Proposal by Finland for a new project:

# Arctic Observation Value project - assessment for physical atmospheric and oceanic variables

Background and Motivation

Arctic monitoring is largely not sustained for a long term. The first [Arctic Science Ministerial declaration](https://obamawhitehouse.archives.gov/the-press-office/2016/09/28/joint-statement-ministers) and the Arctic Councils [Fairbanks declaration are calling for increased efforts to observe the Arctic.](https://oaarchive.arctic-council.org/bitstream/handle/11374/1910/EDOCS-4072-v5-ACMMUS10_FAIRBANKS_2017_Fairbanks_Declaration-2017.pdf?sequence=9&isAllowed=y) An initiative within SAON (Sustaining Arctic Observing Networks) has recently been started and is trying to clearly justify Arctic-monitoring actions by performing a comprehensive Arctic Observation Systems value tree analysis. The Assessment framework and top of the tree has been developed by a workshop in January. The [corresponding report](http://www.arcticobserving.org/news/268-international-arctic-observations-assessment-framework-released) is published on the SAON web. This work has only been started and needs now the next step. Sustaining and extending the Arctic Observing system becomes easier if the value of observations can be made more explicit. It also helps to focus efforts on areas with most impact for policy goals. For this value tree to reach the lower level, it needs to be assessed from the bottom up connecting the information produced for key societal objectives to the underlying services and observation data sources.

AMAP is well placed to tie the top-down and bottom-up processes together as assessments tend to do just that. Additionally AMAP has plans to revise its monitoring guidelines and this project group proposal would be able to contribute to guidelines with a method on how to highlight in future assessments the whole tree of observation and information service contributions and the tree relevant for many climate change related needs.

Finland has in the current [chairmanship plan](http://arctic-council.us11.list-manage.com/track/click?u=274ca09fc8d82dc42a5dfad22&id=4b54697097&e=8f1b3ecec9) for the Arctic Council proposed to improve meteorological and oceanographic cooperation to fill gaps in the observing system. Arctic country meteorological institutes within WMO have a broad interest to strengthen observation activities in the Arctic and a natural follow-on is to contribute to this project group.

Request to AMAP and SAON

Finland is requesting the AMAP working group to nominate participants to the project group according to the structured work plan. The project group proposed here would work with the bottom up for data sources managed by meteorological and oceanographic organisations.

Lead, Members and supporting actions

As a part of the Finnish chairmanship programme of the Arctic Council the Finnish Meteorological Institute has reserved a person resource at 20% working time to lead this task. The work estimate for group members is about 1 man month in total. The project group is a joint SAON and AMAP activity and members can be nominated from both initiatives. Supporting activities will be available from the IDA Science and Technology Institute (STPI) in the US, which have lead the top-down analysis exercise in the January workshop and from European Commission observation value assessment actions. STPI support and participation has been signaled for the value tree analysis to have a coherent design and an overall result to be convincing. European Commission has already launched an action for an Arctic observation value assessment, which would complement the project group actions. The EC is also managing the [INTAROS H2020 project](http://intaros.eu/) that has several tasks that should also contribute to project group proceedings and synergy will be leveraged as much as possible.

Expertise and Concrete tasks

Project group members should have experience in either national observing system management in meteorology/oceanography or experience in producing AMAP assessments. The main tasks for the project are to

* first identify observation data sources (SAON experts),
* second identify information products compiling observation data (AMAP/SAON),
* third to map these data and products paths to assessment actions that would answer to key societal benefit objectives (AMAP) and
* fourth to evaluate the relative weight of sources in key objective assessments (AMAP).

Data source and service inventories should be found through SAON and national meteorological and oceanographic services. The key objectives have been identified in the Arctic Observing assessment framework published by SAON and STPI in May (2017).

This final report of the top-down exercise gives a full set of Arctic societal benefit areas (SBAs). The project group will however only address SBAs where meteorological and oceanographic data is relevant for key objectives.

In summary the project group would deliver a part of the bottom-up analysis of the arctic observing system value tree. The result will be compiled into a report ‘Meteorological and oceanographic observations value for societal benefit in the Arctic’ and the corresponding value tree dataset. The report would be published in spring 2019.

Target audience for outcome

The resulting report is targeted at two audiences: First at funding entities on national and international level to see the sound justification for sustained support to valuable observation infrastructure and operations. Secondly observation and research operators would be more conscious of the applications that their data is finding. The Arctic Council would benefit by knowing how valuable observations in the Arctic are. The study would provide information also for revising the AMAP monitoring guidelines and networks.

Timeline / 3 meetings and working on web in between

The aim is to perform this work within the term of the Finnish Arctic Council chairmanship and deliver the end report in spring 2019. Most of the necessary work on observing systems would be gathered from national SAON focal points or SAON networks in early 2018. The project group would then review these for completeness and mainly work on the value-adding service chain and the evaluation of observing system components towards these until the end of 2018. In 2019 spring the writing phase for the report should end up in time for the Finnish chairmanship Arctic Council finale. Three meetings should be planned for with two in 2018 and the final one in early 2019. Participation via tele/web conference systems will be possible.

Additional information available from

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