



FRAM – Nordområdesenter
for klima- og miljøforskning

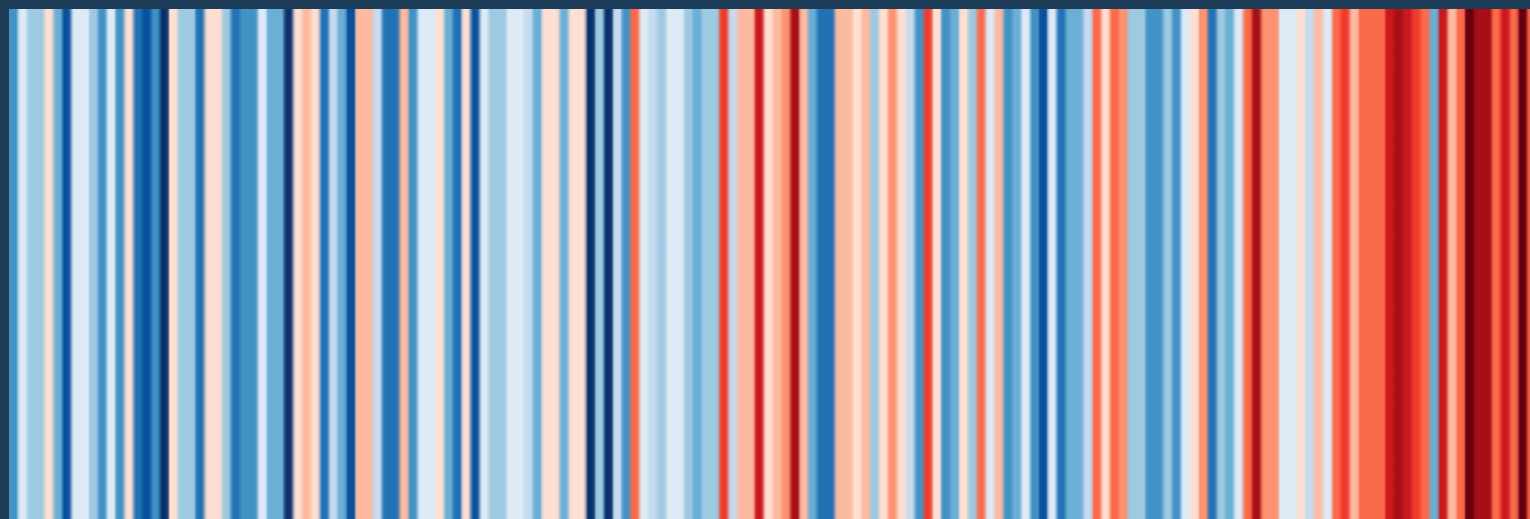
The Fram Centre Collaboration and Space utilization



Bo Andersen, leader of steering board



Climate context



*4-5 around
Svalbard

*2 i Arktis

Stripemodell som viser gjennomsnittstemperaturen i Norge fra 1901 til 2022. Hver stripe er ett år. Kilde: Met.no

Collaboration for better management

- The Norwegian government has created the Fram Centre collaboration to foster research in Tromsø that is needed to optimally manage the northern areas.
- The collaboration is funded by the Ministry of Climate and Environment.
- Information created by space infrastructure is needed by most research in the collaboration as well as for the management.



Members in the Fram Centre collaboration 2024

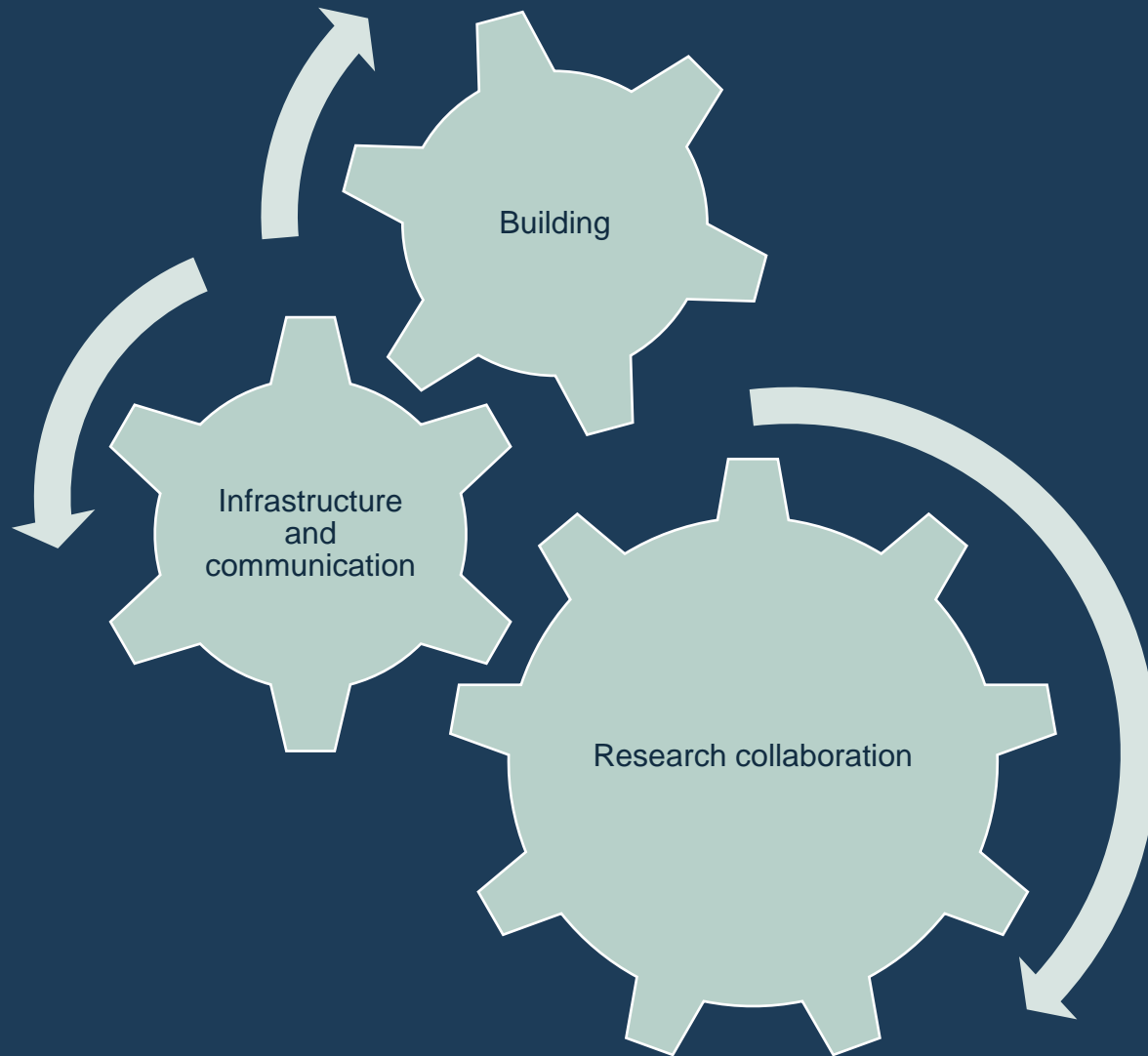


Total research budgets above 2000 MNOK





57,7 MNOK in 2024





Vision for the Fram centre collaboration

Through research Norway shall have the best possible management of our Arctic.

Main goals for the collaboration

Contribute with research based knowledge that makes Norway the best manager of the northern environment and natural- and cultural resources.

Develop the the Fram centre to an internationally leading facility for management related research in the Arctic concerning climate and environment.



The research in the collaboration shall:

- Be directly relevant for the management of the Norwegian Arctic
- Give added value through collaboration
- Require collaboration between the members
- Be cross- and interdisciplinary
- Be closely coupled to the users



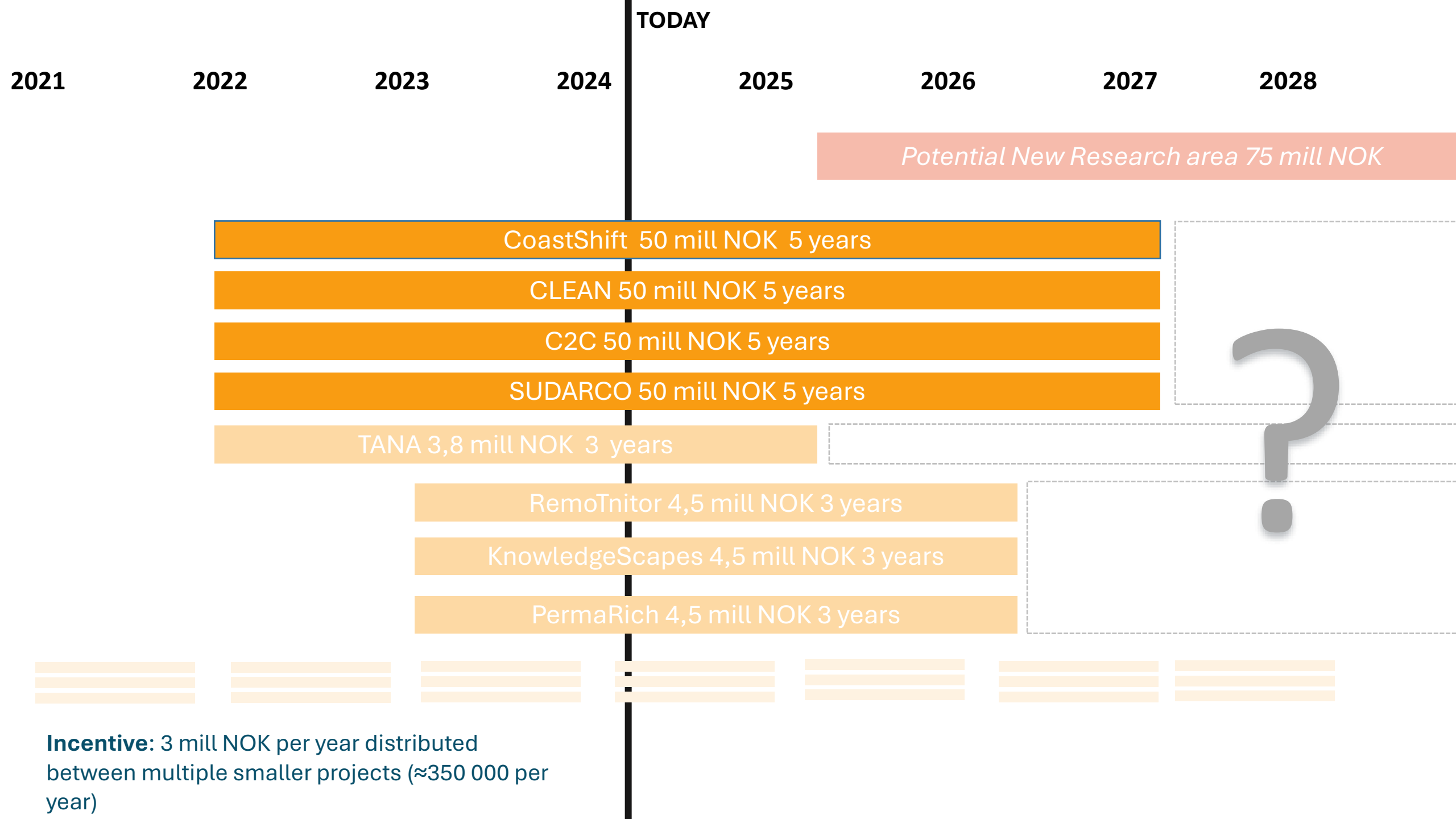
Four five year programmes (2022-2026)

Each with a total budget of about 50 MNOK

Four three year projects (2023-2025)

Each with a total budget of about 4.5 MNOK





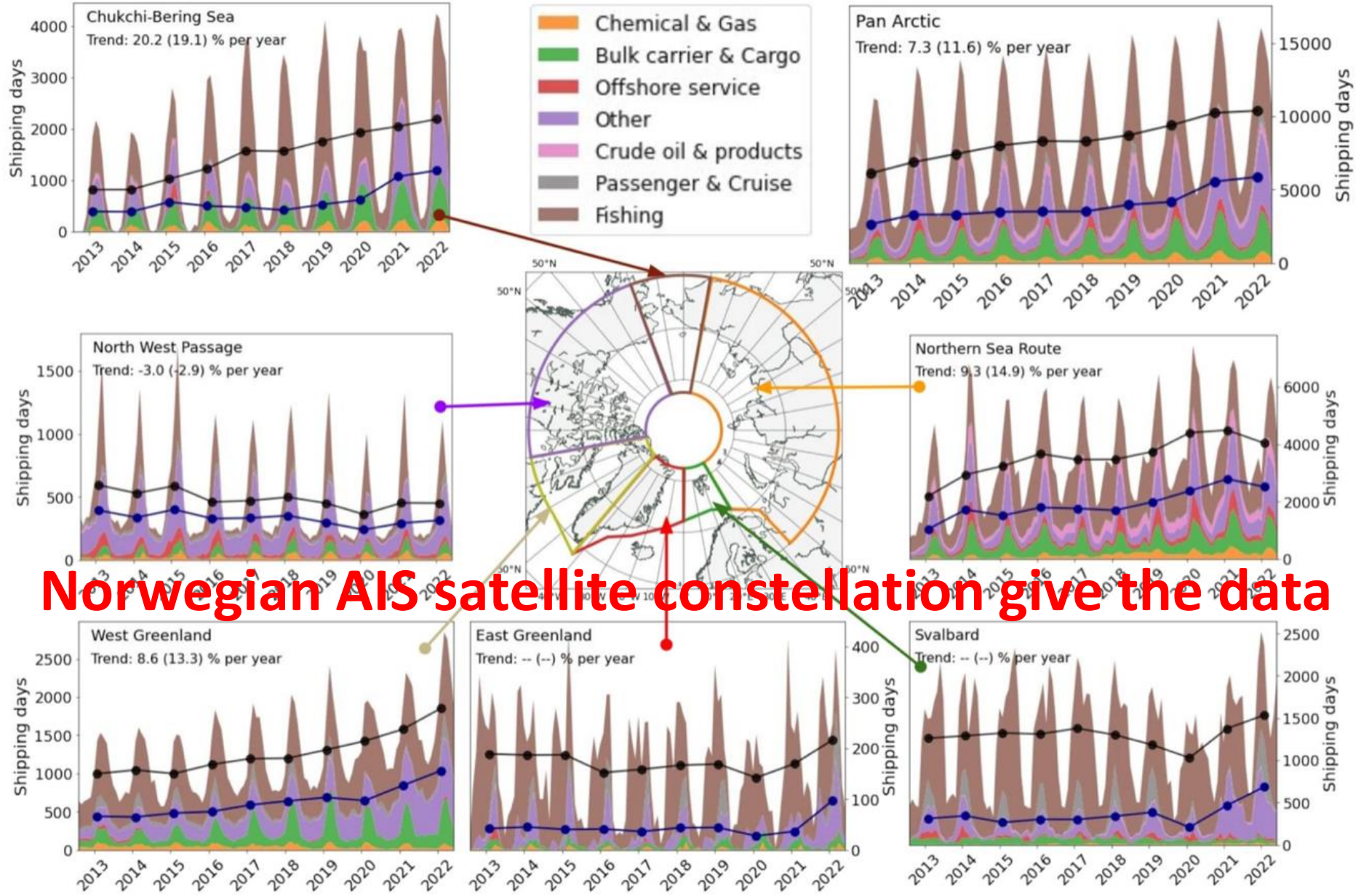


SUDARCO shall provide research that in times of increased utilization shall significantly better the management of the Arctic Ocean

69 researchers from 9 institutions.

Lead institution : Norsk Polarinstitut (NPI)

Maritime Arctic increased by 7%/year

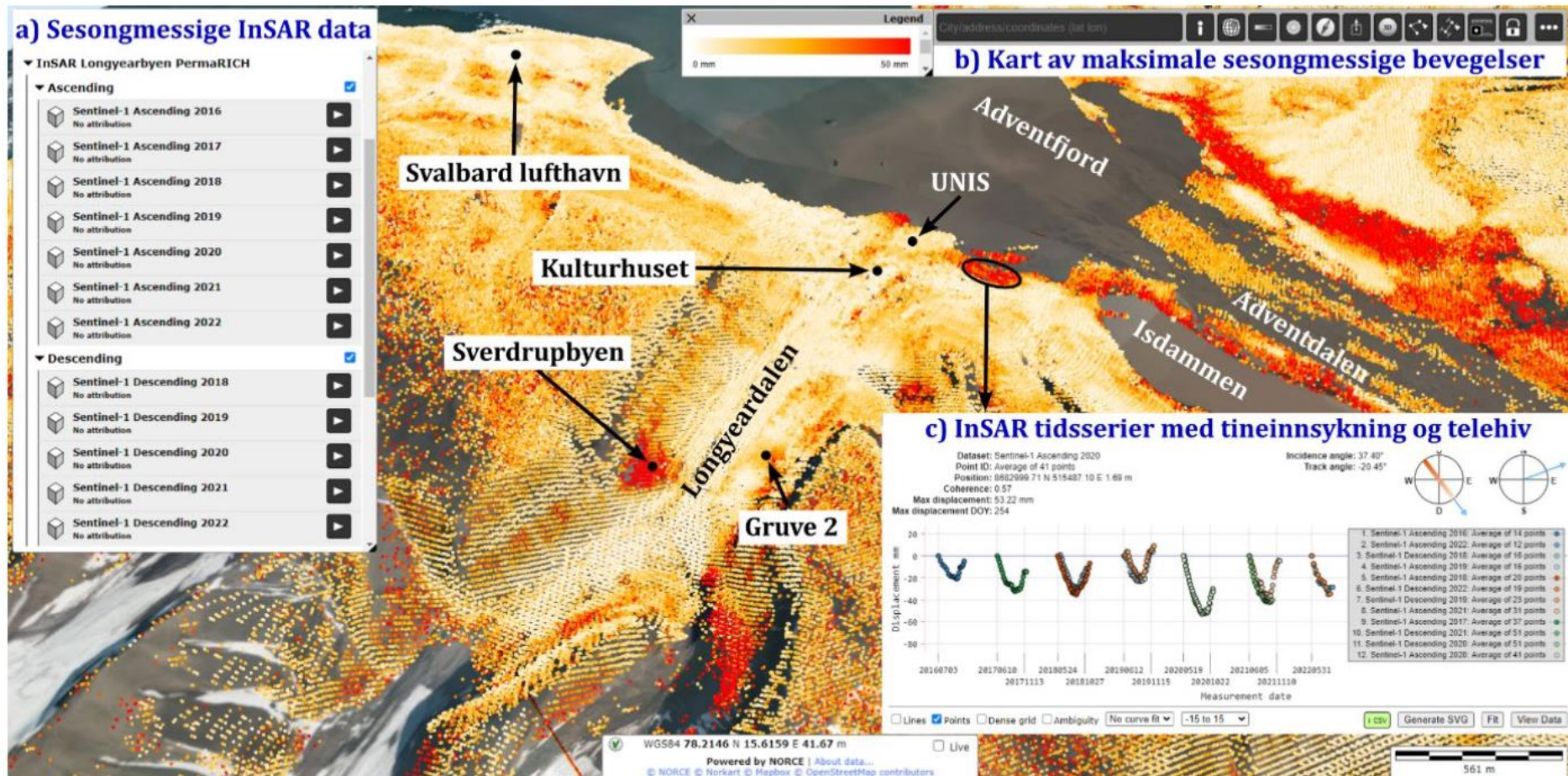




Advanced Mapping and Monitoring for Assessing Permafrost Thawing Risks for Modern Infrastructure and Cultural Heritage in Svalbard - **PermaRich**

NIKU Norwegian Institute for Cultural Heritage Research, SINTEF Ocean,
UNIS – The university centre in Svalbard, Geological Survey of Norway

Lead institution: NORCE Norwegian Research Centre



Figur 2: Eksempel av InSAR sesongmessige kart og tidsserier, visualisert i NORCE WebGIS. **a)** 2016–2022 InSAR datasett prosessert med Sentinel-1 bilder fra stigende bane (ascending) og synkende bane (descending). **b)** 3D-visning av maksimale bevegelser (mm i løpet av sesongen) i Longyearbyen området. Røde punkter viser områder påvirket av stor innynkning på flat terreng eller kryp på skråninger. **c)** Tidsserier som viser tineinnsykning og telehiv i et flat område øst fra Longyearbyen. Hver sesong er prosessert separat.

a) Taubanesentralen – 5.5m PermaRICH borehull



b) Bukk 6, line 5-6 – 5m PermaRICH borehull



Figur 3: Borehull utført i vår 2023 (23–30.05.2023) med PermaRICH budsjetts ved **a)** Taubanesentralen og **b)** Bukk 6 (line 5-6) i Longyearbyen. Målingsensorer (termistorstreng) har vært installert i høst 2023. Analysen av borekjernene (grunnstratigrafiundersøkelse) skal utføres i løpet av vinter 2023–2024.

**Fram – Centre for climate and environmental research
to ensure optimal management of the northern areas**

Utilization of space information is required.

