



Draft Report: Work on the Ecosystem Approach within the Arctic Council

Submitted to Whitehorse SAO meeting

March 2015

Background

In order to advance the ecosystem approach in the context of the Arctic Council, the Arctic Council Ministers established an expert group on ecosystem-based management (EBM) for the Arctic environment during their 2011 Ministerial meeting. This group operated during the 2011-2013 period and was charged with building a common understanding of the ecosystem approach across Arctic Council Member States, Permanent Participants (PPs), Observers, and Working Groups.

The EBM expert group delivered their findings to the Senior Arctic Officials (SAOs) in 2013, which included a definition for EBM, a set of EBM principles, and 12 recommendations for specific activities that could be undertaken by the Arctic Council Member States, PPs, and Arctic Council Working Groups, as appropriate, to advance the ecosystem approach in the Arctic.

In the Kiruna Declaration of 2013, ministers of the Arctic Council States “Welcome[d] the report on Ecosystem Based Management, approve[d] the definition, principles and recommendations, encourage[d] Arctic States to implement recommendations both within and across boundaries, and ensure[d] coordination of approaches in the work of the Arctic Council’s Working Groups.”

Following upon that directive, at the Whitehorse SAO meeting in fall of 2013, the Senior Arctic Official from the United States “asked that the Working Groups affected by the recommendations of the EBM Expert Group [*Note: includes AMAP, CAFF, PAME and SDWG*] report regularly on their efforts ... [and] that a summary report detailing work towards the EBM recommendations from all Working Groups be prepared for the 2015 ministerial meeting.”

SAOs tasked the ACS to “follow up with the Working Groups to ensure that a joint report on the Arctic Council’s follow up of the EBM recommendations” is prepared as desired.

Accordingly, the Working Groups named above – AMAP, CAFF, PAME and SDWG – have all submitted concise responses detailing their efforts in support of each of the recommendations contained in the report “Ecosystem-Based Management in the Arctic”. The responses below have been collated and summarized in the report that follows.

Summary

In reporting on their efforts to implement the recommendations as contained in the report, the Working Groups highlighted the importance of:

- Collaborative work among the Working Groups;
- The role of the ecosystem approach as it is explicitly or implicitly advanced by ongoing work (e.g., the ABA);
- The contribution which is made by Working Groups' work to facilitate implementation of the ecosystem approach by the Arctic States;
- The existing or potential contribution which could be made by existing expert groups within the Working Groups to ecosystem-approach goals;
- Work related to the ecosystem approach in which the Working Groups are engaged through other for a (e.g., the Convention on Biological Diversity);
- Ongoing work to incorporate TK into the Working Groups' work;
- Collaborative work across states currently underway within the Working Groups; and
- Options for undertaking or supporting regular Arctic Council surveys/overviews of the ecosystem approach in the Arctic.

Some of the projects specifically mentioned as contributing to ecosystem-approach goals are:

- The Arctic Biodiversity Assessment and its associated work, including the Arctic Migratory Bird Project (EBM Report Recommendation #1.1)
- Life Linked to Ice (1.1, 1.3)
- AMSA IIc (1.2, 3.2)
- Arctic EBSA workshop (1.2)
- The Circumpolar Biodiversity Monitoring Program, including the Arctic Terrestrial Biodiversity Plan and the implementation of the Arctic biodiversity Freshwater, Marine and Terrestrial Monitoring Plans (1.2, 1.5, 2.2, 3.1, 3.2, 3.4)
- Circumpolar-wide Inuit Response to the Arctic Marine Shipping Assessment (1.2, 1.5, 2.1, 3.2)
- Electronic Memory of the Arctic (1.2, 2.1, 3.4)
- Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change (1.2, 1.4, 1.5, 2.1, 3.2, 3.4)
- Review of Cancer among Circumpolar Indigenous Peoples (2.1)
- AACAC (1.4, 2.1, 3.1, 3.3, 3.5)

- Observed Best Practices in Ecosystem/based Ocean Management in the Arctic (1.5)
- Revised map of Arctic Large Marine Ecosystems (3.1)
- TEEB scoping study (3.3)
- The Arctic Biodiversity Data Service (3.4)
- Sustaining Arctic Observing Networks (3.4)

Two existing expert groups were frequently cited for their existing and potential contributions to advancing EBM in the Arctic:

- Ecosystem Approach Expert Group (1.1, 1.4, 2.1, 2.2)
- Social, Economic and Cultural Expert Group (1.1, 1.5, 3.2, 3.3)

Potential ways forward

In a general sense, improving follow-up on the EBM recommendations approved in Kiruna among the Arctic Council Working Groups will require ever more coordination, collaboration and information-sharing. This could include such steps as the “action items” listed below. These are suggestions, in no particular order, which arose from an informal collaborative discussion including many key stakeholders in Trondheim, Norway in December of 2014. They do not constitute, and are not intended to constitute, a definite plan for implementation. Instead, they should be considered as inputs for further discussion and planning.

Action item 1: Chairmanship, with assistance from the Arctic Council Secretariat, could work to identify a lead to ensure coordination across Arctic Council Member States, PPs, Working Groups, and partners.

Action item 2: AMAP, CAFF, PAME and SDWG to ensure Working Group work plans for 2015-2017 address implementation of the 12 EBM recommendations, as appropriate.

Action item 3: After a review of Arctic Council and non-Arctic Council assessments of ecosystems, PAME Ecosystem-Approach Expert Group, with CAFF (CBMP), to provide guidance on approaches for integrating such assessments in both marine and terrestrial environments.

Action item 4: CAFF (CBMP), PAME, AMAP, SDWG to take a participatory case study approach to illustrate interactions between Traditional and Local Knowledge (TLK) and science in developing and implementing the ecosystem approach. Ensure participation of relevant Working Groups in a specific case study on monitoring coastal Arctic.

Action item 5: SDWG to consider the EBM report’s recommendation 1.3 regarding integration of TLK within its initiative on addressing TLK.

Action item 6: Arctic Council Member States to consider the utility of a regional seas program as a platform for implementing ecosystem-approach principles in the Arctic marine areas.

Action item 7: CAFF (CBMP), PAME and AMAP to help Arctic Council bodies to progress towards consistent use of assessment units. Utilizing the CBMP terrestrial assessment units and other CAFF units, review, develop, and communicate consistent assessment units that are the terrestrial equivalent of, for example, Large Marine Ecosystems or Arctic Marine Areas, and can serve the needs of ecosystem-approach efforts (e.g. physiographic provinces) across Working Groups. Provide an overview of boundary areas /definitions of the Arctic as they may differ across Working Groups.

Action Item 8: Following upon the CAFF-led TEEB for the Arctic scoping study and ongoing Adaptation Actions for a Changing Arctic (AACA) efforts related to ecosystem services, CAFF, PAME, AMAP, SDWG and Permanent Participants should encourage Working Groups and PPs to engage in these efforts in the context of the EBM recommendation on ecosystem services. Informed by these efforts, Arctic Council Member States, Working Groups and/or SAOs may suggest and implement next steps related to resilience, EBM and/or valuation of ecosystem services.

Action item 9: CAFF, PAME, AMAP and SDWG should initiate new efforts and continue existing work to improve interoperability of data and tools from Arctic Council assessments as well as assessments performed by other entities.

Collected Responses from Arctic Council Working Groups to Recommendations regarding Ecosystem-Based Management

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.

(See also: Annex 4, general comments)

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.

(See also: Annex 4, general comments)

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 AACCA 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.

(See also: Annex 4, general comments)

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 [2015] 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.

(See also: Annex 4, general comments)

1.4.AMAP

The AMAP coordinated work on 'Adaptation Actions for a Changing Arctic' (AACAC) 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.

(See also: Annex 4, general comments)

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., *A 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.

(See also: Annex 4, general comments)

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. CAFF is also working on terrestrial EBM issues - a key aspect of which is the implementation of the CBMP Terrestrial and freshwater biodiversity monitoring plans.

(See also: Annex 4, general comments)

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

This ties in with bullet 1.2 [Note: “Explore ways in which Arctic States can cooperate to advance conservation and management of biologically, ecologically, and culturally significant areas”]. 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.

(See also: Annex 4, general comments)

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.

(See also: Annex 4, general comments)

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.

(See also: Annex 4, general comments)

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.

(See also: Annex 4, general comments)

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.