine Information Management (GEMIM), France, 2002 **(electronic copy only)**
185. Sixth Session of IOC/WESTPAC Coordinating Committee for the North-East Asian Regional - Global Ocean Observing System (NEAR-GOOS), Republic of Korea, 2001 **(electronic copy only)**
186. First Session of the Global Ocean Observing System (GOOS) Capacity Building Panel, Switzerland, 2002 **(electronic copy only)**
187. Fourth Session of the ad hoc Advisory Group for IOCARIBE-GOOS, 2002, Mexico **(also printed in French and Spanish)**
188. Fifth Session of the IOC Editorial Board for the International Bathymetric Chart of the Western Indian Ocean (IBCWIO), Mauritius, 2000
189. Third session of the Editorial Board for the International Bathymetric Chart of the Western Pacific, China, 2000
190. Third Session of the Coastal Ocean Observations Panel and GOOS Users' Forum, Vietnam, 2002
191. Eighth Session of the IOC Consultative Group on Ocean Mapping, Russian Federation, 2001
192. Third Session of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Lisbon, 2003 **(also printed in French)**
193. Extraordinary Session of the Joint IOC-WMO-CPPS Working Group on the Investigations of 'El Niño', Chile, 1999 **(Spanish only; electronic copy only)**
194. Fifth Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System, France, 2002
195. Sixth Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System, South Africa, 2003
196. Fourth Session of the Coastal Ocean Observations Panel, South Africa, 2002 **(electronic copy only)**
197. First Session of the JCOMM/IODE Expert Team On Data Management Practices, Belgium, 2003 *(also JCOMM Meeting Report No. 25)*
198. Fifth Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), Paris, 2003
199. Ninth Session of the IOC Consultative Group on Ocean Mapping, Monaco, 2003 **(Recommendations in English, French, Russian and Spanish included)**
200. Eighth Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), France, 2003 **(electronic copy only)**
201. Fourth Session of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Greece, 2004 **(also printed in French)**
202. Sixth Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), Paris, 2004 **(electronic copy only)**
203. Fifth Session of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Argentina, 2005 **(also printed in French)**
204. Ninth Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), France, 2005 **(electronic copy only)**
205. Eighth Session of the IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional – Global Ocean Observing System (NEAR-GOOS), China, 2003 **(electronic copy only)**
206. Sixth Meeting of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Spain, 2006 **(also printed in French)**
207. Third Session of the Regional Forum of the Global Ocean Observing System, South Africa, 2006 **(electronic copy only)**
208. Seventh Session of the IOC-UNEP-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), Paris, 2005 **(electronic copy only)**
209. Eighth Session of the IOC-UNEP-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), Paris, 2006 **(electronic copy only)**
210. Seventh Meeting of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Gabon, 2007 **(bilingual English/French)**
211. First Meeting of the IOC Working Group on the Future of IOC, Paris, 2008 **(Executive Summary in English, French, Russian and Spanish included)**
212. First meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, 3–4 April 2008 **(Executive Summary in English, French, Russian and Spanish included)**
213. First Session of the Panel for Integrated Coastal Observation (PICO-I), Paris, 10–11 April 2008 **(electronic copy only)**
214. Tenth Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), Paris, 6–8 June 2007 **(electronic copy only)**
215. Eighth Meeting of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Paris, 21–25 April 2008 **(bilingual English/French)**
216. Fourth Session of the Global Ocean Observing System (GOOS) Regional Alliances Forum (GRF), Guayaquil, Ecuador, 25–27 November 2008 **(electronic copy only)**
217. Second Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, 27 March 2009 **(Executive Summary in English, French, Russian and Spanish included)**
218. Ninth Meeting of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Paris, 30 March–3 April 2009 **(bilingual English/French)**
219. First Session of the IOC-SCOR International Ocean Carbon Coordination Project (IOCCP) Scientific Steering Group (also IOCCP Reports, 3), Broomfield, Colorado, U.S.A., 1 October 2005 **(electronic copy only)**
220. Second Session of the IOC-SCOR International Ocean Carbon Coordination Project (IOCCP) Scientific Steering Group (also IOCCP Reports, 6), Paris, France, 20 April 2007 **(electronic copy only)**
221. Third Session of the IOC-SCOR International Ocean Carbon Coordination Project (IOCCP) Scientific Steering Group (also IOCCP Reports, 10), Villefranche-sur-mer, France, 3–4 October 2008 **(electronic copy only)**
222. Fourth Session of the IOC-SCOR International Ocean Carbon Coordination Project (IOCCP) Scientific Steering Group (also IOCCP Reports, 15), Jena, Germany, 14 September 2009 **(electronic copy only)**
223. First Meeting of the joint IOC-ICES Study Group on Nutrient Standards (SGONS) (also IOCCP Reports, 20), Paris, France, 23–24 March 2010 **(Executive Summary in E, F, R, S included)**
224. Third Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Lisbon, Portugal, 5–6 May 2010 **(Executive Summary in English, French, Russian and Spanish included)**
225. Eleventh Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), Paris, 13–15 May 2009 **(electronic copy only)**
226. Second Session of the Panel for Integrated Coastal Observation (PICO-II), Paris, 24–26 February 2009 **(electronic copy only)**
227. First meeting of the Task Team on Seismic Data Exchange in the South West Pacific of the ICG/PTWS Regional Working Group for the Southwest Pacific, Port Vila, Vanuatu, 19–20 October 2009 **(electronic copy only)**
228. Fourth Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, France, 20–21 March 2011 **(Executive Summary in English, French, Russian and Spanish included)**
229. Second Session of the IODE Steering Group for Ocean Teacher (SG-OT), Miami, Florida, 11–15 April 2011
230. First Meeting of the Inter-ICG Task Team 1 on Sea Level Monitoring for Tsunami (Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Seattle, USA, 29 November–1 December 2010
231. First Meeting of the Inter-ICG Task Team 2 on Disaster Management and Preparedness (Working Group on Tsunamis and Other Hazards Related to

- Sea-Level Warning and Mitigation Systems (TOWS-WG), Seattle, USA, 29 November–1 December 2010
232. First Meeting of the Inter-ICG Task Team 3 on Tsunami Watch Operations (Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Seattle, USA, 29 November–1 December 2010
 233. Primera Reunión del Grupo de Trabajo Regional para América Central del Grupo Intergubernamental de Coordinación del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico (ICG/PTWS), Managua (Nicaragua) del 4 al 6 de noviembre de 2009 (**Resumen dispositivo en español e inglés**)
 234. Segunda Reunión del Grupo de Trabajo Regional para América Central del Grupo Intergubernamental de Coordinación del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico (ICG/PTWS), San Salvador (El Salvador) del 28 al 30 de septiembre de 2011 (**Resumen dispositivo en español e inglés**)
 235. First Session of the Joint IODE-JCOMM Steering Group for the Global Temperature-Salinity Profile Programme (SG-GTSP), 16–20 April 2012, Ostend, Belgium
 236. Ad hoc Session of the Joint JCOMM-IODE Steering Group for the Ocean Data Standards Pilot Project (SG-ODSPP), 23–25 April 2012, Ostend, Belgium
 237. First Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), Sanya, China, 12–14 December 2011
 238. First Meeting of the IODE Steering Group for OceanDocs (SG-OceanDocs), 24–27 January 2012, Ostend, Belgium
 239. Fifth Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Tokyo, Japan, 15 February 2012 (**Executive Summary in English, French, Russian and Spanish included**)
 240. Ad hoc Session of the IODE Group of Experts on Biological and Chemical Data Management and Exchange Practices (GE-BICH), Ostend, Belgium, 25 October 2012
 241. Twelfth Session of the IODE Group of Experts on Marine Information Management (GE-MIM), Miami, USA, 22–25 January 2013
 242. Twelfth Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), Paris, 9–11 November 2011 (**electronic copy only**)
 243. Meeting of the Pacific Tsunami Warning System Working Group 2 on Detection, Warning and Dissemination Task Team on PacWave11, Honolulu, USA, 21 May 2012 (**electronic copy only**)
 244. Sixth Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, 20–21 February 2013 (**Executive Summary in English, French, Russian and Spanish included**)
 245. Second Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), Petaling Jaya, Malaysia, 16–18 October 2012 (**electronic copy only**)
 246. Seventh Meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems, UNESCO, Paris, 12–13 February 2014 (**Executive Summary in English, French, Russian and Spanish included**)
 247. Third Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), Hong-Kong, China, 6–7 April 2014 (**electronic copy only**)
 248. Tercera Reunión del Grupo de Trabajo Regional para América Central del Grupo Intergubernamental de Coordinación del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico (ICG/PTWS), Managua, Nicaragua, del 29 al 30 de septiembre de 2014 (**Resumen dispositivo en español e inglés**)
 249. Workshop on Tsunami Modelling and Mitigation of the ICG/CARIBE-EWS Working Group 2: Tsunami Hazard Assessment, 1–3 December 2014, Cartagena de Indias, Colombia (**electronic copy only**)
 250. Fourth meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), Jakarta, Indonesia, 11–12 February 2015 (**electronic copy only**)
 251. Eighth Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, 12–13 March 2015 (**Executive Summary in English, French, Russian and Spanish included**)
 252. Ninth Meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems, UNESCO, Paris, 25-26 February 2016 (**Executive Summary in English, French, Russian and Spanish included**)
 253. Fifth Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), Manila, Philippines, 2–3 March 2016 (**electronic copy only**)
 254. Second Meeting of the Regional Working Group for the North West Indian Ocean (WG-NWIO), Tehran, Islamic Republic of, 27–28 February 2017 (**electronic copy only**)
 255. Sixth Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), Shanghai, China, 1–3 March 2017 (**electronic copy only**)
 256. Tenth Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, 23–24 February 2017 (**Executive Summary in English, French, Russian and Spanish included**)
 257. First Meeting of the Group of Experts on Capacity Development (GE-CD), Paris, 21–23 March 2018 (**electronic copy only**)
 258. Eleventh Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, 16–17 February 2018 (**Executive Summary in English, French, Russian and Spanish included**)
 259. Seventh Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), Hanoi, Vietnam, 6–8 March 2018 (**electronic copy only**)
 260. Cuarta reunión del Grupo de Trabajo Regional para América Central del Grupo Intergubernamental de Coordinación del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico (ICG/PTWS), Managua (Nicaragua) el 11 de febrero de 2019 (**Resumen dispositivo y recomendación en español e inglés**)
 261. Eighth Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), Jakarta, Indonesia, 4–6 March 2019 (**electronic copy only**)
 262. First Joint Meeting of the Task Teams of the IOC Group of Experts on Capacity Development: Capacity development requirements of Member States and implementation of a Clearing House Mechanism (CHM) for the Transfer of Marine Technology, UNESCO, Paris, 13–14 March 2019 (**electronic copy only**)
 263. Twelfth Meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-XII), Paris, 21–22 February 2019 (**Executive Summary in English, French, Russian and Spanish included**)
 264. Seventh Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the Pacific Islands Countries and Territories (PICTs-WG), 8 March 2019, Noumea, New Caledonia (**electronic copy only**).
 265. Thirteenth Meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-XIII), Paris, 20–21 February 2020 (**Executive Summary in English, French, Russian and Spanish included**)
 266. Second Meeting of the Group of Experts on Capacity Development (GE-CD), 26 October 2020, (online). (**electronic copy only**)
 267. Fourteenth Meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-XIV), Online, 25–26 February 2021 (**Executive Summary in English, French, Russian and Spanish included**)

- 268 Eighth Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the Pacific Islands Countries and Territories (PICTs-WG), 29 March–1 April 2021 (online)
269. Tenth Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), 28 and 30 September 2021 (online)
270. Fifteenth Meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-XV), 24–25 February 2022 (online)
271. Quinta Reunión del Grupo de Trabajo Regional para América Central del Grupo Intergubernamental de Coordinación del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico (ICG/PTWS), 15 de noviembre de 2021 (En línea)
272. Sixteenth Meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-XVI), Paris, 2–3 March 2023 (**Executive Summary in English, French, Russian and Spanish included**)
273. Sexta Reunión del Grupo de Trabajo Regional para América Central del Grupo Intergubernamental de Coordinación del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico (ICG/PTWS), Heredia, Costa Rica, 24 de abril 2023 (**Executive Summary and recommendation in English included**)
274. Fifth Session of the IOC Group of Experts on Capacity Development (GE-CD), Paris, 27–29 February 2024.