Questions for National SAON Board members on Goal 1 Objectives 1.1 and 1.3

National Board members have filled in the *capacity/capability matrix* where they indicate the national capacity/capabilityto contribute to SAON Goal Objectives.

As a follow up, National Board members are now asked to report on activities that need coordination and that are relevant to [Objectives 1.1 and 1.3 under SAON Goal 1](https://www.arcticobserving.org/images/pdf/Strategy_and_Implementation/SAON_Implementation_Plan_version_17JUL2018_Status_approved.pdf):

* *Conduct an inventory of national observational capacities (1.1*)
* *Provide recommendations for a roadmap for future Arctic observational capacities (1.3*)

Board members are asked to fill in the template below and prepare themselves for verbally reporting on this. The answers should be no more than 2 pages in total.

1. What specifically did you mean here?

Objective 1.1: Finland has since the formation of SAON also a SAON committee of Finland. Members are the Finnish Meteorological Institute, Thule Institute of Oulu University, Natural Resources Finland, Finnish Environment Institute and the Finnish Senior Arctic Official.

It hasn’t been active for a few years, but as it did form the initial report on Finnish national observational capacities. We will convene this committee then SAON requests to report on Finnish monitoring efforts. In Earth Observation a lot of collaboration is established in the inter-ministerial Space committee as well. FMI has been involved in INTAROS performing most of the Observing System analysis there.

In addition Finland has its spatial data assets registered in the GEOSS Portal for anyone to query for monitoring data. FMI is in addition improving catalogues to include better Earth Observation satellite analysis ready data to also expose these data sets better. This includes data from the Environment Institute and is connected with a current Finnish spatial data platform project that is connected to the Arctic SDI. Data from observations are more and more available in near real time.

Objective 1.3: FMI performed with SAON and AMAP a value tree analysis for physical atmosphere and ocean variables of the Arctic Observing System as a contribution to the Finnish presidency of the Arctic Council. This report is giving some concrete numbers as a starting point for the current observing system, which helps to scale the future expansion of the system. The report will be out in April 2019. The main message is that currently **177,6 m€ per year** are used for observations north of 60°N compared to **810 m€** between 30°N and 60°N according to WMO OSCAR information and cost estimates by FMI station managers. Doubling the efforts for the Arctic seems a reasonable request in the face of increasing human activity in the Arctic and a somewhat challenging environment compared to the 30-60N Earth.

2. Who is leading that activity?

Objective 1.1: The SAON lead in Finland is the Finnish Meteorological Institute and it is chairing the Finnish SAON committee by Professor Jouni Pulliainen.

Objective 1.3: SAON and FMI

3. Is this well coordinated?

Objective 1.1: Within Finland both spatial data infrastructure and monitoring networks are well established with a lot of collaboration between all actors in multiple network settings.

Objective 1.3: Yes, but without much communication capacities in SAON.

4. What specifically are you doing that could be coordinated?

Objective 1.1: Cataloguing Analysis Ready EO data and making the data easier discoverable would need more coordination globally. FMI would appreciate coordination here.

Objective 1.3: Cost estimation for atmospheric composition observations and other non-metocean monitoring. Engaging CAFF and ECPHORS.

5. Are you currently engaged in CON?

Roberta Pirazzini and Hanna Lappalainen represent Finland in CON after Hannele Savela stepped back.

6. What would be a useful working definition of this Roadmap. What should the Roadmap include from the standpoint of your national funding body?

The working definition needs a relationship to roadmaps like European Science Foundation Research Infrastructure or Earth Observation programs like Copernicus have. We need to highlight the Arctic parts of many different networks and bring in their proposals into the pool of proposals that we would shape in SAON. Finnish investments are roadmap-based as to be compared with ESFRI roadmaps. SAON should achieve similar alignment, but not target research activities, operational actions are more important albeit being born from research institutions.

The holistic picture is needed for most Societal Benefits as identified in the Arctic Observations assessment frameworks first value tree. Most key objectives for SBAs depend on more than one information service. Expansions need to be targeted broadly to achieve the benefits.