



1st ANNOUNCEMENT
ESSAS International Open Science Meeting

Moving in, out and across the Subarctic and Arctic marine ecosystems: shifting boundaries of water, ice, flora, fauna, people and institutions

Tromsø, Norway
Radisson Blu Hotel

11-15 June 2017

International Sponsors: ICES; PICES; IMBER
Local Sponsor: IMR; Co-Sponsors: NOAA, NPRB, NPFMC (US)

Background and Objectives

During the last decade or more there has been a rapid increase in the air and sea temperatures in the Arctic and a corresponding decline in summer sea-ice cover in the Arctic Ocean. In the Subarctic seas there have also been large changes in sea temperatures but with spatial variability. For example, generally warm conditions have been observed in the Barents and Nordic Seas of the North Atlantic while in the Bering Sea in the Pacific temperature conditions have varied between warm and cold periods with corresponding decreases and increases in winter sea-ice cover, respectively. These changes in the water and ice properties, together with increased ocean acidification, have resulted in major changes in the biogeochemistry and ecology of these regions including distributional shifts of many species of plankton and fish. The resulting changes in fish distribution have resulted in difficulties for fisheries management that are based on historical fishing rights, e.g. Atlantic mackerel in the North Atlantic. This symposium is intended to document the changes that have occurred in the distant to recent past, the processes that led to these changes, and how future changes are likely to further affect these marine ecosystems. It will also provide a forum to discuss how the people who depend upon these ecosystems may best cope with these changes and examine the economic and societal pressures that will come to bear on coastal communities and nations. To place the present day in a longer-term perspective, the symposium will include a session on the paleo-ecology of ecosystems and people in Subarctic and Arctic regions related to changing temperature and sea-ice conditions in the past.

Scientific Program

The format of the meeting will include morning plenary sessions by keynote speakers and up to three parallel sessions in the afternoon of contributed talks. The morning plenary sessions will focus on the topic of the afternoon's theme sessions. The theme sessions include:

- *Paleo-Ecology*: This session will span paleoclimate-paleoecology-archaeology-human history dimensions of climate and sea-ice change.
- *Ecosystem impacts of advection and mixing*: This session will explore the influence of advection and mixing on marine ecosystems, ranging from effects on hydrography and nutrients to marine mammals and seabirds.
- *Timing/phenology and match-mismatch: are they critical issues?* : What is the observational evidence for the match-mismatch hypothesis or other phenology-related hypotheses in Sub-Arctic and Arctic ecosystems?
- *Future Sub-Arctic and Arctic Marine Ecosystems under Climate Change*: This session will focus on what will happen under future climate change to the atmospheric climate, oceanography, ecology, fish, fisheries and human institutions in the Sub-arctic and Arctic regions.
- *Shifting habitats, persistent hot spots, and the distribution of benthos, plankton, fish, seabirds and marine mammals - observations, effects, mechanisms and models*: This session will focus on exploring the mechanisms linking organisms to biophysical habitats.
- *Ocean Acidification*: The formation and transport of corrosive waters in the Arctic and Subarctic—do they matter?
- *Multiple Stressors*: This session will examine the combined effects of multiple stresses, such as climate change, ocean acidification, invasive species, fishing, etc., on Arctic and Sub-Arctic ecosystems and their management and governance.
- *Science, Policy and Management*: This session will explore the influence of science on policy and management decisions, what policy developers and managers really need from science, and how to improve communications between science and managers.
- *General Open Session*: This session will provide an opportunity to those whose work does not fit within any of the more focused sessions.

Potential participants are invited to submit titles and abstracts (maximum of 250 words) for oral presentations or posters. All abstracts will be reviewed for merit and relevance. Posters will be displayed throughout the meeting and sufficient provision given for the authors to discuss them with the meeting participants.

The day prior to the start of the Open Science Meeting, a small number of workshops are also planned. The topics of these workshops will be determined based upon submitted workshop proposals.

Publication

The symposium proceedings will be published in the ICES Journal of Marine Science within 18 months of the meeting. Papers, including those based on poster

presentations, will be considered for publication following peer review. To assist in the process, contributors are asked to submit an electronic version of their manuscript at the time of the meeting.

Participation

The Symposium is open to all scientists, students, managers, and the public who are interested in Subarctic and Arctic marine ecosystems. Limited financial assistance will be available to early career scientists (less than 35 years of age or less than 5 years post PhD).

Registration

On-line registration, abstract submission, and applications for financial assistance for Early Career Scientists will be available 1 November.

Important Dates

1	October	2016	Workshop Proposal Deadline
15	October	2016	Notification of Workshop Acceptance
1	November	2016	Website Open for Abstract Submissions and Registration
15	January	2017	Deadline for abstract submissions
15	February	2017	Notification of abstract acceptance
15	March	2017	Deadline for early fee payment
15	March	2017	Notification of financial support requests
11	June	2017	Workshops
12-15	June	2017	Open Science Meeting

Further information about the symposium can be found at:
http://www.imr.no/essas/essas_open_science_meeting_2017/en.

Co-Convenors:

Dr. Ken Drinkwater (Institute of Marine Research, Bergen, Norway)
Dr. Franz Mueter (University of Alaska Fairbanks, Juneau, USA)
Dr. Sei-Ichi Saitoh (Hokkaido University, Sapporo, Japan)

Scientific Steering Committee:

Dr. Ólafur Ástþórsson (Marine Research Institute, Reykjavik, Iceland; ICES representative)
Dr. Andrey Dolgov (PINRO, Murmansk, Russia)
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