Toward a Regional Alliance for the Arctic Ocean





Bering
Strait

Fastest routes
for PC6 ships

Fastest routes
for OW ships

CANADA

North
Pole

RUSSIA

RUSSIA

Arctic
Circle

Soo MIES

Propagation in Beaufort Sea

Botton bounce suppressed. Thory volume attenuation

Pacific Water creates
100-m sound channel.
Modeled propagation
shows refraction with
little loss in this duct

K. Heaney, OAS

Sound Channel Allows Long-Range

Northern Communities Ecosystem Change
Climate Economics
National Security

Craig Lee (APL-UW, USA), Anna Nikolopoulos (NPI, Norway) and the Arctic Ocean Regional Alliance Task Team

Why now?

- Increased awareness of the Arctic Ocean's role in the climate system.
- Severe climate impacts on Arctic communities.
- Accelerating human activity.
- Many existing initiatives and programs for observing the Arctic marine environment.
- Coordination at national level, but broader cooperation challenging due to complex, heterogenous environment.
- UN Decade of Ocean Science and endorsement from G7 Future of Seas and Oceans Initiative may provide opportunities to advance broad coordination efforts.

An Arctic Ocean Regional Alliance (ArORA)



- Arctic broadly defined (AMAP).
- Existing GRAs encompass elements of this region (US iOOS, EUROGOOS, CIOOS).
- ArORA to complement existing regional alliances & organizations
 - Facilitate pan-Arctic communication and coordination.
 - Connect Arctic efforts and global networks.
 - Matchmake between data providers and users.

Rationale and Function for the ArORA

- Formal representation of the Arctic within GOOS.
- Sustained Arctic observing efforts would benefit from a stable, overarching framework to enable coordination and collaboration.
- Connect existing efforts with Global Ocean Observing Systems (e.g. GOOS, POGO, GEO Blue Planet) to leverage existing structures and resources.
- Encourage Global Ocean Observing Systems to extend coverage into Arctic.
- DATA PROVIDERS **DATA PRODUCTS DATA USERS** LOCAL PEOPLE LOCAL / COASTAL SITUATIONAL **MEASUREMENTS AWARENESS** Indigenous Peoples and local FISHERS, HUNTERS Regional and national agencies ASSIMILATION TO Universities and governmental institutes FORECAST MODELS SHIPPING EOV'S, ECV'S REGIONAL / EEZ **TOURISM INDICATORS MEASUREMENTS** Regional and national agencies Universities and governmental institutes **ENVIRONMENTAL** SEARCH & RESCUE **ASSESSMENTS** PAN-ARCTIC **POLICY MAKERS** ANYTHING **MEASUREMENTS** ELSE? IABP, ARGO, GOA-ON RESEARCH Universities and governmental institutes
- Fundamental engagement with rightsholders and stakeholders observing system conceptualization, design and implementation – align activities with needs.
- Strengthen Arctic representation in international bodies, planning and advocacy in international and national forums.

Task Team 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 organizations.
- 3. Produce a proposal (to GOOS, SAON) for a pan-Arctic ocean observing alliance, including goals, functionality, governance and relationship to existing organizations.
- 4. Prepare for the implementation of the proposed pan-Arctic ocean observing alliance that includes equitable partnerships with Arctic Indigenous Peoples.

Progress and Plans

- Arctic Science Summit Week 2023 Roundtable Need enhanced pan-Arctic coordination.
- SWOT analysis of GRA effort identified many compelling opportunities.
- Two years invested expanding Task Team membership, seeking Indigenous and local voices. Deferred proposal development during this period.
- G7 Future of Seas and Oceans (FSOI) prioritized Arctic Ocean observing, and formation of an Arctic GRA (or similar) as a vehicle for coordination and focusing national support.
- Task Team Terms of Reference and establishment of Steering Group.
- Official designation of Task Team by SAON and GOOS.
- Arctic Science Summit Week 2024 & 2025 panel discussions.
- Proposal under development public comment Q3, delivery in Q4 2025.

Arctic Regional Alliance Task Team

Co-Chairs: Craig Lee (University of Washington, United States), Anna Nikolopoulos (NPI, Norway)

Steering Committee: David Allen (NOAA, USA), Maia Hoeberechts (ONC, Canada), Michael Karcher (AWI, Germany), Molly McCammon (AOOS, United States), Maribeth Murray (AINA, Canada), Jeremy Wilkinson (BAS, United Kingdom), Eun Jin Yang (KOPRI, Republic of Korea)

Coordinator: Manuel Sala Perez

Members: Nicoletta Ademollo (CNR-ISP, Italy), Maurizio Azzaro (CNR-ISP, Italy), Manuel Bensi (OGS, Italy), Dominique Berod (WMO, Int), Agnieszka Besczynska-Moeller (IO PAN, Poland), Maria Teresa Bezem (UiB, Norway), Melissa Chierci (IMR, Norway), Cathy Coon (Department of Interior, United States), Brad deYoung (CIOOS, Canada), Parnuna Egede Dahl (Oceans North, Greenland), Agneta Fransson (NPI, Norway), Hannah-Marie Garcia (Tribal Government of St Paul Island), Maria Grigoratou (EPB, Int), Jari Haaoala (FMI, Finland), Emma Heslop (GOOS, Int), Maria Hood (MOi, France), Monika Kedra (IOPAN, Poland), Jing Li (GOOS, Int), Inga Lips (EUROGOOS, Int), Takashi Kikuchi (JAMSTEC, Japan), Vidar Lien (IMR, Norway), Inga Lips (EuroGOOS, Belgium), Joseph Nolan (EuroGOOS, Belgium), Steffen Olsen (DMI, Denmark), Ben Rabe (AWI, Germany), Nicholas Roden (NIVA, Norway), Hanne Sagen (NERSC, Norway), Stein Sandven (NERSC, Norway), Haliehana M. Stepetin (Ted Stevens Center for Arctic Security Studies, USA), Toste Tanhua (GEOMAR, Germany), Melinda Webster (CliC, Int)

Open to new members...

ArORA at Arctic Science Summit Week 2025

- IASC Marine Working Group
- CliC Arctic Sea Ice Working Group
- Pan-Arctic DBO Workshop
- ArORA Workshop

Questions (Panelists and World Café)

- What functions or benefits would you like to see from a regional alliance (ArORA)?
- How do we envision the first steps (first few years) of an ArORA? What ideas are tangible, high priority, and tractable?
- How do the needs of each community/party differ? How do we embrace these differences in the alliance? What voices are missing?
- What role should ArORA play in the IPY? What steps are needed to achieve these goals?