View results

Respondent

1 Anonymous

56:32
Time to complete

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

2. **Your name** *

Michelle Heupel

3. **Your email** *

michelle.heupel@utas.edu.au

4. **Your role in the GRA** *

IMOS Executive Director, GRA lead

GRA Overview

5. **Vision and mission of the GRA** *

Vision: Australia's healthy oceans, thriving blue economy, and climate actions are underpinned by a sustained, world-class marine observing system. Mission: Supporting solutions to environmental, climate, social and economic challenges at national and global scales through world-leading, sustained marine and Sea Country observing.

6. **Affiliated organisations and agencies of the GRA** *

- [x] Governments/Member States
- [x] Academia
- [x] Research Institutions
- [ ] Regional organisations
- [ ] Non-governmental Organisations (NGOs)
- [x] Private sectors
- [ ] Other

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

Australia

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

If so, please specify GOOS NFPs in which countries you are currently connecting to). Link to current GOOS NFPs is: https://goosocean.org/who-we-are/goos-national-focal-points/group/

I am also the National Focal Point.

9. **Governance of the GRA.** *

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

IMOS is governed under an Unincorporated Joint Venture (UJV), with the University of Tasmania as Lead Agent. IMOS partners include University of Western Australia, Sydney Institute of Marine Science, CSIRO, Australian Institute of Marine Science, Bureau of Meteorology, and South Australian Research and Development Institute. Curtin University, Deakin University, The University of Melbourne and the Australian Antarctic Division are Associate Participants. IMOS has a Governing Board comprised of an independent Chair, a representative from each of the UJV partners and 3 independent members. All IMOS Board members and the Director are senior executives with extensive experience and qualifications.

IMOS is underpinned by the IMOS Strategy (2025-2035) and Five Year Plan 2022-27, which set strategies and objectives to inform investment of funding. Guidance is also provided by the National Marine Science Plan and Sustainable Ocean Plan.

The IMOS Board and IMOS Risk Committee actively oversee risk management frameworks and processes. Internal and external reviews of IMOS facilities and activities are standard operating procedures for the IMOS Office. External independent reviews of IMOS procedures and compliance are also conducted from time to time.

IMOS is also supported by a Science and Technology Advisory Committee as well as geographic leadership through regional Node Committees.

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 (e.g. Strategic Plan, Work Plan, Implementation Plan), Data Policy, etc.

IMOS Strategy 2025-2035. https://imos.org.au/about/strategy-and-plans/imos-strategy
IMOS Five Year Plan 2022-2027. https://imos.org.au/about/strategy-and-plans/imos-five-year-plan-2022-2027

11. **Communication tools of the GRA.** *

Please list links of GRA website, contact person, newsletter, brochure, introductory video, etc., if any.

All information about IMOS contacts, newsletters, etc can be found on our website: https://imos.org.au/
The contact page is: https://imos.org.au/about/contact-us

12. **Primary financial sources of the GRA.** *

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

IMOS is primarily funded by the Australian Government through the National Collaborative Research Infrastructure Strategy. This funding scheme requires a 1:1 financial match which is achieved through contributions from IMOS partners, industry partners, state government partners and others. IMOS also receives funds directly from several State Governments including Tasmania, Western Australia, New South Wales and Queensland, although these funds are inconsistently available.

Achievements since last GRA Forum (April 2024)

13. **Meetings and workshops the GRA organised or sponsored.** *

IMOS holds an annual meeting for the national community every year. IMOS also supports a symposium or data training workshop at the Australian Marine Science Association conference every year.

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

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

- [x] Ship Observations Team (SOT)/Voluntary Observing Ships (VOS)
- [x] Ship Observations Team (SOT)/XBT-Ship of Opportunity Programme (SOOP)
- [ ] Ship Observations Team (SOT)/Automated Shipboard Aerological Programme (ASAP)
- [x] Global Ocean Ship-Based Hydrographic Investigations Programme (GO-SHIP)
- [x] 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)
- [x] Argo
- [x] The Global High Frequency Radar Network
- [x] Ocean Gliders
- [x] Animal-Borne Ocean Sensors (AniBOS)
- [x] Emerging: Fishing Vessel Observing Network (FVON)
- [x] Emerging: Surface Ocean CO2 Observing Network (SOCONET)
- [ ] Emerging: Science Monitoring And Reliable Telecommunications (SMART) Subsea Cables
- [ ] Emerging: SUN Fleet
- [ ] None
- [ ] Other

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

No answer provided.

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

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

- [x] Ocean Data and Information System (ODIS)
- [x] IODE National Ocean Data Center (NODC)
- [ ] IODE Associate Data Unit (ADU)
- [ ] IODE Associate Information Unit (AIU)
- [x] WMO Information System (WIS)
- [ ] Other

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. *

The IMOS Australian Ocean Data Network (AODN) is the central, national repository for ocean observing data. All IMOS data are made freely and openly available via the AODN. This allows access by scientists, government, industry and others.

IMOS also delivers a range of data products including IMOS OceanCurrent, IMOS Biological Ocean Observer, IMOS Animal Tracking Database and more: https://imos.org.au/data/ocean-information-resources.

IMOS also delivers data directly to a range of agencies including the Australian Bureau of Meteorology, World Meteorological Organisation and many others.

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

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

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

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

IMOS Animal Tagging QA/QC document
IMOS Fishing Vessels as Ships of Opportunity (FishSOOP)

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.

IMOS has been working to help support the Pacific Island GOOS through engagement and direct funding support where possible.

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. *

	Yes	No	No info
Sea state	◉	○	○
Ocean surface stress	◉	○	○
Sea ice	○	◉	○
Sea surface height	◉	○	○
Sea surface temperature	◉	○	○
Subsurface temperature	◉	○	○
Surface currents	◉	○	○
Subsurface currents	◉	○	○
Sea surface salinity	◉	○	○
Subsurface salinity	◉	○	○
Ocean surface heat flux	◉	○	○
Ocean bottom pressure	◉	○	○
Turbulent diapycnal fluxes (*pilot)	○	○	◉

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

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

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

	Yes	No	No info
Phytoplankton biomass and diversity	◉	○	○
Zooplankton biomass and diversity	◉	○	○
Fish abundance and distribution	◉	○	○
Sea turtles abundance and distribution	◉	○	○
Seabirds abundance and distribution	○	◉	○
Marine mammal abundance and distribution	○	◉	○
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)	○	◉	○

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

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

25. **Additional comments on EOV measurement by your GRA.**

IMOS measures 27 of the Essential Ocean Variables and 21 of the Essential Climate Variables

Planning and Support

26. **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.

1. IMOS funding is secure until mid-2028. Changes in staffing and approaches to government processes as well as inability of funding to keep up with cost increases are increasing funding pressure and uncertainty. Securing funding beyond 2028 will be a challenge, opportunity and priority for IMOS.

2. Australia lacks national coastal research infrastructure. IMOS is leading a consortium of 13 organisations to try to fill this knowledge gap at the land-sea interface to help increase preparedness and safety in the face of coastal change. This continues to be a challenge and opportunity for the GRA.

3. In 2026 IMOS is celebrating 20 years of operation. This milestone creates a great opportunity to promote the contributions and accomplishments of the GRA as well as the relevance of ocean observing for government, industry and the Australian population.

27. **Planning for 2026-2027** *

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

1. IMOS is currently undergoing a governance review which will help shape the direction of the program into the future. This should be finalised in 2026-27 and will be an important step in the evolution of IMOS.

2. IMOS is leading an initiative to help better understand coastal change in Australia. This initiative includes a range of partners including terrestrial, geological, urban and human health programs as well as modelers and data management experts. The combined expertise of this group is the underpinning of an initiative called the Coastal Research Infrastructure: CoastRI (https://www.coastri.org.au/). Securing funding and establishing this program of work is a significant priority.

3. IMOS is actively working with Indigenous communities to establish co-designed ocean observing activities to create mutual benefit for researchers as well as community members who want to better understand, manage and protect their sea Country.

28. **Requested Support from GOOS** *

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

IMOS does no require any substantial support from GOOS, but capacity to stay better connected and engaged with other GRAs would be valuable to help learn from each other, share information and expertise and collaborate and integrate wherever possible.

Common language and communication about GOOS, what it does and its value proposition would be very welcome to help ensure consistent messaging is provided to governments and at national or international forums. Identification of common global priorities that GRAs can promote would be useful. For example, increased investment in Argo off Africa and in the Southern Ocean to improve our understanding of sea level rise and improve climate models. How can we work together to create global-scale solutions?