

SSF Workshop Summary Report: Research Access to Eastern Svalbard, 16-17 Feb 2010, RCN, Oslo

Research and education activities in Svalbard are highly supported by the Norwegian government. There is also an ambition to make Svalbard one of the world best managed wilderness areas. This is clearly stated in the recent government white paper (St.meld. nr. 22 (2008–2009) Svalbard). The climate changes have contributed to the continuously growing interest for field research in Svalbard, particularly in the North-East part of the archipelago as the typical high arctic phenomena are most distinctive there.

In this context, the Governor of Svalbard and Svalbard Science Forum (SSF) have taken an initiative in organizing a workshop with focus on the future management framework and scientific research in Eastern areas of Svalbard. Areas to be included in the discussions were: Eastern Spitsbergen, Nordaustlandet, Barentsøya, Edgeøya, Kong Karls Land, Kvitøya (note: this includes areas both within the proposed 'reference area' and outside this area).

The goal of the workshop was to identify existing and future opportunities and challenges that both research and management of Eastern Svalbard face and suggest potential solutions. The workshop will contribute to the process of identifying appropriate mechanisms of regulating the access to the planned reference areas. The aims of the workshop were:

1. To identify research needs and ambitions for Eastern Svalbard (What are the research needs in the Eastern part of Svalbard, including the 'inconspicuous' research fields; What knowledge and data are needed to create true reference areas?)
2. To discuss ways of cooperation and joint use of existing and new facilities and logistical resources
3. To establish what are the necessary boundary conditions for the natural and pristine environment to fulfill the role of a reference area for various research purposes (How to limit the strain on the natural and cultural heritage environment?)
4. To identify challenges and future course of action both within area management and science (What should be the priorities for the management to consider when issuing permissions for fieldwork in Eastern areas? What criteria should be looked at in the decision making process (e.g. logistics, methods, technology, sample size in experiments, data availability etc.)

The outcome of the workshop provides an input to the development of the future management framework for the Eastern areas. In addition it provides a basis for the Svalbard Governor's office to handle scientific applications meant to increase the transparency and predictability of decision making by the authorities. There are many unclear issues due to the current changes in the area regulation and management plans for the (protected) Eastern areas in Svalbard. From the Governor's point of view scientists can be applicants for permissions, contributors to knowledge and policy making and residents of Svalbard at the same time which might make a difference in what kind of permissions they would obtain and what are they allowed to do and where. The Governor of Svalbard sees SSF responsible for coordination of research activities and the collaboration between SSF and SMS has tightened a lot which indicates a positive development;

Future research in East Svalbard

East Svalbard is indispensable as reference area. Its importance for monitoring climate change in the Arctic through reference-based research cannot be underestimated e.g. the changes in weather patterns are first visible in the east and should be captured. In many research fields the knowledge about East Svalbard is extremely limited and therefore data is needed first before it is possible to establish a baseline for future reference. Data collection should be synchronized with monitoring to capture rate of change of various elements of the environment. It became obvious during the talks that the knowledge about natural environment in Eastern Svalbard is so limited that it is too early for discussing specific parameters for the baseline. First a lot more data and samples have to be collected. Therefore the focus of the discussion shifted to criteria that are important for project selection and permissions.

The scientific groups who already work in Eastern Svalbard have come up with a set of criteria which could be taken into account while deciding which projects/groups could carry out research in the nature reserves and reference areas:

1. Reference-based research:
 - a. long-term monitoring programmes (e.g. Glaciodyn, seismic activity recording stations)
2. Non-reference-based research:
 - a. peer-reviewed research where the quality of research has already been recognized through publishing in high quality science journals and peer-review process;
 - b. research that aims at gathering data necessary to establish a baseline for reference-based research (e.g. mapping of ecosystems, temperature of permafrost);
 - c. research that cannot be done in other areas due to specific goals of project and/or due to specific conditions in the east Svalbard (e.g. polynyas, geological studies of CO₂ storage rock layer which is on the surface in the east; palaeontology – fossils of different species than in the west; cold/warm currents meeting spot, prevailing Arctic waters in the fiords, migration/dispersal of new species)
 - d. research that aims at validating and calibrating other data sets (e.g. in situ calibration of satellite data and images);
 - e. IPY legacy projects
 - f. research that leaves small size footprint on environment (e.g. using advanced, non-intrusive technology, several groups working in field together in coordinated and synchronized manner (agreed temporary and spatial resolution of data and routines) with complementary value and no duplication, with jointly planned and shared logistics – collaboration proved and visible through a joint project application to the Governor of Svalbard);
 - g. projects that search for threats for the natural environment and risk analyses of disturbances at various levels – these projects should provide conclusions to the management before any final restrictions on access to the East Svalbard are made;

A lot of work that involves constant monitoring and therefore establishing some instruments in the field could and should be done in cooperation with SIOS. There is a clear need for both permanent (e.g. automatic weather and seismic stations) and temporary infrastructure (light, mobile cabins) as well as for high-tech solutions (space technology with long lasting power supplies and data logging/transmitting potential) in combination. Automatic measurements and remote sensing techniques should be used wherever possible.

A full description of all planned activities should be delivered to SSF or SMS well in advance of planned fieldwork to account for coordinating with other groups/projects that could use the same logistics and to ensure complementarity of research and avoid duplications.

Concluding recommendations

1. *All research in east Svalbard should be international, interdisciplinary, well-coordinated, synchronized and with joint use of logistics.* SSF and RiS should be strengthened and further developed to collect, store and disseminate information (mapping of all research activities) which should be used as a tool for planning and organizing joint fieldwork/research expeditions to east Svalbard by several research groups. SMS will deliver full information about accepted applications and given permits to SSF which will include this information in RiS.
2. *Further development of RiS into One-Stop Platform* - SSF in cooperation with NPI, The Governor of Svalbard, Kings Bay AS and AWI develops a "one-stop platform" for project registration, booking and permit application. It is based on current databases and information retrieving systems of SSF, the Governor, Kings Bay AS and the individual stations in Ny-Ålesund and will simplify the project registration and permits application process for scientists coming to conduct fieldwork in Svalbard. The scientist will have to deal with one user interface only instead of having to provide (partly overlapping) information to all partners separately. The system will be extendable to other research stations (e.g. Hornsund, Longyearbyen) and authorities (e.g. Mattilsynet) in the future.
3. *Basic, conservation-related and strategic research will be possible in East Svalbard* although it is advisable that the priority is given to the projects that fulfill the criteria listed above for reference-based and basic research. Research that can be done elsewhere should be done elsewhere.
4. *Reduction of footprint size is of essential.* Therefore it is encouraged to jointly use available high-technology solutions, remote sensing techniques and automatic instrumentation for measurements, low-impact mobile, removable and temporary cabins/containers for accommodation and joint transportation. Implementation of sound environment-friendly solutions and practices is required.
5. *Results of all research in East Svalbard should be made available through existing (or being developed) databases* – the data should enter one common data portal (e.g. SIOS) and follow common policy for data delivery and accessibility;
6. *Safety training is highly recommended and encouraged* for all fieldwork groups in the eastern areas of Svalbard

The workshop was attended by 35 participants representing 27 institutions with interest in research in eastern Svalbard and 3 observers.

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