

**2024 Ecosystem Studies of the Subarctic and Arctic Seas (ESSAS)
Annual Science Meeting**

**Exploring the dynamic interface of human and marine life
in high-latitude coastal zones**

St. John's, Newfoundland, Canada
June 18-21, 2024



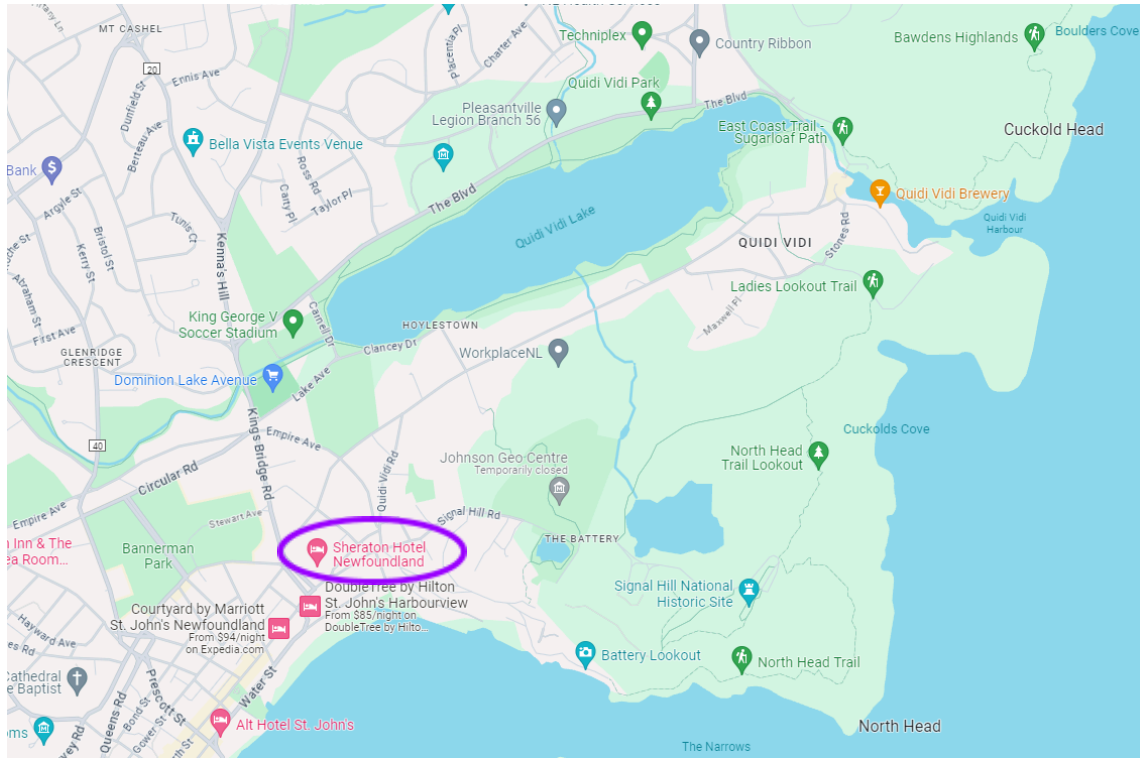
For updates, please check the ESSAS website: <https://essas.arc.hokudai.ac.jp/>

For session descriptions, [see below!](#)

With generous support from:



Meeting Venue: The [Sheraton Hotel](#) in beautiful Downtown St. Johns, Newfoundland and Labrador, Canada



Mode: The meeting will be in-person, but will be available for remote participants in webinar mode. Viewers will be able to ask questions via a Q&A feature. We will consider remote presentations for those unable to travel, but preference will be given to in-person presentations.

Accommodations: We have pre-booked a block of rooms at the Sheraton Hotel. Hotel rooms will be held at the conference rate of CAD \$229. [Book your group rate for ECOS Ecosystem Studies of Subarctic & Arctic Seas 2024 using this link.](#) Rooms held until May 17th. Less expensive student accommodations will also be available at Memorial University's Student Residences (more information to come). Other hotels are available within easy walking distance but be sure to make your reservations early.

Abstract submission and registration: Please submit abstracts (by April 8) and register for the meeting [at this link](#). If you are unable to access Google Forms, please mail your abstract (Title, Author names, First Author Affiliation, Abstract (max 300 words) and oral or poster preference) to fmuetter@alaska.edu. Thanks to generous donations from our sponsors, we are able to provide free registration.

Format and schedule: The meeting will be held in plenary mode (no parallel sessions) to maximize opportunities for interaction among disciplines and regions. We have tentatively scheduled [five sessions](#) for oral presentations and a poster session.

Important dates / schedule of events:

April 8, 2024	Abstract Submissions are due
April 25, 2024	Presenters will be notified
June 30, 2024	Last day for pre-registration
June 17, 2024	Evening Ice-breaker (Axe throwing at Jack Axes)
June 18-21, 2024	Main ESSAS sessions (possibly extending into Friday morning, 6/21)
June 19, 2024:	Afternoon activity (TBD) and evening social at the Quidi Vidi Brewery .

Travel support: We have limited funding to support conference travel for Early Career Researchers (ECRs) who plan to present a talk or poster. Following the IMECaN definition, ECRs are marine science students (Masters and PhDs), and early career researchers (less than eight years post-PhD, and less than six years since their first research appointment). To apply for funding, please indicate so on the abstract submission form.

Exploring the dynamic interface of human and marine life in high-latitude coastal zones

Session 1: Conservation and Sustainable Use of Species and Habitats in Changing Arctic and SubArctic Ecosystems

Session 2: Resilience and Vulnerability of Coastal Benthic Communities at High Latitudes

Session 3: Effects of Climate Change on Spawning and Recruitment Success of Arctic Marine Species

Session 4: High-Latitude Fjords, Estuaries, and Coastal Zones in Transition

Session 5: Understanding and Managing Human-Marine Mammal Interactions in High-Latitude Regions

Session descriptions

Session 1: Conservation and Sustainable Use of Species and Habitats in Changing Arctic and SubArctic Ecosystems

International commitments to preserve global biodiversity target the protection of 30% of marine habitats by 2030. Many of these new protected areas are being placed in the Arctic in collaboration with Indigenous communities who rely heavily on these areas for subsistence, cultural, and economic purposes. In this session we invite presentations that highlight 1) science and knowledge co-production methods used to identify habitats of high conservation value in areas with sparse scientific data, and 2) approaches that can be used to address conservation of these habitats while allowing for sustainable use by rights holders and other local people.

Session Co-chairs:

Rodd Laing (Nunatsiavut Government), rodd.laing@nunatsiavut.com

Bia Dias (University of Alaska Fairbanks), bdossantosdias@alaska.edu

Jon Fisher (Memorial University), jonathan.fisher@mi.mun.ca

Session 2: Benthic communities, resources, and processes in high-latitude coastal zones: current knowledge and impacts

This session will focus on benthic studies in high-latitude coastal environments. From SCUBA-diving depths to deep-water environments, including fjords and bays, benthic environments in high-latitude coastal zones can host an array of diverse habitats and processes. These areas are intrinsically important to indigenous and other coastal communities, and support human-related activities including fishing, aquaculture, and shipping. Yet, these areas are often understudied, and impacts are not well understood. In this session, we invite studies that address social, biological, or geological aspects of high-latitude coastal environments. Presentations may include, but are not limited to, the effect of climate change and industry on benthic resources and processes, from physiological responses to benthic

diversity and ecosystem function, including endofauna, epifauna, and megafauna, local use of benthic communities, impacts and conservation.

Session Co-chairs:

Barbara de Moura Neves (Fisheries and Oceans, Canada); barbaradm.neves@gmail.com

Sam Rastrick (Institute of Marine Research, Norway); samuel.rastrick@hi.no

Session 3: Effects of Climate Change on Spawning and Recruitment Success of Arctic Marine Species

Climate-driven changes in sea ice and water temperature are extending growing seasons for Arctic marine species through shorter winters, increasing light, and earlier primary productivity. Such changes are impacting spawn timing, size-at-age, and energetic status of marine organisms, all of which can shift mortality and maturity schedules for these species. This session is focused on seasonal processes in the Arctic that are important to 1st year of life survival and population replenishment for all types of marine organisms, with an emphasis on gadid and crab populations that have undergone recent population declines and distributional shifts. We encourage talks focused on changes in spring spawning and match-mismatch dynamics, summer growth and distribution, fall maturity and energetics, and winter survival.

Session Co-Chairs:

Ben Laurel (NOAA Alaska Fisheries Science Center, USA); ben.laurel@noaa.gov

Maxime Geoffroy (Memorial University, Canada); Maxime.Geoffroy@mi.mun.ca

Frode Vikebø (Institute of Marine Research, Norway); frode.vikeboe@hi.no

Session 4: High-Latitude Fjords, Estuaries, and Coastal Zones in Transition

Climate change disproportionately affects coastal areas at high latitudes. The decreasing spatial extent, duration and thickness of sea ice leads to higher waves, exacerbating coastal erosion and hazardous conditions for navigation. Increasing river runoff and glacier melting in fjords alter stratification and circulation patterns, affecting terrestrial nutrient and carbon supply, biogeochemical cycling, and ocean acidification. Thawing permafrost releases more organic carbon and methane into coastal regions. Biological processes are strongly influenced by these physical and chemical changes, thereby impacting coastal ecosystems and the livelihoods of coastal inhabitants. This session welcomes presentations on physical and biogeochemical studies in changing coastal environments in high latitudes, encompassing observations from both instrumental and local knowledge sources, laboratory experiments, theoretical studies, and modeling approaches.

Session Co-chairs:

Kumiko Azetsu-Scott (Bedford Institute of Oceanography, Fisheries and Oceans, Canada);

Kumiko.Azetsu-Scott@dfo-mpo.gc.ca

Naomi Harada (University of Tokyo, Japan); naomi.harada@aori.u-tokyo.ac.jp

Session 5: Understanding and Managing Human-Marine Mammal Interactions in High-Latitude Regions

High-latitude marine ecosystems are highly productive regions that attract and sustain a large variety of organisms across all trophic levels. Marine mammals, generally occupying the upper trophic levels, are widely present in these regions. Some are year-round residents, while others migrate to high latitudes during intense summer feeding seasons – but regardless of their residency pattern they play a crucial ecological role. As key top predators, marine mammals rely on the structure and resilience of high-latitude ecosystems to perturbation, including from human activities such as fishing, marine traffic, and offshore energy production. In the coming years, activities and developments in the marine sector are expected to increase substantially. As this is happening against the backdrop of rapid climate warming that disproportionately affects higher latitudes, the expansion of human activities carries serious implications for marine mammals in the north. Despite the potential for human activities to adversely impact marine mammals, and by extension, the entire marine ecosystems of which they are part, human-marine mammal interactions are often not well understood. In this session, we invite presentations on this general topic, including human-marine mammal interactions, monitoring and management frameworks.

Session convenors:

André Moan (Institute of Marine Research, Norway); Andre.Moan@hi.no

Charmain Hamilton (Fisheries and Oceans, Canada); Charmain.Hamilton@dfo-mpo.gc.ca