



The Global Ocean Observing System

STEERING COMMITTEE

GOOS Steering Committee Online Meeting

SC-10 Part 2 (2021 Tenth GOOS SC meeting, part 2)

29 November - 1 December 2021

There are 2 sessions per day for Monday-Wednesday to accommodate participation from many time zones, short summaries will be made available from each session. The final SC in camera session on Thursday is a single session for ALL SC appointed members.

The table below outlines the topics and attendees required across the 4 days. More information on the topics, links to background and presentations are in the detailed agenda below.

Mon 29 Nov »	Tue 30 Nov »	Wed 1 Dec »	Thu 2 Dec »
GOOS Regional Workshop	GOOS SC-10 Part 2	GOOS SC-10 Part 2	GOOS SC in camera meeting
1 Opening Workshop 2 GOOS regional approaches	1 Opening SC 2 Regional Workshop outcomes 3 Short items of a strategic nature <ul style="list-style-type: none"> - Report Card - WMO Data Policy/GBON - EEZ Report - Ocean Indicators - Reflections on COP-26 - Carbon Observatory 	4 Ocean Decade Programmes 5 GOOS TT Progress and Priorities <ul style="list-style-type: none"> - Including formally adopting the GOOS NFP ToRs 6 How we work in 2022 7 Closing	Agenda TBC

	- SMART Cable as a GOOS Project		
GOOS SC, observers, GRA and GOOS projects leadership	GOOS Steering Committee and observers	GOOS Steering Committee and observers	GOOS Steering Committee appointed members only
2.5 hour session	2 hour session	2 hour session	2 hour session
<u>Join this meeting on Zoom</u> (same link every day)			

Online meeting general notes

- Please rename yourself (click the “More” next to your name) with the following convention:
 - “SC Firstname Lastname” if you are a Steering Committee member, including the leads of GOOS core team components (panels, groups, teams) and IODE and co-sponsor representatives
 - “Proj Firstname Lastname” if you are from a GOOS Project, using the project name (e.g., “DOOS Lisa Levin”)
 - “Sec Firstname Lastname” if you are part of the GOOS Office
 - “Obs Firstname Lastname” if you are an invited observer or supporting an SC member
 - “GRA Firstname Lastname” if you are an invited GRA

By default, keep your microphone muted unless you are speaking. We encourage you to use video during the opening, closing and discussion periods of the session, unless it presents a problem for bandwidth. We encourage you to turn off your camera for the remainder of the session.

- Please use the ‘raise hand’ function in Zoom, and be succinct in both your questions and answers.
- At the end of each item, SC members should expect to be called upon, in a roundtable, to ensure all have had the possibility of commenting
- The sessions will be recorded for the secretariat, only for the purpose of writing the report, and the recordings deleted afterwards

Day 1: Monday 29 November 2021 (2.5 hrs)

Sessions at [6:00-8:30 UTC](#) and [14:00-16:30 UTC](#) (click to see what time that is for you), repeating the same material - join the session that works best for you.

[Join this meeting on Zoom](#) (same link every day): <https://zoom.us/j/97411658452>

1st session chair: Toste, 2nd session chair: Anya. Discussion moderator: Albert Fischer

1. Opening Workshop (5 mins)

Introduction to the agenda and what will be covered in this session, importance of the regional session and welcome to the broader regional observing community for the session today. Charge for the discussion

First Session: Toste Tanhua

Second Session: Anya Waite

Meeting Etiquette - Albert Fischer

2. GOOS regional approaches with GOOS Regional Alliances and regional GOOS projects (including guests GRA and project leads)

Background: This special session will focus on the GOOS regional approach. The first GRA was created in 1994 and the most recent addition was in 2014. GRAs are coalitions of nations and/or institutions that share GOOS principles and goals, but are mostly concerned with local priorities and organized around ocean basins or coastal environments.

Today there are 13 designated GRAs. They are heterogeneous in structure and governance and range in type from large national systems, such as IOOS and IMOS, to regional consortia that coordinate across data flow and networks, such as EuroGOOS, to regional bodies that focus on coordination to respond to scientific questions of regional importance. There are also a few emerging regional groups that are not designated as GRA's, but regularly participate and gain from the GRA Forum discussions, such as SOOS and the Arctic Council.

GRAs by concept are especially important for incorporating both coastal and open ocean observations, and for engaging with the users of operational services and the beneficiaries of marine ecosystem health. All GRAs are focused to deliver on the provision of ocean observing information. Several GRAs had evolved to meet a wide range of societal challenges related to both the coastal and open ocean observations. Some GRAs are active and are embracing new networks consistent with the expanded vision and mission of GOOS and increased delivering in terms of operational modeling capacities within GRAs Despite this, several regions remain sparsely observed and the GRA structure and activities have not been a driving force for global capacity

development towards filling these gaps. In addition, the last 5 years has seen the development of regional ocean observing coordination through projects such as TPOS2020 and AtlantOS, that seek to coordinate across perceived 'gaps' in the current GRA structure. In the case of AtlantOS to take a basin scale approach for the Atlantic, and for TPOS2020 to revive and update the Tropical Pacific Observing System for the benefit of the intermediate data users that use the TPOS ocean data in services. Coordination, collaboration and engagement between these regional projects and GRA activities have also not been optimal in order to deliver maximum regional benefits.

The OceanObs'19 paper by Moltmann et al. (2019) and the published paper in *Frontiers in Marine Sciences* (2019) - on this [link](#) further outlines some clear benefits in the GRA structure, as well as barriers and challenges which predominantly include resources and partnerships (see also background document).

At the GOOS SC-10 part 1 we considered the Study on Support Provided to Global and Regional Ocean Observing Systems, by Neville Smith ([link](#)). Section 3.22 page 34 summarises the findings for the regional dimension and makes this recommendation.

Recommendation 3: Regional networks should be recognized as part of the (GOOS) support structure when and where they offered advantage and value for implementing the six pillars of the support strategy.

Finally under Strategic Objective 2 of the 2030 Strategy GOOS and as recommended in the Study on Support Provided to Global and Regional Ocean Observing Systems, by Neville Smith (Recommendation 2), there is work underway to rejuvenate the GOOS National Focal Points role in GOOS. This will be an ongoing focus within GOOS and so should be considered within the regional discussions

This session is convened with the GOOS SC, the leadership of the GRAs and the regional Projects to discuss the evolution of the GOOS GRA concept. What works, what does not, what and how should we evolve this regional concept to contribute more to the GOOS and to those involved at the regional level.

A key discussion point is - could we gain from a more flexible and adaptable approach to what constitutes a GRA and the GRA framework?

[Document: Workshop on GOOS Regional Structures: Background Information](#)

[Document: AtlantOS & TPOS Project Input GOOS SC-10-2](#)

[Presentations: Opening, Introduction, Overview from GRAs, Input from regional projects \(AtlantOS, TPOS2020\), Interactive session: Vision and what GOOS wants from regional coordination, Interactive Session: what regional structures want from GOOS.](#)

Session structure:

1. *Rational and overview of background information and session format (10 mins)*
Emma Heslop
2. *Overview from GRAs (15 mins)*
First Session: Venkat (R. Venkatesan)
Second Session: Carl Goldman
3. *Input from regional projects :*
 - a. *AtlantOS (5 mins)*
First Session: Brad de Young
Second Session: Brad de Young
 - b. *TPOS 2020 (5 mins)*
First Session: Weidong Yu
Second Session: William Kessler

Questions (25 mins)

4. *Interactive session: Vision and what do regional structures want from GOOS (35 mins) - short PPTs to introduce the topic with time for questions, we will use mural boards to capture input around these 2 topics.*
 - a. *Introduction to Mural boards (5 mins)*
Forest Collins
 - b. *Vision for a thriving regional coordination ecosystem, what does GOOS want from regional coordination? Short PPT - then mural board interaction (15 mins)*
PPT and curation: Albert Fischer
 - c. *What do regional structures want from GOOS? Short PPT - then mural board interaction (15 mins)*
PPT and Curation: Denis Chang Seng

(35 mins)

Break (10 minutes)

5. Final plenary discussion: Summary of the mural boards (Albert), roundtable thoughts, discussion on evolving the GOOS Regional Structures leading to main points for a recommendation/decision to be reviewed by the SC on Tuesday 30 Nov.

'Zero draft' Decision - will be created with input from the session and presented to the GOOS SC on Tuesday 30 November.

Day 2: Tuesday 30 November 2021 (2 hrs)

Sessions at [6:00-8:00 UTC](#) and [14:00-16:00 UTC](#) (click to see what time that is for you), repeating the same material - join the session that works best for you.

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1. Opening (10 mins)

GOOS Co-Chairs opening of the session, reflections on GOOS progress, visibility of the ocean observing system internationally, and recent events such as COP-26, priorities for this session. Note on the SC 'in camera' session on Thursday 02 December. Charge for the next days of discussion

First Session: Toste Tanhua

Second Session: Anya Waite

[Presentation: GOOS SC-10 part 2 Short Introduction](#)

Meeting Etiquette - Emma Heslop

2. Regional Workshop outcome (15 mins)

Summary and main points for the recommendation/ decision

First Session: Toste Tanhua

Second Session: Anya Waite

'Zero draft' Decision - will be created with input from the session and presented to the GOOS SC on Tuesday 30 November.

To constitute a GOOS Task Team including members of GOOS SC, GRA leadership and regional projects, amongst others, and using the background paper, the feedback and results of the GOOS Regional Workshop and input of the Task Team members to:

- a) Review the GOOS Regional policy 2013, highlighting gaps, weaknesses and where it is inconsistent
- b) Evolve a vision for the GRA role in the GOOS
- c) Identify the commitment required from GOOS to support a thriving GRA ecosystem
- d) Develop proposal for an updated GOOS Regional Policy 2022, in-line with the Global Ocean Observing System 2030 Strategy and current societal needs for ocean information
- e) Explore mechanisms to engage WMO and UNEP in the process of GRAs and link up to those regional structures
- f) Define possible attributes for different level of ambition / capacity of GRAs

Present this to the GOOS SC for approval in 2022, following preview and input by GOOS Sponsors

Proposal to be put to the IOC Executive Council in June 2022 (proposal to be ready in April 2022)

In 2020 GOOS requested Maria Hood to undertake a synthesis of the Benefits, Responsibilities, and Principles of being a GOOS Regional Alliance and Procedures for Endorsement for the current GRA policy. This is a useful resource for such a GRA TT in defining a revised Policy (see Annex 1 background materials).

3. **Short items of a strategic nature**

Background: A series of short items of a strategic and across-GOOS nature. They are topical and the aim of this session is to provide the SC with a brief overview of the topic, a view of how this fits with the implementation of the GOOS 2030 Strategy (the why), and the specific request or decision. It is envisioned that each session will be 15 minutes - 5 mins presentation, with 10 mins to consider questions and provide guidance on the points raised.

- **Global Ocean Observing Report Card - a cross-GOOS Plan (15 mins)**

First Session: Mathieu Belbeoch

Second Session: Mathieu Belbeoch

Document: [Ocean Observing System Report Card 2021](#)

Presentation: [Ocean Observing System Report Card](#)

- **WMO Data Policy and GBON (15 mins)**

First Session: Jon Turton

Second Session: David Legler

Document: [Suggestions for the GOOS Steering Committee on an initial GOOS contribution to the WMO Global Basic Observing Network \(GBON\)](#)

Document: [GOOS News](#)

Presentation: [WMO Data Policy and GBON](#)

'Zero draft' Decision

Actions requested of the GOOS Steering Committee:

1. Concur with the prioritization of SST, surface air pressure, and upper ocean temperature as initial priority EOVs for the ocean elements of WMO GBON
2. Request to WMO Standing Committee on Earth Observing Systems and Monitoring Networks (SC-ON) that the indicated observing networks be identified and included in the Global Basic Observing Network (GBON).

- **EEZ Report (15 mins)**

First Session: Emma Heslop

Second Session: Emma Heslop

Document: [Final Draft Expert Meeting report on the Ocean Observations in Areas under National Jurisdiction Workshop](#)

Presentation: [GOOS SC-10-2 Ocean Observations in Areas under National Jurisdiction \(OONJ\) – Preview of Report Findings](#)

'Zero draft' Decision

No single solution from the Ocean Observations in Areas Under National Jurisdiction Experts Workshop will be sufficient. Request:

GOOS to work with IOC, WMO and DOALOS to carefully select those areas where they will place effort to support ocean observations in coastal States EEZs. GOOS to ask these organisations to work together and commit to making progress in this politically difficult but societally vital area.

- **Ocean Indicators (15 mins)**

First Session: Sabrina Speich

Second Session: Sabrina Speich

Presentation: [Towards an International Ocean Indicator Framework](#)

- **Reflections on COP-26 / Carbon Observatory (15 mins)**

First Session: Toste Tanhua

Second Session: Anya Waite

Presentation: [Reflections on CoP26](#)

- **Proposal to become a GOOS project SMART Cables (15 mins)**

First Session: Bruce Howe

Second Session: Jose Barros

Document: [JTF SMART Cables Request for Affiliation as a GOOS Project](#)

Presentation: [SMART Subsea Cables: GOOS Project](#)

'Zero draft' Decision

GOOS Projects are aimed at filling identified gaps in the system. They may be Development Projects with a broad scope covering requirements, observations, and data systems universally relevant to GOOS, with a geographic or thematic focus; or Pilot Projects focused on specific areas or systems to improve readiness for sustained observations.

GOOS welcomes the progress in development of SMART Subsea Cables as a component of the sustained ocean observing system

GOOS is supportive of proposal for SMART Subsea Cables to become a GOOS project

Projects are time bound, GOOS requests SMART Subsea Cables to provide a clear project development timeline for 5-years, with deliverables to GOOS aligned with the 2030 Strategic Objectives, and report back to GOOS SC-11 with this timeline for endorsement as a GOOS Project.

Discussion:

Day 3: Wednesday 1 December 2021 (2 hrs)

Sessions at [6:00-8:00 UTC](#) and [14:00-16:00 UTC](#) (click to see what time that is for you), repeating the same material - join the session that works best for you.

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4. Ocean Decade programmes (50 mins)

Background: Review of progress, challenges, opportunities, forward plan from the 3 GOOS Ocean Decade Programmes.

The charge from the last SC was for the Ocean Decade programmes to initiate their governance mechanisms. The GOOS Ocean Decade Programmes have all undertaken work in this direction, in addition the GOOS Office has recently hired a consultant to work full time supporting the 3 GOOS Ocean Decade Programmes and it is anticipated that this extra resource will aid progress. Projects have been allocated to some of the GOOS Ocean Decade Programmes. The programmes are working towards having defined projects which can be funded, however in most cases this will take more time as there is work required to create aligned, coordinated and integrated work.

The Ocean Decade Coordination Office has launched a call for projects and initiated work on a Resource Forum platform.

Overall the concepts of the three GOOS Ocean Decade programmes are well received, for example there was a Ocean Decade Predicted Ocean Laboratory in September where the programmes *Ocean Observing Co-Design*, *CoastPredict*, and *Foresea* from OceanPredict, and the project SynObs collaborated. This type of collaboration is one of the big pluses of the Ocean Decade.

Good progress has been made, however there are some issues to consider: the funding pathways the Ocean Decade has to support the programmes remains unclear, the Decade landscape is increasing in complexity, how can the level of collaboration required, across programmes, projects, communities be realistically achieved (for example the area of ocean data has a Decade Ocean Data Platform coordinator seconded from industry to assist).

- **Observing Together (10 mins)**
First Session: Kim Currie
Second Session: Molly Powers
- **CoastPredict (10 mins)**

First Session: Nadia Pinardi
Second Session: Joaquín Tintore

- **Ocean Observing Co-Design (10 mins)**

First Session: Sabrina Speich
Second Session: David Legler

- **Ocean Decade (10 / 5 min)**

First Session: Vladimir Ryabinin and Julian Barbière (10 mins)
Second Session: Alison Clausen (5 mins)

20 mins for questions

Documents:

- [CoastPredict: Revolutionising Global Coastal Ocean observing and forecasting](#)
- [Observing Together: Meeting stakeholder needs and making every observation count](#)
- [Ocean Observing Co-Design: Transforming our ocean observing system assessment and design process](#)
- [The Global Ocean Observing System at the heart of The Decade of Ocean Science for Sustainable Development 2021-2030](#)

Presentations: [Ocean Observing Co-Design](#), [CoastPredict](#), [Observing Together](#), [Ocean Decade](#)

Discussion:

'Zero draft' Decision / Recommendation

GOOS thanks the Ocean Decade Team for the increased visibility and for catalyzing discussions/strategizing across government, science, NGOs and industry.

GOOS should advance its communication to diverse communities, focusing on policy makers and research Institutions of the Member States.

GOOS should ensure that Decade programmes are integrated (good effort thus far!)

GOOS should clarify how the Decade programmes will be implemented within the GOOS structure

Funding: There is a lack of implementation resources for the GOOS Programmes and projects (in contrast to the resourced Ocean Decade office)

- Project level is perhaps an easier route for investment, however Programmes will put them into a framework for societal impact, to deliver new standards and benefit multiple users/projects.
- Proposed GOOS UN Decade Programmes are important and fundable entities within the Ocean Decade, GOOS AND the Decade need to work on raising their funding profile.
- Programmes/projects need to receive implementation support and resources to coordinate planning

5. **GOOS Task Team Progress and Priorities** (45 mins)

Background: A short view of progress across the Task Teams that have been set up by this SC, some of the work is near completion, others are commencing. With a balance of work required between GOOS core business and GOOS Ocean Decade Programmes, this is an opportunity for the SC to consider priorities.

Document:

Presentation: [GOOS SC-10-2 Task Team Progress and Priorities](#)

Discussion:

'Zero draft' Decision / Recommendation

- GOOS Panels to continue to identify BP and promote endorsement
- Implementation Plan Task Team to complete at next SC April 2022, suggest work continues using the Implementation Plan and tools as a core GOOS activity, through quarterly GOOS Exec meetings to work on cross-GOOS and other actions, funding, analysis of progress, topical issues, and reporting from this annually to the GOOS SC
- Action to set up a specific cross-Panel call to scope what an Observing System Synthesised Recommendations project could be, what it would take to implement and how it relates to existing IP actions?

6. **How we work in 2022** (15 mins)

Background: Travel and personal restrictions related to the Covid-19 pandemic commenced around March 2020. The GOOS-SC 9 and GOOS SC-10 have been virtual, and the pattern of telework, some office days and zoom meetings continues. This session takes a brief pause to consider the outlook for 2022, for the next GOOS SC, and

how to get the most out of the opportunities and challenges we face in working in this way.

[Document:](#)

[Presentation: How we work in 2022](#)

[Discussion:](#)

7. **Closing** (5 min)

Day 4: GOOS Steering Committee appointed members in camera meeting

Agenda TBC