



Training, collaboration and
Innovation in ocean
observing – A contribution
to the Ocean Decade
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Workshop on Environmental Assessment of Arctic research

26-27 September 2023

Hotel Terminus, Zander Kaaes Gate 6, Bergen

*Organized by Nansen Environmental and Remote Sensing Center and Institute of Physics and Technology,
University of Bergen*

Background: There is increased focus on assessing how field-based research activities have impact on the environment in the Arctic, and what actions should be taken to reduce the impact of vessels, aircraft and land-based activities. In many projects it is required to carry out an environmental assessment before the field research is conducted to ensure that instruments and platforms are operated with minimum impact on the marine, atmospheric and terrestrial environment. Various science disciplines are developing best practices and guidelines how used to conduct responsible research in the Arctic. A synthesis report on Environmental Impacts of Research and Logistics in the Polar Regions has recently been published by the European Polar Board (doi:10.5281/zenodo.7907235), where legal frameworks, regulations and guidelines are summarized. For example, the EU project INTERACT has compiled information about permits and regulations for Arctic fieldwork on its website and also produced a guidebook on how to reduce the environmental impact of Arctic fieldwork.

This workshop will address how environmental assessment is required from regulations, funding agencies and the scientific communities working in the Arctic. The workshop is organized by the UAK project (Research Council of Norway under the INTPART programme) and the Horizon Europe project HiAOOS (High Arctic Ocean Observation System). The workshop will include presentations by Norwegian governmental institutions, universities and research institutes working in the Arctic. Kathleen Vigness Raposa from INSPIRE Environmental, with many years experience in environmental assessment of ocean research, will give an introduction to how to prepare for the assessments. The workshop will also address legal, ethical and safety aspects of Arctic field research.

The workshop is organized in two sessions:

Session 1 will provide overview of regulations, permissions, safety and environmental aspects of field work under national and international research projects in the Arctic Ocean and Svalbard. The aim is to clarify the needed actions in preparation of field work in the Norwegian Arctic.

Session 2 will address environmental assessment in selected research activities in the Arctic. The session will have presentation of marine and terrestrial field work with focus on current practices in assessment of the environmental impact

Agenda

Tuesday 26 September 2023. 10:00 – 17:00

Session 1: Regulations, permissions, safety, and environmental aspects of Arctic field work

Chair: Hanne Sagen, NERSC

10:00-10:15 Hanne Sagen, Introduction to the Workshop

10:15-11:00 Jannike Wika, Governor of Svalbard: “Assessment of impact on the environment - in connection with research and teaching on Svalbard”.

11:00-11:15 Coffee break

11:15-11:45 – Norwegian Defense Research Establishment, Trygve Sparr. «Scientific research, security and defence in the Arctic.»

11:45-12:30: Endre Barane, Deputy Commander Norwegian Coast Guard, “Norwegian Coast Guard and operation in the Arctic”

12:30-13:30 Lunch

13:30-14:15: Fred Skancke Hansen, UNIS, “Operationalization of safety and environmental goals – a practical approach.”

14:15-15:00 Kathy Vigness-Raposa, INSPIRE, Introduction to assessment of research activities.

15:00- 15:15 Coffee break.

15:15 – 15:45 Stein Sandven, NERSC “Development of Standards in selected topics of relevance for Arctic research”.

15:45 – 16:15 Torill Hamre, NERSC, Mapping of Arctic Observing Systems

16:15-17:00 Discussion, summary, and recommendations.

17:00 Adjourn

Estimated time for each presentation is 30 minutes followed up by 15 minutes of questions/discussions.

Wednesday 27 September 09:00 – 16:00

Session 2: Status of environmental assessment in selected research activities in the Arctic

Chair: Stein Sandven, NERSC

09:00-09:30: Florian Geyer, NERSC: Status of environmental assessment of research activities at NERSC.

09:30-10:00: Rolf Rødven, Arctic Monitoring and Assessment Programme (AMAP) and Norwegian Environmental Agency and Ethic Advisor of the HiAOOS project (Online).

10:00-10:30: Børge Hamre, University of Bergen, Institute of Physics and Technology (IFT): Optical ocean field observations in the Arctic

10:30-11:00 Coffee Break

11:00-11:30: Arild Sundfjord, Norwegian Polar Institute (title TBC)

11:30-12:00: Nicholas Roden, Norwegian Institute for Water Research. “Source to sea: Water research in the Arctic”.

12:00-13:00: Lunch break

13:00-13:30: Øyvind Paasche, NORCE, GoNorth and Synoptic Arctic Survey (SAS) – the growing need for strengthening international collaboration in a challenged Arctic.

13:30-14:00: Agnieszka B. - Möller, Institute of Oceanology Polish Academy of Science (title TBC)

14:00-14:30: Coffee Break

14:30-15:00: Lora Van Uffelen, University of Rhode Island, USA “Acoustic and Environmental Sensing on Floats and Gliders.”

15:00-15:30: Philippe Blondel, University of Bath, UK: Shipping and ice-covered waters – how accurate are the MSFD “shipping bands”

15:30 – 16:00: Discussion and way forward.

16:00 Adjourn

Project meeting HiAOOS and UAK: Experiment and assessments

Thursday 28 September, 09:00 – 16:00

Lead: Kathy Vigness-Raposa

Kathy: What have we learned? Who does what and for whom? Time schedule?

Tentative plan for cruises in 2024:

- UAK-April; - Svalbard fjords. (UiB et al.)
- HiAOOS - August/September – Nansen and Amundsen Basins (NERSC et al)
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HiAOOS (09:00-12:00)

Hanne and Espen: Presentation of the acoustic field experiment program in Nansen and Amundsen Basin.

Arild Sundfjord: Present the oceanographic program

Agnieszka B.-Møller: Present the plans for moorings North of Svalbard

Florian and Astrid: Present the oceanographic and acoustic environment.

What are the issues needs to be addressed for HiAOOS?

Action list for what is needed for the environmental assessment.

Lunchbreak : 12:00-13:00

UAK: (13:00- 16:00)

Arne Skodvin: Presentation of the experiment plan, and the optics measurement program

Espen Storheim: Presentation of the acoustic and oceanographic program.

What are the issues needs to be addressed for UAK?

Action list for what is needed for the environmental assessment

Action list for the educational program.

Lora present: Ocean acoustic program at URI

Børge present: Ocean optic program at UiB

Start discussing how to identify and select the students?

Discuss the educational program and collaboration between the universities?

Plan for online meetings rpiro and after the cruise.

Criteria for Credits for students? For example:

- Participation in the cruises and analysis of data
- Data management and data publishing.
- Scientific publications: Acoustics: Fall 2024 – there is an online meeting and students can publish a POMA paper. Abstracts due April/May 2024. Optics: ???