

Task team to advance the development of pan-Arctic ocean observing alliance

The development of a structure for improved international coordination of Arctic oceanography, such as an Arctic GOOS (Global Ocean Observing System) Regional Alliance (GRA), has been recommended in various fora in recent years, including during the development of the Arctic Action Plan for the UN Ocean Decade and at various editions of the Arctic Observing Summit (most recently in 2022). A concept and framework for a Sustained Arctic Ocean Observing System was also developed in detail by [Lee et al. \(2019\)](#), and a roadmap for a sustainable Arctic Observation System for ocean, atmosphere and land was developed within the EU-funded INTAROS project ([Sandven et al., 2022](#)).

In order to advance discussions and to develop a roadmap towards realisation of a structure for international coordination of ocean observing in the Arctic, a roundtable discussions meeting was held during the 2023 Arctic Science Summit Week (ASSW) in Vienna. The meeting was attended by a wide range of partners engaged in ocean and broader Arctic observing initiatives. A report from this meeting is available [here](#). Participants in the meeting agreed that a Task Team should be formed to design and lead a process that results in an Arctic GRA or similar structured organisation being realised. This process is to include engagement of a diverse range of stakeholders, including representatives of Arctic Indigenous and Local communities and organisations. It is proposed that this Task Team and the process it co-develops be formally recognised by both Sustaining Arctic Observing Networks (SAON) and Global Ocean Observing System (GOOS).

Objectives

1. Lead the process to co-develop a proposal for a future pan-Arctic ocean observing alliance.
2. Ensure wide engagement of relevant rights holders and stakeholders in this process, including representatives of Arctic Indigenous and Local communities and organisations.
3. Prepare for the implementation of the proposed pan-Arctic ocean observing alliance that includes equitable partnerships with Arctic Indigenous Peoples.

Expected outcome

The expected outcome of the Task Team will be a proposed design for a pan-Arctic ocean observing alliance (such as a GRA) that unites the diversity of sustained ocean observing initiatives in the Arctic through a single entity or structure. The future system will span the whole ocean observing value chain, from observations to benefits for users, and include all sustained ocean and sea ice observing activities in the Arctic (research, operational oceanography, monitoring, community based monitoring, etc.). The proposed design of the pan-Arctic observing alliance will be inclusive of the needs of different rights holders, stakeholders and actors, including Arctic Indigenous and Local communities..

Terms of Reference

- Consult appropriately across the ocean observing community in the Arctic to develop a proposal for a pan-Arctic ocean observing alliance.
- Complete the actions defined below during the Task Team's initial life time.

- Convene Task Team members (online or in person) at 2-monthly intervals (or more frequently as needed) to update on progress and plan implementation of defined actions (below).
- Assess progress towards a pan-Arctic ocean observing alliance and future needs for continued activity after the Task Team's initial lifetime.
- Report to the SAON Board and the GOOS Steering Committee on progress to complete defined actions (below) and detail next steps in October 2024.

Actions

The following initial actions have been identified for the Task Team:

1. Design an inclusive process for the development of a pan-Arctic ocean observing alliance incorporating broad input from relevant stakeholders and representatives of Arctic Indigenous and Local communities. **(Ongoing)**
2. Consult with existing GRAs around the world to gather best practices, advice and experience to support the development of a pan-Arctic ocean observing alliance, particularly those with prominent involvement of Arctic Indigenous and Local communities. **(Ongoing)**
3. Explore available opportunities to secure funding to support the work of the Task Team, particularly to support engagement of Arctic Indigenous colleagues in its activities. **(Ongoing)**
4. Seek resources/funding for staff to support the Task Team's activities, and those of a future operational pan-Arctic ocean observing alliance. **(Ongoing)**
5. Convene a session at the Arctic Observing Summit (AOS) 2024 to discuss the proposed initial pan-Arctic ocean observing alliance design and gather community feedback for further refinement and development **(Deadline: March 2024)**
6. Report on progress of development of a proposed pan-Arctic ocean observing system to the GOOS Steering Committee and Regional Alliance Forum **(Deadline: April 2024)**
7. Host a briefing/information session from other GRAs with prominent involvement of Arctic Indigenous and Local communities to gather best practices, advice and experience to support the development of an Arctic GRA **(Deadline: August 2024)**
8. Draft an inventory of existing sustained ocean and sea ice observing initiatives across the Arctic, building upon previously completed work (such as that completed for the 3rd Arctic Science Ministerial) **(Deadline: October 2024)**
9. Report to the SAON Board and the GOOS Steering Committee on progress towards defined actions (above) and detail next steps at end of the Task Team's initial period **(October 2025)**

Timeline

The Task Team was initiated in February 2023, with preparatory work completed since then. The Task Team will enter an operational phase, initially of 18 months, beginning in April 2024. Renewal of the Task Team's mandate will be sought as needed.

Resources

The Task Team's activities are initially on an in-kind basis. Opportunities for funding the work of the Task Team will be explored, particularly to support engagement of Arctic Indigenous colleagues in its activities.

Endorsement of the task team

These terms of reference are submitted to SAON for approval, seeking endorsement of the group as a SAON Task Team. It is further planned to submit the same document to the GOOS Steering Committee in April 2024, to additionally seek their approval and endorsement as a potential joint GOOS-SAON Task Team.

Initial membership

The following individuals have been identified as initial members of the Task Team. Should endorsement of the Task Team by SAON and GOOS be approved, a call for additional members will be made via those communities. Interested members of the SAON Board are welcome to join the Task Team.

Particular efforts are being made to secure Indigenous participation in the Task Team. Any funding for the Task Team will initially be used to facilitate and support this as a priority.

Liaison contacts with the SAON Secretariat and GOOS Office will ensure necessary connections between the Task Team and relevant activities or meetings.

Name	Affiliation	Country
Jari Haapala (Co-Chair)	Finnish Meteorological Institute (FMI)	Finland
Craig Lee (Co-Chair)	University of Washington	United States
Nicoletta Ademollo	Institute of Polar Sciences (CNR-ISP)	Italy
David Allen	National Oceanic and Atmospheric Administration (NOAA)	United States
Maurizio Azzaro	Institute of Polar Sciences (CNR-ISP)	Italy
Manuel Bensi	National Institute of Oceanography and Experimental Geophysics (OGS)	Italy
Dominique Berod	World Meteorological Organization (WMO)	Switzerland
Agnieszka Besczynska-Moeller	Institute of Oceanology of Polish Academy of Sciences (IOPAN)	Poland
Maria Teresa Bezem	University of Bergen (UiB)	Norway
Melissa Chierci	Institute of Marine Research (IMR)	Norway
Cathy Coon	National Oceanic and Atmospheric Administration (NOAA) Fisheries	United States
Brad de Young	Canadian Integrated Ocean Observing System (CIOOS) Pacific	Canada
Hannah-Marie Garcia	Tribal Government of St. Paul Island	United States
Maria Hood	Mercator Ocean International (MOi)	France
Michael Karcher	Alfred Wegener Institute for Polar and Marine Research (AWI)	Germany

Takashi Kikuchi	Japan Agency for Marine-Earth Science and Technology (JAMSTEC)	Japan
Vidar Lien	Institute of Marine Research (IMR)	Norway
Inga Lips	European Global Ocean Observing System (EuroGOOS)	Belgium
Molly McCammon	Alaska Ocean Observing System (AOOS)	United States
Maribeth Murray	Arctic Institute of North America (AINA)	Canada
Anna Nikolopoulos	Norwegian Polar Institute (NPI)	Norway
Joseph Nolan	European Global Ocean Observing System (EuroGOOS)	Belgium
Steffen Olsen	Danish Meteorological Institute (DMI)	Denmark
Nicholas Roden	Norwegian Institute for Water Research (NIVA)	Norway
Hanne Sagen	Nansen Environmental and Remote Sensing Center (NERSC)	Norway
Stein Sandven	Nansen Environmental and Remote Sensing Center (NERSC)	Norway
Toste Tanhua	GEOMAR Helmholtz Centre for Ocean Research Kiel	Germany
Melinda Webster	Climate and Cryosphere (CliC) Arctic Sea Ice Working Group	United States
Jeremy Wilkinson	British Antarctic Survey (BAS)	United Kingdom
Eun Jin Yang	Korean Polar Research Institute (KOPRI)	Republic of Korea