



INTERACT

**Research stations as science hotspots
in Arctic observing systems**
H2020 funded 2020-2023

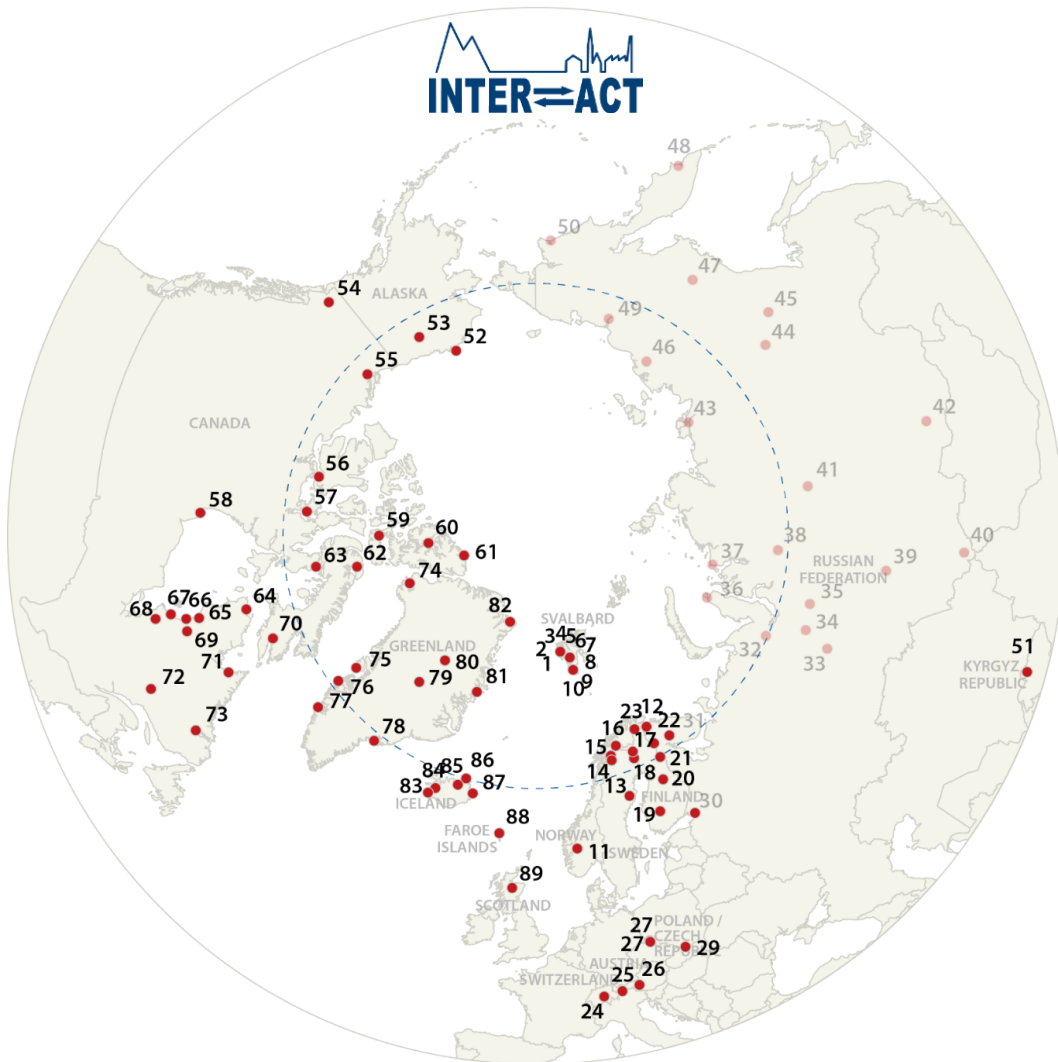


Learn more here:



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INTERACT

**International Network for
Terrestrial Research and
Monitoring in the Arctic**
2011-2023

**Currently 68 member stations
+
21 Russian stations on pause**

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Complex station operations

- Calls for sharing of information and identification of good practices

Permits

Sustainable energy

Waste
management

Science diplomacy

Conflict
mitigation

Local community
cooperation/involvement

Service provisions

Guideline
development

First aid

Import/
Export

Staff recruitment

Reporting

Accounting

Impact
monitoring

Instrumentation

Risk management
and safety

Laboratories

Visitor
handling

Data manager

Transport

Marketing and outreach

Sustainability

Administrator

Quality
assurance

Water supply
and disposal

Training

Media

Accommodation, food,
cleaning, etc.

International
cooperation

Education

Science coordinator

Workshops
and tools

Construction and
maintenance

Management
Board

Funding

Emission
reductions

Chemical
storage

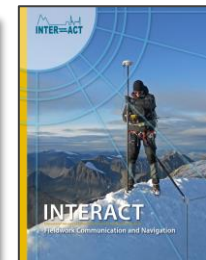
Etc., etc., etc.



Improve services offered to the scientific community

Bring station managers together to work towards standardised approaches to station management

- Management planning
- Risk management and safety
- Reducing climate and environmental impacts
- Science and international cooperation
- Etc.





Tools and guidebooks for scientists

Improving scientist preparedness

- Fieldwork planning handbook and Practical field guide
- Thematic guidebooks



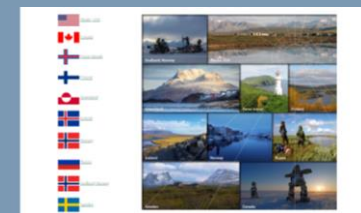
Station selection tool – INTERACT GIS

- Online tool to search for research stations complying with science aims



Overview of arctic permit systems

- In support of Arctic Council's Science Cooperation Agreement





INTERACT stations as multidisciplinary science hotspots



Hosting scientists from a variety of disciplines

Allowing for interdisciplinary comparisons

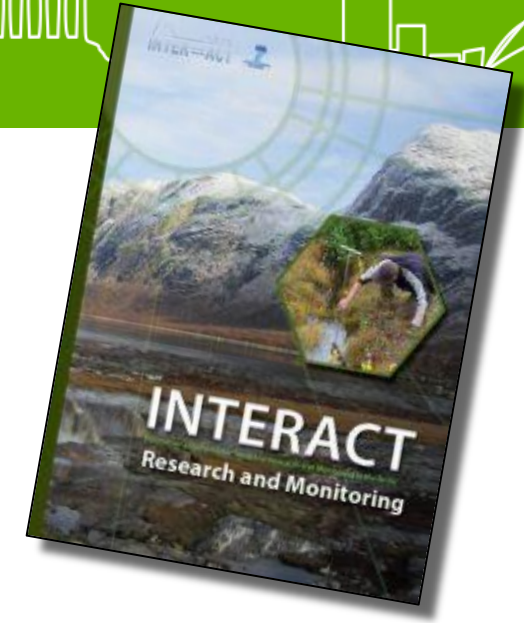




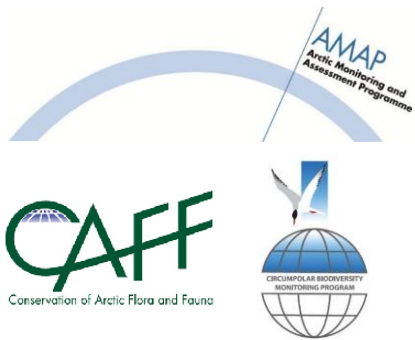
Standardisation

Recommended minimum monitoring programme

Established best practices methodologies



Arctic Council



International scientific networks, e.g.:



European Union, e.g.:





Providing access

Transnational Access

- Physical access to research stations

Remote Access

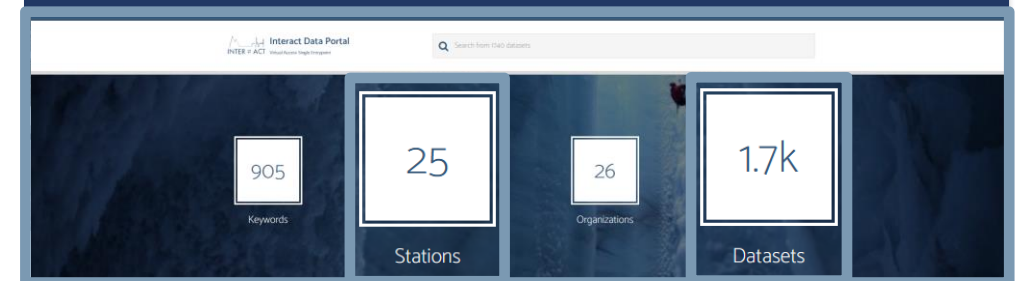
- Station staff collect samples/data

Virtual Access - via INTERACT Data Portal

- Free and open access to data sets



Number of projects: c. 350
Number of scientists: c. 900
Number of field days: c. 13,000
Number of papers: +220



Joint Research Activities



* INTERACT III activity

Science methodology development WPs	What
Climate feedback mechanisms	- INTERACT/ICOS energy flux towers
Harmonising biodiversity monitoring (CBMP)	- Implementing CBMP monitoring plans at stations
Extreme events and impacts monitoring (CBMP)*	- Integrate extreme events into CBMP plans/at stations
Rapid response to environmental alerts	- Coordinated sampling across stations to address urgent data need
Documenting and reducing pollution (AMAP)*	- Deploy passive samplers for emerging pollutants - Test implement plastic monitoring programme
Drone technologies for scaling up	- Drone technology, sensors and sensor needs
Virtual instrumentation	- Automatic data capture and transfer (e.g. flowering from photos)
Artificial intelligence*	- Using AI on station data sets (e.g. foto trap, old handwritten records)

Data management standardisation
Making data widely available*

Education and awareness at all societal levels
Communication and navigation*

Interacting with stakeholders
Adapting to environmental change
Increasing benefits and reducing impacts of tourism*

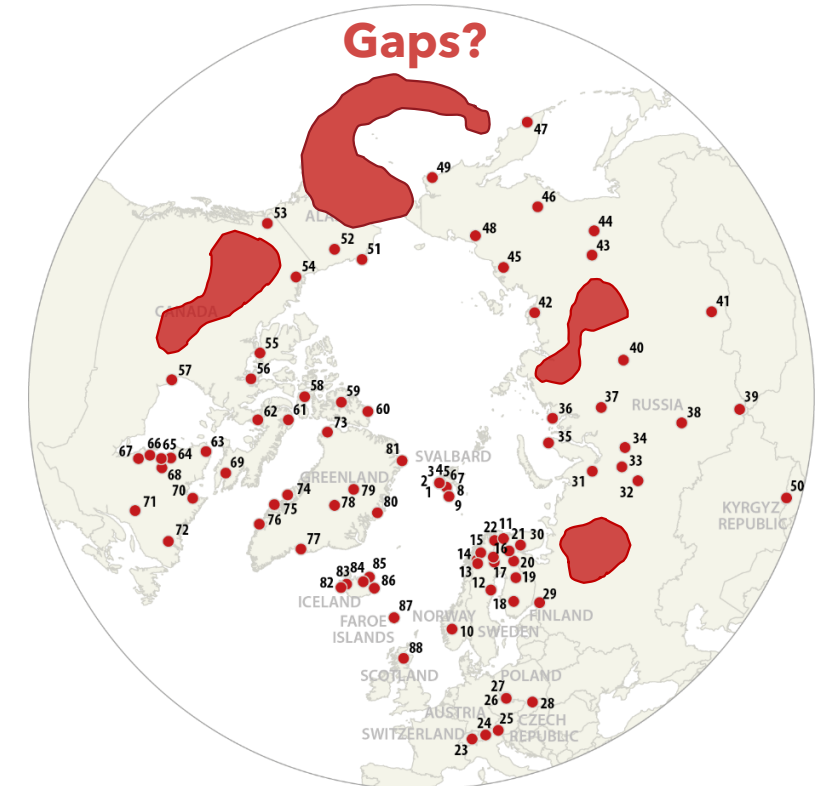
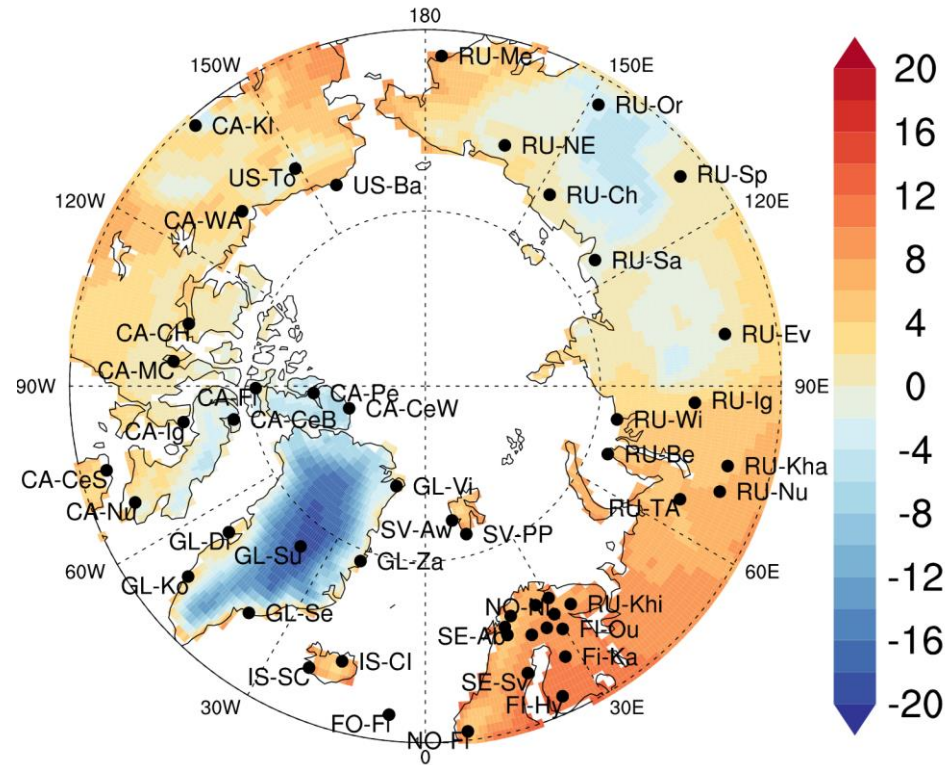
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How well does the network of INTERACT stations reflect expected changes across the entire Arctic?

IPCC temperature projection year 2100

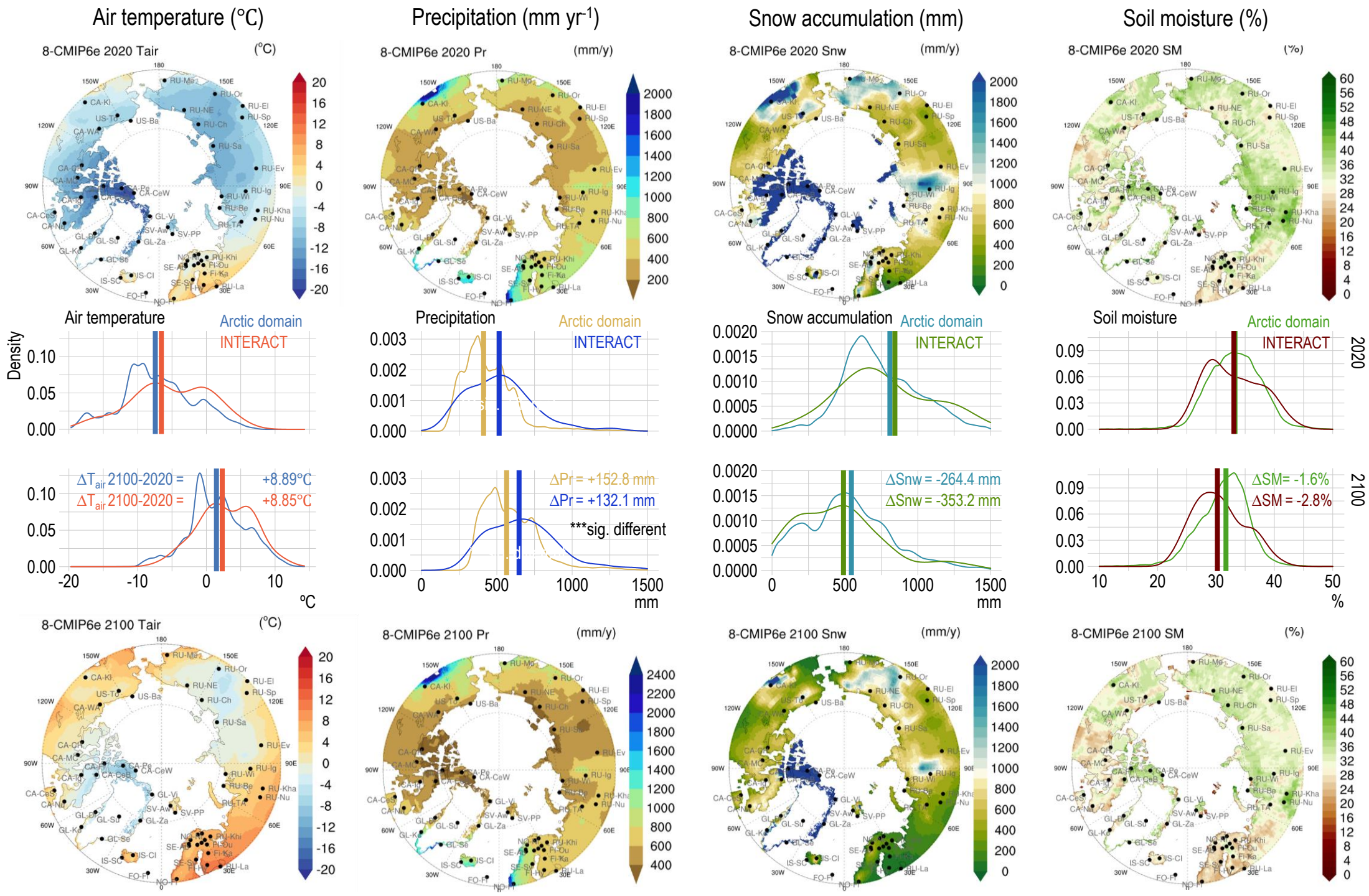


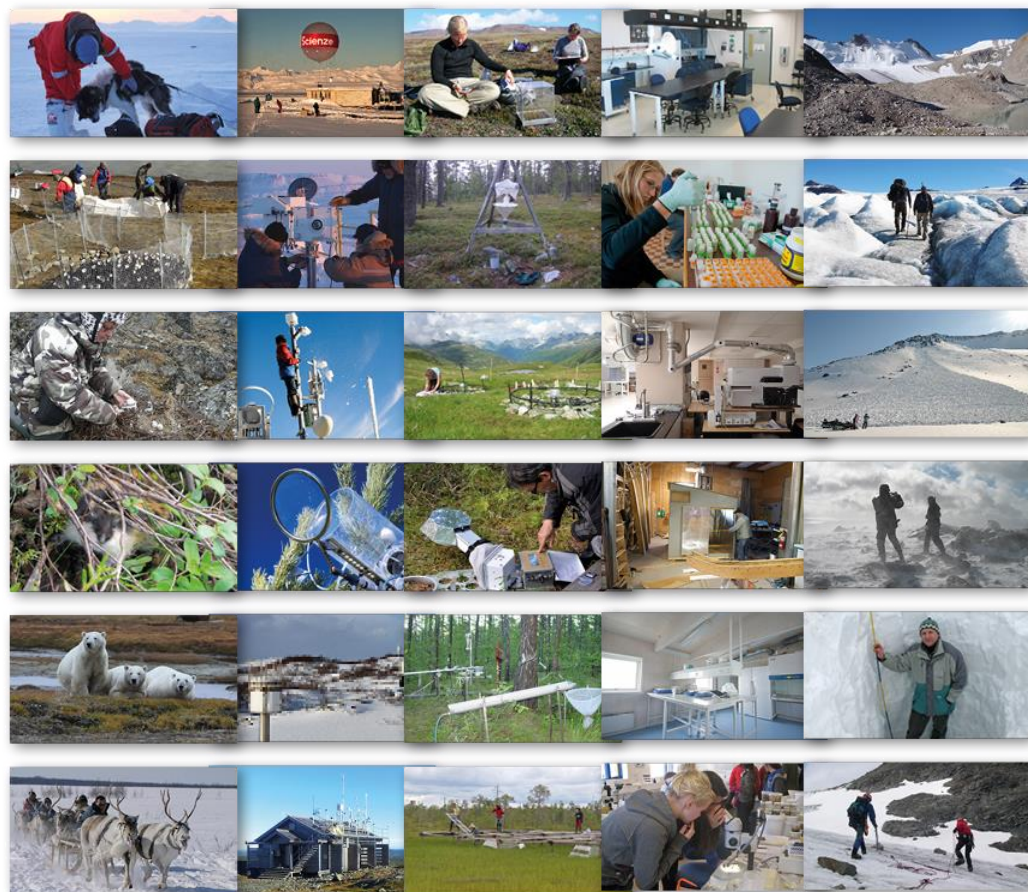
Distribution curves

- All grid cells in the Arctic
- Grid cells with stations

2095 - 2100 mean

2015 - 2020 mean





Funding terminates 2023

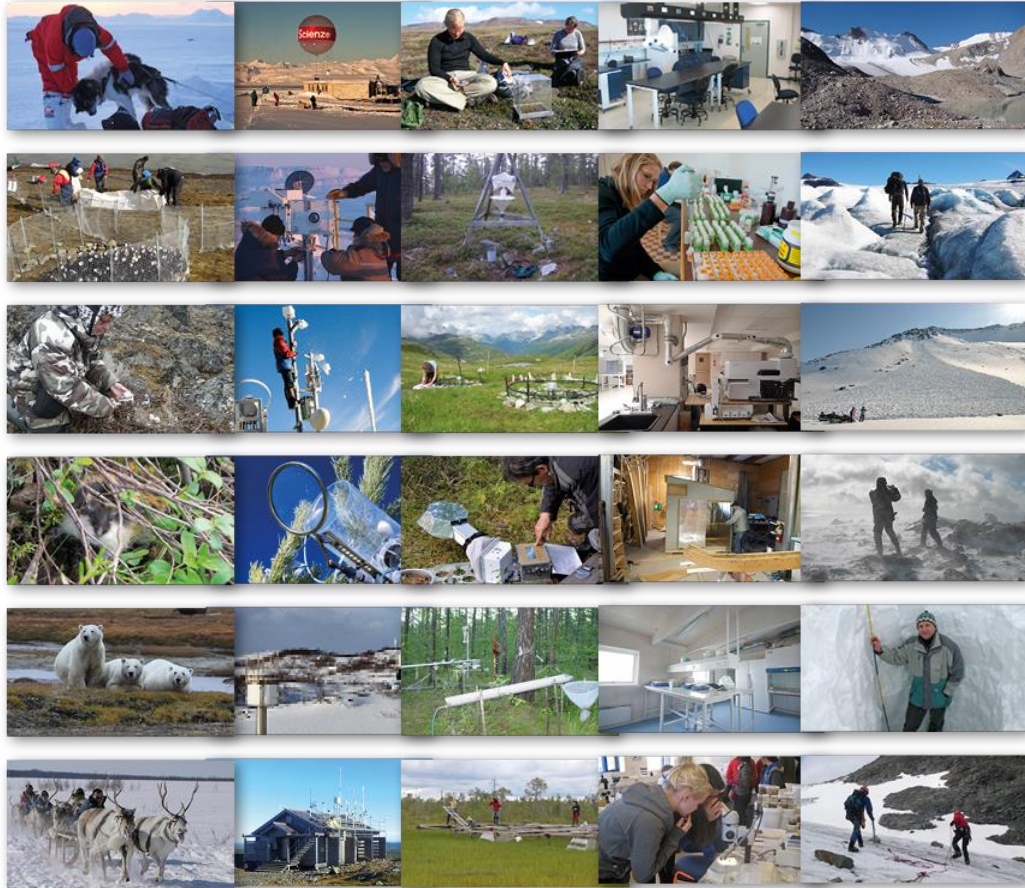
INTERACT

Non-Profit Association

- Formed 2021
- Station member organisation
- Legal entity

Can join applications





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