

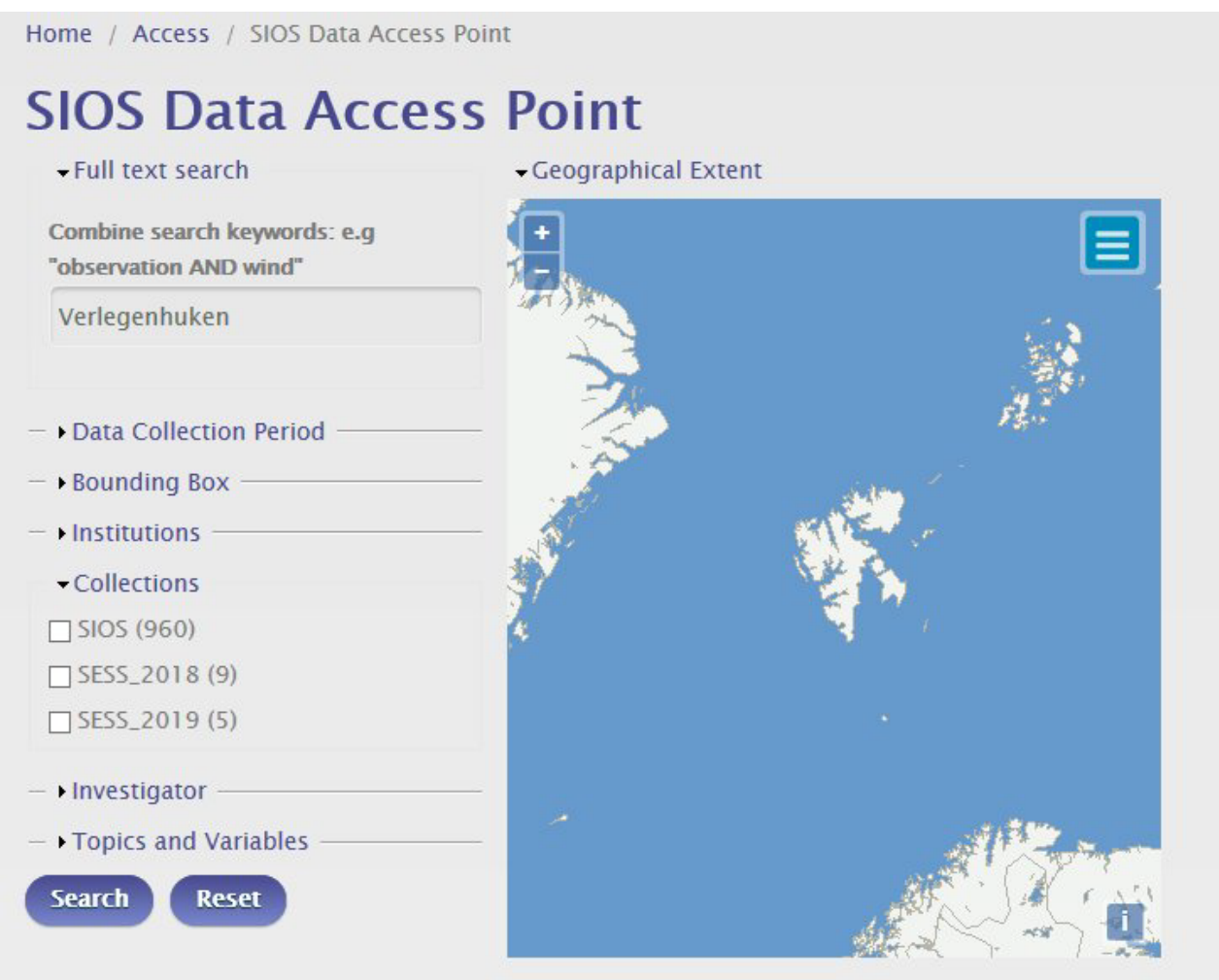
# SIOS Data Management System (SDMS): A tool for increased collaboration in Svalbard research

- SIOS** – an international partnership of research institutions studying the environment and climate in and around Svalbard to
- Develop an efficient observing system
  - Share technology, experience and data
  - Close knowledge gaps
  - Decrease the environmental footprint of science

- The SIOS Data Management System (SDMS)**
- Open and free data sharing
  - Harmonisation of SIOS core data encoding
  - Prioritised functionality
    - Data discovery ('finding relevant datasets across the distributed data repositories contributing to SDMS')
    - Retrieval of data ('downloading data')
    - Visualisation of data ('generating a graphical interpretation of a data set, e.g. a map, a time series')
    - Transformation ('reformatting, reprojecting, subsetting or combining different datasets into a new dataset')
  - A unified virtual data centre - Integrating existing physically distributed data centres, maintained by partners
    - linked to larger frameworks in the Arctic through collaboraton with relevant communities, e.g the joint SAON/IASC Arctic Data Committee
  - Linking the data centres through FAIR data principles - bridging between legacy systems, different standards and technologies
  - Nearly 1000 datasets are currently indexed

## SIOS Data Access Point

[https://sios-svalbard.org/metadata\\_search](https://sios-svalbard.org/metadata_search)



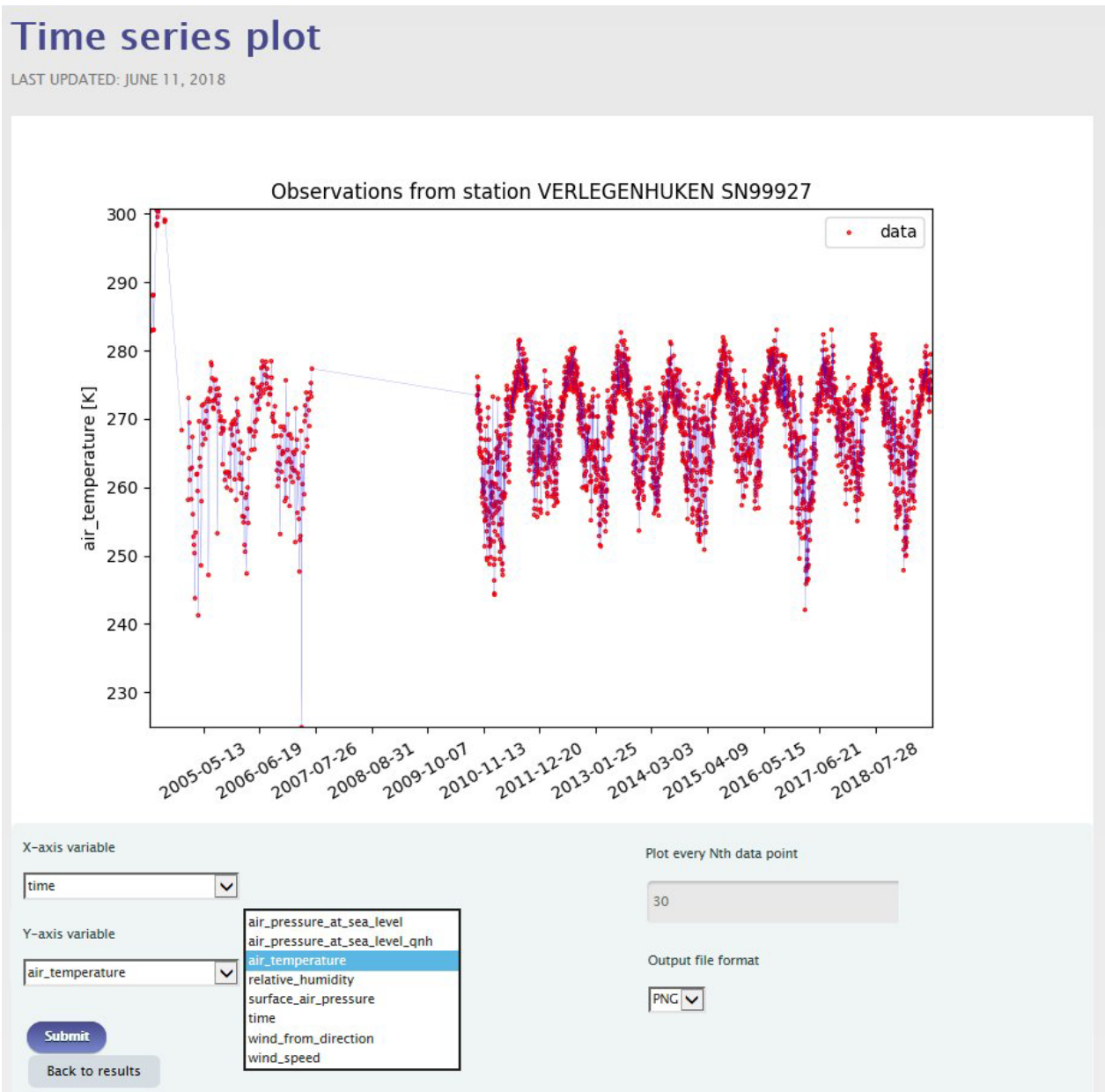
Search results

Dataset name	Institutions	Abstract	Collection period
<input type="checkbox"/> SYNOP data from station VERLEGENHUEN	Norwegian Meteorological Institute	Synoptic meteorological measurements from VERLEGENHUEN extracted from the WMO Global Telecommunication System (GTS). Data are not quality controlled after extraction from GTS.	2013-01-01T12:00:00Z to
<input type="checkbox"/> Observations from Verlegenuken	Norwegian Meteorological Institute	Quality controlled timeseries from Norwegian weather station 0-173-0-99927. Data are climate consistent following a number of automated and manual quality control routines.	2002-08-01T00:00:00Z to

Prev 1 Next  
Add to basket Back to search Share results

Example: Weather station at Verlegenuken

The search will give you 2 datasets: one real time dataset and one quality controlled dataset which is climate consistent.



ASCII data download

LAST UPDATED: JULY 1, 2018

In this form you can select the variables that you want transferred into a comma separated file. The original data are available in NetCDF/CF served through OPENDAP. This implies that using the URL to dataset you can read that directly into your Matlab, Python, or R script without downloading files.

Standard name	Units
<input type="checkbox"/> air_pressure_at_sea_level	Pa
<input type="checkbox"/> air_pressure_at_sea_level_qnh	hPa
<input checked="" type="checkbox"/> air_temperature	K
<input checked="" type="checkbox"/> relative_humidity	1
<input checked="" type="checkbox"/> surface_air_pressure	Pa
<input checked="" type="checkbox"/> time	seconds since 1970-01-01 00:00:00 UTC
<input type="checkbox"/> wind_from_direction	degree
<input type="checkbox"/> wind_speed	m s <sup>-1</sup>

Output format: ☒ CSV

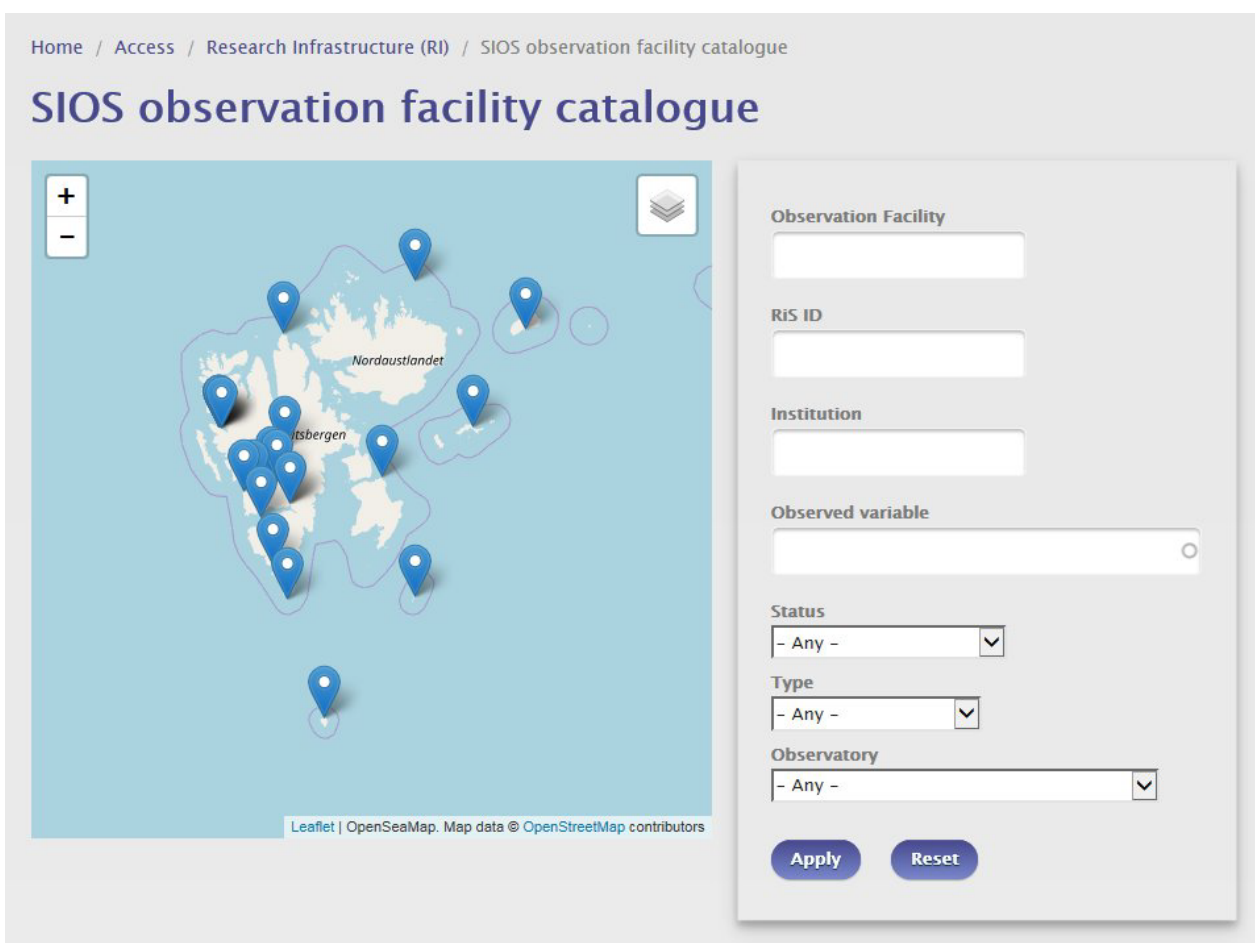
Submit

The system has the ability to visualise remote data - if they are documented and served according to the standards needed.

If needed, data can also be downloaded in spreadsheet format.

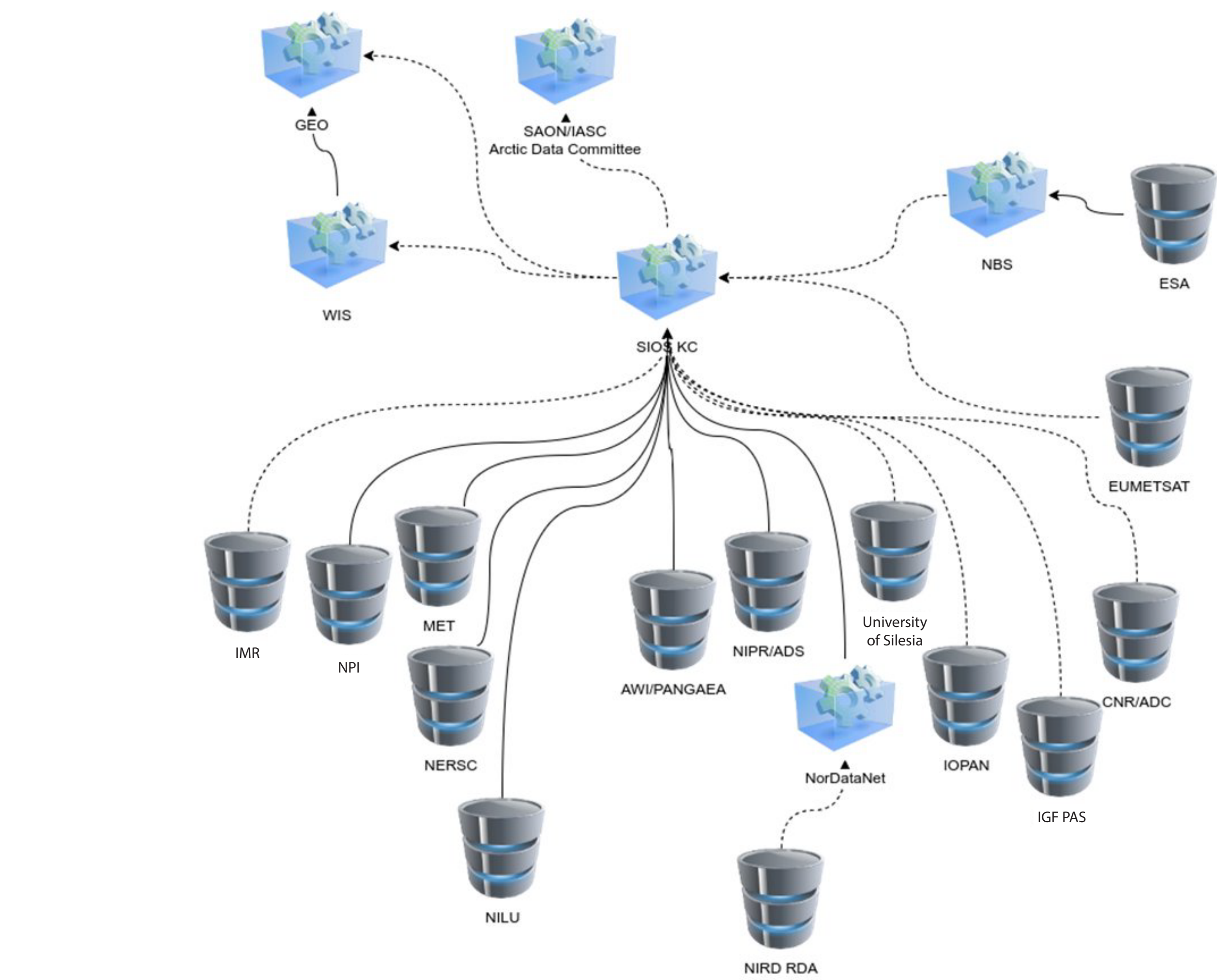
## SIOS Observation Facility Catalogue

<https://sios-svalbard.org/sios-ri-catalogue>



SIOS has established a catalogue of observation facilities - describing existing infrastructure that produces data.

This is a light weight implementation of elements addressed by the WMO Integrated Global Observing System approach for describing observation facilities.



Data centres that are linked at the discovery level enabling Findability and Accessibility. Some of the data centres also support interoperability at the data level, but very few so far.