

ESSAS Annual Science Meeting

January 7 – 9, 2013

Hakodate, Hokkaido, Japan

Conference Information

Conference Theme

'Spatial Dynamics of Subarctic Marine Ecosystems'

The Ecosystem Studies of Sub-Arctic Seas (ESSAS) Program addresses the need to understand how climate change will affect the marine ecosystems of the Sub-Arctic Seas and their sustainability. The Sub-Arctic Seas support stocks of commercial fish that generate a major portion of the fish landings of the nations bordering them. They also support subsistence fishers along their coasts, and vast numbers of marine birds and mammals. Climate-forced changes in these systems will have major economic and societal impact. ESSAS conducts research to compare, quantify, and predict the impact of climate variability and global change on the productivity and sustainability of Sub-Arctic marine ecosystems.

ESSAS Annual Science Meeting will be hosted by Hokkaido University and held at the Hakodate Community Design Center in Jyujigai, Hakodate, Japan. The general theme of this year's meeting is *'Spatial Dynamics of Subarctic Marine Ecosystems'* with two oral sessions scheduled on this topic. Other oral sessions will focus on: bioenergetics of sub-polar fish species; Arctic-Subarctic interactions (atmospheric, oceanographic and/or ecological); human dimensions of Subarctic seas exploring fisheries and fishing communities; and modeling of Subarctic ecosystems.

A session related to the new Japanese research project dealing with climate change in the Arctic will also be held. Discussions on the future directions and activities of ESSAS will also take place. Your participation is welcome, although due to the size of the venue, we will be limited to a maximum of 70 participants

Call for Abstracts

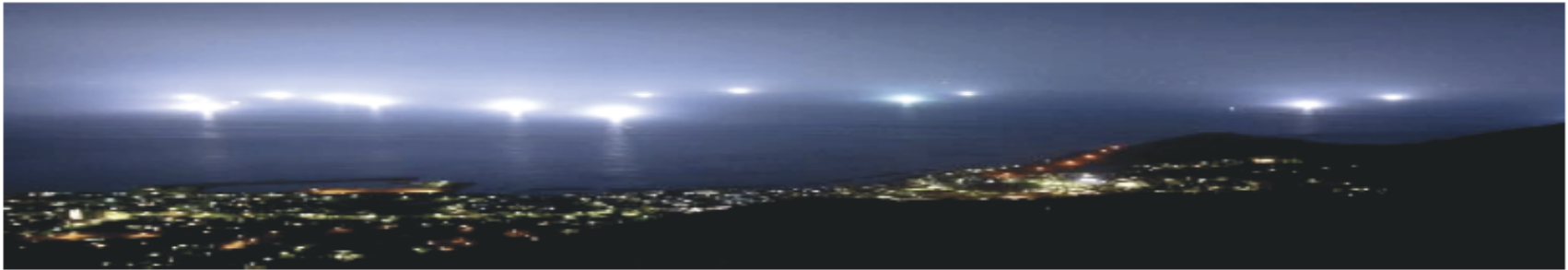
The meeting will be conducted through several plenary talks and presentation of scientific papers (oral and poster) organized under special and general sessions relevant to the meeting theme *'Spatial Dynamics of Subarctic Marine Ecosystems'*.

We are now inviting you to submit an abstract for special and general scientific/technical sessions that are relevant to all areas of subarctic Marine Ecosystems.

Please submit your abstract along with the [Registration Form](#) (available at <http://www.nipr.ac.jp/essas/>) as two separate document attachments to Takashi Yamamoto (taka.y@nipr.ac.jp); please use a Subject Line as follows: ESSAS Abstract Submission – (insert your last name and a number if you are submitting more than one).

Last date for the submission of Abstracts: 30 November 2012.





Topics of General Sessions

- Japanese Arctic Research Project (GRENE)
(Ecosystem studies of the Arctic ocean declining sea ice: ECOARCS)
 - *Overview, Physics, Biogeochemistry, Satellite Monitoring, Phytoplankton, Zooplankton, Fish, Seabirds, Marine Mammals, Modeling*
- Human Dimensions
 - *Fisheries and Fishing Communities in sub-polar and polar regions*
- Bioenergetics
 - *Sub-polar fishes: regional presentations*
- Spatial Dynamics
 - *Spatial dynamics of fish and shellfish in subarctic and Arctic seas: The role of temperature, density-dependence, and advection*
- Arctic-Sub-arctic Interactions
 - *Climate Variability and Fish Populations*
- Modeling Sub-arctic Marine Ecosystems
- Invertebrate-Gadoid Interactions
 - *Role of advection on eastern Bering Sea shelf (co*

On Jan.7th (the first day)

Local Committee

Yasunori Sakurai (Hokkaido University; sakurai@fish.hokudai.ac.jp)

Sei-Ichi Saitoh (Hokkaido University; ssaitoh@salmon.fish.hokudai.ac.jp)

Yutaka Watanuki (Hokkaido University; ywata@fish.hokudai.ac.jp)

Toru Hirawake (Hokkaido University; hirawake@salmon.fish.hokudai.ac.jp)

Takashi Yamamoto (National Institute of Polar Research; taka.y@nipr.ac.jp) **Secretary**

Monday 7 January

08:30 Registration

08:50 Welcome from ESSAS Co-Chairs Drinkwater & Mueter

Local arrangements and practical information

Yasunori Sakurai

09:00 Overview, Physics, Biogeochemistry (4)

- **Kikuchi, T.:** Overview of ECOARCS and preliminary results on 2012 field experiments in the Pacific side of the Arctic Ocean
- **Nishino, S.,** T. Kikuchi, and T. Hirawake: Biogeochemical hotspots in the Chukchi Sea
- **Yamamoto-Kawai, M.,** T. Mifune, and S. Nishino: Ocean Acidification in the Arctic Ocean
- **Nagata, T.,** M. Uchimiya, H. Fukuda, H. Ogawa: What we learn from prokaryote abundance and protection in the Arctic

10:50 Satellite Monitoring, Phytoplankton, Zooplankton(5)

- **Hirawake, T.** and Fujiwara, A.: Community structure and primary production of phytoplankton in sub-arctic and Arctic seas
- **Katsunori Kimoto,** Osamu Sasaki, Harumasa Kanou, Masahide Wakita, Tomohisa Irino, Tomohiro Iwashita, Naomi Harada, Makio Honda : Seasonal carbonate dissolution at the water column in the North Pacific: The evidence from the Micro-focus X-ray CT Technology
- Iida, T., Mizobata, K. and **Saitoh, S.-I.:** Interannual variability of Coccolithophore in response to changes in water column stability in the eastern Bering Sea
- **Onodera, J.,** N. Harada, M. Honda, and Y. Tanaka: Diatom sinking fluxes in the Northwind Abyssal Plain, 2010-2011.
- **Matsuno, K.** and A. Yamaguchi : Zooplankton ecology and climate change

Monday 7 January

13:30 Fish, Seabirds, Marine Mammals (4)

- **Sakurai, Y.** and Yamamoto, J : Fish habitats in the Chukchi and Bering Seas
- **Watanuki, Y.,** A. Takahashi and T. Yamamoto: Sea Birds
- **Mitani, Y.** : Marine Mammals
- **Sasaki:** Whales habitats in the Bering and Chukchi Seas

15:30 Modeling and laboratory experiment (4)

- **Watanabe, E.,** M. J. Kishi, N. Harada, J. Onodera, and T. Terui: Modeling study on biological hot spots in the western Arctic: Impact of shelf water transport
- **T. Terui,** E. Watanabe, M. J. Kishi : Modeling study on biological hot spots in the western Arctic: Impact of ice algae and amphipod
- **Fujiwara, A.** and K. Matsuno: Grazing impact of the Arctic and Pacific copepods during late summer in the western Arctic Ocean
- Satoh, M., F. Itoh, K. Saruwatari, N. Harada, I. Suzuki and **Y. Shiraiwa:** Mechanism how the Arctic and Sub-Arctic coccolithophorids adapt to temperature change

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