GOOS Regional Alliance (GRA) Online Meeting

13:00 – 14:30, CET, 13 November 2024

Executive Summary

The GOOS Regional Alliance online meeting took place on 13 November 2024, with 26 participants representing 13 out of 14 GRAs, three partner programmes and the GOOS Office. Chaired by Carl Gouldman and Alvaro Scardilli, Chair and Vice Chair of the GOOS Regional Alliance (GRA) Council, the meeting featured a presentation by Joanna Post, Director of GOOS on the priorities and governance evolving of GOOS. A review of progress on actions from previous GRA forums followed. Five GRAs shared the updates on their achievements, challenges, opportunities and future plans, including: IOGOOS (Nagaraja Kumar), GOOS Africa (AFFIAN Kouadio), IOCARIBE GOOS (John Cortinas), PI GOOS (Jerome Aucan) and GRASP (Edwin Pinto). The next GRA online meeting is planned for early 2025. The agenda and list of participants are provided in Annex 1 and Annex 2, with all documents available on the website (https://oceanexpert.org/event/4613).

Report

The GOOS Regional Alliance online meeting was organized on 13 November 2024, with 26 participants from 13 out of 14 GRAs, three partner programmes and GOOS Office. Carl Gouldman and Alvaro Scardilli, Chair and Vice Chair of the GOOS Regional Alliance (GRA) Council, chaired the meeting. The meeting agenda was introduced to participants, followed by self-introductions.

1. GOOS priorities and governance evolving

Joanna Post, Director of GOOS, outlines the GOOS priorities and governance evolving, emphasizing the relevance to GRAs. As a critical infrastructure for ocean observing, GOOS connects the ocean observing providers and beneficiaries, focusing on climate, forecasts and warning, and ocean health. GOOS delivers measurements of 36 Essential Ocean Variables (EOVs), supporting international conventions and agendas, with contributions from 84 countries, 8000+ platforms and 13 global observing networks (plus three emerging ones) and the expansion of biological and biogeochemical measurements. Initiatives like OBIS adoption by CBD for supporting the Global Biodiversity Framework and the ongoing development of a Carbon Plan for supporting the UNFCCC, illustrate GOOS's expanding impact. Ms Post highlighted the GRAs' vital role in the overall implementation of GOOS, and called for clearer articulation of GRAs' contributions moving forward.

GOOS will reform under the GOOS 2030 Strategy, reviewing its role in the ocean observing value chain and advancing an IOC integrated ocean data architecture in collaboration with IODE, OceanOPS, and UN Ocean Decade. There are currently 14 GRAs and three research alliances (SAON, SAEON and SOOS), and four GRAs received financial support from GOOS (IOCARIBE, IOGOOS, PI GOOS and GOOS Africa) in the 2024-2025 biennium. The Expert Team on Operational Ocean Forecast System (ETOOFS) continues to build the ETOOFS Guide and evolve a tool to assess the Operational Readiness Level (ORL).

A governance proposal, using a 'double diamond' approach, will be presented at IOC Assembly 33 in June 2025, focusing on reviewing and refining GOOS's mission and structure as step 1 and developing and delivering a reformed GOOS as step 2.

In addition, Ms Post mentioned the opportunity to have the next GRA in-person meeting in 2026 organized together with NFPs.

In response to Michelle's inquiry about the timelines for developing the GOOS communication products and their translation for GRAs, Ms. Post stated that communication toolkits will be created in the next six months .

2. GRA progress review

Carl reviewed the progress of actions from GRA Forum XI (April 2024, Barcelona), categorized into three bins, communication (Action 1-3), strengthening GRA (Action

4&5) and collaboration/coordination among GRAs (Action 7-9). The GRA should further strengthen the connections with NFPs and with other GRAs. The Chair and Vice Chair of GRA Council as well as representative from PI GOOS were invited to the 2nd NFP online forum in October 2024, to discuss on the role of GRAs and opportunities for GOOS NFPs to engage with GRAs. Joint NFP-GRA sessions at the regional level are also being explored. Details of progress are available in GRA Action Tracker.

A key action from GRA X is progressing, the Benefit of Ocean Observing Catalog (BOOC), is advancing and soon open for testing. Ms Post suggested that BOOC could be labelled as a GOOS tool or best practices could be shared through GOOS. The GRA Terms of Reference and GOOS Regional Policy will be revisited in alignment with evolving GOOS Governance.

Inga noted the need to update GRA information on the GOOS website needs to be updated, based upon information submitted by GRAs. .

3. GRA updates

3.1 IOGOOS

Nagaraja Kumar, Secretary of IOGOOS, presented the governance structure, activities, and contributions of IOGOOS, an association of marine operational and research agencies. He detailed its annual meetings, membership, financial reports, pilot projects, training sessions, and involvement in UN Ocean Decade initiatives. IOGOOS, being an association of marine operational and research agencies, also linked closely with relevant programmes and projects in the Indian Ocean, including IIOE-2, IORP, SIBER, IRF and etc. Various data portals are publicly available, and the data are integrated with ERDDAP.

Key IOGOOS pilot projects include:

1) **Modelling for Ocean Forecasting and Process Study (MOFPS)**: Aligning with the UN Ocean Decade's OceanPredict DCC and programme, with most EOVs from ocean models available on the WMO Regional Specialized Meteorological Centre (RSMC) for Numerical Ocean Wave Prediction and Global Numerical Ocean Prediction (RSMC portal).

2) **Remote Sensing Products**: Focused on applications such as Harmful Algal Bloom monitoring (HAB portal), marine heatwaves, and ocean color studies.

IOGOOS also led the organization of multiple training sessions in close collaboration with OTGA and ITCOOcean hosted by INCOIS, and with sponsorship from partner programmes (e.g. POGO). These training programs emphasize ocean observation and remote sensing, building capacity across the Indian Ocean region.

3.2 GOOS Africa

Kouadio Affian, Chair of GOOS Africa, presented an overview of the progress and achievements, challenges and opportunities and the future plans for the GOOS Africa. In general, there are very few long-term in situ ocean time series in Africa, and the regular ocean observation from seasonal to interannual time scales are sparse. The ocean data and information largely originate from research programmes are geographically restricted, and are not shared widely across national networks.

Different priorities for ocean observation are applied for different geographical areas:

- **GCLME (Guinea Current Large Marine Ecosystem)**: Coastal erosion is a primary concern, the sea level observation through GLOSS stations is the priority in the region.
- **Open ocean in Tropical Atlantic**: PIRATA network of oceanographical buoys, fisheries and oceanographic survey via EAF-Nansen Programme and SOOP XBP are the key elements.
- **CCLME (Canary Current Large Marine Ecosystem):** Buoys and tide gauges were deployed.
- **Mediterranean LME**: Observations of eddies, with predictions for SST, SSS, surface currents, and wind speeds along the Moroccan Mediterranean coast.
- **Red Sea region and northwest/southwest Indian Ocean**: GLOSS operational stations for sea level measurement.

The key challenges facing GOOS Africa include: lack of technical and engineering support personnel, high costs associated with calibration and servicing of instruments; limited resources for maintaining and upgrading existing equipment. Opportunities for GOOS Africa include the partnership with institutions in China, Europe and US; co-design of OPERA (Ocean Prediction Enhancement in the Regions of Africa) project; collaborate with UN Ocean Decade; alignment with strategic frameworks in Africa (e.g. African Union 2063 Agenda and 2050 Africa Integrated Maritime Strategy). The new structure of GOOS-Africa will be based on working groups to enhance collaboration and focus, and a **3-year strategic plan** is being developed to set up priorities of actions to address regional ocean observing needs.

3.3 PI GOOS

Jerome Aucan from the Pacific Society (SPC) outlines the history, progress and achievement, challenges and opportunities Pacific Islands GOOS (PIGOOS). PI GOOS connection to the member states is through the Pacific Island Marine and Ocean Service Panel of the Pacific Meteorological Council. As appointed by IOC as the official host of PI GOOS in 2023, SPC recruited a new PI GOOS coordinator in 2024.

Challenges for PI GOOS include: lack of investment, coordination and capacity; high procurement cost; limited awareness of regional GOOS work and poor data curation. The absence of GOOS National Focal Points (NFPs) and limited awareness of regional activities further hinder progress.

To address these issues, PI GOOS plans to enhance links with regional ocean observing programmes and projects; leverage the existing regional governance mechanism in meteorological services and the WMO-IOC JCB to develop synergies in the region; establish tsunami focal points/NTWC through IOC/UNESCO PTWS in compensation of lack of GOOS NFPs. SPC is pursuing new funding opportunities through the Weather Ready Pacific Decadal Investment Programme, SPC's Ocean Flagship, SMART Cable, regional CoastPredic project and IMOS contribution.

3.4 IOCARIBE GOOS

John Cortinas, the new coordinator of IOCARIBE GOOS, highlighted the efforts to re-energize IOCARIBE GOOS since 2023. The governance structure is revised, including the establishment of a new Working Group with inclusive participation of Member States and partners. The Terms of Reference (TOR) is also being updated to better meet the needs of Member States and align with GOOS, and a strategic plan is being developed.

Key challenges include aligning with IOC Regional Body and GOOS, along with limited capacity and funding. Recommendations to GOOS include archiving the TOR documentation of GRAs, facilitating regional GOOS meetings, enabling GRA representatives to attend neighboring GOOS meetings, providing standardized guidance for navigating international policies and synthesizing IOC-determined EEZ policy for GRAs, Member States and stakeholders.

In the future, with the GOOS support in the 2024-2025 biennium, IOCARIBE GOOS plans to: 1) conduct a survey to inventory existing observing networks, assess the priorities of Member States and users, and gauge stakeholder capacity; 2) strengthen relationships with regional partners to identify shared goals and priorities; 3) develop IOCARIBE GOOS Roadmap by identifying achievable and actional steps; and 4) develop the initial observing and forecasting system under the leadership of TAC-OOFS and Task Teams.

3.5 GRASP

Edwin Pinto from GRA for South-East Pacific (GRASP) reviews the history of GRASP and Strategic Plan in 2021-2025. The plan focuses on four strategic axes:

1) Monitoring of the oceanographic and marine meteorological characteristics of the Southeast Pacific Ocean.
2) Oceanographic and marine meteorological research.
3) Exchange of oceanographic and marine meteorological information.
4) Cooperate with neighboring GRAs, GOOS, and relevant international organizations.

The most recent GRASP meeting took place in December 2023 in Colombia and the next scheduled for November 2024.

4. Discussions

- Carl emphasized the need to set up dedicated sessions for discussion in future GRA meetings.
- Alvaro suggested that GRAs inform GOOS Office and Chair and Co-chair about their upcoming activities that other GRAs may be interested in participating in (GRA Event Tracker).
- Ms Post recommended considering to organize inter-regional GRA meeting to better accommodate the time zones in the region.
- Kouadio announced that a Remote Sensing workshop (AARSE 2024) will be held in Abidjan, Cote D'Ivoire on 26-30 November 2024, and invited other GRAs interested in RS application for the environment to attend.
- Explore opportunities for BOOC to become a GOOS product or similar.

5. Actions

Action1: Changes for GRA information on GOOS website could be sent to Jing.

Action 2: Jing will share the GRA Action Tracker with the GRA leads and representatives.

Action 3: A doodle poll will be sent out to set up the date for the next meeting in January or February 2025, prior to the GOOS Steering Committee meeting.

Action 4: Jing will follow up with individual GRAs for their updates and share the GRA Event Tracker.

Annex 1: Agenda

1. Welcome and Introductions (10 mins)
2. GOOS Priorities and governance evolving (Joanna Post, 15 mins)
3. GRA progress review (15 mins)
    - Review progress of actions from GRA Forum XI in April 2024 (Carl & Alvaro)
    - Discuss plans to revisit the GRA Terms of Reference and GOOS Regional Policy, in alignment with evolving GOOS Governance (Carl and Joanna)
4. GRA updates (35 mins)
    - IOGOOS (Nagaraja Kumar)
    - GOOS Africa (Kouadio Affian)
    - PI GOOS (Jerome Aucan)
    - IOCARIBE GOOS (John Cortinas)
    - GRASP (Edwin Pinto)
5. Strengthen connection between GRAs and other GOOS components and GOOS Office (Alvaro and Carl and ALL discuss) (15 mins)
6. AOB

Annex 2: List of participants

Name	Affiliation
Atanas Palazov	GRA: Black Sea GOOS
Andrew Stewart	GRA: CIOOS
Shayla Fitzsimmons	GRA: CIOOS
Holger Brix	GRA: EuroGOOS
Henning Wehde	GRA: EuroGOOS
Inga Lips	GRA: EuroGOOS
AFFIAN Kouadio	GRA: GOOS Afrina
Edwin Pinto	GRA: GRASP
Michelle Heupel	GRA: IMOS
John Cortinas	GRA: IOCARIBE GOOS
Devin Burri	GRA: IOCARIBE GOOS
Alejandro Rojas Aldana	GRA: IOCARIBE GOOS
Nagaraja Kumar M	GRA: IOGOOS
Vanessa Cardin	GRA: MonGOOS
Peter You	GRA: NEAR-GOOS
Jinju Im	GRA: NEAR-GOOS
Alvaro Scardilli	GRA: OCEATLAN/GRA Council Vice Chair
Jerome Aucan	GRA: PIGOOS
Carl Gouldman	GRA: U.S. IOOS/GRA Council Chair
Laura Gewain	GRA: U.S. IOOS
Anne-Sophie Ste-Marie	OGSL
Tamaryn Morris	SAEON
Jari Haapala	AORA Task Team
Emily Smith	GOOS Office
Joanna Post	GOOS Office
Jing Li	GOOS Office