

Changes in freshwater inputs in northwestern Baffin Bay and impacts on primary productivity

Due to rapid warming of the Arctic, melting of sea ice, and weakening of the ice arch in Nares Strait, the future development and functioning of the North Water Polynya are unknown. The proposed project aims at understanding the impacts of arctic and meltwater inputs in northwestern Baffin Bay on the biological and physical parameters of the North Water Polynya. This objective will be achieved using sedimentary, micropaleontological (diatoms, dinoflagellate cysts, foraminifera), and geochemical (TOC, $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, TOC) proxies from sediment cores collected in summer 2019 within the North Water Polynya. The evolution of biological and physical parameters through time will be documented for the last 2000 years with a multidecadal temporal resolution.

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