



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION  
(Of UNESCO)**

**EIGHTEENTH INTERGOVERNMENTAL SESSION OF THE  
UNESCO-IOC SUB-COMMISSION FOR THE CARIBBEAN  
AND ADJACENT REGIONS (IOCARIBE-XVIII)**

(Brasilia, April 23-25, 2025)

**Item 3.2 of the Revised Provisional Agenda**

**IOCARIBE SECRETARY'S REPORT**

**SUMMARY**

This report presents a summary of the programme progress and the implementation of decisions and recommendations during the period 2021–2023, particularly those made at the Seventeenth Session of the Sub-Commission held in Bogotá, Colombia, from May 9 to 11, 2023.

The Sub-Commission is invited to take note of this report and to provide strategic guidance on programme development and implementation, as well as on emerging projects and mechanisms.

## 1. INTRODUCTION

IOCARIBE, the Sub-Commission of UNESCO's Intergovernmental Oceanographic Commission (IOC), coordinates regional efforts in ocean sciences, marine services, and early warning systems for the Tropical Americas and the Caribbean (TAC) region. During 2023-2025, IOCARIBE strengthened its governance by restructuring the working groups for different programme areas. The governance framework for IOCARIBE's GOOS and Capacity Development programmes is now in place, with strong and diverse representation from Member States. A concerted effort to engage all Caribbean Small Island Development States (SIDS) is showing demonstrated improvement in programme implementation. During this biennium, IOCARIBE enhanced collaboration in several areas of the UN Decade of Ocean Science for Sustainable Development (2021-2030). The Sub-Commission also prioritized showcasing national initiatives to demonstrate best practices and lessons learned.

This report has been structured in accordance with the decisions and recommendations of the Seventeenth Session of IOCARIBE. A full list of decisions and recommendations are presented, along with the progress made in their implementation.

Key achievements included expanding the ocean observation system, adopting new technologies, and addressing regional challenges like sargassum blooms, ocean acidification, and coastal hazards. IOCARIBE's focus on capacity building has provided valuable training to professionals and decision-makers, strengthening the region's ability to tackle climate change and promote ocean sustainability.

## 2. RECOMMENDATIONS SC-IOCARIBE-XVII

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

**Aware** of the critical importance of the seven outcomes of the UN Decade of Ocean Science for Sustainable Development (thereafter referred to as UN Ocean Decade) to all aspects of life, safety, and economy of the Member States of IOCARIBE;

**Acknowledge** the progress made since the establishment of IOCARIBE in 1982, the progress made since the 16<sup>th</sup> Session of IOCARIBE in 2021, the kickoff meeting of the UN Ocean Decade in 2021 for the Tropical Americas and Caribbean, and other major ocean initiatives in the Caribbean;

**Recognizing** the importance of the IOCARIBE Medium Term Strategic Science Plan, the IOC Medium Term Strategy 2022–2029, the Revised IOC Capacity Development Strategy, the Draft UNESCO Rolling Operational Strategy/Framework for Small Island Developing States 2022–2029, and the Draft Revised IOC Oceanographic Data Exchange (IODE) Policy;

**Aware** that important stakeholders and sectors such as weather, climate, ocean forecasters, policy makers, and the practitioners are benefitting from access to and use of these data and information products across the region and globally;

**Recognizing** that we need ocean observations to meet challenges in the Tropical Americas and Caribbean (TAC) region;

**Recalling** IOCARIBE Sub-Commission Recommendation XV.2 which requested the IOCARIBE Secretary to facilitate participation of IOCARIBE Member States and their scientific and stakeholder community in UN Ocean Decade events;

**Further recalling** IOCARIBE Sub-Commission Recommendation XVI.1, which requested IOCARIBE Secretary to facilitate Member State participation in the UN Ocean Decade through empowering their creation of National Decade Committees; facilitate the work of the Western Tropical Atlantic Decade Regional Planning Group (WTA RPG) whose vision is to catalyze co-design processes in the region to facilitate and empower the emergence of inclusive partnerships for regional transformative Decade Actions, and encourage Member States (particularly SIDS), the UN, and non-UN stakeholders to participate actively in the regional co-design processes of the WTA RPG Working Groups to leverage capabilities to apply science to implement the Sustainable Development Goals;

**Urges** IOCARIBE Member States to:

#### **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.

1.1. 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.

1.2. 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.

2.1. 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.

2.2. Perform a periodic evaluation of strategic plan progress and activities every two years.

2.3. Consider having French, English, and Spanish translation of documents and interpretation at future meetings, if resources permit.

2.4. Develop a framework that aligns IOCARIBE programs with the UN Ocean Decade in consultation with the TAC Regional Task Force.

2.5. 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.

2.6. 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.

3.1. Prioritize key stakeholders' engagement in IOCARIBE programs.

3.2. 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.

3.3. 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).

3.4. 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.

4.1. Define youth in the context of IOCARIBE.

4.2. Leverage mechanisms such as the UN Ocean Decade ECOP program, the OTGA, and the Caribbean Youth Environment Network (CYEN) to enhance youth engagement.

4.3. Work with the UN Ocean Decade ECOP program in identifying ECOPs in the region and encourage participation in the ECOP program at all levels.

4.4. 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.

5.1. 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 contact for their corresponding programs, and projects in the framework of IOCARIBE.

5.2. Communicate the process of how the Member States can be engaged in the IOCARIBE programs and projects to enable them to work together.

5.3. 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.

5.4. 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.

6.1. 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.

6.2. 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.

7.1. Capitalize on existing regional and international efforts to raise awareness of impacts and benefits for stakeholders.

7.2. Develop ways to include stakeholders to improve and use applications, services, tools, and products in the region.

7.3. 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 FAIR and CARE 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.

8.1. Assess, prioritize, and address the data, information, and knowledge needs within the framework of IOCARIBE programs and projects.

8.2. 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.

8.3. 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.

8.4. 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.

8.5. Invite Member States to report on IOCARIBE needs and gaps, and respond to future surveys to help IOC understand needs and priorities.

8.6. 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.

8.7. Welcome the organization of the 1st Marine Spatial Planning (MSP) Regional Forum for Latin America and the 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.

8.8. 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.

9.1. Recognize the work of the TAC Regional Planning Group and Working Groups.

9.2. Invite the Member States to review the Terms of Reference (ToR) for the establishment of a Decade Coordination Office (DCO) within the IOCARIBE Secretariat before September 2023, and support the establishment of the DCO according to the approved ToR.

9.3. 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.

9.4. Encourage Member States to establish National Decade Committees with the technical support and guidance of IOC and participate in outreach and engagement activities in regional and international fora.

9.5. Establish the TAC Regional Task Force according to the ToRs as presented.

9.6. 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**

10.1. Vote on the permanent coordinator for IOCARIBE GOOS.

10.2. 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.

10.3. 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.

10.4. 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.

10.5. Seek active representation and participation from each of the Member States in IOCARIBE GOOS.

10.6. Leverage ongoing regional and international activities and partnerships, including the Caribbean Institute for Meteorology & Hydrology (CIMH) and the Caribbean Coastal Ocean Observing System (CARICOOS).

10.7. Report metadata and other relevant information to OceanOPS (formerly JCOMMOPS).

### **3. PROGRESS ON IOCARIBE ACTIVITIES AND WORKING GROUPS IN RESPONSE TO SC-IOCARIBE-XVII RECOMMENDATIONS**

In alignment with the recommendations adopted during the Seventeenth Session of IOCARIBE, significant progress has been made in advancing ocean science, capacity development, and regional cooperation. Over the 2023–2025 period, IOCARIBE and its working groups have focused on strengthening governance, fostering stakeholder engagement, expanding ocean observation systems, and enhancing data-sharing mechanisms. These efforts contribute directly to the UN Decade of Ocean Science for Sustainable Development (2021–2030) and the broader objectives of IOC and UNESCO.

The following sections outline the key activities undertaken by IOCARIBE in response to each of the SC-IOCARIBE-XVII recommendations, demonstrating the tangible progress achieved and the strategic direction for the coming biennium (2025–2027).

#### **3.1. Recommendation SC-IOCARIBE-XVII.1: PRIORITIZATION**

##### **3.1.1. Sargassum Working Group**

IOCARIBE has partnered with GeoBluePlanet to establish a Sargassum Working Group to develop monitoring and early warning systems for the Tropical Atlantic. Six Task Teams have been created to review scientific literature and compile data. Additionally, preparations are underway for the Sargassum Forum to foster collaboration and explore sustainable uses of sargassum.

Progress has been made in reviewing existing bulletins and gathering feedback from key stakeholders, strengthening community support tools. A preliminary inventory of available data and products is underway, identifying technical groups and stakeholders involved in the issue. These efforts aim to improve understanding of the sargassum phenomenon and its regional impact, laying the groundwork for more effective management.

##### **3.1.1.1. Next Steps and Considerations for the New Biennium**

In the upcoming biennium, the Sargassum Working Group will focus on finalizing the operational framework for monitoring and early warning systems, ensuring their implementation across the Tropical Atlantic region. Key priorities include expanding the inventory of data and products, as well as integrating advanced remote sensing and modeling technologies to enhance predictive capabilities. Collaboration with regional stakeholders, including governments, research institutions, and local communities, will be strengthened to ensure the systems are tailored to local needs and contexts.

Additionally, the Working Group will prioritize the organization and execution of the Sargassum Forum, which will serve as a platform for knowledge exchange, innovation, and the promotion of sustainable sargassum management practices. Efforts will also be made to secure funding and partnerships to support ongoing research, capacity-building initiatives, and the development of an information centre to consolidate the group's achievements and ensure long-term sustainability in addressing the sargassum challenge.

### **3.1.2. Multi-Hazards Early Warning Systems**

Ocean-related hazard management continued to be the priority of the Sub-Commission during this biennium. The need for sustained ocean observations, forecasting and modelling capacity is being addressed through new governance arrangements and under the UN Ocean Decade Endorsed Project 'Integrating Coastal Hazards Early Warning Systems' for the TAC Region. The project's objective is to develop a regional multi-hazard ocean data and forecast system linked to education, outreach, readiness and communication actions that empowers and recognizes national and local policy and decision-making as well as individual responses for the protection of life and livelihoods. The Sub-Commission is working with the Decade Collaborative Centre for Coastal Resilience to build a major funding proposal using a multi-risk approach to improve observation and prediction of coastal events.

This project includes the development of observation and modelling systems for extreme events, such as flooding and coastal erosion. The initiative further aims to strengthen countries' capacity to respond to natural disasters, reducing the impact on vulnerable communities. This comprehensive approach aligns with the UN Ocean Decade Programme 'CoastPredict,' which may serve as a regional model for the science of ocean observation and prediction.

#### **3.1.2.1. Next Steps and Considerations for the New Biennium**

In the next biennium, CoastPredict will focus on resource mobilization and implementation by enhancing coastal monitoring, improving predictive models, and integrating early warning systems. Key steps include expanding observation networks, training national agencies, and piloting the system in high-risk areas. Collaboration with regional institutions and policymakers will ensure data interoperability and long-term sustainability while prioritizing community engagement and policy alignment to enhance disaster preparedness and resilience in the TAC region.

## **3.2. Recommendation SC-IOCARIBE-XVII.2: GOVERNANCE**

### **3.2.1. IOCARIBE Medium-Term Strategic Science Plan**

To optimize programs within the IOCARIBE structure and ensure alignment with regional challenges, an open intersessional committee was established to review and update the second draft of the IOCARIBE Medium-Term Strategic Science Plan (SSP). Chaired by a member of the IOCARIBE Board, the committee successfully completed the review of the English version, which was approved by Member States and officially published on May 11, 2024. The Spanish version of the SSP was published in February 2025, ensuring broader accessibility for Spanish-speaking Member States. This strategic plan provides a roadmap to maximize regional benefits, aligned with the Ocean Decade's challenges.

Progress has also been made in strengthening regional governance. The Decade Coordination Office for the Tropical Americas and the Caribbean region has been established within the Secretariat of the Sub-Commission. The Caribbean Ocean Decade Roadmap was finalized and published in December 2024, marking a significant milestone for regional management and coordination.

### **3.2.1.1. Next Steps and Considerations for the New Biennium**

The new Head of the Ocean Decade Coordination Office is now onboard. The Decade Task Force published the Roadmap for Implementation in 2024, which will now come into effect. Efforts will focus on enhancing technical governance, including the integration of coordinators into the Ocean Data and Information Working Group. Strengthening partnerships and securing funding for initiatives like the CoastPredict programme will also be critical to ensure long-term sustainability and effective governance.

### **3.2.2. HAB ANCA**

Strengthened governance was reflected in the ANCA 2024-2025 Activity Plan, which enabled the relaunch of the introductory HAB course in Latin America and the Caribbean to strengthen regional capacities. The update of the IOC-UNESCO ANCA platform has optimized harmful algal bloom data management, while ANCA's participation in the UNESCO HAB working group meetings has promoted international collaboration. Additionally, the digital publication of the book 'Ciguatera: A Potential Risk to Human Health: Frequently Asked Questions' was released in both English and Spanish, facilitating access to key information for researchers and managers.

### **3.2.2.1. Next Steps and Considerations for the New Biennium**

In the upcoming biennium, IOCARIBE will focus on expanding capacity-building programs like the ANCA HAB course and maintaining the updated IOC-UNESCO ANCA platform to ensure efficient data management. Efforts will also be made to promote the dissemination of the Ciguatera book and other educational materials to support regional stakeholders. Strengthening collaboration with UNESCO HAB working groups will remain a priority to enhance international cooperation and knowledge sharing.

### **3.2.3. Strengthening Governance and Multilingual Engagement**

IOCARIBE has increased the number of meetings with interpretation in all three official languages (English, Spanish, and French), ensuring broader participation and inclusivity. Additionally, the majority of documents, including the Medium-Term Strategic Science Plan (SSP) and the Ciguatera book, have been made available in both English and Spanish, improving accessibility for Member States and stakeholders. These efforts reflect IOCARIBE's commitment to effective communication and regional collaboration.

### **3.2.3.1. Next Steps and Considerations for the New Biennium**

In the new biennium, IOCARIBE will continue to prioritize multilingual engagement by ensuring that key documents and meetings are accessible in all three official languages. Efforts will focus on fostering regional collaboration and holistic management approaches. Strengthening partnerships and securing funding for these initiatives will be critical to ensure their successful implementation and long-term impact.

## **3.3. Recommendation SC-IOCARIBE-XVII.3: STAKEHOLDER ENGAGEMENT**

IOCARIBE has actively worked to strengthen stakeholder engagement by integrating key

sectors such as the private sector, ocean science users, local communities, NGOs, and the public. Efforts have been directed toward raising awareness through ocean literacy and improving the understanding of stakeholder needs within the region.

A significant milestone was the launch of the ocean literacy program at the 4th International Conference on Small Island Developing States (SIDS4) in Antigua and Barbuda, marking the beginning of formal communication with the Caribbean Examinations Council to develop a Blue Curriculum that promotes ocean knowledge in the region's educational systems. Additionally, an initial meeting and workshop in Grenada laid the foundations for a Blue School project, integrating marine education into school communities. To support these efforts, the Regional Task Team on Ocean Literacy was established under the Capacity Development Working Group, leading the feasibility study for a Regional Blue Schools Network to identify implementation opportunities and challenges.

Stakeholder engagement has also expanded in environmental monitoring, with countries and territories encouraged to participate in an oil spill monitoring initiative in collaboration with the Collaboration for Oil Satellite Tracking in the Americas (COSTA) and the Trinidad and Tobago Institute of Marine Affairs (IMA). Strengthening partnerships with key sectors such as tourism and fisheries has helped promote sustainable marine resource management and increase awareness of the benefits of ocean science.

### **3.3.1. Next Steps and Considerations for the New Biennium**

In the upcoming biennium, IOCARIBE will focus on strengthening multi-sector collaboration, continuing the implementation of A New Blue Curriculum, expanding the Regional Blue Schools Network, increasing stakeholder participation in monitoring programs, and fostering partnerships with tourism and fisheries to promote sustainable ocean use and regional cooperation.

### **3.4. Recommendation SC-IOCARIBE-XVII.4: YOUTH ENGAGEMENT**

Recognizing youth as a priority group for UNESCO, IOCARIBE reinforced its commitment to integrate youth and Early Career Ocean Professionals (ECOPs) into regional ocean science initiatives. Existing mechanisms such as the UN Ocean Decade ECOP programme, the Ocean Teacher Global Academy (OTGA), and the Caribbean Youth Environment Network (CYEN) have been leveraged to enhance youth participation in scientific research, training, and capacity-building activities. These platforms have expanded the reach of IOCARIBE programmes, fostering greater interaction with young professionals at the early stages of their careers.

Through the ECOP program, the Sub-Commission has actively worked to identify and engage young professionals, promoting their involvement in regional activities and training programmes. This effort aims not only to attract new talent but also to provide them with opportunities to develop their skills, gain meaningful experience, and contribute to ocean sustainability goals.

Facilitating ECOP participation in mentoring programs, including the GOA-ON Pier2Peer mentorship program, the Secretariat is exploring further collaboration to enhance capacity development within its operational framework. These mentorship initiatives provide young

professionals with formative experiences and help build a strong support network among early-career participants.

By fully integrating young professionals into the regional ocean agenda, IOCARIBE is ensuring that youth play an active role in addressing the challenges of the Ocean Decade, strengthening their contribution to sustainable ocean management and governance.

#### **3.4.1. Next Steps and Considerations for the New Biennium**

In the upcoming biennium, the Sub-Commission will prioritize expanding ECOP engagement through existing programs, strengthening partnerships with mentorship initiatives, and creating more opportunities for young professionals to actively contribute to regional ocean sustainability efforts. These actions will ensure that youth remain at the forefront of capacity development and decision-making processes within our framework.

### **3.5. Recommendation SC-IOCARIBE-XVII.5: COMMUNICATION**

IOCARIBE has developed a Communications Plan aligned with the IOC communication strategy, ensuring that Member States and partners are informed about applications, services, tools, and products that support decision-making. This strategy enhanced information exchange and collaboration among Member States, as well as with strategic partners and key stakeholders in the region.

One challenge identified by the IOCARIBE Board of Officers was the limited communication between the Secretariat and Member states. To improve science communications, IOCARIBE will continuously update program and partner contact lists, Member States focal points, partners, and other stakeholders. These updates facilitate the effective dissemination of key information through digital newsletters and distribution emails.

Significant progress has also been made in optimizing digital platforms and social media. The transition of the website from Joomla to Drupal allowed for the integration of new functionalities, such as recent publications, interactive maps, and a document library. The 2026-2027 work plan will include updating the Drupal version and implement web traffic monitoring tools. Additionally, IOCARIBE has strengthened its presence on social media platforms such as X, Instagram, and Facebook, and recently launched a LinkedIn profile to expand outreach to different sectors. The result of these efforts gained more than 300 new followers across all platforms, significantly increasing its digital audience and engagement.

Enhancing visibility and participation in global and regional events have been another priority. IOCARIBE organized and participated in workshops and conferences, promoting collaboration and knowledge exchange among Member States. Furthermore, the Sub-Commission is evaluating the implementation of a digital newsletter and the creation of an institutional brochure summarizing the benefits and opportunities offered by IOCARIBE.

#### **3.5.1. Next Steps and Considerations for the New Biennium**

In the upcoming biennium, the Sub-Commission will focus on maintaining updated points of contact, strengthening Member State engagement in programs, and enhancing digital communication platforms. Additionally, monitoring and evaluation systems will be implemented to analyze social media metrics, web traffic, and Member State feedback, ensuring a dynamic

and effective communication strategy that continues to expand the Sub-Commission's reach and impact.

### **3.6. Recommendation SC-IOCARIBE-XVII.6: COLLABORATION**

#### **3.6.1. Strengthening Regional Ocean Governance through the Ocean Coordination Mechanism**

In January 2025, IOC-UNESCO signed a Memorandum of Understanding (MoU) to join the Ocean Governance Coordination Mechanism (OCM) in the Wider Caribbean region, including the North Brazil Shelf Large Marine Ecosystem. Open for signature on October 6<sup>th</sup>, 2023, this agreement aims to reduce fragmentation in regional ocean governance by fostering collaboration among countries, intergovernmental organizations, and key stakeholders. The OCM coordinates actions in areas such as sustainable fisheries, ecosystem restoration, pollution control, blue carbon development, marine spatial planning, and the establishment of marine protected areas.

The OCM was conceived under the 10-year CLME+ Strategic Action Program, endorsed by Wider Caribbean countries in 2014, as a collaborative governance framework for the sustainable management of marine resources. It plays a crucial role in promoting regional cooperation, improving communication, avoiding duplication, creating synergies, and increasing the efficiency of marine and coastal initiatives. The mechanism is structured with an executive group of intergovernmental organizations and a steering group of countries, ensuring an inclusive approach to sustainable blue economy development.

The OCM was negotiated and established through the \$15 million PROCARIBE+ project (2024-2028), reinforcing its role in sustainable marine governance. This initiative represents a significant step toward a sustainable future for the marine ecosystems of the Wider Caribbean, with IOC-UNESCO leading efforts in scientific cooperation, data sharing, and capacity development to advance Sustainable Development Goal 14 (Life Below Water) and related global objectives.

##### **3.6.1.1. Next Steps and Considerations for the New Biennium**

In the upcoming biennium, the Sub-Commission, as an implementing partner of the Marine Spatial Planning (MSP) activities of the PROCARIBE+ project, will ensure alignment with regional priorities and foster cross-sector collaboration for the sustainable management of marine resources.

#### **3.6.2. Advancing Multi-Hazard Coordination for Coastal Resilience**

Recognizing the interconnected nature of ocean, climate, and biodiversity challenges, the Sub-Commission is working to align all threats under a multi-hazard framework in collaboration with the UN Ocean Decade-endorsed project: Integrating Coastal Hazard Early Warning Systems for the Tropical Americas and Caribbean (iCHEWS). This approach ensures that coastal communities in the region have access to timely and accurate risk information, enhancing preparedness and resilience against multiple hazards.

### **3.6.2.1. Next Steps and Considerations for the New Biennium**

The Sub-Commission will continue to strengthen regional multi-hazard coordination through the IOCARIBE-GOOS Working Group, promoting data-driven decision-making, early warning systems, and knowledge-sharing mechanisms to build resilience in vulnerable coastal areas.

## **3.7. Recommendation SC-IOCARIBE-XVII.7: AWARENESS**

The Sub-Commission has made significant progress in raising awareness, visibility, and recognition of its activities, strengthening public engagement with ocean-related issues in the region. Side events organized by IOCARIBE have been well received by stakeholders, reflecting strong interest and commitment to the topics addressed.

To expand outreach, the Secretariat has enhanced its presence on social media, news platforms, and publications, regularly contributing to IOC communication channels. These efforts have improved the dissemination of key information about its programs, increasing engagement with diverse audiences.

Scientific communication has also been a priority. The first sargassum report was shared with Member States, providing essential information to support monitoring and management efforts. This initiative aligns with regional and international ocean sustainability goals and enhances collaboration between stakeholders on experimental sargassum tracking.

Additionally, deep-sea capacity development activities (Deep Sea On-Board CD) have been widely promoted among Member States and youth, fostering education and participation in ocean exploration and conservation initiatives.

Strengthening academic partnerships has also been a focus, with IOCARIBE establishing closer ties with universities in the region, creating a strong regional network. These collaborations support research and project development in ocean science, reinforcing the scientific foundation for decision-making and policy formulation.

Through these initiatives, IOCARIBE continues to position itself as a key driver of ocean awareness and knowledge, contributing to the sustainable development of the Caribbean and adjacent regions.

### **3.7.1. Next Steps and Considerations for the New Biennium**

In the upcoming biennium, IOCARIBE will capitalize on regional and international efforts to raise awareness, engage stakeholders in the development and use of applications, tools, and services, and enhance visibility and accessibility of sargassum reports to improve regional monitoring and response strategies.

### **3.8. Recommendation SC-IOCARIBE-XVII.8: DATA, INFORMATION, KNOWLEDGE, AND TOOLS**

#### **3.8.1. Strengthening Capacity Development and Marine Data Management**

Capacity development remained a fundamental pillar of the Sub-Commission's activities, aligned with the IOC Capacity Development Strategy 2023-2030. Between June 2023 and January 2025, multiple initiatives have been implemented to strengthen the technical and scientific competencies of Member States, with a focus on ocean literacy, deep-sea research, data management, and climate adaptation. These efforts have enhanced regional collaboration, promoted gender equity, and fostered multisectoral inclusion, positioning the Sub-Commission as a leader in ocean science for sustainable development.

##### **3.8.1.1. Key Initiatives in Data and Knowledge Management:**

- UN Convention on Biological Diversity COP16 Side Event on Ocean Data and Information: Organized in Cali, Colombia, focusing on data interoperability for sustainable decision-making, featuring tools like the ADAPT project.
- Launch of the ADAPT Project: The project created an "Ocean Best Practices" course on the Ocean Teacher Global Academy (OTGA) platform, designed to strengthen capacities in marine observation, data management, and climate adaptation. Available in English and Spanish, this course focuses on experiential learning and follows a "train-the-trainer" approach, addressing regional challenges in marine biodiversity and coastal monitoring, particularly in the Caribbean.
- Creation of a Task Team on Ocean Literacy: Promotes ocean education in tourism and fisheries, integrating traditional and local knowledge.
- Capacity Development in Deep-Sea Ecosystems: Strengthened deep-sea research through Challenger 150 and Deep-Ocean Stewardship Initiative (DOSI), addressing funding and technology challenges.

##### **3.8.1.2. Next Steps and Considerations for the New Biennium**

The Sub-Commission will prioritize regional data and knowledge needs, support the establishment of National Oceanographic Data Centers (NODC), expand sargassum tracking tools, and integrate local innovative solutions to monitor sargassum impacts. Additionally, the Sub-Commission will work with IODE to establish new OBIS and Ocean InfoHub (OIH) nodes, ensuring compliance with FAIR and CARE data management principles. The Sub-Commission will also continue promoting Marine Spatial Planning (MSP) initiatives, including the organization of future MSP fora and encouraging Member States to contribute to the Joint MSP Roadmap (2022-2027).

### 3.8.2. Capacity Development through OTGA Courses

As part of its ongoing commitment to capacity development, the IODE Regional Training Center (INVEMAR, Colombia) has implemented several key OTGA courses between 2023 and 2024, addressing critical issues for marine and coastal management:

- Microplastic Pollution (REDCAM 2023): Focused on pollution challenges, with exclusive participation from Colombia.
- Marine Protected Areas: Strengthened conservation efforts, engaging 12 countries, with high female participation.
- Ecosystem-Based Adaptation and Blue Carbon: Explored climate adaptation strategies in marine ecosystems, involving 14 countries.
- Integrated Coastal Zone Management & Marine Spatial Planning (ICZM-MSP): Provided practical planning tools in Colombia.
- Ocean Acidification: Addressed SDG-aligned acidification indicators, with participants from seven countries.
- GIS Applied to Marine and Coastal Environments: Focused on geographic information systems for marine analysis, with participants from four countries.
- All for a Cause: The Ocean We Want: Promoted ocean sustainability under the Ocean Decade, engaging 14 countries.
- Marine Biodiversity Data Publishing (OBIS): Strengthened data sharing on OBIS, improving marine biodiversity visibility.

These courses have enhanced technical competencies, promoted regional cooperation, and increased the engagement of women and young professionals in marine science.

#### 3.8.2.1. Next Steps and Considerations for the New Biennium

IODE will continue to expand OTGA training opportunities, ensure greater accessibility and inclusivity in capacity development programs. Efforts will focus on enhancing course diversity, integrating emerging topics such as AI applications in ocean science, and fostering stronger collaborations with universities, research institutions, and the private sector. Additionally, the Sub-Commission will explore new partnerships to support deep-sea training initiatives and strengthen long-term data-sharing frameworks through OBIS and OTGA.

### 3.9. Recommendation SC-IOCARIBE-XVII.9: UN OCEAN DECADE

Significant progress has been made in implementing the United Nations Ocean Decade in the Tropical Americas and Caribbean (TAC) region. One of the most notable achievements has been the establishment of the Decade Coordination Office (DCO) within the IOCARIBE

Secretariat, aimed at strengthening the implementation of Decade actions in the region. The administrative process to appoint the DCO Head has been completed, ensuring leadership for strategic planning and execution of regional initiatives. Additionally, internship opportunities have been promoted, allowing young professionals to actively participate in Decade initiatives and strengthen their skills in ocean sciences and project management.

Decade governance has been reinforced through the TAC Ocean Decade Task Force, which has met four times to consolidate its structure and functions. The third meeting, held in Costa Rica in June 2024, was particularly significant as it facilitated an extensive consultation and discussion process, leading to the preliminary draft of the TAC Ocean Decade Roadmap. After a participatory review process, the Roadmap was approved by Member States and published, serving as the guiding framework for Decade implementation in the region until 2030. The Roadmap provides a structured approach for regional cooperation, resource mobilization, and capacity development, integrating multiple sectors and key stakeholders.

Several Decade-endorsed actions have been prioritized, including the Decade Call for Actions #6, which focused on supporting Small Island Developing States (SIDS). In this context, IOCARIBE facilitated several meetings with Caribbean SIDS, promoting their participation in the Decade and fostering project development aligned with their specific needs. As a result, eleven (11) projects were approved and endorsed, focusing on strengthening ocean and coastal resilience in these nations.

Another key advancement has been the development of the Integrating Coastal Hazards Early Warning Systems (iCHEWS) project, which expands the Tsunami Early Warning System into a multi-hazard framework. In collaboration with the IOCARIBE-GOOS working group and CoastPredict, regional pilot sites have been selected by states to improve observation, prediction, and modeling of marine phenomena in the region.

In the area of pollution and environmental stressors, projects under the Observatory for Contaminants and Multiple Stressors have been launched, receiving support from the International Atomic Energy Agency (IAEA) through the Research Network on Marine-Coastal Stressors in Latin America and the Caribbean (REMARCO). This initiative, covering 18 countries, addresses ocean acidification, microplastics, harmful algal bloom, and marine pollution, promoting scientific cooperation and knowledge transfer across the region. A similar initiative was recently launched for the Eastern Caribbean.

### **3.9.1. Next Steps and Considerations for the New Biennium**

In the upcoming biennium, IOCARIBE will focus on strengthening the DCO, securing financial and in-kind support from Member States and partners, and ensuring the full implementation of the TAC Ocean Decade Roadmap. Additional efforts will promote the establishment of National Decade Committees, the engagement of regional experts in Decade governance, and the integration of new funding opportunities to sustain Decade actions in the region. It is also proposed to strength cooperation with the IAEA.

### **3.10. Recommendation SC-IOCARIBE-XVII.10: IOCARIBE GOOS**

Significant progress has been made in strengthening the Global Ocean Observing System (GOOS) in the Caribbean and Tropical Americas region (IOCARIBE GOOS). One of the key milestones was the First Meeting of the IOCARIBE GOOS Working Group, held in November 2024. The meeting addressed progress and challenges in implementing a more robust ocean observation system, aligning with the GOOS 2030 Strategy and the goals of the Ocean Decade. Some of the main achievements and activities carried out include:

- Development of the Tropical Americas and Caribbean Ocean Observing and Forecasting System (TAC-OOFS): An Ocean Decade-endorsed project aimed at establishing an ocean observation and prediction infrastructure through cooperation among governments, universities, and research centers.
- Expansion of oceanographic observation systems in the Caribbean: Deployment of Argo floats, underwater gliders, and wave and sea level measurement buoys, improving tropical cyclone and swell event prediction.
- Implementation of the Tropical Cyclone Exemplar Program: Enhancing oceanographic data collection for tropical cyclone prediction in the Caribbean. In 2024, an underwater glider mission was deployed between Puerto Rico, the Dominican Republic, and Curaçao, significantly improving forecast model accuracy.
- Strengthening regional cooperation with coastal observation networks: Partnerships with CariCOOS and CIMH have facilitated real-time access to oceanographic data and the development of risk management tools for coastal communities.

Through these advancements, IOCARIBE GOOS continues to solidify its role as a leader in ocean observations in the Caribbean and Tropical Americas region.

#### **3.10.1. Next Steps and Considerations for the New Biennium**

Member States will consider nominating an expert as Coordinator for IOCARIBE GOOS, support the establishment of a sustained regional ocean observing and forecasting system, and nominate additional experts to the IOCARIBE GOOS Working Group. Additionally, efforts will focus on developing a regional strategy for ocean observing, strengthening governance structures that include ECOPs, and expanding collaborations with regional and international partners such as CIMH and CariCOOS. IOCARIBE GOOS will also work to report metadata and relevant information to OceanOPS, ensuring the region's contributions to global ocean monitoring initiatives.