The Global Ocean Observing System

GOOS Regional Alliances: Discussion on the Role of GRAs & Opportunities for GOOS NFPs to Engage with GRAs

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The Global Ocean Observing System

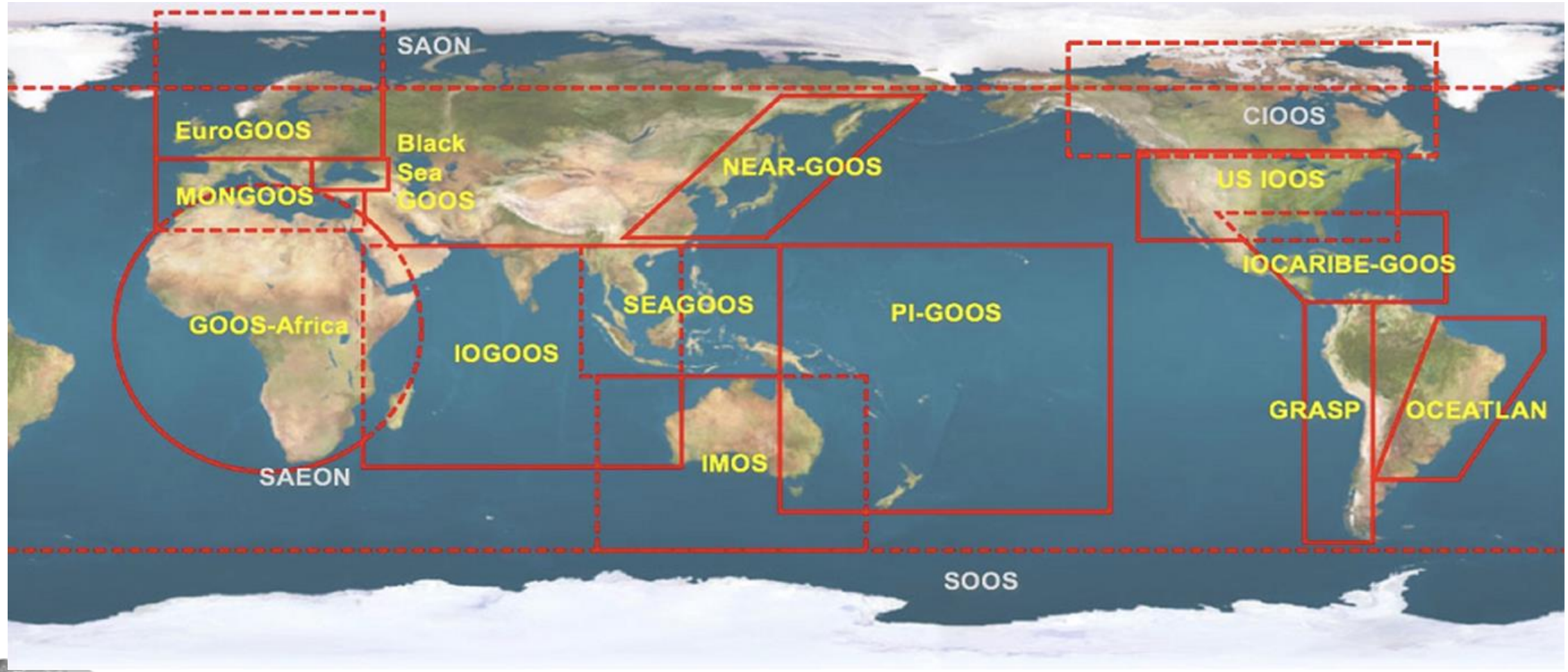
GOOS unifies national observing systems to meet national needs, strengthen connections through learning and sharing, and make a greater set of ocean observations available to a global community.

Our Regional Alliances (GRAs) integrate these national needs into regional systems and deliver the benefits of GOOS's strategy, structure, and programmes at a regional, national and finally global level.

- GRAs are coalitions of nations and/or institutions that share GOOS principles and goals, but are mostly concerned with local priorities and organized around ocean basins or coastal environments.
- Different regions of the globe are represented by 15 GRAs, emphasizing regional priorities, differing by need, resources and culture. These interact with each other to learn and share best practice in implementing observing systems.
- Some GRAs emphasize data sharing or regional capacity development. Others are building out extensive observation systems with dedicated marine service goals such as oil spill response capabilities or typhoon forecasting.

GRAs

Black Sea GOOS EuroGOOS GOOS Africa GRASP IOCARIBE-GOOS IMOS IOGOOS MONGOOS NEAR-GOOS OCEATLAN PI-GOOS SEAGOOS U.S.IOOS SOOS SAON



GRA Governance

Structure	Inter-governmental	Government, Non-Governmental Organizations, institutions	IOC Sub-Commissions	National Marine Agencies
Political consortium	GRASP	EUROGOOS	GOOS AFRICA SEAGOOS	
Basins and regions	BLACK SEA GOOS	IOGOOS MONGOOS		
Small island developing states (SIDS)		PI-GOOS	IOCARIBE-GOOS	
Thematic	NEAR-GOOS OCEATLAN			
National systems				U.S. IOOS IMOS

Summary of the various structures of the GRAs along with the types of entities each GRA represents.

Governance
Charted as an activity of IOCARIBE, IOC Sub Commission of the Wider Caribbean. Governed by a Steering Committee, with Delegates from member states. Coordinated by a Project Coordinator.

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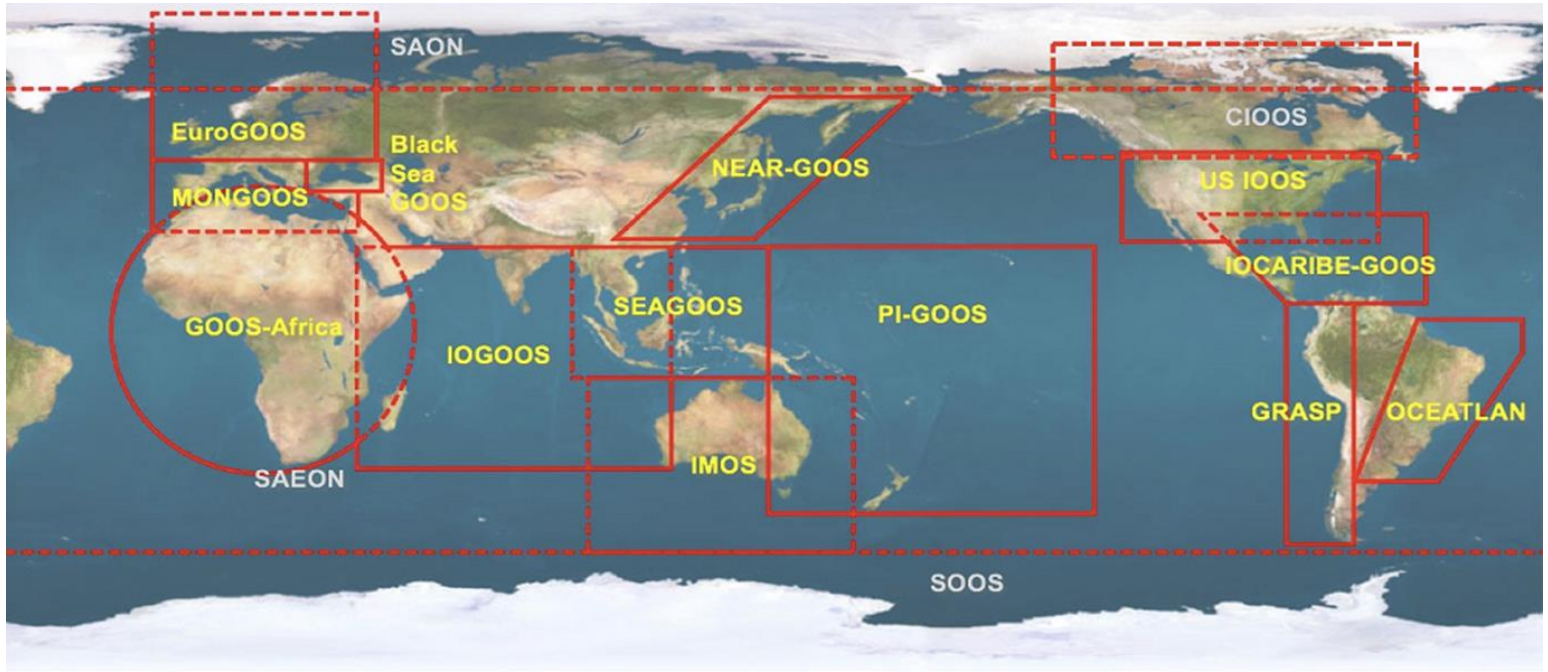
Thank you

goosocean.org



unesco Intergovernmental Oceanographic Commission

WORLD METEOROLOGICAL ORGANIZATION

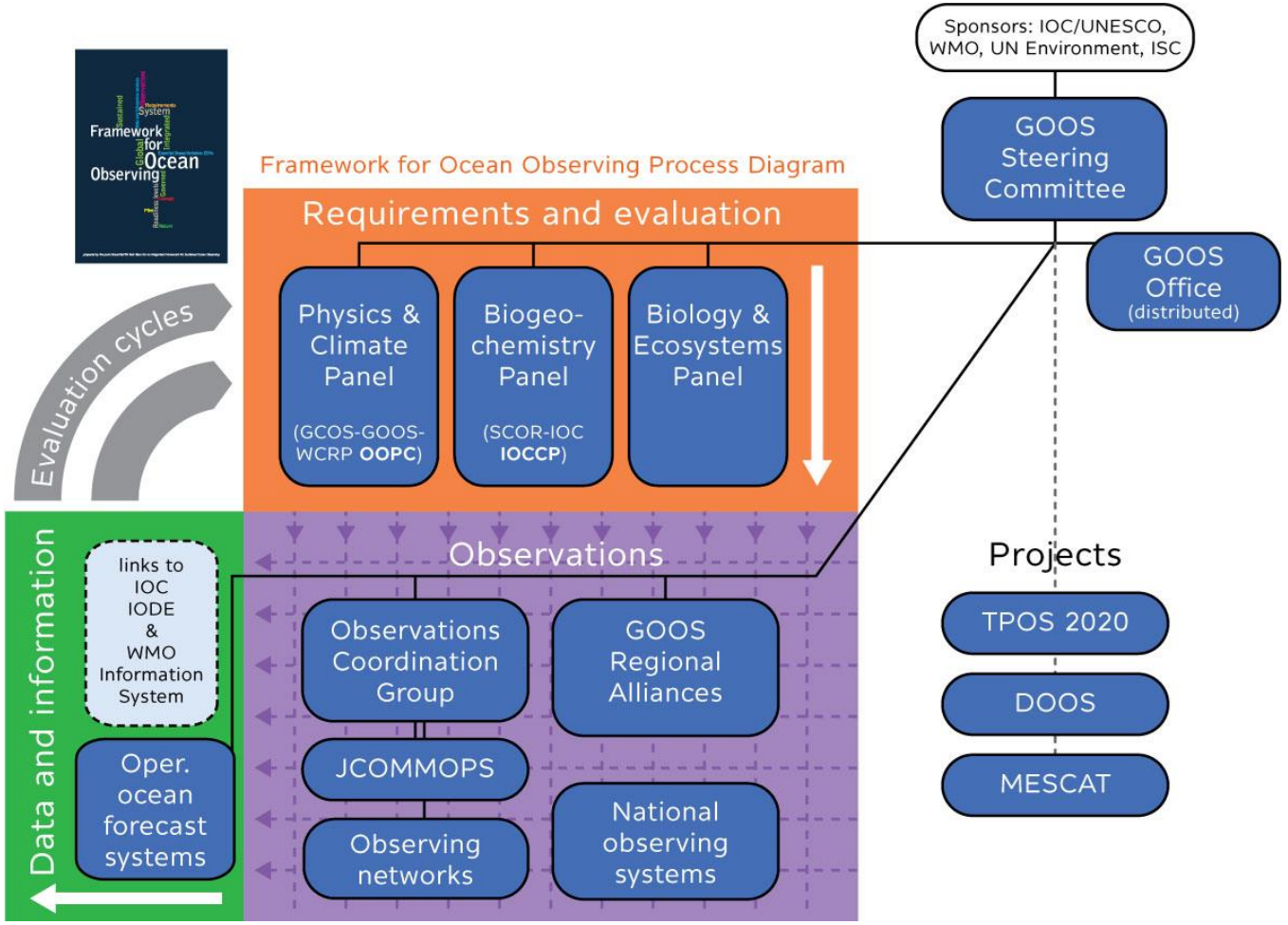
UN environment programme

International Science Council

Back Up

What are GOOS Structures?

GRAs in the Context of FOO



Strength of GRAs

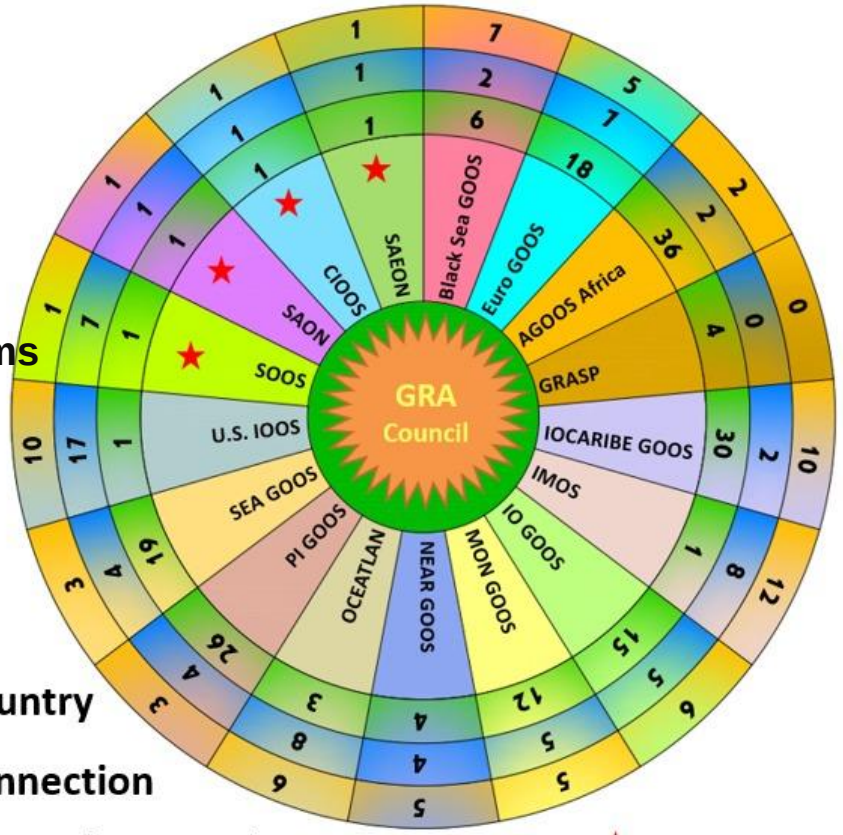
6 IOC sub-commissions or related intergovernmental structures.

4 memorandum of understanding.

1 international nonprofit association,

2 funded national government programs

The Global Ocean Observing System GOOS Regional Alliance Council



130 + Country

70 + Connection

70 + Project/Product/Societal

★ Emerging council

1. IOCARIBE GOOS
2. NEARGOOS
3. SEA-GOOS
4. GRASP
5. PI GOOS
6. GOOSAfrica
7. MANGOOS
8. Black Sea GOOS
9. IOGOOS
10. OCEATLAN
11. EuroGOOS
12. IMOS
13. USIOOS

GOOS Ocean Science Decade Programme Proposal, 2021-2030

1. **Ocean Observing Co-Design** - creating the process, infrastructure and tools for the co-design of a fit-for-purpose GOOS.

1. **CoastPredict** - will transform the science of observing and predicting the Global Coastal Ocean, from river catchments, including urban scales, to the oceanic slope waters, and;

1. **Observing Together** - supporting communities to bring needed observations and forecasts to users and into global data streams, making every observation count.

General Recommendations

- Further explore how to **support the implementation** of the GOOS UN Decade programmes at the regional level through case studies
- To better define **practical ambitions** for GOOS & GRAs
- **To better articulate GOOS priorities** (EOVs, and others) and evidence for those priorities in support of regional and national scale advocacy to generate funding
- **Enhance connections and multilateral cooperation** of GRAs with global stakeholders (WMO, IMO, OECD, IHO, African Union etc. through broader meetings)
- GOOS office can be a **clearinghouse or matchmaker** to connect people with specific needs
- Provide a **collaboration framework** for common research, not necessarily in operational oceanography
- **Coordinate and support funding** bids/proposals and the identification of common regional interest

GOOS?

- GOOS – the Global Ocean Observing System is a programme executed by the Intergovernmental Oceanographic Commission (IOC) of the UNESCO
- GOOS coordinates observations around the global ocean
- Its success relies on the coordinated contributions of several people and organizations worldwide.

VISION – A Thriving Regional Coordination Ecosystem

GOOS 2030 Strategic Objectives

Strategic Objectives

(1) Engagement & Impact

(2) Integration & Delivery

(3) Building for the Future

Outcomes

- **Enhanced Coordination**
- **New Partnerships**
- **Innovation**
- **Capacity Development**

SO4 Empower end user applications

Data Integration Products Across GRAs

- Initial action is to develop case studies
- IMOS has initiated such a project, and this would constitute an initial case study, users to learn and expand across GRAs

SO1 Partnerships for delivery

GRA Forecasts, Services and Assessment

GRAs - Forecasts, Services and Assessment (FS&A) and showcase success stories. evolve a methodology to develop interconnection among GRAs and initiate dialogue during the next GRA Forum

SO9 Capacity Development

Implementing ocean monitoring and forecasting system with the engagement of GRAs

Engage with Member States at regional level, in particular SIDS and African countries on implementing ocean observing and forecasting systems

Ocean Observation Network Training Workshops

For interested African Member States aspiring to undertake National Ocean Observation Network.

Status Updates

GRA Council Leadership

Carl Gouldman (U.S. IOOS), Chair

Alvaro Scardilli (OCEATLAN), Vice Chair

GRA Forum Follow-on

Increasing GRA Collaboration

GRA Foci:

- Data Exchange Standards
- Emerging Observing Networks
- Best Practices and Capacity Building

GRAs and GOOS:

GOOS 2030 Strategy

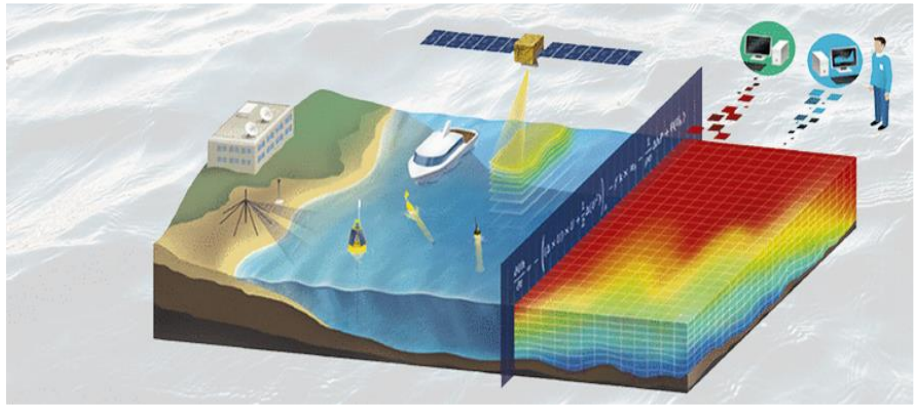
GOOS Implementation

UN Decade

GOOS Structures

ETOOFS

Observations- Services



- 3 panels on requirements and evaluation
- 2 main structures for coordinating observations (IOC-WMO JCB, OCG and the GRAs)
- 1 structure as Expert Team on Operational Ocean Forecasting Systems (ETOOFS)
- Projects that are focused on developing GOOS in a thematic or regional area, leaving a legacy of improved integrated observations.
- GOOS Steering Committee

New GOOS Regional Policy For A Thriving Regional Coordination Ecosystem

Draft Decisions -GOOS SC –X– Part 2 on GOOS Regional Structures Workshop on 29 November 2021

Decision: To constitute a sub-task or Working Group under the GOOS Governance Task Team to:

a) **Review the GOOS Regional Policy 2013, highlighting gaps, weaknesses and where it is inconsistent.**

b) **Evolve a vision for the GRAs role in the GOOS .**

c) **Identify the commitment required from GOOS to support a thriving GRA ecosystem.**

d) **Define possible attributes for different level of ambition / capacity of GRAs.**

e) **Explore mechanisms to engage WMO and UNEP in the process of GRAs and link up to those regional structures.**

f) **Understand links to GOOS National Focal Points (New Task Assigned)**

g) **Review role in connection to the users of ocean information.**

h) **Develop proposal for an updated GOOS Regional Policy 2022, in-line with the Global Ocean Observing System 2030 Strategy and current societal needs for ocean information.**

The Benefits of Ocean Observations Catalog (Under Devlopment)

Be part of the

BOOC

- Comprehensive
- Consistent
- Easy to use

The ocean is the highway of our world economy and provides vital goods and services. From carrying cargo to creating jobs to shaping the weather, our understanding of how it works, how it moves, how it changes, and how we can best work in, on, and around it depends on observations.

Sustained operational ocean observations, measurements and forecasts provide an essential input to ocean scientific research. They support a wide range of societal and economic benefits related to safety, operational efficiency, regulation, and management of activities around, on, in, and under the ocean.

Although it is generally accepted that sustained operational ocean observations, measurements, and forecasts deliver substantial socioeconomic benefits, there has been no comprehensive resource detailing such benefits in a consistent framework and available to the ocean community from a single source. Until now.

IOOS | Integrated Ocean Observing System

As a web-based catalogue, the BOOC will provide **a valuable resource for the ocean observation, measurement and forecasting community** illustrating the ways in which different types of ocean information delivers benefits in a region or for a type of use.

The repository will be **built using readily available GIS, web and database tools**. It will be populated with case studies derived from existing published papers and reports as well as unpublished benefit cases sourced across the ocean observation community.

BOOC will be designed so that the community can easily submit additional benefit cases, which will be moderated for inclusion. Through this updating and review process **the catalogue will increase in utility** as it is expands over time.

Benefits of Ocean Observations Catalog

Community developed Community driven Community benefit

Community Engagement

Building on work begun at OceanObs 19, the BOOC project aims to engage with the entire ocean observation, measurement, and modeling community.

Collecting Case Studies

The BOOC will be continuously updated with new use case studies that demonstrate the benefits of ocean observing worldwide.

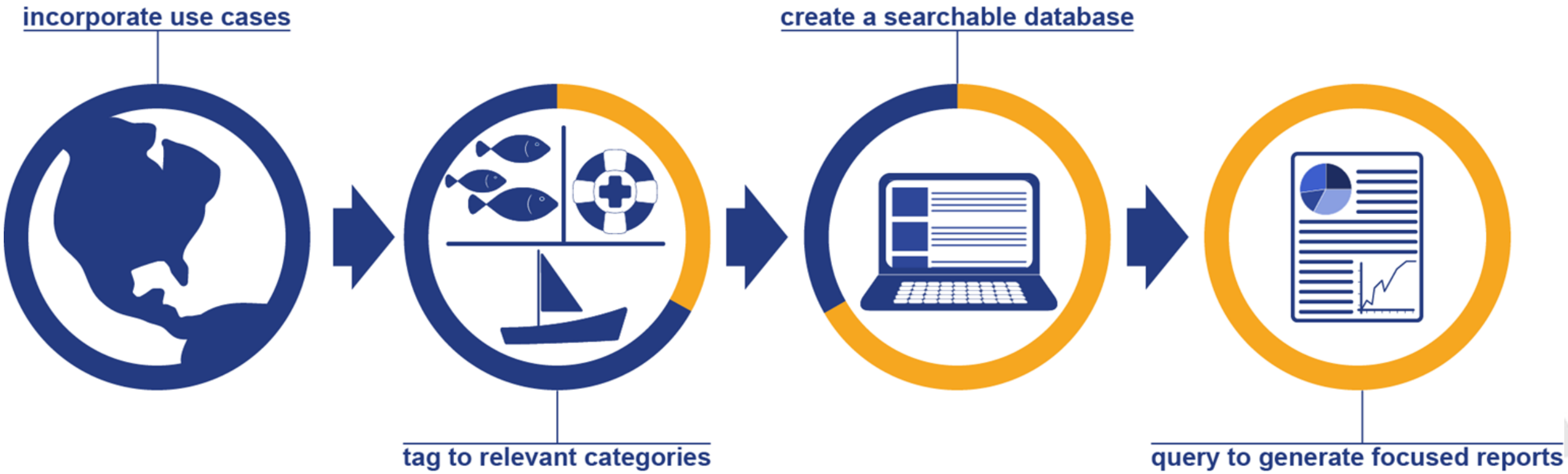
Developing Standards

The BOOC will provide the community with access to a comprehensive, consistent, and constantly improving view of the benefits of ocean observing that can be easily searched by location, benefit area, and type of observation.

www.booc.info

THE OCEAN

The Benefits of Ocean Observations Catalog



Becoming a GRA (from the 2013 GOOS Regional Policy)

3. QUALIFICATIONS

3.1. GRAs are formed by agreement between participating countries, and/or national organizations, and/or international bodies (Regional monitoring networks, Regional Fishery Bodies, Regional Seas Conventions, etc.). Membership should be chosen to best serve the data and information needs of organizations that use, depend on, or are responsible for the management of the marine environment and its resources in the region.

3.2. To be recognized as a part of the GOOS, a GRA must show that they conform to the Principles laid out in paragraph 2 above.

3.3. To the extent that the geographic range and activities of a GRA overlap with those of other GRAs, the GRAs involved shall establish formal and informal agreements to ensure effective use of resources to the benefit of all.

Becoming a GRA (from the 2013 GOOS Regional Policy)

4. APPROVAL

4.1. GRAs must be recognized by the Assembly or the Executive Council of the IOC informed by advice from the GRA Regional Council, through the Chair, to the GOOS Steering Committee (GSC).

4.2. Proposals to be recognized as a GRA must include the following:

- Evidence that a management structure is in place that can deliver an integrated and sustained

system by linking, enhancing and supplementing existing infrastructure and expertise in the region.

- Provision of an acceptable plan that has been endorsed by stakeholders (data providers and users)from the region and describes the procedures by which the observing system will be established, developed, and sustained. This must include procedures for quality assurance, conformance to internationally accepted standards and protocols for measurements, data management, and communications.