

Status and next steps

Welcome to INTERACT GIS

INTERACT GIS provides information about the more than 85 terrestrial research stations that are members of the [INTERACT](#) network. INTERACT stations are located in the Arctic and northern boreal and alpine areas.

INTERACT GIS provides four different types of web-based services:

1. Stations

A searchable map of research stations with different filtering functions in relation to their settings. Clicking on a research station lets you explore more information about the research station, including text descriptions and facts about the station operations, facilities, science activities and surroundings.

2. Research

An application module for scientists applying for access to the research stations. The INTERACT GIS application module is currently used by only a few INTERACT research stations. Application information for other stations can be found in the description of the research stations (see 1. Stations).

Scientists working at research stations have conducted the following research activities at the research stations:

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Let's INTERACT

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Useful links

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INTERACT GIS

48 stations registered in the system

<https://interact-gis.org>

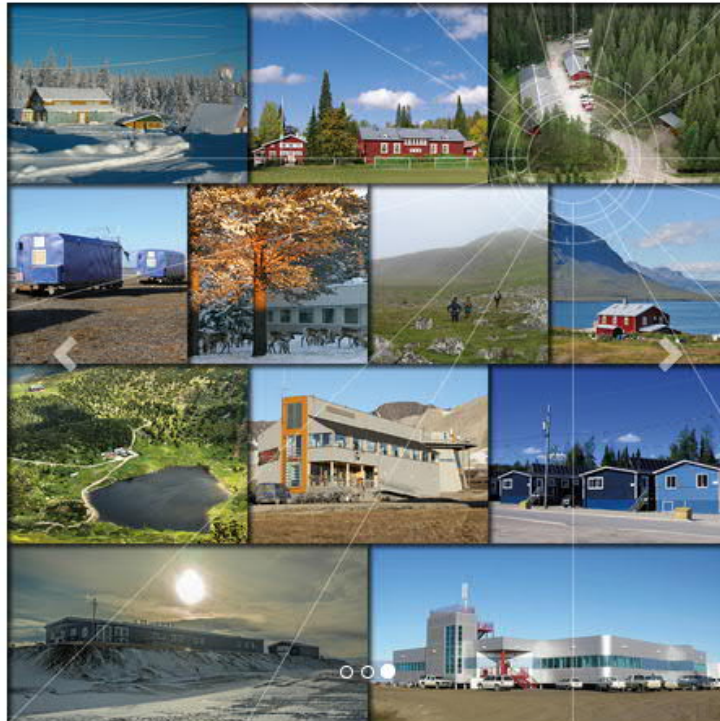
Recent developments and plans ahead

- Restructuring of the system with focus on
 - improved GIS platform (map)
 - station catalogue info integration and search function
 - simplicity and usability
- Scientific networks and thematic maps features
- Development of upload function for project metadata

Application module (limited focus for now)

- Looking into ways of simplifying system and make individual station adaptations easier

INTERACT/SITES GIS front end (Scientists)



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2. Research

A searchable research project database (under continuous development) with information about historical and current research projects at the stations.

3. Publications

Allows you to search for publications uploaded by stations or scientists working at the stations. Publications are often related to a research project conducted at the station.

4. Application

An application module for scientists applying for access to the research stations. The INTERACT GIS application module is currently used by only a few INTERACT research stations. Application information for other stations can be found in the description of the research stations (see 1. Stations).

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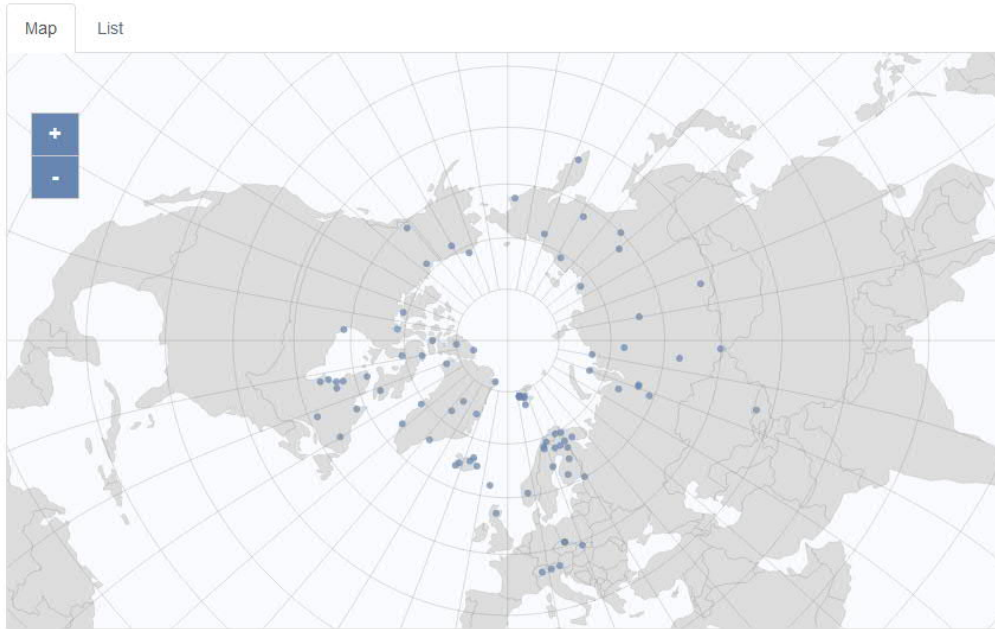
[Instructions](#)

[Technical support](#)

Station Characteristics Matching stations are highlighted on map (if possible: all stations visible, but matching stations highlighted)

Find suitable stations

- Climate and altitude ▶
- Landscape and environment ▼
- Landscape features ▼
- Permafrost zone ▼
- Snow and ice on land ▼
- Ice on water ▼
- Vegetation zone ▼
- Wildlife ▼
- Human use ▼
- Facilities and services ▶
- Monitored variables ▶
- Organisations and networks ▼
- Arctic Council Working Groups ▼
- Scientific networks ▼



Main category	Sub-category	Drop down menu choices
Climate	Climate zone	High Arctic, Low Arctic, Sub-Arctic/Boreal, Alpine
	Mean annual temperature	< -20, -20—1 0, -10-0, 0-10, 10-20, >20
	Mean temperature February	< -20, -20—1 0, -10-0, 0-10, 10-20, >20
	Mean temperature July	< -20, -20—1 0, -10-0, 0-10, 10-20, >20
	Annual precipitation	0-100, 100-300, 300-500, 500-1000, 1000-2000, >2000
	Dominant wind direction	N, S, E, W, NW, NE, SW, SE
	Altitude of station	0-100, 100-300, 300-500, 500-1000, 1000-2000, >2000
	Minimum altitude of study area	0-100, 100-300, 300-500, 500-1000, 1000-2000, >2000
	Maximum altitude of study area	0-100, 100-300, 300-500, 500-1000, 1000-2000, >2000
Landscape and environment	Landscape features	Mountains, nunataks, plateaus, moraines, valleys, homothermic springs, lake, river, estuarie, fjord, sea, mires, other?
	Permafrost zone	Continuous, discontinuous, sporadic, (pingos/ice lenses?), none
	Snow and ice on land	Ice caps, glaciers, permanent snow patches, none
	Vegetation	Tree line, polar desert/Semi-desert, Shrub tundra, Gramminoid tundra, Forest tundra, peatlands, wetlands, palsa mires, deciduous forest, evergreen forest, (alpine heath?), ...
	Wildlife	Terrestrial carnivores, Ungulates, Hares, Rodents, Bird colonies, Polar bear, Whales, Seals, Fish, ...
	Human use	Settlement, Fishing, Hunting, Forestry, Agriculture, Tourism, Animal Husbandry, Tourism, Leisure activities, others?
Facilities	Accommodation	At station, in nearby hotel, other
	Transport at station	Boat, car, ATV, snowmobile, bicycles, ski, snow shoes, kick sledges, other?
	Laboratory	Freezer < -80, freezer -40 - -10, Fridge, Microscopes, Basic laboratory equipment, Advanced laboratory equipment, Basic chemical reagents, Analytical instrumentation, other?
	Communication and data transfer	Mobile phone coverage, VHF, satellite phone, PLB, internet, Data relay stations in field

Research projects

Projects

Map

List

Select station

Period (start/end year)

Discipline

Key word

Contact person

TA project



Export project search results

Project search
Results to be
shown on map
and listed below
map?

(Similar to
current system)

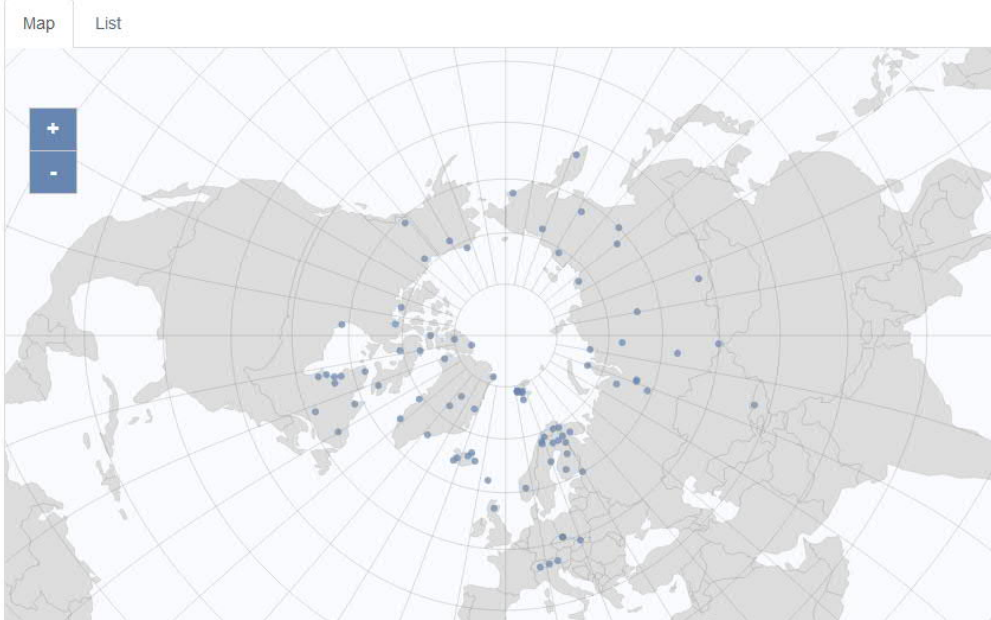
Useful links

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Access to stations and data

- Apply for access to stations
- Select station
- Country permit systems
- Select country
- Access Programmes
- Transnational Access
- Remote Access
- Data Portal (Virtual Access)



Find links to apply for access

Find country permit information

Find access programmes
Matching stations are highlighted

ABOUT

Dear user,

We are pleased that you've found your way to INTERACT GIS, let us briefly explain what it does and who made it work. INTERACT GIS may be called a geographic metadata information system – its basic functionality is to collect metadata regarding the activities performed at Arctic field-stations, and to disseminate the information for station administration, public outreach, and inclusion in other metadata repositories. Its current focus is set on research and monitoring regarding high-latitude environments, having been prototyped at the subarctic research and monitoring stations at Abisko and Tarfala in northernmost Sweden. It is a system with considerable depth, offering extensive tools for station administration including applications for permission to visit stations and management of publication records. It is a truly networked system, allowing the public to query research and monitoring activities across any selection of stations and disciplines. It is due to OPEN development, and is suggested to be equipped with support for disseminating monitoring data products, sharing material resources across stations, and pointing from metadata towards repositories of actual research data. The number of stations expected to join the system is large, beginning with an offer to the 85 stations associated with the INTERACT infrastructure project (www.eu-interact.org), and continuing with the nine Swedish field-stations that constitute the SITES consortium (www.fieldsites.se/en/). The scientific aim of INTERACT GIS is to offer information regarding station activities for station managers to consider as decision support when new activities are planned. This has the potential of reducing redundancy in the collective monitoring and research effort across the Arctic, and thus increasing the cost-benefit ratio of studying the Arctic environment. In addition, it may contribute to turning historically isolated stations into collective collaboration regarding research and monitoring across the North.

INTERACT GIS was invented by Dr. Tomas Thierfelder, a senior scientist at the Swedish University of Agricultural Sciences (SLU), who has acted as principal investigator and entrepreneur through the entire 6-year period of system specification, development and implementation. INTERACT GIS is legally owned by SLU, with Dr. Thierfelder owning the intellectual property. INTERACT GIS is developed and operated by ICT Services and System Development at Umeå University (UmU ITS), Sweden.

We are very grateful to our financial sponsors:

- [The INTERACT infrastructure project](#) (Seventh European Framework Programme and Horizon 2020).
- [Abisko Scientific Research Station](#) (various funding sources).
- [Tarfala Research Station](#) (various funding sources).

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About INTERACT
GIS
The development

Mukhrino Field Station

[Website link]

Russia



[Apply for Access](#) ▼



Station catalogue
information
- Adding all
relevant info

INTERACT/SITES GIS – Back end (station manager work space)

STATION PROFILE

Status

In operation/closed

Station name and access info

Station full name

Station short name

Station website link

Name of station manager

Station contact information
[E-mail/website link]

Access application info [link
to website/contact e-mail]

Station location and operation

Station location [country]

Station longitude

Station latitude

Station description

Station name and owner [text field]

Location [text field]

Biodiversity and natural ecosystems [text field]

History and facilities [text field]

General research and databases [text field]

Human dimension [text field]

Access [text field]

Station logo and photos

Station logo [one – show on page when
uploaded]

Photo of station [one – show on page when
uploaded]

Photos of facilities, field sites and surrounding
environment [multiple – show on page when
uploaded]

Online features

Export metadata to excel

Climate, landscape and environment

Climate
Climate zone ▾
Period of measurements for climate data below [year to year]
Mean annual temperature
Mean temperature February
Mean temperature July
Mean annual precipitation
Dominant wind direction
Max wind speed

Landscape and environment
Landscape features ▾
Permafrost zone ▾
Snow and ice on land ▾
Vegetation zone ▾
Wildlife ▾
Human use ▾

Export metadata to excel

Facilities and staff

Staff

- Number of staff peak season/summer
- Number of staff off season/winter
- Staff able to assist

Housing and accommodation

- Area under roof
- Max number of visitors
- Showers
- Laundry facilities
- Power supply - period
- Power supply – plug type
- Power sources at station

Logistics

- Logistics area

Field equipment

- Safety equipment available at station
- Camping equipment available at the station
- Field power supply available at the station
- Field instruments available at the station

Laboratory

- Laboratory area
- Laboratory equipment
- Camping equipment available at the station
- Field power supply available at the station
- Field instruments available at the station

Communication and IT

- Field to station
- Station to outside world
- Wireless transfer of data from field to station
- IT infrastructure

Export metadata to excel

Science

Monitored variables

- Climate ▾
- Geoscience ▾
- Glaciology ▾
- Biology ▾

Organisations and networks

- Arctic Council Working Groups ▾
- Scientific networks ▾

Projects - upload

- Info about data formats – template (info field) ▾
- Tools (info field) ▾
- Upload function

Export metadata to excel

ADMINISTRATOR GROUPS

 Admin Group

 ReadOnly Group

Search users

Search

Search users you want to have as administrators and give them permissions by adding them to an appropriate access group. The result list is ordered by newer accounts at the top and the older at the bottom

Admin Access

gives a user rights to edit applications, projects, courses and similar objects

Read Only Access

gives a user rights to only view the applications, reports and similar objects

Please Note!

Changing permissions for users takes effect only after next login!

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Questions or comments?

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2:50-3:00 PM	10 min break
3:00-3:35 PM	Arctic permit systems and barriers to arctic science: Arctic permit systems Elmer Topp-Jørgensen, APECS/Svenja Holste
	Input for future survey on barriers to arctic science (presentation of draft survey contents) EPB/Joseph Nolan/Renuka Badhe, APECS/Josefine Lenz/Svenja Holste
3:35-3:50 PM	Station presentation - Summit Station Jennifer Mercer/NSF
3:50-4:05 PM	15 min break