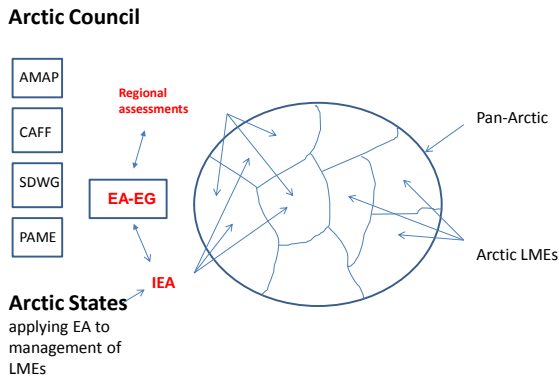


Annex 6-"Road map" for EA work in the Arctic

Discussion note - HRS/PM/MG - 27 September 2013



The diagram illustrates schematically some of the main features of scales and activities related to implementing the Ecosystem Approach to Management (EA) by Arctic states outside and inside the sphere of the Arctic Council.

The EA is seen as a framework for integrated management (of human activities) with six main elements (EA Concept paper; PAME 2013): 1) identify the ecosystem, 2) describe the ecosystem, 3) set ecological objectives, 4) assess the state of the ecosystem, 5) value ecosystem goods and services, and 6) carry out adaptive management. The first two items are more or less done; we have identified 18 Arctic Large Marine Ecosystems (LMEs), and there are basic descriptions of all the LMEs. Work is now starting (by the EA Expert Group) on ecological objectives and we are continuing work on the issue of Integrated Ecosystem Assessments (IEA). The issue of valuing ecosystem goods and services remains as a very challenging task, and adaptive management is implemented to varying degree by all Arctic states.

The marine Arctic, including the coastal environment, can be seen alternatively as a continuous pan-Arctic area or as the sum of the number of distinct and defined LMEs that together make up the pan-Arctic area. It is noted that the terrestrial, coastal and marine environments of the Arctic are coupled through biogeochemical cycles, freshwater inputs, and other physical and biological linkages.

The LME is the appropriate and primary unit for applying the ecosystem approach to management, recognizing the need to deal with ecological features and processes and human activities that take place at different scales in a nested manner. EA is implemented by Arctic states within the areas of their national jurisdiction, in cooperation –with neighbor states in those LMEs that are transboundary. As such, this work is fully or largely outside the Arctic Council, although it is facilitated by the common definitions of ecosystems and EA principles developed within the AC.

Comment [MKR1]: The role of EA-WG in this diagram should be discussed. Is it the coordinating entity we are looking for? Also on aspects that are not marine?

Comment [MKR2]: How does this relate to EBM principles? Which of the EBM

Comment [MKR3]: And the pressures upon it...?

Comment [MKR4]: The scope of the EA EG should be clarified. The tasks followed up by the EA EG seems to be limited to assessments and integration across ecosystem components, whilst EMB to a larger degree integrates across biological, environmental and socio-economic aspects. Also, the EA EG focuses on the marine environment.

Comment [cvq5]: Should a deadline be proposed?

Comment [cvq6]: One or two sentences describing in what way?

Comment [cvq7]: Should some possible future activity with respect to this be mentioned or perhaps at least state that the EA group has no plans for the near future?

The Arctic Council (AC) deals with policy matters for the whole Arctic at the pan-Arctic scale. Underpinning this work there have been comprehensive assessments of the state of the Arctic environment and peoples, such as reports on Arctic pollution (e.g.) by AMAP, the Arctic Climate Impact Assessment (ACIA 2005), Snow, Water, Ice and Permafrost in the Arctic (SWIPA), the Arctic Biodiversity Assessment (ABA), and others.

AC works through 6 working groups, among them are AMAP, CAFF, SDWG and PAME. While the assessments and other work by these groups address issues from a pan-Arctic perspective, biodiversity is local and regional by nature even though it may be impacted by actions on the pan-Arctic and global scales for migratory species, as well as by globally distributed pollutants and climate change. The assessments therefore include detailed descriptions and analysis at the regional ecosystem scale in various parts of the Arctic. This is illustrated well by the AMSA IIC report on identified areas of heightened ecological significance in each of the Arctic LMEs. The selected regions that will be used in the AACAC by AMAP provide another example of regional focus in the work of AC WGs.

Assessments on all different spatial scales can contribute to the broader LME scale implementation of EA by using the Arctic LME boundaries as geographic reference frames. LME boundaries do not necessarily constrain sampling design for new data collection, or selection of published data for analysis, as may be required for the task at hand. Nonetheless, locations of data should be referenced with respect to the portion of an LME to which they refer, or the combination of LMEs which they encompass. During the course of an IEA the LME-referenced components of the assessments may be readily assimilated. The Arctic Council has adopted the Arctic LMEs (Kiruna 2013) as the geographic definition of the ecosystems. It should be noted that the boundaries of these ecosystems are open and dynamic, being influenced by atmospheric and oceanic processes, and that the open boundary conditions are an important part of the characteristics of the defined LMEs.

There is a large common ground of work related to assessments of the state and status of ecosystems at the scale of LMEs by Arctic states in their implementation of the EA, and by AC WGs in their assessments from a pan-Arctic perspective. There is also considerable scope for coordination of activities that take place inside and outside the AC. If there were was effective implementation of the EA including assessment of the state and status of each of the Arctic LMEs, this would be a formidable source of information that could be used for assessments and reporting on the state of the environment at the pan-Arctic scale. In the opposite manner, Arctic states could benefit from assessments done by AC WGs as a contribution to assessments of their own LMEs. The PAME-lead EA expert group could play a coordinating role for EA related work by states for waters under their jurisdiction and by AC working groups.

In conclusion, the Road Map is offered as a starting point for discussions among the working groups of the Arctic council on developing common ways and means to support the implementation of the ecosystem approach to management in the Arctic. Arctic states should work together, in the AC, to promote the maximum synergy between activities that take place by states outside the AC and activities that they do jointly within the AC. There are limited resources for assessments of the state of the Arctic, but by working coordinated together and avoiding duplication of efforts, we can go a long way to what is required. Luckily there are only a limited number of Arctic LMEs to study, assess, and manage.

Comment [cvq8]: Don't mention specific working groups for only one of the reports.

Comment [cvq9]: Year for all or none of the reports given as examples)

Comment [cvq10]: Still a bit unclear in what way, i.e. coordination of what? Type of assessments needed? How to do assessments (methods/contents)? Management recommendations? Development of goals? How to evaluate goals? Etc.

Comment [MKR11]: Good initiative, but unclear how and when these discussions will take place.

Comment [MKR12]: If this is to be implemented, some concrete follow up actions will be necessary. The mapping of the WGs follow up on EBM recommendations is a good starting point to map where coordination is necessary, and where we might have duplication of efforts. AACAA offers a practical example on how knowledge and information from the various working groups fit together in an integrated assessment, and might point towards ways forward.