

The Global Ocean Observing System



GOOS Introduction

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IOC-UNESCO**

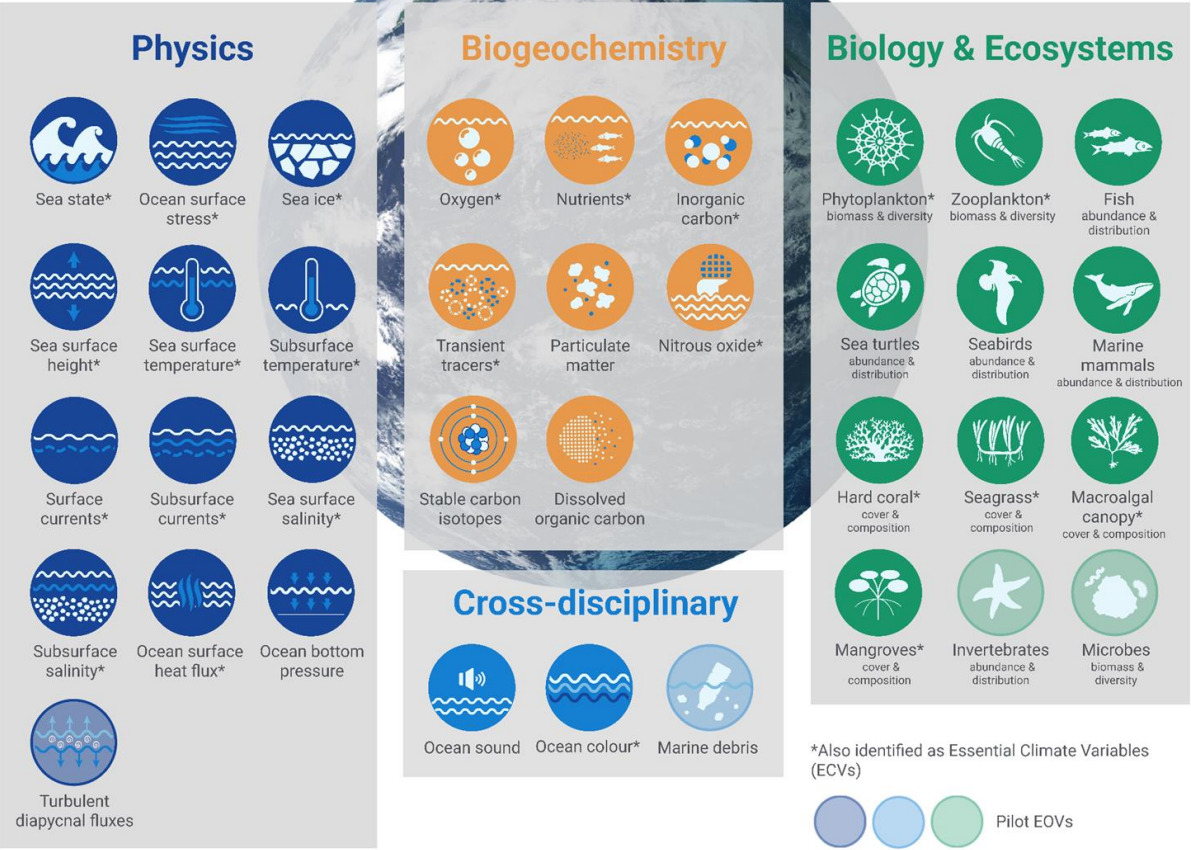
GOOS: A critical infrastructure for ocean observing



Climate | Forecasts and Warnings | Ocean Health

36 Essential Ocean Variables (EOVs)

- GOOS Biodiversity Plan – **New!**
- GOOS Carbon Plan – **New!**



GOOS Today

84 contributing countries

8,000+ observing platforms

13 global observing networks

3 emerging networks

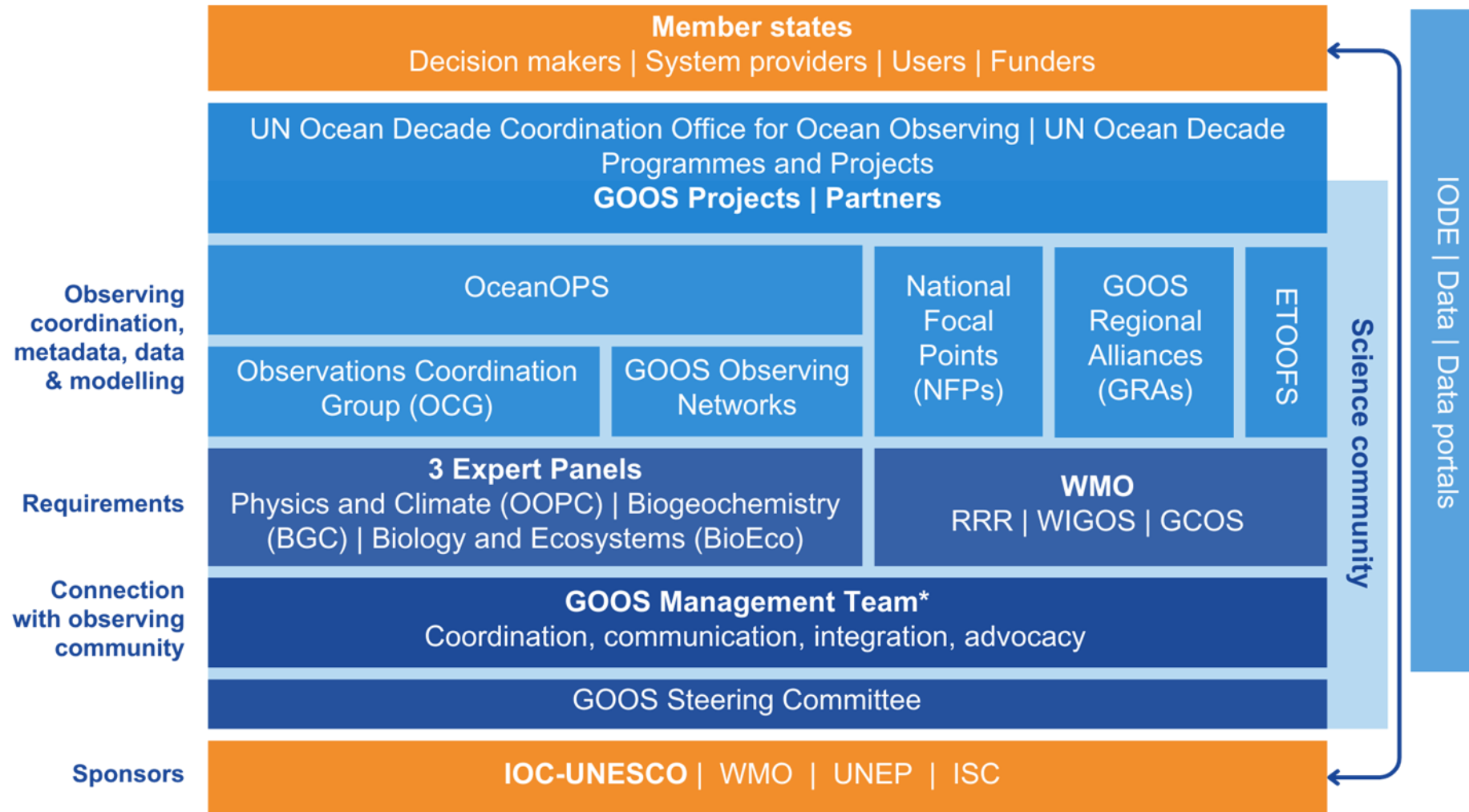
>120,000 observations per day
(operational centres)

+
638 long-term active biological monitoring
programmes integrated into BioEco portal

Three emerging observing networks

- Fishing Vessel Observing Network (FVON)
- Surface Ocean CO₂ Reference Observing Network (SOCONET)
- SMART (Science Monitoring And Reliable Telecommunications) Cable

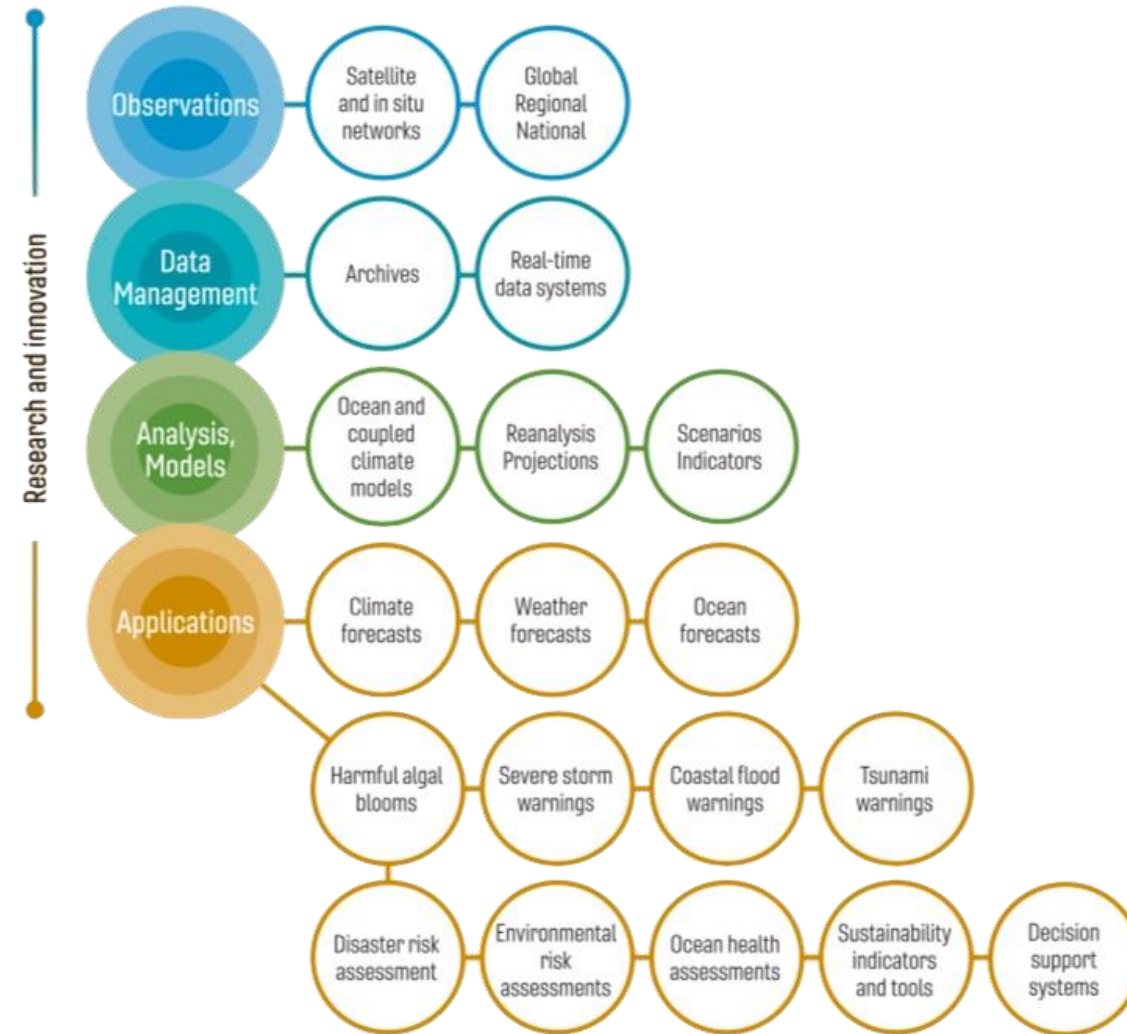
GOOS Structure



The Global Ocean Observing System

2030 Strategy

Sustained observations for a wide range of applications



Ocean Observing Value Chain

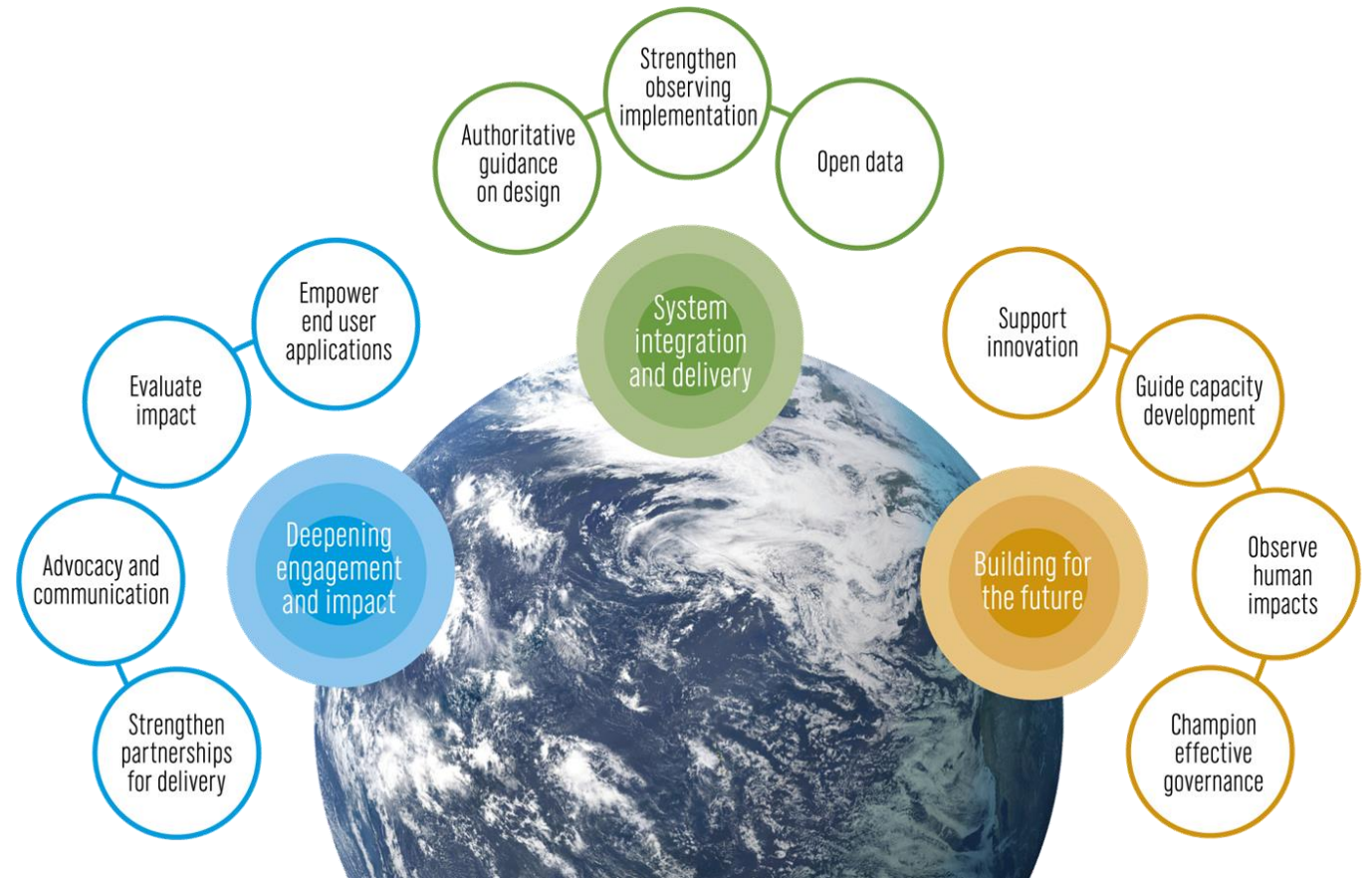
The GOOS 2030 Strategy: Goals

Vision

A truly global ocean observing system that delivers the essential information needed for our sustainable development, safety, wellbeing and prosperity

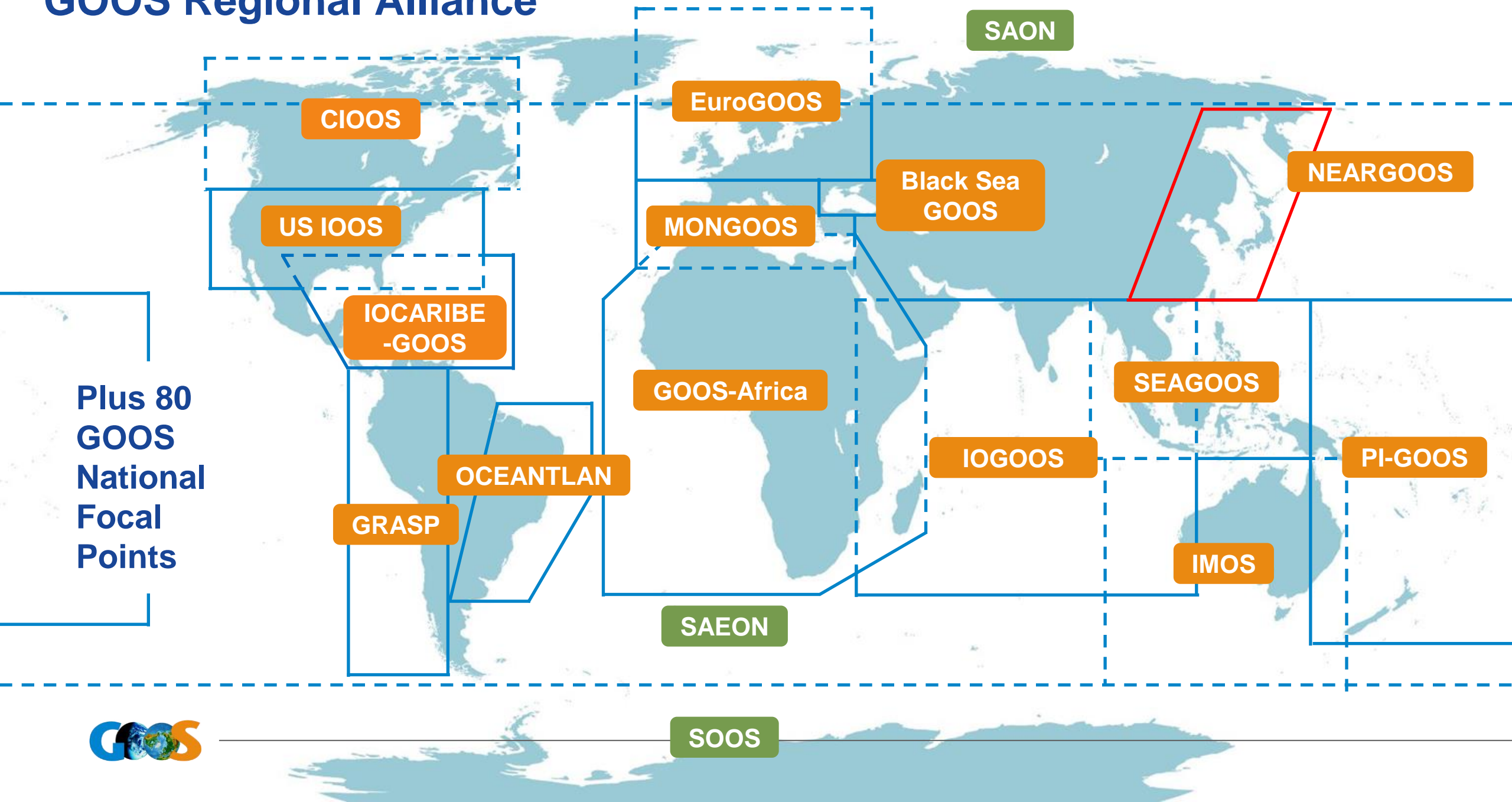
Mission

To lead the ocean observing community and create the partnerships to grow an integrated, responsive and sustained observing system




**Strategic
Objectives**

GOOS Regional Alliance



GOOS National Focal Point (NFP)

- 80 GOOS National Focal Points globally
- GOOS NFP Survey (2024.12 – 2025.2) – result will be published soon.



GOOS National Focal Points in NEAR GOOS Member States

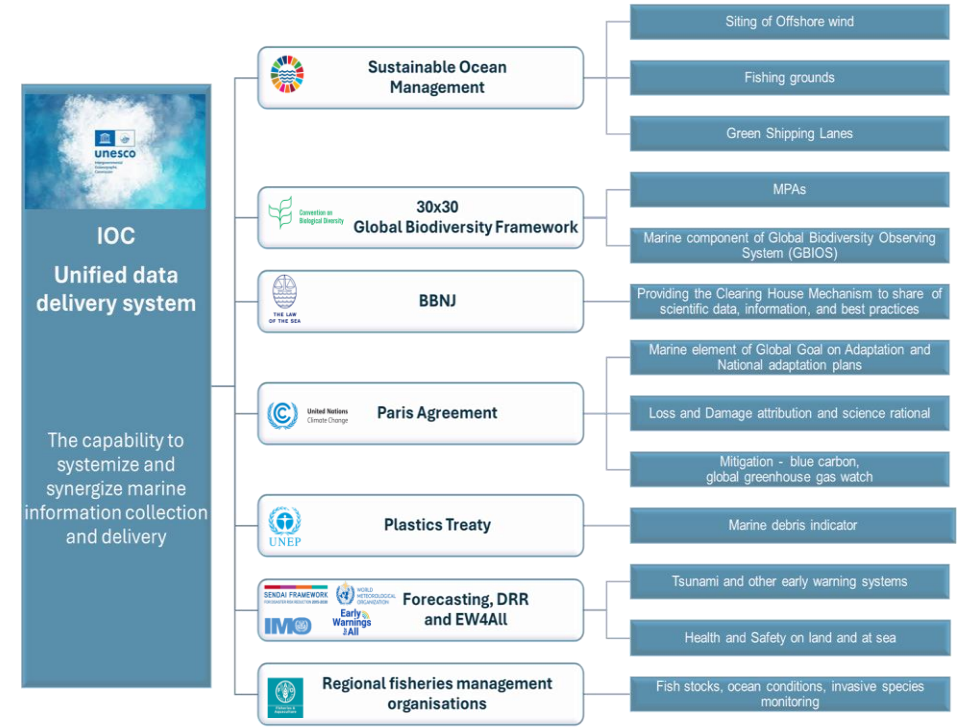
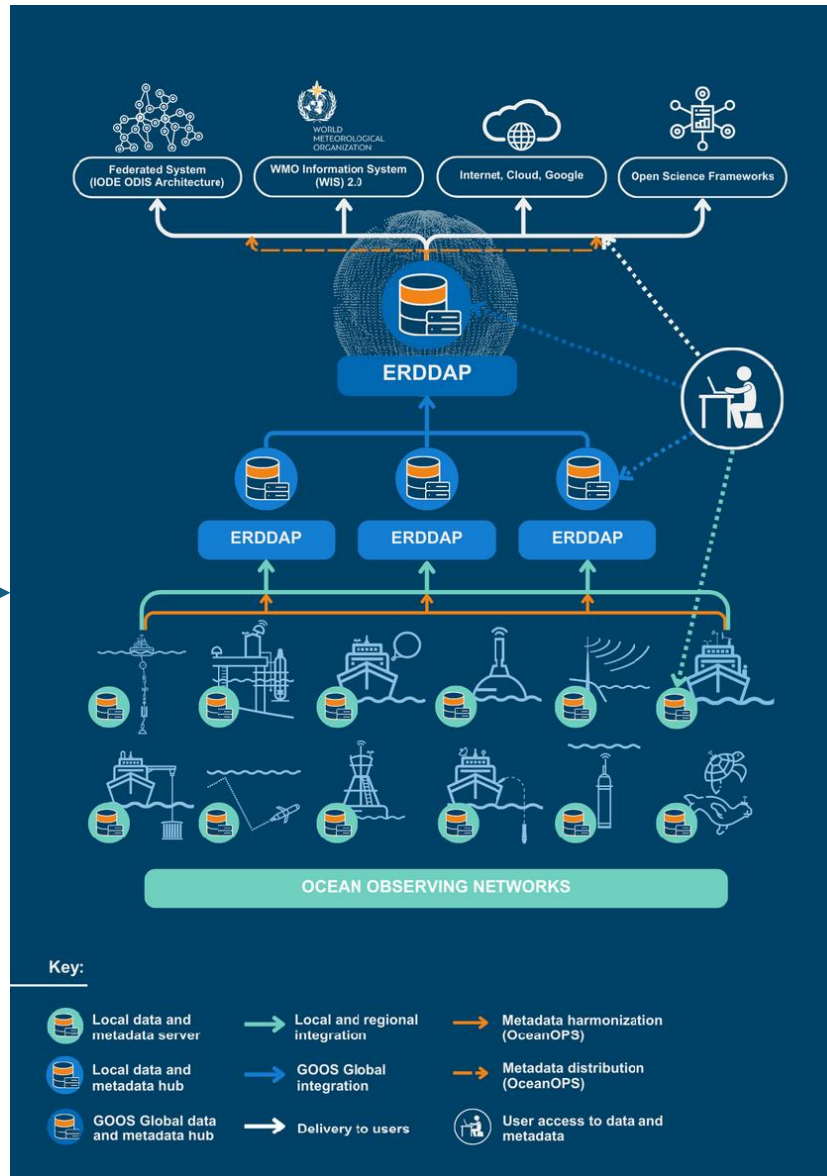
Country	GOOS NFPs
China	WANG Fang
Japan	Katsumasa Yagi
Rep. of Korea	Sungsan Park
Russia	Leonid Ostroumove (Остроумов Леонид Валерьевич)

<https://goosocean.org/who-we-are/goos-national-focal-points/>

Data



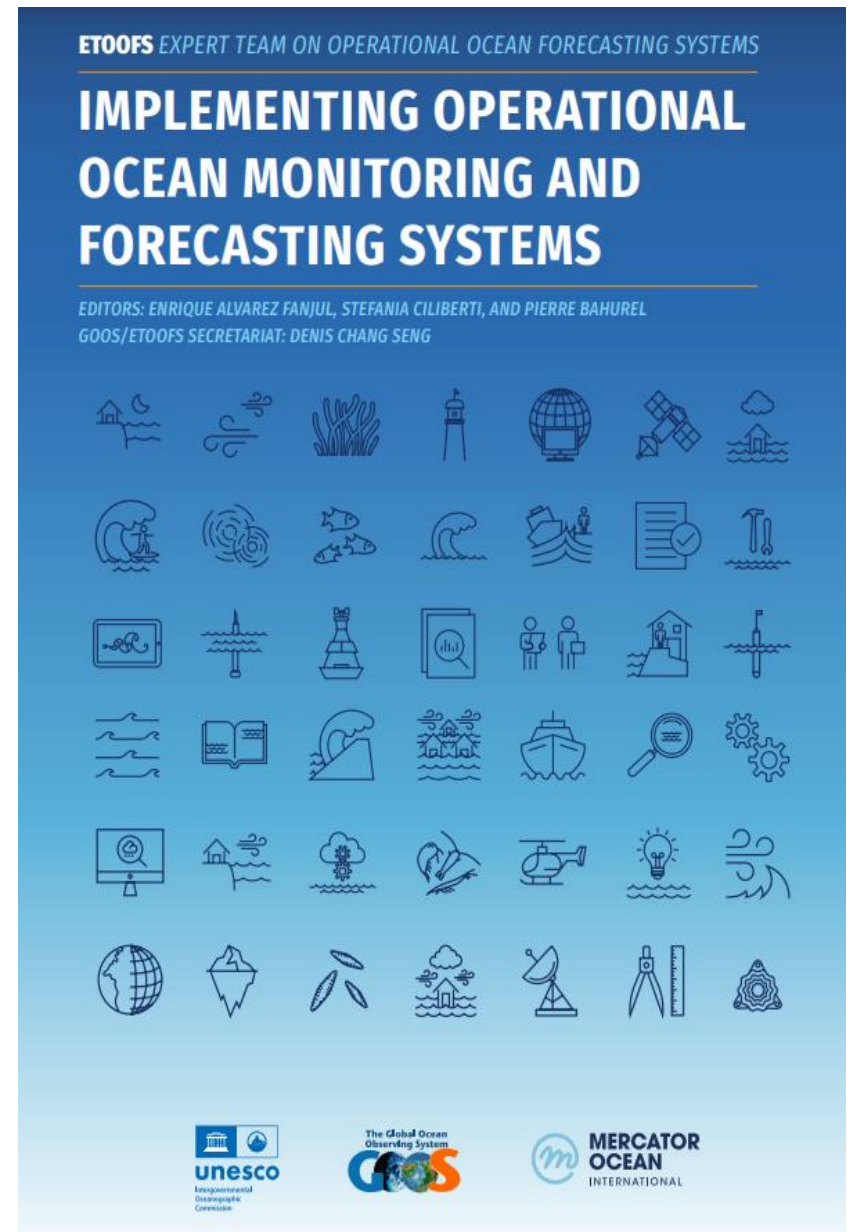
<https://goosocean.org/document/33970>



- With close collaboration with IODE and OceanOPS, relevant IOC sections, DCO-data, DCO- observation and DCC-prediction, WMO, OBIS, ODIS, etc.
- Set in place a process for clear provenance of GOOS EOVS data.

Expert Team on Operational Ocean Forecast Systems

ETOOFS provides states and organizations with high-level standards, support and guidance for developing efficient, reliable and interoperable ocean monitoring and forecasting systems – essential prerequisites for tackling climatic, environmental and societal challenges.



<https://goosocean.org/document/30656>

GOOS and UN Ocean Decade



“ Ocean Observing Co-Design will develop a more **user-focused co-design process to evolve a truly **integrated, responsive ocean observing system**.**

GOOS | Ocean Observing Co-Design
by The Global Ocean Observing System

“ CoastPredict will revolutionise Global Coastal Ocean observing and forecasting, offering **open and free access to coastal information and predictions.**

GOOS | CoastPredict
with The Global Ocean Observing System

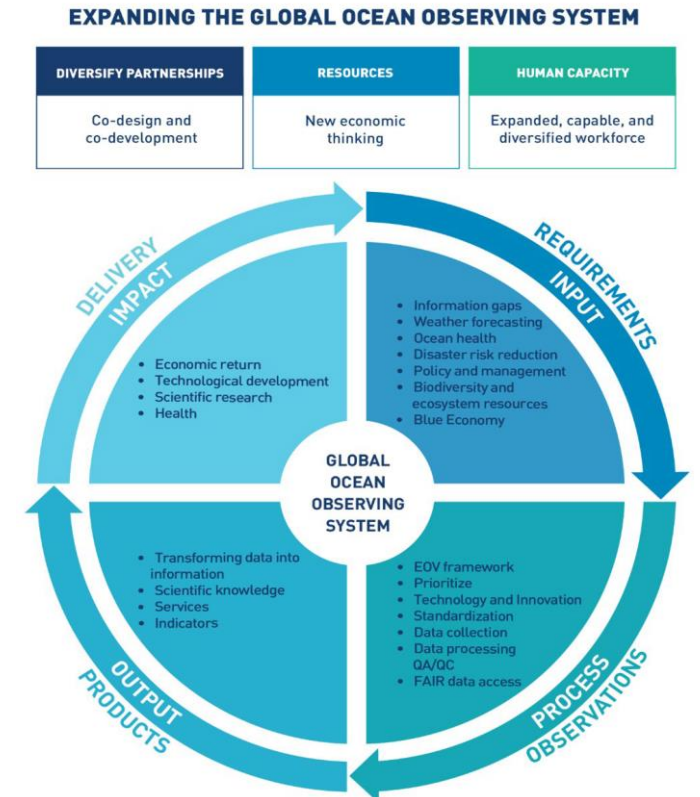
“ Observing Together will **leverage the Global Ocean Observing System's existing networks and expertise to bring needed observations and forecasts to community users and into global data streams, making every observation count.**

GOOS | Observing Together
by The Global Ocean Observing System

Ocean Decade
Vision 2030
White Papers

Challenge 7:
Sustainably Expand the Global Ocean Observing System

The United Nations
Decade of Ocean Science
for Sustainable Development
(2021-2030)



GOOS UN Ocean Decade Programmes



Set up the way forward for GOOS!

Recommendations: Expanding global ocean observation capabilities | Translation of observations into information | Fostering diversified partnerships | Building a capable and diversified workforce | Emphasising a new economic thinking for resourcing ocean observing

Benefits of Ocean Observing Catalog (BOOC)



Benefits of Ocean
Observing Catalog



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development

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Introducing the Benefits of Ocean Observing Catalog

On behalf of the global operational ocean observing community, the [The U.S. Integrated Ocean Observing System \(IOOS\)](#) has supported the development of a Benefits of Ocean Observations Catalog (BOOC). BOOC has been designed as a tool to better understand the economic, societal and environmental benefits derived from ocean observations, measurements and forecasts.

Currently undergoing beta testing, a fully operational BOOC will serve as a global commons for demonstrating and understanding the benefits of ocean observations, information and knowledge in support of policy, safety, operations, economic activity, environmental protection and the delivery of climate resilience. The BOOC project is hosted by the Ocean Decade Program [Observing Together: Meeting Stakeholder Needs and Making Every Observation Count](#).



2024 GRA Forum (bi-annual)

8-9 April 2024, Barcelona, Spain (hybrid)

Increase communication across GRAs and GOOS Component

- Toolkit for communicating the importance of GOOS but also for improving capacity sharing across GRAs.
- Updating GRA GOOS Webpage and GRA Council member info in OceanExpert.

Strengthening GRAs:

- GRA's function to propose emerging technologies to be endorsed as a GOOS network by the GOOS OCG.
- Revise and update the GRA Regional Policy.

Collaboration/coordination among GRAs:

- Consider the possibility in connection with a regional meeting / if people are already planning to meet somewhere to try and gather GRAs together.
- Identify specific collaboration opportunities between GRAs addressing shared challenges, particularly for Small Island Developing States (SIDS).
- More frequent calls for the purpose of information sharing (e.g. quarterly).



2024 GRA online meeting

13 November 2024

Recommendations/Decisions on GRAs:

1. Changes for GRA information on GOOS website could be sent to Jing (Feedback received from and updates done for 6 GRAs: [Euro GOOS](#), [IOCARIBE GOOS](#), [IMOS](#), [OCEATLAN](#), [CIOOS](#) and [IOGOOS](#))
 - * Any updates from NEARGOOS, please contact ji.li@unesco.org
2. Jing will share the [GRA Action Tracker](#) with the GRA leads and representatives.
3. Jing will follow up with individual GRAs for their updates and share the [GRA Event Tracker](#).
 - * A telecon was organized with Chair (Peter YOU) and former Chair (Guimei LIU) on 11 November 2024.
 - ✓ Noted the funds needed for a data gateway for NEARGOOS. NEARGOOS is seeking funds from IOC-WESTPAC to support the data gateway website.
 - ✓ Suggested to consider how NEAR-GOOS can contribute to GOOS, and what supports are needed from GOOS Office.
 - ✓ Suggested to connect to GOOS UN Ocean Decade.

2025 GOOS Steering Committee Meeting (SC-14)

Feb 19 – 21, 2025 Paris, France

Recommendations/Decisions on GRAs:

- Encouraged the GRA council to propose some **application areas** (and leverage these to their alliance members and wider GOOS components) to support data access and delivery to GOOS at regional and national level and report increases in data flow and national-level engagement to GOOS.
- Recommended a virtual meeting (in 2025) between members of the **GOOS SC, GRA council, the OCG and relevant GOOS Decade Programmes** to discuss a mechanism for strengthened engagement and data sharing.
- Recommended that GRA representatives upload their meetings onto **Ocean Expert**, and request **reports** after GRA meetings.
- Recommended that GOOS hold a **GOOS stakeholder meeting** (in 2027) including with GOOS SC, expert panels, GRA, NFP and other relevant stakeholders.
- Encourage participation of GOOS SC Regional Experts and GRA Council in the GRA meetings.



Way forward

Follow-up actions:

- Develop **GRA workplan** for evolving GRAs (including GRA reporting)
- Enhance GRAs and NFPs connection to GOOS components
- Co-develop **application areas** to support data access and delivery to GOOS
- Revise the **GOOS Regional Policy**
- Co-develop **use cases** and publish in Benefit of Ocean Observing Catalog (BOOC)
- Encourage GRAs to publish GRA activities in **OceanExpert**

Upcoming meetings:

- Next GRA online meeting in mid April 2025
- A virtual meeting between GRAs, GOOS Steering Committee, OCG, GOOS Ocean Decade Programmes in 2025
- **GOOS stakeholder meeting** (in 2027) including with GOOS SC, expert panels, GRA, NFP and other relevant stakeholders.



The Global Ocean Observing System

Thank you

goosocean.org



unesco
Intergovernmental
Oceanographic
Commission



WORLD
METEOROLOGICAL
ORGANIZATION



UN
environment
programme

International
Science Council

