

1. POLICY AND IMPLEMENTATION

Advancing further EBM efforts across the Arctic will build upon existing EBM implementation and involve transboundary and sub-national or regional arrangements, integrated approaches, shared goals, and consideration of traditional knowledge as appropriate. The Expert Group on Arctic EBM recommends the following actions:

1.1 Develop an overarching Arctic EBM goal, derived from established Arctic Council goals and visions, and provide guidance on how to develop and operationalize objectives supporting this goal.

1.1.PAME

This is not an appropriate task for the Ecosystem-Approach Experts Group / PAME working alone. Must be collaborative.

1.1.CAFF

The release of the Arctic Biodiversity Assessment (ABA – www.arcticbiodiversity.is) has placed renewed emphasis on EBM:

- One of the ABAs three cross-cutting themes focuses on the necessity of taking an ecosystem-based approach to management. It stressed the need for a comprehensive and integrated approach to address the interconnected and complex challenges facing biodiversity and to ensure informed policy decisions in a changing Arctic.
- One of the six thematic groups into which ABA recommendations were divided focused on EBM and recommended to
- *Advance and advocate ecosystem-based management efforts in the Arctic as a framework for cooperation, planning and development. This includes an approach to development that proceeds cautiously, with sound short and long-term environmental risk assessment and management, using the best available scientific and traditional ecological knowledge, following the best environmental practices, considering cumulative effects and adhering to international standards.*
- Results from the ABA implementation plan and Arctic Biodiversity Congress (ongoing) will provide assistance in achieving these goals.
- Life Linked to Ice: under Appendix 1, point 3.3 the report provides an analysis of Ecosystem Based Management, which echo the importance of this EBM recommendation.

1.1.AMAP

AMAP is not currently engaged in developing management goals or objectives; however, AMAP assessments do lead to various types of recommendation that are intended to inform the policy debate. AMAP assessments should therefore serve as an important input to formulating EBM goals and objectives.

1.1.SDWG

SDWG is not involved in developing management goals or objectives but would be happy to so if requested. SDWG's Social Economic Cultural Expert Group (SECEG) can potentially play a role to look at how EBM policy outcomes can advance social and economic goals, and help Arctic residents adapt to changing ecological and social-economic conditions.

1.2 Explore ways in which Arctic States can cooperate to advance conservation and management of biologically, ecologically, and culturally significant areas.

1.2.PAME

Already addressing this with PAME's work on LMEs. In addition, workshop on EBSA coming up through the CBD.

1.2.CAFF

CAFF active in UN CBD efforts

attending and providing information for the Arctic EBSA workshop.

CAFF addressed the marine area in development of AMSA 2C which identified Arctic marine areas of heightened ecological and cultural significance.

Working to better understand biodiversity change through the CBMP- CBMP can be an information provider into this process.

1.2.AMAP

AMAP, together with CAFF and SDWG prepared the AMSA IIc follow-up report "Identification of Arctic marine areas of heightened ecological and cultural significance: Arctic Marine Shipping Assessment (AMSA) IIc", which also used information from the AMAP coordinated assessment of Oil and Gas activities in the Arctic.

1.2.SDWG

SDWG worked with AMAP and CAFF to prepare the AMSA IIc follow-up report "Identification of Arctic marine areas of heightened ecological and cultural significance: Arctic Marine Shipping Assessment (AMSA) IIc". Currently, ICC is leading the SDWG project ***A Circumpolar-Wide Inuit Response to the Arctic Marine Shipping Assessment***. ICC's objectives for this project are twofold: 1) to communicate AMSA findings to Inuit and seek their guidance on moving AMSA forward, and 2) to expand its earlier survey on Inuit use of sea and sea ice. The project and final draft report in 2015 will help Arctic States work more cooperatively with Inuit and other Indigenous Peoples to advance conservation efforts.

In addition, the ***Electronic Memory of the Arctic*** project and the ***Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change*** project will involve the collection and dissemination of materials that advance conservation and management of biologically, ecologically, and culturally

significant areas. SECEG participation in the AACA Part C project (AMAP) and the Arctic Marine Tourism project (PAME) will also help advance this objective.

Note: SECEG participation in the cross-cutting activities noted above is anticipated but still needs to be confirmed.

1.3 Develop and adopt a policy and best practices for incorporating traditional knowledge into EBM activities as appropriate.

1.3.PAME

Seems like a better fit for SDWG, but PAME is of course exploring this within its work.

1.3.CAFF

Life Linked to Ice: under Appendix 1, point 3.3 the report provides an analysis of Ecosystem Based Management, which echo the importance of this EBM recommendation.

1.3.AMAP

AMAP monitoring and assessment activities take account of TK where appropriate.

1.3.SDWG

Permanent Participants in the SDWG have led the work to produce seven draft "guiding principles" for integrating Traditional Knowledge into the work of the AC and identified several ideas to translate these proposed principles into concrete next steps. This work will help inform how traditional knowledge can be incorporated into EBM activities.

1.4 Encourage initiatives between two or more Arctic States to advance implementation of EBM in the Arctic and demonstrate how knowledge is collected, shared, processed and used to contribute to EBM in the Arctic.

1.4.PAME

The Ecosystem-Approach Experts Group has its fourth workshop coming up in spring for the Beaufort LME. Also there is the pilot study of the Norwegian-Russian joint management of the Barents.

1.4.CAFF

CAFF's CBMP Marine, Terrestrial and Freshwater groups contain country representatives that actively collect, share and process national data to better understand biodiversity change. This is an opportunity for countries to analyze data and partner on issue of mutual concern.

1.4.AMAP

The AMAP coordinated work on 'Adaptation Actions for a Changing Arctic' (AACA-C) is establishing regional implementation activities in the Barents, Baffin/Davis Strait and Bering/Chukchi/Beaufort Sea regions that will have strong links to and support EBM objectives.

1.4.SDWG

The SDWG project ***Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change*** involves the creation of an adaptation portal to facilitate access to adaptation resources and create a space where Northern decision-makers can exchange experiences, lessons learned and best practices. This could provide an opportunity to demonstrate how EBM-related knowledge is collected, shared and processed.

1.5 Review, update and adjust the Observed Best Practices in Ecosystem-based Ocean Management in the Arctic, endorsed by the 2009 Arctic Council Ministerial, to be applicable to all environments, including marine, coastal and terrestrial.

1.5.PAME

Appropriate task for PAME, with terrestrial extension covered by CAFF.

1.5.CAFF

CAFFs CBMP marine biodiversity monitoring plan (in implementation) and its coastal biodiversity monitoring plan (in development) may provide information of value to follow-up on the above recommendation.

1.5.AMAP

AMAP is not generally involved in this type of activity though its assessment work provides input on management of marine, freshwater and terrestrial systems.

1.5.SDWG

Outcomes from ***A Circumpolar-Wide Inuit Response to the Arctic Marine Shipping Assessment*** and the ***Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change*** project could be examined in respect to revising the Observed Best Practices in Ecosystem-based Ocean Management in the Arctic. SECEG participation in the AACA Part C project (AMAP) and the Arctic Marine Tourism project (PAME) will also help advance this objective.

2. INSTITUTIONAL

Recognizing the important ongoing EBM work within the Arctic Council, particularly in the marine environment, sustaining and strengthening EBM will require building greater coordination and integration capacity across the Arctic Council and taking steps to further advance EBM in terrestrial environments. The Expert Group on Arctic EBM recommends the following actions:

2.1 Identify a lead to assure coordination of a common approach to the work of the Arctic Council on EBM in the Arctic and ensure appropriate reporting of progress to the Senior Arctic Officials.

2.1.PAME

This makes sense as an assignment for the Ecosystem-Approach Expert Group, which could collect info from the states and assess whether there is a need for common guidelines.

2.1.CAFF

(No response)

2.1.AMAP

The AMAP coordinated AACA-C work includes activities that compare and could potentially promote harmonization of EBM approaches applied in different regional settings.

2.1.SDWG

Input or reporting related to EBM is not as relevant to SDWG as other Working Groups since our projects focus more on the human dimension. Nonetheless, there are links to a number of SDWG projects (e.g., ***Arctic Circumpolar-Wide Inuit Response to the Arctic Marine Shipping Assessment, Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change, Electronic Memory of the Arctic, Review of Cancer Among Circumpolar Indigenous Peoples***). The SDWG Executive Secretary is best-placed to report on these initiatives.

2.2 Institute periodic Arctic Council reviews of EBM in the Arctic to exchange information on integrated ecosystem assessment and management experiences, including highlighting examples from Arctic States.

2.2.PAME

This reporting could be funneled through the Ecosystem-Approach Expert Group, with PAME focused on marine and CAFF/AMAP focused on terrestrial.

2.2.CAFF

CAFF conducts marine work through the CBMP and through its assessments programme e.g. the Arctic Biodiversity Assessment that can be used to inform information exchange. CAFF also has capacity in not just terrestrial, but freshwater and coastal environments.

2.2.AMAP

AMAP intends to support such reviews instituted by the Arctic Council.

2.2.SDWG

SDWG will participate in any reviews of EBM instituted by the Arctic Council. SDWG is well-placed to provide input on the human dimension of EBM.

3. SCIENCE AND INFORMATION

Advancing Arctic EBM will require the identification of important coastal, marine, and terrestrial areas, improved data comparability and compatibility, enhanced information exchange and monitoring, and improvements in the development and use of integrated ecosystem assessments. In order to achieve this, the Expert Group on Arctic EBM recommends the following actions:

3.1 Encourage the use of the revised map of 17 Large Marine Ecosystems as the oceans management unit to implement EBM in the Arctic; and explore the development of terrestrial assessment units (landscape equivalents to LMEs) based upon ecological criteria or existing eco-regions.

3.1.PAME

The revised map has been delivered with 18 Arctic LMEs; next step is to encourage use by AMAP and CAFF and use the revised map as a basis for work.

3.1.CAFF

CAFF's CBMP utilizes eight Arctic Marine Areas identified in the Arctic Marine Biodiversity Monitoring Plan (published 2011) these were communicated to the team developing the LMEs.

3.1.AMAP

The AMAP coordinated AACA is considering the potential for using LMEs as a basis for its work. [It should be noted that for terrestrial areas in particular there exist a number of alternatives to eco-regions when it comes to defining 'terrestrial assessment units' for management purposes, e.g. river basins].

3.1.SDWG

The use of the LME map is not applicable for the majority of SDWG projects.

3.2 Identify biologically, ecologically, and culturally significant areas in the coastal, marine and terrestrial environments, and consider EBM-related needs for these areas. Identify the coastal, marine and terrestrial areas most vulnerable to human impacts.

3.2.PAME

Ties in with the second bullet. The AMSA IIc is done, and someone is needed to take over the terrestrial and, to a lesser extent, coastal sections.

3.2.CAFF

CAFF through the CBMPs Freshwater, Coastal, Marine and Terrestrial biodiversity monitoring plans may provide biodiversity related information into processes aimed at responding to this recommendation.

3.2.AMAP

This work has been completed for the marine environments under the AMSA iic work. AMAP has no plans for such initiatives within the coastal and terrestrial environments.

3.2.SDWG

Outcomes from ***A Circumpolar-Wide Inuit Response to the Arctic Marine Shipping Assessment*** and the ***Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change*** project could help towards this objective. The SECEG could possibly play a role in identifying culturally significant coastal, marine and terrestrial areas through participation in the AACA Part C project (AMAP) and the Arctic Marine Tourism project (PAME).

3.3 Assess the value of significant Arctic ecosystem services relevant to the well-being of local communities and regional economies and ecosystem services, and those of particular global significance.

3.3.PAME

This is mostly appropriate for SDWG. The AACA will address this goal as well.

3.3.CAFF

CAFF is undertaking a TEEB Arctic scoping study for the Arctic in partnership with TEEB, UNEP, WWF, UNEP-GRID Arendal which is scheduled for completion for the 2015 Ministerial.

3.3.AMAP

The 'value of significant Arctic ecosystem services' will most likely be addressed for selected regions in AACA.

3.3.SDWG

SDWG/SECEG involvement in the AACA Part C will support the objective of assessing the well-being of local communities and economies vis-à-vis ecosystem services.

3.4 Enhance access to, and use of, the multidisciplinary data required for the implementation of EBM by building upon ongoing work in the Arctic Council to contribute to an Arctic Council data portal.

3.4.PAME

As part of the next bullet, PAME is looking into the data issue for the Barents, Beaufort, etc. – the regional level. There are many obstacles. In many ways, the Arctic Council is already addressing this with

its existing data portals, and gathering experience from smaller-scale portals rather than plunging in to making a huge one is wise.

3.4.CAFF

The Arctic Biodiversity Data Service is CAFF's data portal and is the data-management framework for managing data generated via the Conservation of Arctic Flora and Fauna (CAFF – www.caff.is) and its Circumpolar Biodiversity Monitoring Programme (CBMP – www.cbmp.is). It is an online, interoperable data management system which serves as a focal point and common platform for all CAFF programs and projects as well as be a dynamic source for up-to-date circumpolar Arctic biodiversity information and emerging trends. It will allow for discovery, archiving and access to data at various spatial, temporal, and taxonomic scales (e.g., populations, regions, nations, circumpolar, biomes, habitats) allowing users to explore relationships and factors driving change. It could feed into this recommendation.

3.4.AMAP

AMAP is already addressing this in a number of data-related initiatives. SAON has the objective to enhance access to Arctic observational data.

3.4.SDWG

SDWG is working to develop an adaptation portal (***Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change*** project) and is gathering and digitizing circumpolar related information on a variety of topics from AC state libraries, museums and archives (Electronic Memory of the Arctic project). These sources of information can potentially be linked to an AC data portal.

3.5 Exchange information and experiences with integrated assessments of ecosystem status, trends and pressures for coastal, marine, and terrestrial areas and provide guidance on approaches for integrating existing assessments.

3.5.PAME

This is the focal activity of the Ecosystem-Approach Expert Group.

3.5.CAFF

The use of an ecosystem based approach to conservation and management is inherent in all of CAFF's work and has remained integral to all CAFF activities since its formation under the Arctic Environmental Protection Strategy in 1992.

3.5.AMAP

Information exchange for integrated assessment purposes is a key component of the AACA activity. AMAP (together with CAFF) are the primary AC working groups responsible for assessments of status, trends and impacts (on coastal, marine, and terrestrial areas) in the Arctic - and many of these assessments now involve integration of physical, biological and social-economic aspects.

3.5.SDWG

SDWG provides human dimension input into assessments as requested. SECEG participation in the AACA Part C project will help identify the socio-economic implications of assessments/scenarios and the development of possible adaptation strategies.

4. Annex: General comments

Examples of recent CAFF activities which build upon the nine EBM principles defined by the EBM task force and respond to the activities recommended by Ministers in Kiruna to advance EBM in the Arctic include:

- The ABA action plan to implement the ABA recommendation is underway with early implementation already ongoing e.g. the Arctic Migratory Bird Initiative (AMBI).
- In cooperation with AMAP and SDWG the development of the AMSA IIC report on the Identification of Arctic marine areas of heightened ecological and cultural significance: Arctic Marine Shipping Assessment (AMSA) IIc.
- The report “Life Linked to Ice: A guide to sea-ice-associated biodiversity in this time of rapid change” was completed and released.
- Completion of the Arctic Terrestrial Biodiversity Plan.
- Completion of the CBMP strategic plan (2013-2017) phase II implementation of the CBMP
- Implementation of the Arctic biodiversity Freshwater, Marine and Terrestrial monitoring Plans.
- Commencement of a scoping study on the Arctic’s ecosystem services.
- Commencement of a project to address protection of Arctic lifestyles and people through migratory bird conservation.