



# INTERACT Station catalogue 2019

INTERACT SMF September 11, 2019, Vindeln Sweden



### STATION NAME AND OWNER

The Netherlands' Arctic Station is owned Centre of the University of Groningen.

### LOCATION

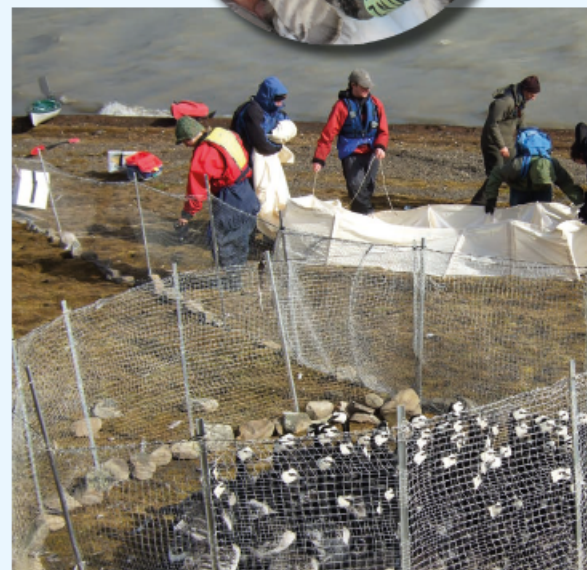
The Netherlands' Arctic Station is situated on the island of Spitsbergen and is part of a community in the former mining town of Longyearbyen. In this town, more than 10 nations have established a community using shared facilities for meals and recreation. The community is focussed on science and nature. Several stations have independent programmes and the Netherlands' Arctic Station is one of them.

### BIODIVERSITY AND NATURAL ENVIRONMENT

Kongsfjorden is a beautiful high arctic fjord with glaciers terminating in the fjord. The area is sparsely vegetated with dense moss cover and below bird cliffs. Locally there is human activity by trappers and from cross-country skiers. The whole area is well-protected and a special nature reserve.



Category	Sub-Category	Netherlands' Arctic Station
Website		www.arcticstation.nl
Country		Svalbard/The Netherlands
Opening year		1995
Operational period		Mid June-mid August
Permitting issues categories	Permits required for access to the station Permits required for studies Contact (permit issues)	Yes Yes m.j.j.e.loonen@rug.nl
Facility owner and manager	Name of the facility owner Owner status Institution responsible for managing the station Contact (access to station) Website (institution)	University of Groningen, Arctic Centre Private University of Groningen, Arctic Centre m.j.j.e.loonen@rug.nl www.rug.nl/arcticcentre
Other institutions	Name Country	- -
Location	Geographical coordinates Altitude of station Min. altitude within study area Max. altitude within study area Nearest town/settlement Distance to nearest town/settlement Map	78°55' N, 11°56' E 10 m a.s.l. 0 m a.s.l. 556 m a.s.l. Longyearbyen (2116 inhabitants) 115 km 1:100 000
Climate	Climate zone Permafrost Years measured Mean annual temperature Mean temperature in February Mean temperature in July Mean annual wind speed Max. wind speed Dominant wind direction Total annual precipitation Precipitation type Ice break up	High Arctic Continuous - -6 °C -14.6 °C 4.9 °C 4 m/s 21.6 m/s NW 400 mm Snow, rain Lakes: May/June; Sea: May
Station facilities	Area under roof Scientific laboratories Logistic Number of rooms (beds) Number of staff on station (peak/off season) Max. number of visitors at a time Showers Laundry facilities Power supply (type) Power supply	114 m² 16 m² 16 m² 6 rooms (8 beds) 1/0 7 - - 220 V 24 hours per day
Scientific equipment	Specific device Scientific services offered	Very basic, blood sampling -
Medical facilities	Medical facilities Medical suite No. of staff with basic medical training or doctor Distance to hospital (estimated time) Compulsory safety equipment Recommended safety equipment	Basic - - 115 km Weapon, VHF radio, survival kit -
Landing facilities	Airstrip (Length x Width) Airstrip surface Helipad Ship landing facilities	800 x 50 m Gravel Yes Port, landing wharf, pier, pontoon
Vehicles at station	Sea transportation Land transportation	Aluminium small boats Bicycle
Transport and freight	Transport to station Number of ship visits per year (period)  Number of flight visits per year (period)	Plane Freight once per summer month, tourist cruiseships daily (May to November) 2 per week all year (year-round)



Features within study area	<input checked="" type="radio"/> Yes <input type="radio"/> No
<ul style="list-style-type: none"> <li>Ice cap or glacier</li> <li>Permanent snowpatches</li> <li>Mountain</li> <li>Valley</li> <li>Lake</li> <li>River</li> <li>Shoreline</li> <li>Tree line</li> <li>Polar deserts/semi-deserts</li> <li>Shrub tundra</li> <li>Graminoid tundra</li> <li>Forest tundra</li> <li>Peatlands</li> <li>Wetlands</li> <li>Palsa mires</li> <li>Deciduous forest</li> <li>Evergreen forest</li> <li>Human settlements or resource use in the area</li> <li>Other (Bird cliffs and small islands)</li> </ul>	
Main science disciplines	
<ul style="list-style-type: none"> <li>Anthropology, Sociology, Archaeology</li> <li>Astrophysics</li> <li>Atmospheric chemistry and physics</li> <li>Climatology, Climate Change</li> <li>Community based monitoring, Citizen Science</li> <li>Ecosystem services</li> <li>Environmental sciences – Pollution</li> <li>Geocryology, Geomorphology</li> <li>Geodesy</li> <li>Geology, Sedimentology</li> <li>Geophysics</li> <li>Glaciology</li> <li>Human biology, Medicine</li> <li>Hydrology</li> <li>Isotopic chemistry</li> <li>Limnology</li> <li>Land-use change, Mapping, GIS</li> <li>Marine biology</li> <li>Microbiology</li> <li>Oceanography, Fishery</li> <li>Paleoecology</li> <li>Paleolimnology</li> <li>Soil Science</li> <li>Terrestrial biology – Biodiversity</li> <li>Terrestrial biology – Ecosystem function</li> </ul>	
Workshop facilities	
<ul style="list-style-type: none"> <li>Metal workshop</li> <li>Wood workshop</li> <li>Plexiglas workshop</li> <li>Staff available to assist with constructions</li> </ul>	
Communication	
<ul style="list-style-type: none"> <li>Telephone</li> <li>Satellite phone</li> <li>VHF</li> <li>E-mail</li> <li>Internet</li> <li>Computer</li> <li>Printer</li> <li>Scanner</li> <li>Fax</li> </ul>	





## Information presented for all stations included in this catalogue

Text descriptions including

- Station name and owner
- Location
- Biodiversity and natural environment
- History
- General research and databases
- Human dimension
- Access

## Fact box information including

- Website
- Country
- Opening year
- Operational period
- Contact (access to station)
- Geographical coordinates
- Altitude of station
- Nearest town/settlement (distance)
- Climate zone
- Mean annual temperature, February and July
- Precipitation type





# NETHERLANDS' ARCTIC STATION



Facilities removed

## STATION NAME AND OWNER

The Netherlands' Arctic Station is owned and run by the Arctic Centre of the University of Groningen.

## LOCATION

The Netherlands' Arctic Station is situated in Kongsfjorden on the island of Spitsbergen and is part of an international research community in the former mining town of Ny-Ålesund, Svalbard. In this town, more than 10 nations have their own station while using shared facilities for meals and recreation. Several stations have independent terrestrial research programmes and the Netherlands' Arctic Station is the smallest of all.

## BIODIVERSITY AND NATURAL ENVIRONMENT

Kongsfjorden is a fjord environment with several islands and a small bay. The raised beach terraces are vegetated with dense moss cover around small tundra lakes and below bird cliffs. Locally there are clear traces of former human activity by trappers and from coal mining. At present, the whole area is well-protected and a special permission is needed to enter the islands during the bird breeding season. In 1978,

reindeer was re-introduced and since 1982 barnacle geese have established a colony and are regularly feeding between the houses. Both herbivores have a clear impact on the vegetation.

## HISTORY

From 1916 to 1968, the village of Ny-Ålesund was a coal mining settlement. This village has now developed into a unique mix of stations, laboratories, and research infrastructure. There is a small international community of 25 to 30 people – all temporal residents. Tourists are discouraged to stay overnight.

## GENERAL RESEARCH AND DATABASES

Research focusses on the role of barnacle geese in the arctic ecosystem. Nutrient cycles, plant productivity, and vegetation patterns are studied to understand plant-herbivore interactions. Behaviour, timing, and breeding success of individually ringed geese are observed over their lifetime, and the effect of predators is studied as a dynamic interaction. Population trends of plants, herbivores, and predators are monitored in a warming environment. Long term experiments include grazing exclosures and greenhouses on paired vegetation plots. There are also

projects focussing on the history of human exploitation and the effect of tourism on cultural heritage.

## HUMAN DIMENSION

The local community in Ny-Ålesund is a mixture of nationalities from the various stations. The area is owned by a company called Kings Bay, taking care of the logistics for the entire village. There are no indigenous people and most inhabitants originate from the Norwegian mainland and live on Svalbard only because of their temporal job assignment. Tourism, local administration, science, and coal mining are the most important sources of income.

## ACCESS

Throughout the year, Kings Bay organises two flights per week with a small plane (14 passengers) between Longyearbyen and Ny-Ålesund.

## Netherlands' Research Station

Website	www.arcticstation.nl
Country	Svalbard/The Netherlands
Opening year	1995
Operational period	June-August
Contact (access to station)	m.j.j.e.loonen@rug.nl
Geographical coordinates	78°55' N, 11°56' E
Altitude of station	5 m a.s.l.
Nearest town/settlement	Longyearbyen (100 km)/ Ny-Ålesund (0 km)
Climate zone	High Arctic
Mean temperature: Annual (Feb., Jul.)	-6.3 °C (-14.6 °C, 4.9 °C)
2018/2019:	-2.8 °C (-11.2 °C, 7.4 °C)
Total annual precipitation (type)	385 mm (rain-snow)
2018/2019:	530 mm



Human dimension shorter





# Online version

# INTERACT GIS <https://interact-gis.stage.its.umu.se/>

The online edition of the INTERACT Station catalogue includes full text descriptions and all facts about the station, its facilities, monitoring efforts and natural environment (incl. features in the study area, main science disciplines)

- The online version of the catalogue allows station managers themselves to edit the information about their station.
- The information will be updated regularly and thus always function as an up-to-date inspirational tool for scientists looking for the most appropriate station/ stations for planning and designing proposed research or monitoring activities.