Accenture Development Partnerships

Global Ocean Observing System

Mission, scope, structure

accenture

16 December 2025

This reform provides a framework for the future evolution of the Global Ocean Observing System (GOOS)

Why did we embark on this reform process?

- Member States have **binding commitments** under **international frameworks and conventions** (UNFCCC, CBD, BBNJ, etc.) requiring data and information for decision making dependent on a globally integrated ocean observing system
- Fulfilling these commitments requires more than infrastructure and data sharing – it requires **active involvement** in setting **priorities**, **governance**, and **investment** strategies
- Global Ocean Observing System (GOOS) is designed to help Member States meet these obligations through **active coordination of the global system of ocean observations**, but currently **faces challenges** like fragmented governance, unclear roles, weak national integration, and administrative burdens that limit its effectiveness
- Recognizing these challenges, IOC Member States have invited the IOC Executive Secretary in IOC Decision EC-57/4.1 and IOC Decision A-32/4.8.1 to **evolve GOOS governance and structure**, in consultation with the GOOS Steering Committee, representatives from Member States, and GOOS sponsors

What are the intended outcomes of GOOS reform?

- **Streamlined governance and reporting structure** with clarity on roles and responsibilities and enhanced accountability mechanisms
- **Elevated Member States' influence** in driving ocean observations agenda, ensuring priorities for ocean observations reflect both **suppliers** and **end-users needs**
- **Strengthened national coordination** by empowering National Focal Points (NFPs) and fostering inter-agency collaboration within countries
- **Improved efficiency and interoperability** in network coordination and data management
- **Fit-for-purpose structure** with capabilities that facilitate long-term resource mobilization

A four-month journey with consultations across the GOOS system brought clarity to the mission and actionable recommendations for GOOS's future

Who did we engage throughout the process?

Throughout the project, we engaged over 45 individuals across the GOOS ecosystem during one-on-one interviews, workshops, status meetings and offline feedback including the following:

- Member State representatives (including IOC Chair and Vice Chairs)
- GOOS Director and GOOS Secretariat staff
- GOOS Steering Committee Co-Chairs and members
- GOOS sponsors
- IOC Executive Secretary
- Expert panel scientific officers
- GRA and NFP representatives
- OceanOPS
- Other external collaborators (full list in appendix)

In addition to interacting with key stakeholders, the project team reviewed over 40 documents, including TORs, GOOS reports, and others, to better understand the system's history and current state.

3
Project steering committee meetings held to align on key recommendations

2
Workshops held to co-create the mission statement and discuss key structural changes needed

45+
Stakeholders engaged through interviews, workshops, and written feedback

40+
Documents analyzed including 8 Terms of Reference

4
Success metrics for GOOS

6
GOOS components remaining after streaming and optimization

This updated version of the GOOS reform reflects key refinements following feedback on the previous draft from November 2025

Key update	Description	Slide number
Component responsibilities	• Clarified in-scope and out-of scope responsibilities for all GOOS components in line with mission statement and OKRs • The Secretariat's role has been clarified to align with its core functions, emphasizing which responsibilities should be led by the Secretariat and which can be delegated	#14
Infrastructure Coordination Group (ICG)	• Combined OCG and OceanOPS and coordination capabilities of BioEco Panel into one component with a broadened mandate to centralize the coordination of GOOS networks and other observing communities	#20
GOOS Regional Alliances (GRAs)	• Removed the elimination of the GRAs as a GOOS component from the list of recommended changes • Proposed future extreme options for GRAa ranging from self-governed and independent entities to its differentiated role within GOOS • GRA options to be further investigated and discussed during GRA Forum XII and GOOS SC-15 in March 2026	#22-23
User engagement mechanism	• Idenitifed user engagement mechanism as an outstanding item impacting the future structure of GOOS which will be investigated futher, starting with a user uptake strategy	#22
Draft implementation plan	• Developed a high-level draft transition plan to guide the implementation of the proposed structural changes within GOOS based on the reform timeline and key sponsor meetings	#35-36

Note: These key refinements were made following two feedback sessions with the GOOS Steering Committee and five review meetings with the GOOS Steering Committee Co-Chairs and GOOS Director. Additional refinements in this version are based on offline feedback and include clearer articulation that both the mission statement and value proposition apply to the entire GOOS, not just the Secretariat, slightly revised value proposition and governance model to better reflect system-wide objectives and roles as well as further clarification and detailing of the proposed structural changes.

The proposal for GOOS reform on a page

Mission	**To enable and evolve a globally integrated, responsive, and resilient ocean observing system for thriving communities and a healthy ocean**
Value Proposition	We enable and evolve a globally integrated, responsive, and resilient ocean observing system for: Member States: to strengthen **marine ecosystems**, **ocean economy**, **national resilience**, and **maritime security** through data-driven decisions and policy-relevant observations Ocean Observing Data Providers: to advance **groundbreaking research** and relevant **operational ocean science** Ocean Observing Data Users: to fuel **innovation**, support disaster risk reduction, and support thriving marine ecosystems and ocean economies via smarter, **data-driven decisions**
Structure	The following key changes are recommended to optimize how GOOS will be operating going forward: 1 **Streamline GOOS reporting structure and refresh component responsibilities** 2 **Consolidate sponsorship under the IOC and WMO** based on existing contributions and distinguish sponsor, donor, and partner roles 3 **Enhance resource mobilization through the Donor Coordination Group** to convene funders, foster alignment, and drive investment for GOOS 4 **Elevate the GOOS Steering Committee's function** through stronger strategic oversight, targeted skillsets, and longer terms 5 **Empower the GOOS Secretariat** to have clear identity to support the system 6 **Introduce the Infrastructure Coordination Group (ICG)** as an OCG with broadened mandate to centralize the coordination of GOOS networks and other observing communities 7 **Strengthen NFP's role and interaction model** to further enable Member States participation, national coordination, and integration with GOOS standards
Accountability mechanism	GOOS components to report on four results linked to the revised mission to drive system-wide performance and ensure accountability

Objective	Enable ocean observing system	Evolve globally integrated ocean observing system	Be responsive to Member States, suppliers of ocean observation data, and users	Ensure resilience of the global ocean observing system
Key result	% observing systems with interoperable EOV dataflows	# of Member States contributing to and sharing data from GOOS Networks	# of co-developed initiatives or products with stakeholders	% increase in GOOS funding and commitments

Governance	**New governance meetings to be introduced:** 1) Donor Coordination Group to strengthen resource mobilization, 2) NFP Advisory Group with IODE representatives to improve data exchange linkages, 3) GOOS Conference and joint Panel Meeting to strengthen cross-component coordination **Existing governance meetings to be clarified and strengthened** e.g., Executive Committee to start exploring innovative ideas, standardized governance across Expert Panels

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Mission and scope
01

An updated and forward-focused mission statement outlines the essential role in delivering coordinated action and strategic outcomes for GOOS

Support stakeholders with implementation of effective observation systems

Support continuous improvement of ocean observing system to meet changing scientific, economic, ecological, environmental, and technological needs

Facilitate worldwide coordination and data sharing for a unified, comprehensive ocean monitoring, forecasting, and service value chain

Be receptive to the GOOS components, sponsors, Member States, suppliers, users, and the broader ocean observing enterprise

Build a robust and adaptable system that can withstand disruptions and deliver long-term, reliable data

To **enable** and **evolve** a **globally integrated**, **responsive**, and **resilient** ocean observing system for **thriving communities** and a **healthy ocean**

Ensure essential ocean data are ultimately transformed into actionable insights to support resilient societies and protect ecosystems – turning science into real-world impact while advancing the ocean economy, weather, and climate communities

Refined mission statement based on the GOOS reform project

By acting on its strategic choices, the GOOS will be empowered to adapt its operational focus for greater impact and sustained relevance

FROM…	…TO
Reacting and responding to the **immediate needs** of the ocean observing community as they arise	**Shaping** and **advising** the global ocean observing agenda
Viewing the **operational** and **scientific oceanography community** as the primary stakeholder	Being agile and responsive to **Member States**, **providers**, and **users** of ocean observation data
Relying on **Member State contributions** for funding	Augmenting **public funding** from diverse Member States, supplemented by growing financial and in-kind contributions from **non-traditional actors**
Operating under a **broad-based sponsorship structure** (e.g., IOC, WMO, UNEP, and ISC)	Engaging with **key strategic sponsors** (e.g., IOC, WMO), supported by a broader coalition with clearly defined **roles** and **priorities**

Strategic shifts identified through the GOOS reform project

GOOS is committed to deliver distinctive value to Member States, suppliers and users of ocean observing data towards 2030+

	Member States (as decision makers, not suppliers or user) e.g., countries that have formally joined the IOC and WMO with rights and obligations, national focal points	Ocean Observing Data Providers e.g., Member States, oceanographers, marine scientists, research institutions, scienitifc networks, private sector	Ocean Observing Data Users e.g., Member States, scienitifc community (as data users), private sector (fisheries, shipping, energy etc.), NGOs, educators, civil society, philantropists, innovators
Who struggle with...	Uneven expertise and infrastructure, complex platforms, fragmented coordination, and unclear roles between GOOS and Member States	Fragmented data and governance, administrative burden, and insufficient recognition and visibility	Inaccessible and non-user friendly data, engagement complexity, and lack of co-design involvement
We provide...	A **globally integrated**, **responsive**, and **resilient** ocean observing system		
That...	Strengthens marine ecosystems, ocean economy, national resilience, and maritime security through data-driven decisions and policy-relevant observations	Advances groundbreaking research and relevant operational ocean science	Fuels innovation, supports disaster risk reduction, and supports thriving marine ecosystems and ocean economies via smarter, data-driven decisions

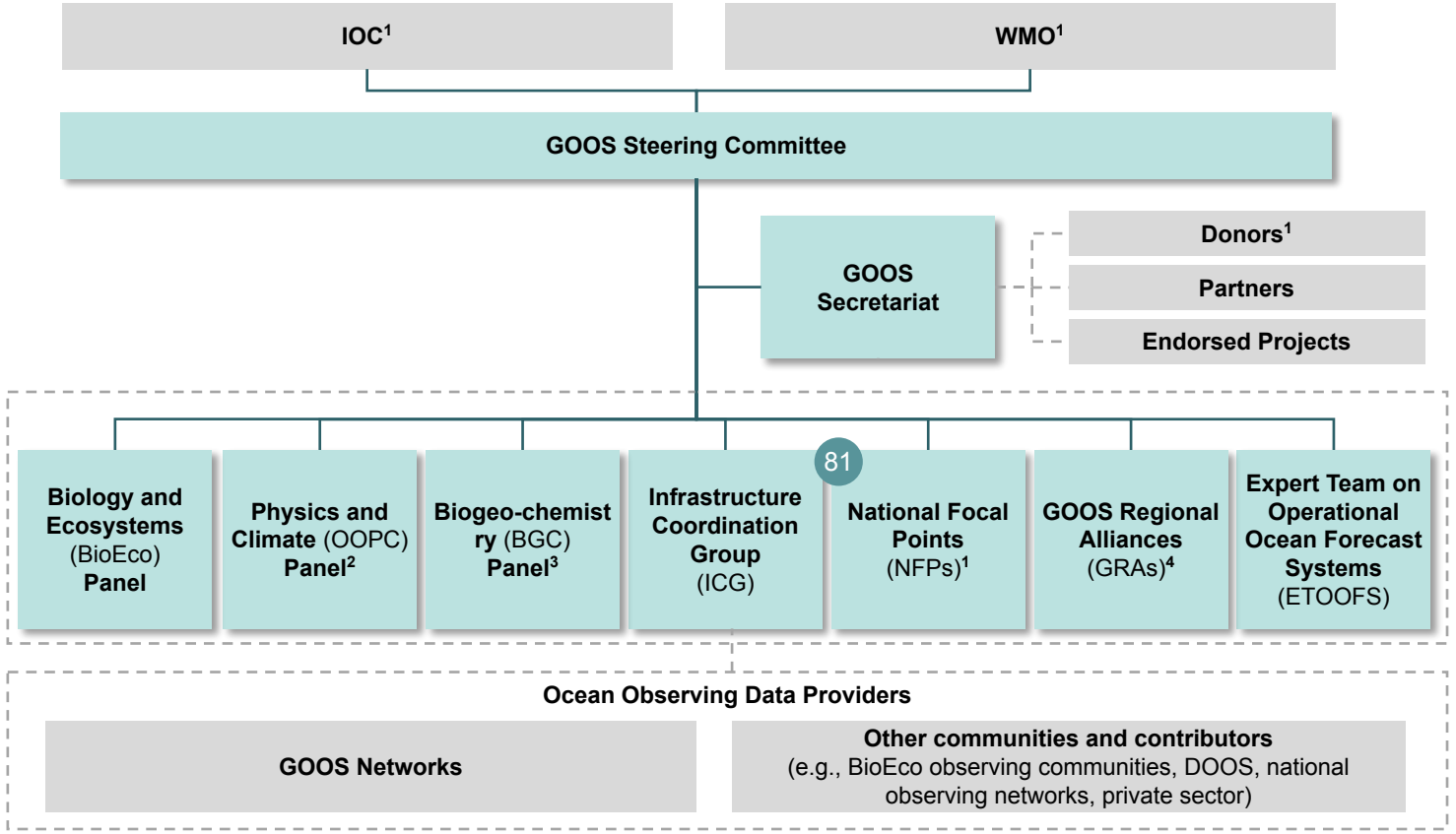

02
Proposed structure
02

Recommended structural changes will help GOOS to enhance its operations and better deliver against its mission

	Recommended changes	This will help achieve...
1	**Streamline GOOS reporting structure and refresh component responsibilities**	• Remove overlapping reporting to improve delivery and efficiency and strengthen accountability • Enable the GOOS Steering Committee to make informed decisions based on input from components • Clarify responsibilities and reduce duplication between components
2	**Consolidate sponsorship under the IOC and WMO** based on existing contributions and distinguish sponsor, donor, and partner roles	• Anchor GOOS under IOC and WMO to ensure unified leadership, stability, and shared responsibility • Streamline sponsor coordination while recognizing UNEP and ISC's historic contributions
3	**Enhance resource mobilization through the Donor Coordination Group** to convene funders, foster alignment, and drive investment for GOOS	• Enhance engagement and coordination across Member States and other donors • Strengthen long-term sustainability by coordinating donor outreach and aligning investments with GOOS priorities for the system and its coordination
4	**Elevate the GOOS Steering Committee's function** through stronger strategic oversight, targeted skillsets, and longer terms	• Enhance GOOS Steering Committes's capacity to provide oversight across components and advice to Member states • Strengthen leadership continuity, institutional memory, expertise and recognition at the intergovernmental level
5	**Empower the GOOS Secretariat** to have clear identity to support the system	• Drive clarity of purpose and focus and enable tangible progress toward GOOS mission and objectives • Enhance capacity to coordinate, communicate, and drive delivery across all components
6	**Introduce the Infrastructure Coordination Group (ICG)** as an OCG with broadened mandate to centralize the coordination of networks and other observing networks	• Expand mandate to coordinate all ocean observing data providers • Centralize efforts for data services and management, metadata harmonization, and performance monitoring to improve global interoperability
7	**Strengthen NFP's role and interaction model** to further Member States participation, national coordination, and integration with global standards	• Build more consistent and accountable system for national reporting and engagement • Enhance collaboration among NFPs and improve the information flow

Streamlining reporting lines will promote greater integration and accountability across GOOS components (1/3)

Proposed GOOS reporting structure



1) Member States are represented in the GOOS structure via IOC and WMO Governing Bodies, NFPs, and Donors
2) Additionally reports to the GCOS Steering Committee
3) Additionally reports to the ISC SCOR
4) GRAs role and position is still under revision and therefore is not detailed out in this proposal, options are included in the appendix
Note: GOOS components are organized in the diagram by following the value chain view

Recommended changes

- The GOOS Steering Committee will be reporting to the IOC Governing Bodies (Assembly, Executive Council) and WMO Governing Bodies (Congress, INFCOM)
- All other GOOS components will report to the GOOS Steering Committee, ensuring clarity, stronger oversight and alignment
  - The GOOS Secretariat (formally known as the GOOS Project Office and GOOS Office in Paris) will be formalized as a standalone component and coordinate with donors, partners and endorsed projects
  - Expert Panels will continue to have double reporting
  - Ocean observing data providers will be coordinated through a single integrated component, the Infrastructure Coordination Group (ICG), that combines the coordination capabilities of OCG, OceanOPS, the BioEco Panel and IODE (see slide #20)
  - There will be a strengthened two-way interaction model with NFPs (see slide #21)
  - GRAs role and position is still under revision and therefore is not detailed out in this proposal
- The clarified structure will enable opportunities for the needed outsourcing/in-kind support by Member States for GOOS components
- Components will be assigned a defined set of targets to ensure system-wide accountability (see slide #26)
- The clarified reporting lines and accountability mechanism will require an increased governance role of the GOOS Steering Committee (see slide #18)

Number of NFPs | GOOS component | External contributor | Oversight | Coordination

Refreshing and strengthening responsibilities across GOOS components will enhance efficiency across the ocean observing community (2/3)

Responsibilities of GOOS components

GOOS Steering Committee

- ✔ Develop and oversee **GOOS strategy** and **biennial workplans** for submission to IOC and WMO Governing Bodies and **respond to governing body requests**
- ✔ Oversee, monitor, guide, and evaluate **GOOS system performance** to ensure alignment with strategic objectives and workplans
- ✔ **Advise Member States** and other **donors** on the importance of and benefits from GOOS
- ✔ **Approve** updates to component **Terms of Reference** (excluding the GOOS Steering Committee's own TOR), Chair/Co-Chairs (per component TOR), workplan, and GOOS endorsed projects
- ✔ **Advocate** for ocean observing and provide **senior level representation** of GOOS and ocean observing in appropriate fora
- ✔ Support Secretariat with **resource mobilization** and **donor engagement**
- ▯ Drive tactical/day-to-day interaction between GOOS components (e.g., ex officio removed from the SC)

GOOS Secretariat — **Details on next slide**

Ocean observing system coordinator | Strategic advisor and advocacy champion | Standards steward | Innovation catalyst

BGC Panel | OOPC Panel | BioEco Panel

- ✔ Identify, set specifications, evaluate, and evolve **Essential Ocean Variables** (EOVs)
- ✔ Co-design and develop optimal **system design requirements** and implementation strategies for EOVs
- ✔ **Collaborate across disciplines** and GOOS components, including with other GOOS Expert Panels
- ✔ Support development of **user-oriented data** and information **products**
- ✔ **Monitor** observing system design
- ▯ Coordinate observing networks / communities, including management of the BioEco Portal (moved to ICG)
- ▯ Develop data-flow standards and data quality control protocols (moved to ICG)

Infrastructure Coordination Group (ICG)

- ✔ Coordinate, provide **guidelines** and **specifications** for **ocean observing data providers**
- ✔ **Grow the network** of ocean observing data providers (GOOS networks and other observing communities including private sector)
- ✔ Monitor **performance** and **coordinate reporting** of the operational system on behalf of ocean observing data providers
- ✔ Promote **innovation** in observing **technologies** and methodologies
- ✔ Set **metadata standards** for ocean data networks and communities and **integrate** with IOC and WMO systems
- ✔ Monitor performance and **assets distribution** (e.g., ensure data flow, data services, and management)
- ▯ Report directly to IOC and WMO (incl. communication, engagement, etc.)
- ▯ Promote the importance of ocean observation through capacity building

NFPs

- ✔ Coordinate **national ocean observing activities** and **engage** key stakeholders (e.g., via National Coordination Committees)
- ✔ Provide **national inputs** for GOOS reporting, EOV tracking, and system assessments
- ✔ Support and strengthen national **participation** in global and regional GOOS initiatives
- ✔ Promote **adoption of GOOS best practices** and open data-sharing standards at the national level
- ✔ Identify **national needs** for ocean observation
- ✔ Advocate for **national investment** in sustained ocean observing systems

GRAs

To be confirmed – under revision

ETOOFS

- ✔ Set global **standards** and **guidance** to ensure continuous improvement of operational ocean **forecasting systems**
- ✔ Improve **integration** of observations and models and **coordinate** forecasting efforts
- ▯ Assess forecasting system performance and strengthen capacity across Member States

✔ **In-scope activity** ▯ **Out of scope activity**

Empowering and prioritizing GOOS Secretariat roles will help advance its mandate and better support the ocean observing community (3/3)

Responsibilities of GOOS Secretariat

	Ocean observing system coordinator	Strategic advisor and advocacy champion	Standards steward	Innovation catalyst
Current in-scope activities	✔ Facilitate **planning**, **coordination**, and **communication** across GOOS components to ensure **system-level integration** and alignment with the 2030+ strategy ✔ Support the development of standards that enable worldwide engagement and data sharing for a **unified**, **comprehensive** ocean monitoring value chain ✔ Facilitate alignment with **sponsors** ✔ Support and **monitor GOOS components** as defined by TOR	✔ Develop, formalize, and maintain **strategic partnerships** with policy makers, scientific community, ocean observing data providers, implementors, funders, and other relevant users ✔ Strengthen GOOS visibility through **communication tools** and **guidance**	✔ Promote and maintain **best practices** and **standards** for ocean observing (setting EOVs, network, and metadata specifications) ✔ Coordinate activities **across GOOS components** to leading to new and better standards	✔ **Promote** emerging **technologies** in ocean observing
New activities	✔ Advise on ocean observing strategies and solutions in response to **policy-based queries** and **respond** to Member States requests ✔ Facilitate alignment with **Member States** and **other donors**	✔ Lead **engagement**, provide **insights** and coordinate **feedback mechanisms** for donors and partners	✔ Promote **GOOS endorsement**, such as through new projects, to facilitate evolvement of the system	✔ **Activate government** and **private sector** engagement for project design based on current and new technologies ✔ **Catalyze pilots** of **technologies** and **tools** ✔ Promote the use of ocean observing data for **products and services** for the ocean economy and disaster risk reduction
Out of scope activities	✘ Matchmaking between different entities or stakeholders ✘ Detailed project management activities for smaller research projects	✘ Organize individual seminars or workshops	✘ N/A	✘ N/A

This view does not include internal facing activities like strategy design, progress tracking and monitoring

Maintain Preserve and strengthen existing core functions and responsibilities

Expand Broaden scope or scale to increase impact and reach

Explore Innovate and test new approaches or partnerships for future opportunities

Consolidating sponsorship under IOC and WMO and defining roles of sponsors, donors, and partners will deliver a coordinated support system

Proposed definitions, roles, and governance for sponsors, donors, and partners

Type	Definition (and examples)	Primary roles	Governance
Sponsor	UN entities with deep institutional alignment that provide long-term staffing and funding commitment, and play a strategic, directive, and enabling role to support GOOS and the ocean observing enterprise • IOC - Lead sponsor • WMO	• Provide formal governance, oversight, and legitimacy within the UN system • Approve and endorse GOOS's strategic direction, workplan, priorities (Lead sponsor only) • Provide core and project-based funding to core support infrastructure, staff, capacity and participate in Donor Coordination Group • Champion ocean observing	• IOC and WMO Governing Bodies to serve as the oversight body for the GOOS Steering Committee
Donor	Nations and institutions that provide core funding and in-kind staffing to support GOOS and its coordination e.g., • Member States • Intergovernmental organizations • Philanthropies • Corporations	• Provide core and project-based funding to core support infrastructure, staff, and capacity • Participate in Donor Coordination Group • Champion and fund ocean observing	• The biennial Donor Coordination Group meeting to serve as a mechanism for resource mobilization and to engage current and potential donors
Partner	Organizations that provide supportive, complementary, collaborative, and advisory contributions with flexible and thematic engagement, e.g., • UNEP & ISC • International Maritime Organization • International Hydrographic Organization • Partnership for Observation of the Global Ocean (POGO) • Private sector (e.g, shipping industry)	• Collaborate with GOOS on specific projects and programs • Promote GOOS goals within their networks, communities, and regional forums	• Define and coordinate relationships through partnership MOUs • Opportunity to serve on the GOOS Steering Committee as a non-Regional Expert Group member

Recommended changes

- GOOS sponsorship will be consolidated under IOC and WMO based on the long-term institutional alignment, investment, involvement, and leadership of the two organizations
  - IOC and WMO Governing Bodies will continue to serve as the oversight and decision-making body for the GOOS Steering Committee, appoint Steering Committee members
  - IOC to continue to serve as the lead sponsor, host the GOOS Secretariat, service components, coordinate efforts of sponsors, and represent GOOS with external audiences
- The role of donors and partners will be distinguished from the role of sponsor to enable targeted strategies for communication, funding, and collaboration
  - UNEP and ISC will be recognized for their historic contribution and transition into serving as partners, with UNEP continuing to play a role in partnering with GOOS on biodiversity and ecosystem-focused work
  - The biennial Donor Coordination Group will serve as a mechanism for resource mobilization without spinning out a new component (see slide #17)
  - GOOS Secretariat will lead partnership engagement in consultation with the respective GOOS components

Enhancing resource mobilization through the Donor Coordination Group will unite funders, align goals, and encourage greater investment in GOOS

Overview of a proposed Donor Coordination Group

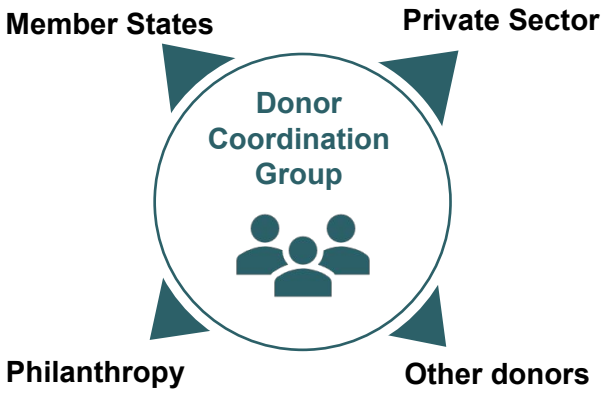
Coordinating members

Convener — IOC Executive Secretary & WMO Secretary General

Co-Chairs — 1 Member State Donor Rep & 1 non-Member State Donor Rep (Elected, rotational)

Facilitator — Selected GOOS Steering Committee and GOOS Secretariat members

Donors



Goals

- Convening of sponsors and donors
- Platform to galvanize and sustain donor support for GOOS and its components
- Tool to engage prospective donors
- Opportunity for donor feedback

Recommended changes

- The Donor Coordination Group will be established to address overall funding gaps and ongoing financial and resource mobilization challenges for GOOS and its components and the ocean observing enterprise
  - Resources include but are not limited to core Programme and Budget, Regular Programme, extrabudgetary, external project funds, and well as other in-kind and staff secondment support
- This group will act as a consultative biennial meeting and not as a new GOOS component
- The group will serve as a platform to link donor and GOOS priorities
- The GOOS Steering Committee and GOOS Secretariat will provide an actionable, prioritized GOOS system-focused “investment menu” and guide donor engagement and investment decisions
- The GOOS Steering Committee, with support from the GOOS Secretariat, will share annual written updates with members on implementation progress and funding impact
- GOOS Secretariat and GOOS Steering Committee will consult with Member States to identify the relevant donor representatives

Note: Before formalizing the Donor Coordination Group it is recommended that GOOS explore the complementarity of the proposed GOOS Informal, Open-Ended Working Group on Ocean Observing Risks and other existing high-level forums for oceans (e.g., High Level Panel for Sustainable Ocean Economy, G7 FSOI, WMO Commons, etc.)

Elevating the GOOS SC by enhancing oversight, expert skills, and member terms will lead to better governance and more effective decision making

Proposed membership structure of the GOOS Steering Committee (SC)

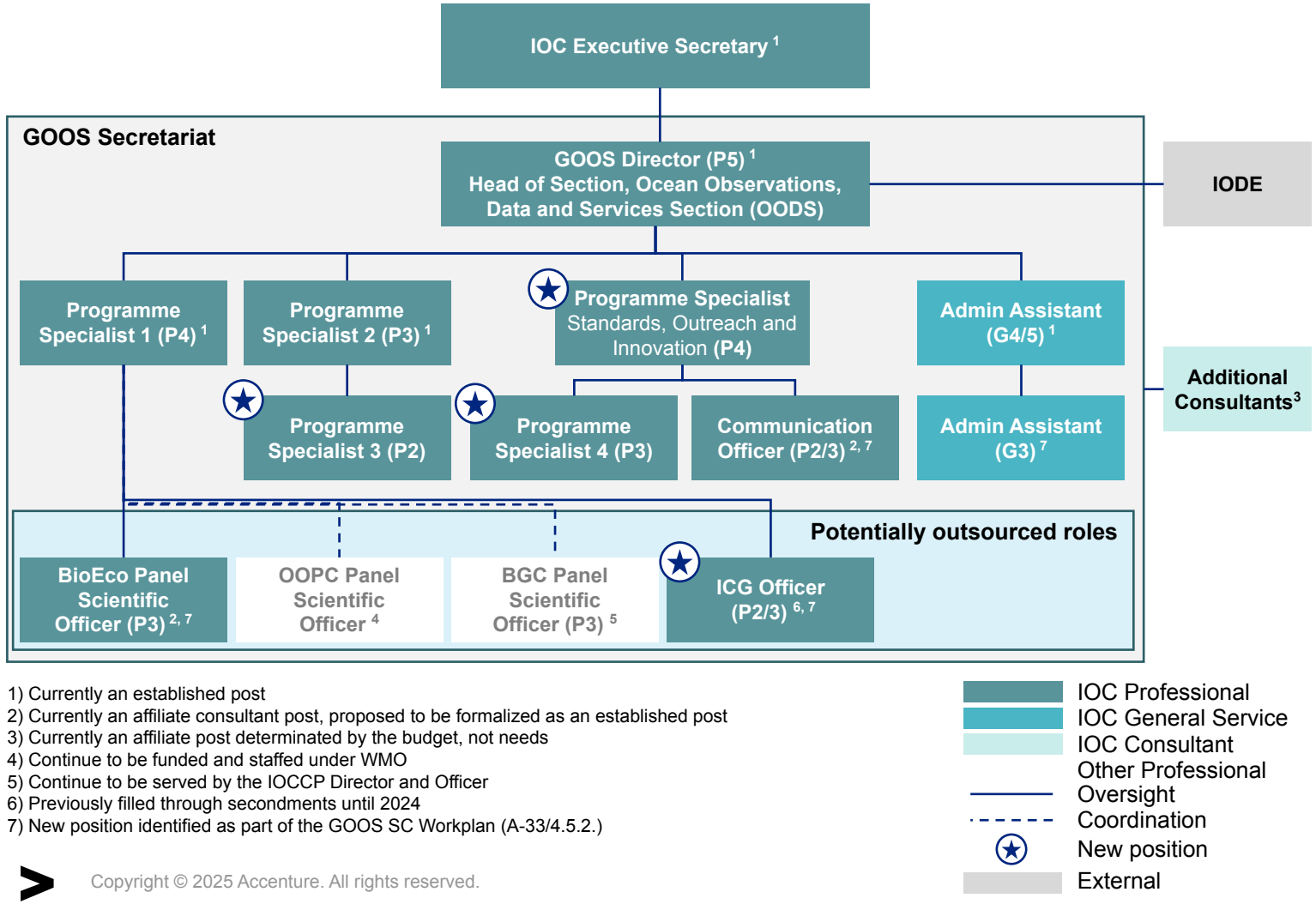
	#	Role / representation	Rotation (illustrative)	Illustrative role description	
Regional experts	1	Group I	Year 1	• Ensure regional priorities are reflected in GOOS decisions • Provide input on capacity development needs and regional resource mobilization	Co-chair x1
	2	Group II	Year 1		
	3	Group III	Year 1		
	4	Group IV	Year 3		
	5	Group V	Year 3		
Scientific and technical experts	6	Private sector	Year 1	• Oversee operational coordination and system performance • Drive adoption of emerging technologies and partnerships • Strengthen private sector engagement and funding opportunities • Align GOOS outputs with global policy frameworks • Promote training and equitable participation globally	Co-chair x1
	7	Data management	Year 1		
	8	OceanOPS liaison	Year 1		
	9	Innovation	Year 1		
	10	Science policy advisor	Year 1		
	11	...	Year 3		
	12	...	Year 3		
	13	...	Year 3		
	14	...	Year 3		
	15	...	Year 3		
Ex-officio	16-25	Components reps.	NA		

Recommended changes

- Steering Committee (SC) will serve as a decision-making and governing body, overseeing GOOS components and responsible to IOC and WMO Governing Bodies
  - SC members will have ocean observation expertise, more targeted skillsets and corresponding roles aligned with 2030+ strategy
  - Ex-officio for GOOS components will no longer be considered as part of the SC, but will continue to collaborate via the GOOS Executive Committee and joint meetings
- Two Co-Chairs – one from regional expert groups (suggested rotation by region) and one from scientific and technical experts – will be elected by the SC every 2 years with opportunity to renew for 2 more years
- Term length for all SC members will be extended from 2 to 4 years including renewal opportunity to serve up to two consecutive terms (8 years total)
- A phased (staggered) transition will be implemented with 7 to 8 members renewed every 2 years
- Regional expert group members will be selected by IOC electoral groups and approved by the IOC Assembly
- Scientific and technical experts will be nominated by an open call to IOC and WMO Member States, selected by the IOC Executive Secretary with WMO approval, while considering representation across both skillsets and ocean basins
- Timebound SC task teams will address specific issues

Formalizing the identity of GOOS Secretariat with additional staff will boost coordination across GOOS and reinforce its operational capacity

Proposed organizational chart for the GOOS Secretariat



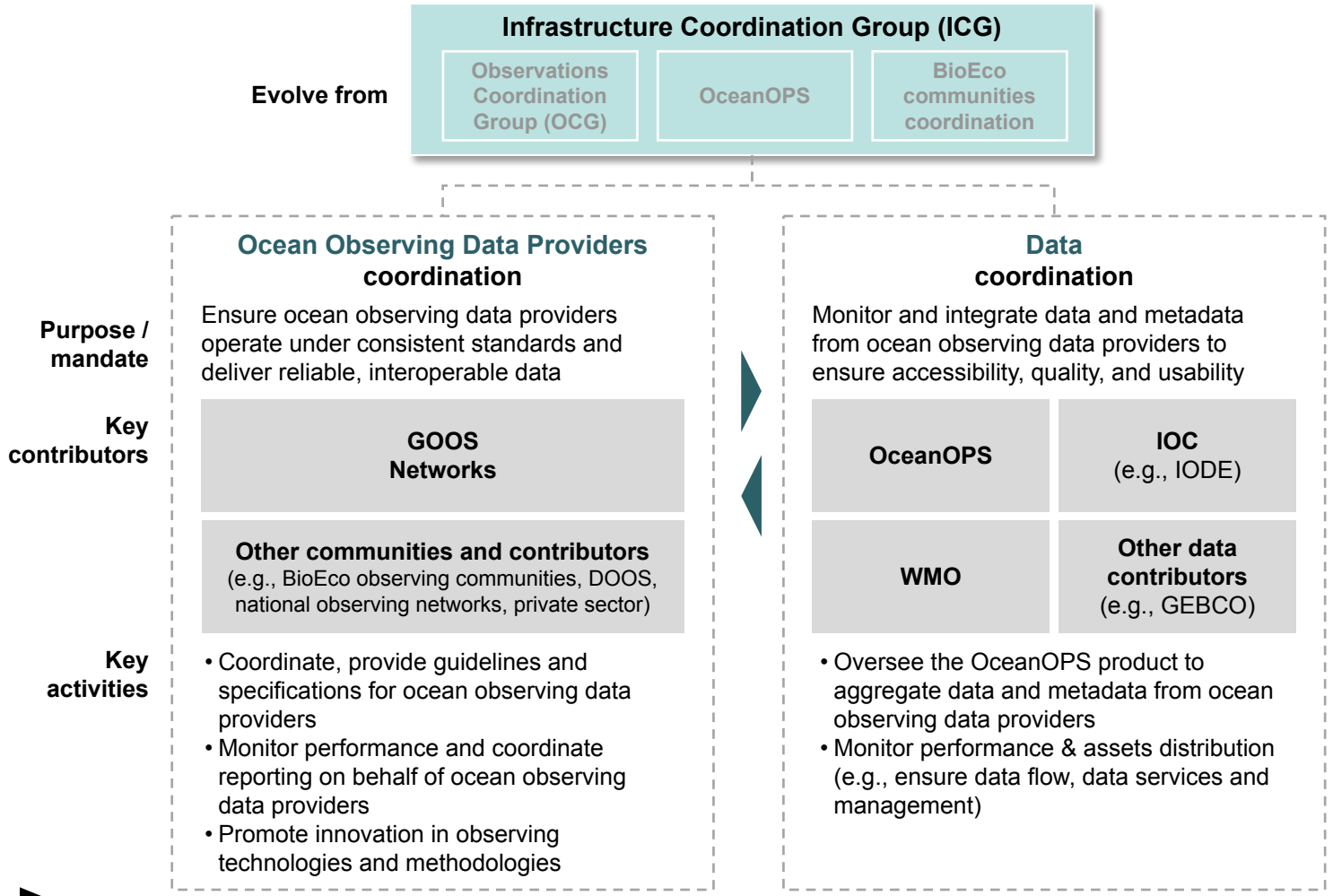
1) Currently an established post
2) Currently an affiliate consultant post, proposed to be formalized as an established post
3) Currently an affiliate post determinated by the budget, not needs
4) Continue to be funded and staffed under WMO
5) Continue to be served by the IOCCP Director and Officer
6) Previously filled through secondments until 2024
7) New position identified as part of the GOOS SC Workplan (A-33/4.5.2.)

Recommended changes

- The GOOS Secretariat, including existing IOC and WMO staff and additional proposed resources, will be formalized as an official component of GOOS and will take on an expanded scope with four prioritized roles supported by existing and new key activities to advance its mission
- Updated team structure will align with the expanded responsibilities and improve operational efficiency
  - The OOPC Scientific Officer will continue to report to their respective WMO department
  - Staffing resources for Panel Scientific Officers, ICG Officers, and other technical roles can be adopted by other organizations (ex: National observing networks, etc.)
- Clear accountabilities will be established across GOOS Secretariat team members to ensure role clarity and balanced workload distribution (see slide #58)
- Contributions from other GOOS components will be formalized to provide complementary capabilities e.g., resource mobilization, strategic planning (see slide #59)
- GOOS Secretariat will create an onboarding document outlining its responsibilities, expectations, etc.

Introducing the Infrastructure Coordination Group will centralize ocean data provider coordination, data management, and strengthen integration

Proposal for Infrastructure Coordination Group (ICG)

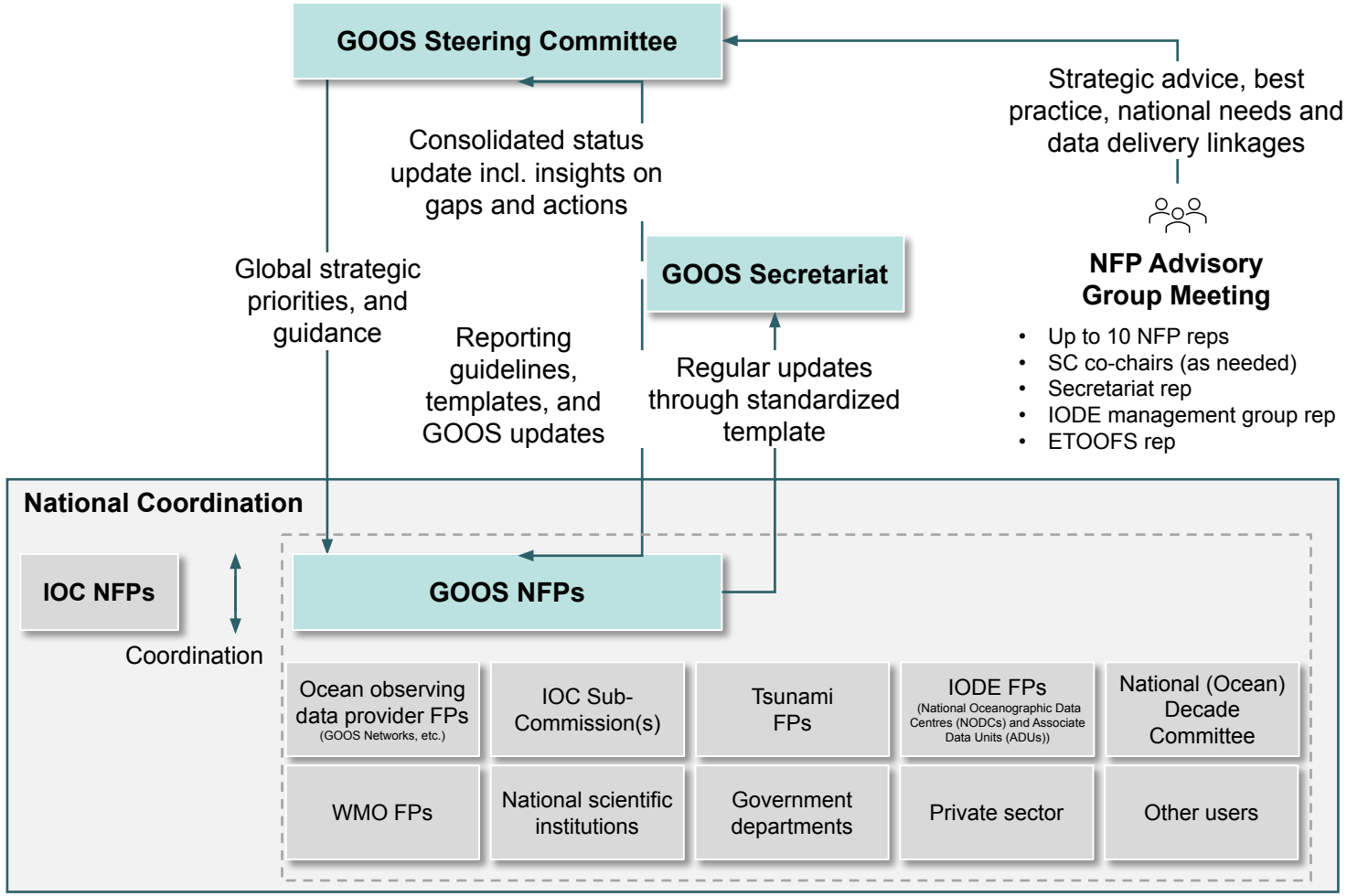


Recommended changes

- Network and data coordination provided currently by OCG, OceanOPS, BioEco Panel and IODE will be merged into a single component – Infrastructure Coordination Group (ICG)
  - ICG will have an expanded mandate to coordinate all ocean observing data providers (e.g., GOOS Networks, biology community, regional and coastal observations)
  - OceanOPS will facilitate implementation of ICG workplan
- A Co-Chair system will be established with one focused on network and one on data, while also introducing Vice Chairs to represent external contributors, ensure biological expertise, and the user community
- ICG will report to GOOS Steering Committee on behalf of all ocean observing data providers contributing to ocean observation and system wide data coordination efforts
  - NFPs will continue to communicate and collaborate with their respective national observing networks and communities to develop and sustain its national ocean observing coordination
- Ocean observing data providers will follow data management standards and protocols set forth by IOC and WMO
- Ocean observing data providers will be encouraged to integrate their own data platforms (e.g., BioEco Portal) with the OceanOPS product

Strengthening NFP's role and interaction model will increase Member State involvement, enhance coordination, and align with global standards

Key NFP interactions in the future model



Recommended changes

- NFPs will have a strengthened role to link national observing efforts with broader GOOS and advocate GOOS at the national level
- GOOS Steering Committee (SC) will provide strategic direction and oversight to NFPs
  - NFP Advisory Group (comprising representatives from IOC Electoral Groups) will be established to ensure Member States perspectives are effectively communicated to the GOOS SC (see slide #32)
  - GOOS Secretariat will coordinate activities among NFPs, serving as the primary point of contact, sharing updates, templates, best practices, consolidating reports and actively supporting engagement between GOOS NFP and IODE focal points (NODCs and ADUs)
- NFPs will be encouraged to coordinate with IOC NFP and other relevant focal points and representatives (e.g., GOOS Network, WMO, IODE) through:
  - Existing national coordination mechanism (national observing networks) or
  - Establish national ocean observing committee/hub that bring together key representatives as per existing TOR and Implementation Guidelines
- NFPs will communicate and collaborate with national ocean observing data providers but the ICG will be reporting on their behalf (e.g., on % observing systems with interoperable EOV dataflows)

→ Key interactions

Additionally, two outstanding decisions that will shape the future structure of GOOS are yet to be addressed

GOOS Regional Alliances (GRAs)

User engagement mechanism

	GOOS Regional Alliances (GRAs)	User engagement mechanism
Key challenge	**GRAs are intended to bridge regional coordination and implementation, but their current structure lacks clarity and coherence** • There is significant variation in the structure and function of GRAs, leading to uneven levels of effectiveness • Interviews revealed confusion and uncertainty about their role and value, including language barriers that hinders collaboration	**Currently, there is insufficient engagement with end-users of ocean observation, resulting in their needs not being adequately addressed** • GOOS lacks a common, actionable view of end-users, resulting in fragmented engagement, limited co-design, inconsistent priorities, and weak justification for long-term funding • Whilst not in scope of the GOOS reform review, the process has confirmed the need for a user analysis and development of user uptake engagement strategy
Options to investigate	• Consider the role and level of integration of GRAs with GOOS (see next slide) • Consider how to sharpen the unique contributions and role vis a vis GOOS in contrast to national system • Consider identifying potential maturity levels for GRAs	• Develop a user uptake strategy • Widen the Expert Panel's mandate beyond EOVs with additional roles on user engagement and co-design • Create a wider "User Engagement Group" to include a broader range of ocean observation end users • Formalize a process of engagement with user communities in collaboration with IOC and WMO • Coordinate and leverage partnerships to further engage with end users

GRA role will be further investigated and discussed during the GRA Forum XII and GOOS SC-15 in March 2026

Degree of integration with GOOS

	Differentiate GRAs in GOOS structure	GRAs as self-governed, independent entities
Overview	• Renewed mandate and responsibilities to strengthen regional coordination of ocean observation • New and clearer process of engagement • Formalized accountability and reporting (e.g., OKRs) • Continued support from GOOS Secretariat • GRAs encouraged to be basin-aligned	• GRAs no longer a separate component of GOOS with no formalized mandate; with flexibility to set their own priorities • Regional autonomy in self-governance and decision-making • Voluntary alignment with GOOS principles rather than formal obligations • No direct support received from GOOS Secretariat
Governance	• GRA Council and GOOS Regional Forum	• Joint meeting between GRAs and NFPs for regional coordination
Pros	✔ Avoids disruption as builds on existing regional infrastructure and relationships ✔ Possibility to enhance regional coordination if mandates are clearly set and implemented ✔ Greater clarity and structure could improve performance and accountability	✔ Provides full autonomy and flexibility for GRAs to set regional priorities ✔ Encourages open dialogue and idea-sharing without formal obligations ✔ Streamlines GOOS structure ✔ Reduces dependency on GOOS Secretariat resources
Cons	✘ Demands change management to implement cohesively across GRAs ✘ Limits GRA flexibility and autonomy ✘ Requires ongoing GOOS Secretariat resources and capacity	✘ Weaker alignment with global GOOS objectives, with a risk of inconsistent standards and practices across GRAs ✘ GRAs may feel demotivated due to reduced formal authority, potentially limiting regional impact

Note: Other options considered included reconfiguring GRAs to basin-aligned, repositioning them under IOC sub-commissions with a stronger role for regional experts in the GOOS Steering Committee, or removing GRAs entirely (more detailes in Appendix slide 54,55)


03
Accountability mechanism
03

The OKRs operationalize the GOOS's revised mission, breaking it down into strategic priorities and measurable outcomes

> To **enable** and **evolve** a **globally integrated**, **responsive**, and **resilient** ocean observing system for **thriving communities** and a **healthy ocean**

Objective	**Enable ocean observing system**	**Evolve globally integrated ocean observing system**	**Be responsive to Member States, suppliers of ocean observation data, and users**	**Ensure resilience of the global ocean observing system**
Key Result	**% observing systems with interoperable EOV dataflows**	**# of Member States contributing to and sharing data from GOOS Networks**	**# of co-developed initiatives or products with stakeholders**	**% increase in GOOS funding and committments**

Suggested process to get started with measuring GOOS results starting in year 2026

1. Define baselines for each Key Result in year 2026
2. Apply a % yearly increase to each Key Result through 2030
3. Embed OKRs into existing performance dashboards/ reporting tools
4. Review Key Results annually and adjust priorities as needed

OKR – Objectives and Key Results

To drive system-wide performance and ensure accountability, it is proposed that components report on four results of the revised mission

Objective	Enable ocean observing system	Evolve globally integrated ocean observing system	Be responsive to Member States, suppliers of ocean observation data, and users			Ensure resilience of the global ocean observing system
Key result	% observing systems with interoperable EOV dataflows	# of Member States contributing to and sharing data from ocean observing networks	# of co-developed initiatives or products with stakeholders			% increase in GOOS funding and commitments
			Member States	Ocean Observing Data Providers	Ocean Observing Data Users	
GOOS Secretariat			✓			✓
Expert Panels				✓	✓	
ICG	✓	✓		✓		Joint reporting
Ocean observing data providers	✓			✓	✓	
NFPs[i]			✓			✓
ETOOFS				✓	✓	

Note: These key results require structured consultations to determine how each GOOS component will contribute to achieving the objectives, while also mapping intersections with other IOC entities (e.g., IODE and related programs)

Recommended changes

- All GOOS components will be assigned a defined set of targets that directly align with the GOOS revised mission
- These targets will serve as measurable indicators of each component's contribution to system-wide goals and will be shared with the GOOS Steering Committee on annual basis via the annual reporting process
  - NFPs will be expected to submit regular reports to the GOOS Secretariat which will consolidate and syntethise to inform strategic decision-making (see slide #21)
  - ICG will submit joint report based on input from ocean observing data providers
  - GOOS Secretariat targets will be aligned with IOC medium-term strategy

✓ **Expected reporting on the key result**

1) Ocean observing data providers includes GOOS Networks and other observing communities

04

Governance

04

Proposed governance structure will deliver accountability and transparent decision-making to support Member States in achieving its commitments to multilateral agreements

Key governance principles

1	Governance meetings will **reflect the global nature of ocean observation** (including global representation)
2	Governance meetings will specify **accountability reporting mechanisms** and **expectations for all parties to contribute** (including two-way interaction model between GOOS Steering Committee and Member States)
3	The governance model will establish a **clear and faster decision-making hierarchy to drive ownership**
4	Governance meetings will **break silos between different components** through **enhanced collaboration** to ensure coordinated ocean observing efforts
5	Key decisions and progress made will be **communicated in a timely manner** to build trust and enable informed participation
6	Meetings, and their composition will be **governed by their respective component TORs**

GOOS meetings will address strategic, operational, and external goals to ensure agile, inclusive governance and focused decision-making

Type	Steering	Cross-component	Component-led	External
Focus	Shape the direction of GOOS and guide the evolution of its mission and structure	Foster collaboration among GOOS components and enable shared planning, and innovation	Support operational execution and ensure components remains responsive and accountable	Connect GOOS with broader ecosystem and support alignment with global needs
Meeting	GOOS Steering Committee Meeting	★ GOOS Conference[1]	Expert Panel Meetings (x3)	IOC Assembly Meeting
	★ Donor Coordination Group Meeting	GOOS Executive Committee Meeting	Expert Panel Exec Meetings (x3)	IOC Executive Council Meeting
		↻ GOOS Secretariat Meeting[2]	★ Joint Expert Panel Meeting	WMO Governing Body Meetings
		↻ Infrastructure Coordination Group (ICG) Meeting[3]	↻ ICG Network Coordination Meeting[4]	Joint WMO-IOC Collaborative Board Meeting (JCB)
		⊗ OCG Executive Committee Meeting	↻ ICG Data Coordination Meeting[5]	Ocean Observing Data Providers Meetings e.g., GOOS Networks (x Mulitple)
			NFP Forum	NFP National Coordination Committee Meeting[7] (x Multiple)
			★ NFP Advisory Group Meeting	
			ETOOFS Meeting	
			GRA Forum[6]	
			GRA Council Meeting[6]	

What is new?

- Strengthen GOOS **Steering Committee** oversight role and **limit members** to 5 Regional Experts and 10 scientific and technical experts
- **Donor Coordination Group** introduced to strengthen resource mobilization

- **GOOS Conference** introduced to strengthen connection between components
- Strengthened Executive Committee to **explore innovation**
- Transition GOOS Management Team meeting into GOOS **Secretariat Meeting**
- **Removed** OCG Executive Committee

- Introduced a **joint Panel Meeting**, **NFP Advisory Group**
- **IODE and ETOOFS** to participate in the NFP Advisory Group for better linkage for data exchange
- Proposed **standardized governance** across Expert Panels

1) To be coordinated with Ocean Obs '29 and beyond, 2) Transitioned from GMT meeting, 3) Transitioned from annual OCG meeting, 4) Transitioned from joint OCG / OceanOPS meeting, 5) Transitioned from OceanOps meeting, 6) GRA Forum and GRA Council Meetings are to be confirmed given that GRAs are still under revision, thus, not included in the deep dive, 7) Applicable only in countries where it exists.

↻ Transitioned meeting ★ New meeting ⊗ Removed meeting

Steering governance meetings

Meeting	Mandate (non-exhaustive)	Suggested participants	Suggested frequency
GOOS Steering Committee Meeting	• Develop and oversee GOOS strategy and biennial workplans for submission to IOC and WMO Governing Bodies • Monitor, guide, and evaluate GOOS system performance to ensure alignment with strategic objectives • Advise Member States and sponsors on participation in and benefits from GOOS activities • Establish short-term task teams to address emerging or time-bound priorities • Approve updates to component Terms of Reference (excluding the GOOS Steering Committee's own TOR), Chair/Co-Chairs (per component TOR), workplan, and GOOS endorsed projects • Select and appoint GOOS Steering Committee Co-Chairs in accordance with established procedures	**Co-Chairs:** Regional Experts rep x1 and scientific / technical expert rep x1 **Participants:** 5 Regional Experts, 10 scientific / technical experts	Quarterly (Q1 in person)
★ **Donor Coordination Group Meeting**	• Convene sponsors and donors to ensure high-level alignment and strategic engagement • Mobilize and sustain donor support to advance GOOS priorities and initiatives • Engage prospective donors and capture feedback to strengthen partnership and investment opportunities • Review biannual written updates prepared by the GOOS Secretariat and shared by the SC to maintain oversight and continuity between meetings	**Co-Chairs:** IOC Executive Secretary, WMO Secretary-General **Participants:** GOOS SC Co-Chairs, Member State donor rep, non-Member State donor rep, GOOS Secretariat rep, selected GOOS SC rep	Biennial (+ annual written update)

Transitioned meeting ★ New meeting ⊗ Removed meeting

Cross-component governance meetings

Meeting	Mandate (non-exhaustive)	Suggested participants	Suggested frequency
GOOS Conference[1]	• Strengthen collective alignment to purpose, strategy, and mission by bringing together Sponsors, Chairs, members of all components, and key collaborators (partners, etc.) via a GOOS-wide forum • Foster connections and collaboration between GOOS components and other IOC entities (e.g., IODE and related programs) to enhance system integration and coherence	**Chair:** SC Co-Chairs **Participants:** Sponsor rep, SC, panel, NFPs members, other IOC focal points (IODE committee), relevant ocean observing stakeholders (civil society, etc.)	Every five years
GOOS Executive Committee Meeting	• Review progress across components and align quarterly priorities with global ocean observing goals • Identify and explore emerging technologies, methodologies, and co-designed solutions • Share updates, coordinate joint initiatives and align stakeholders on key decisions and messaging before the formal SC	**Chair:** SC Co-Chairs **Participants:** Co-Chairs/leadership of all GOOS components	Quarterly
GOOS Secretariat Meeting[2]	• Track implementation of the GOOS Strategy, biannual workplan, and related initiatives • Address bottlenecks and enable timely delivery of GOOS Secretariat priorities, effective coordination among all GOOS components, resource optimization, and joint solutions to common challenges • Monitor timelines and outputs in preparation for upcoming review and reporting cycles • Prepare and consolidate materials to support other components and governance meetings	**Chair:** GOOS Director **Participants:** GOOS Secretariat (including WMO staff)	Fortnight (Every two weeks)
Infrastructure Coordination Group (ICG) Meeting[3]	• Ensure ocean observing data providers operate under consistent standards and deliver reliable, interoperable data • Monitor and integrate data and metadata from ocean observing data providers to ensure accessibility, quality, and usability • Identify synergies across ocean observing data providers, gaps in coverage, data interoperability, and lead network integration and stakeholder engagement • Approve the annual report for the SC and select ICG Co-Chairs and Vice Chairs	**Chair:** ICG Co-Chairs **Participants:** ICG Vice-Chairs, Ocean observing data provider rep (GOOS Networks, etc.), OceanOPS Manager, GOOS Secretariat rep, IOC rep (IODE, OBIS, etc.), WMO rep	Annual
OCG Executive Committee Meeting	• Oversees the development and implementation of the OCG Work Plan, managing resources, inter-sessional activities, communication with the OCG, and relationship with other bodies	**Chair:** OCG Chair **Participants:** OCG Vice-Chairs, OceanOPS Manager, GOOS Secretariat and WMO rep	Quarterly

Transitioned meeting New meeting Removed meeting

1) To be coordinated with Ocean Obs '29 and beyond 2) Transitioned from GOOS Management Team meeting 3) Evolved from OCG meeting

Component-led governance meetings

Component	Meeting	Mandate (non-exhaustive)	Suggested participants	Suggested frequency
Expert Panels	**Expert Panel Meeting** (x3)	• Align on scientific priorities and review progress on EOV development and implementation • Develop and update workplans, deliverables, and recommendations for the SC	**Co-Chairs:** Panel Co-Chairs **Participants:** All Panel members, Panel project/scientific officer(s)	Quarterly (Three times per year)
	Expert Panel Exec Meeting (x3)	• Track progress on specific EOV tasks and panel operations, address technical or logistical challenges, and coordinate day-to-day actions • Prepare for Expert Panel Meeting, draft technical documents, and synthesize updates for reporting	**Co-Chairs:** Panel Co-Chairs **Participants:** Panel project/scientific officer(s), other Panel reps (if needed)	Quarterly
	★ **Joint Expert Panel Meeting**	• Coordinate across Panels to align on scientific priorities, EOVs and implementation strategies • Exchange methodologies, evaluation frameworks, and best practices	**Chair:** One of the Panel Co-Chairs **Participants:** Panel Co-Chairs, Panel project/scientific officer(s); GOOS Secretariat rep	Annual
ICG	**ICG Network Coordination Meeting**	• Ensure ocean observing data providers operate under consistent standards and deliver reliable, interoperable data • Review status, coverage, and data delivery of ocean observing data providers, respond to queries and escalations • Discuss requirements, observing advances, environmental stewardship, metrics, standards and best practices, and capacity development for ocean observing data providers	**Co-Chairs:** ICG Co-Chairs **Participants:** Ocean observing data provider rep; Secretariat rep	Quarterly / Monthly
	ICG Data Coordination Meeting	• Oversee the OceanOPS product to aggregate data and metadata from ocean observing data providers • Monitor performance & assets distribution (e.g., ensure data flow, data management) • Advance metadata standardization and integration and enable new data streams across ocean observing data providers	**Chair:** ICG Co-Chairs **Participants:** OceanOPS manager and staff; Secretariat rep	Weekly
NFPs	**NFP Forum**	• Communicate national needs and gaps • Strengthen collaboration, peer learning and share best practices, guidance, templates • Select NFP Advisory Group members by electoral groups	**Chair:** NFP Advisory Group Chair **Participants:** All NFPs, GOOS Secretariat rep	Annual
	★ **NFP Advisory Group Meeting**	• Provide strategic advice on Member States related matters to the SC and Secretariat • Serve as a sounding board for new initiatives, policies, engagement models, and capacity development • Support generating best practices for national system development and coordination, alignment with global frameworks, and ocean observing applications • Discuss the linkage between national needs and data delivery • Work with Secretariat on NFP reporting and accountability	**Chair:** One of the members **Participants:** 1-2 representatives from each IOC electoral groups, SC Co-chairs (as needed), Secretariat rep, IODE management group rep, ETOOFS rep	Biannual
ETOOFS	**ETOOFS Meeting**	• Identify gaps, successes, and technical priorities across observing, data management, and forecasting systems and review progress and performance	**Chair:** ETOOFS Co-Chairs **Participants:** ETOOFS members, Secretariat rep	Annual

Transitioned meeting ★ New meeting ⊗ Removed meeting

Expert Panel Meeting, Joint Expert Panel Meeting, NFP Advisory Group, and ETOOFS Meeting will be selecting their respective Chair/Co-Chairs

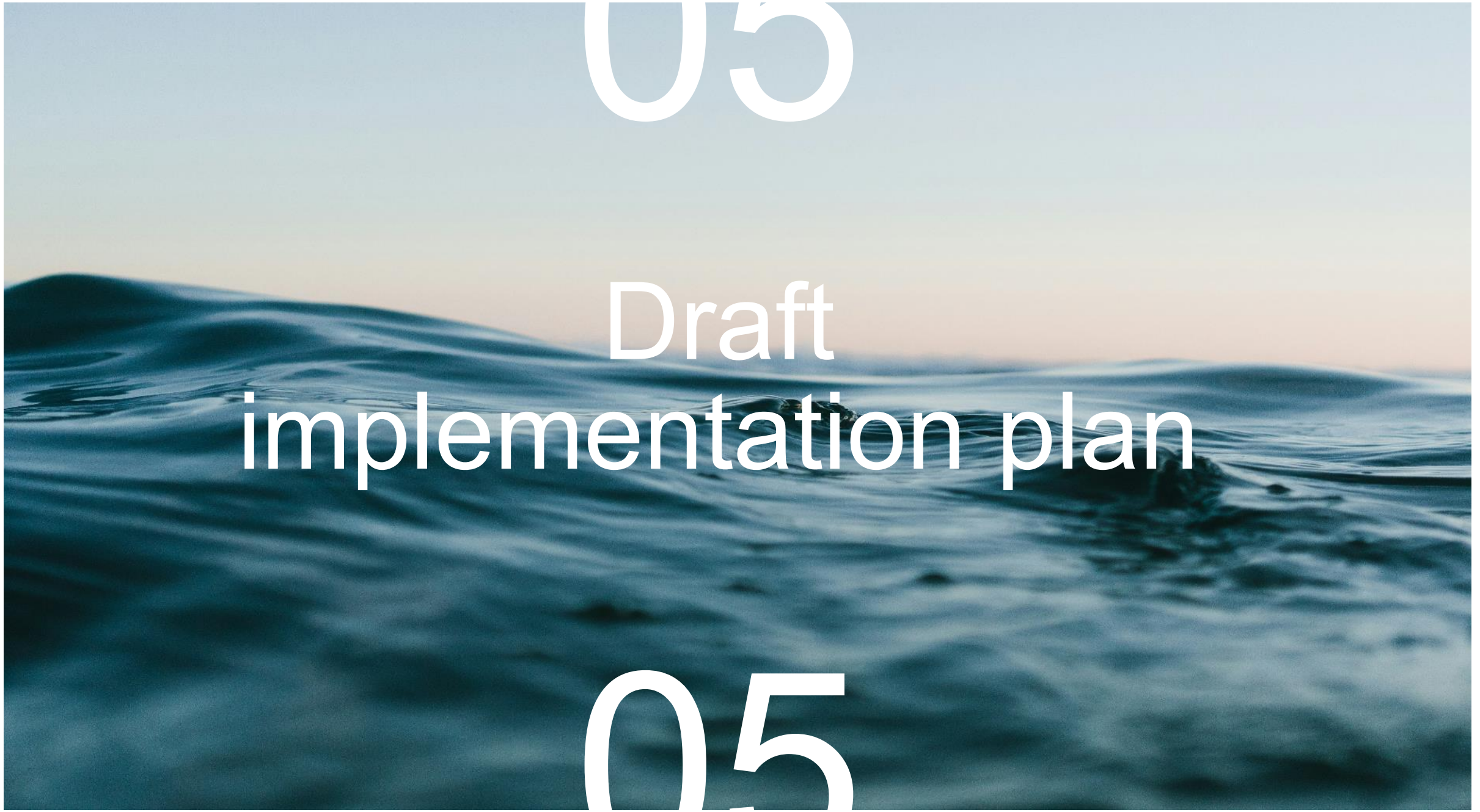
External

Key external governance meetings

Meeting	Mandate (non-exhaustive)	Suggested participants	Suggested frequency
IOC Assembly Meeting	• Oversee the overall implementation and progress of GOOS within the IOC framework • Approve and adopt the GOOS Strategy, biennial workplan and budget, and major reforms (e.g., creation or removal of components) • Approve the five GOOS SC "Electoral Group" members, amendments to SC TOR • Encourage Member State contributions of observations, data, and resources towards GOOS • Determine IOC's contributions to GOOS, including financial, human, and technical resources	**Chair:** IOC Chair **Participants:** All 152 Member States	Biennial
IOC Executive Council Meeting	• Review GOOS-wide annual report submitted by the GOOS SC • Ensure GOOS alignment with IOC strategy, objectives, and related programs (e.g., IODE, Ocean Decade) • Provide strategic guidance to the SC and serve as its escalation and advisory body	**Chair:** IOC Chair **Participants:** 40 IOC Executive Council Member States	Annual
WMO Governing Body Meetings (INFCOM, Executive Council, Congress)	• Review GOOS-wide annual report submitted by the GOOS SC • Ensure GOOS alignment with WMO strategy, objectives, and related programs • Provide strategic guidance to the SC and serve as its escalation and advisory body • Determine WMO's contributions to GOOS, including financial, human, and technical resources	**Chair:** As per WMO TORs **Participants:** GOOS SC co-chair or co-chair nominated representative	-
Joint WMO-IOC Collaborative Board Meeting (JCB)	• Serve as the primary forum for sponsor coordination and collaboration, in line with the JCB TOR • Engage in accordance with the JCB TOR, the WMO–IOC Collaborative Strategy, and relevant topics as identified by the JCB, including joint work between WMO and IOC, such as GOOS, GCOS, and WCRP • Promote integrated ocean observation	**Co-Chairs:** WMO and IOC nominated representatives **Participants:** As per JCB TOR	Annual
Ocean Observing Data Providers Meetings e.g., GOOS Networks (x Multiple)	Exemplary for GOOS Networks (e.g., ARGO): • Design and approve network specification sheets • Update, approve, and implement network strategies to meet evolving activities and user needs • Select GOOS Network Meeting Chair • WHEN APPLICABLE: Onboard, coordinate, oversee, and manage network NFPs • WHEN APPLICABLE: Oversee network task teams, and working groups, and communications (website, map products, etc.)	Exemplary for GOOS Networks (e.g., ARGO) **Chair:** GOOS Network Exec Board Chair **Participants:** All NFPs, GOOS Secretariat rep	Annual
NFP National Coordination Committee Meeting[1] (x Multiple)	• Coordinate national implementation of GOOS activities across NFPs • Promote dialogue between scientific institutions, government agencies, and private sector • Track and report national contributions to global ocean observing efforts • Leverage existing national ocean observing coordination structures, when exists	**Chair:** GOOS NFP **Participants:** See stakeholders in the "National Coordination" box on the NFP recommendations (slide 21)	Annual/ Biannual

Transitioned meeting New meeting Removed meeting

1) Applicable only in countries where it exists, see NFP slide for more details on NFP national coordination


05
Draft
implementation plan
05

Key considerations for the draft implementation plan

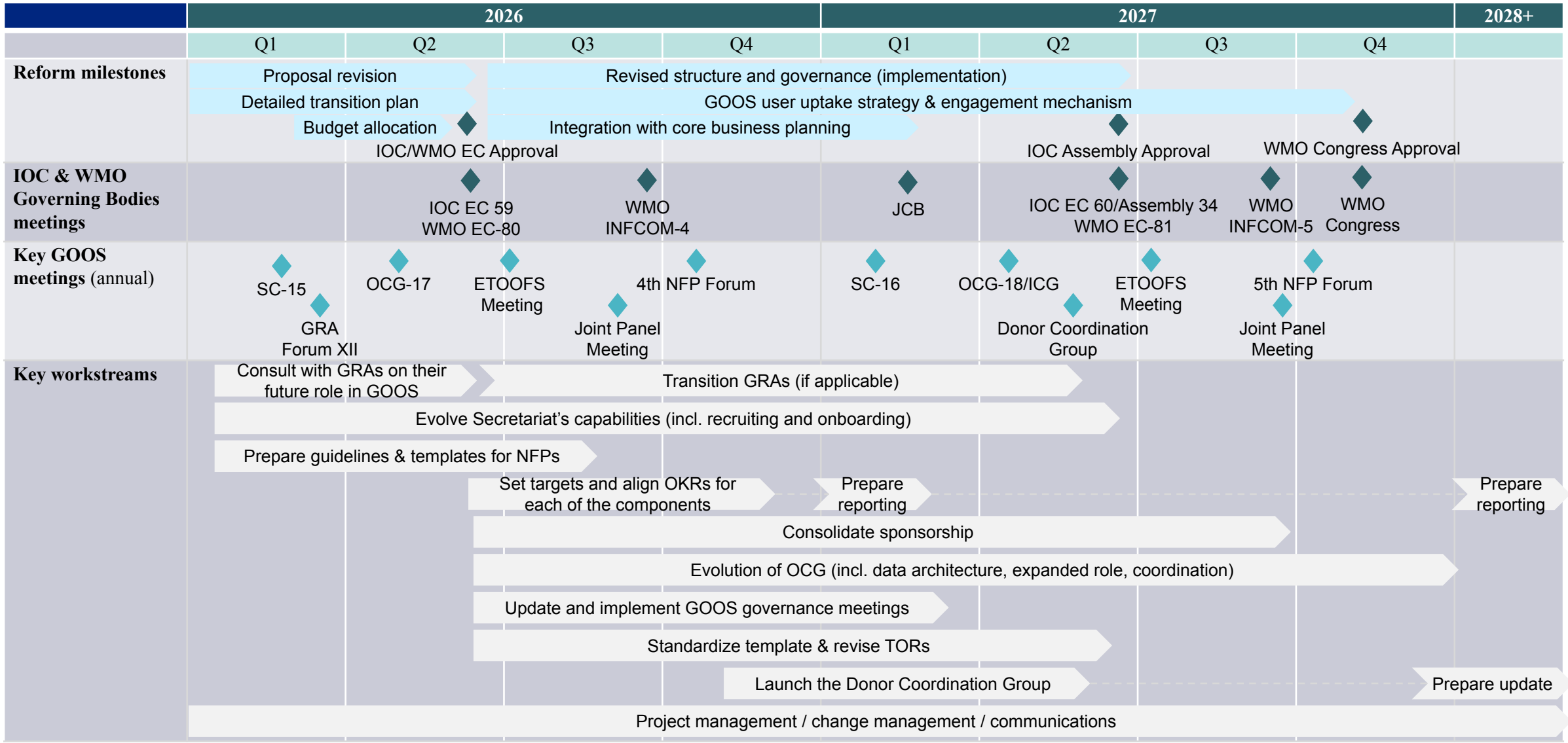
1. The draft implementation plan is intended as an initial, high-level guide to support planning for the GOOS reform process

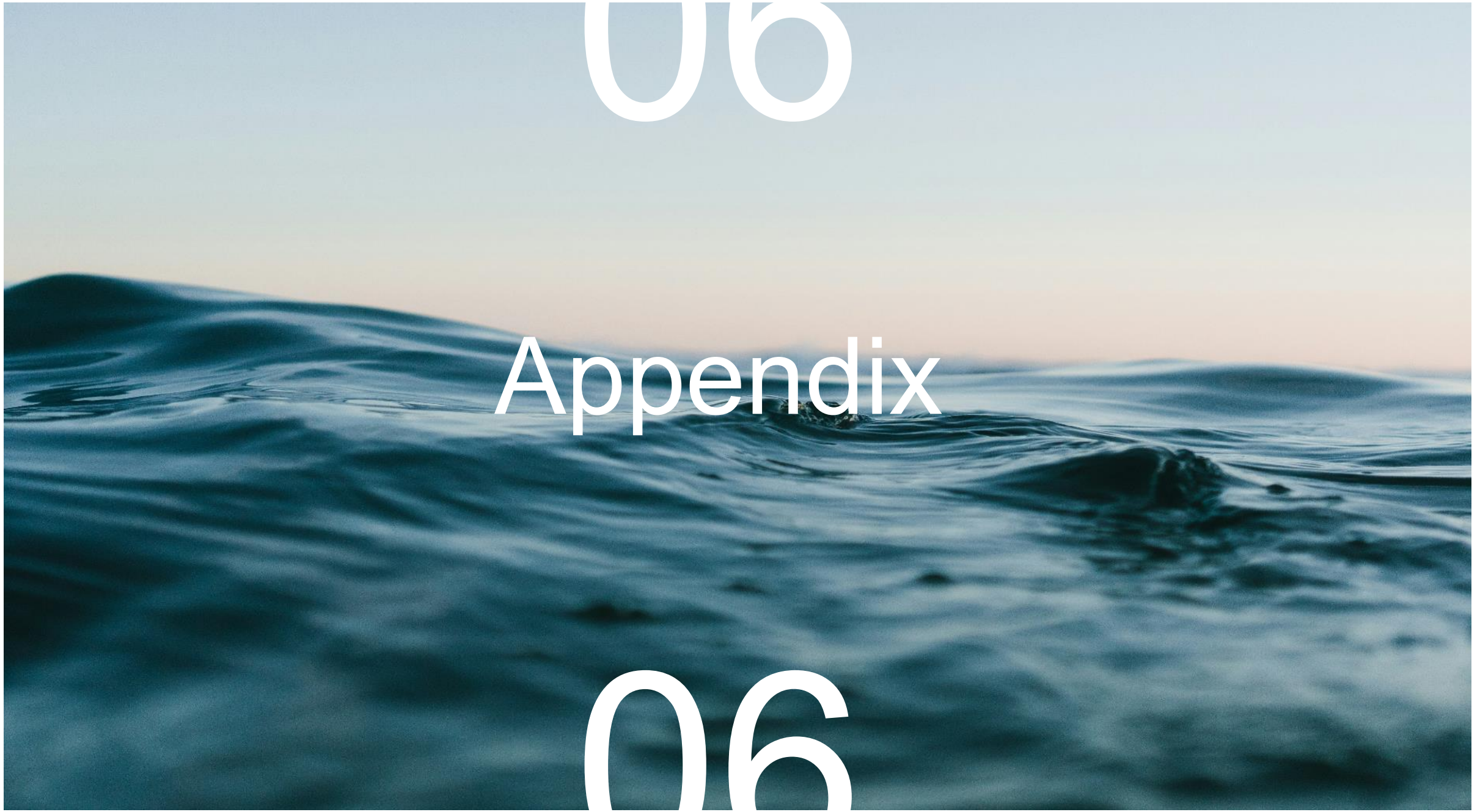
2. All milestones, timelines, and activities are indicative and subject to further refinement

3. Successful implementation will require additional detailed planning, ongoing consultation with stakeholders, and flexibility to adapt to evolving needs and feedback

4. The roadmap should not be interpreted as a finalized schedule, but rather as a working draft to inform next steps and facilitate discussion

High-level draft implementation plan for GOOS reform





06

Appendix

06

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Appendix

5.1

Ocean observing enterprise today

> *GOOS is unique in being the only body within the UN system with a clear mandate on ocean observation.*

Less than 10% of the ocean is being regularly observed[(1)]

(1) GOOS 2030 Strategy

The ocean observing system is advancing in response to shifting global priorities, technological innovation, and new ecosystem demands

Growing user base

Data is no longer only for scientists and Member States. A **diverse set of users** – from the private sector to the ocean, climate, and weather communities and citizens – are increasingly leveraging information for decision-making, innovation, and resilience.

Insights beyond data

Stakeholders are asking for more than raw data. They need **actionable insights** – interoperable products, tailored services, and user-friendly tools that transform ocean observing data into real-world value to guide daily operations and long-term planning.

Recognition for partnerships and technology

The complexity of the ocean observation ecosystem demands **strong partnerships**. Engaging non-traditional stakeholders, fostering cross-sector collaboration, and integrating emerging technologies are essential to unlocking impact and innovation.

Holistic understanding of our ocean

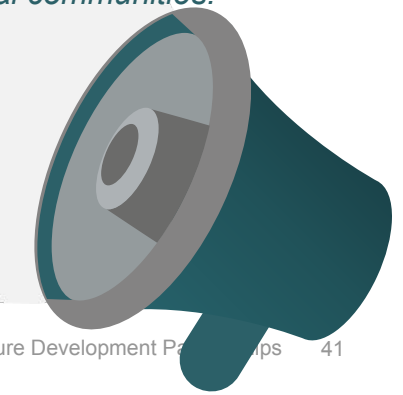
The ultimate goal is a connected, **systems-level understanding** of the ocean that integrates physical, chemical, biological, and socioeconomic dimensions. This enables smarter decisions and strengthens resilience in the face of global change.

Industries such as oil and gas exploration, offshore energy, marine logistics, and fisheries all need detailed ocean observing data.

GOOS should strengthen the 'value chain' – ensuring that data collected leads to actual value, such as usable products and services.

Current pressures make it even more urgent and important to work collectively and build stronger partnerships; otherwise, within a decade or two, everything could fall apart.

[The scientific community] needs to analyze and translate ocean data into formats that are understandable and actionable for policymakers and local communities.



Source: Stakeholder interviews

While the demand and strategic relevance of the ocean observing system is growing, significant challenges persist across the enterprise

Sustainable funding across the ecosystem

Ensuring long-term, reliable, and diverse funding to support coordination, infrastructure, operations, and service delivery

Varying priorities among Member States

Building political will, support, and active participation from Member States to sustain and scale global ocean observation

Coordination among systems and nations

Overcoming the siloed observation systems and governance by improving alignment across global, regional, and national levels

Unequal global coverage and capacity

Addressing disparities in observation capacity, talent, and resourcing to ensure equitable participation in ocean observation

Emerging technology adoption and usage

Understanding, adopting, and integrating new technologies to improve efficiency, expand coverage, and unlock innovation

User engagement and co-creation

Ensuring that infrastructure, data, and services are designed with users in mind, transforming observations into actionable insights

Visibility and broad-based support

Raising the profile of ocean observation as an essential global public good across stakeholders to secure sustained investment

Source: Stakeholder interviews

Effective governance and coordinated partnerships are thus essential to align diverse stakeholders and drive the integrated system forward

Intergovernmental Organizations

Coordinate global cooperation, set standards, and provide platforms for sharing ocean data and knowledge

International Treaties and Frameworks

Set commitments, standards, and cooperative rules that underpin coordinated ocean observations

International and Regional Bodies

Facilitate collaboration, harmonize data collection, and address shared challenges

Government Agencies

Fund, regulate, oversee, and operate national ocean observation programs

Regional/National Ocean Observation Systems

Integrate infrastructure, and research institutions into sustained observing networks

Global Ocean Observing Networks

Provide long-term, global, high-quality, in-situ ocean observations

Networks and Initiatives

Connect institutions, countries, and experts to advance specific themes in ocean observations

Research Institutions and Universities

Conduct fundamental and applied ocean research, operate observing platforms, and train scientists

Non-Governmental Organizations

Advocate for ocean health, conservation, and data transparency

Private Sector

Develop technologies, deliver observation and data services, and apply ocean data to support industries

Non-exhaustive list of stakeholders. Source – Accenture Research

At the heart of the ocean observing ecosystem, GOOS and its components drive critical functions across the entire value chain

INPUTS Requirements	PROCESS Observations deployment & maintenance	OUTPUTS Data & information products	IMPACTS Delivery of services to end users
Provide national and regional stakeholder inputs to requirements setting	Coordinate national and regional observing efforts	Control data quality and standardize / format raw data	Promote the importance of ocean observation through capacity building
Identify and set requirements for EOVs, incl. specification sheets	Develop and maintain observing infrastructure (e.g., satellites, buoys)	Import & merge data (e.g. satellite and in situ) into models	Assess and monitor climate impact
Develop sampling requirements and implementation strategies	Guide standards, best practice and network specifications for data delivery	Integrate observations into numerical models	Leverage data for operational services e.g., weather forecasts
Guide evaluations and assessment of the system, engage scientific community	Coordinate GOOS Networks and ensure efficiency and data flows	Ensure usability through visualization and interface	Assess and monitor ocean health
Set standards via RRR, WIGOS & GCOS	Capture data based on defined variables	Enable data access for public	Deliver other actionable insights through data
	Monitor performance & assets distribution (e.g., ensure data flow & tech support)	Provide advice on operational ocean forecasting systems	
		Develop tailored data and information products/services	

Build advocacy and visibility with stakeholders to build and facilitate partnerships to extend reach and impact

Coordinate observing system components and ensure interoperability and alignment across the system

Promote best practices, standards, frameworks and oversee governance (e.g., funding, success metrics)

Enable strategic innovation through new partnerships, funding, co-design and piloting new technologies and methodologies (projects)[1]

Provide strategic direction and oversight for ocean observing and Member States

Provide financial and resources support and monitor progress and impact of funded initiatives

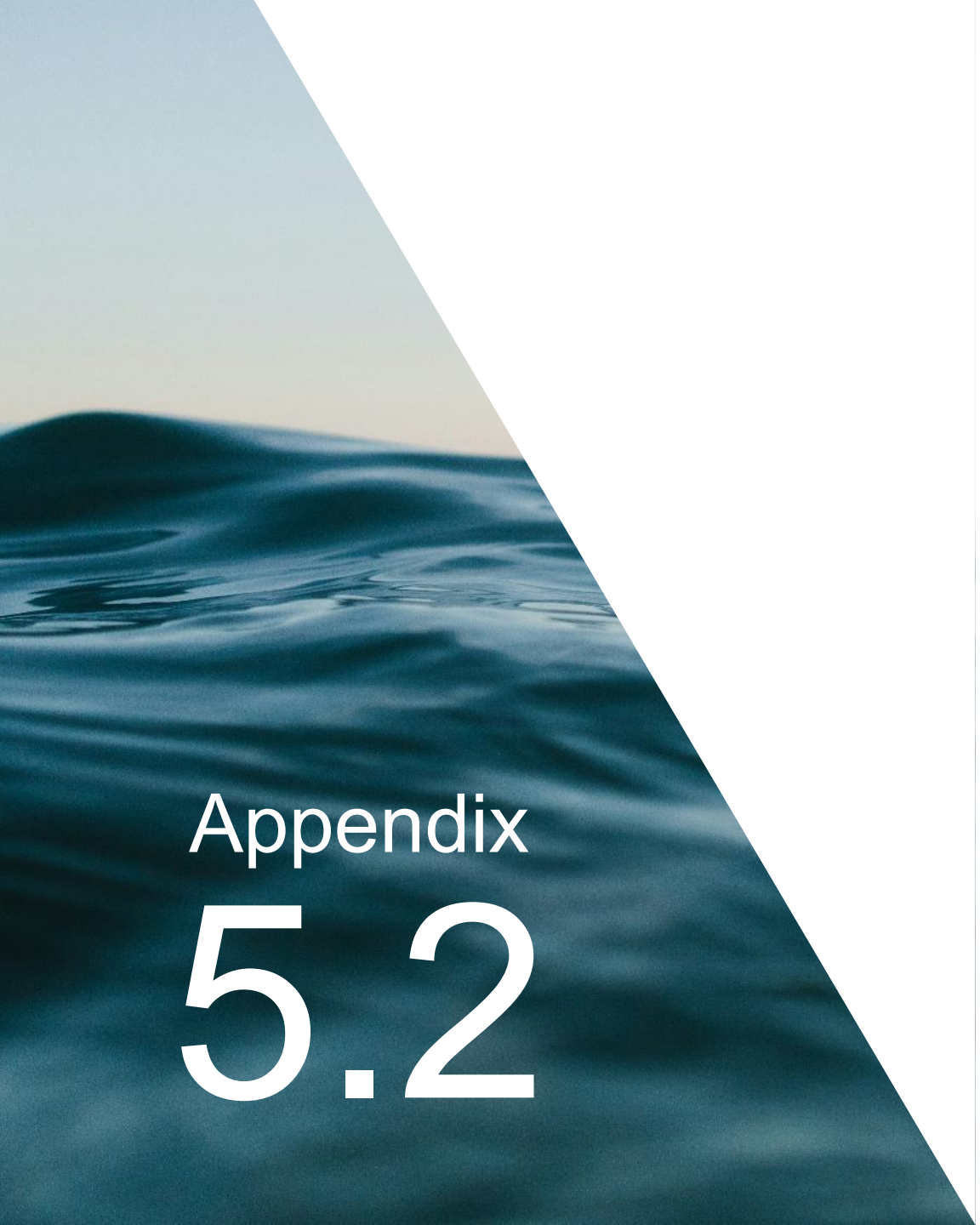
Cooperate and partner with the ocean observation ecosystem on specific themes and scope (ex: MOUs)

In-scope for GOOS

Out of scope for GOOS but influenced by GOOS

GOOS Steering Committee, GOOS Secretariat, Expert Panels, OCG, OceanOPS, GOOS Networks, GRAs / NFPs, ETOOFS

1) In coordination with Ocean Decade



Appendix

5.2

Current state analysis

> *There is fragmentation across GOOS components – panels, regional alliances, national focal points – and uneven regional capacities. Smooth coordination is needed between them.*

Key strengths of GOOS identified during stakeholder interviews

Serves as the recognized **global brand** and **undisputed leader** within the ocean observation community, with strong trust from the scientific community and beyond

Holds the unique role of establishing **standards** and **best practices** for interoperability and system design – e.g., clearly defined and widely adopted Essential Ocean Variables

Leads the coordination of the complex global ocean observation system through a **passionate** and **dedicated secretariat**, together with a broader organizational structure

Functions as a hub for **global expertise** and **scientific leadership** with multidisciplinary integration, enabling high-quality data, innovation, coordination, and the development of best practices

Plays a **critical role** in addressing **emerging societal needs** such as disaster resilience, climate adaptation, ocean health, and supporting a sustainable ocean economy, in addition to supporting weather and climate users

Convenes nations, states, users, and stakeholders via the multilateral **UN platform** to advocate for **neutral** and effective ocean observation collaboration

Key challenges GOOS faces identified during stakeholder interviews

STRATEGIC FOCUS

- Unclear **articulation of GOOS' core mission** - whether it is primarily a coordinator, a provider of data, or an advocate for specific end uses
- Lack of **prioritization and strategic focus** leading to dispersed effort, over-extension, and ambiguity about GOOS' core mandate
- GOOS's **brand's visibility** is deep within scientific circles, but shallow among decision-makers, the general public, or non-scientific community
- Uncertainty and difficulty in long-term planning and maintenance due to **lack of sustained funding**
- Difficulty in **demonstrating ROI** due to lack of widely recognized examples

STAKEHOLDER ECOSYSTEM MANAGEMENT

- **Fragmented mechanisms** for cohesive engagement, requirement-gathering, and ongoing dialogue
- Missed synergies, and limited integration of regional priorities into global strategy due to **silos** between national, regional, and global activities
- Funders **lack dedicated forums** with GOOS to discuss priorities or see clear value propositions
- Dependence on **volunteer efforts** for engagement roles, limiting stakeholder coordination in underrepresented regions
- Insufficient communication and **outreach outside** the traditional scientific community

STRUCTURE, PROCESS AND GOVERNANCE

- Unclear reporting lines and **insufficient connection** between decision-making bodies in complex structure
- Insufficient **professional staffing and frequent rotation** of GOOS steering committee members
- Overlapping or unclear responsibilities, with some structures acting more like **information pass-throughs** without added value
- Processes for assessing user needs, setting priorities, and linking observation networks to societal impact remain **fragmented and uneven**
- Administrative **burden and (lack of) high-level sponsorship** of UNESCO under a biennial budgeting process

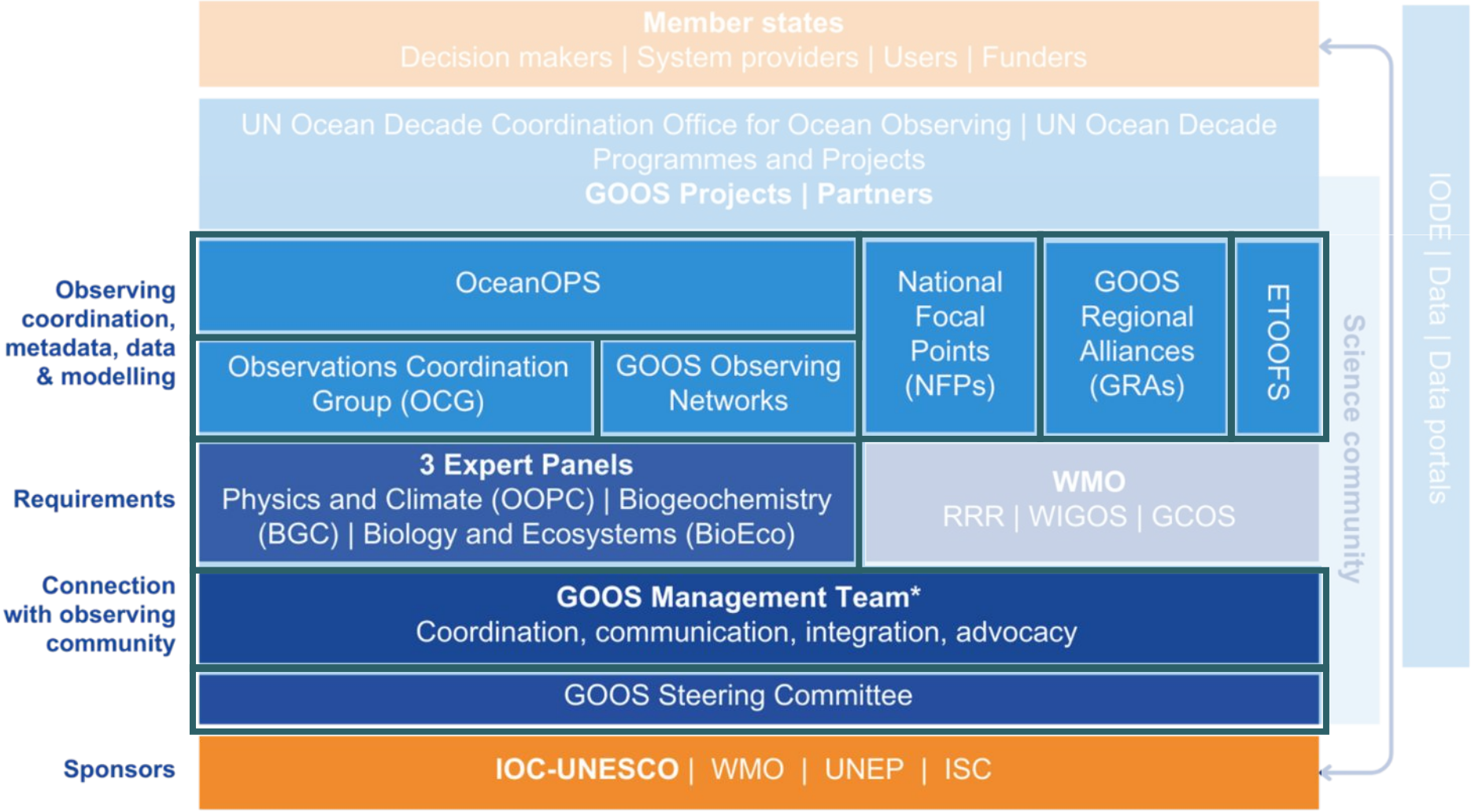
CAPABILITY DEVELOPMENT AND EQUITY

- **Limited support** for early-career scientists, emerging technical skills like AI and data assimilation, and thematic areas such as biogeochemistry
- High costs of ocean observing instruments and insufficient infrastructure **restricts ability** of many countries to contribute data and benefit equitably
- Initiatives are typically tied **to short-term projects** rather than embedded in national infrastructure
- Paywalling or monetizing ocean data could create significant **disparities in access**

TECHNOLOGY, DATA AND INNOVATION

- Varying views on the need to **reform EOVs** – prioritize vs. expand (social, economic)
- No **framework** for technology assessment and integration constraining adoption by end users
- GOOS's enabling role in facilitating open data is under-recognized and challenged by **fragmented practices** and lack of incentives
- Challenges in **data accessibility and usability**; moving beyond providing raw data to delivering actionable insights tailored for users
- Limited support for developing **cheaper, standardized technologies** for broader deployment

To understand GOOS governance, we started by reviewing the “block diagram” to understand the structure and associated components



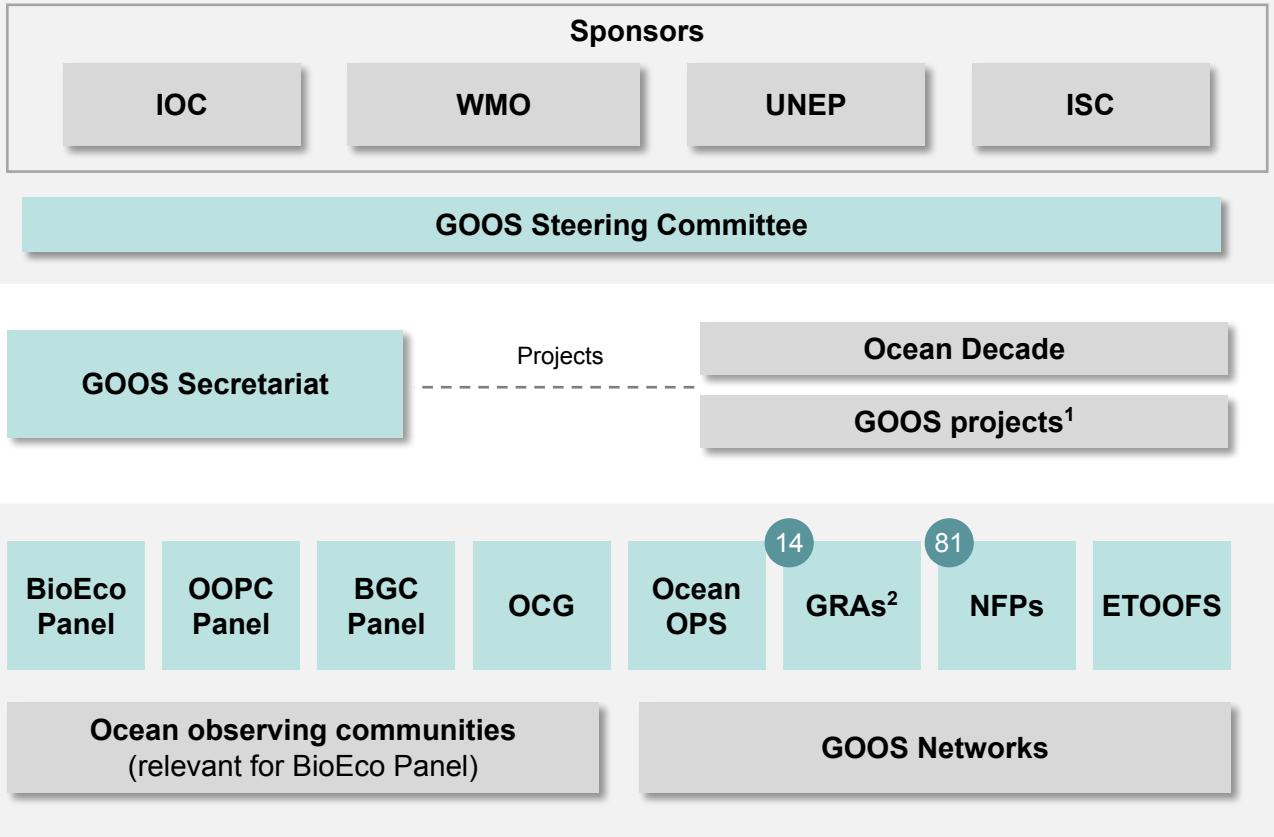
GOOS component

- The terms of reference have been defined
- It plays an active role in GOOS operations
- The GOOS Secretariat coordinates with this entity

GOOS Sponsor

- The MoUs with WMO, UNEP, NOAA call out the terms of engagement but are **not being considered** as components for this analysis

To support strategic redesign, we simplified the current structure to understand how different components collectively deliver on the mission



Governance & oversight

- Sponsors provide financial and strategic oversight
- GOOS Steering Committee ensures strategic alignment

Coordination & projects

- GOOS Secretariat connects governance with implementation, managing projects and facilitating collaboration between components

Operational & scientific components

- Core GOOS components deliver technical expertise and implement observation activities e.g., coordinate data collection, provide scientific guidance, and connect global strategies with regional and national execution

Number of GRAs/NFPs

GOOS

External Contributor

1) Current GOOS projects include Tropical Pacific Observing System (TPOS), Deep Ocean Observing Strategy (DOOS) and Integrated Marine Debris Observing System (IMDOS)
2) Associated Organizations and other Task Teams include SAON, SAEON, SOOS, and ArORA Task Team

We identified key challenges related to governance, integration and funding that constrain GOOS's ability to function as a fit-for-purpose global system

Inconsistent governance and reporting

Fragmented structures and unclear reporting lines across GOOS components create inefficiencies and reduce accountability, highlighting the need for clearer roles and coordinated oversight.

One of the weaknesses is a lack of clarity about roles and expectations.

Coordination gaps across components

The different parts of GOOS (Secretariat, Steering Committee, GRAs, NFPs, etc.) do not always work in a fully aligned or connected way, which oftentimes creates inefficiencies and duplication.

There is fragmentation across GOOS components—panels, regional alliances, national focal points—and uneven regional capacities.

Weak national and regional integration and representation

Many National Focal Points remain inactive, and Regional Alliances vary widely in capacity. Uneven engagement limits GOOS's ability to reflect member states' diverse needs and secure support.

There is no vertical linkage ensuring synergy between the national, regional, and global levels.

Administrative burden from UNESCO

As part of the IOC/UNESCO, the GOOS Secretariat faces bureaucratic and procedural hurdles, including funding and management fees, which slow down decision-making and program delivery – this is being addressed through IOC autonomy process.

GOOS is constrained within UNESCO, resulting in a massive administrative burden, convoluted decision-making processes, and strict budget limitations.

Limited alignment with sponsors and member states

GOOS's individual components and goals are not always fully connected with sponsor's strategic direction or with the priorities of member states, limiting political support and resourcing.

One big gap is better integration with IOC mandates to align GOOS work strategically with the broader system, which has not been fully realized.

Limited professional staff and heavy reliance on volunteers

GOOS operates with a very small GOOS Secretariat, placing disproportionate responsibility on volunteers and experts. It creates limits on the system's ability to scale and sustain activities.

GOOS relies heavily on volunteer contributions… some regions simply lack the available experts or volunteers, making engagement inconsistent and challenging.

We also drew inspiration and best practices from other entities across the IOC, WMO, and the wider global observing ecosystem

	GOOS Ocean observations	**GCOS** Climate observations	**GEBCO** Bathymetry	**GEO** All Earth observations
Sponsors	IOC (Lead), WMO, UNEP, ISC	WMO (Lead), IOC, UNEP, ISC	IHO, IOC	
Governance and structure	Steering Committee, Secretariat, panels x3, OCG, regional alliances, NFPs	Steering Committee, Secretariat, panels x3, climate observation networks; accredited networks, NFPs	Joint IOC-IHO Guiding Committee; Sub Committees; working groups; scholars;	Plenary, Executive Committee, Programme Board, Secretariat, Regional GEOs
Funding model	Member State contributions, IOC, WMO core budget, in-kind investments	Member State contributions, WMO core budget, EU support, in-kind investments	Sponsor contributions, projects (e.g., Seabed 2030 with Nippon Foundation)	Member State contributions (via Trust Fund), WMO core budget, project-based funding (multilateral, national gov, etc.)
Key activities/ offerings	Essential Ocean Variables (EOVs), OceanOPS, ocean observation networks	Essential Climate Variables (ECVs), UNFCCC/IPCC interface	Global bathymetric mapping, Seabed 2030, training & capacity building	Mature flagships, flagships, initiatives, pilots, convening, and enabling mechanisms

Key findings

- GEO's regional representation is broken down to 4 **geographic-based** "Regional GEOs" as opposed to 14 GOOS GRAs with five unique structural groupings, resulting in wide-ranging consortium of countries or institutions
- GEO initiative-based program model promotes **flexible**, **trust-based funding**, including multiyear grants and general operating support, positioning it as more resilient and adaptive to systemic change
- GEBCO has the most specialized mandate and operates under a **dual governance model** (IHO and IOC)

The IOC and WMO serve as core sponsors of GOOS with long-term instructional, governance and financial backing

GOOS sponsorship current state	unesco Intergovernmental Oceanographic Commission	WORLD METEOROLOGICAL ORGANIZATION	UN environment programme	International Science Council
Lead sponsor	✔			
Co-sponsors		✔	✔	✔
Joint MOU on GOOS collaboration	✔	✔		
Provider of shared services	✔			
Provider of core funding	✔	✔		
Governance entity responsible for GOOS SC	✔			
Consulted for GOOS SC appointments (per TOR)	✔	✔	✔	✔
Approval of GOOS SC appointment (reality)	✔			
Employer of GOOS Management Team staff	✔	✔		
Host of GOOS Secretariat	✔			
Host of OceanOPS staff		✔		
Consulted for GOOS Director appointment (per TOR)	✔	✔	✔	✔
Governance entity for GOOS Expert Panels (per TOR)	✔	✔		✔
Governance entity for GOOS OCG (per TOR)	✔	✔		

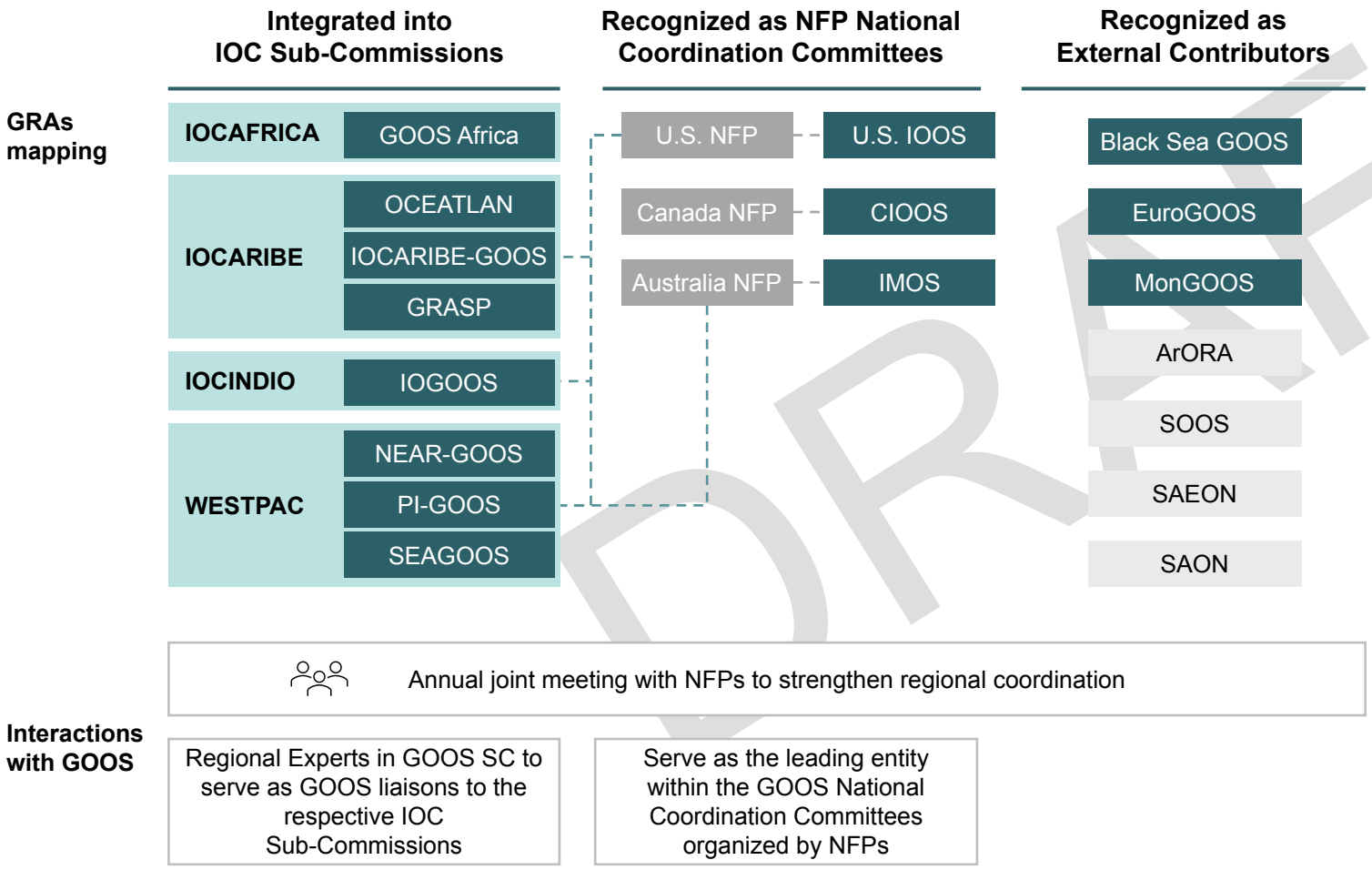
Structural and organizational differences across GRAs contributes to uneven engagement

#	GRA	Structure	Type	Member States/Institutions	Overlapping countries (non-exhaustive)	Corresponding IOC Sub-Commission	IOC Electoral Groups	Ocean-Basin/Region
1	GOOS Africa	IOC Sub-Commissions	Political Consortium	36 Member States	Kenya, Tanzania, South Africa	**IOCAFRICA**	V	Atlantic (West Africa)/ Indian (East Africa)
2	OCEATLAN	Inter-governmental	Thematic	Argentina, Brazil & Uruguay and 15 institutions	Brazil	edit:not part of IOCARIBE	III	Tropical Atlantic
3	IOCARIBE-GOOS	IOC Sub-Commissions	SIDS	30 Member States	Brazil, Colombia, USA	**IOCARIBE**	I, III	Caribbean Sea & Adjacent Atlantic
4	GRASP	Inter-governmental	Political Consortium	Chile, Colombia, Ecuador, Peru and 12 institutions	Colombia	edit: not part of IOCARIBE	III	South East Pacific
5	IOGOOS	Government, NGOs, Institutions	Basins and Regions	17 Member States and 29 organizations and institutions	Australia, Indonesia, Kenya, Tanzania, South Africa	**IOCINDIO**	I, IV, V	Indian Ocean
6	NEAR-GOOS	Inter-governmental	Thematic	China, Japan, Korea, Russia	China, Japan, Korea, Russia	**WESTPAC** Edit: PI-GOOS not part of WESTPAC	II, IV	Northwest Pacific
7	PI-GOOS	Government, NGOs, Institutions	SIDS	22 Pacific Island Countries and Territories & 5 Metropolitan Members	Australia, France, UK, USA		I, IV	South Pacific
8	SEAGOOS	IOC Sub-Commissions	Political Consortium	21 Member States of WESTPAC	Australia, China, Indonesia, Japan, Korea, Russia		II, IV	Southeast Asian Seas
9	U.S. IOOS	National Marine Agencies	National Systems	United States		[United States]	I	North Atlantic/Pacific/ Artic
10	CIOOS	National Marine Agencies	National Systems	Canada		[Canada]	I	North Atlantic/North Pacific/Artic
11	IMOS	National Marine Agencies	National Systems	Australia and Southern Ocean		[Australia]	IV	Indian/South Pacific
12	Black Sea GOOS	Inter-governmental	Basins and Regions	Bulgaria, Georgia, Romania, Russia, Türkiye, Ukraine	Türkiye, Russia	External contributor	I, II	Black Sea
13	EuroGOOS	Government, NGOs, Institutions	Political Consortium	19 European Member States and ~48 members	Cyprus Island, France, Spain, Portugal, UK	External contributor	I, II	North Atlantic /Mediterranean Sea/Baltic Sea/Artic
14	MonGOOS	Government, NGOs, Institutions	Basins and Regions	14 Member States and 48 partners	Cyprus Island, France, Spain, Portugal, Türkiye	External contributor	I, II, V	Mediterranean Sea

Associated Organizations and other Task Teams are not included in the analysis

Potential Option: Repositioning GRAs as independent entities will enhance flexibility while preserving their critical role in regional coordination

Suggested mapping of GRAs in the future model

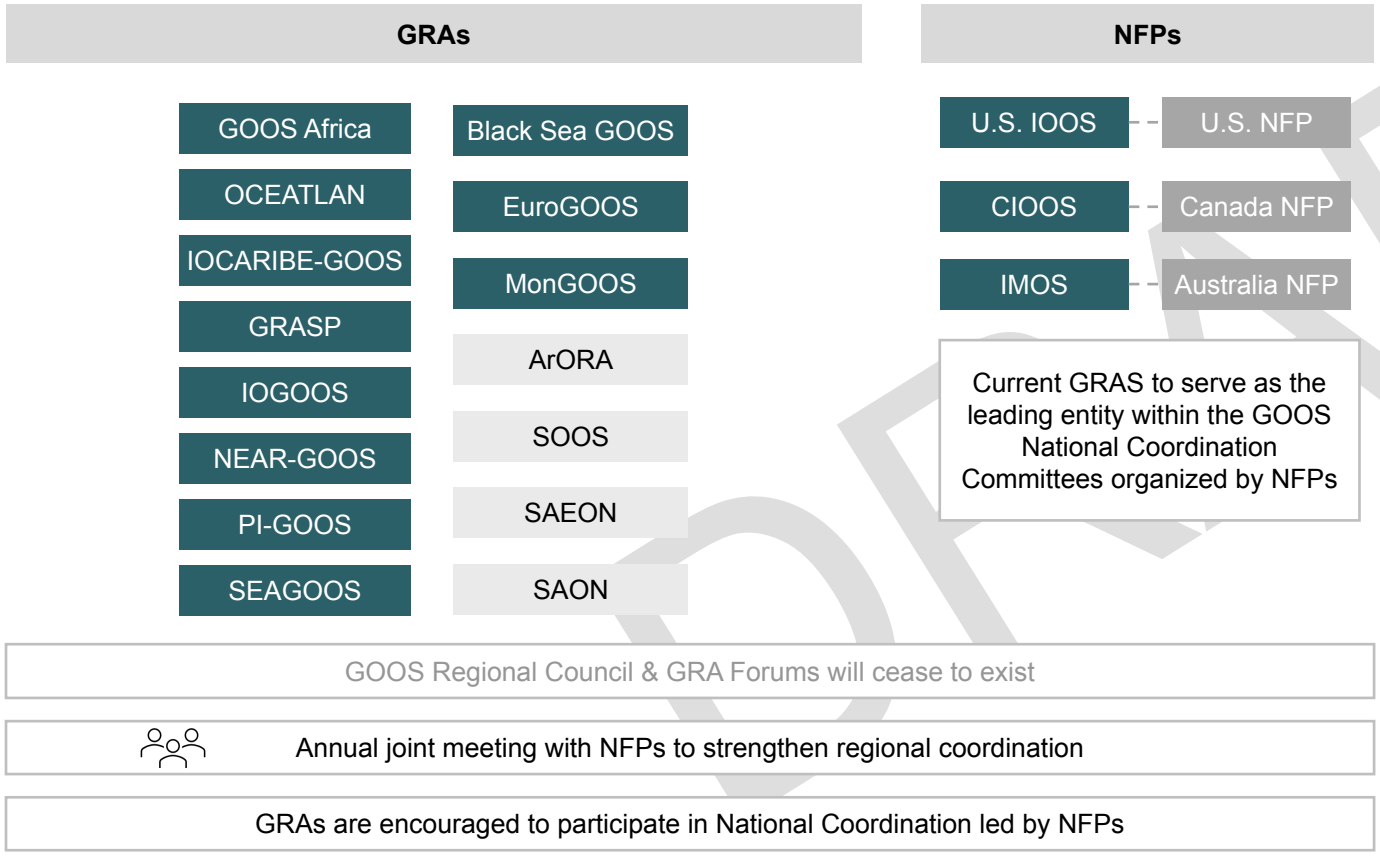


Recommended changes

- GRAs will no longer operate as a standalone component within GOOS and will be recognized as independent entities
  - GRAs will not receive support from GOOS Secretariat but will take part in annual meeting with NFPs to strengthen regional coordination
  - Their core functions will remain unchanged and flexible (e.g., setting regional strategies, advocating for region etc.)
- Most of the GRAs will be integrated into the four IOC Sub-Commissions as a standalone programs and will be encouraged to reorganize around ocean basins for better alignment and efficiency
  - GOOS SC Regional Experts will act as connectors for GOOS (SC-14 action) by holding a dual role as members of their respective IOC sub-commissions
  - Each IOC Sub-Commission Secretariat will be encouraged to appoint a Project Officer to serve as a regional POC for coordinating ocean observations
  - GRAs will be funded through the existing budget from IOC, GOOS funding requests to support staff and projects, or monetary or in-kind contributions from Member States or regional organizations
- National ocean observing systems (e.g., IMOS) will continue as the lead entity within the NFP National Coordination Committees organized

Potential Option: Strengthening the self governance of GRAs while preserving their critical role in regional coordination

GRAs are recognized as independent entities contributing towards GOOS



Recommended changes

- GRAs will no longer operate as a standalone component within GOOS and will be recognized as self-governed independent entities
  - GRAs will not receive support from GOOS Secretariat but will take part in annual meeting with NFPs to strengthen regional coordination
  - Their core functions will remain unchanged and flexible (e.g., setting regional strategies, advocating for region etc.)
- National ocean observing systems (e.g., IMOS) will continue as the lead entity within the NFP National Coordination Committees organized

Current GRA | NFPs | Associated organizations | Collaboration

Appendix

5.3

GOOS Secretariat of the future

> *GOOS needs to become more precise about what it does and does not do. Being clear about its scope can both protect Secretariat capacity and open space for new funding.*

The GOOS Secretariat currently has limited capacity, restricting its ability to fully fulfill its role and meet the increasing demands of the system

Professional
General Service
Consultant

GOOS Director (P5)

- Leads the GOOS Secretariat and **oversees the implementation of the GOOS strategy**
- **Coordinates** with the **GOOS Steering Committee**, **IOC** Governing Bodies, and external partners
- Represents GOOS in **international forums** and **strategic partnerships**
- Guides the **development of new initiatives** and ensures alignment with UN ocean goals

Programme Specialist 1 (P4)

- Supports the Director in **executing the GOOS strategy and coordination with WMO**
- Manages specific **GOOS programmes / components** (e.g., OCG, Panels) **and partnerships**
- Facilitates **collaboration between GOOS components** (excluding GRA/NFP)
- Oversees **reporting**, **documentation**, and **internal coordination**

Program Specialist 2 (P3)

- Facilitate **communication** and **coordination** and ensure **national and regional needs** and gaps in sustained ocean observing are communicated to the GOOS Steering Committee and relevant components
- Coordinate **NFP, GRAs, and ETOOFS**
- Organize and manage **GRA** and **NFP forums**, workshops, and consultations to strengthen national engagement

Communication Consultant

- Manage and update the **GOOS website** to ensure content is current and accessible
- Run **communication campaigns** with products like articles, flyers, and social media posts
- Coordinate the **annual Ocean Observing Report Card** with OceanOPS
- Prepare and send the **GOOS Update newsletter** and **GOOS Notes** via Mailchimp

Admin Assistant Consultant

- Manage **scheduling**, **meeting logistics**, and **document preparation** to ensure smooth operations across GOOS Secretariat activities
- Support **finance and operational compliance**
- Provide support in **reporting**

Admin Assistant (G5)

- Position vacant, to be filled in late 2025

As per October 2025. Other “non-Secretariat” affiliate and consultant roles are not included in this analysis

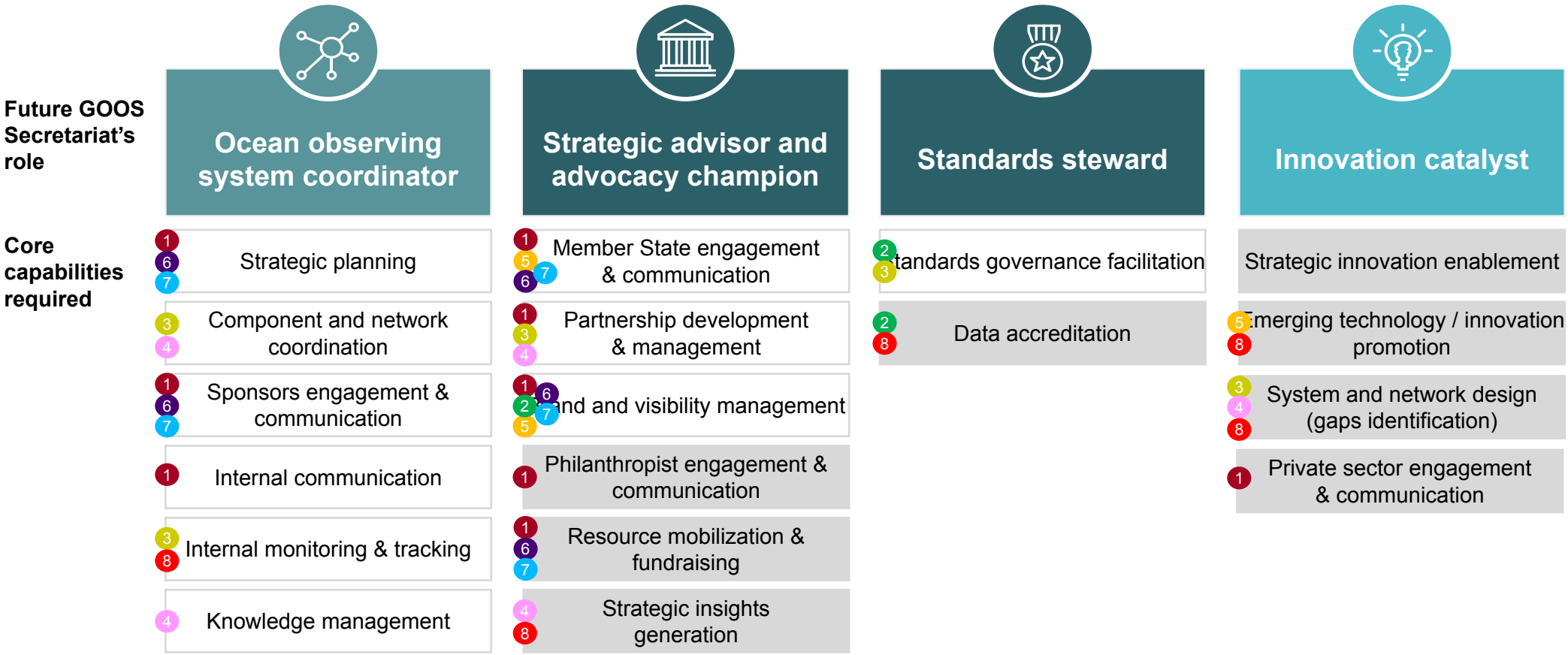
Mapping activities against existing and proposed positions will provide clarity for staff and empower the GOOS Secretariat to deliver greater impact

Role	Activity	Director	Specialist 1 (P4)	Specialist 2 (P3)	Specialist 3 (P2)	Standards, Outreach, etc.	Specialist 4 (P3)	Comms
Ocean observing system coordinator	Facilitate planning, coordination, and communication across GOOS components to ensure system-level integration and alignment with the 2030+ strategy		✔			✔		✔
	Support the development of standards that enable worldwide engagement and data sharing for a unified, comprehensive ocean monitoring value chain		✔	✔	✔			
	Facilitate alignment with sponsors	✔						
	Support and monitor GOOS components as defined by TOR		✔	✔	✔			
	NEW: Advise on ocean observing strategies and solutions in response to policy-based queries and respond to Member States requests	✔				✔		
	NEW: Facilitate alignment with Member States and other donors	✔				✔	✔	
	OUT OF SCOPE: Matchmaking between different entities or stakeholders	☐	☐	☐				
	OUT OF SCOPE: Detailed project management activities	☐	☐	☐				☐
Strategic advisor and advocacy champion	Develop, formalize, and maintain strategic partnerships with policy makers, scientific community, ocean observing data providers, implementors, funders, and other end users	✔						
	Strengthen GOOS visibility through communication tools and guidance					✔		✔
	NEW: Lead engagement, provide insights and coordinate feedback mechanisms for donors and partners	✔				✔	✔	
	OUT OF SCOPE: Organize individual seminars or workshops	☐	☐	☐				☐
Standards steward	Promote and maintain best practices and standards for ocean observing (setting EOVs, network, and metadata specifications)					✔	✔	
	Coordinate activities across GOOS components to leading to new and better standards					✔	✔	
	NEW: Promote GOOS endorsement, such as through new projects, to facilitate evolvement of the system					✔	✔	
Innovation catalyst	Promote emerging technologies in ocean observing			✔	✔	✔		
	NEW: Activate government and private sector engagement for project design based on current and new technologies	✔				✔	✔	
	NEW: Catalyze pilots of technologies and tools			✔	✔	✔		
	NEW: Promote the use of ocean observing data for products and services for the ocean economy and disaster risk reduction	✔					✔	

✔ Key responsibility ✔ Supporting role ☐ Descoped

This mapping only include GOOS Secretariat staff, while contributions from additional IOC/OOS and GOOS related FTEs are reflected in the capability mapping slide below

GOOS Secretariat capabilities are defined for each role, with contributions from other components identified to enable system-wide delivery



A clear set of capability definitions provide clarity on the functional areas essential for coordination, delivery, & support across the GOOS ecosystem

Role	Capability	Definition
 Ocean observing system coordinator	**Strategic planning**	Provides input to GOOS's long-term strategic direction, goals, and workplan
	Component and network coordination	Facilitates collaboration and coherence among GOOS components, strengthen volunteer engagement, and identify and resolve interoperability issues to maintain system-wide coherence
	Sponsors engagement & communication	Builds and maintains strong relationships with IOC and WMO to secure and sustain support (e.g., reporting, consulting on decisions, co-convening)
	Internal communication	Shares information and collaborate across GOOS components through communication channels like GOOS Steering Committee, Executive Committee, Management Team, NFP Forums etc.
	Internal monitoring & tracking	Tracks outputs, key results, and performance metrics of GOOS components (e.g., NFPs) to ensure accountability and effective delivery of GOOS objectives and strategy
	Knowledge management	Organizes, curates, and disseminates GOOS governance documents, templates, best practices and insights to enhance learning, transparency, and decision-making
 Strategic advisor and advocacy champion	**Member State engagement & communication**	Strengthens relationships and interactions with IOC Member States to foster participation, alignment, and support for GOOS priorities (e.g., briefing packs for NFPs; quarterly donor coordination group updates)
	Partnership development & management	Builds and sustains strategic collaborations with the UN system, partners, and ocean observing stakeholders to advance GOOS goals (e.g., conferences, projects)
	Brand and visibility management	Enhances GOOS's global visibility, reputation, and recognition through consistent outward facing messaging, outreach, and identity (e.g., social media campaigns, brand guidelines, communication guide)
	Philanthropist engagement & communication	Cultivates strong, trust-based relationships with philanthropic actors to align their interests with GOOS priorities (e.g., strategic dialogue, knowledge sharing, coordination with Ocean Decade)
	Resource mobilization & fundraising	Secures diversified financial and in-kind resources (from Sponsors, Member States, philanthropists and other donors) to ensure the sustainability of current operations and growth of key focus areas
	Strategic insights generation	Analyzes global ocean observations trends, evidence, and stakeholder feedback to provide strategic insights for governments, philanthropists, and private sector actors

Capability is either lacking or requires development

A clear set of capability definitions provide clarity on the functional areas essential for coordination, delivery, & support across the GOOS ecosystem

Role	Capability	Definition
 Standards steward	**Standards governance facilitation**	Coordinates the development and adoption of common standards (e.g., EOVs) and best practices to ensure consistency and interoperability across GOOS activities
	Data accreditation	Strengthen data credibility by leading engagement with other components on data accreditation standards
 Innovation catalyst	**Strategic innovation enablement**	Drive innovation by forming new partnerships, securing funding streams, and co-designing projects that integrate cutting-edge technologies and methodologies
	Emerging technology / innovation promotion	Identify and champion emerging ocean observing technologies in collaboration with Ocean Decade and global science networks
	System and network design (gaps identification)	Coordinates analyses of existing observing systems to identify coverage, capability, and coordination gaps and guide future investments
	Private sector engagement & communication	Builds partnerships and dialogue with industry stakeholders to leverage resources, technology, and expertise for GOOS objectives

Capability is either lacking or requires development

Understanding who the stakeholders are and what data and services they require is critical for defining a targeted value proposition

	Member States	Ocean Observing Data Providers	Ocean Observing Data Users
Key role	Decision-makers and policysetters	System architects and ocean observation suppliers	Consumers of ocean observations
Includes	• IOC and WMO Member States and its relevant government agencies • National focal points and national coordinating committees	• Oceanographers, marine scientists, research institutions and universities • Technical experts in observing platforms • Members of GOOS expert panels • Scientific networks and initiatives • Private sector	• Ocean, weather, and climate scientific communities (as data users) • Private sector (e.g., fisheries, shipping, energy, insurance) • NGOs, educators, and civil society • Policymakers and government agencies • Philanthropies, blue collar, innovators, tech
Needs for GOOS data/ services	• Tracking impacts of changes in ocean • Supporting ocean resources management policy and implementation • Shaping climate policy, disaster response, adaptation strategies planning • Strengthening national security • Fulfilling treaty and framework commitments (UNFCCC, BBNJ, CBD)	• Co-design and governance participation • Infrastructure and funding for sustained observations • Recognition and influence in shaping global priorities	• Operational services and modelling (e.g., weather forecasting, early warning systems, shipping, insurance, public sector, agriculture, marine and coastal industries, etc.) • Enhancement of scientific research and innovation through ocean observation data

Non-exhaustive list of stakeholders under each group

Understanding stakeholder roles and pain points allows GOOS to provide relevant solutions that advance the global ocean observing agenda

	Member States	Ocean Observing Data Providers	Ocean Observing Data Users
Pains What obstacles or risks do they face?	• High cost of infrastructure for sustained ocean observation • Limited technical capacity and know-how • Fragmented data access and lack of coordination across national and global systems • Resource constraints • Uneven global participation and engagement • Lack of role clarity across national, regional, and global levels	• Fragmented and non-seamless data access • Limited visibility and discoverability of datasets • Fragmented governance, lack of proper coordination and role clarity • Limited influence in strategic agenda-setting • Resource and capacity gaps • Administrative burden and high rotation with engagement dependent on individual effort • Insufficient recognition and visibility	• Inability to easily access data and insights • Complexity to engage with GOOS and form formal partnerships • Feeling that they are not brought into the co-design process
Gains What benefits do they seek?	• Harmonization of global and national priorities • Access to shared standards, knowledge, and best practices • Shared technology and data to reduce costs and enable data-driven decision-making	• Global platform for collaboration and data sharing • Increased visibility and recognition in international forums and influence in global policy • Accelerated research through coordinated efforts and open data access • Support for early-career researchers	• Data that allows to deliver insights to help shape decision making • Ability to integrate GOOS data streams into existing tools, platforms, and models • Invest in or co-finance observational infrastructure through innovation challenges, R&D collaboration, or impact-aligned funding • Engage with GOOS' work through storytelling, educational content, and citizen science opportunities

At the core of the value proposition are the key roles the Secretariat assumes to ensure alignment, execution, and innovation across the ocean system

	Ocean observing system coordinator	Strategic advisor and advocacy champion	Standards steward	Innovation catalyst
Member States	• Facilitates coordination across systems to **reduce duplication** and **optimize resources** • Responds to Member States' **updates and concerns** via interaction with Governing Bodies, NFPs and GRAs	• Provides **evidence-based advice** to support policy, investment, and international commitments • Offers a **global platform** to display Member States' advancement and commitment in ocean observation	• Promotes **EOVs** and **best practices** for **data**, enabling comparability and interoperability • Offers "GOOS label" for credible data	• Connects Member States with **partnerships** and **resources**, modernize observing capacity • Supports Member States to **showcase latest technology and systems** on the global stage (feedback loop)
Ocean Observing Data Providers	• Provides a **framework** that links national research and observation with global priorities and standards • Provides a **platform for dialogue and data integration** across the EOVs and the GOOS network	• Provides **visibility for scientific contributions** by serving as a link between science and society • Elevates the **importance of ocean science** in multilateral forums and policy dialogues	• Maintains **shared, integrated, and interoperable** protocols, data formats, and frameworks that underpin robust, credible science • Setting **specifications** for EOVs, networks, and metadata	• Provides **global awareness** to innovative tools, methods, and observing platforms developed by the scientific community • Seeks **advise and recommendation** from community on innovation
Ocean Observing Data Providers	• Facilitates **access to a coordinated ocean observation data system** that can then be turned into timely, actionable insights • Serves as **bridge** between user community and Member States	• Provides **strategic insights** to society, industry, philanthropies, and private sector actors • Advocates for **user needs and concerns** to IOC, WMO, Member States, scientific community and others	• Advocates for **reliability, comparability, and transparency** of ocean data • Provides **standard specifications** for users	• Supports **co-design with users** to design an observing system that can deliver it effectively • Catalyzes **emerging technologies, products, and tools** with high potential

Appendix

5.4

Terms of Reference review and recommendations

> *GOOS needs Terms of References clarifying who communicates to whom, and how progress is tracked.*

We have compiled a Terms of References repository by GOOS components

#	GOOS component	TOR status	Year
1	**GOOS Steering Committee**	Included as an annex within **IOC resolution XXVI-8**, not as a standalone TOR	2011
2	**GOOS Secretariat**	**Does not exist**	N/A
3	**Physics and Climate (OOPC) Expert Panel**	Available (on the GOOS website and GCOS website)	2023
4	**Biogeochemistry (BGC) Expert Panel**	**IOCCP TOR** available	2017
5	**Biology and Ecosystems (BioEco) Expert Panel**	Available	2023
6	**Observations Coordination Group (OCG)**	Available	2022
7	**OceanOPS**	**5 year strategic plan available**, but not as a standalone TOR	N/A
8	**GOOS Network**	**Individual network specification sheets available**, but not as a standalone TOR	N/A
9	**GOOS Regional Alliances (GRAs)**	Available, **structured as "Information Document"** and not as a TOR	2013
10	**National Focal Points (NFPs)**	Available	2023
11	**Expert Team on Operational Ocean Forecast Systems (ETOOFS)**	**Partially available** (on Ocean Expert), TOR is being completely updated	N/A

We have analyzed the existing Terms of References against the following evaluation criteria

TOR element	Purpose / mandate	Scope of responsibilities	Reporting & governance	Membership & composition	Interactions
Description	Explains why the component exists and how it supports GOOS's mission	Lists the key tasks and duties the component is expected to perform	Defines who the component reports to, how decisions are made, and meeting structure	Outlines who can join, how members are chosen, and how long they serve	Describes how the component collaborates with other GOOS components
High maturity	• The purpose statement includes specific objectives, references GOOS's mission, and describes unique value	• Responsibilities are listed as discrete, actionable items with measurable outcomes (e.g., produce annual report)	• Reporting lines, appointment processes, decision-making authority, and meeting cadence are clearly stated	• Membership criteria, selection process, term limits are clearly documented and followed	• Collaboration mechanisms (e.g., joint meetings, shared protocols) with other components are clearly defined
Medium maturity	• Purpose is present but uses generic language (e.g., "support GOOS") without specifics	• Responsibilities are described but lack specificity (e.g., "support coordination," "help with data")	• Some governance elements are defined, but others (e.g., meeting cadence) are vague or inconsistently documented	• Membership is defined but lacks clarity on selection or renewal	• Interactions are mentioned but informal or ad hoc • No structured coordination or shared protocols
Low maturity	• No purpose statement, or it is so vague that its relevance to GOOS cannot be determined	• Responsibilities are missing, aspirational (e.g., promote excellence), or so unclear they cannot be operationalized	• Governance structure is unclear or absent • Reporting relationships and operational modalities are undefined or ad hoc	• Membership rules are vague or absent • No process for appointments, renewals, or representation	• No mention of collaboration

Standardizing the format and review process of TOR across components will ensure consistency, role clarity, and shared understanding of mandates

GOOS component/ TOR element	Purpose/mandate	Scope of responsibilities	Reporting and governance	Membership and composition	Interactions
Steering Committee	Low	Medium	High	High	Medium
OOPC Panel	High	High	Medium	Low	High
BGC Panel	Medium	Medium	Low	Low	Low
BioEco Panel	High	High	High	High	High
OCG	High	High	High	High	Medium
GRAs	Medium	Medium	Medium	Low	Low
NFPs	Medium	Medium	Low	Low	Medium
ETOOFS	Low	Medium	Low	Low	Low
Key findings	**Ambiguous mandate**	**Unclear scope of responsibilities**	**Insufficient reporting and governance data**	**Limited information on membership and composition**	**Lack of transparency regarding interactions**
	• Components have **stated mandates**, but their **unique value is sometimes unclear**	• Responsibilities differ in **detail and clarity**; for example, BioEco and OCG TOR specify activities and deliverables, while the TOR of GRAs and NFPs are more general and aspirational	• **Accountability** mechanisms such as reporting and evaluation are **not defined** in many cases (e.g., Expert Panels, NFPs) • Governance mechanisms such as meeting cadence are **inconsistently documented**	• Membership qualification, eligibility and approval criteria are **not defined** for panels (except BioEco), GRAs, NFPs, and ETOOFS • **Observer status** is oftentimes not clearly defined	• While collaboration is encouraged, most TOR **lack structured mechanisms** for cross-component coordination

Based on TOR review we have identified the following opportunities for improvement

1. **Create a standardized TOR template** including mandatory sections and **revise current TORs accordingly**
2. **Emphasize the importance of collaboration** and explain in detail how the components should interact with each other
3. **Clearly distinguish between essential roles and desirable responsibilities** to establish expectations and prevent overwhelming volunteers
4. **Introduce a regular review cadence for TORs** (e.g., every 2 to 5 years)
5. **Consider to clearly state and incorporate non-monetary incentives in all TORs**, such as recognition, career development and networking opportunities
6. **Ensure TORs are published in easily accessible formats and locations** to enhance transparency and improve accessibility (e.g., booklet)

A standardized TOR template across components, including mandatory sections, can greatly streamline future GOOS governance and operations

1. Component Overview

- Brief description of the component, its purpose, and how it contributes to the overall mission and strategy of GOOS.

2. Key Roles & Responsibilities

- **Role A:** [Insert description]
- **Role B:** [Insert description]
- **Add as needed**

3. Governance

- **Leadership:** Process for selecting Chair/Co-Chair (e.g., nomination, election, appointment, term length).
- **Committees:** Sub-structures within the component (e.g., BioEco Executive, OCG Executive Committee), if applicable.
- **Meetings:** Frequency, format, and minimum quorum requirements.
- **Reporting:** Specify which GOOS body (e.g., Steering Committee, IOC Governing Bodies, OCG) and/or external entities the component reports to.
- **Outputs/products:** Expected deliverables (e.g., annual workplan, reports, EOV technical guidance).
- **GOOS Secretariat interaction:** Type and level of support expected from the GOOS Secretariat.
- **Internal collaboration:** Engagement with other GOOS components.
- **External engagement:** Collaboration with external organizations, networks, or initiatives.
- **External engagement:** Collaboration with external organizations, networks, or initiatives.
- **Professional staff:** Roles such as Project Officer, if applicable.
- **Budget & fundraising:** Sources, management, and responsibilities for financial sustainability, if applicable.
- **Review & amendments:** TOR approval process, amendment procedure, and periodic review cycle.

4. Membership

- **Composition:** Size, expertise, and diversity (e.g., regional, professional background) criteria for membership.
- **Nomination & selection:** Process for proposing, reviewing, and approving new members.
- **Ex-officio / observers:** Rules for participation of non-voting or observer members.
- **Terms of service:** Length of membership, reappointment criteria, and maximum term limits.
- **Commitment:** Expected time contributions, including meeting attendance and voluntary work.

5. Annex (if applicable)

- **Organizational chart:** Roles, committees, and reporting lines.
- **Detailed role descriptions:** Expectations and non-monetary incentives for Chair, Co-Chair, members, and professional staff.
- **Attributes for members:** Desired qualifications, skills, and diversity considerations.

The Steering Committee TOR establishes a solid governance foundation, but lacks the overall clarity and broader engagement mechanisms

	Score	Key findings
Purpose / mandate	Low	✔ Highlights the importance of establishing the Steering Committee as a central governance body ▯ Lack of a clearly defined mandate e.g., to provide strategic direction and oversight for ocean observing and Member States ▯ Included as Annex within an IOC resolution and not a standalone TOR ▯ Last updated in 2011 and includes outdated language like "JCOMM," and "GOOS Project Office"
Scope of responsibilities	Medium	✔ Includes a defined list of activities and outputs (biennial Workplan to be adopted by the IOC Assembly) ▯ Lack of clarity on responsibilities with respect to other components (e.g., direct oversight)
Structure & governance	High	✔ Clear annual reporting to IOC Governing Bodies ✔ Clear authority to appoint a Chair from amongst its own membership ✔ Authority to create and dissolve time-limited panels ▯ Mandated to assess its own performance in relation to its TOR
Membership & composition	High	✔ Brings clarity on the number of members, composition (including regional expert seats), and selection ✔ Clear term limits ▯ Mentions ex-officio and observers but the list of ex-officio components is not updated
Interactions	Medium	✔ Clarifies support needed from the IOC Executive Secretary and GOOS Secretariat ✔ Recognizes the need for interaction, even if mechanisms are not fully defined ▯ Unclear interaction with GOOS components, Member States, and sponsors outside of the IOC ▯ No defined communication or coordination protocols with the GOOS Secretariat
TOR vs. reality gaps		▯ Mentions a single chair, however the SC currently operates in a co-chair system

✔ Strength to preserve ▯ Gap

The OOPC Panel TOR is specific on its three-way sponsorship and reporting structure, while leaving a gap in membership composition

	Score	Key findings
Purpose / mandate	High	✔ Well defined mandate to oversee the ocean component of the GCOS, the physical variables for GOOS, while defining sustained ocean observing requirements for the WCRP ✔ Specified role to support assessments (i.e. IPCC), monitoring, projections and research ▯ TOR not accessible on Ocean Expert but rather as a webpage on the GOOS website
Scope of responsibilities	High	✔ Covers full lifecycle of activities including requirements review, technology assessment, technical advice, network coordination, training, and more ✔ Distinct role for ocean observations of physical EOVs and ocean ECVs ▯ Lack of clarity on resources and budget available to action against a broad range of stated activities
Structure & governance	Medium	✔ Clear sponsorship by and reporting to the GOOS Steering Committee, GCOS Steering Committee, and WCRP Joint Scientific Committee ▯ No mention of OOPC expert panel professional staff/scientific officer and their role ▯ Lack of frequency or format of governance meetings, nor mechanisms for escalation ▯ No direct reference to workplan approval process and reviews, though workplan can be found on website
Membership & composition	Low	▯ Unclear membership criteria, selection process, and term limits guidelines, though members and ex-officio members are listed on the website ▯ Lack of clarity on co-chair selection process and term limits
Interactions	High	✔ Clear interactions with GOOS OCG and GRAs, IOC commissions and IODE, WMO's Information System (WIS), WCRP, and GCOS, GEO, modelling, and relevant regional bodies mentioned in TOR
TOR vs. reality gaps		*Not identified*

✔ Strength to preserve ▯ Gap

The BGC Panel TOR defines biogeochemistry EOVs but remains vague on its relationship with GOOS

	Score	Key findings
Purpose / mandate	Medium	✔ Clear articulation for the need of biogeochemistry EOVs ✔ Clear definition for what constitutes as a biogeochemistry EOVs ▯ TOR adopted by ISC SCOR's Scientific Steering Group (SSG) and not GOOS or IOC ▯ TOR not accessible on either the GOOS website or Ocean Expert
Scope of responsibilities	Medium	✔ Covers full lifecycle of activities including requirements review, technology assessment, technical advice, network coordination, training, and more ✔ Distinct role for biogeochemistry EOVs ▯ Mentions responsibility to raise funds to implement IOCCP activities without additional details
Structure & governance	Low	✔ Clear sponsorship by UNESCO and ISC SCOR ▯ Unclear on whether the IOC sponsorship is managed by IOC secretariat vs GOOS SC vs other GOOS components ▯ Lack of frequency or format of governance meetings, nor mechanisms for escalation ▯ No mention of BGC expert panel professional staff/scientific officer and their role
Membership & composition	Low	✔ Includes IOCCP SSG term length and limits within the "Terms of Reference for members of IOCCP SSG" ▯ Unclear membership criteria, selection process, and term limits guidelines, though members and ex-officio members are listed on the website ▯ Lack of clarity on co-chair selection process
Interactions	Low	▯ Unclear interaction with the GOOS components aside from sponsors and the global ocean carbon and biogeochemistry observing community
TOR vs. reality gaps		*Not identified*

✔ Strength to preserve ▯ Gap

The BioEco Panel TOR is well-structured and detailed with all essential components clearly separated into distinct sections

	Score	Key findings
Purpose / mandate	High	✔ Clear global mandate on developing EOVs ✔ Describes the importance of establishing the Panel and its unique value in biology/ecosystem domain
Scope of responsibilities	High	✔ Covers full lifecycle of activities including requirements review, technology assessment, technical advice, EOV network coordination, and BioEco Panel ▯ Unclear role in defining and interacting with the growing BioEco observing communities ▯ Some responsibilities (e.g., phased implementation, evaluation of observing systems) lack measurable outcomes
Structure & governance	High	✔ Clearly defined reporting to GOOS SC [and other sponsor Governing Bodies] ✔ Well-defined governance meetings with clear roles and indicated cadance ✔ Staggered terms for continuity and succession
Membership & composition	High	✔ Transparent and open recruitment process with clear criteria ✔ Staggered terms and renewal limits
Interactions	High	✔ Strong focus on collaboration with other panels, IOC programmes, and external agencies ✔ Facilitates data sharing through established systems (IODE, OBIS, OBPS)
TOR vs. reality gaps		*Not identified*

✔ Strength to preserve ▯ Gap

The OCG TOR is updated and detailed with all essential components, serving as a model for other components

	Score	Key findings
Purpose / mandate	High	✔ Clear purpose to "guide and strengthen the implementation" of GOOS and WIGOS through identifying, coordinating and developing relevant initiatives across the GOOS Networks ✔ Clear 8 strategic foci and list of GOOS Networks ✔ References GOOS 2030 Strategy
Scope of responsibilities	High	✔ Detailed list of 14 responsibilities across the strategic foci ✔ Clear coordination role across global ocean observing and emerging networks ✔ Clear oversight, support, and approval of OceanOPS Work Plan and budget ✔ Outlines annual report requirement to the GOOS SC and WMO INFCOM
Structure & governance	High	✔ Clear joint oversight and steering from GOOS SC and WMO INFCOM ✔ Delegate GOOS SC responsibility to approve OCG TOR and the responsibility of approving the OCG Chair ✔ Hosts the OCG Executive Committee to manage OCG and provide oversight to OceanOPS ✔ Offer guidance on annual OCG meeting
Membership & composition	High	✔ Well defined membership composition, selection criteria, and more ✔ Clear term limit for OCG chair and vice chair ✔ Defined OCG Executive Committee, membership, and term length/limits
Interactions	Medium	✔ State interaction with oversight entities, partnership with GOOS Expert Panels and GRAs, ✔ Various mentions of integration with IOC/IODE and WMO systems, especially for OceanOPS ✘ No mention of interaction with the GOOS Secretariat, NFPs, and other components
TOR vs. reality gaps		✘ TOR mentions OCG overseeing OceanOPS and the Ocean Observation Networks as part of its strategic foci but each operates more independent in reality

✔ Strength to preserve ✘ Gap

The GRA TOR presents opportunities to enhance and specify its scope, and to clarify interactions, particularly with NFPs and the GOOS Secretariat

	Score	Key findings
Purpose / mandate	Medium	✔ Clear alignment with GOOS mission ✘ Heavy overlap with NFPs, especially for "National System" structured GRAs
Scope of responsibilities	Medium	✔ Detailed list of responsibilities focused on GRA's role with the GOOS Regional Council (GRC) ✘ Responsibilities tend to be more aspirational than clearly defined
Structure & governance	Medium	✔ Governed by the GRC with the role to coordinate between GRAs and the GOOS Secretariat and SC ✔ Clear mandate for bi-annual GOOS Regional Forums ✔ Outlines GRA annual report requirement ✘ Uneven "voice" as some countries participate in multiple GRAs, including participating as a National Observing Network ✘ Wide variation of GRA structure and entity types, ranging across IOC Sub-Commissions, Inter-governmental organizations, Government, NGOs, Institutions, and National Marine Agencies
Membership & composition	Low	✔ Dynamic coverage of coalitions of nations and/or institutions ✔ Specified term length for GRC Chair (though GRC Vice Chair term length is not specified) ✘ Loose qualification and approval criteria to onboard new GRAs ✘ Qualification process and membership approval of new GRAs is not clearly outlined ✘ Identified need for a GRC Co-Chair system instead of the current Chair, Vice Chair system
Interactions	Low	✔ GRC chair serves as an ex officio member of the GOOS SC ✔ Encouragement for GRAs to collaborate with expert panels, GOOS Networks, national ocean observing systems, etc. ✘ Unclear interaction with NFPs, GOOS secretariat and IOC Sub-Commissions
TOR vs. reality gaps		✘ Wide variation of structure (Political Consortium, Basins and Regions, SIDS, Thematic, National Systems) and entity types (Inter-governmental, Government, Non-Governmental Organizations, Institutions, IOC Sub-Commissions, National Marine Agencies) for GRAs ✘ The 14 GRAs, task team, and associated organizations vary in maturity levels and frequently lack the capabilities to deliver on the responsibilities outlined in the TOR

✔ Strength to preserve ✘ Gap

The NFP TOR outlines a broad range of ambitious responsibilities and lacks clear definitions of reporting and interactions with GRAs

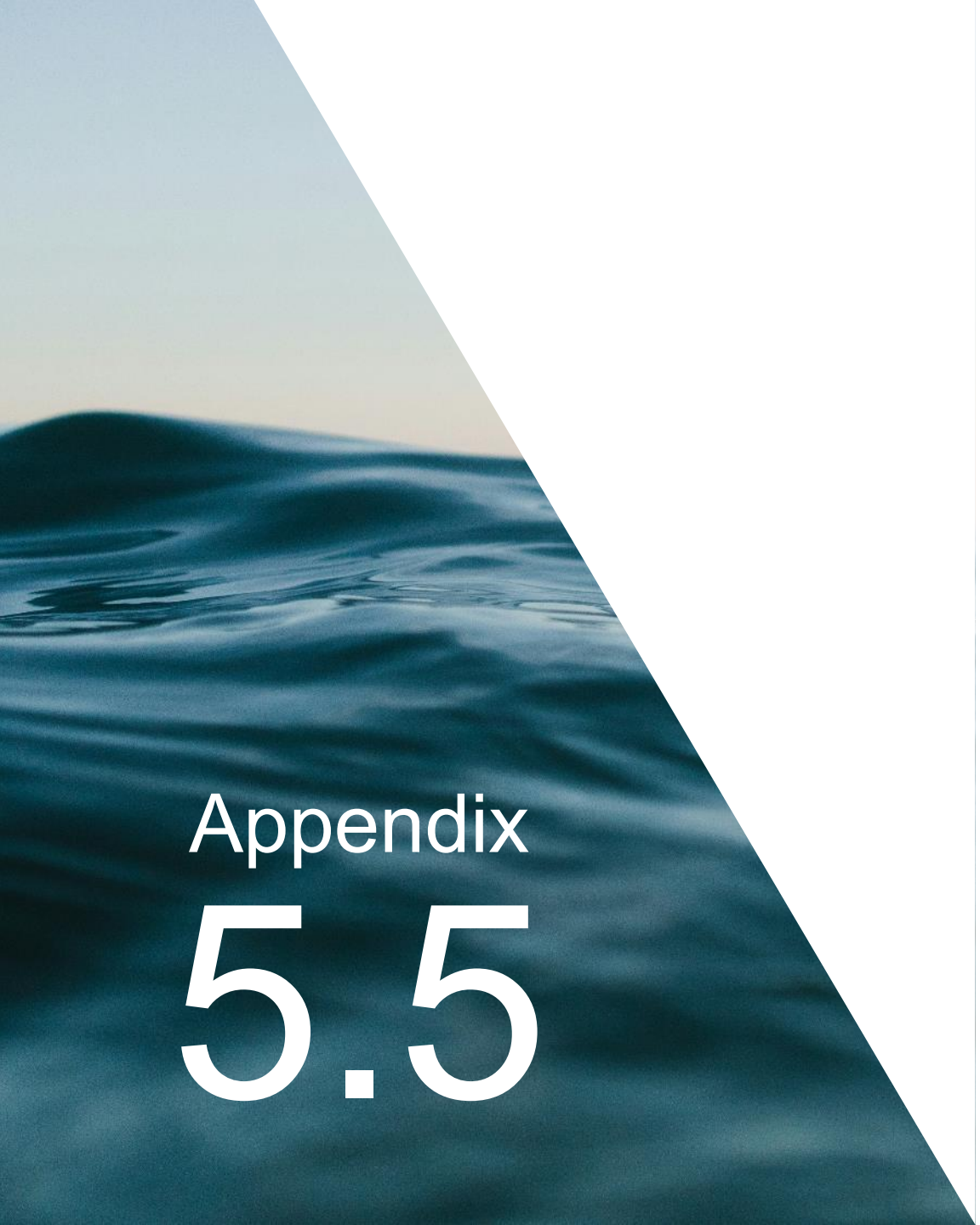
	Score	Key findings
Purpose / mandate	Medium	✔ References GOOS 2030 Strategy ✘ Broad and aspirational mandate leading to ambiguity in prioritizing activities
Scope of responsibilities	Medium	✔ Detailed list of responsibilities, including key stakeholders to work with ✘ Overly ambitious list of responsibilities with wide range of activities and lack of prioritization or guidance on most critical ✘ Ambiguity in regional role of NFPs
Structure & governance	Low	✔ Provides flexibility to establish a national hub / committee ✘ Lack of clarity on reporting lines and performance measurement ✘ Lack of details on decision-making processes within national hub / committee ✘ Lack of frequency or format of governance meetings, nor mechanisms for escalation ✘ Lack of clarity on forum for exchange with GOOS and other NFPs
Membership & composition	Low	✔ Provides guidence on the selection of members to establish the national hub / committee ✘ Not specified criteria for selection, appointment, and tenure of NFPs ✘ Lack of guidance on replacing or removing NFPs
Interactions	Medium	✔ Provides the recommended list of connections ✔ Provides the list of benefits for Member States ✔ Highlights importance of collaboration with other NFPs ✔ Defines type of support to be received from GOOS Secretariat ✘ Lack of clarity on the interactions between NFPs and other components e.g., GRAs
TOR vs. reality gaps		✘ NFPs primarily serve a communication function rather than fulfilling the broad range of responsibilities outlined in the TOR ✘ NFPs vary in maturity levels and frequently lack all the connections outlined in the TOR

✔ Strength to preserve ✘ Gap

The ETOOFS TOR is currently restricted to the outlined responsibilities, as it is still under development

	Score	Key findings
Purpose / mandate	Low	✗ Mandate and unique value not provided
Scope of responsibilities	Medium	✔ Provides detailed list of activities ✔ Supports GOOS 2030 Strategy implementation by connecting observing and forecasting systems to service delivery ✗ Some responsibilities (e.g., identifying gaps, evaluating success) lack clear metrics or performance indicators
Structure & governance	Low	✔ Initial indication that should report annually to GOOS SC ✗ Details on governance, meetings cadence and roles are missing
Membership & composition	Low	✗ Unclear membership size, criteria, selection process, and term limits guidelines ✗ Lack of clarity on chair selection process and term limits
Interactions	Low	✔ Highlights importance of collaboration with IOC and WMO partner programs ✗ Detailed interactions with other components not included, limited mention of other Expert Teams in SFSPA, OPA and DMPA
TOR vs. reality gaps		*Not identified*

✔ Strength to preserve ✗ Gap



Appendix

5.5

Project contributors

List of stakeholders engaged throughout the project

Stakeholder group		Name and role
GOOS Secretariat		Joanna Post, Emma Heslop, Jing Li, Signe Lemcke
GOOS Steering Committee		David Legler (Co-Chair), Balakrishnan Nair (Co-Chair), Dwikorita Kanarwarti, Pooja Mahapatra
GOOS Sponsors	IOC	Vidar Helgesen (Executive Secretary), Yutaka Michida (IOC Chair)
	WMO	Michel Jean (INFCOM President), Albert Fischer, Champika Gallage
	UNEP	Andrea Hinwood, Hartwig Kremer, Joana Akrofi
	ISC	Salvatore Aricò
Member States representatives	Group 1	Alan Evans, Rafael González-Quirós, Patrick Gorringe (SC Regional Expert, NFP), Pierre-Yves Le Traon (FrOOS, NFP), Luís Menezes Pinheiro, Allison Reed (IOC Vice Chair), Miguel Santos (Alternative NFP), Andrew Stewart, João Vitorino (NFP), Matthias Wunsch, Furkan Yaman (NFP), Manfred Zeiler (NFP)
	Group 2	Atanas Palazov (IOC Vice Chair, NFP), Veselka Marinova
	Group 3	Matías Sifón (SC Regional Expert, NFP), Edwin Pinto, Carlos Zúñiga (IOC Vice Chair)
	Group 4	Michiyo Kawai, Hansan Park (IOC Vice Chair)
	Group 5	Suzan Elgharabawy (SC Regional Expert), Amr Hamouda (IOC Vice Chair, NFP), Affian Kouadio
Expert Panels		Ana Lara Lopez (BioEco Panel), Belen Martin Miguez (OOPC Panel), Maciej Telszewski (BGC Panel)
GOOS Regional Alliances		Gabrielle Canonico (Chair), Alvaro Sscardilli (Vice Chair)
OceanOPS		Mathieu Belbeoch (Manager), Martin Kramp, Magali Krieger, Thomas Latter, Victor Turpin
ETOOFS		Pierre Bahurel (Chair), Enrique Alvarez Fanjul
Key external collaborators		Michelle Heupel (IMOS, NFP), Maria Hood (Mercator; G7 FSOI)

Appendix

5.6

Acronyms glossary

Glossary of terms, abbreviations, and acronyms

Acronym	Name
ADU	Associate Data Unit (IODE)
ARGO	Array for Real-time Geostrophic Oceanography (GOOS Network)
BBNJ	Biodiversity Beyond National Jurisdiction
BGC	Biogeochemistry Panel (GOOS Component)
BioEco	Biology and Ecosystems Panel (GOOS Component)
CBD	Convention on Biological Diversity
CIOOS	Canadian Integrated Ocean Observing System (GRA)
DOOS	Deep Ocean Observing Strategy (GOOS Project)
EC	Executive Council (IOC/WMO)
ECV	Essential Climate Variable
EOV	Essential Ocean Variable
ETOOFS	Expert Team on Operational Ocean Forecast Systems (GOOS Component)
GCOS	Global Climate Observing System
FP	Focal Point
GEBCO	General Bathymetric Chart of the Oceans
GEO	Group on Earth Observations
GRA	GOOS Regional Alliances (GOOS Component)
GRASP	GOOS Regional Alliance for the South Pacific (GRA)
GOOS	Global Ocean Observing System
ICG	Infrastructure Coordination Group (Proposed GOOS Component)
IHO	International Hydrographic Organization
IMDOS	Integrated Marine Debris Observing System (GOOS Project)
IMOS	Integrated Marine Observing System (Australia) (GRA)
INFCOM	WMO Infrastructure Commission
IOC	Intergovernmental Oceanographic Commission (GOOS Sponsor)
IOCCP	International Ocean Carbon Coordination Project
IOCARIBE	IOC Sub-Commission for the Caribbean and Adjacent Regions
IODE	International Oceanographic Data and Information Exchange (IOC)

Acronym	Name
IOGOOS	Indian Ocean GOOS Regional Alliance (GRA)
ISC	International Science Council (GOOS Sponsor)
JCB	WMO-IOC Joint Collaborative Board
NFP	National Focal Point
NGOs	Non-Governmental Organizations
NODC	National Oceanographic Data Centre (IODE)
OBIS	Ocean Biodiversity Information System (IODE)
OCG	Observations Coordination Group (GOOS Component)
OceanOPS	WMO-IOC Joint Centre for Oceanography and Marine Meteorology in situ Observations Programmes Support (fmr. JCOMMOPS)
OKR	Objectives and Key Results
OOPC	Ocean Observations Physics and Climate Panel (GOOS Sponsor)
PI-GOOS	Pacific Islands GOOS (GRA)
POGO	Partnership for Observation of the Global Ocean
RRR	Review of Requirements
SC	GOOS Steering Committee (GOOS Sponsor)
SCOR	Scientific Committee on Oceanic Research (ISC)
SIDS	Small Island Developing States
SOOS	Southern Ocean Observing System (GRA Associated Organization)
TOR	Terms of Reference
TPOS	Tropical Pacific Observing System (GOOS Project)
UNEP	United Nations Environment Programme (GOOS Sponsor)
UNFCCC	United Nations Framework Convention on Climate Change
WCRP	World Climate Research Programme
WESTPAC	IOC Sub-Commission for the Western Pacific
WIGOS	WMO Integrated Global Observing System
WMO	World Meteorological Organization (GOOS Sponsor)


Thank you