GOOS Work Plan 2025-2027

DRAFT 16 Feb 2025

Table of Contents

GOOS Work Plan 2025-2027 1
I. Introduction 2
II. Observation system design and development 2
A. Essential Ocean Variables / Expert Panels 2
B. Carbon and GHG Plan 3
C. Biodiversity Plan 3
D. EOV-led Ocean Indicators 3
E. RRR and Evolving GBON 3
III. Strengthening data integration and delivery 3
A. Observations Coordination Group 3
B. IOC Data Architecture 3
IV. System implementation 3
IV.1 System implementation at national and regional level 4
A. National Focal Points 4
B. GOOS Regional Alliances 4
IV.2 System implementation and applications 4
A. ETOOFS 4
C. Engagement on applications, including forecasting 4
V. Outreach and Partners 4
A. Projects and partners 4
B. Communications 5
VI. Reform 5
Annex 1 List of GOOS components and their terms of reference 6

I. Introduction

1. The Global Ocean Observing System (GOOS) was established in 1991. It is led by UNESCO-IOC and co-sponsored by WMO, UNEP and ISC. Its most recent terms of reference date from the IOC Resolution XXVI-8 (2011). Member States identify GOOS as a priority for the IOC.
2. The GOOS mission is to lead the ocean observing community and create the partnerships to grow an integrated, responsive and sustained multi-purpose observing system, as outlined in the GOOS Strategy 2030 (2019). The Framework for Ocean Observing (FOO, 2012) sets the technical framework for GOOS based on essential ocean variables (EOVs).
3. The GOOS structure is comprised of a number of components: the Steering Committee; the Ocean Observations Physics and Climate Panel (OOPC), Biogeochemistry Panel (BGC) and Biology and Ecosystems Panel (BioEco); the Observations Coordination Group (OCG) and GOOS networks, GOOS Regional Alliances (GRAs) and National Focal Points (NFPs) that implement observing systems; and GOOS projects and partners (see Annex 1 for further details).
4. The IOC secretariat provides support to the Steering Committee, Observations Coordination Group (OCG) and other GOOS components in coordination with a wider management team. The latter includes colleagues at WMO, OceanOPS and those supporting expert panels, the OCG as well as the Decade Coordinating Office on Ocean Observing (DCO-OO).
5. Resolution XXVI-8 identifies that the GOOS Steering Committee will produce a biennial work plan for consideration by the IOC Governing Bodies and adoption by the Assembly.
6. This work plan 2025-2027 was discussed and presented to the 14th meeting of the GOOS Steering Committee, 19-21 February 2025. It covers: Observation system design and development (Section II); strengthening data integration and delivery (Section III); system implementation at national and regional level and system implementation and applications (Section IV); outreach – projects, partners and communications (Section V); and GOOS reform (Section VI).

II. Observation system design and development

Deliver an integrated, 'fit for purpose' observing system built on the systems approach outlined in the Framework for Ocean Observing (GOOS Strategy 2030, Strategic Goal 2).

A. Essential Ocean Variables / Expert Panels

7. The key work of the panels is to: coordinate and set EOV specifications, develop new EOVs, articulate best practice, assess readiness levels, review and ensure fit-for-purpose system outputs among EOVs, develop implementation strategies and coordinate international, regional and national activities.
8. In regards to future requirements for the expert panels support of GOOS – all panels require a full time scientific officer. Currently only OOPC has this support. As OOPC supports GCOS and WCRP as well as GOOS, the full time scientific officer is a staff member at WMO, Geneva. The International Ocean Carbon Coordination Project (IOCCP) acts as the GOOS Biogeochemistry Panel. The BioEco panel has no fixed term secretariat support. The GOOS SC in 2023 recommended the need to provide minimum staffing and secretariat support for

expert panels (see Action table from GOOS SC-13), even if external funding is reduced, to ensure continuity. Both BGC and BioEco panel are supported by IOC regular budget.

9. Info to be added - any action relevant to EOVs not included below

B. Carbon and GHG Plan

10. Info to be added (background, advances, next steps (2025-2027), benefits to GOOS, resource needs (if possible))

C. Biodiversity Plan

11. Info to be added (background, advances, next steps (2025-2027), benefits to GOOS, resource needs (if possible))

D. EOV-led Ocean Indicators

12. Info to be added (background, advances, next steps (2025-2027), benefits to GOOS, resource needs (if possible)

E. RRR and Evolving GBON

13. Info to be added (background, advances, next steps (2025-2027), benefits to GOOS, resource needs (if possible).

III. Strengthening data integration and delivery

GOOS SC identified strengthening data integration and delivery as a needed new area of emphasis for GOOS

A. Observations Coordination Group

14. Info to be added (background, advances, next steps (2025-2027), benefits to GOOS, resource needs (if possible).

B. IOC Data Architecture

15. The IOC, led by IODE and GOOS, are coordinating and aligning activities in order to establish an IOC data architecture (data space) and lay the ground for the development of an integrated, efficient, future facing, and FAIR data landscape across GOOS, IODE, OBIS, GOOS OCG, OceanOPS, BioEco and BGC data components.
16. This work was initiated at the IODE-GOOS data workshop, 30 September - 2 October 2024, with initial discussion and deliverables detailed in the workshop report.
17. Info to be added (background, advances, next steps (2025-2027), benefits to GOOS, resource needs (if possible))

IV. System implementation

Deepen engagement and partnership from observations to end users to advance the use and impact of the observations and demonstrate their benefits (GOOS Strategy 2030, Strategic Goal 1)

IV.1 System implementation at national and regional level

A. National Focal Points

18. The overarching objective of the GOOS National Focal Points as identified in the TOR is to promote and support nationally and regionally coordinated strategies for the implementation of a sustained GOOS that delivers the essential information needed for our sustainable development, safety, wellbeing and prosperity. There are currently 76 designated GOOS National Focal Points. The list is currently being updated as requested through Circular Letter 3024 (dated 3 February 2025).

19. Info to be added next steps/deliverables

B. GOOS Regional Alliances

20. As per their current terms of reference in the GOOS regional policy (2013), the GRAs "identify, enable, and develop sustained GOOS ocean monitoring and services to meet regional and national priorities, aligning the global goals of GOOS with the need for services and products satisfying local requirements". The GOOS Regional Council consists of the lead from each of the GRAs or their designated representative. The GOOS Regional Council was created by the GRAs at the 2nd GOOS Regional Forum (Nadi, Fiji, 2004) and is not a subsidiary body of IOC.

21. Info to be added next steps/deliverables

IV.2 System implementation and applications

A. ETOOFS

22. The expert team on ocean operational forecasting systems (ETOOFS) supports member states to develop their ocean forecasting services and associated applications

23. Info to be added next steps/deliverables

C. Engagement on applications, including forecasting

24. Info to be added next steps/deliverables

V. Outreach and Partners

Building for the future through innovation, capacity development, and evolving good governance (GOOS Strategy 2030, Strategic Goal 3)

A. Projects and partners

25. At GOOS SC-14, the GOOS SC decided to dissolve current GOOS Projects (listed in Annex 1) and introduce a GOOS endorsment process for projects and partners.

26. Info to be added next steps/deliverables

B. Communications

27. Info to be added next steps/deliverables

VI. Reform

Building for the future through innovation, capacity development, and evolving good governance (GOOS Strategy 2030, Strategic Goal 3)

28. Info to be added – readout from workshop and next steps by consultancy to provide proposal to IOC Assembly 33
29. The workplan 2026-2027 will depend on the consultancy – first draft outlined here

Annex 1 List of GOOS components and their terms of reference

GOOS Component	Terms of Reference (TOR)	Chairs
Global Ocean Observing System (GOOS) and Steering Committee	Resolution for GOOS and GOOS SC (2012) GOOS TOR	SC Co-Chairs: David Legler, Balakrishnan Nair Membership
Physics and Climate Expert panel (OOPC)	OOPC Panel TOR	Co-Chairs: Sabrina Speich and Weidong Yu Membership
Biogeochemistry Expert panel (BGC)	BGC panel TOR	Co-Chairs: Adrienne Sutton and Véronique Garçon Membership
Biology and Ecosystems Expert panel (BioEco)	BioEco Panel TOR	Co-Chairs: Clive McMahon and Audrey Darnaude Membership
Observations Coordination Group (OCG)	OCG TOR	Chair: tbc
OceanOPS (joint WMO/IOC technical centre)	https://www.ocean-ops.org/ Five year strategic plan	Director: Matthieu Belboch
GOOS Regional Alliances Council (GRA Council)	GRA Council TOR	Chair: Carl Gouldman, Vice-Chair: Alvaro Scardilli
National Focal Points (NFPs)	NFP TOR	
Expert team on ocean operational forecasting (ETOOFs)	ETOOFS TOR	Co-Chairs: Pierre Bahurel, Enrique Alvarez Membership directory

GOOS Projects:

- All-Atlantic Ocean Research & Innovation Alliance (AtlantOS)
- Integrated Marine Debris Observing System (IMDOS)
- Ocean Best Practices System
- SMART Cables
- The Deep Ocean Observing Strategy (DOOS)
- The Tropical Pacific Observing System in 2020 (TPOS 2020)