

## **GOOS-SAON Task team to advance the development of pan-Arctic ocean observing alliance (ArORA Task Team)**

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 discussion 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 similarly structured organisation being realised. This process is to include engagement of a diverse range of stakeholders and rights holders, 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).

The Task Team adopts the name 'Arctic Ocean Regional Alliance' (**ArORA**) as a working title for the future regional alliance.

### **Objectives**

1. Lead the process, which includes wide engagement of rights holders and stakeholders, to co-develop a proposal for a future ArORA.
2. Submit the proposal to GOOS and SAON for consideration and follow up on any feedback and further requests.
3. When approved, design and implement a handover process from the Task Team to the new ArORA leadership and close the Task Team.

### **Expected outcome**

The Task Team will produce a proposed design for ArORA 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 ArORA will be inclusive of the needs of different rights holders, stakeholders and actors, including Arctic Indigenous Peoples and coastal communities.

## Terms of Reference

- Consult appropriately across the Arctic ocean observing community to develop a proposal for ArORA.
- Complete the actions defined below during the Task Team's initial lifetime.
- Convene Task Team members (online or in person) at two-monthly intervals (or more frequently as needed) to update on progress and plan implementation of defined actions (below).
- Assess progress towards ArORA and future needs for continued activity after the Task Team's lifetime.
- Report to the SAON Board and the GOOS Steering Committee on progress to complete defined actions (below) and detail next steps in October 2025.

## Timeline

- The Task Team was initiated in February 2023, with preparatory work completed since then. The Task Team began an operational phase, initially of 18 months, beginning in April 2024. Renewal of the Task Team's mandate will be sought as needed from October 2025.

## Task Team

- The Task Team is open to all, with members serving on a volunteer basis. Individuals wishing to join the Task Team should indicate interest by self-nomination. Task team members should be willing to represent the needs of broad cross-sections of the Arctic community.
- Initial term of service will extend to the end of the Task Team's current mandate in October 2025, with a possible extension should the team require additional time to complete the proposal for ArORA.
- Task Team members are expected to engage in meetings and to lend their expertise and experience to the process of shaping the proposed ArORA. Task Team members will also assist with writing and reviewing the associated proposal for GOOS and SAON.
- The Task Team has two Co-Chairs, nominated from the Task Team members, who lead and figurehead its activities.
- The Task Team has a Coordinator, nominated from the Task Team members, who supports the Task Team's activities in close collaboration with the Co-Chairs.
- Current Task Team members are listed in Annex 1.

## Steering Group

- A Steering Group, drawn from the Task Team members, will work to:
  - Focus and coordinate activity Task Team activity toward completion of the objectives stated above.
  - Synthesise Task Team discussion and outputs.
  - Actively support Task Team efforts, including report generation and facilitation of discussions.

- The Steering Group is for the ArORA Task Team during its lifetime. It is not a steering group or governance body for the future ArORA.
- The Steering Group will be composed of seven or more individuals (current Steering Group members are listed in Annex 2):
  - The two Task Team Co-Chairs,
  - The Task Team coordinator,
  - Four or more individuals nominated and selected from the Task Team members. At least one member should be a representative of an Indigenous Peoples' Organisation.
- Task Team members may self-nominate or nominate fellow Task Team members to join the Steering Group. Steering Group nominees are to be approved by the Task Team, seeking Indigenous leadership and national and disciplinary balance.
- The term of service will extend to the October 2025 end of the Task Team's current mandate, with a possible extension should the team require additional time to complete the proposal for ArORA.

## Task Team Actions

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

1. Design an inclusive process for the development of ArORA incorporating broad input from relevant stakeholders and representatives of Arctic Indigenous Peoples and Local communities. **(Ongoing)**
2. Consult with existing GRAs around the world to gather best practices, advice and experience to support the development of ArORA, particularly those with prominent involvement of Indigenous Peoples and Local communities. **(Ongoing)**
3. Explore available opportunities to secure funding to support the work of the Task Team, including support for engagement of Arctic Indigenous colleagues in its activities. **(Ongoing)**
4. Seek resources/funding for staff to support the establishment and initial activity of a future operational ArORA. **(Ongoing)**
5. Convene a session at the Arctic Science Summit Week (ASSW) 2025 to report on progress to the Arctic science community and seek feedback on the draft ArORA proposal **(Deadline: March 2025)**
6. Report on progress of development of a proposed ArORA to the GOOS Steering Committee at their 2025 annual meeting **(Deadline: April 2025)**
7. Report on progress of the development of a proposed ArORA to the SAON Board at their regular meetings **(Ongoing)**
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 in 2021) **(Ongoing)**
9. Develop and submit the proposal for ArORA to GOOS and SAON for consideration; follow up on any feedback and further requests **(October 2025)**

Upon completion of the defined actions, new actions will be defined to address next steps with an updated terms of reference, or the Task Team will be closed.

## Next steps

Upon acceptance of the proposal, preparations for the implementation of the proposed ArORA should be made, including equitable partnerships with Arctic Indigenous Peoples.

Necessary preparations include, but are not limited to:

- Identification of a host organisation(s) for the proposed ArORA, and a plan for resourcing its implementation.
- Establishment of ArORA entity and recruitment of staff.
- Design and implementation a transition process from the Task Team to the new ArORA.
- Assemble and handover resources, learnings, and contacts from the Task Team to the new ArORA leadership.

These next steps are indicative only and for implementation after the task team's initial mandate has been fulfilled.

## 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.

## Annex 1: Task team membership (June 2025)

The following individuals have been identified as members of the Task Team. Membership of the Task Team is not limited. In particular, interested Arctic Indigenous representatives, members of the SAON Board and GOOS national focal points are encouraged 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.

*Members of the Steering Group are indicated by (SG)*

| <b>Name<br/>(role)</b>              | <b>Affiliation<br/>(short)</b> | <b>Affiliation<br/>(long)</b>  | <b>Country</b>        |
|-------------------------------------|--------------------------------|--|-----------------------|
| Craig Lee<br>(SG; Co-chair)         | UW                             | University of Washington   | USA                   |
| Anna Nikolopoulos<br>(SG; Co-chair) | UiT,<br>ArcticROOS             | UiT The Arctic University of Norway  | Norway                |
| David Allen<br>(SG)                 | NOAA                           | National Oceanic and Atmospheric<br>Administration                         | USA                   |
| Maia Hoeberechts<br>(SG)            | ONC/<br>UVIC                   | Ocean Networks Canada, University of<br>Victoria                           | Canada                |
| Michael Karcher<br>(SG)             | AWI                            | Alfred Wegener Institute Helmholtz centre for<br>polar and marine research | Germany               |
| Molly McCammon<br>(SG)              | AOOS                           | Alaska Ocean Observing System  | USA                   |
| Maribeth Murray<br>(SG)             | AINA                           | Arctic Institute of North America  | Canada                |
| Jeremy Wilkinson<br>(SG)            | BAS                            | British Antarctic Survey   | UK                    |
| Eun Jin Yang<br>(SG)                | KOPRI                          | Korea Polar Research Institute   | Korea                 |
| Nicoletta Ademollo                  | CNR-ISP                        | National Research Council Institute of Polar<br>Sciences                   | Italy                 |
| Maurizio Azzaro                     | CNR-ISP                        | National Research Council Institute of Polar<br>Sciences                   | Italy                 |
| Manuel Bensi                        | OGS                            | National Institute of Oceanography and<br>Applied Geophysics               | Italy                 |
| Dominique Berod                     | WMO                            | World Meteorological Organization  | Intl./Switzerl<br>and |

|                              |                    |  |              |
|------------------------------|--------------------|--|--------------|
| Agnieszka Besczynska-Moeller | IOPAN              | Institute of Oceanology Polish Academy of Sciences                       | Poland       |
| Maria Teresa Bezem           | UiB                | University of Bergen   | Norway       |
| Yanxu Chen                   | WHOI               | Woods Hole Oceanographic Institution                                     | USA          |
| Melissa Chierici             | IMR                | Institute of Marine Research   | Norway       |
| Brad de Young                | CIOOS-Pacific      | Canadian Integrated Ocean Observing System, Pacific Regional Association | Canada       |
| Parnuna Egede Dahl           | Oceans North       | Oceans North Kalaallit Nunaat  | Greenland    |
| Agneta Fransson              | NPI                | Norwegian Polar Institute  | Norway       |
| Hannah-Marie Garcia          | St. Paul Island TG | Aleut Community of St. Paul Island Tribal Government                     | USA          |
| Maria Grigoratou             | EPB                | European Polar Board   | Intl./Sweden |
| Emma Heslop                  | GOOS               | Global Ocean Observing System  | Intl./France |
| Maria Hood                   | MOi                | Mercator Ocean International   | France       |
| Jari Haapala                 | FMI                | Finnish Meteorological Institute   | Finland      |
| Monika Kędra                 | IOPAN              | Institute of Oceanology Polish Academy of Sciences                       | Poland       |
| Takashi Kikuchi              | JAMSTEC            | Japan Agency for Marine Earth Science and Technology                     | Japan        |
| Jing Li                      | GOOS               | Global Ocean Observing System  | Intl./France |
| Vidar Lien                   | IMR                | Institute of Marine Research   | Norway       |
| Joseph Nolan                 | Seascope           | Seascope Belgium   | Belgium      |
| Steffen Olsen                | DMI                | Danish Meteorological Institute  | Denmark      |
| Benjamin Rabe                | AWI                | Alfred Wegener Institute Helmholtz centre for polar and marine research  | Germany      |
| Nicholas Roden               | NIVA               | Norwegian Research institute for water and the environment               | Norway       |
| Hanne Sagen                  | NERSC              | Nansen Environmental and Remote Sensing Center                           | Norway       |
| Stein Sandven                | NERSC              | Nansen Environmental and Remote Sensing Center                           | Norway       |
| Haliehana Stepetin           | Ted Stevens Center | Ted Stevens Center for Arctic Security Studies                           | USA          |

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|-----------------|--------|---|---------|
| Arild Sundfjord | NPI    | Norwegian Polar Institue                        | Norway  |
| Toste Tanhua    | GEOMAR | GEOMAR Helmholtz Centre for Ocean Research Kiel | Germany |
| Melinda Webster | CLIC   | CLIC Arctic Sea Ice Working Group               | USA     |