

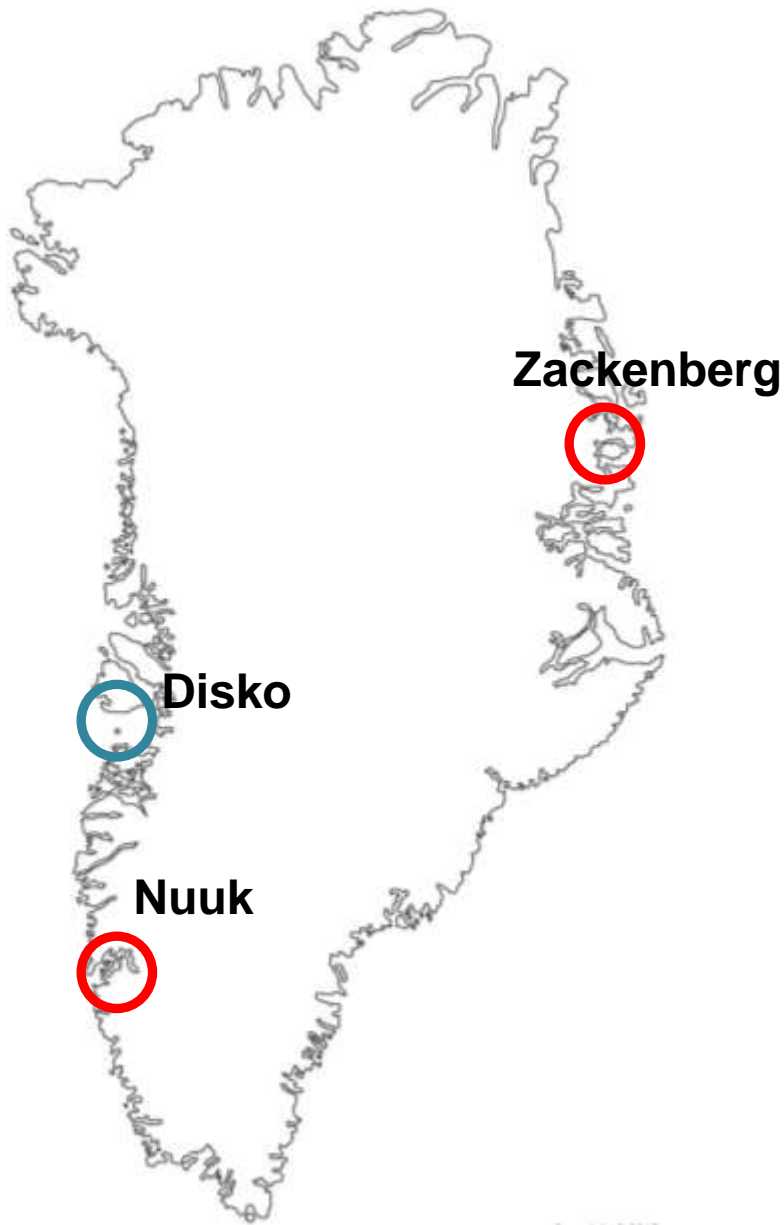
Greenland Institute of Natural Resources

Overview of projects 2020

Presented by
Mie Winding, Greenland Climate Research Centre

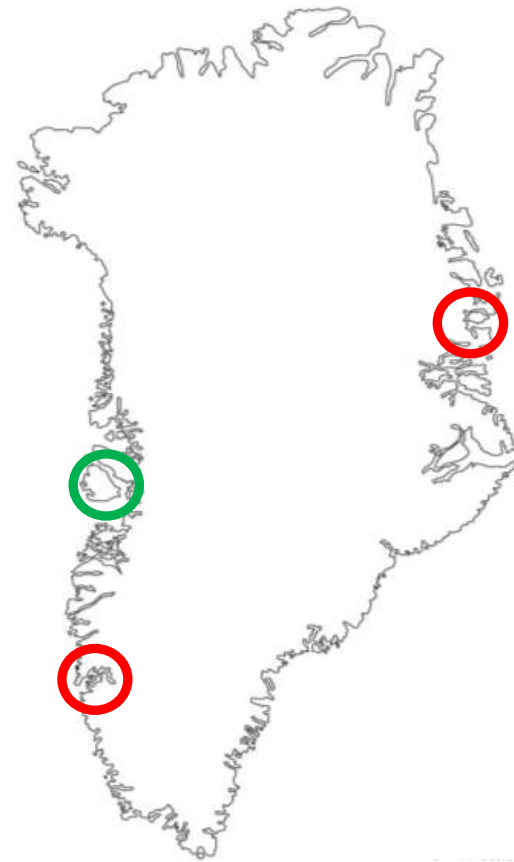


Greenland Ecosystem Monitoring



New sampling for eDNA will be added to the GEM programme in collaboration with AWI and University of Copenhagen

All three GEM stations



UNIVERSITY OF
COPENHAGEN

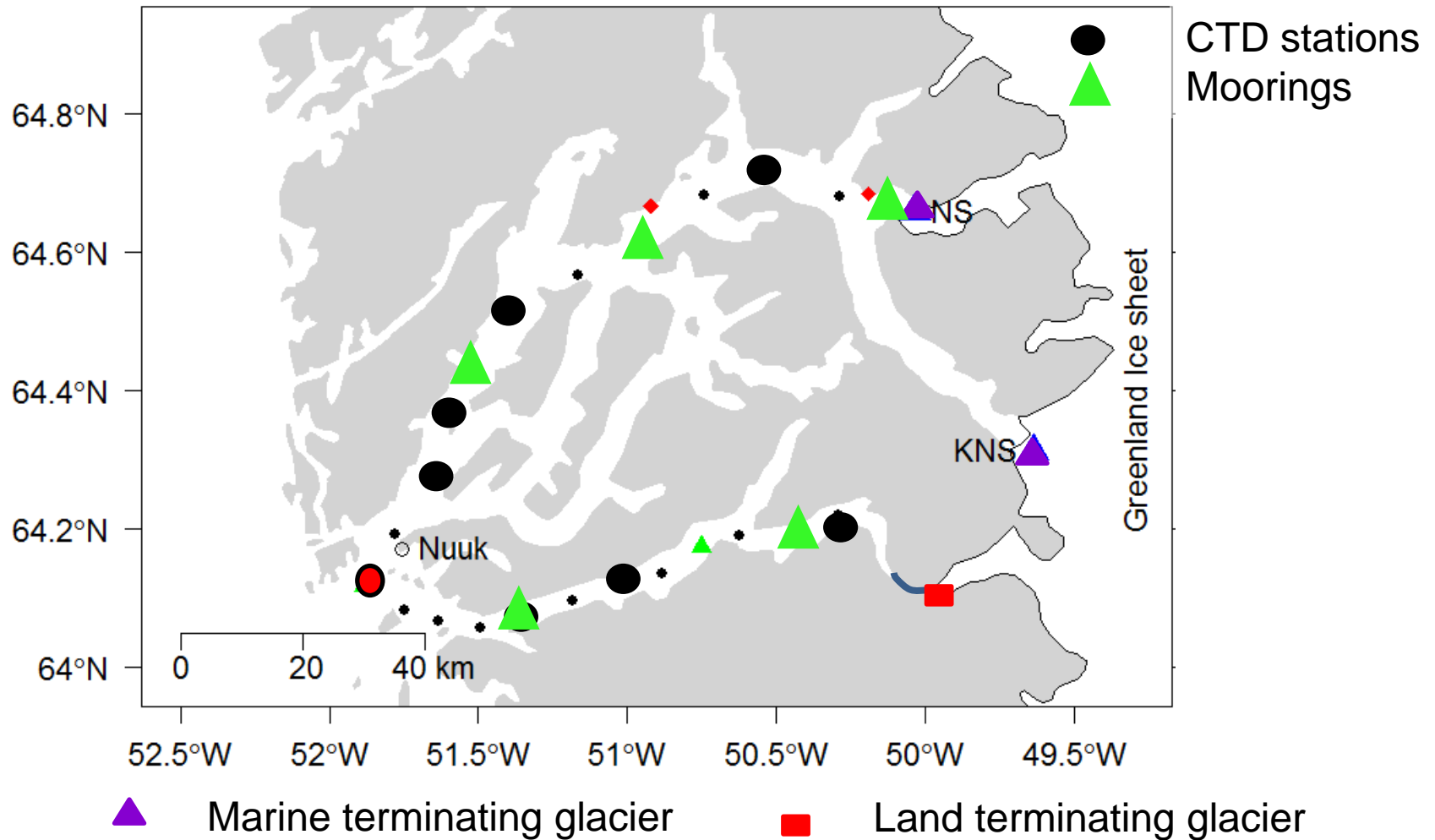
Oceanographic fieldwork

Research and Monitoring cruises during summer at the coast and in different fjord systems in collaboration with fishery survey and Danish military



Seasonal oceanographic work

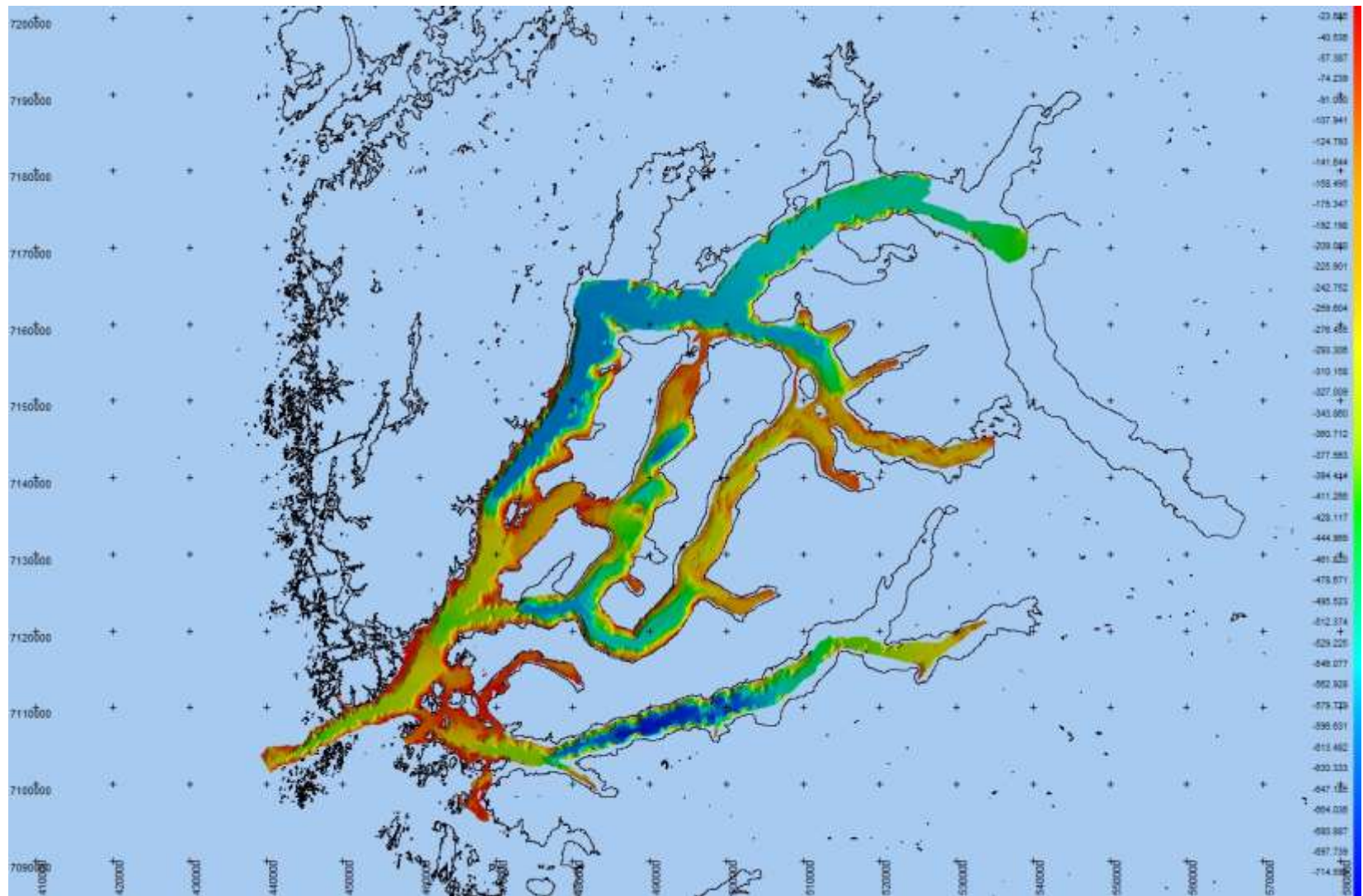
Monthly surveys and moorings in two fjord systems in SW Greenland



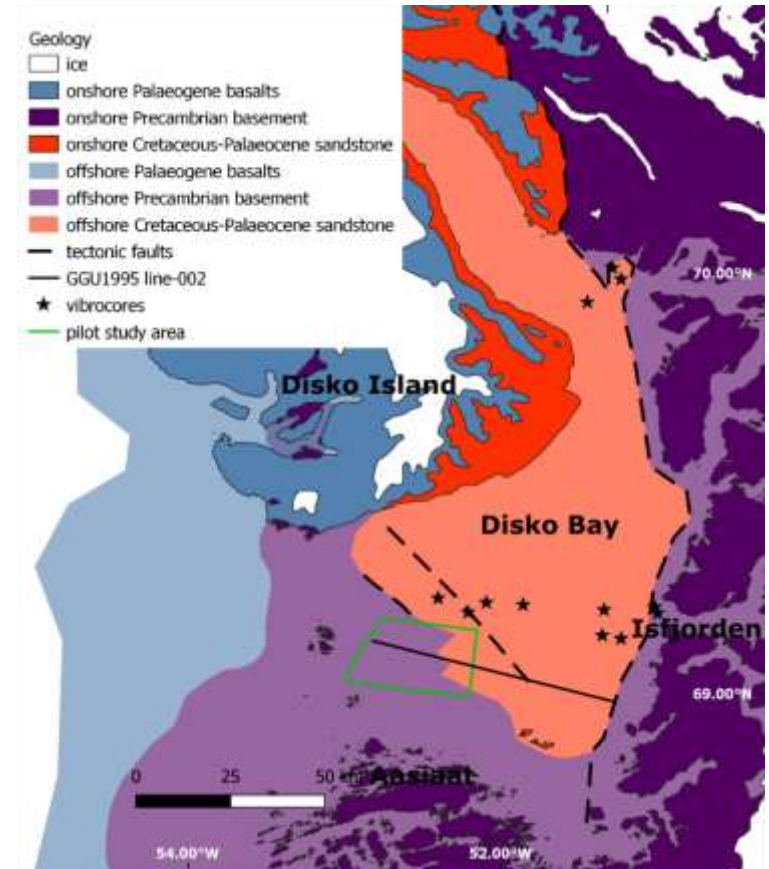
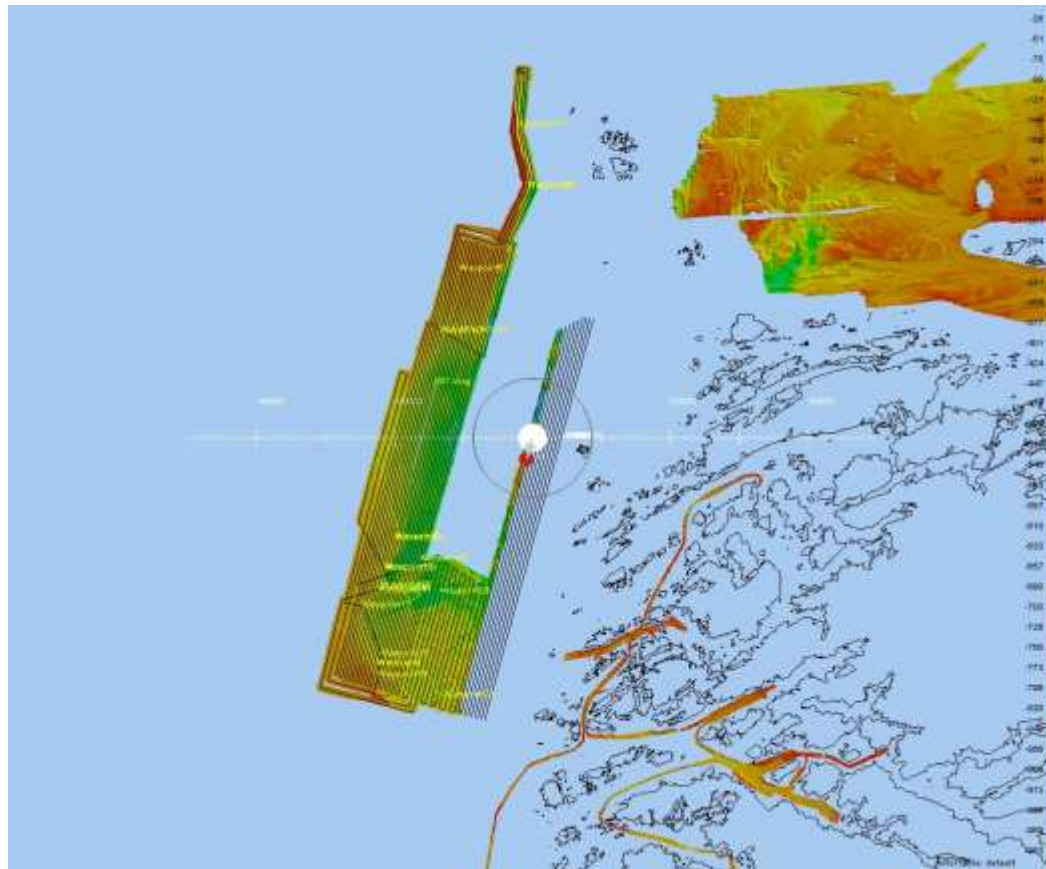
Offshore activities



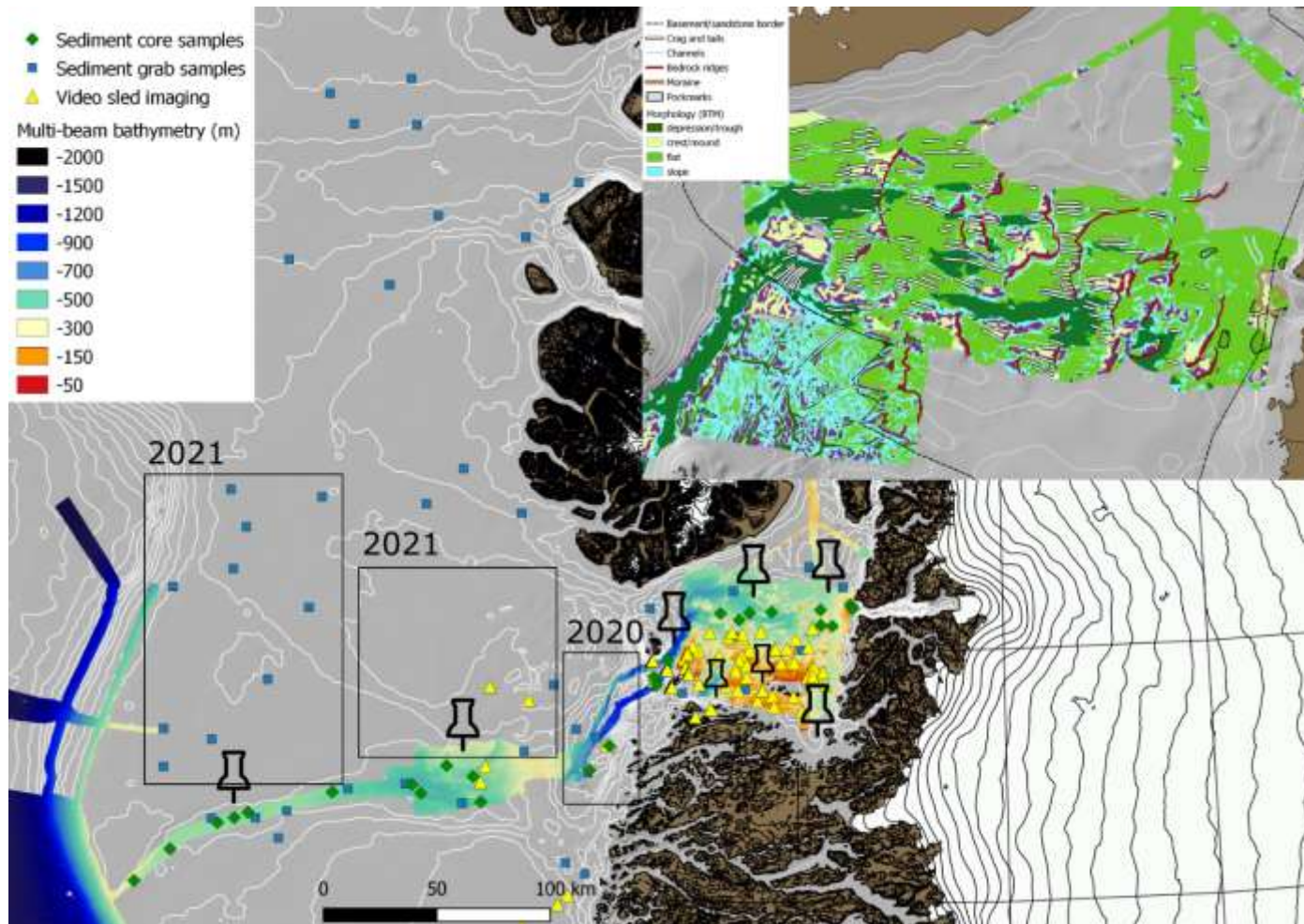
Nuup Kangerlua mapping



Hidden habitats



Plans for 2021



A map of Greenland is shown on the left side of the slide. It is a grayscale map with the landmass in dark gray and the surrounding water in light gray. Several black dots are placed along the coast to indicate the locations of acoustic moorings. There are two dots on the northeast coast, one dot on the south coast, and two dots on the southwest coast. The map includes latitude and longitude lines.

Acoustic

Acoustic devices were deployed along the South and East coast of Greenland in Spring and Fall 2018

They monitor marine mammals and background noise

The 3 Southern moorings are planned to be retrieved and redeployed in Spring 2019 (STILL NOT RETREIVED)

The 3 northern moorings are planned to be retrieved and redeployed in summer 2019 (STILL NOT RETRIEVED)



Initial View



Pan



Export



Identify



Query



Filter

Home



I want to...

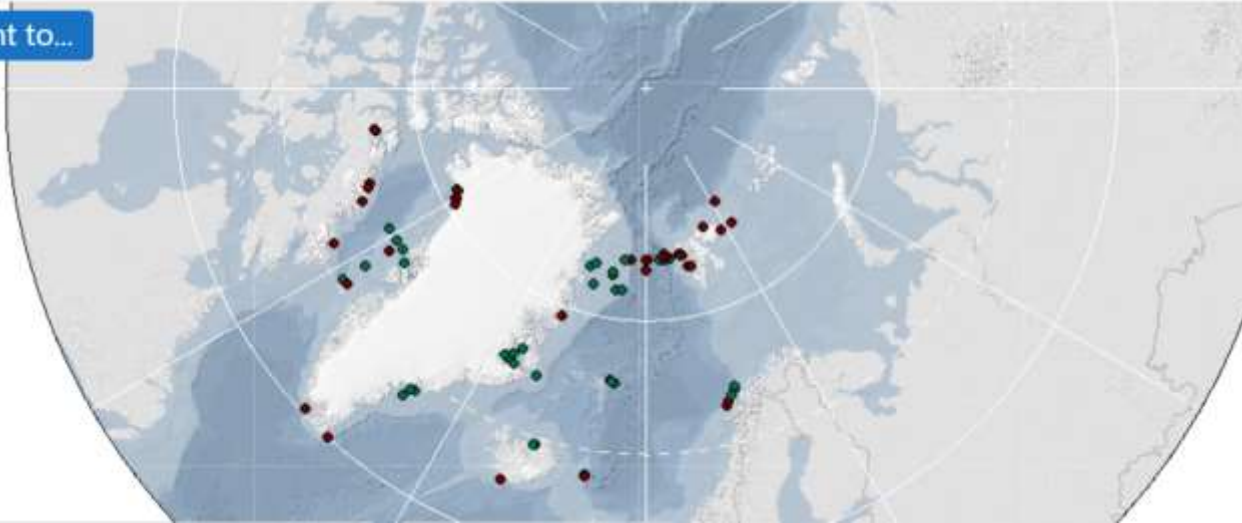


Listen, Connect and Conserve

A Pan-Arctic Passive Acoustic Monitoring (PAM) Network

The CAFF Marine Mammal Expert Network has recognised a need for better connectivity in the Arctic marine mammal acoustics community. To address this need, a circumpolar metadata base and a map of PAM instruments deployed throughout the Arctic has been constructed. The main goal of this metadata base is to unite researchers working in the Arctic and initiate international collaboration that could be important to policy and conservation planning.

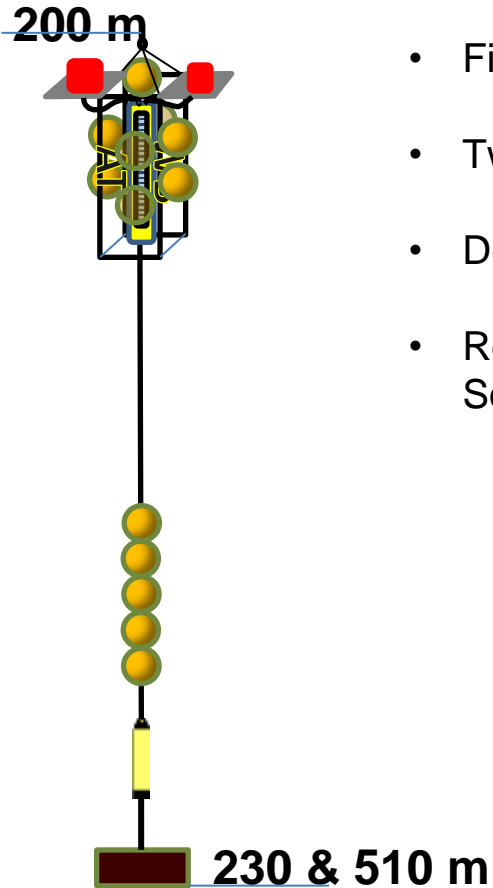
This map includes both past and current deployments within the CAFF Arctic boundaries. Multi-year/monitoring deployments are shown in red, while



<https://svalbardkartet.npolar.no/Html5/index.html?viewer=ArcticPAM>

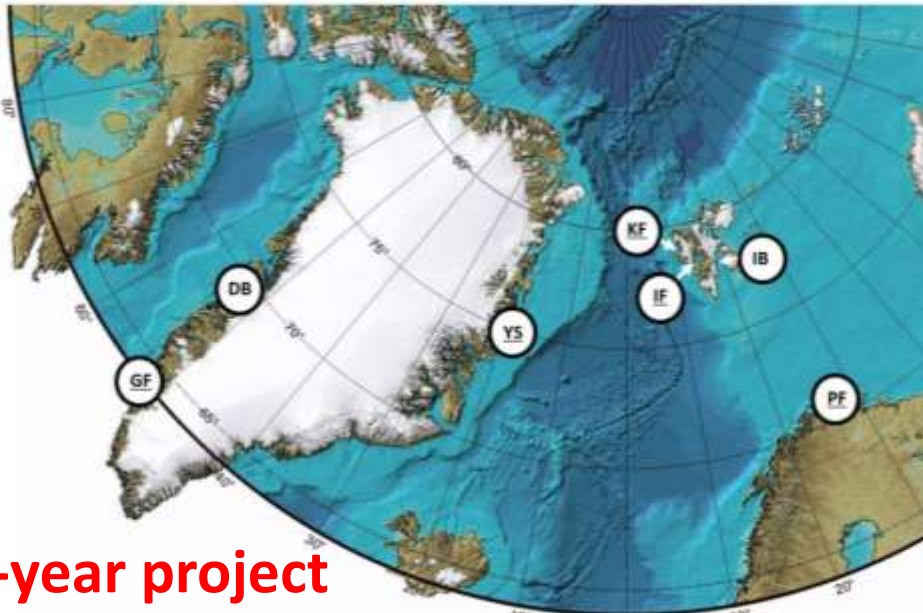
WBAT – Acoustic monitoring

- Three WBAT deployed in October 2019
- Fish and Plankton (33 kHz & 200 kHz)
- Two in Nuup Kangerlua and one in Ameralik
- Deployment time: 1 year
- Re-deployment in 2020 in Nuup Kangerlua, Young Sound

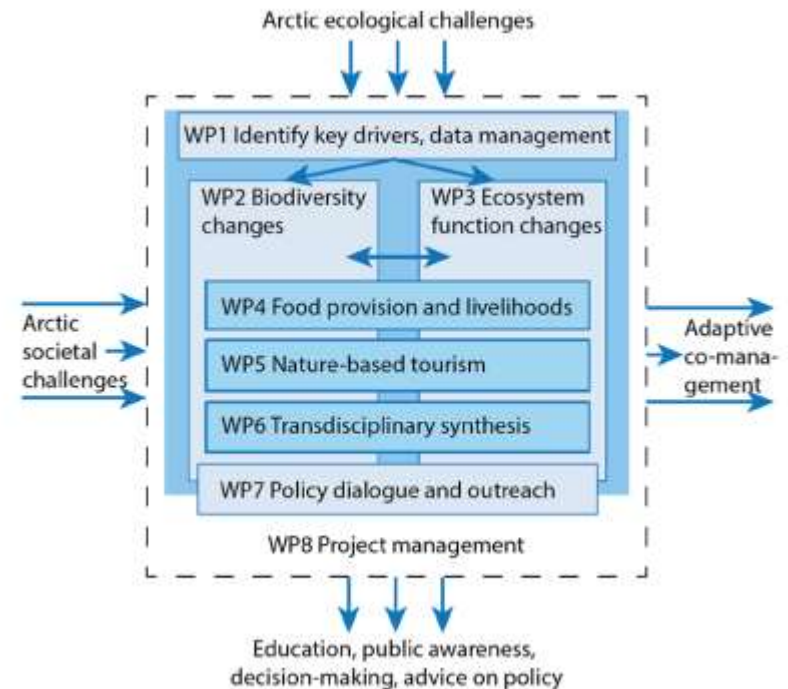


Inshore activities – FACE-IT (EU Project)

The Future of Arctic Coastal Ecosystems - Identifying Transitions in fjord systems and adjacent coastal areas (FACE-IT)



**4-year project
2020-2024**

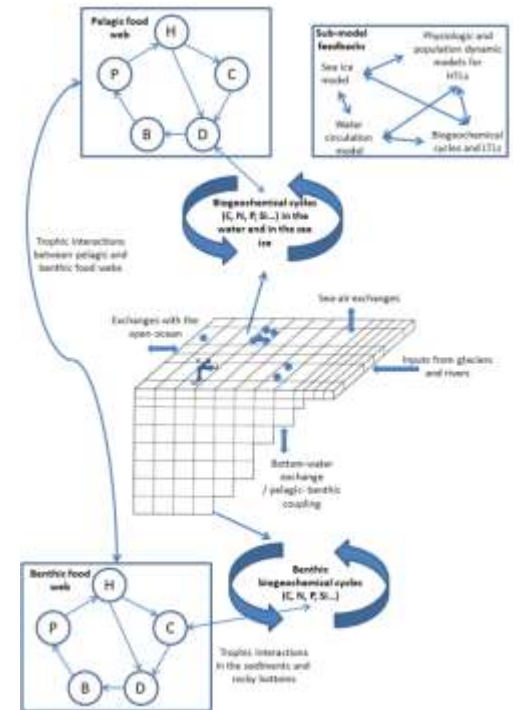


Inshore activities – FACE-IT (EU Project)

WP 3 - Ecosystem function changes (Lead: AU)

...two fundamental components of marine ecosystem functioning, **carbon fixation and primary production, and their variability in time and space relative to key drivers identified (WP 1)** and changes in **species abundance and biodiversity (WP 2)**.

...existing time-series of **pelagic and benthic primary production in conjunction with changes** in phytoplankton biomass, nutrient concentration, glacial discharge, light climate and other key ecosystem parameters **from the FACE-IT focal study sites** for comparative studies of ecosystem functioning and changes.



Inshore activities – FACE-IT (EU Project)

Task 3.3. Quantifying the impacts of glacier retreat on pelagic primary production and ecosystem functioning
(lead: GINR, partners: UAarhus, NPI, UBremen, UNIS, SU).

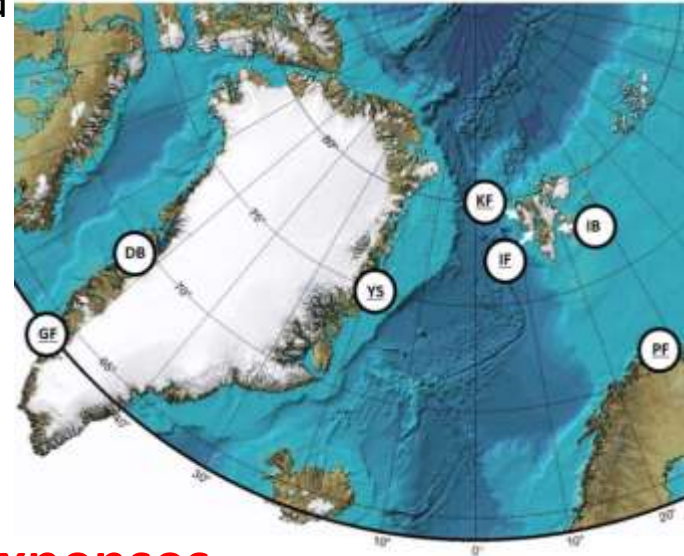
...a comparison of **pelagic primary production with key ecosystem parameters**...in specific fjords either, dominated by land-terminating glaciers or tidewater glaciers.

The key questions are:

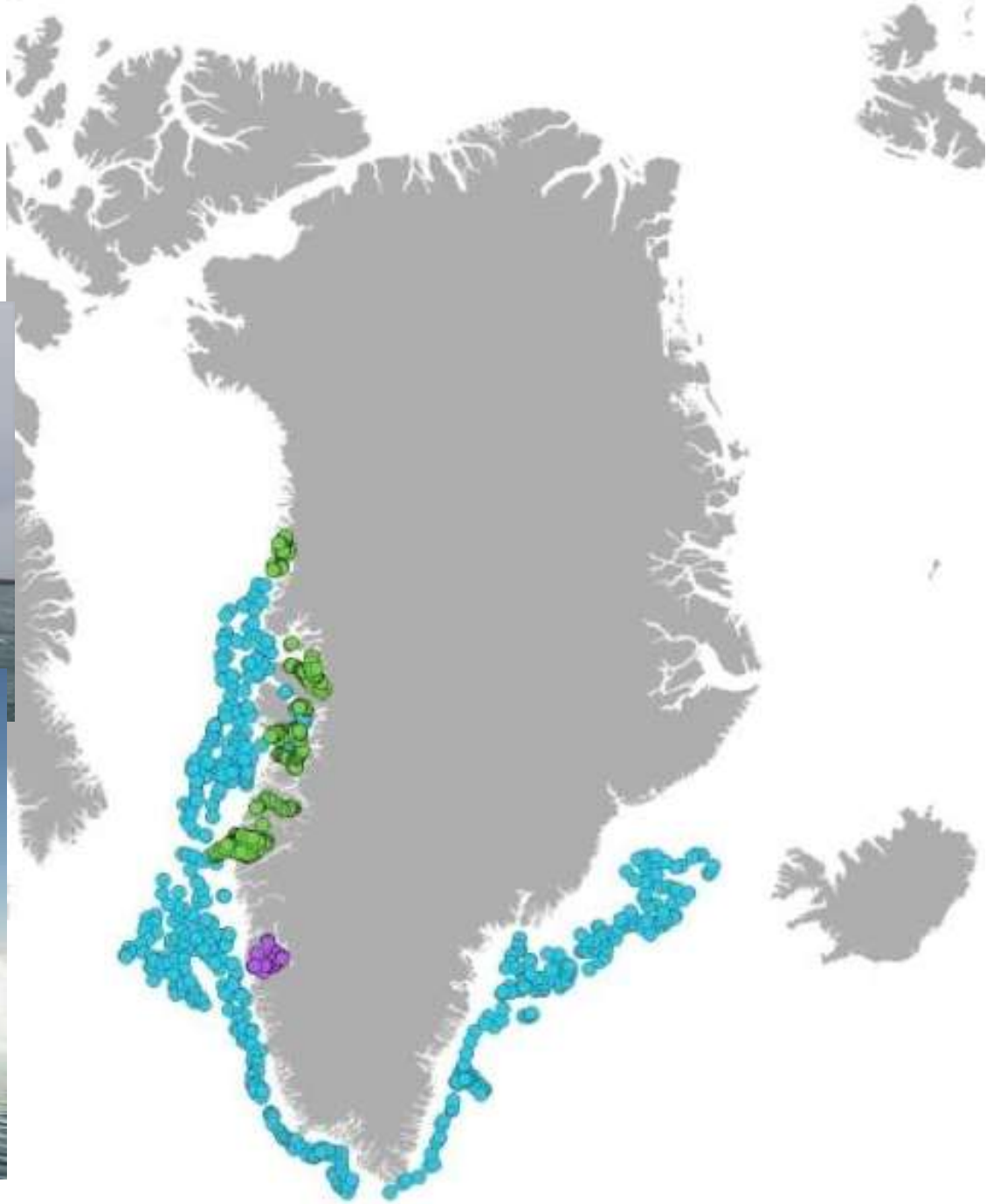
1. How do **key ecosystem parameters affect primary production** between the two types of fjord system...
2. **How may these fjord systems change** considering that present tidewater glaciers may retreat...

GINR:

3-year post doc + 10 months salary + expenses



Approx. 1000
stations/year



New Research Vessel



Main Dimensions (32 Persons + hospital)

Length o.a.	61.00 m
Length between p.p.	52.20 m
Beam	15.00 m
Depth to trawl deck	8.80 m
Depth to 1 st deck	11.40 m
Depth to 2 nd deck	14.00 m
Frame spacing (main frames)	600 mm



May 2021
Greenland

Thank you

