

Title	KOPRI's Research Program for the Reconstruction of Holocene paleoenvironmental changes in the Arctic Svalbard fjords
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Preferred session:

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- Svalbard > 0°C
- A bear ate my zodiac
- Svalbard in the dark
- Toolbox
- Long term monitoring
- An ocean of plastic
- Rocks, mud and ice

The Advisory Scientific Committee can move abstracts to other sessions if more appropriate.

Presentation preference: oral or poster, poster. The Advisory Scientific Committee will select presentation format.

The abstract should be written in Calibri or Times New Roman 11pt. The abstract must not exceed 300 words and should be text only.

Word file only.

A book of abstracts will be published as a pdf in connection with the conference.

Submit no later than 15 June 2019 to abstract@rcn.no

Starting in 2015, KOPRI launched a five-year research project (July 2015 – June 2020) titled "Research on environmental changes in fjords and coastal geomorphology: Towards a better understanding of the erosion and redeposition processes of the Svalbard archipelago in the Arctic",

which is supported by the National Research Foundation of Korea (NRF). The main objectives of this project are 1) the assessment and mapping of coastal geomorphology, 2) the reconstruction of environmental changes caused by the Holocene climate changes in the fjord systems in Svalbard, and 3) the development of paleoenvironmental proxies for Arctic research. The first joint expedition between Korea and Norway with R/V Helmer Hanssen in summer of 2016 provided invaluable data and new sediment cores that kept records of the Holocene and recent environmental changes in various Fjords such as Dicksonfjorden, Isfjorden, Van Mijenfjorden, and Hornsund.

Our effort to unravel the geologic and environmental background of Svalbard extended to the fjords in the northern Svalbard (Wijdefjorden, Woodfjorden) and beyond the summer sea-ice margin in the far north during the second joint cruise between Korea and Norway on the R/V Helmer Hanssen (July 26 – August 1, 2017). This summer, the third joint cruise between Korea and Norway to the Svalbard fjords (Isfjorden, Van Mijenfjorden, Van Keulenfjorden, and Hornsund) will be carried out in order to collect further data on bathymetry and chirp-profiles as well as new sediment cores with R/V Helmer Hanssen (August 2 –7, 2019). The overall goal of the marine-geological research program is the reconstruction of the climate history of the Svalbard fjords through the post-deglaciation. Bathymetry and chirp data will provide further insights into the evolution of glacial sediments in the Arctic fjord complex systems since the last post-glacial period.

The new sediment cores collected during the three expeditions enable us to study the holistic history of environmental changes in the Svalbard fjords during the Holocene. Based on data obtained, we will continue to analyze the mechanisms of environmental changes such as sediment deposition, sea-ice formation, and retreat from the glaciers in the Svalbard archipelago to study the effects of future climate change in the polar region.