



SAON CON Inventory Work Plan

Overview of SAON CON inventory efforts

1. Background

The document 'Implementation of the SAON Strategy'¹ outlines the tasks for CON: "The first task of the Committee will be to develop and implement a plan for the establishment of an inventory and related gap analysis of circum-Arctic observational and monitoring assets"

EU-PolarNet is a Coordination and Support Action under the EU Horizon 2020 programme. Several objectives have been taken on by AMAP including ones that will be led by SAON given the similarity of objectives. One of the deliverables is: "inventory of existing monitoring and modelling programmes" (D2.3). For more details, see Appendix 1.

This document discusses and outlines a plan for SAON CON inventory work.

2. Proposed SAON CON Role and Approach

Inventories of Arctic observational and monitoring programs have long been the focus of SAON and provide the underpinning for various future initiatives (e.g. indicator work). It is proposed that SAON CON take a lead role on the EU-PolarNet deliverable while taking an approach that simultaneously supports the SAON CON needs and objectives as well. We propose taking a multi-pronged approach to achieving both the EU-PolarNet and SAON CON inventory deliverables.

It is proposed that a three-tier approach is taken:

2.1 State of National Inventories and reporting of information about Arctic programs, networks, projects and platforms

Recognizing the diversity or variability among countries in the current state of Arctic program inventories we thought it would be ideal to share a 'state of inventory' as part of a summary on Arctic programs. It will assist in identifying challenges among countries that may be due to differences among agencies/department standards of inventories or resourcing to support inventories. It will also assist with co-ordination efforts in SAON and perhaps for individual nations.

¹ http://www.arcticobserving.org/images/pdf/Board_meetings/1st_helsinki/11_SAON_Implementation_v1.0.pdf

Supporting the 'state of inventory' it is proposed that an inventory of Arctic programs, networks and project platforms is shared. These will remain simple and present overall information like title, affiliation, start date, end date, URL, contact information and a brief text description. The information will be compiled by the individual members of CON in Excel sheets. These will have a predefined structure (columns) and will be sent to the SAON Secretariat for processing and upload to the SAON web site. Alternatively, CON members will grant access to databases that hold this information.

During the early phases of SAON, a Project Directory was developed². SAON CON members that are responsible for projects contained within this will contribute to this task by updating the information about these projects.

This task will be a continuous activity of CON and over time more and more information will be added to these inventories (in breadth as well as depth). This work will allow CON to conduct the mentioned "gap analysis of circum-Arctic observational and monitoring assets."

2.2 Detailed inventory within a specific Arctic theme

Given that the task of the establishing the above mentioned inventories of arctic monitoring is comprehensive, it is proposed that, in addition to this, a thematic approach is taken. Similar to how SAON has lead and developed an inventory for community based monitoring with the CBM Atlas, CON will consider other themes.

Potential themes for Inventory development and partnerships are:

- **Arctic Fisheries:** This initiative has engaged with the SAON Arctic Data Committee (ADC). It is an attractive theme because there has been so little work (research/monitoring) in the area of interest so it may be a manageable task. There are two interwoven initiatives:
 - The first is the 'Third Meeting of Scientific Experts on Fish Stocks in the Central Arctic Ocean in April', where Peter Pulsifer from ADC had prepared the document 'Mapping the Arctic Ocean Fisheries Data'³.
 - The second is an 'ICES/AMAP/CAFF/PAME Workshop on Integrated Ecosystem Assessment (IEA) for the Central Arctic Ocean (WKICA)'⁴: This workshop will lead into a regular Working Group with AMAP involvement and a 3-year Terms of Reference. The first year will have focus on data/information collection.
- **Atmosphere:** Vito Vitale (Italy) has already put together a paper on this theme⁵. Additionally, we can partner this work with IASOA (<http://www.esrl.noaa.gov/psd/iasoa/data>).
- **Global Terrestrial Network for Permafrost (GTN-P):** <http://gtnp.arcticportal.org>. This group has strong arctic component and already has strong databases and inventories.
- **Community Based Monitoring.** This initiative could update and provide additional information to the "Atlas of Community-Based Monitoring in a Changing Arctic" (www.arcticcbm.org/index.html).

² <http://pusnes.grida.no/amap/amappd/?org=4>

³ <https://drive.google.com/file/d/0By7qwdOzPurTcV9qZI91MkROZ3c/view?usp=sharing>

⁴ <http://ices.dk/community/groups/Pages/WKICA.aspx>.

⁵

Some of the themes identified are based on partnerships with ADC and work that has already begun in CON.

The main purpose of this task will be to make CON visible within a relatively short timeframe, but also to establish a basis for a dialogue with ADC on the next topic.

2.3 Inventory templates/parameters

While the themes in 2.2 are considered, CON will also need to consider templates or guidance on the development of such a themed inventory.

Defining the parameters will differ among themes, however we could consider a standard template for from which to modify. Below are topics for consideration for an inventory:

- Type of activities/scope to include in a monitoring inventory
- Which programs/projects/networks are considered 'monitoring' (e.g. collection of data over 3 years)
- Time stamp, how far back in time? Historical monitoring programs/projects/networks
- Templates/profiles
- The use of dictionaries/keywords
- Other

3. Timelines

November 2015:

- Approve this document (CON meeting)
- Develop and circulate template for 2.1 (Secretariat)
- Discuss theme for 2.2

December 2015:

- Collect information for 2.1 (CON members)
- Update information in SAON PD (CON members)
- CON meeting to decide on theme for 2.2 and develop plans for this
- CON meeting to outline document on existing inventory capabilities and the need for additional membership and resources. For the SAON Board

January 2015:

- Submit information for 2.1 to Secretariat (CON members)

February 2016:

- CON meeting to finalise the document on existing inventory capabilities and the need for additional membership and resources.
- Compile and upload information for 2.1 (Secretariat)

March 2016:

- Present a first version of 2.1 and an updated SAON PD for the SAON Board
- Present resource document to SAON Board

4. Discussion/consideration

When the work on these deliverables is planned, it will become clear that different CON members will have different capabilities/resources to provide the information needed. We may need to consider new memberships or encourage countries to develop national inventory teams as representatives cannot represent all agencies and activities. For this purpose, CON will develop a document on existing inventory capabilities and the need for additional membership and resources.

Task 2.3 will have to be further developed in cooperation with ADC and other ongoing initiatives.

Appendix 1: EU PolarNet Description**Main description of Task 2.3 from the Description of Work:****Task 2.3: Optimisation of existing monitoring and modelling programmes (AMAP, VUB) (M1-M36)**

This task builds on current national and international monitoring and modelling activities, e.g., those under the AMAP Trends and Effects Programme on environmental and climate-related parameters, the CAFF Circumpolar Biodiversity Monitoring Programme (CBMP) on living resources, OSPAR, and EMEP in the Arctic, as well as relevant monitoring and observation programmes in the Antarctic, notably CCAMLR and the emerging Southern Ocean Observing System (SOOS) programme and the various national observational programmes. It will develop an inventory of existing monitoring activities, including the parameters monitored, frequency, sampling locations (to the extent possible), and associated data reporting and data handling arrangements. This inventory will also include existing modelling programmes, e.g., under EMEP, WCRP CLiC and other relevant ecosystem and climate modelling programmes such as the Integrated Climate-Ecosystem Dynamics (ICED) programme in Antarctica. Based on this inventory, a strategic analysis of the existing monitoring and modelling programmes, and the infrastructures used to deliver them, will be conducted to determine where additional support may be needed to ensure the adequate collection of data to meet the needs of these programmes as well as to contribute, to the extent possible, to priority issues identified in other WP2 tasks. Finally, together with WP3, a scheme for optimisation of infrastructure use will be developed. Both task leaders complement each other, AMAP has the monitoring expertise and VUB is the dedicated bi-polar climate modelling specialist. AWI, IPEV and CNR-DTA will contribute to T2.3.

This Task will focus on:

- Preparing an inventory of existing monitoring and modelling programmes.
- Performing a strategic analysis of the monitoring and modelling programmes and related infrastructures.
- Preparing a roadmap for infrastructure optimisation with WP3.

AMAP deliverables for Task 2.3:

- D2.3: Release of the inventory of existing monitoring and modelling programmes (M18, August 2016)
- D2.6: Roadmap for optimisation of monitoring and modelling programmes (M36, February 2018)

Appendix 2: Some definitions

Platform: A facility that serves as a physical framework for observational work. Typical arctic examples are land-based stations, ships/icebreakers, buoys, satellites. The information (metadata) to organize in a catalogue/inventory for Platforms are name, position, observational facilities, funding, ownership, plans for coming activities, etc.

Program: An activity with a well-defined (broader) scope. A program usually has a broad long-lasting base for support and governance. A program runs two or more projects, and the duration may be open-ended or fixed. Typical SAON examples are the observational programs of organizations like AMAP, CAFF, ICES, and WMO. The information (metadata) to organize in a catalogue/inventory for Programs are name, organization, governance structure, scope of work, plans for coming activities, etc.

Project: An activity with a well-defined (narrow) scope, duration and resource allocation. A project may be part of a program. Typical SAON related examples are the Tasks 'Polar Metadata Profile', 'Arctic Ocean Structure', 'Expanding Historical Climate Analysis', 'People-ACE', 'CBM classification', and 'International Review of Community Based Monitoring'. The information (metadata) to organize in a catalogue/inventory for Projects are name, scope, duration, geographical area, etc.

Networks: A cooperation between two or more observational institutions, infrastructures or sites. They are typically spatially distributed and are collaborating to collect information about the environment etc. They share (at least to some extent) objectives and protocols and they can exchange information. Typical SAON related examples are IASOA, CircHob, INTERACT, GTN-P, and SIOS. The information (metadata) to organize in a catalogue/inventory for Networks are name, scope, members, etc.