

Category

BE Biology, Ecology, Ecosystems, Biodiversity

Session Number

BE-5

Session Title

Productivity, Biodiversity & Ecosystem Shifts at Cryosphere-Ocean Boundaries

Session Description

The boundaries between the cryosphere and ocean are shifting as the climate warms in both the Arctic and Antarctic. This session will explore the possible responses of biological systems to changing ice cover, and expand our understanding on how climate warming is likely to further alter ecosystem processes across this boundary. High latitude productivity and associated ecosystem adjustments is a key organizing principle that could help bridge information and insights from across multiple disciplines. We invite contributions from studies investigating ecosystem consequences of cryosphere changes in glacially influenced systems such as fjords and adjacent coastal ecosystems, ice shelves and underlying ocean waters, as well as continental shelves impacted by retreating sea ice, including recent changes that are already apparent. Observational, experimental, and modeling studies leading to a mechanistic understanding of processes that are related to productivity and its influences on biodiversity and ecosystem structure are equally welcome. This session aims to bring together diverse perspectives on the future of Arctic and Antarctic productivity and impacts on ecological structure. The session will also seek to identify knowledge and/or data gaps, which might limit our collective ability to understand connectivity across polar systems.

Keywords: Productivity, Antarctic, Arctic, Ecosystems, Biodiversity, Fjords, Ecosystem Function, Climate Warming, Glaciers, Sea Ice

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