

ESSAS (co-)Sponsored Activities **Conferences, Sessions, and Workshops** **Up-Coming Events**

15-19 September 2014

ICES Annual Science Conference in A Coruña, Spain (<http://www.ices.dk/news-and-events/asc/ASC-2014/Pages/default.aspx>)

At the ICES meeting ESSAS is cosponsoring a session on

Physical and biological consequences of North Atlantic circulation patterns

The circulation plays a crucial role in determining the physical and biological characteristics of the North Atlantic as well as its adjacent oceans. The circulation is highly conditioned by several distinct water mass sources and their subsequent spreading patterns, interchanges among the large-scale subpolar and subtropical gyres, and exchanges with the Arctic. These processes have important consequences for heat, freshwater and nutrient transport, which are often far reaching. For example, the world's energy budget is regulated owing to the existence of the meridional overturning cell in the North Atlantic. The currents and their variability also affect the ecology, including changes in species distribution, recruitment (abundance), phenology, production and/or metabolic rates. The main goals of the theme session are to quantify these advective processes and highlight their impacts. We are also interested in how they may differ under future climate change. Papers that examine (1) the exchange rates between the Arctic and Subarctic and the fate of transported physical, chemical and biological properties and (2) subtropical to subpolar connectivity including the formation and renewal of modal waters, Mediterranean Water formation and spreading, transformation of intermediate and deep water masses originating at higher latitudes and processes involving subtropical-subpolar interchanges such as large-scale oceanic gyres and eastern boundary poleward flows will be considered. While the focus of (1) is mainly upon the Atlantic sector, papers are also welcome on the effects of advection on the physical and biological properties from the Pacific sector. This session is cosponsored by ESSAS, the Working Group on Oceanic Hydrography, SICCOME and PICES.

16-26 October 2014

PICES Annual Meeting in Yeosu, Korea (<http://www.pices.int/meetings/annual/PICES-2014/2014-background.aspx>)

ESSAS is cosponsoring the following:

S9: POC/MONITOR Topic Session (1-day)

Variability in advection and its biological consequences for Subarctic and Arctic ecosystems

Co-sponsor: International Council for the Exploration of the Sea ([ICES](#))

Co-Convenors:

Franz Mueter (USA)
Enrique Curchitser (USA)
Kenneth Drinkwater (Norway / ICES)
Sen Tok Kim (Russia)
Hiroshi Kuroda (Japan)
Sei-Ichi Saitoh (Japan)

Invited Speakers:

[Georgina Gibson](#) (International Arctic Research Center, University of Alaska Fairbanks, USA)

The advection of water masses and their associated nutrients and plankton is critical to biological processes within the subarctic gyres and on the productive shelf regions bordering the gyre. Cross-shelf and along-shelf advection regulate the supply of nutrients and plankton to these shelves, thereby affecting the productivity and species composition of the prey organisms that support higher trophic levels. Moreover, the advection of larvae to suitable nursery areas

affects the spatial and temporal overlap between larvae and their prey and predators (match-mismatch dynamics). Advective processes have been linked to the recruitment success of walleye pollock off Japan and in the Gulf of Alaska, which benefit from increased retention within certain near-shore regions, and to recruitment patterns of flatfishes and crab in the eastern Bering Sea, which benefit from increased advection towards suitable nursery areas. Interannual variability in advection has long been understood as an important source of biological variability, while variability at shorter time scales (days to weeks) has only recently received more attention due to the increased availability of high-frequency observations and the development of high-resolution models. The main goal of this session is to explore how variability in the advection of nutrients, zooplankton prey, and early life stages at all scales affects the recruitment, abundance and distribution of subarctic fish and invertebrate species, including the potential to extend their range into Arctic waters. We invite papers that explore past variability and potential future trends based on field observations, analyses of long-term data series, and biophysical models. Contributions from both the Pacific and Atlantic Subarctic are welcome.

Additional sessions and workshops in which ESSAS members are co-chairing or involved in include the following:

S2: Strengths and limitations of habitat modeling: Techniques, data sources and predictive capabilities.

S5: Ecosystem consideration in Fisheries management of cod and other demersal species.

S6: Climate change impacts on spatial distribution of marine fish and shellfish.

S7: Recent assessments of climate change impacts on marine ecosystems.

S10: Regional climate modelling in the North Pacific

W1: Dynamics of pelagic fish in the North Pacific under climate change.

June 2015

ESSAS Annual Science Meeting in Seattle, Washington, USA

The main theme of this ASM will be *Ice in the Sea: From glacial fjords to the Arctic Basin* and will provide an opportunity for an interdisciplinary examination of the role of ice in the sea by natural and social scientists. From tide-water glaciers in fjords to seasonal sea ice in the Arctic Ocean and its marginal seas, ice affects ocean-atmosphere fluxes, the physical, chemical and biological structure of the water column and its productivity, and the use of these ice-influenced waters by humans. The adaptation of humans to changing impacts of ice on marine systems requires an interdisciplinary approach. From the use of sea ice by indigenous people for hunting and transportation corridors, to the modern development of resource extraction and trans-polar transportation of goods and tourists, changes in ice will affect how and where humans can use polar resources. Sea ice affects marine productivity and human access to the upper trophic-level species that depend upon the Arctic Ocean and its marginal seas. Likewise, glaciers have shaped the depth and length of fjords, the presence or absence of sills at their mouths, and the fluxes of fresh water, nutrients and heat into their marine environments. These fjords in turn affect the productivity of the marine ecosystems to which they abut. The ASM will consist of a series of focused sessions, each with an interdisciplinary mix of speakers, and each with up to 20% of the available time devoted to discussion. The emphasis will be on comparative approaches and the building of future inter-disciplinary collaborations. The theme of comparative studies and interdisciplinary collaboration in understanding how climate change will affect the Arctic and Sub-Arctic Seas is at the heart of the ESSAS mission, and this ASM will further these goals. It is hoped that participants will support the development of one or more special volumes based on presentations at the Symposium. There may also be other session on non-ice related topics.

Details of dates of the ASM, abstract submission, detailed session information will appear as they become available.

June 2015

ESSAS Annual SSC Meeting in Seattle, Washington, USA following the ASM.