## Sustaining Arctic Observing Networks - SAON

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29 October, 2009 PICES Jeju, Korea

#### **Salekhard Declaration**

In November 2006, the Arctic Council urged all member nations to maintain and extend long-term monitoring of change in the Arctic, with a view to building a lasting legacy of the International Polar Year.

Further, the AC requested that the Arctic Monitoring and Assessment Program work with other AC working groups, the International Arctic Science Committee (IASC) and other partners in this effort, to meet identified societal needs.

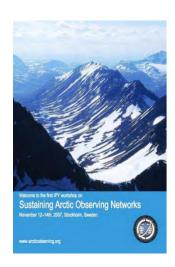
The goal of developing an Arctic Observing Network as a legacy of IPY was also endorsed by the WMO XV Congress in May 2007.

#### **SAON Vision**

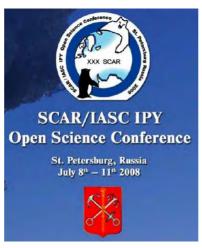
The SAON vision is that users should have access to free, open and high quality data that will realize pan-Arctic and global value-added services and provide societal benefits.

To attain the vision, SAON's goal is to enhance Arctic-wide observing activities through <u>coordination</u> and <u>integration</u> and to promote <u>sharing</u> and <u>synthesis</u> of data and information.

### **SAON-IG Workshops and Meetings**











Stockholm (November 2007)

Edmonton (April 2008)

St. Petersburg (July 2008)

Incheon (September 2008)

Helsinki (October 2008)

Final SAON-IG report was distributed in January 2009

## **Key Points from SAON-IG Workshops**

- Both bottom-up science integration and top-down agency-level integration are needed;
- SAON is an opportunity to improve linkages between users and providers;
- A coordinated and sustained set of observing networks would be very worthwhile;

- Coordination on circum-polar scale would improve ability to detect and attribute environmental trends;
- Coordination requires a "coordinating entity" and tools that promote and facilitate integration;
- Acknowledge and respect knowledge of Arctic residents;
- Non-polar states can contribute to SAON goals;
- Take advantage of existing networks building blocks.

### **Existing Observing Networks are the SAON Building Blocks**

#### Ocean, Sea Ice

- IABP
- Arctic ROOS
- iAOOS

#### **Coasts**

ACCO-Net

#### **Rivers**

 Arctic-HYDRA

#### **Terrestrial**

- SCANNET
- CEON

#### Cryosphere

- IGOS
- TSP, GTN-P, CALM
- GLACIODYN

#### **Atmosphere**

- IASOA
- WMO Networks

#### **Biodiversity / Biology**

- CBMP
- Polar Bear Group
- CARMA

#### **Human Dimensions**

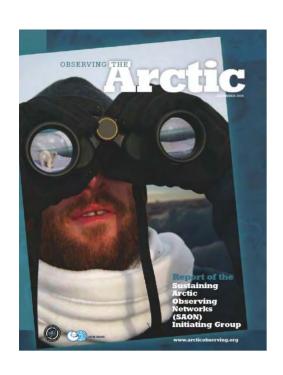
- Arctic Social Indicators
- Bering Sea Sub-Network
- ELOKA
- Arctic Human Health Initiative

(..and many others)

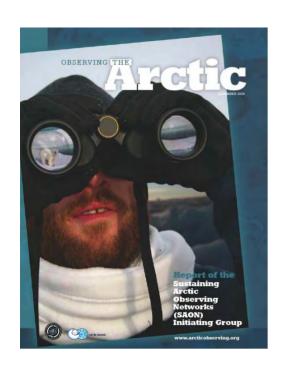


1: The Arctic Council (including permanent participants and observers) should lead the facilitation of international collaboration among government agencies, researchers, and northern residents, especially indigenous people at community level, to ensure a sustainable pan-Arctic observing system.

To this end, the Arctic Council and partners are encouraged to establish an Arctic Observing Forum (AOF), with adequate resources and defined roles for Arctic Indigenous Peoples, to facilitate arctic observing and related data and information management services. The AOF shall address issues that transcend individual arctic observing systems and national capabilities.



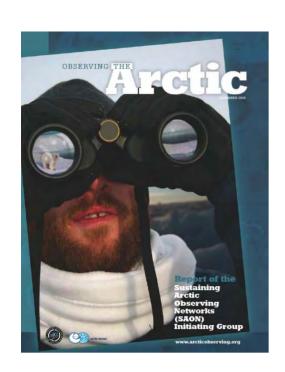
- 2: The governments of the Arctic Council member states should commit to:
- sustaining their current level of observing activities and data and information services, and to making every reasonable effort to increase the scope of those activities in the future;
- creating a data dissemination protocol to make data and information freely, openly and easily accessible in a timely fashion at minimal costs to users, taking into account relevant national legislation, and seek to ensure that relevant national organizations adhere to similar policies.



**3:** The Arctic states are urged to increase intergovernmental cooperation in coordinating and integrating Arctic observing activities, and associated data and information management.

Each of the Arctic states is encouraged to create a national inter-agency/department group to coordinate and integrate their Arctic observing activities, and resulting data and information services.

These groups shall form the basis for increased inter-governmental communication and cooperation on Arctic observing.



4: Recognizing that the Arctic issues are of global common concern and that they are open for scientific study by all states, the Arctic Council member states are urged to welcome non-Arctic states and international organizations as partners to the inter-governmental cooperation that will be necessary to sustain and improve Arctic observing capacity, and data and information services.

Non-Arctic states are therefore also encouraged to adopt, support and implement actions that are recommended to the Arctic states in 1-3 above.

## The Tromsø Declaration

In April 2009, Arctic Council Ministers agreed to:

- Recognize the valuable contribution of the Sustaining Arctic Observing Networks (SAON) process as an IPY legacy to enhance coordination of multidisciplinary Arctic data acquisition, management, access and dissemination, encourage the continuation of this work with emphasis on improving sustained long term observation, and welcome the participation of indigenous organizations in future work; AND
- Decide to take the lead in cooperation with IASC and other relevant partners in the continuation of the SAON process, including to consider ways to develop an institutional framework to support circum-Arctic observing, and the preparation and implementation of a workplan for the next two years to initiate work on priority issues including sustained funding and data management.

## **SAON Steering Group**

- As defined by the Arctic Council Senior Arctic Officials, the new SAON Steering Group (SAON-SG) consists of representatives from:
  - each of the 8 Arctic Council member states
  - AC Permanent Participants
  - AC Working Groups
  - IASC
  - WMO
- AMAP and IASC providing a co-chair and secretariat support
- The SAON-SG is focused on "doing" not on "planning"

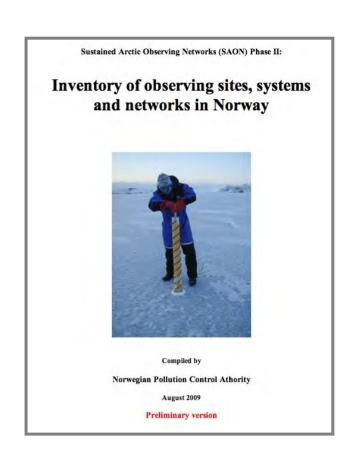
## SAON-SG objectives (2009-2011)

- The SAON-SG retains the Vision defined by the SAON-IG;
- SAON-SG will identify and implement steps to improve coordination and integration, and to promote sharing and synthesis of data and information;
- Priority activities are:
  - Identify needs, gaps, and opportunities for improving data access and data sharing;
  - Facilitate coordination and integration among activities supported by national agencies;
  - Improve the linkage between community-based monitoring and science-based monitoring.

## 1. Surveys of national observing networks

Country representatives are providing inventory lists of established networks and data archives using a standard format.

- Focus on long-term networks initially;
- Information to be made available on the SAON web site;
- New and updated information will be added to this initial list on an ongoing basis.



## 2. Meeting of National Funding Agencies

One of the most important steps toward realization of sustained Arctic observations is to obtain the views and support of the many funding and implementing organizations that deal with observations on the Arctic region.

The SAON-SG will sponsor a workshop focused on defining benefits from and means to accomplish improved coordination and collaboration in funding and performing Arctic observations.

This meeting is tentatively scheduled to be held during on 19 March during the **State of the Arctic Conference** in Miami.

## Agency Workshop - Objectives:

Share information on types of sustained Arctic observing activities supported and/or conducted by each agency;

Share information on process used to allocate resources to specific Arctic observing activities and the annual timing of such process;

Collect views on benefits of international collaboration for supporting and conducting sustained Arctic observations and sharing of data, and the types of collaboration that would prove useful;

Seek agreement on actions that could be taken to achieve the benefits of international collaboration.

### 3. Community Based Monitoring

A subgroup of SAON-SG members, supported by CAFF, are currently compiling a list of organizations, programs, and networks implementing or making use of Traditional and Local Knowledge.







#### 4. Data Access and Sharing

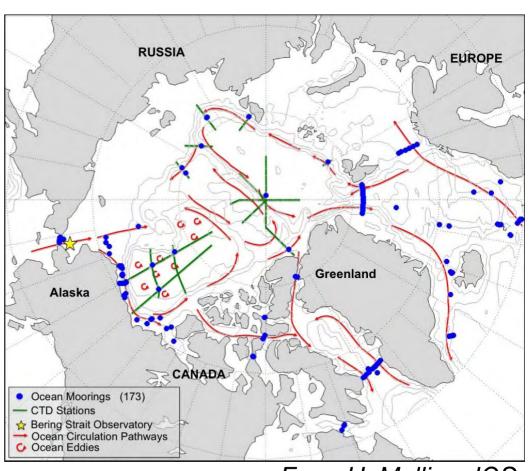
- What is the current state of technology and support for discovering, accessing, and sharing Arctic data?
- What process should be used to design and implement the optimal (minimal?) system for single entry, Arctic-wide data discovery, access, and sharing?
- SAON and IPY Data Management Committee have agreed on joint workshop in spring 2010
  - Review current DM practices by existing Arctic observing networks and identify improvements
  - Identify useful approach for developing "union catalog" of data sets

## A SAON Data Management Test Case?

## Ocean Moorings Deployed During IPY

During the IPY, at least 173 oceanographic moorings were deployed by organizations from at least 10 countries.

The data from these moorings will provide the most complete synoptic view of the physics of the Arctic Ocean ever obtained. To obtain this view, the scientists involved in these moorings will have to pool their data and develop an integrated data product, perhaps in conjunction with modelers. A unified data base will be needed to perform this task. Creating this unified data base is a compelling and feasible task for the post-IPY period and would represent a significant accomplishment in the area of data management.



From H. Melling, IOS

#### To Summarize:

## Research and observational activities in the Arctic region must lead to <u>predictive skill</u> for:

- Integrated real-time ice-ocean-atmosphere-hydrosphere forecasts for present and future residents and users;
- Ecosystem status and change as the best indicator of overall Arctic health and as the basis for material and cultural wealth;
- Economic and social factors and trends, local and distant, that will require and constrain local, regional and global responses;
- Individual and community health and well-being;
- Impact of a rapidly changing Arctic and global climate on all of the above.

# New SAON web site hosted by the Arctic Portal www.arcticobserving.org



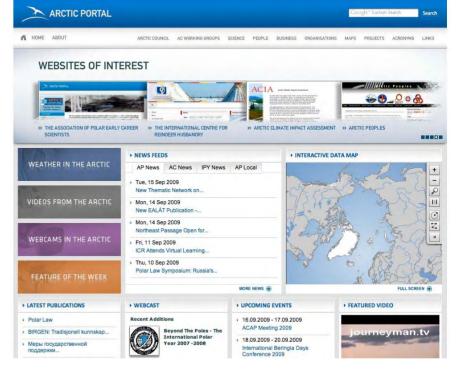
The SAON report 'Observing the Arctic' was distributed and

presented at the Arctic Council Ministerial Meeting in Tromsø April 2009. Conclusions of the report have developed during a series of

workshops involving 350 Arctic researchers, representatives of

inter-governmental, national and subnational government agencies, representatives of indigenous peoples organizations, and residents of the Arcitic. This first phase of the SAON-process was initiated as a response to the request from Arctic Council ministers at their meeting in Salekhard, Russia in November 2006. The report was

drafted by the SAON Initiating Group and is directed to organizations, agencies, governments, networks and programs involved in all



Download the SAON Report 'Observing the Arctic'

Hard copies of Observing the Arctic can be ordered from Anders Clarhäll

aspects of Arctic observing

Vetenskapsrådet

This sie is maintained by Ander

## Thank You!





www.arcticobserving.org