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INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

> Thirty-third Session of the Assembly UNESCO, 25 June–3 July 2025

Item 4.5.2 of the Provisional Agenda

GLOBAL OCEAN OBSERVING SYSTEM STEERING COMMITTEE WORKPLAN

<u>Summary</u>

The GOOS mandate dates back to 2012, with <u>Resolution XXVI-8</u>, which also defines the terms of reference for its Steering Committee. The resolution mandates the GOOS-SC to develop a biennial workplan for consideration of the IOC Governing Bodies and adoption by the Assembly.

This document provides an outline of the GOOS-SC workplan for 2025–2027 and the resource required; as determined by GOOS-SC at its 14th session (SC-14).

Financial and administrative implications: paragraphs 24-25.

<u>The proposed decision</u> is referenced A-33/Dec.4.5.2 in the Action Paper (document <u>IOC/A-33/2 Prov.</u>)

Introduction

1. In 2024, the Executive Secretary reconstituted the 10 executive members of the GOOS Steering Committee (SC), who joined the five serving regional representatives that were elected in 2023 at the 32nd session of the Assembly. The Steering Committee elected its two co-chairs in August 2024: David Legler (NOAA, USA) and Balakrishnan Nair (INCOIS, India).

2. The GOOS Steering Committee held its 14th session, <u>GOOS SC-14</u>, on 19–21 February 2025 at UNESCO, Paris. The SC-14 report is available as <u>GOOS-305</u> for the consideration of the Assembly to which it reports.

3. The GOOS-SC co-chairs identified that the SC, in accordance with its mandate and taking into consideration the <u>GOOS 2030 Strategy</u> (2019) and the <u>Framework for Ocean Observing</u> (2012), will focus during the next biennium on clear decision-making and the identification of strategic actions for a multipurpose and sustained observation system, including transparent improvements and changes at the organizational and process levels, in order to support Member States and the multi-user community of GOOS.

4. The GOOS-SC recognises the need to ensure that GOOS work meets the relevant mandates of its sponsors, including the 'IOC Medium Term Strategy', the 'WMO Rolling Review of Requirements', the Joint WMO-IOC Collaborative Board, as well as future plans that build on GOOS, including the Implementation Plan for the IOC-wide Strategy on Sustainable Ocean Planning and Management (see agenda item 4.1).

5. The GOOS-SC has identified six sections in the workplan for 2025–2027: (i) GOOS coordination and management; (ii) observation system integration, design, development and delivery; (iii) maintain and strengthen data integration and delivery; (iv) system implementation: (a) at national and regional levels and (b) for societal applications; (v) outreach: (a) projects and partners and (b) communications; and (vi) GOOS Reform (see agenda item 4.5.1). The key actions are indicated below for each section. Resources allocated to GOOS are fragile, both for the system and its coordination. This document indicates current minimum additional resource needs for the coordination of the GOOS workplan deliverables by the IOC secretariat. The resource needed for the implementation of the global system are not currently covered.

Workplan 2025–2027

I. <u>GOOS coordination and management</u>

6. <u>Overview</u>: The GOOS Management Team (GMT) leads GOOS and its components, advances and implements the objectives of the GOOS Strategy, and build the partnerships necessary to develop an integrated, responsive and sustained observing system. The GMT consists of the core team at the IOC secretariat, 4 established posts (in the current Programme and Budget— 42 C/5) and 9 affiliate posts (Regular Programme/extrabudgetary/external project funds), as well as other members in-kind (including representatives from the International Ocean Carbon Coordination Project, NOAA, OceanOPS and WMO).

7. <u>Actions</u>: management, integration, coordination, reporting and outreach of GOOS; collaboration and engagement with all GOOS components (Steering Committee, expert panels, Observations Coordination Group (OCG), OceanOPS, regional alliances, national focal points, Expert team on Operational and Ocean Forecasting Systems), sponsors (IOC, WMO, ISC and UNEP), Global Climate Observing System, partners, stakeholders, GOOS Projects, Ocean Decade Programmes, and communities of practice; ensuring coherence with IOC and other relevant mandates and supporting Member States and wider United Nation System as a whole

8. <u>Additional resource needs</u>: G4 (General Service category) Full-Time Equivalent (FTE) administrative assistant; P3 (Professional category) FTE BioEco Panel scientific officer (currently

covered by RP (Regular Programme) and extrabudgetary resources; P2 Communications officer (currently covered by RP); P2 FTE to support the Observations Coordination Group (OCG) and data management (previously filled through secondments until 2024); and P3 FTE Biogeochemistry (BGC) Panel scientific officer (currently no resources available).

II. Observation system integration, design, development and delivery

9. <u>Overview</u>: responding to GOOS 2030 Strategy goal 2, these activities aim to focus delivery of GOOS to enable an integrated, fit-for-purpose observing system built on the systems approach outlined in the *Framework for Ocean Observing*. The actions are responsive to Member States needs, IOC Medium-Term Strategy and relevant UN mandates.

10. Actions:

- (i) update the EOV Specification Sheets Specification Sheets;
- (ii) produce GOOS Biodiversity Plan and implement;
- (iii) produce GOOS Carbon and Greenhouse Gas (GHG) Plan and implement;
- (iv) develop a proposal for an international framework of ocean indicators, with implementation of pilot indicators in collaboration with relevant partners and tools for reporting and narrative building;
- (v) hold joint expert panel meeting in 2026 to ensure cross collaboration on all actions;
- (vi) lead the coordination with WMO of the Ocean Earth System Application Area component of the Rolling Review of Requirements (RRR) and Global Basic Observing Network (GBON), including reviewing and finalising WMO Statements of Guidance (SoG) for Ocean, Atmosphere and Cryosphere (2025), initiating the Biogeochemical Cycles Application Area for the Ocean component of the RRR process;
- (vii) Support the Joint WMO-IOC Collaborative Board (JCB) Global Basic Observing Network (GBON) sub-group. In parallel evolve discussions for a GOOS basic observing network (for EOVs). In this work, consider water under national jurisdiction and open ocean, EOV status and implementation, and an approach for requirements-setting that leverages existing components and processes.

11. <u>Additional resource needs</u>: P3 FTE BioEco scientific officer and P3 FTE BGC scientific officer (as highlighted in paragraph 8 above), three-day cross-expert panel meeting for 40 people at a cost of approximately USD 200,000, one P2 FTE to produce the carbon plan, 20% in-kind contribution to support the RRR and GBON work.

III. Maintain and strengthen data integration and delivery

12. <u>Overview</u>: This new focus area across all three goals of the GOOS 2030 Strategy aims to deliver coordinated GOOS data to the global system that is FAIR (findable, accessible, interoperable and reusable) and reaches its users with appropriate latency and quality, ensuring alignment within GOOS, IOC, WMO around the broad adoption of open architectures and with a federated systems approach (including ODIS, WIS2.0, ERDDAP[™]).

- 13. <u>Actions</u>:
 - (i) continue the implementation of Observations Coordination Group (OCG) crossnetwork data implementation strategy;
 - (ii) co-develop the IOC data architecture plan (agenda item 3.4.3), support production of demonstration products that ensure the visibility of the benefits of a more integrated ocean observation and related data management and sharing system;
 - (iii) Implement the IOC data architecture plan in collaboration across the IOC and other relevant partners.

14. <u>Additional resource needs</u>: One P3 FTE (6 months) to develop the IOC data architecture plan; resource needs for implementing the data architecture plan will be determined in 2025.

IV. <u>System implementation: (i) at national and regional level and (ii) and societal</u> <u>applications</u>

15. <u>Overview</u>: These activities respond to goal 1 of the GOOS 2030 Strategy to deliver and deepen engagement and partnership from observations to end-users to promote the use and impact of ocean observations and demonstrate their benefits. Actions will facilitate transparency of contributions to and from GOOS with National Focal Points (NFPs) and GOOS Regional Alliances (GRAs), strengthening their links with other GOOS components through a clearer framework for defining interactions and providing relevant information for applications. Finally, GOOS actions will focus on the application of multipurpose observation strategy that meets the needs of society and a sustainable ocean economy (e.g. through the Expert Team on Operational Ocean Forecast Systems (ETOOFS), United Nations Ocean Decade activities, the UN Secretary General Early Warnings for All (EW4All) initiative, etc.)

- 16. <u>Actions</u>:
 - (i) produce NFP implementation guidelines and reporting template;
 - (ii) facilitate and support GRA engagement with GOOS, including around focussed application areas for coordination and supported data flow, as well as the development of a reporting template;
 - (iii) produce revised terms of reference for ETOOFS and its membership, and a workplan, ensuring the role of ETOOFS in GOOS and other communities is clearly identified;
 - (iv) develop a proposal for how to raise the profile of EW4ALL including entry/collaboration points for GOOS;
 - (v) future GOOS conference (150-200 people), coordinated by the GOOS-SC, including with GRAs, NFPs, panels and other IOC focal points (such as those of the IODE committee) and relevant stakeholders.

17. <u>Additional resource needs</u>: Approximately USD 500,000 is needed for the GOOS conference (150-200) people, provisionally scheduled for 2027; a host country is being sought.

V. Outreach: (i) projects and partners and (ii) communications

18. <u>Overview</u>: Outreach is a core need at the heart of GOOS and referenced in goals 1 and 3 of the GOOS 2030 Strategy, so as to deliver strengthened and prioritised partnerships, build advocacy and visibility, develop capacity to ensure implementation and a broad range of engagement, support innovation to build championed and effective communities of practice and expand GOOS capacity.

- 19. Actions:
 - (i) revise the GOOS approach to projects to move towards a clearly defined GOOS endorsement process and innovation role and legacy for GOOS;
 - (ii) support an intersessional GOOS-SC meeting to focus on GOOS Ocean Decade Programmes, achievements, integration, and GOOS legacy planning;
 - (iii) build a roadmap to identify coordination options with satellite community, including Committee on Earth Observation Satellites;
 - develop a GOOS strategy for engagement with the private sector; continue building opportunities for private sector engagement with GOOS, including in partnership with the Marine Technology Society (MTS), NOAA and the private sector in the Ocean Enterprise Initiative;

- (v) support the evolution of Ocean Best Practices System towards being an IOC Ocean Best Practices (OBPS) System (agenda item 3.4.4);
- (vi) produce GOOS Report Card 2025—an annual high-level report on the state, capacity, and value of the global ocean observing system developed in collaboration with OceanOPS (and 2026, 2027).

20. <u>Additional resource needs</u>: Support for engagement with the private sector would be helped by 20% FTE in-kind support, OBPS P2 FTE (across IOC).

VI. GOOS Reform (GOOS 2030 Strategy, Goal 3)

21. <u>Overview</u>: Following mandates from Member States (see agenda item 4.5.1), GOOS reform is a vital part of the workplan over the next biennium, as highlighted in the GOOS Strategy goal 3: deliver a GOOS fit for the future. The GOOS-SC recognises the need for a critical global infrastructure for ocean observing.

- 22. <u>Actions</u>: Undertake GOOS reform as a double diamond approach:
 - (i) The first diamond is being undertaken in 2025 and includes, with the support of a consultancy, a 'GOOS Mission' and scoping review report, a 'GOOS Structure' review report and generation of an initial proposal for GOOS reform alongside development of a 'GOOS Communication Toolkit' (2025).
 - (ii) On the basis of the outcomes from the first diamond, the second diamond from 2026 onwards will consider delivery of a revised structure and governance of GOOS (mission, scope, structure, revision of terms of reference, delivery mechanisms), a user and uptake strategy, production of a GOOS basic observing network plan, GOOS Communication Plan and a revision of the GOOS 2030 Strategy, alongside coordination on the IOC data architecture.

23. <u>Resources</u>: The first diamond is covered by the current regular budget, the second diamond resource needs are to be determined (cf document <u>IOC/A-33/4.5.1.Doc(1)</u>).

Financial and administrative implications

24. The following Member States or organizations have made specific financial or in-kind contributions to support GOOS coordination during the 2024–2025 period: China, Denmark, European Commission, France, Monaco, Norway, USA, and the World Meteorological Organization.

25. The immediate financial and administrative implications are taken into account in the parameters of the IOC's regular budget, specifically IOC Output 1 of Programme and Budget 42 C/5, and next 43 C/5 budget. Despite the increase in funding to GOOS allocated in the 42 C/5, there remains a shortfall in resources, as indicated in the workplan above (paragraph 5).