

Intergovernmental Oceanographic Commission
Reports of Governing and Major Subsidiary Bodies



IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE)

Seventeenth Session

Bogotá, Colombia, May 9- 11, 2023

DRAFT SUMMARY REPORT

UNESCO 2023

TABLE OF CONTENTS

	page
1. OPENING.....	2
2. ORGANIZATION OF THE SESSION	2
2.1 ADOPTION OF THE AGENDA	2
2.2 DESIGNATION OF THE RAPPORTEUR FOR THE SESSION	3
2.3 ESTABLISHMENT OF SESSIONAL COMMITTEES AND WORKING GROUPS.....	3
2.4 INTRODUCTION OF DOCUMENTATION AND TIMETABLE	3
3. IOCARIBE MATTERS AND REPORTS	3
3.1 STATEMENT OF THE CHAIRPERSON	3
3.2 IOCARIBE SECRETARY’S REPORT ON THE WORK ACCOMPLISHED SINCE SIXTEENTH SESSION AND BUDGET IMPLEMENTATION	4
4. STRATEGIC DEVELOPMENT	5
4.1 IOC MEDIUM-TERM STRATEGY 2022 - 2029.....	5
4.2 REVISED IOC CAPACITY DEVELOPMENT STRATEGY	6
4.3 DRAFT UNESCO ROLLING OPERATIONAL STRATEGY/Framework FOR SMALL ISLAND DEVELOPING STATES 2022–2029.....	6
4.4 DRAFT REVISED IOC OCEANOGRAPHIC DATA EXCHANGE POLICY	7
4.5 DEVELOPMENT OF A NEW IOC-WIDE STRATEGY ON SUSTAINABLE OCEAN PLANNING AND MANAGEMENT	8
4.6 DRAFT UPDATED IOCARIBE MEDIUM TERM STRATEGIC SCIENCE PLAN.....	8
5. IOCARIBE CONTRIBUTION TO UN OCEAN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT (2021–2030)	10
5.1 UN OCEAN DECADE: GLOBAL UPDATE.....	10
5.2 UN OCEAN DECADE: STATUS OF PROJECTS AND TAC WORKING GROUPS, AND PREPARATION OF NEW PROJECT SUBMISSIONS FOR OCEAN DECADE ENDORSEMENT.....	11
5.3 ESTABLISHMENT OF UN OCEAN DECADE COORDINATION OFFICE FOR THE TROPICAL AMERICAS AND THE CARIBBEAN	12
5.4. PROPOSED AMENDMENTS TO THE TERMS OF REFERENCE OF THE TAC REGIONAL PLANNING GROUP TO ADVANCE AND COORDINATE STRATEGIC PARTNERSHIPS AND ACTIONS FOR WTA ENGAGEMENT IN THE UN OCEAN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT (2021– 2030)	13
5.5 ENHANCED COMMUNICATION AND ENGAGEMENT STRATEGY TO RAISE AWARENESS OF OCEAN DECADE ACTIVITIES, AND NATIONAL OCEAN DECADE COMMITTEES.....	13

6. REVIEW OF REGIONAL PROGRAMMES, PROJECTS AND WORKING GROUPS AND FUTURE DIRECTIONS	14
6.1 OCEAN RESEARCH	14
6.1.1 Harmful Algal Bloom (HAB) Programme	14
6.1.2 Ocean Acidification	15
6.2 OBERVATIONS, SERVICES, DATA AND INFORMATION, AND EARLY WARNING SYSTEMS	15
6.2.1 IOCARIBE GOOS Report from Science Conference.....	15
6.2.2 Oceanographic Data and Information Exchange (IODE)	16
6.2.3 IOC Ocean Info Hub and LAC Ocean Info Hub	16
6.2.4 ICG CARIBE EWS XV 2023 Report.....	18
6.2.5 MACHC-IOCARIBE Seabed 2030 Strategy and Work Plan 2023	19
6.3 CAPACITY DEVELOPMENT	19
6.3.1 Ocean Teacher Global Academy	19
6.4 ASSESSMENT INFORMATION FOR POLICY AND SUSTAINABLE MANAGEMENT AND GOVERNANCE.....	20
6.4.1 Ocean Literacy.....	20
6.4.2 Marine Spatial Planning and Sustainable Ocean Economy.....	21
7. INSTITUTIONAL FRAMEWORK	24
7.1 STATUS OF COOPERATION WITH OTHER ORGANIZATIONS	24
8. ADMINISTRATION AND MANAGEMENT	25
8.1 ELECTIONS OF THE BOARD OF OFFICERS OF THE SUB-COMMISSION.....	25
8.1.1 Election of the Chairperson of the Sub-Commission	25
8.1.2 Election of the Vice-Chairpersons of the Sub-commission	26
8.2 DATES AND PLACES OF THE EIGHTEENTH SESSION OF THE SUBCOMMISSION.....	26
9. ADOPTION OF DECISIONS AND RECOMMENDATIONS	26
10. CLOSURE	26
ANNEXES	
ANNEX I	AGENDA
ANNEX II	RECOMMENDATIONS
ANNEX III	STATEMENT AND ADDRESSES
ANNEX IV	LIST OF PARTICIPANTS

ANNEX V LIST OF ACRONYMS AND ABBREVIATIONS

1. OPENING

1. The Chairperson of the IOC (of UNESCO) Sub-Commission for the Caribbean and Adjacent Regions IOCARIBE, Mr. Arnulfo Sanchez (Panama) opened the Seventeenth Session of the IOC Sub-commission for the Caribbean and Adjacent Regions SC-IOCARIBE-XVII at 09.00 hrs on May 9, 2023, at NH Collection Bogotá WTC Royal Hotel in Bogota, Colombia.
2. Mr. Sanchez introduced Her Excellency, Ms J. Elizabeth Taylor, Vice Minister, Ministry of Foreign Affairs, Colombia. She addressed the Session and welcomed participants and delegations to Colombia and to the Seventeenth Session of the IOC Sub-commission for the Caribbean and Adjacent Regions.
3. IOC Executive Secretary and UNESCO ADG/IOC, Mr. Vladimir Ryabinin addressed the Session in representation of the Intergovernmental Oceanographic Commission (IOC) of UNESCO. He referred to the importance of the meeting for the region and for Small Island Developing States (SIDS) and recalled the importance of the UN Ocean Decade of Ocean Science for Sustainable Development.
4. Mr. Sanchez welcomed the participants to the meeting and wished all participating Delegations a successful and productive meeting and a great stay. He thanked the government of Colombia for their continuous support and for hosting the Seventeenth Session of the IOC Sub-Commission.
5. Ms. Lorna Inniss, Head of the IOCARIBE Secretariat, thanked the Government of Colombia for hosting the meeting. She highlighted the great work done by the former IOCARIBE Secretary, Dr Cesar Toro. She invited Member States to partner and to work together for the future of our children, our seniors, and the very large and diverse communities.
6. The Chairperson declared officially opened of the Seventeenth Session of the IOC Sub-commission for the Caribbean and Adjacent Regions SC-IOCARIBE-XVII.
7. The full text of these introductory remarks is included at Annex III.
8. Immediately following the opening session, a conference photo was taken, immediately followed by a coffee break.

2. ORGANIZATION OF THE SESSION

2.1 ADOPTION OF THE AGENDA

9. The IOCARIBE Chairperson, Mr. Arnulfo Sanchez introduced this item. The Provisional Agenda and Timetable were submitted to the Session for adoption.
10. Mr. Vladimir Ryabinin requested to include a brief presentation on the IOC, at the beginning of Agenda Item 4.
11. The Session adopted the Provisional Agenda.
12. The Agenda, as adopted is included in Annex I.

2.2 DESIGNATION OF THE RAPPORTEUR FOR THE SESSION

13. The IOCARIBE Chair invited the Session to designate a Rapporteur for each language (Spanish and English) for the present session to assist the Chairman and the UNESCO IOC Secretary for IOCARIBE in the preparation of the Draft Summary Report.
14. Colombia (CN Juan Camilo Forero) was proposed to act as Spanish Rapporteur. Aruba (Mr. Marck Oduber) was proposed to act as English language Rapporteur for the Session.
15. **The Sub-Commission accepted** the proposals and welcomed Rapporteurs.

2.3 ESTABLISHMENT OF SESSIONAL COMMITTEES AND WORKING GROUPS

16. The IOCARIBE Secretary, Ms Lorna Inniss introduced this item. The Session was requested to work in Plenary as far as possible. However, where deemed necessary, the Session was requested to constitute open-ended working groups.
17. She invited the Sub-commission to form three sessional committees, the Financial Committee, the Recommendations Committee and the Elections Committee, but suggested to focus on Elections and Recommendations committees only this time.
18. These Working Groups may be formed to deal with specific questions arising from Agenda Items. Considering that the Session is hybrid, these Groups would meet before or after Plenary. Their product shall serve as the basis for and to facilitate the debate in Plenary. She then invited nominations for sessional working groups.
19. The Sub-Commission decided to constitute the following statutory and open-ended sessional committees.
20. Elections Committee (to examine all proposals of candidates for the elections to the chair and vice-chairs at the present session, and to report on them) with the following composition: Colombia, Jamaica and Costa Rica.
21. Recommendations Committee (to report on all draft recommendations duly presented for consideration at the session) with the following composition: United States, Dominican Republic and Venezuela.
22. Recommendations approved are included in Annex II and the List of Participants in Annex IV.

2.4 INTRODUCTION OF DOCUMENTATION AND TIMETABLE

23. The IOCARIBE Secretary, Ms Lorna Inniss introduced this item. She briefly reviewed the list of working documents and reminded the Session that the report would be focused on recommendations. Ms. Inniss indicated that the list of documents is posted on the Ocean Expert website. She referred to the Document Action Paper. The Action Paper was intentionally drafted as a pre-report to streamline the reporting process during the session. Ms. Innis encouraged Member States to focus on items 5.3, 5.4 and 6.2.1, as they address important issues regarding the UN Ocean Decade Coordination Office, the TAC Regional Planning group and the IOCARIBE GOOS.

3. IOCARIBE MATTERS AND REPORTS

3.1 STATEMENT OF THE CHAIRPERSON

24. In accordance with rule of procedure 8.1(a), Mr. Arnulfo Sanchez (Panama) the IOCARIBE Chairperson, delivered an oral statement on recent developments in the work of the Sub-Commission since the Sixteenth Session of IOCARIBE (Online Meeting, May 3-5, 2021) and perspectives for the coming years.
25. Mr. Sanchez highlighted the importance of UN Ocean Decade other UN programs related to natural issues. He indicated that the Ocean Decade is priority for the Sub-Commission, and the importance to have a Ocean Decade Coordination Office in the Caribbean. Mr. Sanchez referred to IOCARIBE GOOS and acknowledged the nomination of Dr John Cortinas as IOCARIBE GOOS representative. He further indicated that emphasis should be put on ECOP. Finally, he thanked Dr Cesar Toro for his tireless work during his period and acknowledged Ms. Lorna Inniss as new head of IOCARIBE.
26. The IOCARIBE Chairperson urged Member States to actively participate, engage and promote the activities of IOC and the Sub-Commission.
27. **The Sub-Commission acknowledged** with thanks the Report of the Chair.

3.2 IOCARIBE SECRETARY'S REPORT ON THE WORK ACCOMPLISHED SINCE SIXTEENTH SESSION AND BUDGET IMPLEMENTATION

28. The IOCARIBE Secretary, Ms Lorna Inniss, introduced this agenda item. She referred to the programme progress and to the implementation of decisions and recommendations during the period 2021 – 2023, particularly those made at the Sixteenth Session of the Sub-Commission held online in May 2021.
29. Ms Inniss indicated that Secretary's report was unusual this year. This biennium began in January 2022, and Dr Toro retired one month later. UNESCO Science Officer with the Cluster Office in Jamaica, Dr. Jean-Paul Ngome Abiaga took on the interim duties of the Secretariat, along with his own workload. Ms. Inniss arrived at the Secretariat in January 2023. The report presented was mostly taken from Dr. Toro's exit report to IOC – UNESCO, which covers activities from the previous biennium, ended in December 2021.
30. Ms. Inniss mentioned that for the past four months, she held meetings with all Coordinators of programs and Ocean Decade projects. She also met online with each of the IOC Unit Chiefs. She initiated a series of individual meetings with Member States before this XVII session and plans to continue this series. She noted that the Secretariat has an impressive list of partners with whom they implement programmes in the region. From the IOCARIBE GOOS Conference and the momentum for an integrated ocean observation network, she anticipates a strong recommendation on the IOCARIBE GOOS programme. She stressed the importance of clarity on immediate, medium-term and longer-term actions, the costs associated with those actions, and the person or groups responsible for implementation over the next biennium. This approach will help to mobilize resources, engage partners and stakeholders.
31. She highlighted the need to communicate more effectively the work of the Secretariat to many different audiences. She began working on a communications plan that will guide the Secretariat's engagement with the stakeholders. Once completed, the document will be presented to the Board for their comments, and shared with Member States. She also talked about the importance of engaging young people in the co-design and co-implementation of programs.
32. **The Sub-Commission took note** of the report of the IOCARIBE Secretary.

4. STRATEGIC DEVELOPMENT

33. The IOC Executive Secretary, Mr. Vladimir Ryabinin provided a brief presentation on IOC. Mr. Ryabinin reminded that the IOC assembly is in June and IOCARIBE needs to report on June 21. He gave example of key influencers and other programs that are important for IOC. He highlighted UNESCO programs that are important to IOC programs. He discussed his perspective for the future of IOC with respect to budget and workforce. For IOCARIBE he strongly recommended that the region needs to focus on a few, clear objectives, rather than attempting to accomplish everything. He advised the meeting that he will retire in December.
34. Costa Rica commented that at the national level they have been making progress in the creation of activities to discuss and plan the prospective of ocean issues. The Sub-Commission took note that the Third UN Ocean Conference, chaired jointly by the governments of France and Costa Rica, will take place in Nice in June 2025, and will be preceded by a stakeholder meeting in Costa Rica in June 2024. Member States were invited to participate.
35. The United States took the opportunity to thank the IOC Secretariat for its contributions to the ocean community. The United States also thanked the IOCARIBE Head and Co-Chairpersons for their reports, and commended the IOCARIBE team for the significant amount of work that took place during this past intersessional period and a time of transition for IOCARIBE. They also extended thanks to Dr. Jean-Paul Ngome Abiaga for a successful temporary appointment, and congratulated Dr. Lorna Inniss for being selected as the new Technical Secretary for IOCARIBE, and for successfully pulling this meeting together.
36. The United States mentioned they were excited about many items on the agenda, including the continued implementation of the UN Ocean Decade, and transformation towards co-design and co-development of capacity development activities across the region. The Ocean Decade's core values, including capacity development, data sharing and use, equity, inclusion, gender balance, engagement of youth and local and indigenous knowledge, are important to both the United States and the Caribbean, and in particular to small island states.

4.1 IOC MEDIUM-TERM STRATEGY 2022 - 2029

37. The IOC Head of Marine Policy and Regional Implementation, Mr. Julian Barbieri introduced this agenda item.
38. He referred to the IOC Medium Term Strategy 2022-2029, which includes activities to (i) assist the continental coastal Latin-American and the Caribbean SIDS Member States to achieve sustainable use of the ocean and coastal resources, (ii) focus on climate change, such as hurricanes, severe storms, coastal inundation, coastal erosion, and Sargassum beaching, occur on the background of generally low resilience of island countries, (iii) strengthening Member States' capacity of managing the ocean, in national and transboundary context, through an ecosystem-based management approach (iv) formulating national and regional policies and plans to develop ocean science and technology as well as exchange mechanism, and (v) Regional hub for cooperation between organizations of the UN system, IGOs, NGOs, and the scientific community.
39. The United States expressed its support to the IOC Medium-Term Strategy framework that allows for the necessary international cooperation to achieve the IOC's High-Level Objectives and provide scientifically sound services, with particular attention to ensuring that all Member States have the capacity to meet and implement them. As a member of IOCARIBE and WESTPAC, they are very pleased that the Medium-Term Strategy emphasizes "working closer to the field." This underscores the importance of the work of the Sub-commissions and in particular for IOCARIBE.

40. Panama indicated the importance of IOC programs due to climate change and sea level rise. It was indicated that there is an idea to issue a temporary moratorium of deep-sea mining, with respect to ocean health. Panama recommended that IOCARIBE place more attention on the issue of deep sea mining and its potential danger.
41. The Dominican Republic suggested the incorporation of the priority approach to the different IOCARIBE processes to encourage the consolidation of holistic scientific cooperation schemes and to link the different Member States and partners working in diverse regional workspaces.
42. Curaçao highlighted the important ideas and programs that were articulated by Member Aruba IOCARIBE meeting in 2019. Curaçao congratulated the Chair and especially the tsunami working group. According to Curaçao, the built capacity helped to keep warnings going during COVID-19 and expressed appreciation to Dr. Cesar Toro for all the information and seminars held virtually. Curaçao further congratulated Dr. Inniss on her appointment and indicated that they had worked together for a long time; he recommended to continue working together and share knowledge and values.
43. Panama emphasized the importance of the role of the IOC focal points in the different Member States to strengthen the network and the coordination of capacity building.
44. In his response, the IOC Executive Secretary, Mr. Vladimir Ryabinin pointed out the concern that has been generated by the increase in sea level in recent months and that the waters that come from key ecosystems such as the poles, have an impact on the increase of continental waters. He noted that at the international level there is no entity that monitors and verifies this problem.

4.2 REVISED IOC CAPACITY DEVELOPMENT STRATEGY

45. Ms. Johanna Diwa introduced this agenda item. She highlighted the key updates made in the IOC Capacity Development Strategy for 2023-2030. The Executive Summary incorporated an increased recognition that the ocean plays in political, commercial, science and society and the importance of capacity development in the delivery of the Ocean Decade of Ocean Science. 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 CD activities are clearly articulated and that the benefits are more readily identified.
46. The United States thanked Ms. Diwa-Acallar for this report and the recent work of the IOC Group of Experts for Capacity Development as they prepare to deliver the revised IOC Capacity Development Strategy to the Assembly this June. The United States expressed its support of this Strategy and note the responsibility of the IOC, as well as UN Oceans, the Law of the Sea Resolutions, and the UN General Assembly, to ensure that all Member States have an opportunity to contribute to a global endeavor to better understand our seas and ocean.
47. The United States reaffirmed its commitment to the capacity development principles in all regional and global work of the IOC. They also recognized and congratulated the IOC on the launch of their Capacity Development Hub this past February.
48. **The Sub-Commission requested** the IOCARIBE Secretary to assess needs and tailor capacity development activities to regional requirements including via the Capacity Development Facility and the Ocean Teacher Global Academy (OTGA).

4.3 DRAFT UNESCO ROLLING OPERATIONAL STRATEGY/Framework FOR SMALL ISLAND DEVELOPING STATES 2022–2029

49. Mr Jean-Paul Ngome, former Interim Regional IOCARIBE Coordinator, introduced this agenda item. The strategic priorities for the SIDS includes: (i) support SIDS in benefitting from new generation of Early Warning System including Tsunami early warning systems, (ii) SIDS capacity development in the field of marine science and technology (iii) support in advancing ocean observation and data management through the Global Ocean Observing System (GOOS) and IOC Ocean Data and Information System (ODIS) (iv) reinforcement of cooperation to address the specific challenges posed by sea-level rise, ocean pollution and acidification, loss of marine biodiversity, and coastal erosion (v) building resilience of vulnerable communities to climate change, and the regeneration of biodiversity stocks and (vi) foster strategic partnerships to mobilize funding opportunities from all sources.
50. The Dominican Republic mentioned that there are some States that are not internationally recognized island states, but at the local level have been coexisting under this dynamic even though their participation in the SIDS intergovernmental processes related to oceanic and insular affairs is limited.
51. Venezuela stressed that the SIDS strategy has highlighted the need to create cooperation networks. Specifically they expressed interest in establishing a cooperation network focused on SIDS and that the research group REMARCO has been developing cooperation strategies that should be known and shared within the region.
52. The IOC Executive Secretary, Mr. Vladimir Ryabinin suggested strengthening the communication and visibility networks of projects developed in the entire UNESCO ecosystem beyond the IOC.
53. The United States agreed with the priorities presented, particularly the importance of collaboration, development of early warning systems, and increasing capacity development as it relates to the Caribbean and look forward to continuing this conversation and working towards a resilient and united SIDS community.
54. Jamaica supported the SIDS 2022-2029 strategy.
55. **The Sub-Commission acknowledged** the Strategy and thanked Mr. Ngome for his presentation.

4.4 DRAFT REVISED IOC OCEANOGRAPHIC DATA EXCHANGE POLICY

56. Ms. Paula Cristina Sierra Co-Chair for IODE-IOC-UNESCO, introduced this item.
57. The Sub-Commission took note of the final draft of the IWG-DATAPOLICY, which will be submitted to the IOC Assembly at its 32nd session for adoption. The IODE-XXVII Committee strongly recommended that IOCARIBE Member States support the Data Policy at the IOC Assembly and adopt the Policy as a new global commitment to “Data & Information we need for the future of Ocean we want”.
58. Dr. Albert Martis gave a short presentation on WMO-IOC Collaborative Strategy 2022-2023. He gave an introduction on the WMO-IOC strategy and highlighted 6 areas/approaches to work on.
59. The United States acknowledged the presentation on WMO-IOC Collaborative Strategy and recognized the interaction between WMO and IOC and the need to partner at the regional level on weather, climate and ocean.
60. Colombia indicated that they are developing many aspects of the marine issues and are conducting combined research in the area. Colombia recommended the continuation of collaboration between the two agencies (IOC and WMO).

61. The IOC Executive Secretary, Mr. Vladimir Ryabinin indicated that at the high level of the UN there is a good link between UN agencies, but at Member States level cooperation is weaker and recommended following on Dr. Martis's ideas.
62. Dr. Martis responded to comments and further indicated that the strategic WMO-IOC Collaborative Strategy is at a high level, but implementation is at member level. He noted that the idea is for WMO and IOC to participate in each other's meetings, even regionally. He also suggested that Colombia can be a center of excellence on marine issues for the region and requested Member States to ask their WMO focal points to put IOC issues on the table, and also for IOC focal points to present WMO issues also.

4.5 DEVELOPMENT OF A NEW IOC-WIDE STRATEGY ON SUSTAINABLE OCEAN PLANNING AND MANAGEMENT

63. Mr Julian Barbieri, Marine Policy and Regional Coordination Section, introduced this item, recalling that over the last three Ocean Decades, the IOC has embarked in the development of science-based approaches to support integrated ocean management efforts at local, national, and transboundary levels. These include: (i) the Large Marine Ecosystem approach focusing on transboundary management of marine resources with partners such as NOAA, GEF, and UNDP; (ii) the establishment of Integrated Coastal Area Management programme focusing on technical tools and related capacity development for coastal management, adaptation and hazard mitigation and (iii) since 2006, IOC has been leading international efforts in Marine Spatial Planning, developing technical guidance supported by related capacity development actions in all ocean basins.
64. This was reinforced in 2017, with the development of a joint roadmap between IOC and the European Commission to advance MSP implementation globally and the establishment of the MSP Global initiative. The Joint Roadmap was renewed in 2022 for a further five years. Building on the political commitments of the High-Level Panel to sustainably manage 100% of the ocean area under national jurisdiction by 2030, the provisions of the UN Ocean Conference Lisbon Declaration highlighting the role of science-based actions and innovation to "informing integrated ocean management, planning and decision-making"; various initiatives of international, regional and national institutions to support the implementation of ocean management, sustainable ocean planning, marine/maritime spatial planning, and other area- based/ecosystem management approaches, there is now an opportunity to accelerate these efforts in all ocean basins through the UN Ocean Decade of Ocean Science for Sustainable Development 2021–2030.
65. **The Sub-Commission was invited** to adopt an IOC-wide Strategy on Sustainable Ocean Planning & Management, which would guide the contribution of the Commission across its programmes in ocean sciences, observation and data, early warning services and assessments, through the development of new services, ecosystem-based management tools, assessment, and related information products, as well as capacity development in support to sustainable ocean management.
66. **The Sub-Commission took note** of the process for developing the IOC-wide Strategy on Sustainable Ocean Planning Management (2024–2030), as well as the consultation process foreseen to collect inputs from Member States, IOC programmes and technical bodies as well as relevant stakeholders engaged in ocean management, prior to its presentation to the IOC Council at its 57th session in 2024.

4.6 DRAFT UPDATED IOCARIBE MEDIUM TERM STRATEGIC SCIENCE PLAN

67. The IOCARIBE Secretary, Ms Lorna Inniss, introduced this agenda item.

68. The Science Plan takes into consideration the IOCARIBE Medium-Term Strategic Science Plan 2005-2015 (IOCARIBE 2006), IOCARIBE Medium Term Strategic Science Plan (2017-2026) (IOCARIBE, 2016), IOC Medium-Term Strategy 2014-2021 (IOC, 2014), IOC Resolution XXVIII-2 “IOC Capacity Development Strategy 2015–2021” (IOC, 2015), and the IOC Capacity Development Strategy 2015- 2021 (IOC, 2015).
69. The objectives of the IOCARIBE Medium-Term Strategic Science Plan are fully aligned with the IOC Medium Term Strategy: to assist Member States to achieve sustainable use of the ocean and coastal resources; strengthen the scientific basis for policy development; Support strategic planning of IOCARIBE Member States for the implementation of the IOC Global Programmes in the Region - IOCARIBE Regional Programmes; facilitate a coherent management of regional programmes related to the marine-coastal environment and its resources.
70. The IOCARIBE Strategic Science Plan is focused on five thematic areas, following the IOC Medium-Term Strategy 2022-2029: i) Healthy ocean ecosystems and sustained ecosystem services; ii) Effective early warning systems and preparedness for tsunamis and other ocean-related hazards; iii) Increased resilience and adaptation to climate change and variability; iv) Scientifically-founded services for the development of the sustainable ocean economy; Enhanced knowledge of emerging ocean science issues.
71. Ms. Inniss proposed to constitute a working group to examine and revise the second draft of the IOCARIBE Medium Term Strategic Science Plan.
72. The United States recognized the importance of establishing a priority order to be addressed by the Sub-commission’s regional programs and projects under generally limited funding resources and agreed with the Secretariat’s proposal on establishing a working group. They also proposed a review of the current draft before the IOC assembly in June, to further refine the document that would be submitted to the intersessional working group.
73. Colombia confirmed its support for the work of IOCARIBE, agreed with the proposal to constitute a working group and reiterated its contribution and commitment to the proposed objectives.
74. Curaçao supported the call for an immediate review and revision of the current document.
75. Dominican Republic agreed with the proposal to constitute a working group and revise a draft before the IOC Assembly in June.
76. Mr. Vladimir Ryabinin supported the creation of the working group and asked all Member States to participate.
77. **The Sub-Commission acknowledged** the key updates made to the IOCARIBE Medium Term Strategic Science Plan (2023-2029).
78. **The Sub-Commission requested** the IOCARIBE Secretary to establish an open-ended intersessional committee to examine and revise the second draft of the IOCARIBE Medium Term Strategic Science Plan and ensure appropriate consultation with Member States. A revised strategy shall be presented to the IOCARIBE board, prior to approval by Member States before the end of 2023. An IOCARIBE Board Officer will be invited to chair the committee.
79. **The Sub-Commission requested** the IOCARIBE Secretary to perform a periodic evaluation of Strategic Science plan progress and activities every two years.

5. IOCARIBE CONTRIBUTION TO UN OCEAN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT (2021–2030)

5.1 UN OCEAN DECADE: GLOBAL UPDATE

80. Mr Julian Barbieri, IOC Ocean Decade Focal Point, introduced this item. He presented an overview of the progress in operationalizing the Implementation Plan. He reported that to date, four Calls for Ocean Decade Actions have been concluded and resulted in the endorsement of 47 Ocean Decade programmes, 235 Ocean Decade projects and 79 Ocean Decade contributions. The fifth Call for Ocean Decade Actions is currently open until 31 August 2023. He reported that while the portfolio of Ocean Decade Actions exhibits strong thematic diversity, there are still important gaps in leadership from partners in SIDS and LDCs.
81. Mr Barbieri reported that the growing network of nine decentralized coordination structures are essential partners to coordinate and support existing Ocean Decade Actions, analyze gaps and future priorities, and catalyze new Ocean Decade Actions in response to future Calls for Ocean Decade Actions. He thanked partner institutions for their commitments in establishing decentralized coordination structures but indicated that gaps in the network remained in priority thematic areas and geographies, and also reminded the Assembly that the Ocean Decade Coordination Offices led or proposed by IOC required additional resources to become fully operational. In this context he highlighted the proposal for the establishment of a Ocean Decade Coordination Office within IOCARIBE that will be discussed under Agenda Item 5.3.
82. Mr Barbieri confirmed that 34 National Ocean Decade Committees have been established and are operational but highlighted the uneven geographic distribution of these Committees with very few Committees in SIDS or LDCs.
83. Mr Barbieri indicated that priorities for the Ocean Decade over the next 12 to 18 months will include increased focus on engagement of African countries and SIDS, including exploration of mechanisms for dedicated streams of funding for Ocean Decade Actions led by partners in these countries. He indicated that the Ocean Decade Capacity Development Facility that will be operationalized in coming months would focus on delivering demand-driven capacity development to Ocean Decade partners, with a focus on LDCs, SIDS and Early Career Ocean Professionals. He recalled the importance of the work of the Foundations Dialogue and the Ocean Decade Alliance, both for direct support to Ocean Decade initiatives and to raise awareness of the importance of investing in ocean science and thanked the members of these groups for their continued engagement.
84. He recalled that the 2024 Ocean Decade Conference will be generously hosted by Spain in Barcelona in April 2024 and will be a critical moment in the implementation of the Ocean Decade. This Conference will provide an opportunity to take stock of achievements of the Ocean Decade to date, and to set a collective vision for the way forward and recalled that strong engagement of partners from the region will be important. Mr Barbieri noted the importance of strong articulation of the outcomes of the Conference with the 2025 United Nations Ocean Conference to be co-hosted by France and Costa Rica.
85. Venezuela, Costa Rica and Panama indicated that they are working on establishing NDCs.
86. Brazil confirmed that they have established a council on the Sustainable Development Goals and an NDC and encouraged the establishment of more NDCs and the engagement of the private sector.
87. Colombia indicated its willingness to share experiences and good practices for the establishment of the NDCs.

88. **The Sub-Commission acknowledged** the progress made in operationalizing the Ocean Decade Implementation Plan.
89. **The Sub-Commission invited** Member States to engage in the Ocean Decade Implementation Plan through different opportunities, such as (i) supporting the establishment and operation of an IOCARIBE Ocean Decade Coordination Office e.g. via secondments or financial support, (ii) engagement in regional Ocean Decade Taskforce, (iii) supporting the establishment and empowerment of National Ocean Decade Committees, (iv) development of national ocean science action plans that align with regional Ocean Decade priorities, (v) alignment of national resource allocation to regional Ocean Decade priorities, (vi) supporting the national capacity development needs assessments and partnership in Ocean Decade Capacity Development Facility, (vii) engagement in 2024 Ocean Decade Conference and (viii) manifesting interest to join the Ocean Decade Alliance.

5.2 UN OCEAN DECADE: STATUS OF PROJECTS AND TAC WORKING GROUPS, AND PREPARATION OF NEW PROJECT SUBMISSIONS FOR OCEAN DECADE ENDORSEMENT

90. IOCARIBE Secretary Ms Lorna Inniss, introduced this item and referred to the energy and momentum for Ocean Decade Actions during the previous IOCARIBE XVI Session, to begin work on the proposals for Ocean Decade endorsed projects and for engagement to advance a co- design process. Working groups were formed, workshops were held and the Regional Planning Group met regularly. With the retirement of the previous IOCARIBE Secretary, some momentum was lost, although it is envisaged that there will be significant progress during 2023 and beyond.
91. Ms Christa von Hillebrandt presented the endorsed Project No 138.2. Integrating Coastal Hazard Warning Systems for TAC. She noted that this project is included in the Ocean Decade-Endorsed programme CoastPredict, and it enhances the work of the ICG Caribe EWS. The work is beginning, with the confirmation of several partners already identified, and the ongoing review of a survey completed by UN DRR office in Barbados, focused on gaps and needs for early warning systems.
92. The project objectives are to prioritize the integration of existing and new coastal hazards early warning systems and services considering four components: Monitoring and Warning, Risk Knowledge, Warning Dissemination and Communication, and Response Capabilities, with cross cutting governance and capacity development considerations. Linkages to regional and international efforts and national and local priorities would be maximized and strengthened. Many ocean-related hazards and their impacts would be considered, including Tropical Cyclones, Climate Change, Tsunami, Sargassum, Wastewater, Oil Spills, and Coral Bleaching, mindful of the impacts and lessons from COVID-19. Regional, national and local impacts will be identified and common features of the underlying infrastructure elements will be enhanced and optimized.
93. **The Sub-Commission requested** the IOCARIBE Secretary to align all threats that IOCARIBE is working on under a multi-hazard framework, utilizing the Integrating Coastal Hazard Early Warning Systems for the Tropical Americas and Caribbean (iCHEWS) UN Ocean Decade endorsed project.
94. Mr Alejandro Acosta introduced the endorsed project No. 133.2 - Gain knowledge to respond to multiple stressors, and noted that its partner, the Gulf and Caribbean Fisheries Institute (GCFI) will continue plans for a TAC Ocean Decade Session at their annual meeting.
95. Colombia indicated that there is an excellent infrastructure with respect to the GFCI and REMARCO and is a good chance for Member States to be involved.

96. Mr Douglas Wilson introduced the endorsed project No. 135.2 - TAC Ocean Observing and Forecasting System for the TAC Region, and provided a review of previous efforts within IOCARIBE to establish IOCARIBE GOOS. He advised that the Ocean Decade-endorsed project can be catalytic with respect to funds and technical expertise needed for GOOS.
97. Ms Soraya Silva reported on project No. 134.2 Pollutants Observatory. The TAC Pollutants Observatory project is one of the endorsed projects by the Ocean Decade and is part of the Marine Life 2030 Program. This project is based in the need to develop an inventory of contaminant sources along with a regional baseline database and current values, to better understand and interpret the impact of the pollutants and climate change on marine life along with future changes and trends.
98. Ms Silva noted that this work will focus on addressing key gaps in knowledge related to understanding the fate of pollutants in the region. The key and essential action toward success of this project is the integration of diverse ocean actors in the TAC region related to marine pollution and different stressors, to increase the use of ocean knowledge through cooperation and partnership.
99. The activities initiated so far includes the identification and engagement of key partners or contributors, as UNEP-CEP (Marine Pollution Regional Activities Centres-CIMAB-Cuba and IMA-Trinidad and Tobago). The Secretariat of the Cartagena Convention will assist with coordination of its 26 ratified Member States in the Wider Caribbean region. Also conversations were initiated with different stakeholders, at the national and regional level, with networks, as GPML, the collaboration with the Regional Node of the Global Partnership on Marine Litter (GPML-Caribe), The Global Partnership on Nutrient Management (GPNM) and other similar regional initiatives will be beneficial for development of regional initiatives and mechanisms.
100. Another network expected to contribute is REMARCO "Research Network of Marine-Coastal Stressor in Latin America and the Caribbean" with the goal to contribute to the definition of public policies towards the integral solutions of pollution problems. Meetings are now being held to establishing working groups, advisory group to co-design, to review, update and implement existing regional strategies and action plans and it is important to establish the timeline and management framework between all partners.
101. **The Sub-Commission acknowledged** the progress made by the different projects.
102. **The Sub-Commission recognized** the work of the TAC Regional Planning Group and Working Groups.

5.3 ESTABLISHMENT OF UN OCEAN DECADE COORDINATION OFFICE FOR THE TROPICAL AMERICAS AND THE CARIBBEAN

103. Ms. Alison Clausen introduced this agenda item and explained the need of the region to have a dedicated regional coordination structure to support stakeholders to fully engage in the Ocean Decade and to ensure that the specific characteristics of the region are addressed.
104. **The Sub-Commission invited** Member States to review the Terms of Reference (ToR) for the establishment of a Ocean Decade Coordination Office (DCO) within the IOCARIBE Secretariat before September 2023, and support the establishment of the DCO according to the approved ToR.
105. **The Sub-Commission invited** Member States and partners to provide in-kind and financial resources for the operations of the DCO, including through the provision of

secondments, internships, Junior Professional Officers, the loaning of personnel and the hosting of regional and international UN Ocean Decade events.

106. **The Sub-Commission encouraged** Member States to establish National Ocean Decade Committees with the technical support and guidance of IOC and participate in outreach and engagement activities in regional and international fora.

5.4. PROPOSED AMENDMENTS TO THE TERMS OF REFERENCE OF THE TAC REGIONAL PLANNING GROUP TO ADVANCE AND COORDINATE STRATEGIC PARTNERSHIPS AND ACTIONS FOR WTA ENGAGEMENT IN THE UN OCEAN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT (2021–2030)

107. Ms. Allison Clausen from IOC/MPR introduced this agenda item and indicated that the TAC force will act as a technical advisory board to give strategic advice. The advice will be for the IOCARIBE region.
108. Jamaica asked for clarification on whether self-proposals need the endorsement of Member States. Ms Clausen explained that there is no need for endorsement in the draft Terms of Reference.
109. IOCARIBE Vice Chair John Cortinas asked about the timeline for the establishment of the DCO. Alison indicated that assuming the ToR are approved at this meeting, nominations will be received in June and July and operation would start in September.
110. **The Sub-Commission requested** the IOCARIBE Secretary to establish the TAC Regional Task Force according to the ToRs as presented. The Ocean Decade TAC Task Force would be established as a technical advisory body that will provide strategic advice to the Secretariat and Governing Bodies of the Sub-commission.
111. **The Sub-Commission requested** the IOCARIBE Secretary to invite international and regional intergovernmental organizations and funding partners to act as observers at meetings of the TAC Regional Task Force.
112. **The Sub-Commission requested** the IOCARIBE Secretary to develop a framework that aligns IOCARIBE programs with the UN Ocean Decade in consultation with the Board of Officers and the TAC Regional Task Force.

5.5 ENHANCED COMMUNICATION AND ENGAGEMENT STRATEGY TO RAISE AWARENESS OF OCEAN DECADE ACTIVITIES, AND NATIONAL OCEAN DECADE COMMITTEES

113. Ms. Allison Clausen from IOC/MPR introduced this item and presented case studies on communication and engagement from other regional programs. She explained the status of Ocean Decade implementation and the principles of enhanced communications and engagement; actors and targets of communications and engagement and key initiatives underway and planned.
114. Trinidad and Tobago wondered how to strategize communications around existing issues. Allison responded by indicating that this is part of the challenge, they looked into some examples and best practices where ocean science has an impact on SDGs, also there is a task force working on the relevant issues.

115. The United States indicated that Ocean Decade Collaborative Centers are key partners in identifying opportunities and supporting actions relevant to a particular Challenge or region. They would encourage more open communication about the value and expectations of the endorsed programs, and requested that IOCARIBE and its working groups consider the importance of interdisciplinary and transdisciplinary relationships to ensure that data, knowledge, and information generated is effectively used by Member States, managers, policymakers, and end-users. They also encouraged IOCARIBE to consider specific co-development actions in their work plan development and working group activities.
116. The United States stressed that it is critical that the working groups and projects are aligned with already existing efforts e.g., UN Ocean Decade actions and reduce any duplication, including the newly proposed task force. In addition, they encouraged the definition and inclusion of youth in existing regional programs and initiatives.
117. The Dominican Republic indicated that there are many multilateral projects or regional UN projects that have communication strategies included. Furthermore, it was noted that sometimes these strategies are aligned and sometimes not, noting that access to the information is the main problem but also the structure of the information itself. It was recommended to restructure the communications programs and strategize them for alignment. She recommended a more dynamic way to keep the information alive and flowing.
118. Colombia indicated that (i) it will continue to participate in the work spaces and communication groups, (ii) it supports the initiation of the taskforces and supports the search for stakeholders and partners to seek resources, (iii) it supports the creation of the Ocean Decade Coordination Office and (iv) it makes its knowledge available to share experiences and good practices in the creation of committees.
119. The CHA/CAST private sector representative, Ms Loreto Duffy indicated that there is a wide science gap between what stakeholders are doing and what the ocean science community is doing. For example they are participating in a regional project with TNC that has many links to Ocean Decade ideas. Her suggestion is to look at other projects in the region to avoid duplication or have more synergy. She also recommended presenting the IOCARIBE/Ocean Decade projects in CHA and other hotel association networks in the region.
120. **The Sub-Commission requested** the IOCARIBE Secretary to: (i) maintain and update the IOCARIBE Member States' points of contact, through appropriate and agreed upon channels, and encourage them to regularly identify and update the points of contacts for their corresponding programs, and projects in the framework of IOCARIBE, (ii) communicate the process of how the Member States can be engaged in the IOCARIBE programs and projects to enable them to work together, (iii) develop a communications plan based on the IOC communications strategy and develop best practices to ensure that the IOCARIBE Member States are aware of knowledge, applications, services, tools and products being generated to aid in decision making; and (iv) invite the Sub-Commission to draft a template and develop a process and timeline for biennial national reporting by Member States.

6. REVIEW OF REGIONAL PROGRAMMES, PROJECTS AND WORKING GROUPS AND FUTURE DIRECTIONS

6.1 OCEAN RESEARCH

6.1.1 Harmful Algal Bloom (HAB) Programme

121. Mr. Ernesto Mancera presented this agenda item. He presented the progress made by the IOCARIBE-ANCA working group, during the 2021-2023 intersessional period. The working

group achieved the goals proposed in March 2021 during the VIII ANCA-virtual workshop: i) increased visibility among the different social stakeholders in the Caribbean region; ii) identify and characterize the microalgae responsible for the intoxications (PSP, DSP, ASP, NSP, Ciguatera), as well as the toxins vector species in the Caribbean and adjacent areas; strengthening of research on epiphytic toxic dinoflagellates; iii) progress in initiatives on HAB early warning systems.

122. **The Sub-Commission acknowledged** the progress made by the Harmful Algal Bloom (HAB) Programme.

6.1.2 Ocean Acidification

123. Ms. Katherina Schoo introduced this agenda item. She began by indicating some conceptual considerations regarding ocean acidification, such as that the decrease in pH and the ocean's capacity to absorb CO₂ are the main points of interest in this topic. Indicating that this problem is recognized by the United Nations in the Sustainable Development Goal number 14, which aims to reduce ocean acidification, it is a new field in which oceanographic data are being collected for the first time on a large scale. Catalina expressed her hope that the contributions of scientists will increase, national contributions will improve, and the training of scientists in Latin America and the Caribbean will improve to allow regional and international comparisons. She also shared that more countries are now providing data on this topic, improving efforts to develop a clearer global picture of ocean acidification through better data collection.

6.2 OBSERVATIONS, SERVICES, DATA AND INFORMATION, AND EARLY WARNING SYSTEMS

6.2.1 IOCARIBE GOOS Report from Science Conference

124. Dr. John Cortinas, IOCARIBE Vice Chair, presented this item. The GOOS Steering Committee at its twelfth session (25–27 April 2023, Halifax, Canada) assessed GOOS progress towards the 11 Strategic Objectives (GOOS 2030 Strategy, GOOS Report 239, GOOS Implementation Plan Summary 2024–2025, IOC/A-32/4.8.1. Doc (1)) and identified key priorities for the next intersessional period. These include: as a priority the change process for evolving GOOS Governance with stakeholders and its co-sponsors; advancing partnership for delivery with key global organizations and operational ocean forecasting systems; supporting the Ocean Decade through the GOOS Ocean Decade Programmes remains an important focus; strengthening regional and national coordination is an important part of evolving the GOOS structure, and work will continue to support the renewed activity for regional coordination in the Pacific Islands (PI-GOOS), Caribbean (IOCARIBE-GOOS), and Africa.
125. Colombia highlighted the need to map capacity of all islands within the region and establish a regional center to give capacity and aid in monitoring. Colombia further noticed a lack of marine forecasting capacity in the region and recommend that the WMO be involved in this.
126. The United States supported the establishment of an IOCARIBE-GOOS governance and management structure in the Tropical Americas and the Caribbean
127. **The Sub-Commission invited** Member States to support the re-establishment of a sustained regional ocean observing and forecasting system and nominate experts to the working group of IOCARIBE GOOS through a Circular Letter.
128. **The Sub-Commission requested** the IOCARIBE Secretary to (i) identify and inventory priority observational needs including communication, social science and ocean literacy within the region while considering available resources and avoiding the duplication of previous work,

and develop a regional strategy for ocean observing and forecasting, including ways to collectively facilitate domestic marine scientific research clearances for instrument deployments, (ii) establish a sustainable governance structure that includes ECOPs, and develop ToRs for IOCARIBE-GOOS that, inter alia, provides mechanisms for sharing experiences and activities among Member States; (iii) seek active representation and participation from each of the Member States in IOCARIBE GOOS; (iv) leverage ongoing regional and international activities and partnerships, including Caribbean Institute for Meteorology & Hydrology (CIMH) and Caribbean Coastal Ocean Observing System (CARICOOS); and (v) report metadata and other relevant information to OceanOPS.

6.2.2 Oceanographic Data and Information Exchange (IODE)

129. Ms. Paula Cristina Sierra presented this item. She indicated that there are a number of IODE National Oceanographic Data Centers (NODC), Associate Data Units, and Associate Information Units in Latin America including in the IOCARIBE (underlined) region: Argentina x 2, Barbados (restarting) , Brazil x 2, Colombia x 3, Ecuador x 3, France, Jamaica (ISA), Mexico x 2, Netherlands, Panama, Peru, UK, USA. There were more but several became inactive in recent years. Within the 32 IOCARIBE Member States, only 10 countries host a Data Centre.
130. Trinidad indicated that it has marine biodiversity data and would further like cooperate with OBIS.
131. The United States supported the co-development of a practical protocol or process that provides open discovery, sharing, archival, and access to IOCARIBE Member States data that includes the minting of Digital Object Identifier (DOI) landing pages as appropriate. In addition, the United States supported the open sharing of coastal and ocean data as openly and widely as possible to promote equitable maximum data utilization for and by all countries.
132. Colombia mentioned that it participates in ocean data exchanges, is involved in related programmes, and assists in the translation of programme materials. Colombia will host the next IODE meeting in Santa Martha. Colombia is trying to expand its Blue Carbon sector and is leading the region in this area. Colombia will continue to support IODE ideas within the region.
133. Peter Pissierssens asked countries to provide Focal Points for IODE group and reminded Member States that the next IODE meeting will be held in Colombia. This will increase regional countries with IODE programmes.
134. **The Sub-Commission requested** the IOCARIBE Secretary to assess, prioritize and address the data, information and knowledge needs within the framework of IOCARIBE programs and projects.
135. **The Sub-Commission encouraged** Member States to strengthen existing and/or establish new National Oceanographic Data Centers, Associate Data Units, and Associate Information Units with the technical guidance of IODE and assist to develop FAIR and CARE best practices to ensure that collected data are appropriately deposited in recognized data repositories consistent with the IOC Oceanographic Data Exchange Policy.

6.2.3 IOC Ocean Info Hub and LAC Ocean Info Hub

136. Ms. Lucy Scott presented this item. The ODIS Catalogue of Sources (ODISCat) (<http://catalogue.odis.org>) is an online browsable and searchable catalogue of existing ocean related web-based sources/systems of data and information as well as products and services. The content of the catalogue has continuously been growing and (as on 18 April 2023) contains now 3105 entries of on-line content sources covering 16 content types. 2179 of those entries have already been quality controlled and this quality control process will continue in the future.

ODICatt is the starting point for discovering sources that are compliant with the ODIS-Architecture that is defined in the Ocean InfoHub project.

137. The IOC Ocean Data and Information System (ODIS) is an e-environment where users can discover data, data products, data services, information, information products and services provided by Member States, projects and other partners associated with IOC. While ODIS will initially focus on "partners associated with IOC" this has been expanded, considering the partnership established under the UN Ocean Decade of Ocean Science for Sustainable Development. As such it will become a key contribution to the data chapter of the Ocean Decade implementation plan. The first Steering Group meeting for the ODIS project was held in August 2022.
138. The Ocean InfoHub (OIH) Project (<https://oceaninfohub.org/>) is a four-year project, funded by the Government of Flanders, Kingdom of Belgium. The aim of the project is to support the initial development of the Ocean Data and Information System architecture (ODIS-Arch), as well as develop communities of practice (information systems and their end users) in three pilot regions: Africa; the Latin America and Caribbean region; and the Pacific Island Developing states. Thus, it aims to improve access to global ocean information, data and knowledge products for management and sustainable development.
139. Since June 2020, three regional communities of practice (Africa, Latin America and the Caribbean, and the Pacific Small Island Developing States) have been established, and Steering Group meetings have been held over three sessions. An expert technical working group has grown, now with over 120 technical experts from partner projects and pilot regions, with technical working platforms on Slack and Github. The global ODIS-architecture has been established, and proof-of-concept achieved with several partners. The documentation for the ODIS-architecture is openly available online <https://book.oceaninfohub.org/index.html>.
140. INVEMAR has developed a pilot regional hub of the Ocean InfoHub, available at <http://portete.invemar.org.co/chm#/> departing from the Clearinghouse mechanism for LAC previously designed and implemented two years ago, but now adapted to ODIS protocol. OIH Caribbean node includes the Caribbean Marine Atlas CMA (<https://www.caribbeanmarineatlas.net/>) as the repository for geospatial data and information for the region, this platform offers more than 350 cartographic layers related to more than 10 thematic around Integrated Coastal Zone Management ICAM. Many partner organisations (working spreadsheet available here) are working with the project to demonstrate proof-of-concept of the ODIS architecture. 18 project partners are fully operational nodes in ODIS, and are contributing openly discoverable content to the Ocean InfoHub knowledge graph. We have developed an Ocean InfoHub Global Search portal as a demonstration of ODIS (<https://oceaninfohub.org>), and this will be further developed over the duration of the project, to improve and refine services offered. The portal currently (April 2023) contains nearly 100,000 content items in 8 content categories: (i) Experts (24,000); (ii) Institutions (13,000); (iii) Documents (42,000); (iv) Training (1,900); (v) Vessels (238); (vi) Projects (3,500); (vii) Datasets (5,500); and (viii) Spatial data (8,700).
141. A training course was prepared and delivered via the OceanTeacher Global Academy platform in 2021: IOC/OTGA/OIH Training course: Implementing the Ocean Data and Information System (ODIS) architecture. <https://classroom.oceanteacher.org/course/view.php?id=722>. The course resources remain open online and may be used at any time. <https://classroom.oceanteacher.org/course/view.php?id=722>. Full course materials were translated into Spanish, French and Portuguese. Courses have been offered in four languages during April 2023.
142. A Programme called "An Ocean Data and Information System supporting the UN Ocean Decade of Ocean Science for Sustainable Development" (OceanData-2030) has been registered with the UN Ocean Decade for Ocean Science for Sustainable Development. The programme

will play a central role in supporting the Ocean Decade mission to catalyse transformative ocean science solutions for sustainable development, connecting people and the ocean. In order to achieve the Ocean Decade vision of ‘the science we need for the ocean we want’.

143. The Dominican Republic mentioned that has been participant in Atlas Marine and is coordinating with INVEMAR. Also indicated that lacks trained technical personnel to attend the programme. The IOCARIBE Secretariat offered support.
144. Colombia indicated that the Ocean Info Hub is important for the OBIS Programme. Other project such as CLME+ has help Colombia to engage with the OCEAN Info-Hub faster.
145. Peter Pissierssens indicated that in the past, data centers were asked to send data to one data center and this caused some issues with countries that did not want to share all data. He explained that Ocean InfoHub is different since it will harvest the data but the owner keeps control of the data and makes decisions regarding its use.
146. **The Sub-Commission acknowledged** the progress made with the IOC Ocean Data and Information System, the Ocean InfoHub and the work done by INVEMAR for the development of a pilot regional hub of the Ocean InfoHub.
147. **The Sub-Commission requested** IODE to provide technical guidance to IOCARIBE in the establishment of new Ocean Biodiversity Information System (OBIS) nodes and Ocean InfoHub (OIH) Ocean Data and Information System (ODIS) nodes in the region.
148. **The Sub-Commission requested** the IOCARIBE Secretary to support and benefit from the Colombian Marine and Coastal Research Institute’s (INVEMAR) capacities, such as, OIH, OTGA, and other efforts in the Latin American and Caribbean region.
149. **The Sub-Commission invited** Member States to report on IOCARIBE needs and gaps, and respond to future surveys to help IOC understand outstanding needs and priorities.

6.2.4 ICG CARIBE EWS XV 2023 Report

150. Mr. Anthony Guterrez presented this item and explained the progress on ICG CARIBE EWS and the work done by the working groups and task teams, which were reorganized and aligned with the Tsunami Ocean Decade Programme.
151. Colombia considered that it is relevant to enhance Tsunami warnings capacities. Colombia has served as a vice-chair of the commission in the past and will continue to support the Programme.
152. Costa Rica suggested to extend our capabilities to the communities near the coasts, where the hazards are pertinent.
153. The United States indicated that given the endorsed iCHEWS Ocean Decade project which has a multi-hazard focus, they recommended that IOCARIBE explore how to align all the threats that IOCARIBE is working under a multi hazard framework. It is critical that IOCARIBE Member States are engaged in the generation and use of the data, as well as FAIR-compliant data sharing in order to allow for operational modeling centers to generate most accurate products, advisories, and forecasts that are informed by that data.
154. **The Sub-commission acknowledged** the progress made on ICG CARIBE EWS.

6.2.5 MACHC-IOCARIBE Seabed 2030 Strategy and Work Plan 2023

155. Mr. Diego Billings presented the MACHC-IOCARIBE Seabed 2030 Project and its goals to contribute Existing Non-Public Bathymetric Data to the IHO DCDB and GEBCO Grid, increase Data Coverage and Build Capacity for mapping contributions. Diego mentioned some technical assistance needed for the project such as: training in Hydrography, a high-level technical visit from the IHO for Member States and data.
156. Trinidad and Tobago expressed its willingness to contribute to the data but must communicate and consult with appropriate ministries and stakeholders.
157. Colombia expressed its willingness to assist Member States in this item and indicated that the country has a science vessel to make many types of observations and can make it available for Member States if needed.
158. Dominican Republic mentioned that Dominican Republic and Colombia have a joint project with respect to this item, especially in Dominican Republic's marine protected areas.
159. Mr. Billings finalized indicating that he looks forward to collaborating with Member States for the data that Member States are willing to provide.
160. **The Sub-commission acknowledged** the progress made on MACHC-IOCARIBE Seabed 2030 Strategy and Work Plan 2023.

6.3 CAPACITY DEVELOPMENT

6.3.1 Ocean Teacher Global Academy

161. Ms. Paula Sierra presented this agenda item. She indicated that the OceanTeacher Global Academy (OTGA) is a global network of seventeen Regional and Specialised Training Centres delivering training on ocean sciences, services, and marine and information data management (including marine biodiversity data and ocean best practices) relevant to IOC Programmes and contributing to the United Nations Ocean Decade of Ocean Science for Sustainable Development, using the OceanTeacher e-Learning Platform. OTGA aims at building equitable capacity related to ocean research, observations, and services in all IOC Member States.
162. OTGA is contributing primarily to the priority area 7 of the UN Ocean Decade for Ocean Science through the implementation of capacity development through, inter alia, transfer of marine technology, ocean literacy, education and training. OTGA will also contribute to the UN Sustainable Development Goals to conserve and sustainably manage ocean and marine resources and to build the scientific and institutional capacity needed to achieve the SDGs.
163. OTGA fully contributes to the implementation of the IOC Capacity Development Strategy, addressing key outputs identified in the strategy through increased support in the training activities of all IOC programmes. This support includes the Tsunami Unit, Ocean Literacy, Harmful Algal Bloom programme, IODE, Ocean Sciences and the Ocean Decade, amongst others. OTGA supports IOCARIBE to ensure the capacity development needs of the region are being met by supporting the OTGA Regional and Specialized Training Centres.
164. Since 2020 OTGA has delivered more than 30 online training courses in the IOCARIBE region through its network of Regional and Specialized Training Centres in Argentina (Escuela de Ciencias del Mar), Brazil/Uruguay (University of Santa Catarina (UFSC) and University of Uruguay (Udelar)), Colombia (Marine and Coastal Research Institute in Colombia (INVEMAR)), and Ecuador (Escuela Superior Politécnica del Litoral (ESPOL)). Courses are delivered in Spanish, Portuguese and English. The result of this training will be increased national and

regional capacity to effectively address the priority areas of the Ocean Decade and 2030 Agenda and its SDGs.

165. The direct benefits of OTGA for IOCARIBE include: (i) Increased learning opportunities to broaden the knowledge-base, skills and job competencies of Member States in the region, (ii) increased access to facilities and equipment in the Regional and Specialised Training Centres to provide access to existing learning services for developing competencies, (iii) increased quality of learning services offered by Regional and Specialized Training Centres, (iv) increased interaction with IOC Programmes and other relevant global and regional initiatives, (v) OTGA has developed collaborations beyond UNESCO/IOC to position itself as the 'training hub' for ocean sciences, including topics related to the management of the impact and interactions with human activities.
166. The United States supported the OTGA strategy presented, as well as acknowledged the work that they have already accomplished. They noted the efforts of the International Tsunami Information Centre in preparing Tsunami Awareness, Tsunami Ready and Tsunami Evacuation Maps, Plans and Procedures training through the Ocean Teacher Global Academy platform and hybrid training workshops and training videos. The United States believe that there is a lot of opportunity for cross group collaboration especially in light of the activities under the UN Ocean Decade and encouraged the scoping of potential collaborative opportunities. They also encouraged prioritization of the Capacity Development strategy actions and are looking forward to discussing this further during the Paris Assembly.
167. Colombia: (i) indicated that it has been playing an active role in OBIS, (ii) acknowledged the region's needs in terms of capacity development, (iii) celebrated that for the first time OBIS has two Latin American women as Co-chairs, contributing to gender balance, (iv) ratified INVEMAR's commitment, (v) highlighted that gender equity and youth integration have been included in the selection of participants, and (vi) invited the Member States to continue supporting this strategy.
168. **The Sub-Commission acknowledged** the work done by the Ocean Teacher Global Academy.

6.4 ASSESSMENT INFORMATION FOR POLICY AND SUSTAINABLE MANAGEMENT AND GOVERNANCE

6.4.1 Ocean Literacy

169. Ms. Francesca Santoro, IOC Senior Programme Officer for Ocean Literacy presented this agenda item. Highlights the implementation of an action plan for ocean literacy, focusing on integrating ocean science concepts into educational curricula. The goal is to improve dialogue and collaboration in ocean literacy discussions, promoting inclusiveness. Efforts to increase the accessibility of ocean literacy resources in different languages and modalities are mentioned, with recent attention to developing activities for people with disabilities. Capacity building for diverse stakeholders, such as governments, the private sector, indigenous communities, journalists and social scientists, is a key goal.
170. Ocean literacy is presented as a developing academic discipline, encouraging collaboration with social scientists for resource mobilization. Mention is made of the "New Blue Curriculum," a toolkit for policy makers, and the call to include ocean literacy in curricula by 2025, as part of the Ocean Summit. Capacity building activities, delivered online, include training for the financial sector, journalists, educators, architects, urban planners and designers. Information is shared on the geographic distribution of attendees, expressing satisfaction with the participation

of member states, but requesting more effort, especially from experts in the Sub-Commission region.

171. **The Sub-Commission acknowledged** the progress on the IOC Ocean Literacy Plan of Action and **requested** the IOCARIBE Secretary to support Member States in the implementation of ocean literacy activities including via the use of A New Blue Curriculum: A toolkit for policymakers and the development of a feasibility study for a new regional blue schools network.

6.4.2 Marine Spatial Planning and Sustainable Ocean Economy

172. Mr. Julian Barbieri and Jean Paul Ngome introduced this agenda item. Mr. Barbieri presented on the status of Marine Spatial Planning around the world and in the Wider Caribbean. the focus is on providing an update on supporting Marine Spatial Planning (MSP) processes globally and recent efforts in the Caribbean region. The speaker outlines the nature of MSP as a recognized, multi-stakeholder process for allocating spatial and temporal use of ocean space to achieve socioeconomic and environmental objectives. They discuss the global developments in MSP, including the MSP roadmap and the MSP Global initiative, which involves training workshops and activities.

173. The speaker then shifts to the specific situation in the Caribbean, reporting on the State of the Ocean Report and the challenges faced in gathering information from countries regarding their MSP initiatives. The presentation highlights regional activities such as training for port infrastructures, events focusing on economic objectives through MSP, and the launch of a regional MSP Forum. The speaker concludes by outlining future opportunities, including the establishment of a regular regional MSP forum for Latin America and the Caribbean, strategic workshops, translation of MSP guides into online training, and the use of innovative tools like the MSP challenge game to create awareness about the role of MSP in the region.

174. **The Sub-Commission acknowledged** the opportunities for the region through: (i) MSProadmap / Regional MSPforum for Latin America and the Caribbean: Mobilize resources and regional collaborations to co-organize 2nd edition as an inperson event; (ii) MSPglobal 2.0: Opportunities for regional experts and stakeholders to engage in the global activities of the project such as strategic workshops to develop new knowledge and tools for MSP as well as the 6th International MSPforum (2024) and Online training based on the MSPglobal Guide; and (iii) MSP Challenge/MSPglobal training network: IOCARIBE is a member of the training network and received a Spanish version of the MSP Challenge board game for capacity development activities.

175. **The Sub-Commission welcomed** the organization of the 1st Marine Spatial Planning (MSP) Regional Forum for Latin America and Caribbean held virtually in December 2022, supported through the Government of Sweden, and explore the organization of future MSP fora on a regular basis through in-person meetings, bringing together MSP practitioners.

176. **The Sub-Commission called on** IOCARIBE Member States to establish MSP processes and contribute to the implementation of the Joint MSP Roadmap (2022-2027) through the engagement of IOCARIBE regional experts and stakeholders in the activities of the MSPGlobal initiative.

6.4.3. Caribbean Large Marine Ecosystem (CLME+) and PROCARIBE+

177. Ms. Ana Maria Nuñez presented this agenda item. Ms. Nuñez showed the timeline of the CLME initiative, from the first CLME Project from 2009 to 2014 and the results achieved with the CLME+ project executed from 2015 to 2021. The new 5-year PROCARIBE+ Project was approved by the GEF in December 2022 and will start implementation in 2023. This new project

aims to improve regional coordination and collaboration, national capacity, key actions, regional knowledge management and data infrastructure.

178. The IOCARIBE Secretariat suggested that further discussion is needed to identify ways to build synergies between all the coordination mechanisms that the IOCARIBE Member States are considering and have been mentioned here this week.
179. The Dominican Republic indicated that they have been involved in the whole process of the CLME initiative, reaffirmed that it is aligned with the needs of the region and recommended that the project should be integrated with the new IOCARIBE action plan.
180. The United States actively engaged in the CLME+ Project Steering Committee and the PROCARIBE+ Project Preparation Grant Development Committee. They directly witnessed the value-added of the CLME+ Project, which provided essential support to a number of regional efforts, working groups, and reports. They look forward to advancing these efforts by participating in the follow-on project, PROCARIBE+, and agree with the Secretariat's suggestion.
181. Colombia indicated that it supports the PROCARIBE+ Project and urged Member States to join efforts to capitalize on the benefits of this project.
182. **The Sub-commission took note** of the progress for the operationalization of the PROCARIBE+ Project and requested the IOCARIBE Secretary to integrate the relevant PROCARIBE+ project activities into the work program of the IOCARIBE Sub-Commission.

6.4.4 Sargassum and Oil Spill Monitoring

183. Mr Joaquin Trinanes introduced this item. He presented the work done by NOAA/AOML on the Satellite monitoring, tracking and research of pelagic sargassum. The products and services can support research, resource management, and decision-making on topics such as understanding, managing and protecting ocean and coastal resources and for assessing impacts of environmental change in ecosystems, weather, and climate.
184. Jamaica questioned the calibration needed at national level for monitoring sargassum, and asked if the calibration they are conducting in country is correct. Mr Trinanes will follow-up.
185. The United States is committed to improving Sargassum forecasting capabilities and oil spill monitoring. They mentioned that the US NOAA Atlantic Oceanographic and Meteorological Laboratory is conducting research to learn more about sargassum movement and identify ways to provide accurate forecasting for impacted communities on human health, the arrival and amount of sargassum, infrastructure and transportation impacts. Finally, they encouraged IOCARIBE to consider consolidating the programs HAB-ANCA, Sargassum, and Oil Spill into an overarching initiative given their close alignment.
186. Vladimir Ryabinin inquired about research on the origin of sargassum and the type of models used. Mr Trinanes indicated that there are different kind of models (advection, growth and decay) and origin has to do with changing currents/climate.
187. Dominican Republic mentioned that they have a long experience with sargassum and its relation with tourism. The private sector has investigated the situation extensively. Dominican Republic would like to improve monitoring in situ especially with respect to volume landing.
188. The United States indicated that the AOML team has a citizen science application that can help Member States with beaching monitoring.

189. Dr. John Cortinas asked to what extent this information is being communicated to the Member States. Mr Trinanes responded that they are focused on developing the models but not on communicating and that communications should be improved.
190. Ms. Inniss indicated that the Sub-commission will take on the challenge of developing a communication plan that allows everyone to be aware of the products and asked for help from the countries to indicate the focal points to deliver the products and test them.
191. Mr. Vladimir Ryabinin suggested to establish a taskforce on Sargassum.
192. Jamaica recommended a dialogue with Member States, GFCL, and UWI since there are many programs on sargassum, and it is necessary to align the processes and move forward as a group.
193. Colombia mentioned that the proposal to have a specialized working group should be approached not only in a reactive manner, but with an ambitious proposal of what to do with the sargassum, linking private companies and academia, turning the challenge into an opportunity for development.
194. CHA indicated that tourists are using beach cameras to get an idea of which beach is affected by sargassum, so they can select non-affected coastal areas. She recommended webcams for monitoring sargassum.
195. The United States agreed on beach images being used to monitor sargassum.
196. **The Sub-Commission requested** the IOCARIBE Secretary to capitalize on existing regional and international efforts to raise awareness of impacts and benefits for stakeholders, (ii) develop ways to include stakeholders to improve and use applications, services, tools and products in the region; and (iii) increase visibility and accessibility of Sargassum reports produced for the region and enhance communication between IOCARIBE Member States and stakeholders on efforts to experimentally monitor and track Sargassum.
197. **The Sub-Commission requested** the IOCARIBE Secretary to develop more robust regional tracking tools for Sargassum within the IOCARIBE Member States including local innovative solutions to monitor sargassum impact and understand the local environmental conditions which lead to Sargassum onshore landing.
198. **The Sub-Commission requested** the IOCARIBE Secretary to enhance the governance of Harmful Algae Blooms in the Caribbean and Adjacent Regions (HAB-ANCA) by considering close collaboration with the Sargassum programme, to explore ways to build synergies given their close alignment and ensure sharing of practices and data.

6.4.5 COSTA: Tracking Marine Oil Spill using satellites in the Americas

199. Ms. Bonnie Zhu presented this item. She explained the work done by the Collaboration for Oil Satellite Tracking in the Americas (COSTA). COSTA is an international effort to enable nations in the Americas to establish satellite oil monitoring and analysis capabilities in the Gulf of Mexico, Caribbean and adjacent oceans. With the availability of high resolution, publicly available satellite imagery, routine oil spill monitoring can provide the first warning of a spill or intentional vessel oil discharge, help inform and direct spill response resources during major spills, and help countries find and target chronic leak sources.
200. Trinidad and Tobago expressed appreciation to the team for the training and capacity development provided for monitoring of oil spills.

201. Colombia noted that the COSTA program will be beneficial for Colombia programs with respect to oil spill.
202. **The Sub-Commission encouraged** countries and territories to engage and participate in expanding a long-term oil spill monitoring program in collaboration with the Collaboration for Oil Satellite Tracking in the Americas (COSTA), and support and benefit from the Trinidad and Tobago Institute of Marine Affairs oil spill monitoring effort in the Eastern and Southern Caribbean region or other sources of monitoring.

7. INSTITUTIONAL FRAMEWORK

7.1 STATUS OF COOPERATION WITH OTHER ORGANIZATIONS

203. The IOCARIBE Secretary Ms. Lorna Inniss introduced this agenda item. She provided a general introduction on the progress made in the established cooperation with international organizations and other regional programmes. She noted the importance of forming sustained partnerships with organizations, especially related to the revitalization of the IOCARIBE GOOS Regional Alliance. Representatives from cooperating Organizations present at the Session were invited to present.
204. Ms Jessica Snowden presented AtlantOS, its approach to advancing ocean observing in the Atlantic through codesign and how it will enhance IOCARIBE GOOS to develop a partnership.
205. The United States indicated that it is committed to continuing its work with current partners and broadening collaboration with IOCARIBE and related networks in the Caribbean region. Specifically, the AtlantOS Program and Local2030 Islands Network, is a network which may help to identify strategic partnerships, enable communities of practice, and advance Caribbean and Atlantic basin scale ocean observing co-design.
206. Ms Andrea Miralles-Barboza presented on the Local 2030 Islands Network and explained the benefits of partnership for the implementation of the Draft Rolling Operational Strategy for SIDS in the region. The Local2030 Islands Network is an innovative platform, which fosters strong international cooperation of islands across the world, to develop solutions to interconnected global challenges, many of which relate to the oceans that surround them.
207. Dr Mark Oduber, presented on the Islands Innovation Network, and how it can support the implementation of the Draft Rolling Operational Strategy for SIDS in the region. The Sub-Commission took note of the work of Island Innovation Ambassador Program 2023 and its benefits for the region and potential to enhance the work of the Sub-Commission.
208. Ms Shannon Weekes presented on the Caribbean Youth Environmental Network (CYEN). She noted that it is important to incorporate young people into the work of the IOC Sub-Commission, recognizing that they are the ocean governance leaders of tomorrow, and will inherit the successes and failures of the present generation of leaders. She presented a brief overview of the CYEN's work and presented a recommendation that the meeting agree to include young people and Early Career Professionals in all committees, working groups and programs.
209. **The Sub-Commission requested** IOCARIBE Secretary to: (i) define youth in the context of IOCARIBE, (ii) leverage mechanisms such as the UN Ocean Decade ECOP program, the OTGA, and the CYEN to enhance youth engagement, (iii) work with the UN Ocean Decade ECOP program in identifying ECOPs in the region and encourage participation in the ECOP program at all levels; and (iv) encourage ECOP participation in mentoring programs including but

not limited to the Global Ocean Acidification Observing Network (GOA-ON) Pier2Peer mentorship program and identify ways to work with these programs in the IOCARIBE framework.

210. Ms Joanna Akrofi from UNEP presented the proposal for the LAC Region through GEMS Ocean. The Global Environment Monitoring System for the Ocean and Coasts (GEMS Ocean) Programme is focusing on integrating global observing systems to provide fit-for-purpose information and data to Member States/regional bodies and support policy making to conserve, restore and properly manage coastal and marine ecosystems. The transdisciplinary partnership is convened by UNEP. The GEMS Ocean proposed pilot project, The Caribbean Digital Twin prototype (CDTp) is an innovative initiative that aims to improve our understanding of the Caribbean region's coastal and ocean environment and ultimately inform policy making. The CDTp will be supported by a Data Hackathon in the region, which will bring together experts and stakeholders to analyze and interpret data collected in the region and understand the constraints and opportunity for the development of the prototype. The hackathon will help identify the critical environmental factors, including the state of the ocean, the health of the marine ecosystem and the impact of human activities on these ecosystems. The results supported by capacity building activities in the region will be used to develop a digital twin prototype that can be used to monitor, model, and manage the use of the region's coastal and marine ecosystems. The CDTp will try to integrate existing sources of data and information from a range of stakeholders to provide a comprehensive almost real-time, virtual representation of the Caribbean's coastal and marine environment. This will provide support to ongoing efforts by the UNEP Cartagena Convention Secretariat and other regional and sub- regional intergovernmental organizations to develop period state of environment reports for the coastal and marine environment of the Wider Caribbean region.
211. IODE thanked UNEP for the proposal and expressed its interest of supporting this project and the preparation of the hackathon.
212. Ms. Lorna Inniss mentioned that it is an excellent opportunity for the region and thanked UNEP for choosing IOCARIBE as the pilot region.
213. The Sub-Commission in close coordination with IOC continues actively to enhance and strengthen links with other United Nations Programmes and other international and regional organizations.
214. **The Sub-Commission acknowledged** the progress made by the Secretariat in establishing cooperation with international organizations and other regional programmes.
215. **The Sub-Commission requested** IOCARIBE Secretary to prioritize key stakeholders' engagement in IOCARIBE programmes, and in this context, to consider having French, English, and Spanish translation of documents and interpretation at future meetings, if resources permit.

8. ADMINISTRATION AND MANAGEMENT

8.1 ELECTIONS OF THE BOARD OF OFFICERS OF THE SUB-COMMISSION

216. The chairperson of the Nominations Committee introduced this item. The Committee worked in conformity with the technical arrangements for the elections of the Officers of the Sub-Commission as laid down in Appendix I of the Rules of Procedure. The list of nominations (to be received by 18.00 hours local time on 09 May 2023) was put before the Sub-commission.

8.1.1 Election of the Chairperson of the Sub-Commission

217. The Sub-Commission noted that there was only one candidate for the position of Chairperson. Mr. Marck Oduber (Aruba) was elected by acclamation for his first mandate.

8.1.2 Election of the Vice-Chairpersons of the Sub-commission

218. The Sub-Commission noted that there was only one candidate for each of the three positions as Vice-Chairpersons. Noting that the candidates provide an equitable sub-regional representation, the following were elected by acclamation:
219. Ms. John Cortinas (United States) was re-elected as Vice-Chairperson seconded by Aruba and Panama for his second period.
220. Ms. Soraya Silva (Venezuela) was elected as Vice-Chairlady seconded by Panama and Dominican Republic.
221. Mr. Roberto Dantas de Pinho (Brazil) was elected as Vice-Chairperson seconded by Colombia and Costa Rica.
222. The Chairperson of the Nominations Committee thanked former members of the Board for the great work accomplished during their term and asked them to take the floor to address the Session. The Chairperson of the Nominations Committee congratulated the newly elected Chairperson and Vice-Chairpersons and asked them to take the floor.

8.2 DATES AND PLACES OF THE EIGHTEENTH SESSION OF THE SUBCOMMISSION

223. The IOCARIBE Chairperson introduced this item.
224. He recalled that Regional Sub-Commissions of IOC should meet every two (2) years, preferably before the IOC Assembly, to review their activities and timely submit their Recommendations and budgetary request to the main governing body of IOC.
225. The Sub-Commission decided to hold its Eighteenth Intergovernmental session during the first quarter of 2025.
226. The United States stated that it would explore the possibility of hosting the 18th Session.
227. The Chairperson invited other Member States to present their nominations to the Sub-Commission as soon as possible.

9. ADOPTION OF DECISIONS AND RECOMMENDATIONS

228. The Chairperson of the Recommendations Committee reported to the Sub-Commission on the work of the Committee during the session and invited the Session.
229. The Chairperson of the Session invited the Sub-Commission to adopt the Draft Recommendations of its present Session.
230. The Sub-Commission adopted ten (10) recommendations from the Seventeenth Session, as reviewed during this agenda item.

10. CLOSURE

231. The Sub-commission met in plenary session during three days from May 9 to May 11, 2023, considered 48 items on its agenda and approved 10 recommendations.

232. The IOCARIBE Chairperson thanked the local organizing committee and the Government of Colombia for the excellent facilities and hospitality provided for the organization of the meeting.
233. The IOCARIBE Chairperson closed the Seventeenth Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions SC-IOCARIBE-XVII at 16:00 on May 11, 2023.

ANNEX I

- 1. OPENING**
- 2. ORGANIZATION OF THE SESSION**
 - 2.1 ADOPTION OF THE AGENDA
 - 2.2 DESIGNATION OF THE RAPPORTEUR FOR THE SESSION
 - 2.3 ESTABLISHMENT OF SESSIONAL COMMITTEES AND WORKING GROUPS
 - 2.4 INTRODUCTION OF DOCUMENTATION AND TIMETABLE
- 3. IOCARIBE MATTERS AND REPORTS**
 - 3.1 STATEMENT OF THE CHAIRPERSON
 - 3.2 IOCARIBE SECRETARY'S REPORT ON THE WORK ACCOMPLISHED SINCE SIXTEENTH SESSION AND BUDGET IMPLEMENTATION
- 4. STRATEGIC DEVELOPMENT**
 - 4.1 IOC MEDIUM TERM STRATEGY 2022–2029
 - 4.2 REVISED IOC CAPACITY DEVELOPMENT STRATEGY
 - 4.3 DRAFT UNESCO ROLLING OPERATIONAL STRATEGY/Framework FOR SMALL ISLAND DEVELOPING STATES 2022–2029
 - 4.4 DRAFT REVISED IOC OCEANOGRAPHIC DATA EXCHANGE POLICY
 - 4.5 DEVELOPMENT OF A NEW IOC-WIDE STRATEGY ON SUSTAINABLE OCEAN PLANNING AND MANAGEMENT
 - 4.6 DRAFT UPDATED IOCARIBE MEDIUM TERM STRATEGIC SCIENCE PLAN
- 5. IOCARIBE CONTRIBUTION TO UN OCEAN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT (2021–2030)**
 - 5.1 UN OCEAN DECADE: GLOBAL UPDATE
 - 5.2 STATUS OF PROJECTS AND TAC WORKING GROUPS, AND PREPARATION OF NEW PROJECT SUBMISSIONS FOR ENDORSEMENT
 - 5.3 ESTABLISHMENT OF UN OCEAN DECADE COORDINATION OFFICE FOR THE TROPICAL AMERICAS AND THE CARIBBEAN
 - 5.4 PROPOSED AMENDMENTS TO THE TERMS OF REFERENCE OF THE TAC REGIONAL PLANNING GROUP TO ADVANCE AND COORDINATE STRATEGIC PARTNERSHIPS AND ACTIONS FOR WTA ENGAGEMENT IN THE UN OCEAN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT (2021–2030)
 - 5.5 ENHANCED COMMUNICATION AND ENGAGEMENT STRATEGY TO RAISE AWARENESS OF OCEAN DECADE ACTIVITIES, AND NATIONAL OCEAN DECADE COMMITTEES
- 6. REVIEW OF REGIONAL PROGRAMMES, PROJECTS AND WORKING GROUPS AND FUTURE DIRECTIONS**
 - 6.1 OCEAN RESEARCH
 - 6.1.1 Harmful algal blooms (HAB/ANCA)
 - 6.1.2 Ocean acidification
 - 6.2 OBSERVATIONS, SERVICES, DATA AND INFORMATION, AND EARLY WARNING SYSTEMS
 - 6.2.1 IOCARIBE GOOS Report from Science Conference
 - 6.2.2 Oceanographic Data and Information Exchange (IODE)
 - 6.2.3 IOC Ocean Info Hub and LAC Ocean Info Hub
 - 6.2.4 ICG CARIBE EWS XV 2023 Report

- 6.2.5 MACHC-IOCARIBE Seabed 2030 Strategy and Work Plan 2023
- 6.3 CAPACITY DEVELOPMENT
 - 6.3.1 Ocean Teacher Global Academy (OTGA)
- 6.4 ASSESSMENT INFORMATION FOR POLICY AND SUSTAINABLE MANAGEMENT AND GOVERNANCE
 - 6.4.1 Ocean Literacy
 - 6.4.2 Marine Spatial Planning and Sustainable Ocean Economy
 - 6.4.3 Caribbean Large Marine Ecosystem (CLME+) And PROCARIBE+
 - 6.4.4 Sargassum and Oil Spill Monitoring
 - 6.4.5 COSTA: Tracking Marine Oil Spill using satellites in the Americas
- 7. **INSTITUTIONAL FRAMEWORK**
 - 7.1 STATUS OF COOPERATION WITH OTHER ORGANIZATIONS
- 8. **ADMINISTRATION AND MANAGEMENT**
 - 8.1 REPORT BY FINANCIAL COMMITTEE CHAIRPERSON ON THE PROGRAMME AND BUDGET FOR NEW BIENNIUM 2024-2025
 - 8.2 ELECTIONS OF THE BOARD OF OFFICERS OF THE SUB-COMMISSION
 - 8.2.1 Election of Chairperson of the sub-commission
 - 8.2.2 Election of Vice-Chairpersons of the Sub-Commission
 - 8.3 DATES AND PLACE OF THE EIGHTEENTH SESSION OF THE SUB-COMMISSION
- 9. **ADOPTION OF DECISIONS AND RECOMMENDATIONS**
- 10. **CLOSURE**

ANNEX II

RECOMMENDATIONS

Recommendation SC-IOCARIBE-XVII.1

Prioritization

Develop a regional strategy aligned with the priorities of the UN Ocean Decade based on the analysis of progress in the region in different areas of ocean science, countries' installed capacities and resources, take into account the projects, regional programs focused on the needs of the countries and existing regional agreements.

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Focus on the priorities dictated by the needs created by major impacts in the region, such as, but not limited to: sargassum proliferation and its management, sensitivity, and coastal risks due to the actions of extreme weather events, changes in sea level and its effects in coastal areas of the Small Island Developing States.
- ii. Strengthen IOC and IOCARIBE's vision to support a sustainable ocean economy and maximize the benefit from ocean science, through the effective involvement of the various sectors that use ocean resources.

Recommendation SC-IOCARIBE-XVII.2

Governance

Streamline programs within the IOCARIBE structure to ensure efficiency and reduce duplication, while ensuring progress, and align IOCARIBE programs with the UN Ocean Decade.

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Establish an open-ended intersessional committee to examine and revise the second draft of the IOCARIBE medium term strategic science plan and ensure appropriate consultation with Member States. A revised strategy shall be presented to the IOCARIBE board, prior to approval by Member States before the end of 2023. An IOCARIBE Board Officer will be invited to chair the committee.
- ii. Perform a periodic evaluation of strategic plan progress and activities every two years.
- iii. Consider having French, English, and Spanish translation of documents and interpretation at future meetings, if resources permit.
- iv. Develop a framework that aligns IOCARIBE programs with the UN Ocean Decade in consultation with the TAC Regional Task Force.
- v. Encourage the governance of Harmful Algae Blooms in the Caribbean and Adjacent Regions (HAB-ANCA) and Sargassum and Oil Spill programs to explore ways to build synergies given their close alignment and ensure sharing of practices and data.

- vi. Foster strategic partnerships to mobilize funding opportunities and in-kind resources from diverse and innovative sources.

Recommendation SC-IOCARIBE-XVII.3

Stakeholder engagement

Create enhanced engagement of stakeholders including, but not limited to, the private sector, users of ocean science, local communities, non-governmental organizations (NGOs), and the general public, within the region including to raise awareness through ocean literacy and improve our understanding of their needs.

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Prioritize key stakeholders' engagement in IOCARIBE programs.
- ii. Support Member States in the implementation of ocean literacy activities including via the use of A New Blue Curriculum: A toolkit for policymakers and the development of a feasibility study for a new regional blue schools network.
- iii. Assess needs and tailor capacity development activities to regional requirements including via the UN Ocean Decade Capacity Development Facility and the Ocean Teacher Global Academy (OTGA).
- iv. Encourage countries and territories to engage and participate in expanding a long term oil spill monitoring program in collaboration with the Collaboration for Oil Satellite Tracking in the Americas (COSTA), and support and benefit from the Trinidad and Tobago Institute of Marine Affairs oil spill monitoring effort in the Eastern and Southern Caribbean region or other sources of monitoring.

Recommendation SC-IOCARIBE-XVII.4

Youth engagement

Noting that youth is a priority group for UNESCO, we look to enhance engagement of youth and Early Career Ocean Professionals (ECOPs) in IOCARIBE programs and initiatives.

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Define youth in the context of IOCARIBE.
- ii. Leverage mechanisms such as the UN Ocean Decade ECOP program, the OTGA, and the Caribbean Youth Environment Network (CYEN) to enhance youth engagement.
- iii. Work with the UN Ocean Decade ECOP program in identifying ECOPs in the region and encourage participation in the ECOP program at all levels.
- iv. Encourage ECOP participation in mentoring programs including but not limited to the Global Ocean Acidification Observing Network (GOA-ON) Pier2Peer mentorship program and identify ways to work with these programs in the IOCARIBE framework.

Recommendation SC-IOCARIBE-XVII.5

Communication

Improve communication and sharing of information amongst IOCARIBE Member States, and between regional and national institutions and their IOCARIBE representatives

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Maintain and update the IOCARIBE Member States points of contacts, through appropriate and agreed upon channels, and encourage them to regularly identify and update the points of contacts for their corresponding programs, and projects in the framework of IOCARIBE.
- ii. Communicate the process of how the Member States can be engaged in the IOCARIBE programs and projects to enable them to work together.
- iii. Develop a communications plan based on the IOC communications strategy and develop best practices to ensure that the IOCARIBE Member States are aware of knowledge, applications, services, tools and products being generated to aid in decision making.
- iv. Invite the Sub-Commission to draft a template and develop a process and timeline for biennial national reporting by Member States.

Recommendation SC-IOCARIBE-XVII.6

Collaboration

Enhance IOCARIBE Member State relationships with international programs, projects and initiatives to foster the opportunity for collaboration among groups, reduce duplication, and encourage collaborative efforts and the production of knowledge, applications, services, tools and products

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Align all threats that IOCARIBE is working on under a multi hazard framework, utilizing the Integrating Coastal Hazard Early Warning Systems for the Tropical Americas and Caribbean (iCHEWS) UN Ocean Decade endorsed project.
- ii. Integrate the relevant PROCARIBE+ project activities into the work program of the IOCARIBE Sub-Commission.

Recommendation SC-IOCARIBE-XVII.7

Awareness

Raise awareness, visibility and recognition of the IOCARIBE activities, tools, services, and products

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Capitalize on existing regional and international efforts to raise awareness of impacts and benefits for stakeholders.
- ii. Develop ways to include stakeholders to improve and use applications, services, tools and products in the region.
- iii. Increase visibility and accessibility of Sargassum reports produced for the region and enhance communication between IOCARIBE Member States and stakeholders on efforts to experimentally monitor and track Sargassum.

Recommendation SC-IOCARIBE-XVII.8

Data, Information, Knowledge and Tools

Raise awareness and provide support to create and link infrastructure, expertise and capacity to implement FAIR¹ and CARE² principles and sharing of data collected by IOCARIBE Member States with the data assembly centers and the tools, following the IOC strategic plan for ocean data and information and other relevant IOC manuals. Facilitate the use and development of Member States' capacity for ecosystem-based management tools and processes. This includes but is not limited to capacity development, transfer of marine technology, supporting maintenance of equipment, and adoption of methodological best practices in research.

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Assess, prioritize and address the data, information and knowledge needs within the framework of IOCARIBE programs and projects.
- ii. Encourage Member States to strengthen existing and/or establish new National Oceanographic Data Centers, Associate Data Units, and Associate Information Units with the technical guidance of IODE and assist to develop FAIR and CARE best practices to ensure that collected data are appropriately deposited in recognized data repositories consistent with the IOC Oceanographic Data Exchange Policy.
- iii. Request IODE to provide technical guidance to IOCARIBE in the establishment of new Ocean Biodiversity Information System (OBIS) nodes and Ocean InfoHub (OIH) Ocean Data and Information System (ODIS) nodes in the region.
- iv. Support and benefit from the Colombian Marine and Coastal Research Institute's (INVEMAR) capacities, such as, OIH, OTGA, and other efforts in the Latin American and Caribbean region.
- v. Invite Member States to report on IOCARIBE needs and gaps, and respond to future surveys to help IOC understand needs and priorities.
- vi. Develop more robust regional tracking tools for Sargassum within the IOCARIBE Member States including local innovative solutions to monitor sargassum impact and understand the local environmental conditions which lead to Sargassum onshore landing.

¹ Findable, Accessible, Interoperable, Reusable (FAIR)

² Collective benefit, Authority to Control, Responsibility, and Ethics (CARE)

- vii. Welcome the organization of the 1st Marine Spatial Planning (MSP) Regional Forum for Latin America and Caribbean held virtually in December 2022, supported through the Government of Sweden, and explore the organization of future MSP fora on a regular basis through in-person meetings, bringing together MSP practitioners.
- viii. Call on IOCARIBE Member States to establish MSP processes and contribute to the implementation of the Joint MSP Roadmap (2022-2027) through the engagement of IOCARIBE regional experts and stakeholders in the activities of the MSPGlobal initiative.

Recommendation SC-IOCARIBE-XVII.9

UN Ocean Decade

Encourage Member States to actively support the implementation of the UN Ocean Decade in the region.

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Recognize the work of the TAC Regional Planning Group and Working Groups.
- ii. Invite the Member States to review the Terms of Reference (ToR) for the establishment of a Ocean Decade Coordination Office (DCO) within the IOCARIBE Secretariat before September 2023, and support the establishment of the DCO according to the approved ToR.
- iii. Invite Member States and partners to provide in-kind and financial resources for the operations of the DCO, including through the provision of secondments, internships, Junior Professional Officers, the loaning of personnel and the hosting of regional and international UN Ocean Decade events.
- iv. Encourage Member States to establish National Ocean Decade Committees with the technical support and guidance of IOC and participate in outreach and engagement activities in regional and international fora.
- v. Establish the TAC Regional Task Force according to the ToRs as presented.
- vi. Invite international and regional intergovernmental organizations and funding partners to act as observers at meetings of the TAC Regional Task Force.

Recommendation SC-IOCARIBE-XVII.10

IOCARIBE GOOS

The IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE),

Requests the IOCARIBE Secretary to:

- i. Vote on the permanent coordinator for IOCARIBE GOOS;
- ii. Support the re-establishment of a sustained regional ocean observing and forecasting system and nominate experts to the working group of IOCARIBE GOOS through a Circular Letter;

- iii. Identify and inventory priority observational needs including communication, social science and ocean literacy within the region while considering available resources and avoiding the duplication of previous work, and develop a regional strategy for ocean observing and forecasting, including ways to collectively facilitate domestic marine scientific research clearances for instrument deployments.
- iv. Establish a sustainable governance structure that includes ECOPs, and develop ToRs for IOCARIBE-GOOS that amongst other issues provides mechanisms for sharing experiences and activities among Member States;
- v. Seek active representation and participation from each of the Member States in IOCARIBE GOOS;
- vi. Leverage ongoing regional and international activities and partnerships, including Caribbean Institute for Meteorology & Hydrology (CIMH) and Caribbean Coastal Ocean Observing System (CARICOOS);
- vii. Report metadata and other relevant information to OceanOPS (formerly JCOMMOPS).

ANNEX III

STATEMENTS AND ADDRESSES

*MENSAJE DE LA VICE MINISTRA DE ASUNTOS MULTILATERALES – SRA.
ELYZABETH TAYLOR*

Señor Vladimir Ryabinin, Secretario Ejecutivo de la Comisión Oceanográfica Intergubernamental de la UNESCO (Bienvenido a Colombia).

Señor Arnulfo Sánchez, Presidente de la SubComisión Oceanográfica Intergubernamental de la UNESCO/IOCARIBE.

Señora Lorna Inniss, Jefe de la Secretaría Regional de la COI-UNESCO para IOCARIBE.

Señor Julian Barbière, Jefe de la Sección de Política Marina y Coordinación Regional.

Señora Alison Clausen, Especialista del programa de la sección de Política Marina y Coordinación Regional.

Distinguidos representantes de los Estados Miembros de IOCARIBE, delegados de las Embajadas de los países del Caribe acreditadas en Colombia, Jefes de Organismos Regionales e Internacionales, amigos y amigas.

Para Colombia, es un gran honor hospedar esta Reunión Intergubernamental de la Subcomisión de la COI-UNESCO para el Caribe y Regiones Adyacentes, no solo porque contamos con un estrecho vínculo con IOCARIBE al ser su sede desde 1989 en Cartagena de Indias, sino porque al igual que todos sus países miembros, compartimos un genuino interés en fortalecer nuestras relaciones de diálogo y cooperación para construir conocimientos cada vez más profundos sobre la naturaleza, los recursos oceánicos y las zonas costeras, que nos permitan mejorar los procesos de gestión y toma de decisión, y así contribuir de manera significativa al cumplimiento de la Agenda 2030 de Desarrollo Sostenible.

En lo personal, es más que un gran honor acompañarlos como Viceministra de Asuntos Multilaterales y como persona nacida en una isla oceánica, razón que inspiró mi interés en las ciencias marinas y lo que ha determinado mi trayectoria profesional de casi tres décadas.

Es innegable el efecto de la crisis climática reflejada en la degradación de los ecosistemas marinos. Para Colombia, como Estado bioceánico y megadiverso, la conservación y el uso sostenible de la diversidad biológica revisten una gran importancia: Reconocemos la necesidad de implementar acciones y soluciones transformadoras de la mano de las comunidades en los ámbitos de la ciencia, la educación y la cultura, para enfrentar los impactos adversos que las prácticas antrópicas han causado a los océanos y al ambiente en su conjunto.

Para cumplir esta meta, el gobierno del Presidente Gustavo Petro está canalizando múltiples esfuerzos dirigidos a generar un diálogo más fluido y dinámico con los países del Caribe, que fortalezcan nuestros lazos históricos, refuerce la cooperación científica

a nivel regional e internacional; y genere aportes a las ciencias oceánicas que además nos permitan afrontar los riesgos asociados a un clima cambiante en una región altamente vulnerable.

Queridos colegas, Para consolidar a Colombia como Potencia Mundial de la Vida, el desarrollo económico del país y la sostenibilidad social y ambiental no pueden seguir siendo asumidos como procesos independientes. Esto implica una transformación hacia actividades productivas diversificadas, que aprovechen sosteniblemente los recursos naturales y sean intensivas en conocimiento e innovación que permitan reducir las emisiones de carbono y más resiliente ante los choques climáticos. El océano nos ofrece una inmensa posibilidad de beneficiarnos de la economía azul y brindar opciones reales de desarrollo social a nuestras poblaciones costeras de una manera que no esté opuesta a nuestros principios de conservación y sostenibilidad ambiental con altos estándares.

Así mismo, el gobierno de Colombia observa con particular interés la integración privilegiada de nuestros territorios continentales e insulares con los diversos países de la región y las organizaciones multilaterales regionales, en especial, los lazos culturales e históricos de los pueblos étnicos, que contribuyen a la consolidación de sinergias que potencian la concreción de más y mejores acuerdos de cooperación enfocados en mejorar las condiciones de vida de nuestros ciudadanos.

En las últimas dos décadas Colombia ha desarrollado distintas políticas públicas en pro del manejo sostenible y conservación de los océanos, las zonas costeras y marítimas. Recientemente en 2020 el Consejo Nacional de Política Económica y Social, aprobó el documento CONPES 3990 “COLOMBIA: POTENCIA BIOCEÁNICA SOSTENIBLE 2030”. Esta Política tiene un carácter prospectivo y estratégico que busca posicionar en la agenda pública nacional los océanos como factor de desarrollo sostenible en los próximos 11 años.

Estimados delegados, Nuestra pertenencia a IOCARIBE es un privilegio que implica grandes responsabilidades a nivel de la investigación, la generación de conocimientos, el intercambio de información, la protección medioambiental, la producción de energías limpias y el fortalecimiento de las ciencias oceánicas, pero además, requiere un total compromiso con la defensa de la vida y la reivindicación de las prácticas culturales de nuestros pueblos étnicos, a quienes debemos integrar de manera efectiva y permanente en nuestras decisiones con miras a encontrar estrategias idóneas, innovadoras y diversas enfocadas en hacer frente a los múltiples desafíos que agobian a nuestro océano, tales como: la sobrepesca, la contaminación marina, por ejemplo la causada por los vertimientos de aguas residuales y plásticos y otras basuras al mar, la acidificación de las aguas, la pérdida de especies, la degradación ambiental y el cambio climático.

Por eso, comprender las condiciones y los modos de vida de las comunidades, resulta imprescindible a la hora de identificar las potencialidades de nuestra región en materia de biodiversidad y preservación de las prácticas culturales tradicionales lo que, sin lugar a duda, nos permitirá abordar los desafíos y oportunidades que ofrece el mar Caribe para nuestras comunidades.

Somos un solo Caribe, una región rica, próspera, llena de potencialidades y con una

naturaleza excepcional. Con esta misión, es indispensable que no sólo se construya la ciencia que necesitamos, sino que esta ciencia sea transformadora, incluyente, compartida y en un lenguaje tan claro y entendible que esté al servicio del ciudadano de a pie, los tomadores de decisiones y los ejecutores de estas.

Igualmente, es imprescindible contar con un Caribe unido, cooperante y alienado con las metas enmarcadas dentro del Decenio de Acción de las Naciones Unidas – 10 años para transformar el mundo - , en especial el Decenio de las Ciencias Oceánicas para el Desarrollo Sostenible, así como el Decenio de las Naciones Unidas sobre la Restauración de los Ecosistemas, que nos permita mejorar la calidad de vida de cerca de 45 millones de habitantes de la región, pues como saben, el océano regula el clima, absorbe dióxido de carbono, proporciona oxígeno y provee el sustento a más de 3.000 millones de personas en todo el mundo gracias a las actividades de pesca, comercio, transporte, generación de energía, turismo, comercio, transporte, generación de energía, etc.

Queridos colegas, Finalmente, quiero hacer un llamado para que continuemos avanzando en la gestión sostenible de nuestros océanos y para que los procesos de producción, colaboración y difusión científica internacional que se nutrirán con sus valiosos aportes, nos permitan resignificar nuestra relación con el océano en beneficio de la vida en el planeta. El caribe es mi casa y es la casa de todos nosotros. Los invito a que sigamos trabajando decididamente para no solo conservar su belleza, su riqueza natural, sus culturas, sino también para defender un importante legado para nuestra futuras generaciones. Muchas gracias.

*MENSAJE DEL PRESIDENTE DE LA SUBCOMISION DE LA COI PARA EL CARIBE
Y REGIONES ADYACENTES DE LA UNESCO (SC-IOCARIBE) – SR. ARNULFO
SANCHEZ*

Estimados delegados, señoras y señores, colegas y amigos, sean bienvenidos!

Para mí es un gran placer estar aquí en esta **Decimoséptima Reunión Intergubernamental de la Subcomisión de la Comisión Oceanográfica Intergubernamental** de la UNESCO para el Caribe y Regiones Adyacentes-IOCARIBE.

Queridos colegas, desde mi elección como presidente de IOCARIBE en mayo de 2019, es la primera vez que TENGO LA OPORTUNIDAD DE DIRIGIRME a ustedes, en presencia de los representantes delegados de LOS PAISES Y TERRITORIOS del Gran Caribe, dadas las circunstancias conocidas por la pandemia, nos vimos obligados a realizar reuniones y actividades de forma virtual, pero con seguridad hubiésemos preferido realizar estas actividades de forma presencial, compartiendo con ustedes y que hubiésemos desarrollado y avanzado IOCARIBE de forma naturales sin restricciones sanitarias.

La Asamblea General de las Naciones Unidas, encomendó a la Comisión Oceanográfica Intergubernamental (COI) de la UNESCO la tarea de trabajar con todos los actores interesados en el diseño de un decenio de las ciencias oceánicas que nos ayude a conseguir el océano que necesitamos para el futuro que queremos, recuerdo

la asamblea general de la COI en 2017, uno de los aspectos más destacados fue la Resolución sobre El Decenio de la Ciencia Oceánica para el Desarrollo Sostenible, nos sentimos emocionados por tal anuncio, debido a una ciencia emergente sobre el océano y las posibilidades de contribuir con la ciencia oceánica. Ahora estoy bastante seguro de que el decenio 2021-2030 está aún más lleno de eventos y más positivo que nunca, para el océano, la ciencia, la humanidad y para la COI, entendiéndolo que como especie humana nunca hemos hecho algo así, ES TODO UN RETO, es un campo inexplorado: vamos a tener que revolucionar el modo en que vivimos y trabajamos, en que producimos energía y alimentos, en que impartimos la justicia y empoderamos a los más desfavorecidos. Sin embargo, no nos queda otro camino, sino dar un paso al frente y apoyar este Decenio; podemos ver a diario el costo de la inacción del hombre en tiempo real, las protestas políticas, los efectos del cambio climático generalizadas, los incendios de bosques enteros, los niveles sin precedentes de desertificación, la contaminación de las aguas, la inundación de antiguas ciudades, la mortandad de especies marinas y la migración forzada de millones de personas.

En referencia al Decenio de las Naciones Unidas de las Ciencias Oceánicas para el Desarrollo Sostenible, en IOCARIBE HEMOS REALIZADO DISTINTAS ACTIVIDADES VIRTUALES hace poco más de dos años iniciamos un período sin precedentes en la historia, para el cual nos hemos marcado una serie de objetivos y resultados esperados para dar respuesta a desafíos críticos. Esta Década nos permitirá sentar bases sólidas para un proceso transformador en la gestión sostenible del Océano basada en el mejor conocimiento científico, en un contexto holístico, transparente, inclusivo y participativo, asegurando que nadie se quede atrás.

Para los estados de IOCARIBE, la Década de las Naciones Unidas para las Ciencias Oceánicas sigue siendo una alta prioridad. Necesitamos negociar sobre el establecimiento de una Oficina Regional de Coordinación del Decenio de las Naciones Unidas en IOCARIBE y cómo será dotada de personal y financiada. También necesitamos acordar un nuevo marco y términos de referencia para el Grupo de Planificación Regional para guiar las actividades regionales de la Década de la ONU.

Acojo con beneplácito el estudio de alcance y los TdR presentados durante esta reunión sobre estos asuntos.

Quisiera expresar mi agradecimiento a los Estados miembro de IOCARIBE por su paciencia y la orientación en las distintas direcciones de trabajo de esta Subcomisión, el apoyo recibido a las propuestas formuladas durante este período tan especial, su confianza, así como por aceptar celebrar reuniones de forma “remota” con agendas reducidas a aquellos temas claves que requerían orientación o decisión antes de nuestra 32ª reunión de Asamblea General.

En permanente consulta con la Mesa Directiva y la Secretaría, hemos realizado una cuidadosa preparación para garantizar los temas y la calidad del debate, permitiendo que el proceso de toma de decisiones sea inclusivo, transparente y efectivo, como es el caso de esta reunión que brinda a los Estados miembros la oportunidad de reevaluar todos los programas en vista de nuestras prioridades nacionales como estados., en consecuencia estamos cumpliendo con la totalidad de nuestro Reglamento.

No quiero perder la oportunidad de reconocer el trabajo incansable que desarrollo

nuestro Secretario Cesar TORO, Felicitaciones por el retiro de César Toro en febrero de 2023.

Su partida dejó un vacío en la Secretaría y la implementación del plan de trabajo anterior no se completó completamente antes de esta reunión.

Estuvimos muy complacidos de participar ayer en la Reunión Científica de IOCARIBE GOOS. Este programa ha estado inactivo durante algún tiempo y es esencial para el éxito de todos los programas e iniciativas regionales de gobernanza de los océanos. La Junta nombró al Dr. John Cortinas como Coordinador Interino de IOCARIBE GOOS y esperamos que usted acepte confirmarlo en esta reunión.

Estamos muy interesados en la introducción de Early Career Professionals ECOPS en nuestra reunión y contar con la fuerte colaboración de jóvenes de la región. Sus innovaciones permitirán una renovación de los programas e insto a los Estados miembros a encontrar a sus jóvenes destacados que trabajen en temas relacionados con los océanos. Queremos desarrollar un cuadro fuerte de ECOPS en la región de América Latina y el Caribe.

También nos complace dar la bienvenida a la Dra. Lorna Inniss a la Secretaría.

Hacemos un llamado a todos los Estados Miembros, ya sea en línea o en persona en esta reunión híbrida para que apoyen el trabajo de IOCARIBE en la región.

Este océano es nuestra vida y debemos trabajar para sostenerlo y protegerlo para nuestra propia supervivencia. Las Ciencias Oceánicas y los Servicios Oceánicos proporcionados por la COI-UNESCO son fundamentales para este propósito.

CONSEGUIR EL OCÉANO QUE NECESITAMOS PARA EL FUTURO QUE QUEREMOS

Muchas Gracias!

OPENING REMARKS – Ms. LORNA INNISS – HEAD OF THE IOCARIBE SECRETARIAT

Your Excellency Elizabeth Taylor Jay, Vice Minister en el Ministerio de Relaciones Exteriores IOCARIBE Chairman Arnulfo Sanchez, Executive Secretary IOC, Vladimir Ryabinin, Head of the Colombian Ocean Commission and the National Ocean Decade Committee of Colombia, Capitan Juan Camilo Forero and other Members of the Colombian delegation who helped us organize this meeting, esteemed Member States representatives, partners, young people, invited private sector organizations, other UN organization representatives, Welcome to XVIIth Session of IOCARIBE – The Sub-commission of IOC for the Caribbean and Adjacent Regions.

It is truly an honour and a privilege for me to be here within the IOC family again. I truly appreciate the warm welcome received when I met with IOC Staff, Member States and partners. Vice Minister Taylor Jay and Chairman Sanchez, Francisco Arias, and I go back a long way within this regional IOC framework, when we were all representatives

of Member States. The time has passed as a dream, and here we are, continuing to fight for our region's waters in other capacities, just as we did in the past.

It is with a feeling of gratitude and perhaps nostalgia, that I give honor to the work of another pillar of IOCARIBE, Dr Cesar Toro, who proceeded on retirement last year. He came to the Sub-Commission for 2 years, and he stayed for 20 years. He and I have worked side by side and we saw many successes and failures. One key success during that period was the establishment of the Tsunamis and Coastal Hazards Warning System for the Caribbean and Adjacent Regions, which now has its own ICG, and we will hear from them today. But as with so many who have been associated with this work and this region, Cesar has not left us completely. He is with us today online and will speak later.

After so many years of toiling, we are all very pleased I am sure, to see the increased global attention and political will to work on the oceans. Now we have the opportunity to harness that global attention to bring innovative support to the region. Within the Sub-Commission, we need to streamline our regional initiatives into a comprehensive and efficient framework encapsulated within the UN Ocean Decade of Ocean Science for Sustainable Development, focusing on those few actions with highest impact. Let me remind all that the capacity of your Sub-Commission is small, I urge you to consider as we move through the discussion of recommendations over the next 3 days. It would be great if we could agree on 5-6 recommendations with a clear mandate to the Sub-Commission that is actionable over 2 years and has strong support from States.

And speaking of support from Member States, the Government and people of Colombia stand out as a shining example of support to the Sub-Commission, not only providing very comfortable premises for us, but every year, they contribute funding that is earmarked for IOCARIBE. Vice Minister, I hope that your Government is well aware of our immense gratitude, and please convey our wishes for even closer collaboration in the coming biennium.

Excellencies, friends of IOCARIBE, we have a lot of work to do, and few hands with which to do it. I am counting on all of you to be a true partner with the Sub-Commission-ask of us and we will ask of you; partner with us and we will accomplish, together, for the future of our children, our seniors, and the very large and diverse communities.

THANK YOU

ANNEX IV

LIST OF PARTICIPANTS

**Seventeenth Intergovernmental Session of the UNESCO-IOC Sub- commission for the Caribbean and Adjacent Regions
(IOCARIBE) –
(May 9 – 11, 2023)**

CHAIRPERSON AND VICE-CHAIRPERSONS

Full name / Nombre completo:	Gender / Genero:	Member State / Estado Miembro:	Institution / Institución:	E-mail address / Correo electrónico:	Job title / Cargo:	Address / Dirección:	Representation / Representación:	Participation / Participación:
Dr Leo Brewster	Male / Masculino	Barbados	Coastal Zone Management Unit	lbrewster@coastal.gov.bb	Director	8th Floor, Warrens Tower II, Warrens, St. Michael, Barbados	Vice-chairperson	Virtual / Virtual
Arnulfo Sánchez Morales	Male / Masculino	Panamá	Autoridad Marítima de Panamá	asanchez@amp.gob.pa	Jefe de Ambiente	Edificio Pan Canal, Piso 2, Albrook	Chairperson	In Person / Presencial
John Cortinas	Male / Masculino	United States	NOAA	john.cortinas@noaa.gov	Director, Atlantic Oceanic and Meteorological Laboratory	4901 Rickenbacker Causeway, Miami, FL. 33133, USA	Vice-chairperson	In Person / Presencial

DELEGATIONS

Full name / Nombre completo:	Gender / Genero:	Member State / Estado Miembro:	Institution / Institución:	E-mail address / Correo electrónico:	Job title / Cargo:	Address / Dirección:	Representation / Representación:	Participation / Participación:
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NINA LYSENKO	Female / Femenino	Dominican Republic	Ministerio de Medio Ambiente y Recursos Naturales	nina.lysenko@ambiente.gob.do	Directora De Gestión, Conservación Y Protección De Ecosistemas Costeros Y Marinos	CAYETANO GERMOSEN, ESQ. AV. LUPERON	Head of Delegation / Jefe de la Delegación	In Person / Presencial
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Aria St. Louis	Female / Femenino	Grenada	Ministry of Climate Resilience, The	hodenv@cre.gov.gd	Environmental Specialist	Ministerial Complex	Delegate / Delegado	Virtual / Virtual

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			Environment and Renewable Energy					
Mirna Marin	Female / Femenino	Honduras	Universidad Nacional Autonoma de Honduras	namirmarin@gmail.com	Profesor Jubilado	Bo El Cristo, Santa Lucia ranciaco Morazan, Honduras	Head of Delegation / Jefe de la Delegación	In Person / Presencial
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ANNEX V**LIST OF ACRONYMS AND ABBREVIATIONS**

AIUs	IODE Associate Information Units (AIUs)
AOML	Atlantic Oceanographic and Meteorological Laboratory
ASP	Amnesic shellfish poisoning (ASP)
ATLANTOS	All-Atlantic Ocean Observing System Caribbean Small Island Developing States – GEF
CARE	Collective benefit, Authority to Control, Responsibility, and Ethics
CARIBE-EWS	Coastal Hazards Warning System for the Caribbean and Adjacent Regions
CARICOM	Caribbean Community
CARICOOS	Caribbean Coastal Ocean Observing System
CCO	Comisión Colombiana del Océano (Colombia)
CD	Capacity Development
CDTp	Caribbean Digital Twin prototype (CDTp)
CIMAB	Centro de Investigación y Manejo Ambiental del Transporte (Cuba)
CIMH	Caribbean Institute for Meteorology & Hydrology
CLME	Caribbean Large Marine Ecosystem
CLME+	Caribbean & North Brazil Shelf LME Project
CMA	Caribbean Marine Atlas
COSTA	Collaboration for Oil Satellite Tracking in the Americas
CDTp	Caribbean Digital Rwin Prototype
CRFM	Caribbean Regional Fisheries Management
CYEN	Caribbean Youth Environmental Network
DCO	Ocean Decade Coordination Office
DOI	Digital Object Identifier
DSP	Diarrhetic Shellfish Poison

ECOP	Early Career Ocean Professionals
ESPOL	Escuela Superior Politécnica del Litoral
FAIR	Findable, Accessible, Interoperable, Reusable
GOA-ON	Global Ocean Acidification Observing Network
GCFI	Gulf and Caribbean Fisheries Institute
GEBCO	General Bathymetric Chart of the Oceans
GEF	Global Environmental Facility
GEMS	Global Environment Monitoring System for the Ocean and Coasts
GIS	Geographical Information System
GOOS	Global Ocean Observing System
GOs	Governmental Organizations
GPML-Caribe	Regional Node of the Global Partnership on Marine Litter for the Caribbean
HAB	Harmful Algal Blooms
HAB-ANCA	Network of IOCARIBE HAB (Algas Nocivas del Caribe)
HAEDAT	Harmful Algae Event database
ICAM	Integrated Coastal Area Management
ICG/CARIBE-EWS	Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions
ICHEWS	Integrating Coastal Hazard Early Warning Systems for the Tropical Americas and Caribbean
ICM	Integrated Coastal Management
ICZM	Integrated Coastal Zone Management
IHO	International Hydrographic Commission
IMA	Institute of Marine Affairs (Trinidad & Tobago)
IMO	International Hydrographic Organization
INVEMAR	Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andrés
IOC	Intergovernmental Oceanographic Commission

ODISArch	Ocean Data & Information System Architecture
ODIS	IOC Ocean Data and Information System
ODISCAT	Catalogue of Sources-IODE
IGOS	Intergovernmental Organizations
IOCARIBE	IOC Sub-Commission for the Caribbean and Adjacent Regions
IOCARIBE- GOOS	Global Ocean Observing System for the Caribbean and Adjacent Regions
IODE	Oceanographic Data and Information Exchange
IPHAB	Intergovernmental Panel on Harmful Algal Blooms
ISDR	International Strategy for Disaster Reduction
IWCAM	Integrated Watershed and Coastal Area Management
LAC	Latin-American and the Caribbean
LDCs.	Least Developed Countries
LME	Large Marine Ecosystem
MACHC	Meso American Caribbean Sea Hydrographic Commission
MS	Member States
MSP	Marine Spatial Planning
NDC	National Data Center
NDCs	National Decade Committees
NFP	National Focal Point
NOAA	National Oceanic and Atmospheric Administration
NODC's	National Oceanographic Data Centres
NGOs	Non Governmental Organizations
NSP	Neurotoxic Shellfish Poisoning
OBIS	Ocean Biodiversity Information System (OBIS)
ODIS-Arch	Ocean Data and Information System architecture
ODIS	IOC Ocean Data and Information System
ODISCAT	IOC Ocean Data and Information System catalogue of sources project

OIH	Ocean Info Hub
OTGA	Ocean Teacher Global Academy (OTGA).
PI-GOOS	Pacific Islands GOOS
PROCARIBE+	Regional initiative for Protecting and Restoring the Ocean's Natural Capital, building Resilience and supporting region-wide Investments for sustainable Blue socio-Economic development in the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ region)
PSP	Paralytic Shellfish Poison
REMARCO	Research Network of Marine-Coastal Stressor in Latin America and the Caribbean
SDGs	Sustainable Development Goals
SIDS	Small Islands Development States
TAC	Tropical Americas and the Caribbean Region
ToR	Terms of Reference
UFSC	University of Santa Catarina (Brazil)
UN	United Nations
UN DRR	UN Office for Disaster Risk Reduction
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP/CAR/RCU	United Nations Environment Programme Regional Coordinating Unit
UNESCO	United Nations Educational, Scientific and Cultural Organization
UWI	University of the West Indies
WESTPAC	IOC Sub-commission for the Western Pacific
WMO	World Meteorological Organization