An Ocean Observing and Forecasting System for the Tropical Americas and Caribbean Region

Doug Wilson

Representing the IOCARIBE Regional Planning Group for A Predicted Ocean Edgard Cabrera Albert Martis Julio Morell Douglas Wilson

A REGIONAL PLANNING GROUP was formed, an initial workshop was held (November 2020), and during July – October 2021, seven regional co-design workshops were held with OCEAN DECADE OUTCOME themes.



A regional Ocean Decade Kickoff Conference summarizing the workshops and suggesting ways forward was held in December 2021.

Included in the Conference Recommendations – Essential Infrastructure WG - was the statement that "Ocean observations, data management, analysis, models and products, are foundational to our approach to sustainable development."



Based on the Workshop's co-designed outcomes, Kickoff Conference discussions, and in consultation with the Regional Planning Group, it was recommended to submit a proposal for an Ocean Decade Action in support of **An Ocean Observing and Forecasting System for the Tropical Americas and Caribbean Region.**

The Action was endorsed by the UN Ocean Decade Coordination Unit in September 2022.

The Action is intended to provide a roadmap to a Regional System that meets the original goals of IOCARIBE-GOOS, while considering

- Suggestions and ideas from Workshop participants
- Advancements in observing system expansion, capabilities, and interest within the region
- Evolution of the Global Ocean Observing System and associated Programs
- Advances in Ocean Observing technology, methods, and best practices
- Lessons learned from the previous IOCARIBE-GOOS experience
- Opportunities to collaborate with other UN Decade activities



Some highlights of TAC-OOFS proposal, including addressing specific questions asked by the Decade Coordination Unit

We are at an important point – beginning of the UN Decade. So many external opportunities have developed designed to support Observing Systems (especially in Small Island Developing States), and we have a Decade Project Proposal endorsed.

We need to immediately put a framework in place to begin to take advantage of those opportunities.

The Decade Proposal was written based on feedback from the workshops and regional planning group. It should be a primary basis for moving IOCARIBE-GOOS ahead, as it is the result of an extensive co-design process, and it immediately connects to available Decade opportunities.

The UN Decade of Ocean Science for Sustainable Development 2021 - 2030

WESTERN TROPICAL

MEMBERS

Describe the management structure which will be used to coordinate your Decade Action

To achieve our Objectives, we will need a Governance and Management (G&M) structure for the Observing and Forecasting System that

- 1) ensures sustainability;
- 2) enables and supports broad regional engagement and participation;
- 3) promotes data and information sharing; and
- 4) advocates for regional collaboration with the global ocean community.

Consider these four as among the guiding principles of the G&M structure we decide upon.



Describe the management structure...

To ensure principles of co-design, equity, and stability, IOCARIBE will facilitate and coordinate the creation of an initial governance and management framework for the System, taking into consideration input from all member states and interested regional organizations. There is an existing GOOS Regional Alliance for the Caribbean, IOCARIBE-GOOS, to help develop this program.



An initial advisory group for TAC-OOS will be established consisting of experts and representatives from organizations expected to participate.

A final framework will be co-designed by the regional principals. The framework will be established by the partners and take over management from IOCARIBE, with initial tasks including outlining initial projects of importance, strategy for their implementation, and funding sources for the Project, per the First Three Years activities

Describe the management structure...

Framework structure should be composed of both national and organizational decision-makers; groups of regional and non-regional experts on observations, modeling and forecasting, products, and data management activities; and task teams carrying out capacity building, outreach, and education activities.



It will be important to separate G&M from operational and development activities. G&M will work at a high level on regional cooperation, funding, and internal activities coordination. In addition, there must be funded directed groups working on specific important aspects of implementation and operations.

In all activities, emphasis will be placed on utilizing the support and capabilities available through identified regional contributors and existing UN Decade Programmes.

Key contributors and partners need to be identified and engaged. IOCARIBE, as the initial lead organization, can facilitate this step. Because of the large number of existing organizations, agencies, and institutions presently engaged regionally in activities relevant to ocean observing and forecasting, a sustainable and responsive Governance and Management framework needs to be established quickly. The framework will be established by the partners and take over day-to-day management from IOCARIBE.



Promote data and product sharing and reciprocal data collection agreements associated with membership in the System.

Strive for complete (all countries) representation at a G&M level, including individuals with capability to recommend or implement such agreements.

Identification of:

- Existing Regional assets
- Existing extra-regional contributing assets (including existing Decade Programs);
- Needs; best done through targeted studies carried out by project-component specific working groups established within the management framework, working with GOOS Ocean Observing Co-Design and Observing Together Programmes;
- Gaps; extension of needs identification process.

These are difficult and and may need identified leadership (possibly contracted) to take on and complete. They can be easily started and defined to a level adequate to begin system development and implementation but should be continued to a comprehensive level (can be continuously reviewed) to support future growth and full participation.



 Develop initial tasks including outlining initial projects of importance, strategy for their implementation, and funding sources for initial and long-term sustainability of the Project.

This is a high priority job for ad hoc leadership team

 Implementation of a representative initial System, using existing assets and filling gaps as necessary, that demonstrates multiple aspects of the system, targets regionally important Essential Ocean Variables and Processes, links to other regional projects, and creates a framework for expansion.

The UN Decade of Ocea Science for Sustainable

Priority for ad hoc leadership team, use as opportunity to build more extensive implementation and operations teams.

- Support the co-design of National Observing and Forecasting Systems using GOOS principles
- Create a robust program of capacity building and training to enable sustainable National Systems and contribute to the success of the Regional System.

Tasks for G&M along with a dedicated CB and training group.

• Accomplish the integration of related Decade Programs into the TAC-GOOS implementation framework.



Take-aways for the rest of the Workshop and for developing an IOCARIBE XVII Resolution leading to a successful regional implementation of GOOS

There is a wealth of successful and important ocean observing and forecasting contributions operated by regional countries and agencies; there are multiple available Decade opportunities; and many proposed and possible projects waiting implementation.



While valuable, these activities will not organize themselves into a SYSTEM that *ensures* sustainability; enables and supports broad regional engagement and participation; promotes data and information sharing; and advocates for regional collaboration with the global ocean community.

WE must add energy by investing in dedicated activity to reach and sustain the desired system.

The Decade Action "An Ocean Observing and Forecasting System for the Tropical Americas and Caribbean Region" was created with this in mind and can provide a roadmap for the way forward.