

ESSAS Symposium on “Moving in, out and across the Subarctic and Arctic – shifting boundaries of water, ice, flora, fauna, people and institutions”

2015/3/SSGEPD03 An ESSAS Symposium on “Moving in, out and across the Subarctic and Arctic - shifting boundaries of water, ice, flora, fauna, people and institutions” will be held during 12–15 June 2017 at Tromsø, Norway with Ken Drinkwater (Norway), Franz Mueter (USA) and Sei-Ichi Saitoh (Japan) as Co-conveners.

A Scientific Steering Group has been established (Paul Wassmann-Norway; Gudrun Marteinsdottir-Iceland; Andrey Dolgov-Russia; Jean Eric Tremblay-Canada; George Hunt, Sue Moore, John Walsh and Alan Haynie-USA; Naomi Harada and Shin-Ichi Ito-Japan; and Jinping Zhao-China).

Olafur Astthorsson will be the ICES representative on the Scientific Steering Committee.

Supporting Information

Priority:	ICES has long recognized that marine productivity will change in response to climate change and other factors, including ocean acidification and human pressures such as fishing, particularly in Arctic and sub-arctic seas. The proposed meeting will document present ecosystem changes due to multiple factors in these geographic areas, as well as address possible future ecosystem changes. Given the rapid rate of Arctic warming and disappearance of the sea ice, as well as observed ecological changes, it is essential to meet the challenges of climate warming as soon as possible in order to prepare the management and institutional responses by seeking innovative solutions based on sound scientific knowledge.
Scientific justification:	The primary aim of the Ecosystem Studies of Subarctic and Arctic Seas (ESSAS), a regional program of IMBER, has been to understand the role of climate variability and anthropogenic climate change on the productivity of Subarctic and Arctic marine ecosystems and its effects on the sustainability of goods and services obtained from these seas. This is consistent with ICES Strategic Plan in terms of climate change and also their recent priority to focus increasing effort on the Arctic. Warming due to anthropogenic climate change and natural variability is resulting in large thermal changes and loss of sea ice in the Arctic with future projections indicating that these trends will continue eventually resulting in the largest expected changes in the world’s ocean. The present changes are having measureable effects on the ecology in the Subarctic and Arctic and improved future projections are needed in order to prepare to take advantage of development opportunities as well as avoid possible problems. This meeting is aimed at documenting the changes in the Subarctic and Arctic regions from the climate to physical oceanography, biogeochemistry and through the foodweb from phytoplankton to fish, marine mammals and seabirds with special emphasis on the underlying mechanisms linking climate and ecological responses. In addition we aim to develop future scenarios of physical and biological changes that may be expected in a changing climate. It is recognized that climate change does not occur in isolation from human pressures such as fishing or ocean acidification, hence the effects of multiple pressures and their interactions will be emphasized. Management and economic issues, especially related to fisheries, will be addressed, including ecosystem-based management. Different management systems will be compared and contrasted to determine which of the systems will be best prepared to successfully meet the challenges of climate change and the other multiple forcings. The meeting also will be used to identify existing gaps in our knowledge and point the way for future work.
Resource requirements:	There will be significant resource requirements associated with the meeting, hence several organizations besides ICES have been, or will soon be, approached to help fund the meeting including PICES, IMBER, NPRB, NOAA Alaska Fisheries Science Center, NSF, Research Council of Norway, Norwegian Fishing Companies, Japanese funding agencies, and others. The majority of the funds will be raised through participant fees.

Participants:	A wide range of scientists from climatologists and physical oceanographers to biological oceanographers, fisheries scientists, fisheries economists, and social scientists are expected from all nations interested in the Subarctic and Arctic, including from several ICES member countries. These latter will include Canada, Denmark, Finland, France, Germany, Greenland, Iceland, Netherlands, Norway, Poland, Sweden, United Kingdom, and the United States. In addition, we expect representatives from the PICES countries, which in addition to the US and Canada, include Japan, China, Korea and Russia.
Secretariat facilities:	A local organizing committee has been formed under the leadership of Benjamin Planque (Norway, at IMR in Tromsø) with representation from local institutions (Institute of Marine Research, Norwegian Polar Institute, University of Tromsø, and Aquaplan Niva). The IMBER International Project Office will help in the organization of the logistics of the meeting and will be responsible for the collection of the registration fees. We will not require the direct assistance of the ICES Secretariat during the Symposium. We would, however, appreciate their help in advertising the Symposium. In consultation with the conveners, we also hope that the ICES Secretariat will help us solicit appropriate co-sponsorship from other international organizations.
Financial:	We are requesting financial support in the amount of €10,000 from ICES mainly to help cover the costs of keynote speakers and early career scientists. In addition, we expect to receive funds from other organizations in order to keep the registration fee to \$400 or less. We also request a volume of the ICES Journal of Marine Science be used to publish some of the papers from the Symposium.
Linkages to advisory committees:	Results from the symposium are potentially of interest to ACOM and SCICOM.
Linkages to other committees or groups:	Results from the symposium are potentially of interest to any committee or group working in or interested in climate or climate change effects, fisheries management and/or in the Subarctic or Arctic. These include AFWG, AGDMM, MCWG, NWWC, SGCC, SICME, SIHD, WGECCO, WGHARP, WGIABS, WGINOR, WGIMM, WGIPEM, WGLMEBP, WGOH, WGOOFE, WGRFE, WGZE, and possibly others.
Linkages to other organizations:	The topic of this symposium has very close relevance to the interests of PICES (Robin Brown) and IMBER (Carol Robinson, Chair). It is also expected to be of interest to AMAP, ASOF, SEARCH, CLIVAR, CLIC, and other programs.
Publication of proceedings	The proceedings of the symposium will be published in the ICES Journal of Marine Science. Keynote speakers from each of the topical session will be requested to deliver manuscripts, preferably synthesis papers. These keynote speakers will be selected early in the process, which will allow adequate time to work on these papers. Announcements of the meeting will communicate the intention to publish the proceedings and encourage all presenters to submit manuscripts. We will ensure to the best of our ability that all of the session topics will have at least 1-2 submissions. We understand and agree to the 15-month turn-around schedule for publication. The anticipated volume will be limited to around 200 pages and if there are additional pages, we will agree to cover the extra costs.