

Category

OS Ocean, Sea Ice & EN Environment & BE Biology, Ecology, Ecosystems, Biodiversity

Session Number

OS-8

Session Title

Unifying perspectives: conceptualizing pan-Arctic and pan-Antarctic ecosystems

Session Description

Many nations are elaborating major research programs aimed at advancing our understanding of polar oceans. These are circular and cannot be understood by research carried out exclusively in specific sectors. In times of climate change the necessity of unifying, conceptual models is particularly compelling for the Arctic Ocean system that is transformed with breath-taking rapidity. A cascade of effects of Arctic change affects the rest of the world, in particular on the Northern Hemisphere. A prerequisite to understand environmental change and to manage the imminent pressures derived from the forecasted increase in industry operations in the Arctic are unifying ecosystem models that address the entire Arctic Ocean. The risk is that research programs will suffer from a lack of focus and their outcomes, while possibly scientifically relevant and sound for specific sector, may fall short of providing the high level understanding required for entire systems. The challenge to adopt a similar strategy for the Antarctic in the advent of possible industrial activity in future is apparent.

The goal of the session is to promote shared, high-level paradigm synthesizing our understanding of the key processes and elements governing the response of the Arctic and Antarctic ecosystems in relation to current pressures and changes. In the Arctic the work has already started, but we aim at following up process for both Polar Regions

Keywords: Arctic, Antarctic, marine ecology, unifying perspectives

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