Initial concepts for IAS-GOOS


Recommendation SC-IOCARIBE-XIV.4 SARGASSUM BLOOMS

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

Recognizing the significant negative impact elevated levels of sargassum seaweed have had on the economies of the wider Caribbean region in areas such as tourism and fisheries,

Recognizing also the challenges in understanding the cause of these events and the challenges experienced in the remediation of impacts to coastlines affected by the influx of large volumes of sargassum,

Noting that the Member States have previously supported the development and implementation of several global, regional and supra-regional IOC/IOCARIBE activities and programmes, which together could contribute to the establishment of a regional forecasting and tracking system for sargassum seaweed,

Building on the initiatives of currently underway or in development in other IOC sub-regions,

Establishes a working group to develop a strategy and action plan to improve the understanding of the occurrence of these sargassum events and invites Member States to nominate experts to the working group.

The working group will create a plan to design a forecasting and tracking system and an implementation plan, including the development of a prototype / pilot of the system to test the concept.

IOC Global programmes including IODE, HAB and GOOS, OBIS and IOCARIBE programmes such as IOCARIBE-GOOS, CMA, ANCA, should contribute to and guide on best management practices for sargassum events, and on the development and operation of the tracking and forecasting system.
Goals of a regional Sargassum Information System would be:

- Aggregate information from existing regional Sargassum identification/tracking/forecast systems
- Collaborate with regional interests to develop products and user interfaces for accessing information
- Develop a system to collect, store, and utilize local information (from fishermen, sailors, maritime interests, beaches, coastal managers) about Sargassum location and abundance both offshore and in the coastal zone
- Provide a widely accessible database and archive of regional Sargassum presence and impacts for integration with other regional environmental datasets for research
- Provide a regional framework for aggregating and delivering similar ocean observing products, such as oil spills
IOCARIIBE-GOOS was established in 1999 at IOCARIBE VI, led by an ad hoc Group of Experts. The first task of the group was to produce a Strategic Plan (The Case for IOCARIBE-GOOS, GOOS Report No. 115, UNESCO, 2002). IOCARIIBE-GOOS was accepted as a GOOS Regional Alliance by I-GOOS in 2003.

“To serve the marine data and information needs of humanity for the efficient, safe, rational and responsible use and protection of the marine environment, and for climate prediction and coastal management, especially in matters requiring information beyond that which individual national observation systems can efficiently provide, and which enable smaller and less-developed nations to participate and gain benefit...”
The goal of the GEO Blue Planet Initiative is to ensure the sustained development and use of ocean and coastal observations for the benefit of society. We do this by promoting collection of continuous ocean observations, processing of data into information and linking this information with societal needs. The societal needs feed back into ocean and coastal observation requirements and enhancement or modification of the ocean and coastal observation strategy. This requires close working relationships between scientists who collect ocean and coastal observations, those that take these observations and extract information as well as forecast future conditions, and those that use the information and forecasts in the management of our living planet.
Pilot Project Concept

This pilot project will aim to demonstrate the utility of ocean observations and products to Countries’ interests by focusing on a complete end-to-end delivery of usable products for the monitoring and forecasting of Sargassum concentration and of oil spills. The Pilot Project will be based on existing technologies and activities, working to augment and improve the framework for information management and delivery and mechanisms for product development and usage. The resulting system will:

- Be based on clearly defined and specified frameworks (including the GOOS Framework for Ocean Observations)
- Result in useful products embedded as operational components of regional and national agencies;
- Build a sustainable structure of observations, data management, and product delivery that can be further utilized in other locations and for additional regional products;
- Utilize enhanced and customized realizations of existing mechanisms when possible for efficiency, engagement, and sustainability.
System Parameters and Design

- Observations, based on existing activities when possible
  - Satellite data, products, and analyses
  - Field data (Offshore, Crowd Sources, Beach Observations)
  - Gap Analysis of existing activities, recommended observing / product improvements
- Data and Information Management – framework to aggregate / deliver information that is flexible for expansion
- Modeling and Forecasting – Existing and Gaps
- Product Development
- Product Visualization and Dissemination
- Local Supporting Infrastructure (Local POCs, Product Use Training)
- Long-term Program Management and Operational Sustainability
User Interaction and Outreach

- Identification of potential product users
- Interviews to determine interest, need and potential use cases
- Product development and design through iterative user testing and feedback
- Outreach to potential users of the products

Economic Impact Analyses

- Analysis of potential value of the products
- Development of “success story” utilization of the products for policy making and/or responsive actions
Support for R&D

Recognizing there is need for work to be done on causes and sources of Sargassum, and on detection and forecasting especially at locally significant scales.

Long-term funding sources

Suggestions

Participants and Roles

We have representatives here from government/local management, academic, operational, etc. sectors. How do all work successfully together to create the system we need?

Following first day of informational presentations, we will break into working groups to address these questions.

We will provide a framework for discussion guidance but do not want to inhibit creativity.