

GOOS Regional Alliance (GRA) Report 2024-2025

Description: This report aims to capture the current status of individual GRA. It invites basic information on the GRA (Section 1), an overview of its role and linkages (Section 2), a snapshot of key achievements in 2024–2025 (Section 3), a simple self-assessment of EOVS measurements (Section 4), and a forward look at plans and support needs for 2026–2027 (Section 5). The template provides a common structure to support consistent inputs across regions.

Also, the purpose of this document is to have a comprehensive tool for reporting to the GOOS Steering Committee and to sustain an updated and collaborative mechanism between GRAs. It is expected for individual GRA to report annually, on Sections that have relevant information to be known by the GRA Council and the GOOS Steering Committee.

GRAs are encouraged to complete it to the best of their ability, gathering information from all members of the organization.

Session 1: Basic information

1. Name of GRA

- GRA: Black Sea GOOS
- GRA: CIOOS
- GRA: EuroGOOS
- GRA: GOOS Africa
- GRA: GRASP
- GRA: IOCARIBE GOOS
- GRA: IMOS
- GRA: IOGOOS
- GRA: MonGOOS
- GRA: NEAR GOOS
- GRA: OCEATLAN
- GRA: PI GOOS
- GRA: SEAGOOS
- GRA: U.S. IOOS
- SAEON (an affiliated GRA)

2. Your name

Juliet Hermes / Tamaryn Morris (offshore) Tommy Bornman/Shاون Deyzel (coastal)

3. Your email

jc.hermes@saeon.nrf.ac.za / t.morris@saeon.nrf.ac.za

4. Your role in the GRA

Session 2: GRA Overview

5. Vision and mission of the GRA

Advance our understanding of the marine offshore environment and our ability to detect, predict and react to global change through long term observations, modeling, research and data.

mission

- Interpret, understand and summarize scientific data in a manner which is accessible to management and readily translates into policies and strategies.
- Provide a platform for undertaking long-term research both nationally and internationally.
- Establish and maintain world class network facilities, as well as an open access information management system for long-term, multi-institutional and participatory marine ecosystem studies with strong regional and global linkages.
- Provide societal benefits through education, awareness and communication of marine environmental science issues and foster greater public engagement/participation in science events
- Building relationships between Scientists, Teachers, Students and Learners to bridge the gaps between these groups.

6. Affiliated organisations and agencies of the GRA:

- **Governments**/Member States
- Academia
- Research Institutions
- Regional organisations
- Non-governmental Organisations (NGOs)
- Private sectors
- Other. Please specify_____

7. Please list the national observing systems that the GRA is connecting to.

8. How does the GRA connect to GOOS National Focal Points (NFPs) in the respective countries?

Please specify GOOS NFPs in which countries you are currently connecting to and how you are coordinating with them). Link to current GOOS NFPs

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

9. Governance of the GRA.

Please outline governing bodies of the GRA, including Chair, Secretariat, Steering Committee, etc.

10. Strategic documents of the GRA.

Please list titles, dates, and relevant information of the most recently updated version of the governing documents, including the **links** if available. Strategic documents may include: MoU, Goals and Objectives, Planning Documents (eg Strategic Plan, Work Plan, Implementation Plan), Data Policy, etc.

11. Communication tools of the GRA.

<https://egagasini.saeon.ac.za/>

<https://smcri.saeon.ac.za/>

<https://www.sapri.ac.za/>

12. Primary financial sources of the GRA.

Please consider the investment in the ocean observing system itself as well as for GRA coordination.

Government funding

Session 3: Achievements since last GRA Forum (April 2024)

13. Meetings and workshops the GRA organised or sponsored
ICSHMO, Ocean20 (<https://egagasini.saeon.ac.za/ocean20sa/>), hosted the Ocean Decade Taskforce meeting (funded through IOC), benthic monitoring workshop, my climate risk workshop

14. Contribution/Integration to the Global Ocean Observing Networks.

If the GRA is currently contributing/integrating to other networks or observing communities other than GOOS networks, please specify them in the field of 'Other'.

- Ship Observations Team (SOT)/Voluntary Observing Ships (VOS)
- **Ship Observations Team (SOT)/XBT-Ship of Opportunity Programme (SOOP)**
- Ship Observations Team (SOT)/Automated Shipboard Aerological Programme (ASAP)
- Global Ocean Ship-Based Hydrographic Investigations Programme (GO-SHIP)
- Global Sea Level Observing System (GLOSS)
- **OceanSITES**
- Data Buoy Cooperation Panel (DBCP)/Moored Buoys (MB)
- Data Buoy Cooperation Panel (DBCP)/Tsunami Buoys
- Data Buoy Cooperation Panel (DBCP)/Drifting Buoys (GDA)
- **Argo**
- The Global High Frequency Radar Network
- **Ocean Gliders**
- Animal-Borne Ocean Sensors (AniBOS)
- Emerging: Fishing Vessel Observing Network (FVON)

- Emerging: Surface Ocean CO2 Observing Network (SOCONET)
- Emerging: SUN Fleet
- None
- Other. Please specify_____

15. Any other ocean observation projects and activities uniquely conducted by the GRA?

16. Contribution of data at local/national/regional/global level.

Please indicate other data centers and repositories in 'Other', if applicable.

- Ocean Data and Information System (ODIS)
- IODE National Ocean Data Center (NODC)
- IODE Associate Data Unit (ADU)
- IODE Associate Information Unit (AIU)
- WMO Information System (WIS)
- Other. Please specify_____

17. Describe the primary roles of the GRA in facilitating the delivery of Information, Products and Services to end users and how these are different/complementary to national activities

SAEON mostly functions to provide infrastructure and data support to users, however we also support the South African Marine Information Management System as well as providing operational forecasts and products to the Oceans and Coastal Information Management System (OCIMS)

18. In what areas (checklist is below) does the GRA enable ocean observing solutions that are co-designed/co-produced with users?

More detailed information & services, e.g. links, can be indicated in 'Other'

- **Biodiversity conservation**
- Sustainable fisheries
- **Coastal resilience**
- Climate resilience mitigation and adaptation
- Sustainable ocean planning
- Marine carbon capture and storage
- **Safety of life at sea**
- Coastal hazard warnings
- Disaster risk reductions
- Human health
- **Ocean science**

- Other. Please specify_____

19. Please list new Best Practice documents completed in 2024-2025 (and submitted to the OBPS).

20. Capacity Building and Knowledge Sharing

Please state the capacity building activities organised in 2024-2025, and # of beneficiaries; expertise/experience shared with other GRAs in terms of capacity building.

Section 4: Essential Ocean Variables (EOVs) Measurement

GOOS Essential Ocean Variables (EOVs) are defined as the minimum set of ocean variables that are needed to assess ocean state and variability for important global ocean phenomena, and to provide essential data for applications that support societal benefit. Please see more detailed information and specification sheet for each EOv via

<https://goosocean.org/what-we-do/framework/essential-ocean-variables/>

21. Please indicate the **physics EOVs** that have been/are being measured by your GRA.

EOVs	Yes	No	No info
Sea state			
Ocean surface stress			
Sea ice			
Sea surface height			
Sea surface temperature	Yes		
Subsurface temperature	Yes		
Surface currents	Yes		
Subsurface currents	Yes		
Sea surface salinity	Yes		
Subsurface salinity	Yes		
Ocean surface heat flux			
Ocean bottom pressure			
Turbulent diapycnal fluxes			

(*pilot)			
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22. Please indicate the **biochemistry EOVs** that have been/are being measured by your GRA.

EOVs	Yes	No	No info
Oxygen	Yes		
Nutrients	Yes		
Inorganic carbon	Yes		
Transient tracers			
Particulate matter			
Nitrous oxide	Yes		
Stable carbon isotopes		No	
Dissolved organic carbon	Yes		

23. Please indicate the **Biology and Ecosystems EOVs** that have been/are being measured by your GRA.

EOVs	Yes	No	No info
Phytoplankton biomass and diversity	Yes		
Zooplankton biomass and diversity	Yes		
Fish abundance and distribution			
Sea turtles abundance and distribution			
Seabirds abundance and distribution			

Marine mammal abundance and distribution	Yes		
Coral cover and composition			
Seagrass cover and composition			
Macroalgal canopy cover and composition			
Mangrove cover and composition			
Microbe biomass and diversity (*pilot)			
Benthic invertebrate abundance and distribution (*pilot)	Yes		

24. Please indicate the **Cross-disciplinary (including human impact) EOVs** that have been/are being measured by your GRA.

EOVs	Yes	No	No info
Ocean colour			
Ocean sound			
Marine debris (*pilot)			

Section 5: Planning and Support

25. Top 3 Challenges and Opportunities

*To highlight the **challenges** for operation of GRA and how to address them; as well as the **opportunities** for new partnerships with regional networks, programme/project, countries; new funding opportunities including cooperation with industries; emerging requirements for delivery of information and services, and etc.*

How to officially become a GRA is not a clear process and the GRAs act so differently from each other. Across the region, there is a stark disparity in national observing capacities,

infrastructure, and institutional maturity. We need to move away from voluntary, unfunded coordination toward mandated, resourced "Regional Designs."

Interactions with other GRAs and NFPs

Sustained funding for staffing (as opposed to running costs and infrastructure)

26. Planning for 2026-2027

To highlight top 3-5 priorities of the GRA over next two years.

- 1) Become officially recognised as a GRA under GOOS**
- 2) Bring together the two SAEON Marine Nodes as well as the South African Institute for Aquatic Biodiversity (sister unit) under the GRA banner to provide inputs of activities to the GOOS.**

27. Requested Support from GOOS leadership and other components including other GRAs.

May include but not limited to communication support; capacity building support; partnership building support; leveraging support from member states, etc. Indicate priority or urgency.