

PAME II-2018

Agenda Item 3.6

A topic on the Finnish Chairmanship agenda: Links between national and international meteorological work and the work by PAME

Discussion paper submitted by Finland

Purpose of this document

Meteorology in the Arctic region is one of the priorities for the Finnish Chairmanship of the Arctic Council. This topic was on the agenda of the last AMAP meeting and AMAP will continue to explore the possibilities of including meteorology in the AMAP work plan. The purpose of this document and presentation is to stimulate discussions of these possibilities in the PAME context.

Background

Climate change is clearly taking place faster in the Arctic region than anywhere else. Climate change will have a significant impact on Arctic marine environment and biota. Along with the changing climate, also tourism, shipping, and the utilization of natural resources will increase in the Arctic region. This in turn asks for both observational data on the Arctic environment and services. Meteorological data, combined with data on Arctic environment and services, would benefit mitigation of the impact of climate change.

During the Finnish Chairmanship of the Arctic Council, the Finnish Meteorological Institute (FMI) is having the lead on this topic. FMI has also advanced meteorological collaboration in the Arctic Council. According to its *Action Plan* (http://ilmatieteentaitos.fi/documents/30106/42393/arktinenstrategia_fmi.pdf/003c5ff0-3bf0-45a6-bf8a-63ab0e32943e) FMI organized an *Arctic Science Networking Workshop on late summer 2017*, and provided a joint message from scientists. Later, FMI organized an *Arctic Meteorology Summit* in Levi, Finland, in March 20, 2018. Also, a wide variety of needs were identified, e.g. developing a sustained monitoring network in the Arctic, providing support to understanding the climate change, improve data sharing and better use of existing data for e.g. modeling (weather, climate, ice, ocean). During the *AC Senior Arctic Officials (SAO) meeting* held also in Levi (March 22-23, 2018) a clear decision was made to suggest that meteorology will be included as an elemental part of the future work of all Arctic Council Working Groups.

Summary of all arctic meteorology related events held in Levi, and themes that are relevant to AC Working Groups can be found here: <https://www.dropbox.com/s/ux52jr4fqrrljqi/il-arktinen-summary-2018-210x210mm-12s-160518.pdf?dl=0> (*Findings of the Arctic meteorology Summit*)

Requests for the PAME II-2018 working group meeting

Topics for discussion:

- a) Is Arctic meteorological collaboration relevant for PAME?
- b) If yes, which meteorological topics would best support and strengthen the work of PAME?
- c) Can PAME identify elements of its own work that would benefit from meteorology (please, note that some examples are provided in the following presentation by FI)
- d) If the points a-c, in PAME's view, are worthwhile exploring then how should this be taken forward within and by PAME?

Finland suggests that these discussions should acknowledge a-d, and aim at deepening an "Earth system science approach" and identifying meteorological topics when PAME updates its work programme. Some examples of possible topics are:

- Meteorological observations, activities and projects in the Arctic
- Oceanography and drift modeling,
- Satellite safety services to the Arctic,
- Arctic Regional Ocean Observing System (ArcticROOS).
- Benefits of all of the topics above for PAME's main topics, e.g.:
 - vessel traffic and safety in the Arctic
 - marine biodiversity monitoring, assessments, and planning of MPA networks
 - the indigenous people and other coastal local residents in the Arctic