Summary Report draft OR
from the first workshop on Sustaining Arctic Observing Networks (SAON)

Time and place: Stockholm 12-14 November 2007
Local host: Swedish IPY Committee
Participants: 115 from 18 countries

Context

Behind the SAON initiative is 11 international organisations and is intended as a cooperation between the Arctic Council, the science community and local/indigenous observations.
The SAON Initiating Group (SAON-IG) has suggested a series of three workshops to develop a set of recommendations on how to achieve long-term Arctic-wide observing activities that provide free, open and timely access to high quality data that will realise pan-Arctic and global value-added services and provide societal benefits.
The SAON-IG promotes coordination, collaboration and communication among all parties to develop the recommendations and achieve a lasting legacy of the International Polar Year.

Further information about the SAON process, including who are behind it etc. is found in the SAON IG document available on the web site:

http://www.arcticobserving.org

This web site will be kept through all workshops and is the place where you will find presentations made at a workshop and detailed reports from break-out sessions, as well as information about the next workshop.

The Stockholm workshop

consisted of three parts:

1: Presentations on user needs as seen from a science, or a governmental or a local perspective.
These presentations are best studied by visiting the web site and click on 'Material presented'

2: Examples of observing networks and sites, and keynote talks
These presentations are also well documented on the web site, and you are encouraged to visit the web site for details.

3: Break-out sessions
The break-out sessions were organized in the following areas:

- Atmosphere
- Ocean/sea-ice
- Hydrology/cryosphere
- Terrestrial ecosystems
- Human dimensions

The main charge to the break-out sessions were to discuss the following questions:

- *What Arctic observing sites, systems and networks currently exist?*
- *What spatial, temporal and disciplinary gaps exist?*
- *Are current observing activities sufficient to meet users' needs?*

As mentioned in the SAON-IG document there are 5 such key questions. However, participants were encouraged to start with the first two mentioned above, and also do discuss the relevance of the user needs presented earlier in the workshop.

Most groups run short of time, so they were given an opportunity to improve their initial drafts before publishing them on the web site. For the full texts you are referred to the web site.

Summaries from the break-out sessions

Reports from the break-out groups are available on the web site and studying the full texts is recommended.

Some highlights as seen from an outsider:

1: Atmosphere

The 10 participants from the 1st SAON workshop's Atmosphere Breakout Group discussed the existing atmospheric observational capacity in the Arctic and its shortcomings. The various stakeholders, operational weather forecasters, the research community, and the local people, require more atmospheric observations both regionally and temporally. The types of these observations vary from conventional weather observations and radiosondes to state-of-the-art remote sensing instruments.

Before the 2nd workshop in Canada, the group will assess the existing observatory activities, identify observational gaps, and discuss the cooperation, method harmonization, data access and quality control issues.

Potential 'building block' candidate:
- IASOA: International Arctic Systems for Observing the Atmosphere, see web site at:

http://www.iasoa.org

2: Ocean/Sea-Ice

This break-out group analysed ongoing processes that identifies existing Arctic observing sites, systems and networks; as well as spatial, temporal and disciplinary gaps. Please see the full report for details. Further, they discussed user needs and how such needs could be integrated.

This report also includes some recommendations important for further development, and the following quotes may stimulate you to read the full report:

"Sustained:Linkages& partnerships needs to be developed that integrate successful operational programs (e.g. IABP), emerging and past industry programs, environmental and resource management programs; charge for 2nd SAON Workshop to involve agencies that oversee industrial activities: continued satellite coverage is key and requires high degree of international coordination, collaboration and data exchange at level of space agencies and beyond (2nd SAON Workshop needs to involve space agency representatives); satellites key in specific design of adaptive systems".

"In addition to bottom-up integration at the science level …..international top-down integration at the level of operational and funding agencies, and other relevant bodies is needed. This is an important role for SAON and participation of representatives from these different groups, including from countries such as Russia not well represented at the first workshop is crucial. A relatively simple and robust SAON based on presently available technology should be implemented immediately as part of stepwise ramp-up to a multi-component, interdisciplinary Arctic observing system.
An international body will required to coordinate the various national programs (eliminate overlap, ensure that data holes are filled) and ensure intercompatibility, open access and widespread distribution of data"

Potential building block candidate: iAOOS

3: Hydrology/Cryosphere

The key questions for the workshop have already been addressed and quite comprehensively been answered in the following recently published report:

IGOS, 2007, The Integrated Global Observing Strategy Cryosphere Theme Report – For the Monitoring of our Environment from Space and from Earth.
Geneva: World Meteorological Organization. WMO/TD-No. 1405. 100 pp.
(Available online: http://igos-cryosphere.org).

The full session report gives an outline of this report, and some other reports related to the SAON initiative.
Further, user needs were analysed suggesting cost-benefit analyses to be undertaken which is likely to very positive for hydrological/cryospheric observations.

Before the 2nd SAON Workshop, they agreed to:

- Finalize the assessment of currently existing Arctic observation capacity (CliC Project Office),
- A few experts to review the IGOS report and adding missing information to achieve a pan-Arctic perspective
- As the IGOS report does not include hydrology as such, hence this topic needs a separate chapter.

Candidates for building blocks:

IGOS (revised?) and Arctic-HYDRA (?)

4: Terrestrial and Freshwater Ecosystems

This group analysed user needs quite extensively and how to meet these needs; types of data and data products.
They compiled a good overview of networks, policy groups and co-ordination bodies.
You are referred to the full report for details.

Their conclusions were:

- No list of monitoring variables is definitive because needs change. However, certain core variables and baseline information need to be obtained and sustained
- Gaps in information can be determined by using environmental envelopes and geography. Interface between tundra, dry lands and forest are a focus from the former, Canada and parts of Siberia a focus of the latter. Current IPY projects fill many gaps but their legacy is uncertain
- Current flagship observatories and key sites need to be sustained with ensured funding for their networks and collaboration with other monitoring networks and Arctic residents
- The concept of flagship observatories could be proposed as a joint international responsibility and cooperation, also in financing. More firm agreements to assure long term funds for the coordination of flagship observatories and key sites are needed, for example through the Arctic Council

Candidates for building blocks: SCANNET and CEON

5: Human Dimension

Their discussion was conducted along the priority indicators identified by the Arctic Human Development Report, and refined in the follow-up: Arctic Social Indicators (IPY and Arctic Council). This project (expected to be completed within a year) will identify priority areas for observing human and social conditions in the Arctic.

Their breakout session started out with three guiding questions:

- Opportunities for better coordination in order to make use of synergies and to avoid overlaps,
- Open and timely access to data, and
- How do we make the observation system sustainable?

In answering these questions, they identified 3 priority areas:

A: Access to statistical agency data on a pan-Arctic scale
B: Implementation of local observation network
C: Synthesis and access of special study data.

For each priority area, they discussed: Rationale, Challenges, Priorities and Actions.

You are referred to the full report for details. However, the suggested actions for each area were:
A: - Speak to agencies in each country to involve in next workshop
- Next workshop: Russian expertise on data

B: - Involve experts in local observation systems and network development in Edmonton workshop.

C: - Make meta-data available from IPY projects
- IASSA assisted by IASC to set up a list server

Their recommendations for the SAON process:

- Continuity of participation is important
- Further develop priorities as task groups in Edmonton
- Local Observation Networks
- Statistical agency data
- Data sharing

The intention with this summary was to serve as an appetizer to reading the full reports, so please go to:

http://www.arcticobserving.org

and click on the Stockholm workshop.

This web site will be maintained for the coming workshops, so make it one of your favourites

Building block candidate: Arctic Social Indicators