



ECOSYSTEM APPROACH PROGRESS REPORT

Joint Group of Experts on the
Ecosystem Approach to Management

APRIL 2015



PAME
Protection of the Arctic Marine Environment



ARCTIC COUNCIL

Joint Group of Experts on the Ecosystem Approach to Management

Ecosystem Approach Progress Report 2013-2015

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Protection of the Arctic Marine Environment

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Background

PAME established in 2007 an expert group on the Ecosystem Approach to Management (the EA-EG). This was broadened in 2011 to become a PAME-led joint expert group with participation also of other Arctic Council working groups (AMAP, CAFF and SDWG). Norway and USA are co-lead countries for the theme 'Ecosystem Approach to management' (EA) under PAME. The work of the EA Expert Group is carried out according to a work plan as part of the agreed PAME Work Plan for 2013-2015 (Annex 1).

The co-leads presented a progress report on the EA work to the PAME II-2014 meeting in Whitehorse, Canada, 16-18 September 2014. The outcome of the discussion at PAME on the EA item as reflected in the RoD is included as Annex 2.

Revised Terms of Reference

A new Terms of Reference (ToRs) 2015 – 2017 for the joint EA-EG is in Annex II. A first draft version of ToRs was presented at the PAME II-2014 meeting. According to the RoD, the PAME secretariat sent the draft ToRs to the other Arctic Council WGs (AMAP, CAFF, SDWG) for their consideration and comments by 15th of November. The ToR were revised in response to comments received from AMAP and Norway. Consultations with SDWG occurred twice in 2014 and are currently ongoing. The revised ToR was agreed by the PAME I-2015 meeting..

EA Coordination Activities

The relevant RoD of the PAME-I 2014 reads, "*PAME welcomes the progress report on the work of the Ecosystem Approach expert group (EA-EG) and noted the importance to further advance the coordination effort of a common approach to the work of the Arctic Council on EBM in the marine part of the Arctic.*" The EA-EG led or contributed to five meetings July – December 2014 in order to advance coordination of a common approach to EA within the Arctic Council. Coordination activities supported by the grant from the Oak Foundation are denoted (Oak).

SDWG Meeting in Yellowknife (Oak)

At the invitation of the SDWG secretariat one EA member (Skjoldal) attended the SDWG meeting in Yellowknife, 18-19 October 2014 to learn from, and to engage and inform about the activities of the EA-EG and to identify possible areas of mutual interest.

ICC Quadrennial Meeting in Inuvik (Oak)

One EA member (Mundy) attended the Inuvik 2014 on July 24th meeting to learn from, and to engage and inform PPs from the circumpolar ICC. ICC leaders from around the Arctic identified management issues and solutions. Informal discussions on coordinating EA implementation were held with the SDWG chair (Wark). Follow up discussions on the 4th EA Workshop recommendation for a joint US/Canada transboundary monitoring project in support of EA in the Beaufort Sea were held with DFO Winnipeg (Newton) management.

Inuvialuit Game Council in Whitehorse (Oak)

Following the PAME II 2014 meeting EA member (Mundy) attended the Council Meeting in Whitehorse on September 17th to learn about current management issues for living resources in the marine and terrestrial areas of the western Canadian Arctic. The

opportunity was taken to inform and engage members of one of the primary management bodies of Canada's Inuvialuit Settlement Region, ISR. Contacts for future follow-up were made with the ISR Secretariat (Snow) and past IGC chair (Gilman). IGC members and secretariat were invited to participate in the EA workshops in 2015 and 2016 to bring a ground-level management perspective to implementing EA in the Arctic.

EBM Workshop in Trondheim (Oak)

Three EA members (Skjoldal, Mundy, Coon) participated in the workshop on December 1st to review progress on implementing EA since Kiruna. The workshop report can be downloaded [here](#). The report contains preliminary analyses of the implementation of the recommendations of the EBM expert group, adopted by the Council in 2013 at Kiruna, by the working groups (see report figures 1 and 2), as well as the level of expected participation of the working groups in the five elements of EA implementation identified by the EA-EG in its EA brochure on the PAME web site.

Arctic Biodiversity Congress in Trondheim

Following the EBM workshop, two presentations were made at the Congress (2nd – 4th of December) by EA member (Mundy), *Ecosystem Based Management: Biodiversity, Resilience, and Beyond* in the session convened by an EA member (Sommerkorn) entitled 'Beyond Arctic Biodiversity Conservation; Ecosystem Stewardship and Resilience', and *Implementing the Ecosystem Approach (EA) in the Arctic* in the session 'Ecosystems and Fisheries: Understanding Cumulative Effects and Managing Change'. Informal discussions on coordinating EA implementation activities of work groups were held with CAFF (Larsson), AMAP (Olsen), and SDWG (Klassen).

Planning for the 5th EA Workshop in 2015

The draft workshop prospectus is found in Annex V. The workshop has been discussed to some extent with all working groups and is planned with a focus on the issue of setting ecological objectives as part of the EA. It is designed with a view toward a sixth EA workshop in 2016 which may be part of an international conference on all aspects of implementing EA in the Arctic with multiple work groups and other entities as sponsors.

Summary of Accomplishments from the 2013 – 2015 Workplan

EA concept paper and brochure

A Draft Concept paper was prepared in early 2012 and circulated to participants of the 2nd EA Workshop in Stockholm (22-23 March 2012) and to the members of the EA Expert Group. The Draft Concept paper was also made available to the Arctic Council Ecosystem-based Management (EBM or EA) experts group for use in their work. The Draft Concept paper has also been used as a source of information in the drafting of the chapter on EBM/EA of the AOR (Arctic Ocean Review) Phase II report. A final version of the Draft EA Concept paper was presented to PAME I-2013. A short version of the EA Concept paper, the 'EA brochure', was also presented to PAME I-2013.

After final editing the 'EA brochure' was published as a PAME product available at the PAME web site.

Revision of the Arctic LME map

The revision of the Arctic LME map was completed in May 2013 and defines 18 Arctic LMEs (Fig. 1). A report describing the revision process, the boundary changes, and a brief explanation of the rationales behind each of the current boundaries was prepared, printed and approved by PAME for consideration at the Ministerial Meeting in Kiruna, Sweden, in May 2013. The revised map of the Arctic LMEs was adopted by the Arctic Council Ministers at the Kiruna meeting. The LME Report may be downloaded from the PAME web site:

<http://www.pame.is/arcticlarge-marine-ecosystems-lme-s>

3rd EA workshop on 'data issues' Reykjavik, Iceland, 10-11 June 2013

The topic for the workshop was 'data issues' such as availability, access, management etc. in relation to the need for data to conduct integrated assessments. The workshop addressed these issues from the perspectives of single LMEs and the pan-Arctic scale. A report from the workshop has been prepared and is available at the PAME web-page

(<http://www.pame.is/reports>)

4th EA workshop, Vancouver, Canada, 16-18 June 2014

The 4th EA workshop was planned and organized by a planning group consisting of the two co-leads and members from Canada, AMAP, CAFF, PAME and WWF. The workshop reviewed progress on development of Integrated Ecosystem Assessment (IEA) and related EA aspects with focus on two Large Marine Ecosystems (LMEs), the Barents Sea and the Beaufort Sea. It was attended by 22 participants from five countries (Canada, Iceland, Japan, Norway and USA).

EA 'Road map'

A short discussion note (2 pages) called "Road map" for EA work in the Arctic was included as an annex (annex 6) to the EA Progress Report to PAME I-2014 meeting. The document highlighted two aspects which should be discussed and considered in relation to the EA and IEA work in the Arctic:

1) Work carried out inside and outside of the sphere of the Arctic Council, and 2) Work carried out at the scales of LMEs and pan-Arctic.

Oak Foundation project to establish a Community of Practice on EA in the Arctic

The Oak Foundation is supporting a project 'Implementing the Ecosystem Approach to Management (EA) in the Arctic: Building the Circumpolar Community of Practice' run in association with the EA-EG and managed by the PAME secretariat. The goal of the project is to support implementation of the ecosystem approach to management (EA) in the Arctic marine environment through development of a functional Community of Practice (CoP) specializing in Arctic EA.

The project aims to consolidate gains in knowledge base relevant to EA by establishing a web-based inventory of relevant information products such as papers and reports on EA and

components such as IEA, objectives etc. The project also aims to create a CoP by identifying and establishing communications among specialists from relevant agencies of the Arctic States, the circumpolar indigenous communities, and non-governmental entities.

See the document [PAME \(I\)/14/8.0/Supplement to the EA Progress Report – IEAA Web content for further explanation.](#)

Map information – areas of heightened ecological significance, habitats and human activities

Two of the items on the work program (Annex 1) relate to mapping and spatial map information on areas of heightened ecological (and cultural) significance, human uses and habitats. There has been limited work on these items by the EA-EG so far. We had a presentation on the general issue of marine spatial planning in relation to the EA at the Vancouver workshop (by Erik Olsen, IMR, Norway). We also had some discussion on these items but of limited scope since they were peripheral to the main focus areas for the workshop.

At the workshop it was noted that there are at least three different thematic information layers that are relevant and of interest in the context of IEA and EA:

- i) the identified areas of heightened ecological and cultural significance identified in the AMSA II report by AMAP/CAFF/SDWG,
- ii) coastal and marine habitats,
- iii) human activities (infrastructure, usage areas, etc.).

We will continue work on these items, specifically in relation to the broader issue of IEA (how to use spatial information on important areas, habitats and human activities in an assessment context). These spatial items should be considered in the revised EA work plan for 2015-2017.



ANNEX I - EA WORK PLAN ITEMS 2015-2017

The work of the Joint Ecosystem Approach (EA) Expert Group (EA-EG) is based on the Terms of Reference (ToR) and is structured according to the six identified elements in the framework for implementation of the EA.

- 1) Contribute to development of ecological objectives:
 - a. Convene a workshop (the 5th EA workshop) on the issue of ecological objectives, summer 2015;
 - b. prepare a scoping white paper on the issue of developing Ecological Objectives by Arctic States, PPs, and AC working groups – Autumn 2015 (PAME II-2015 and other WGs); and
 - c. prepare a Report "Status of Setting Ecological Objectives in the Arctic" for the SAO meeting spring 2016 (By LMEs, by Work Group).
- 2) Follow up actions on Integrated Ecosystem Assessments:
 - a. Consider methodological developments in IEA in collaboration with ICES (ICES WGs on IEA for Barents Sea, Norwegian Sea) and other relevant organizations;
 - b. contribute to/review progress in the development of Transboundary Beaufort project;
 - c. review and report on progress on work on IEA in other Arctic LMEs (e.g. Barents, Bering, Chukchi, Beaufort, Baffin) including experiences from AMAP AACA-C and CAFF CBMP; and
 - d. prepare a briefing "Work on Integrated Ecosystem Assessments of Arctic LMEs" for consideration by the working groups in Fall 2016/Spring 2017
- 3) Implementation of EA in the Arctic:
 - a. Convene a workshop (possible 6th EA workshop) or conference on the status of implementing the EA in the Arctic – spring/summer 2016;
 - b. prepare a workshop report or conference proceedings – Autumn 2016; and
 - c. prepare a 2017 Report to Ministers "Status of Implementation of the Ecosystem Approach to Management in the Arctic" (By LME, by Work Group)
- 4) Consider issues of scale in EA:
 - a. Prepare a scoping document on the relationships between the specific ecosystem (LME) scale and the wider pan-Arctic (and global) scale(s) – Autumn 2015; and
 - b. prepare a scoping document on use of information on identified areas of heightened ecological and cultural significance for assessment and management purposes within LMEs – Spring 2016.
- 5) Supporting activities:
 - a. Support development of a network of experts (community of practice) working to implement EA in the Arctic; and
 - b. support development of a bibliographic resource that identifies key works in EA and IEA.
- 6) Reporting:
 - a. The EA-EG will provide half-yearly progress reports on the work to PAME and the other AC WGs.

ANNEX II – Terms of Reference for Joint EG-EA 2015-2017

Background

The Arctic Council (AC) adopted in 2004 the Arctic Marine Strategic Plan (AMSP) which had the ecosystem approach to management (EA) as a core and overarching principle. One of the strategic actions (7.4.1) was to identify the Large Marine Ecosystems (LMEs) of the Arctic, and PAME developed a working map of 17 Arctic LMEs which was adopted by the Arctic Council in 2006. The map was revised during the 2011-2013 period to include 18 Arctic LMEs. The revised map was approved by the Arctic Council in May 2013.

PAME established in 2007 an expert group (EG) on the Ecosystem Approach to marine management (EA, or the equivalent term Ecosystem-based management, EBM) co-lead by the USA and Norway with work activities identified in PAMEs biennial work plans. The revision of the Arctic LME map was done under this EG with input from other Working Groups and Arctic States.

With reference to the AC approval of the PAME Work Plan 2011-2013 (May 2011), with particular reference to the updating of the Arctic Marine Strategic Plan (2004) and the EA work, PAME was given the mandate to broaden the scope and membership of its EA EG. PAME extended its invitation to the other Arctic Council working groups dealing with marine-related issues to participate in this work in 2011. The rationale for extending the PAME EA-EG was based on increased emphasis on the EA as the foundation of the Arctic Council's work and the essential need to apply the EA to manage Arctic marine-related issues. PAME agreed in 2011 to a Terms of Reference for the EA-EG as a basis for the Work Plan for 2011-2013. The EA Work Plan was revised as part of the PAME Work Plan for 2013-2015.

In addition to revision of the LME map, the EA-EG has produced an EA concept paper and considered various aspects of Integrated Ecosystem Assessment (IEA) as a key component of the EA. The EA-EG has arranged four workshops as part of its work (Tromsø, Norway, January 2011; Stockholm, Sweden, March 2012; Reykjavik, Iceland, June 2013; and Vancouver, Canada, June 2014). Reports from these workshops as well as progress reports on the EA work are available at the [PAME webpage, here](#).

The Arctic Council established an Expert Group on Ecosystem-based Management (EBM) in 2011 which delivered their report back to ministers at the meeting in 2013. One of the recommendations of the EBM Expert Group which was adopted by the Arctic Council in May 2013 in Kiruna was to: *“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”*. This Terms of Reference is developed in response to this and other marine-specific EBM recommendations in the Kiruna Declaration. The Arctic Council working groups addressing marine issues have identified a need for a mechanism to facilitate exchange of information and experiences gained to support the development of a common and coordinated approach to the implementation of the EA by Arctic states. The EA-EG with the participation of relevant Arctic Council working groups is well suited to serve as such a mechanism with the aim to contribute collectively to the integration of EA implementation into the overall work of the Arctic Council.

Purpose of the EA Expert Group

The EA expert group will consider scientific and technical aspects related to the implementation of the EA to the management of the Arctic LMEs and contribute to ongoing Arctic Council projects of relevance.

The aims of the group are to:

- ✓ Provide a forum for and facilitate exchange of information and experiences that will support implementation of the EA by Arctic states and AC working groups.
- ✓ Consider methodological development, and develop appropriate documents to support the development.
- ✓ Contribute to and review progress in the development of IEA within the Arctic, and provide advice and guidance as appropriate.
- ✓ Give input to the development of recommendations for further work in AC working groups.
- ✓ Help to develop consistency in the EA work performed by states and in the working groups.
- ✓ Identify, discuss and address issues of common concern, and prepare scoping papers, if requested.
- ✓ Facilitate access to supporting activities and resources.

It is not intended that the EA-EG will produce IEAs for any specific area but rather to facilitate exchange of information and provide guidance to contribute to a common approach among Arctic Council member states.

The issues and needs identified in Annex A for the 6 elements of implementation of the EA will form the basis for the more detailed work plans for the EA-EG. The EA concept paper, [available here](#), describes a framework for implementation of the EA with 6 main elements. The main focus of the work will be on scientific, technical and methodological issues related to *elements 3 (ecological objectives), 4 (IEA), and 5 (valuation)*.

EA Expert Group membership, co-chairs and ways of working

The members of the EA expert group are nominated by AC member states, working groups and permanent participants.

The EA co-chairs are nominated for the period as defined by the EA work plan (2015-2017).

The work of the EA-EG will be guided by the co-chairs following-up on the decisions made by PAME and the other contributing working groups, including development of EA-EG work plans. The co-chairs call and chair EA meetings and workshops.

The co-chairs are primarily responsible for the conduct of EA work, developing an equitable division of work among EA expert group members. The EA co-chairs are responsible for reporting to Arctic Council working groups. It is expected that some of the recommendations for further work will be accomplished throughout the Arctic Council's working groups and their associated expert groups and expert networks. By whom specific tasks will be accomplished (e.g. which working group) will depend on topics, available expertise and other resources. In addition Arctic Council member states are engaged in developing these elements and they will be part of and contribute to these continuing efforts.

The EA-EG is expected to meet twice annually either in-person or by teleconference. In addition, members of the group are expected to participate in organizing and convening EA-EG related workshops as stipulated within work plans of relevant working groups.. In addition members may expect to be contacted by the co-chairs and secretariat between meetings for advice when the need arises.

A list of members of the expert group (to be updated as needed) is in Annex IV.

Annex A - Framework for implementation of the EA

The EA concept paper, [available here](#), describes a framework for implementation of the EA with 6 main elements:

1. identify the ecosystem (LMEs),
2. describe the ecosystem,
3. set ecological objectives,
4. assess the ecosystem (Integrated Ecosystem Assessment - IEA),
5. value the ecosystem, and
6. manage human activities in an adaptive manner.

Regarding the first element, **identify the ecosystem**, we have completed the assigned task of identifying the Arctic LMEs, which form the starting point for management and management cooperation in the case of transboundary LMEs. However, significant ongoing issues related to integration and differentiation of spatial scales will need to be addressed. For example is the important matter of how to integrate issues and results of work at the scale of LMEs to address the larger, pan-Arctic scale, and *vice versa*.

Regarding the second element, **describe the ecosystem**, there is a large body of information and many descriptions of the Arctic marine ecosystems including the recent Arctic Biodiversity Assessment (ABA) by CAFF. As part of the Assessment of Oil and Gas Activities in the Arctic (OGA), AMAP has produced extensive descriptions of each of the Arctic LMEs including detailed information on species of fish, birds and mammals. There is a need to consider and clarify how existing and emerging descriptions of Arctic marine ecosystems can be applied in the context of the EA, for instance in relation to conducting IEAs. The third element, **setting ecological objectives**, provides an important component of the EA, defining in practical terms sustainability in relation to the extent of human use of natural resources and associated environmental impacts. There is a need to compare ongoing efforts to set regional and national ecological objectives in order to support development of transboundary ecological objectives. The work of the International Council for Exploration of the Sea (ICES) is expected to make important contributions to identifying and applying ecological objectives in the EA.

The fourth element, **assess the ecosystem, or Integrated Ecosystem Assessment** (IEA), is essential to implement EA. There is a need to continue work to compile information on, and compare regional and national approaches to the basic methodology for conducting IEA, as well as promoting and facilitating the production of IEAs for the various Arctic LMEs. An IEA provides information on status and trends of the main ecosystem components, including evaluation of impacts by various human activities such as fishing, pollution, coastal development, and others, as well as the overall or cumulative impacts of those activities. The state of development toward IEA is quite different across the Arctic, being reasonably well developed in some of the boreal and sub-Arctic areas where there are large fisheries (e.g. Barents and Bering seas), and being less well developed in some of the high Arctic LMEs (e.g. Beaufort and Kara seas) that lack large fisheries. A specific issue to consider is the relationship of IEA to other types of environmental assessments, such as Environmental Impact Assessments (EIAs), and how such assessments can support the work on IEA for specific LMEs. A related issue is how to coordinate and integrate across assessments carried out for various purposes both outside the Arctic Council (e.g. fish stocks and multispecies assessments) and by working groups inside the Arctic Council (e.g. AMAP AACA-C project). Collaboration with relevant organizations in particular ICES will be sought to further advance international understandings on IEA.

The fifth element, ***valuing ecosystem goods and services***, provides an essential link between the natural ecosystem (of which man is part) and the human subsystem with its cultural, social and economic aspects. CAFF, in partnership with TEEB, UNEP, WWF Arctic and GRID-Arendal have launched a TEEB Arctic Scoping Study as a first step towards mainstreaming Arctic biodiversity and ecosystem services into policy and decision-making processes. There is a need to further develop and use methodology for valuing ecosystem services and to integrate this aspect into IEA in its fully integrated form (including socio-economic information from societal drivers to response).

The sixth and final element, the ***adaptive management of human activities*** is implemented by the Arctic States, and needs ultimately to be based on comprehensive IEAs on the geographic scale of LMEs, which may require transboundary cooperation. IEAs identify management actions and interventions that are necessary to achieve the overarching goals of sustainable use of resources and conservation of biodiversity that are expressed by operational ecological objectives. Adaptive management of human activities requires practical scientific advice based on the outcome of the IEA process. Such practical scientific advice serves as the basis for decision-making that allow managers to achieve specific management objectives in an ecosystem context. ICES has a long history of providing scientific advice to management in an international context, making it a relevant and important partner for the work on this topic.



ANNEX III – Records of Decisions on EA for 2013-2015

PAME I-2015:

- ✓ PAME welcomes the progress report on the work of the Ecosystem Approach expert group (EA-EG) describing work over the last 6 months as well as a summary of achievements under the work plan for the 2013-2015 period. PAME notes the importance to continue the outreach activities to secure a strong involvement of the other working groups working on marine-related issues (AMAP, CAFF and SDWG).
- ✓ PAME welcomes and agrees to the new and revised Terms of reference (ToR) for the PAME-led joint Ecosystem Approach Expert Group (EA-EG) with participation of other Arctic Council working groups (AMAP, CAFF, SDWG) in an effort to ensure an adequate breadth in expertise of nominated members to the EA-EG. Draft versions of the ToR have been sent to the other working groups for their comments and PAME notes that there may yet be acknowledgements added in response to comments to be received.
- ✓ PAME welcomes the planning and convening of the 5th EA workshop on “Methodology and status of development of ecological (quality) objectives for Arctic Large Marine Ecosystems” by the EA-EG. Tentative venue and time is Bergen, Norway, 26-27 May 2015.
- ✓ PAME welcomes the planning of a scoping workshop on conducting an integrated ecosystem assessment for the central Arctic Ocean by the International Council for the Exploration of the Sea (ICES) in collaboration with other relevant Arctic Council working groups, tentative venue and time is Bergen, Norway 28-29 May 2015.

PAME II-2014:

- ✓ PAME welcomes the progress report on the work of the Ecosystem Approach expert group (EA-EG) and noted the importance of making this a joint group with active participation of other Arctic Council working groups (AMAP, CAFF and SDWG in particular). PAME Chair/Secretariat to contact the other working groups to encourage their active participation.
- ✓ PAME welcomes the report from the 4th EA workshop in Vancouver 16-18 June 2014 and notes the progress on development of Integrated Ecosystem Assessment (IEA) for the Barents Sea and the recommendation to develop a transboundary EA/IEA pilot project in the Beaufort Sea LME.
- ✓ PAME welcomes the planning of a 5th EA workshop on the topic of setting ecological objectives and notes the importance of a planning group being established with participation of other Arctic Council working groups (AMAP, CAFF, SDWG) and Permanent Participants. Plans for the workshop will be presented for approval at the next PAME meeting (PAME I-2015).
- ✓ PAME welcomes the draft Terms of Reference (ToR) for the EA-EG and agrees that these should be sent now by the PAME secretariat to the other Arctic Council WGs (AMAP, CAFF, SDWG) for their consideration and comments by 15th of November. An updated version of the ToR will be prepared by the EA co-leads for approval at the PAME I-2015 meeting.
- ✓ PAME notes that the membership of the EA-EG should be broadened to include an active network of experts on EA including IEA, ecological objectives and ecosystem evaluation. PAME representatives are encouraged to coordinate nominations of experts with their national representatives to ensure an adequate breadth in expertise of nominated members to the EA-EG. Nominations should be sent to the PAME secretariat by 15 December 2014.

- ✓ The EA co-leads, in cooperation with the EA-EG members, to develop items for consideration at PAME I-2015 for inclusion in the PAME 2015-2017 Work Plan.

PAME I-2014:

- ✓ PAME welcomes the progress report on the work of the Ecosystem Approach expert group (EA-EG) and noted the importance to further advance the coordination effort of a common approach to the work of the Arctic Council on EBM in the marine part of the Arctic.
- ✓ EA co-leads to provide the PAME members with a list of skill sets and areas of expertise for new contributing members of the EA-EG. In consideration of the needs PAME members are requested to nominate or re-nominate members for this group to the PAME Secretariat by February 28, 2014.
- ✓ PAME Chair to write to the other Arctic Council working groups addressing marine-related issues of relevance to ask them to nominate/re-nominate active members/points of contact from their network of experts for the EA-EG by February 28, 2014.
- ✓ PAME Secretariat to circulate to PAME members for their comments on the PAME I-2014 EA-EG Progress Report Annex 5: EBM Recommendations and response on follow-up by PAME and Annex 6: Road map for EA work in the Arctic. Deadline for comments on Annex 5 is March 15 and deadline is May 2, 2014 for Annex 6. EA co-leads and the EA-EG members to provide revised versions of these annexes for the PAME II-2014 meeting.
- ✓ PAME Chair to request inclusion of the follow-up on EBM Expert Group Recommendations on the agenda of the next meeting of Arctic Council Working Group chairs and secretaries to ensure coordination of efforts in this regard.
- ✓ PAME welcomes the planning and convening of the 4th EA workshop on “Integrated Ecosystem Assessment (IEA) – Understanding national approaches and reviewing progress on IEA in the Arctic LMEs”. Tentative venue and time is Vancouver, Canada 18-20 June.
- ✓ PAME urges the EA co-leads and the EA-EG members to ensure an active involvement of the other Arctic Council working groups working on marine-related issues of relevance (AMAP, CAFF and SDWG) in the planning and participation of this workshop.
- ✓ The EA co-leads, in cooperation with the EA-EG member, to revise its Terms of Reference, taking into account new and ongoing activities (e.g. the follow-up of the EBM Recommendations) and submit a revised draft to PAME II-2014 meeting for approval.

PAME II-2013:

- ✓ PAME welcomes the report from the 3rd Ecosystem Approach workshop in Reykjavik, Iceland, 10-11 June 2013, and the progress report on the work of the Ecosystem Approach expert group (EA-EG).
- ✓ PAME members are urged to nominate or re-nominate members of the EA expert group. PAME Secretariat will write to the other Arctic Council working groups working on marine-related issues of relevance to ask them to nominate active members from their network of experts so that the EA-EG can function effectively as a joint expert group to fulfill recommendations of the EBM 2013 Ministerial Report.
- ✓ PAME notes that a 4th EA workshop is being planned for spring or early summer 2014. The topic for the workshop is to be further discussed but could be on the issue of integrated ecosystem assessment (IEA) with focus on the Beaufort Sea LME but in a comparative and pan-Arctic context.

- ✓ PAME recognizes the leading role that the EA-EG could play in assuring coordination of a common approach to the work of the Arctic Council on EBM in the marine part of the Arctic.

ANNEX IV – EA-EG current membership (version 27 Jan 2015)

Members	Ecosystem Approach Expert Group
	Co-leads: Norway and USA
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ANNEX V – DRAFT PROSPECTUS FOR 5TH EA WORKSHOP

PAME, CAFF, AMAP, SDWG – Ecosystem Approach Expert Group

Fifth Ecosystem Approach Workshop

Methodology and status of development of ecological (quality) objectives for Arctic Large Marine Ecosystems

Venue and time: Bergen, Norway - 26-27 May 2015.

Introduction

The Ecosystem Approach to management (EA) is now widely accepted as a key management strategy or principle. It is defined as **integrated management** of human activities to achieve sustainable use of ecosystem goods and services and maintenance of ecosystem integrity. Application of the EA requires a focus on the **overall state of the ecosystem** and a corresponding set of **ecological objectives** that can guide management decisions toward achieving and maintaining good or acceptable status. The ecological objectives bridge the desired state of the ecosystem and acceptable levels of human activities and represent (either directly or following translation) management objectives for regulations and interventions. Setting an agreed set of ecological objectives is the step in the EA process where sustainability is defined in practical management terms.

EA was adopted as a principle by the Arctic Council as part of the Arctic Marine Strategic Plan (AMSP) in 2004. PAME established an EA expert group (EA-EG) in 2007 that was broadened with participation of AMAP and CAFF in 2011. The EA-EG has prepared a concept paper with a framework for implementing the EA by Arctic states and a map of 18 Large Marine Ecosystems (LMEs) for the Arctic area. As part of this work, the EA-EG has convened four EA workshops in 2011-2014, the last (4th EA workshop) in Vancouver in June 2014. The workshops have dealt with various issues including LME boundaries, EA framework and Integrated Ecosystem Assessment (IEA). Reports from the four EA workshops and progress reports from the EA-EG are available at the PAME webpage.

The 5th EA workshop will focus on the topic of ecological objectives and address this through summaries and reviews of existing management objectives related to living resources and the environment in current management systems and legislation, and by reviewing the state-of-the-art in developing more comprehensive sets of ecological objectives (e.g. the work in Europe in OSPAR and in implementing the EU Marine Strategy Framework Directive, MSFD). We will also take into account the perspectives of Permanent Participants of their value systems and use of traditional knowledge and respect as a basis for the subsistence harvest and use of nature by indigenous peoples of the Arctic.

Workshop objectives

1. Review existing management objectives for use of living and non-living resources, environmental protection and nature conservation in national legislation and management systems.
2. Review developments and methodologies for defining a comprehensive set of ecological objectives as a step in implementing a more holistic management approach, e.g. the EA.
3. Review/learn about the principles and values embedded in the use and management of living resources and the wider nature by indigenous peoples of the Arctic.

4. Identify next steps in the work to develop ecological objectives as part of the implementation of the EA for Arctic LMEs by Arctic states supported by collaborative efforts in the Arctic Council.

Further planning of the workshop

A detailed program for the workshop including presentations and discussion items will be drawn up by a planning group with representatives from AMAP, CAFF, SDWG and PPs in addition to the co-chairs and selected members of the EA-EG.

The co-chairs and planning group will prepare a background document for the workshop providing initial summaries of current status with regard to ecological objectives in national management systems and legislation (e.g. Canada, Norway and the USA/Alaska). The background document will also provide an overview of some of the relevant international processes where environmental standards and ecological objectives are being developed (e.g. OSPAR). It is envisioned that the background document will form the backbone of a report on the status of development of ecological objectives as part of implementing the EA for Arctic LMEs, further elaborated and informed by the outcome of the workshop. This report could be a potential deliverable to the Arctic Council at the end of the US chairmanship in spring 2017.

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