

Implementing Recommendations for Ecosystem-Based Management in the Arctic Workshop Report

Introduction

In order to advance ecosystem-based management (EBM) in the context of the Arctic Council, the Arctic Council Ministers established an expert group on 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 EBM 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 EBM in the Arctic. The final report was welcomed by Arctic Council Ministers at the 2013 Ministerial meeting in Kiruna, and the definition, principles and recommendations were approved. During the subsequent Canadian Chairmanship, SAOs requested information from each Working Group regarding their implementation of the EBM recommendations, and these data were compiled by the Arctic Council Secretariat and presented at the October, 2014 SAO meeting.

With these tools in hand, a group of Arctic Council Member State representatives, Working Group members, and EBM experts met in Trondheim, Norway in December, 2014 to discuss the follow-up activities of the 2013 EBM report's recommendations, status of implementation, linkages with activities of the Arctic Council Working Groups (such as the PAME-led Ecosystem Approach Expert Group on marine-related issues), and opportunities for advancing EBM during the period of the upcoming U.S. Chairmanship and beyond. Sponsored by the Gordon and Betty Moore Foundation and the Oak Foundation, and supported by the Arctic Council Secretariat, this workshop had the following objectives:

1. Assess progress to date: The workshop will review progress towards implementation of the Arctic Council's recommendations for advancing EBM. Each Working Group will present its EBM efforts in relation to the Kiruna EBM recommendations and identify critical bottlenecks that need to be addressed. Permanent Participant and non-governmental organizations will contribute perspectives and priorities regarding the EBM recommendations and the efforts of the Working Groups.
2. Advance Coordination: The workshop will advance cross-pollination of EBM efforts and improve coordination and communication among AC Working Groups – particularly PAME, CAFF, AMAP and SDWG – and with Permanent Participant organizations and other partners.
3. Identify Barriers: The workshop will identify and record concerns and challenges in implementing the EBM recommendations, as they relate to the needs of Permanent Participant organizations and associated co-management bodies, with the goal of providing guidance on how implementation efforts may need to be designed to attain EBM objectives.
4. Identify Opportunities: This workshop will identify opportunities for advancing a subset or priority list of EBM recommendations. The workshop report will provide an action plan or series of next steps for addressing these recommendations."

Workshop Findings

This workshop featured a remarkable brain trust, including some 30 experts from government institutions across six Arctic Council Member States and three Permanent Participant organizations, as well as experts from academia and civil society. It was clearly advantageous to co-locate this workshop with the CAFF Arctic Biodiversity Congress, a high-profile and well-attended meeting.

The discussions were initiated with an assessment of the degree of engagement by four Arctic Council Working Groups (AMAP, CAFF, PAME, and SDWG) in the context of twelve EBM recommendations from the EBM report, and an analysis of the roles of these Working Groups as they relate to six elements of EBM implementation [derived from a framework developed by the Ecosystem Approach Expert Group (EA-EG) of PAME] (Figures 1 and 2).

It is important to note that the Arctic Council does not have a mandate to engage in the management aspects of EBM, and that its activities on EBM are directed at facilitating approaches and knowledge systems that enable EBM, such as identifying and describing objectives, performing assessments, and identifying ecosystem values (Figure 2). Although the findings that are presented in Figures 1 and 2 have not been formally endorsed by the four aforementioned Arctic Council Working Groups, they make the generally accepted point that each of the four Working Groups have committed to implementing most of the recommendations, albeit to varying degrees (Figure 1). When the EBM recommendations are grouped into five/six elements of implementation, it is clear that all Working Groups will need to work cooperatively, as no single Working Group is in a position to deliver all five of the elements essential to inform EBM (Figure 2).

A significant item of discussion during the workshop was a perceived lack of coordination among the Working Groups on EBM, despite the ongoing efforts of the EA-EG and other relevant efforts within the other Working Groups, as well as in other international fora. The experts generally agreed, as a top action item, on the need to identify a process or function to lead and improve EBM coordination among Arctic Council Working Groups and Member States. It was suggested that this could be an ongoing role of the Arctic Council chairmanship.

Another matter causing some concern was that some national-level observation systems are currently unstable. The scientific communities in some Arctic states are experiencing budgetary restraints that limit the development of their national observation systems in terms of the collection of data and maintenance of time series. In the long run this is a serious threat to the integrated ecosystem assessments that are the basis of EBM, as these rely on a steady stream of new data in established time series. The maintenance of observation networks and data collection is essential to integrated ecosystem assessments and to the EBM efforts that depend upon them. There was general agreement to continue to encourage and enhance access to the multidisciplinary data required for the implementation of EBM, building upon existing work in the Arctic Council Working Groups and through ongoing engagement and coordination with relevant outside organizations (an action supported by the original 2013 report).

Discussions also focused on some of the other barriers and opportunities going forward and generated a set of EBM Action Items - important next steps that would not take place without coordinated effort. The list of Action Items that follows does not represent official approval

by Arctic Council Member States or Working Groups, but represents the convergence of views of this group of experts as perceived by the session chairs. The following criteria for identifying action items were discussed and agreed to during the meeting: a) must be timely or urgent, b) must have direct relation to the 12 approved EBM recommendations from the EBM Expert Group report, c) must bring added value, and d) would not likely happen independently of this coordinated effort.

EBM Action Items

Action item 1:

- What: Identify a lead to ensure coordination across Arctic Council Member States, PPs, Working Groups, and partners.
- Who: Chairmanship, with assistance from Arctic Council Secretariat
- When: Upon next ministerial
(Additional ideas for coordination included: Establish an EBM Advisory Group; establish a series of workshops among relevant Working Groups; coordinate around case studies; identify overarching goals and objectives; and incorporate one member from each of the Working Groups into the PAME-led EA-EG)

Action item 2:

- What: Ensure Working Group work plans address implementation of the 12 EBM recommendations, as appropriate.
- Who: AMAP, CAFF, PAME, SDWG (with Arctic Council Secretariat encouragement, through US Heads of Delegation)
- When: Immediately, Working Groups are currently finalizing plans for the next chairmanship period in anticipation of approval at the 2015 Arctic Council Ministerial in Iqaluit

Action item 3:

- What: Following a review of Arctic Council and non-Arctic Council assessments of ecosystems, provide guidance on approaches for integrating such assessments in both marine and terrestrial environments.
- Who: PAME EA-EG with CBMP and CAFF
- When: By end of U.S. Chairmanship

Action item 4:

- What: Participatory case study approach to illustrate interactions between Traditional and Local Knowledge (TLK) and science in developing and implementing EBM. Ensure participation of relevant Working Groups in a specific case study on monitoring coastal Arctic.
- Who: CAFF (CBMP), PAME, AMAP, SDWG with encouragement from the Arctic Council Secretariat and Chairmanship
- When: By end of U.S. Chairmanship

Action item 5:

- What: The SDWG initiative on addressing TLK should consider the EBM report's recommendation 1.3 regarding integration of TLK.
- Who: SDWG
- When: Immediately, with results to report by end of U.S. Chairmanship

Action item 6:

- What: Consider the utility of a regional seas program as a platform for implementing EBM principles in the Arctic marine areas.
- Who: Arctic Council Member States
- When: By end of U.S. Chairmanship

Action item 7:

- What: Arctic Council bodies should express assessment units in a consistent manner. 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 EBM 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.
- Who: CBMP (CAFF), PAME, AMAP
- When: During the U.S. Chairmanship

Action Item 8:

- What: 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, 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.
- Who: CAFF, PAME, AMAP, SDWG, PPs
- When: Upon delivery of TEEB scoping study at the 2015 Arctic Council Ministerial in Iqaluit

Action item 9:

- What: Working Groups 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.
- Who: CAFF, PAME, AMAP, SDWG
- When: By end of U.S. Chairmanship

Figure 1. Degrees of engagement of Working Groups in implementing the EBM recommendations from Kiruna (2013) based on the responses tendered by Working Groups to SAOs at their meeting in Yellowknife in October, 2014. As the analysis was presented to stimulate workshop discussions, the degrees of commitment were not officially vetted through the Working Groups, hence the degree of priority for each recommendation may not accurately reflect levels of engagement.

Status of Implementing Twelve EBM Recommendations in the Arctic Council

		AMAP	CAFF	PAME	SDWG	
<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: green; margin-right: 5px;"></div> High priority or lead </div> <div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: yellow; margin-right: 5px;"></div> Medium priority, collaborat </div> <div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: red; margin-right: 5px;"></div> Low priority or outside miss </div> </div>	Responses from AMAP, CAFF, PAME, and SDWG to EBM	1.1				Overarching EBM goal
		1.2				Ways to manage BECSA
		1.3				Traditional knowledge EBM
		1.4				Transboundary EBM
		1.5				Update BePOMAr
		2.1				Coordinate common EBM
		2.2				Periodic EBM review w/ IEA
	ACSAO-CA03 Yellowknife EXEC 4.3 Oct 2014	3.1				Apply LME and terrestrial units
		3.2				Identify BECSA, EBM, vulnerabilities
		3.3				Ecosystem services for communities
		3.4				Data for EBM, data portal
		3.5				Compare and integrate IEA

Figure 2. Roles of Arctic Council Working Groups in implementing EBM in the Arctic in terms of the six elements of the implementation framework developed by the PAME Ecosystem Approach Expert Group. Gray tone indicates that Working Groups do not have a direct role in managing Arctic resources, but individual Arctic states and individual Working Group members may have such roles.

**Role of Arctic Council WGs in EBM Implementation: Six Steps
Implementing the ecosystem approach to management in the Arctic (PAME EA EG Brochure)**

		AMAP	CAFF	PAME	SDWG	
<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: green; margin-right: 5px;"></div> High priority or lead </div> <div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: yellow; margin-right: 5px;"></div> Medium priority, collaborate </div> <div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: red; margin-right: 5px;"></div> Low priority or outside mission </div> </div>	Identify	1				
	Describe	2				
	Set objectives	3				
	Assess	4				
	Value	5				
	Manage	6				

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EBM Workshop: December 1, 2014

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