



UiT field activities 2019/20

Foto: Nansen Legacy

TUNU-program (2002 -) North-East Greenland

Responsible: Jørgen Schou Christiansen, UiT

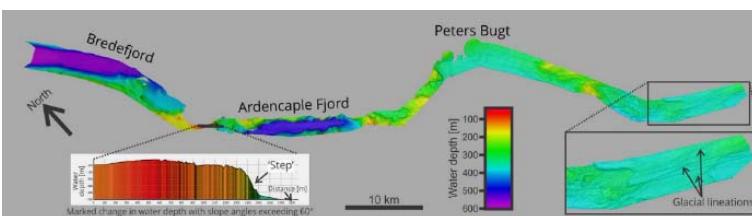
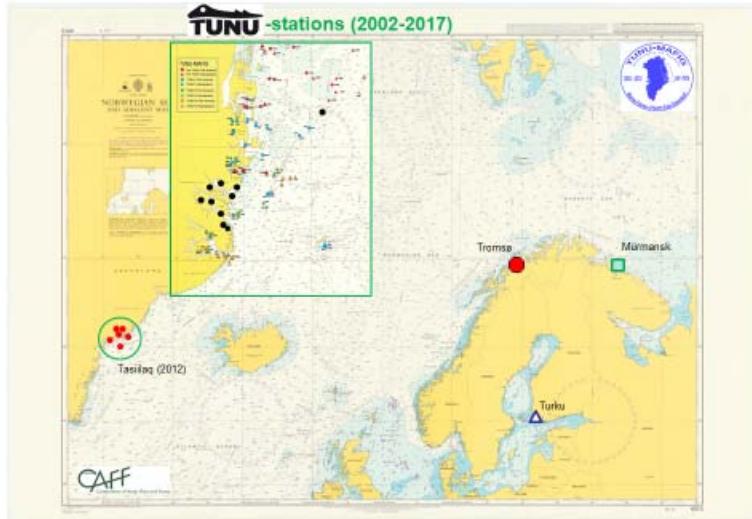
TUNU - PROGRAMME

(Northeast Greenland)

ARCTIC UNIVERSITY OF NORWAY
UiT The Arctic University of Norway

Contact

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UiT – The Arctic University of Norway,
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SCIENCE –

- MARINE BIODIVERSITY, DISTRIBUTION & CONSERVATION
- GREENLAND SHARK ECOLOGY & CONSERVATION
- POLLUTANTS
- TUNU-MUSEUM COLLECTION
- TUNU-OCEANOGRAPHIC BASELINE
- SEABED MAPPING (BIO-GEO key-collaboration)

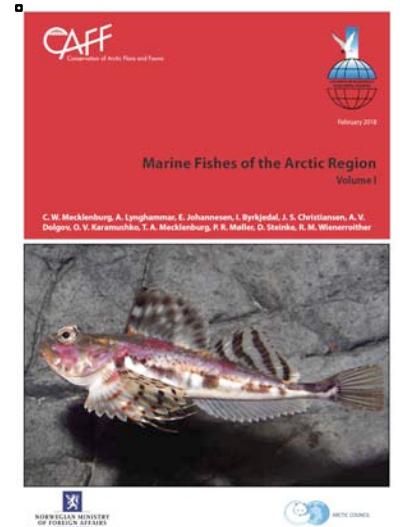


OUTLET –

- TIME SERIES: 2002–TUNU-VIII Expedition 2020
- TRANSECTS: latitudes 70–80 °N
- > 150 stations (0–1500 m depth)
- > 140 published case studies
- Ongoing case studies, reviews and syntheses



PARTICIPANTS – c. 40 scientists from 10 nations with research experience from both Arctic and Antarctic waters



Bioprospecting-program (2005-): Norwegian coast, Barents Sea, now – Arctic Basin

Responsible: Hans Christian Eilertsen, Espen Hansen

Bioprospecting cruise no. 16

Earlier cruises (1-14):
Western and Northern
Norwegian coast,
Barents Sea, Svalbard



SAMPLING

Physical/Biological environment:
Meteorology, Physical
oceanography, CO₂, Ox, Irradiance,
Phytoplankton, Zooplankton, etc.

Marine Bioprospecting:
Sampling of Bacteria, fungi, seaweed,
phytoplankton, zooplankton, nekton,
benthos

Assays (Cancer, diabetes,
inflammation, biofilm,
antiox, etc.) and subsequent
analytical chemistry



Goes to the
Polar Basin!



Contact persons: Hans Christian
Eilertsen or Espen Hansen, UiT

Earlier Arctic
finds



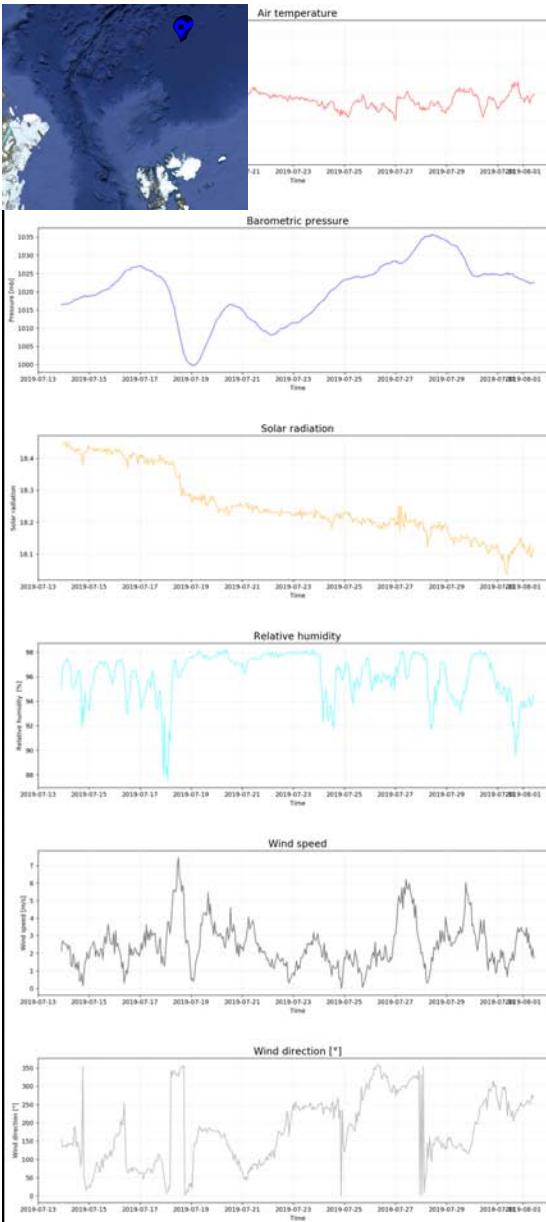
Piscus pelsidus

Earlier Arctic
finds



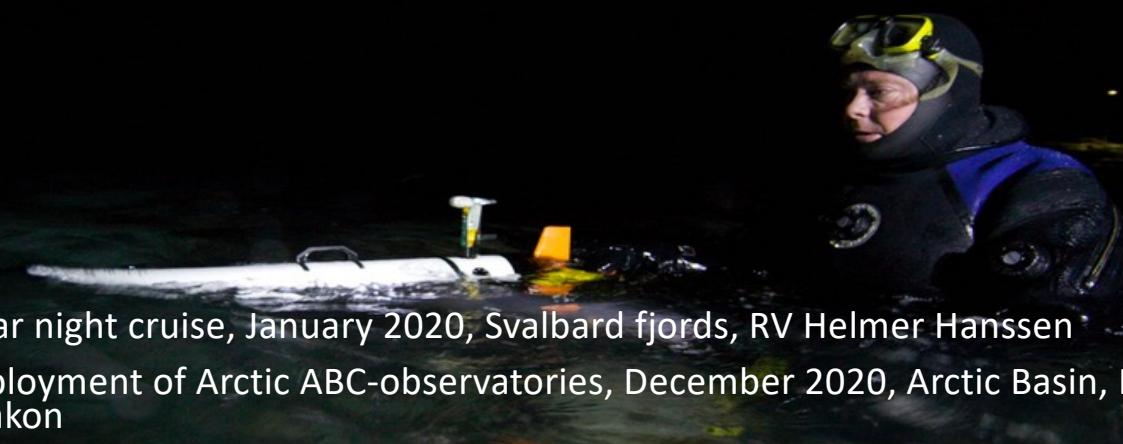
Arctic ABC-program (2016-): Svalbard fjords, Arctic Basin

Responsible: Jørgen Berge



Polar night research and Arctic ABC-observatories

Design of innovative autonomous drifting observatories to be deployed in Arctic ice covered waters



- Polar night cruise, January 2020, Svalbard fjords, RV Helmer Hanssen
- Deployment of Arctic ABC-observatories, December 2020, Arctic Basin, RV Kronprins Haakon
- Potential: ARCTOS / Nansen Legacy PhD course on productivity, April/May 2020.
 - Northern Barents Sea, HH/KPH

Responsible: Jørgen Berge, UiT

Arctic ABC observatory drifting north of Svalbard since mid July 2019, provide realtime data

Nansen Legacy project (2018-23): Northern Barents Sea, Arctic Basin

Responsible: Marit Reigstad

The Nansen Legacy characterize main human and physical impact and ecosystem responses – past, present, future

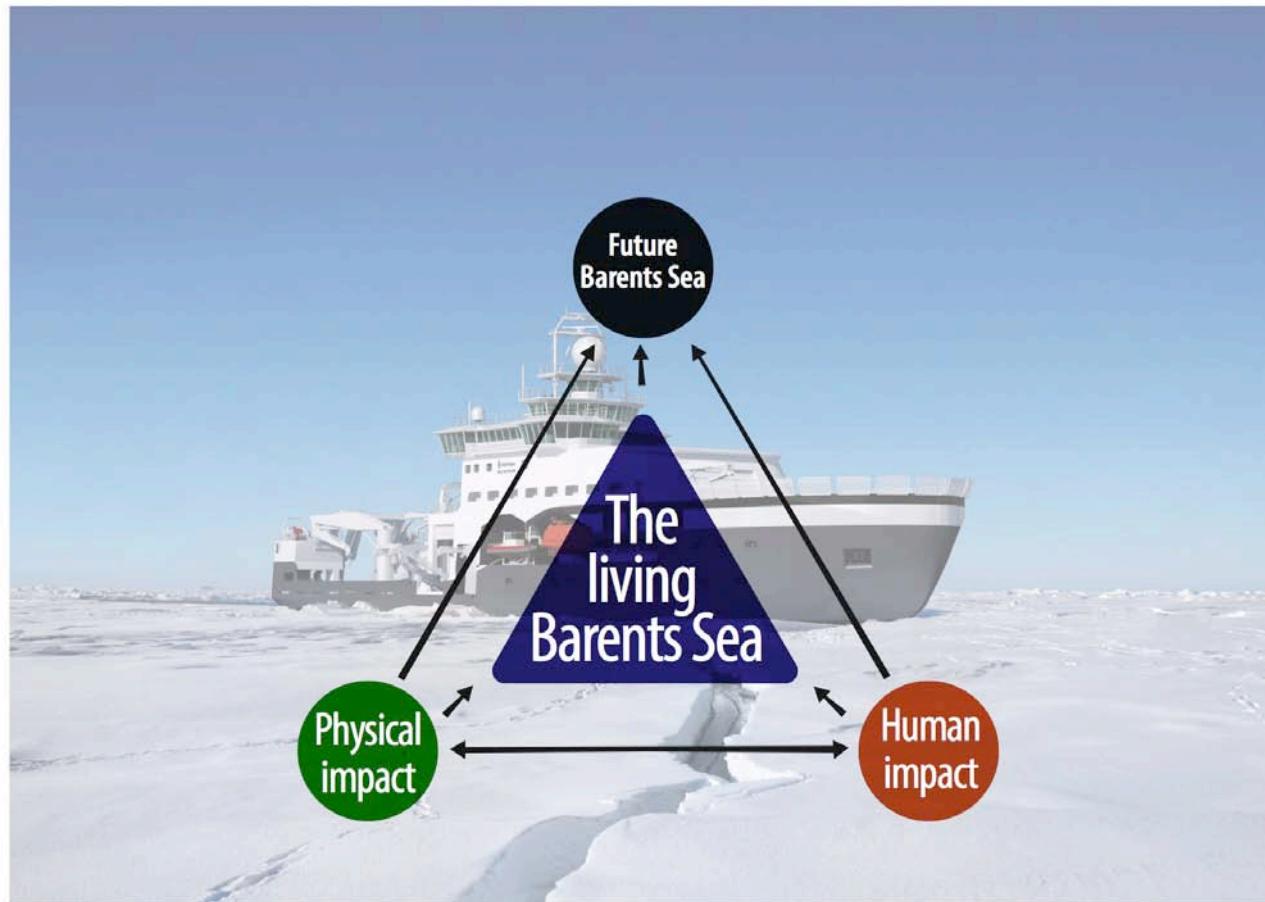
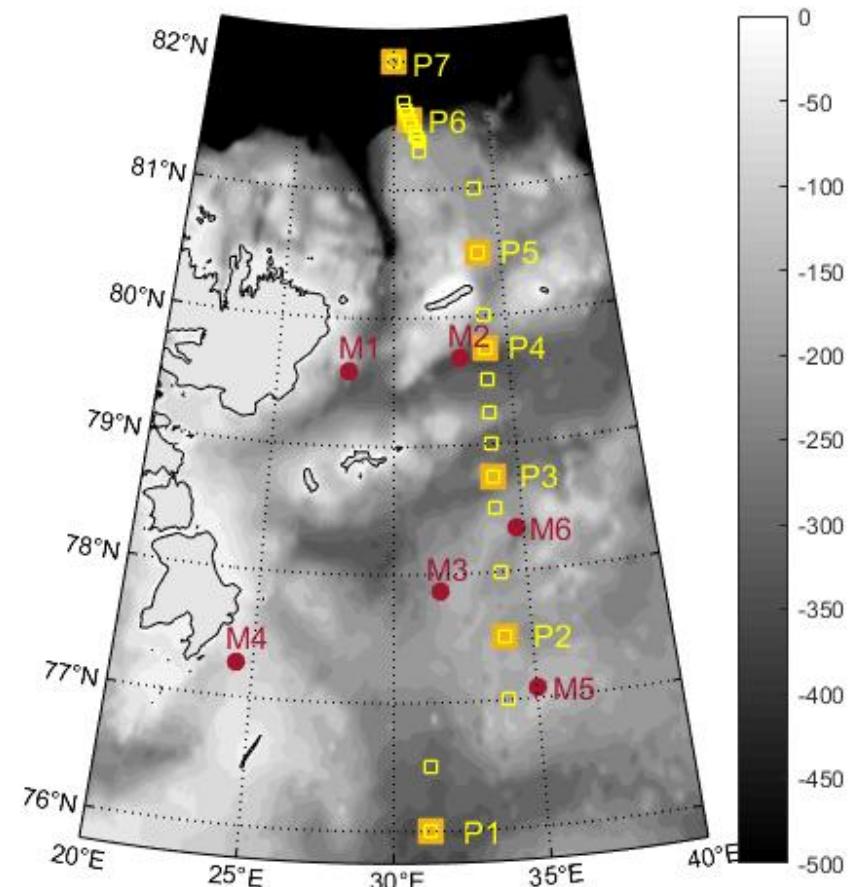
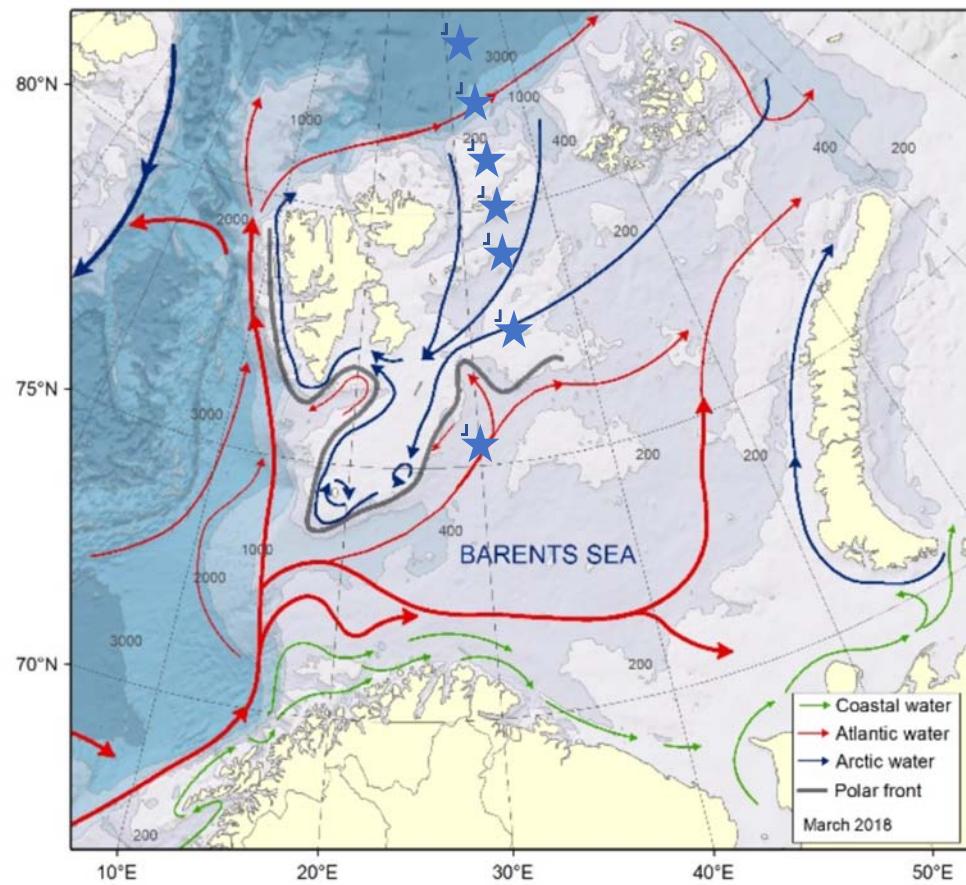


Figure: Nansen Legacy

Barents Sea currents and Nansen Legacy transect



The Nansen Legacy will use over 360 days at sea over the coming 5 years



Pilot studies
-deploy moorings
-baseline and
processes



Seasonal approach
baseline studies
-processes

Transect into
Arctic Basin

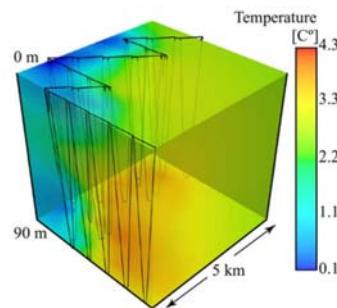
Closing gaps

Include media & collaborating scientists

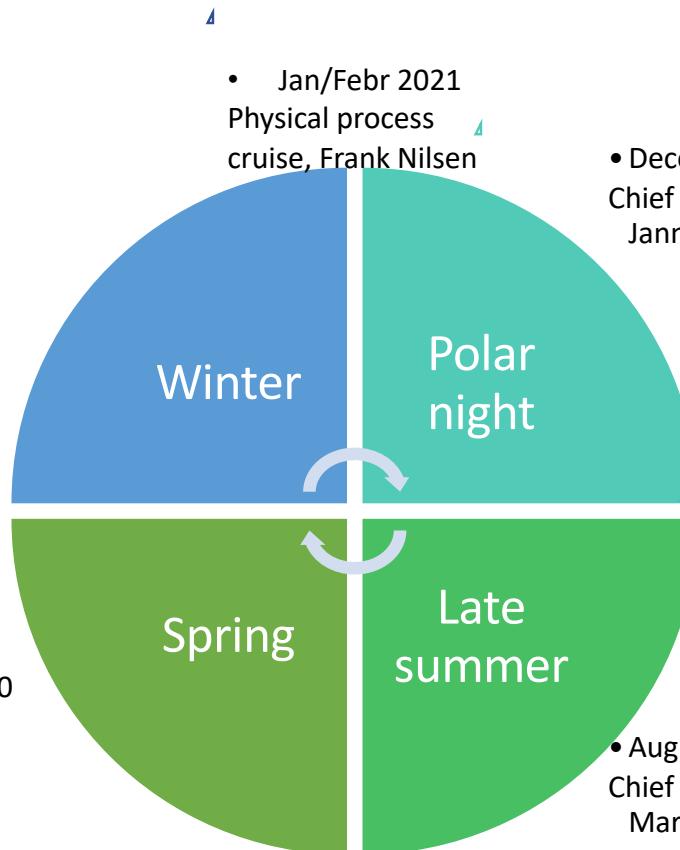
Seasonal studies: Climate and ecosystem



- March 2020
Chief scientist:
Sebastian
Gerland



- April/May 2020
Chief scientist:
Martin
Ludvigsen



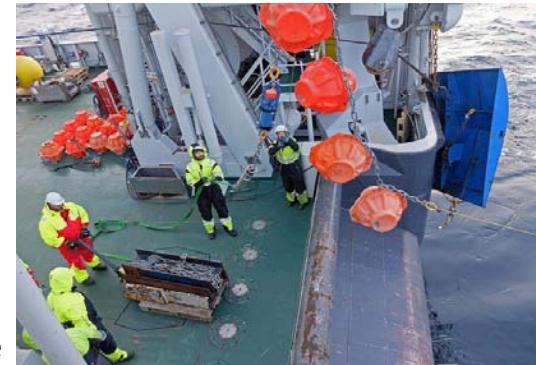
- Jan/Febr 2021
Physical process
cruise, Frank Nansen

- December 2019
Chief scientist:
Janne Søreide

- November 2019
Mooring service
cruise (RV KPH,
Arild Sundfjord)

- October 2020
Physical process
cruise, Ilker Fer
RV Kristine Bonnevie

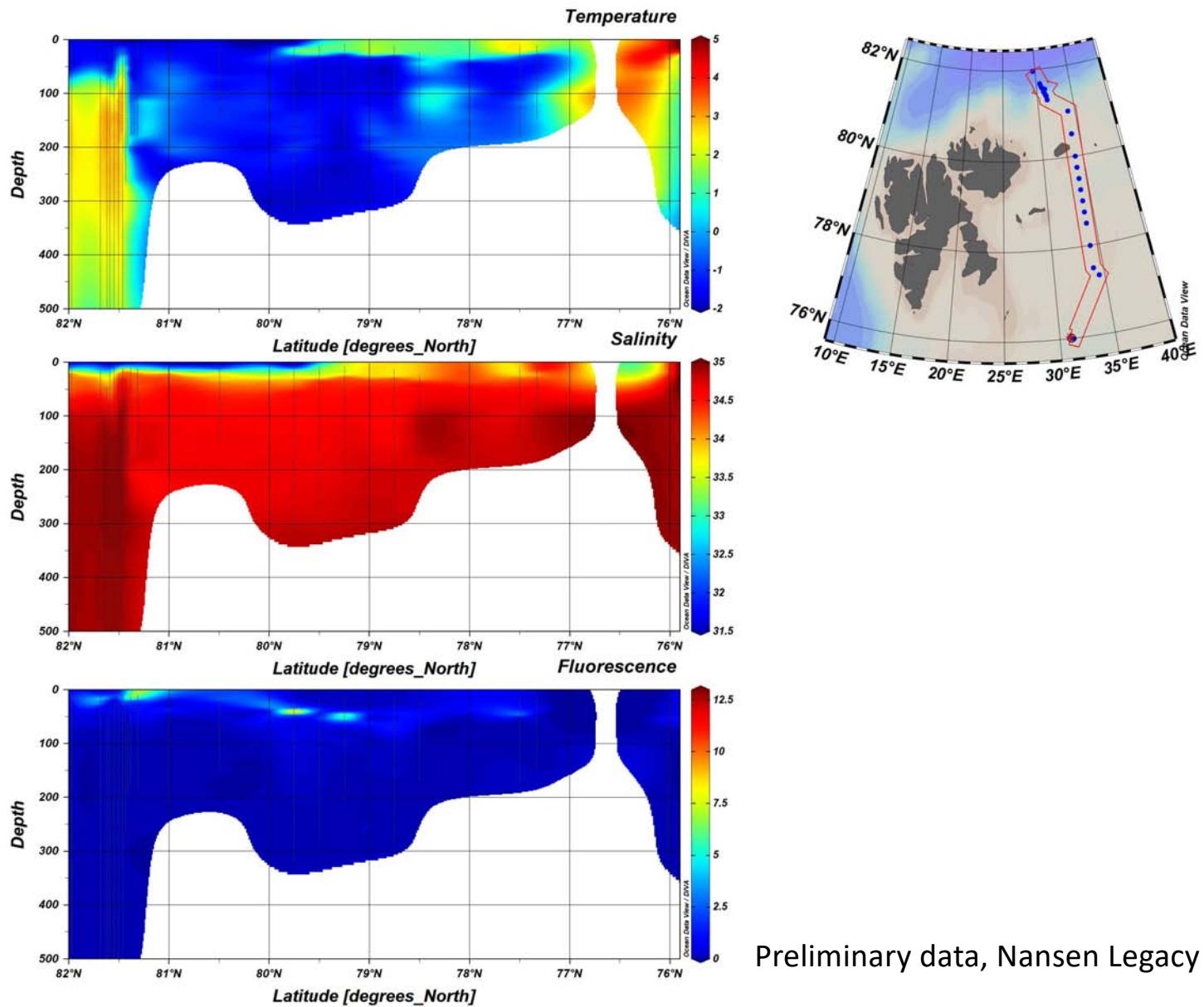
- August 2019
Chief scientist:
Marit Reigstad



Photos: Christian Morel (christianmorel.net), Inge Lise Ness, both Nansen Legacy

Nansen Legacy transect, August 2019

500-0 m



Preliminary data, Nansen Legacy

Additional activities include

- COAT terrestrial ecosystem monitoring program Svalbard and Varanger (northern Norway).
- Geology fieldwork (CAGE CoE on gashydrates and Institute of geology) have field work September/ October 2020