



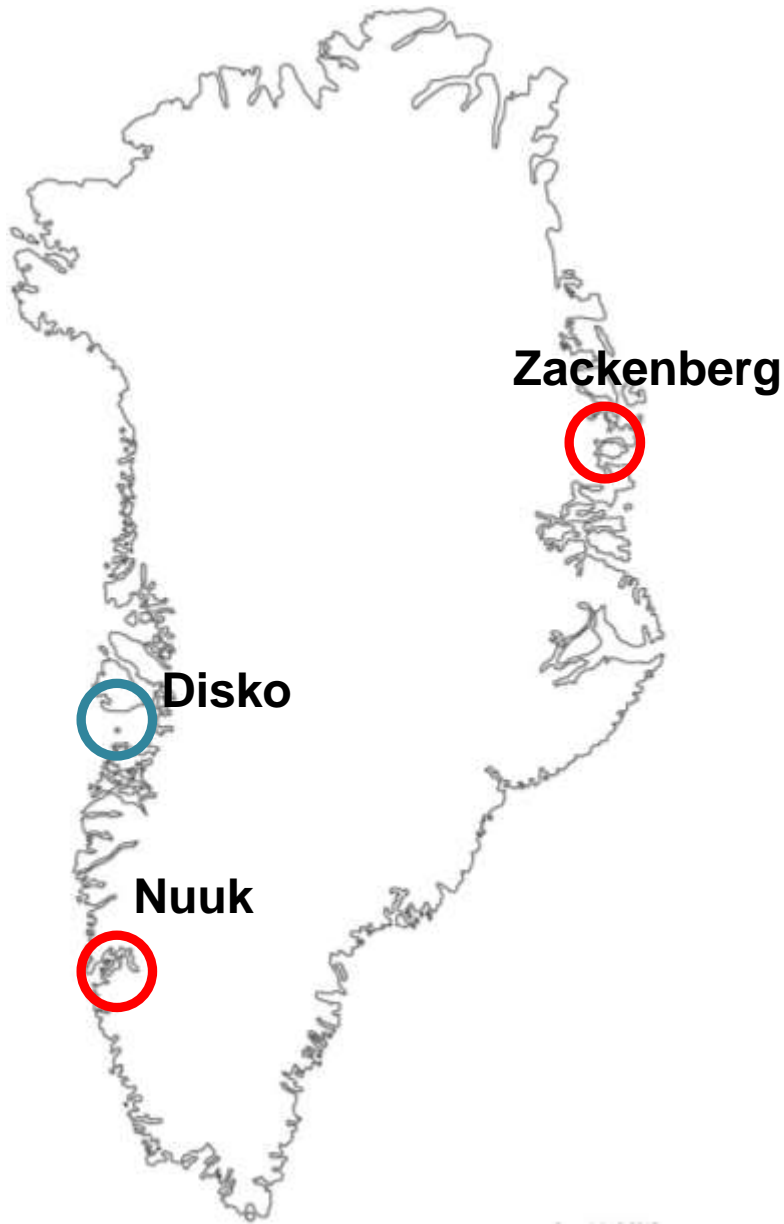
# Greenland Institute of Natural Resources

## Overview of projects 2020

Presented by  
Mie Winding, Greenland Climate Research Centre

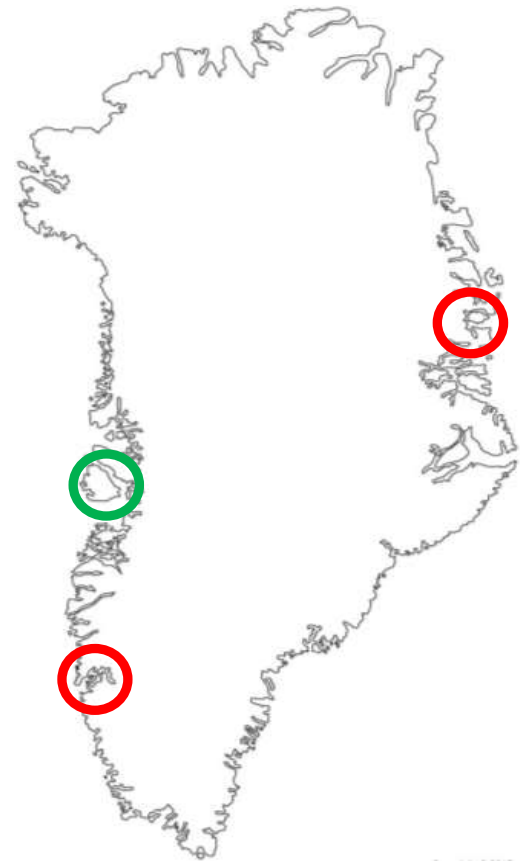


# Greenland Ecosystem Monitoring



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



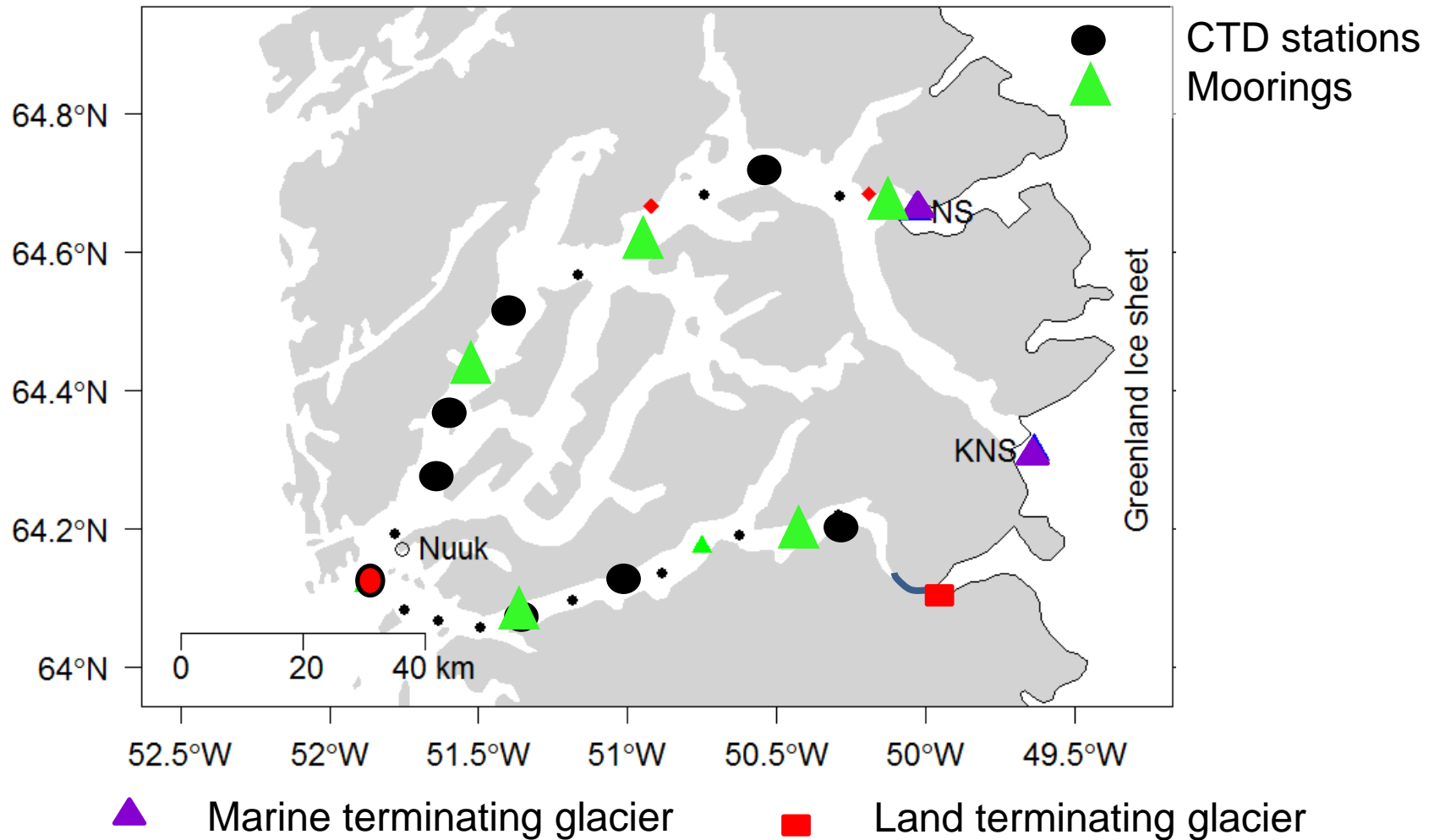
# Oceanographic fieldwork

**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

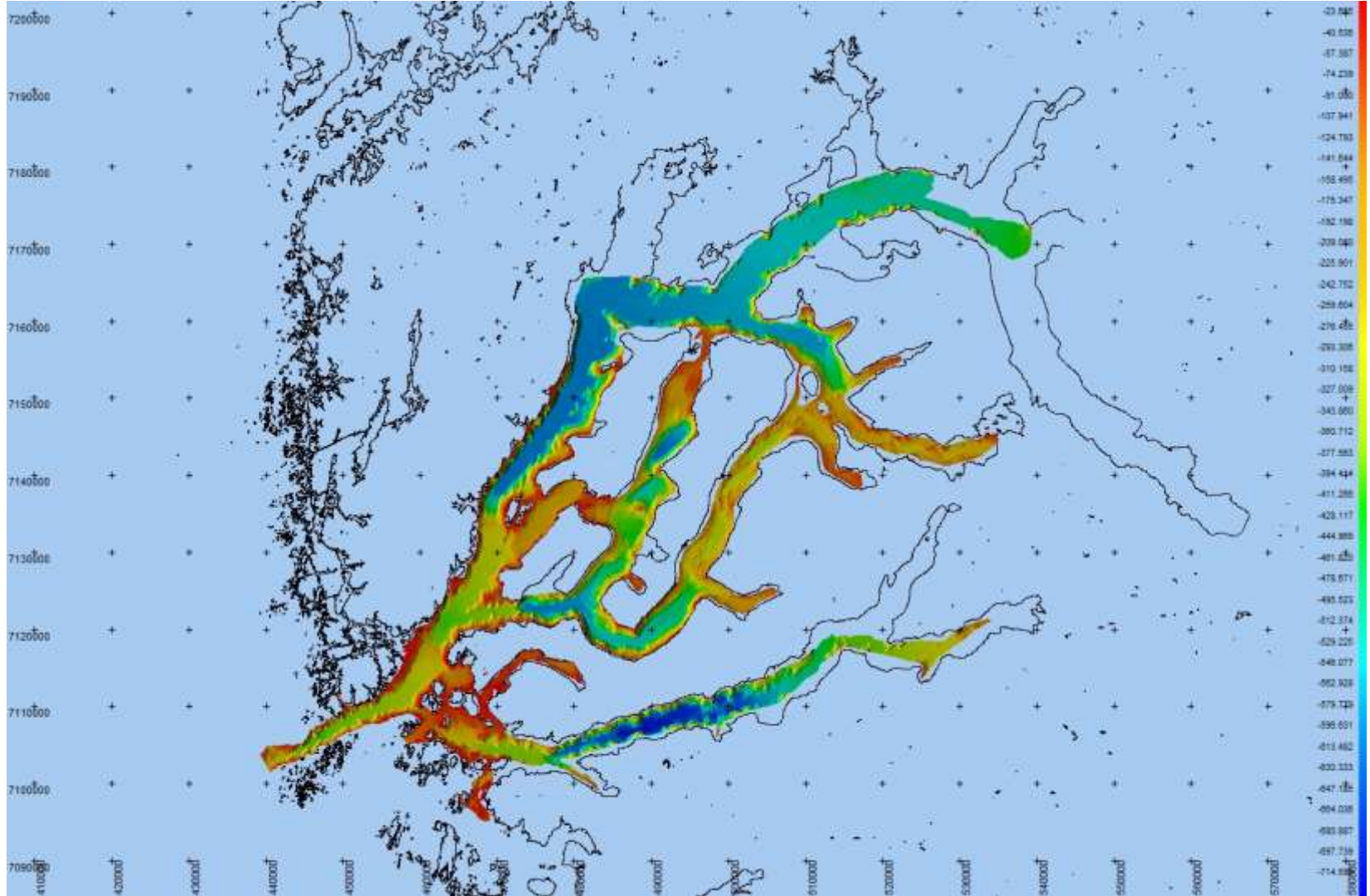


# Offshore activities

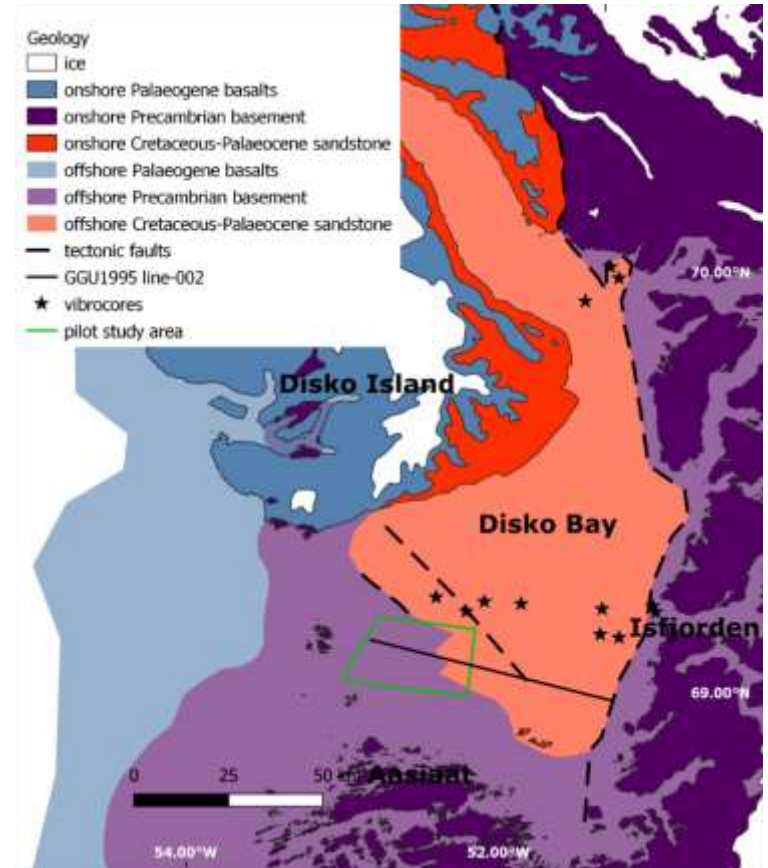
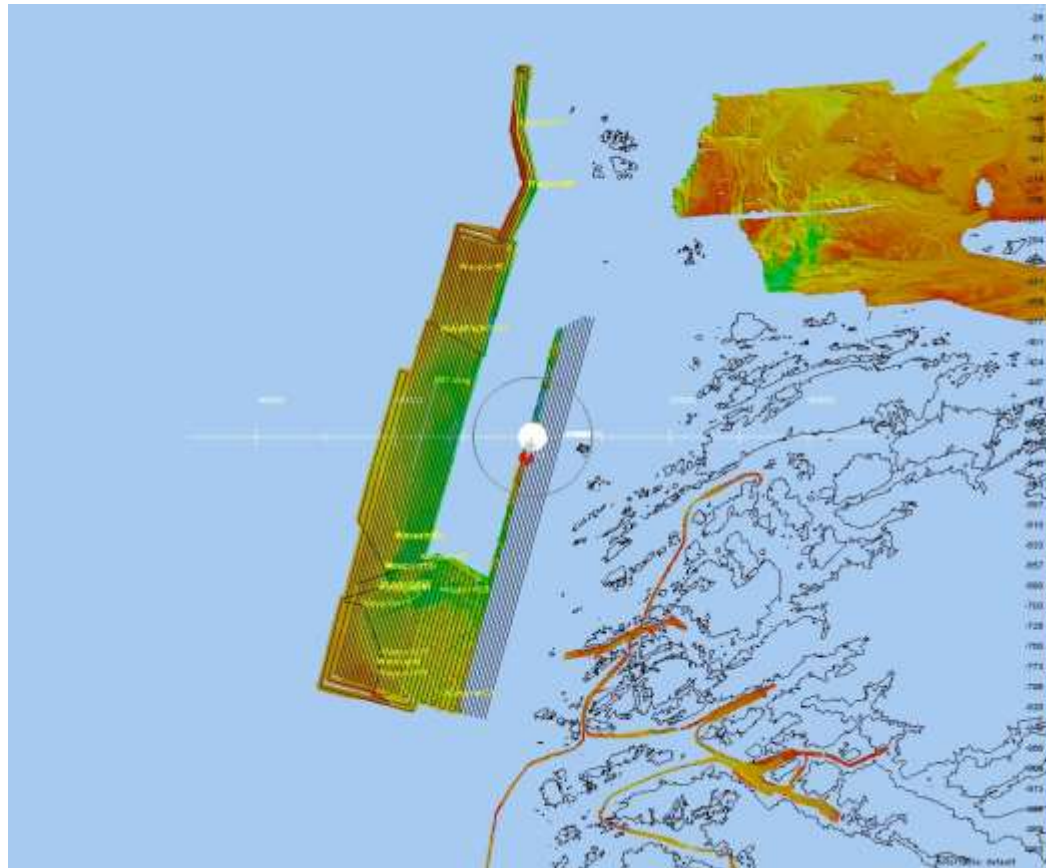




# Nuup Kangerlua mapping

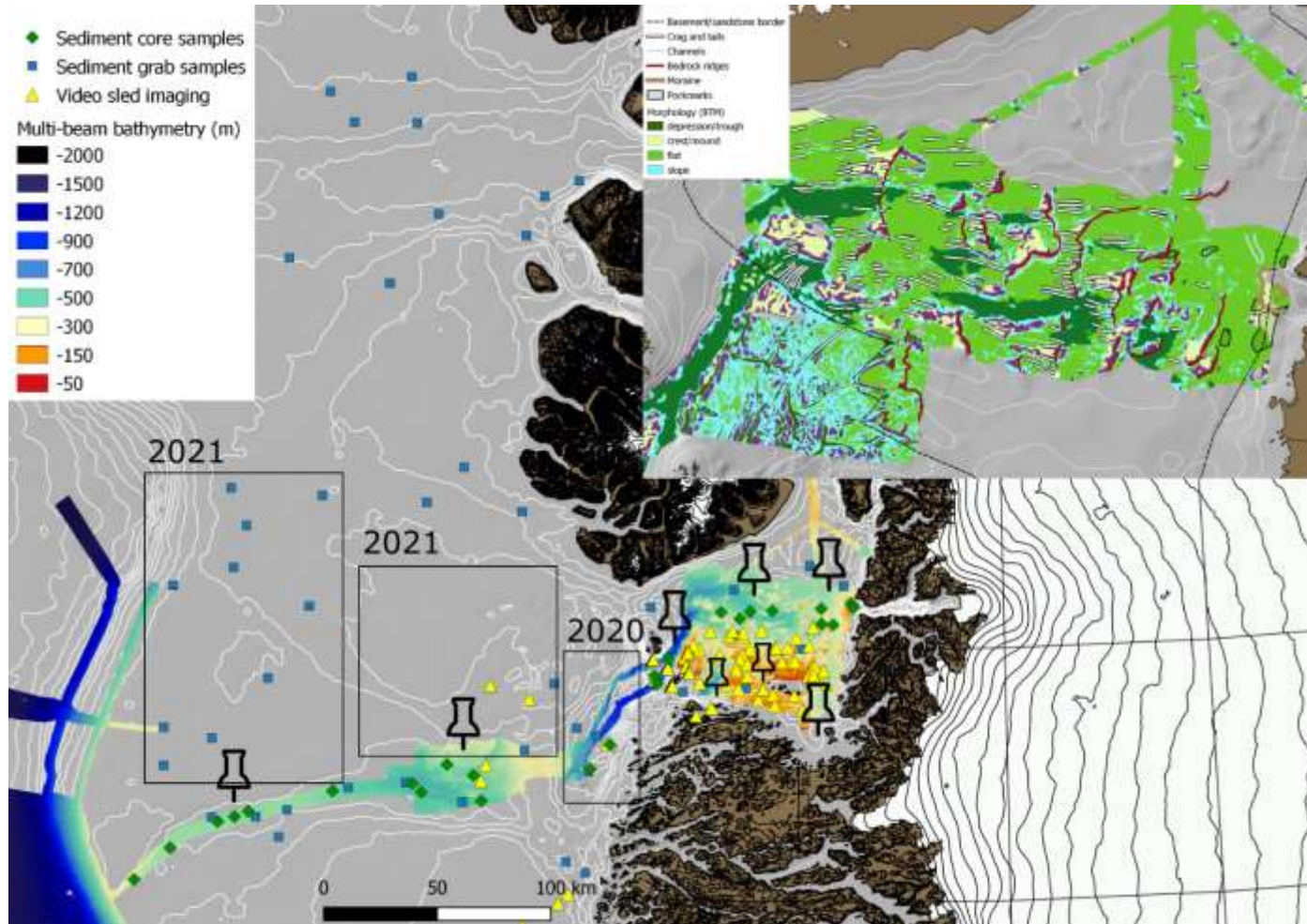


# Hidden habitats





# Plans for 2021



# 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)





Tools



Tool Labels



Initial View



Pan



Export



Identify



Query



Filter

Home



I want to...

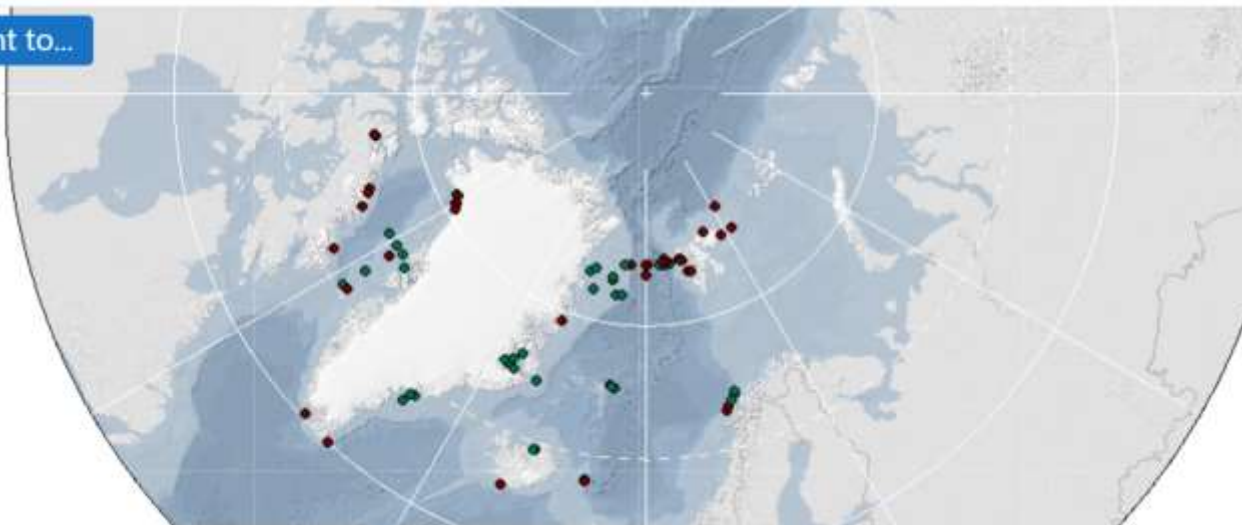


## Listen, Connect and Conserve

### 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

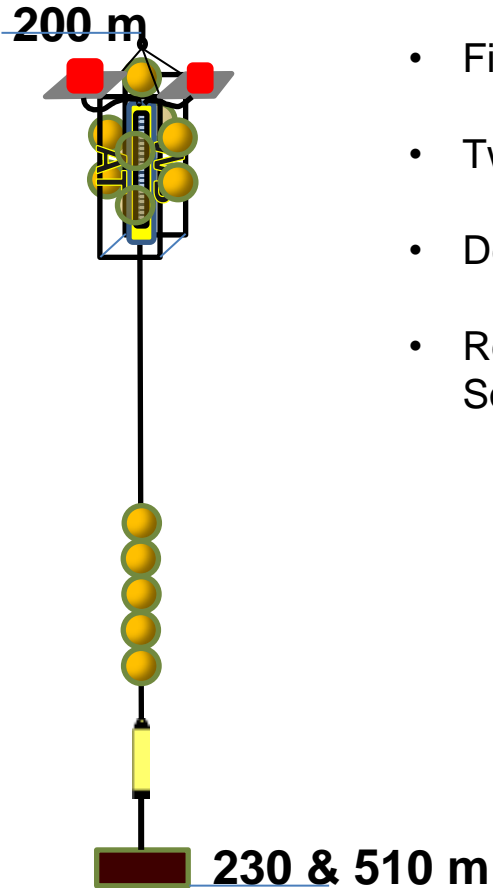


<https://svalbardkartet.npolar.no/Html5/index.html?viewer=ArcticPAM>



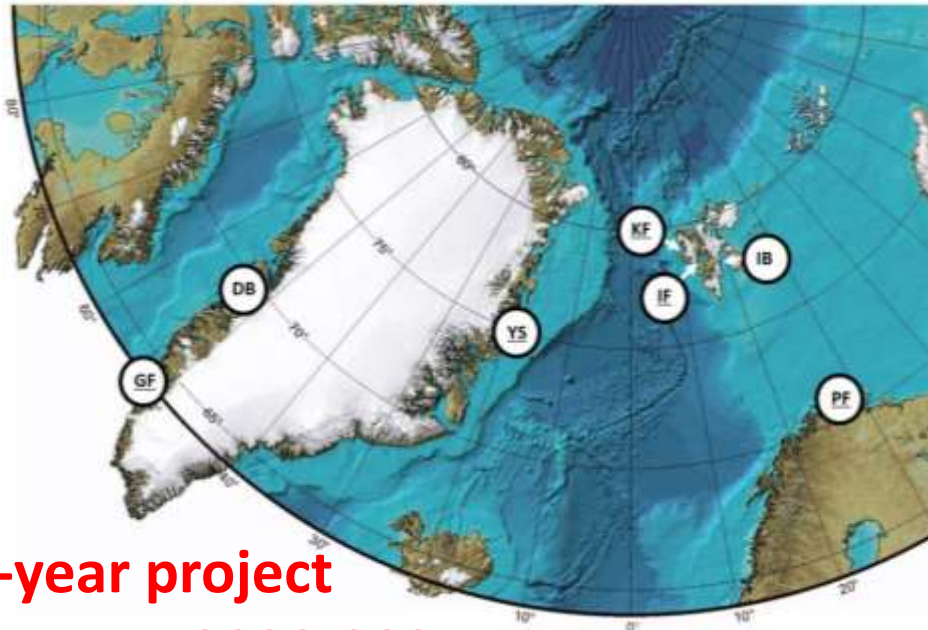
# WBAT – Acoustic monitoring

- 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

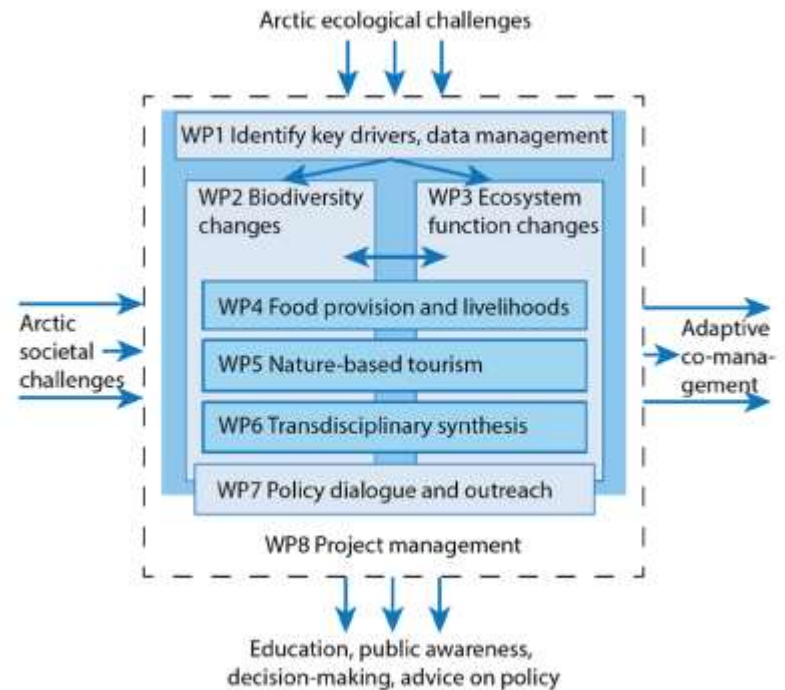


## Inshore activities – FACE-IT (EU Project)

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



**4-year project**  
**2020-2024**

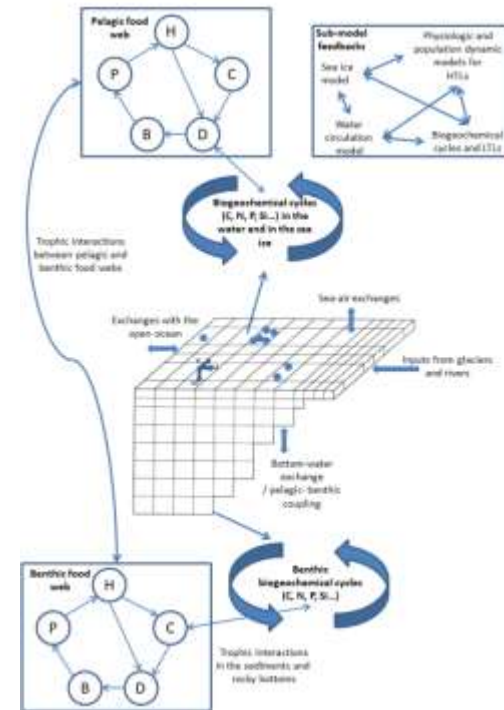


# Inshore activities – FACE-IT (EU Project)

## 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).

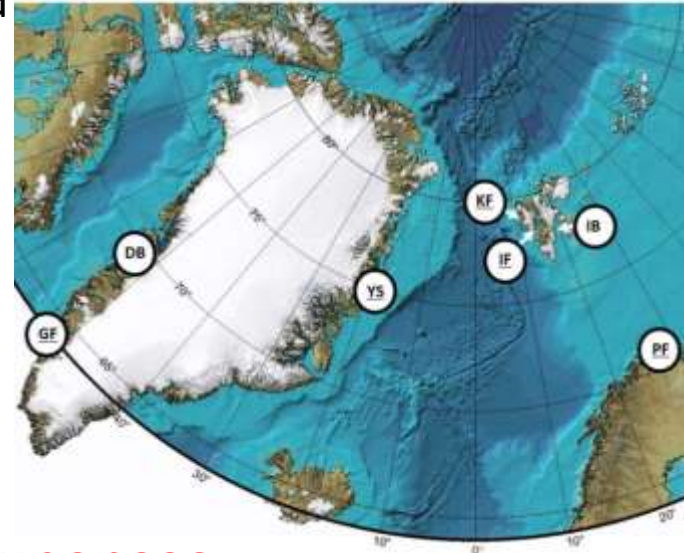
...a comparison of pelagic primary production with key ecosystem parameters...in specific fjords either, dominated by land-terminating glaciers or tidewater glaciers.

The key questions are:

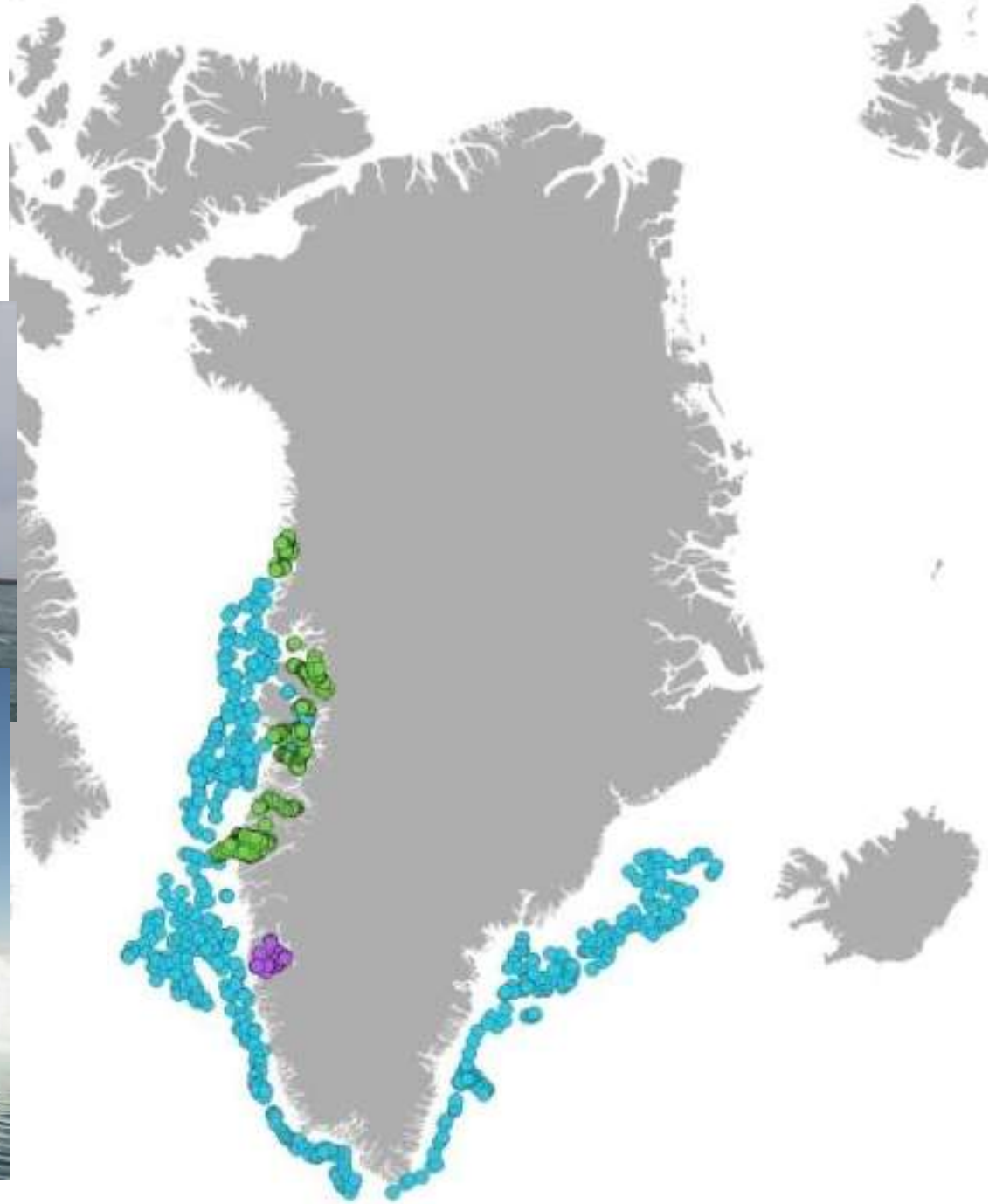
1. How do **key ecosystem parameters affect primary production** between the two types of fjord system...
2. **How may these fjord systems change** considering that present tidewater glaciers may retreat...

**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 <sup>st</sup> deck	11.40 m
Depth to 2 <sup>nd</sup> deck	14.00 m
Frame spacing (main frames)	600 mm



May 2021  
Greenland



Thank you

