

## Towards a SIOS observational integration plan

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The existing and planned observational capacities of SIOS members on Svalbard are diverse and distributed with respect to locations, scientific disciplines, physical spheres, institutional structures, and other aspects. Accordingly, a great need of integration arises, which on one hand needs to take into account the specifics of a large range of scientific disciplines, of polar research, international cooperation beyond Europe, and more. On the other hand, integrating the observational capacities opens up a huge potential of novel research and knowledge –and especially if satellite data are included more in the work. Within SIOS the scientific observations should be coordinated with the goal to produce “added values” by making infrastructure available across disciplines, locations and institutions..

For the Kongsfjorden International Research Base in Ny-Ålesund four flagship programmes have been developed recently by NySMAC and SSF. Each programme identifies also here needs for observational integration.

Observational integration within SIOS can be fundamentally discriminated for the two areas of scientific work, namely Field expeditions (on land or on sea but outside of established stations and permanent installations), and Long term observations. For long term observations SIOS should utilize already existing structures and affiliate with them. This includes particularly established observational networks which we find in fields like meteorology, oceanography, geophysics and others, as well as in organisational structures like SAON/ISAC, INTERACT/SCANNET, AMAP and others.

For Ny-Ålesund the previously established Flagship Programmes could be further developed to become an integral part of SIOS.

Observational coordination could be organized according to

- Disciplines or compartments, like “atmosphere”, “ocean”, “cryosphere”, “terrestrial systems”
- Platforms, like “land based”, “sea borne”, “air borne”, “space borne”
- Location, like Ny-Ålesund, Longyearbyen, Barentsburg, Hornsund, Hopen/ Bjørnøya, others
- Scientific Topics

The Ny-Ålesund scientific community is invited to contribute substantially to the further development of the SIOS observational integration plan, which should become effective after the formal establishment of SIOS, planned autumn 2014.

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