

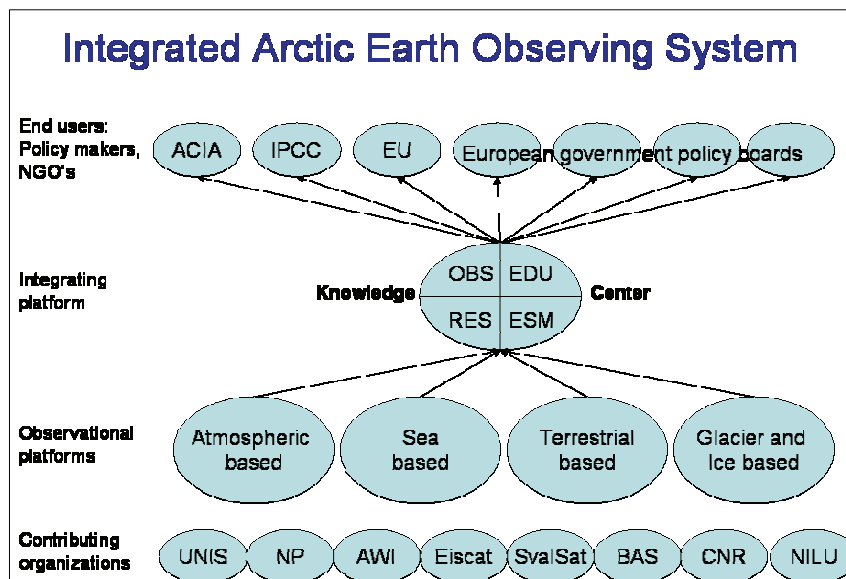
Appendix 6: Knowledge centre

Objectives:

All activities of the SIAEOS initiative will be coordinated and all research and monitoring data shared at the SIAEOS Knowledge Centre located in the Svalbard Science Centre, adjacent to the University Centre in Svalbard. The Knowledge Centre integrates the existing research, monitoring and educational activities in Svalbard into a new Integrated Arctic Observing System Facility comprising:

- **OBS (Observing system):** Data handling, storage and delivery, harmonization of data, measurements, protocols and instruments, coordination of monitoring programs, building on the Sustainable Arctic Observing System (**SAON/AON**, www.nap.edu/catalog/11607.html).
- **ESM (Earth System Modeling):** Data assimilation including the integration of satellite and field data, space and time integrating facility. This section will work closely with modeling organization elsewhere, as we don't intend to build our own modeling facilities.
- **EDU (Education and outreach):** New student courses under the framework of the new integrated arctic earth system observation and modeling facilities, building on the existing university studies in Svalbard (**UNIS**, www.unis.no).
- **RES (Research and assessments):** Coordination of European and international research, outreach and information, building on the services provided by **SSF** (www.ssf.npolar.no).

Please note; chart only shows a selection of contributing organizations and end users.



The Knowledge Centre will be the heart of the Integrated Arctic Earth Observing System, which is designed to be the major building block of a Sustained Arctic Observing System (SAON), building on the recommendations put forward by AON.

(NAP, 2006: **Towards and Integrated Arctic Observing Network (AON)**.

<http://www.nap.edu/catalog/11607.html>).

The contributing organizations will coordinate their research/monitoring efforts and share their results through their joint operation of the Centre. The Knowledge Centre will also be the place where data is integrated from the various platforms into one database and one coordinated data delivery unit. This will allow end users to get advice from a coordinated and validated data delivery unit covering all aspects of the High Arctic environment, rather than communicating with each part of the system separately.

All participating nations will have equal influence on priorities, equal access to results and equal influence as to how data should be processed and used. The SIAEOS facility is open for new members and invites all new arctic research institutions to join.

In the operational phase, we foresee a small organization/facility with a permanent staff of 8-10 persons (more people may be needed during the construction phase). The facility should be located in Svalbard Science Centre. A Board should be established with representatives from the major research institutions in Svalbard.

Research in Svalbard (RiS) database:

Svalbard Science Forum has established a database on its web portal, where all research projects in Svalbard will be registered. The database is a tool to provide information about past, ongoing and planned scientific research in Svalbard, and is intended to facilitate coordination and cooperation of research and field activities.

The online database replaced in summer 2007 the annual project catalogue 'Research in Svalbard RiS' (1998-2004). All information from this catalogue has been implemented in the new database, thus extending the searchable period until 1998.

At present, a project database is operative, including information like project title, summary and time frame, keywords, institutions and persons affiliated, field work details as time of field work and location, and resulting publications. The database can be searched for projects, publications, and persons and the results can then be narrowed down with help of several criteria, as institution, location, etc.

In addition to the project database, a metadatabase is in work. The goal of the metadatabase is to gather information of the existence and whereabouts of scientific datasets collected in Svalbard. This is in compliance with the DIF standard and will be in cooperation with DokIPY.

Further plans are to extend the functionality of the database in order to establish a one-stop-only platform for all information, application for permissions and reporting needed for doing research in Svalbard. The database will also be supplemented with a mapping system, including information on field activities and regulations.

DokIPY

DokIPY will link existing thematic metadatabases and databases in Norway on behalf of the national IPY community. By exchanging metadadata, all databases in the network will have information on all available data. A user can search any of the metadatabases for the data in interest and will be guided to the database containing the actual data. User interfaces may vary at the various metadatabases which might be specifically adapted or designed for a certain community, but the content will be the same everywhere. Existing metadatabases and databases utilising existing hardware for backup at the Institute of

Marine Research, Norwegian Polar Institute and Norwegian Meteorological Institute will be linked. DokIPY focus on developing interfaces between existing systems (and future systems) which will identify as a virtual system rather than developing a centralised system. As such it complies with the basic idea of IPY data management as defined through IPY data policy and additional documents.

Investments and operating costs:

The Knowledge Centre as described in the appendix will need 5 M€ in initial investments, 4M€/y for operational costs the first five years, thereafter 2 M€/y. The physical construction of the centre not included.