

Joint Group of Experts on the Ecosystem Approach to Management

Progress report to PAME II-2015

Background

PAME established an expert group on the Ecosystem Approach to Management (the EA-EG) in 2007. 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.

A new Terms of Reference (ToRs) 2015–2017 for the joint EA-EG was developed in consultations with AMAP, CAFF and SDWG and agreed at the PAME II-2015 meeting and submitted to the Arctic Council Ministers in April 2015 as Annex II of the EA Progress Report for the period 2013-2015. In the ToRs it is recognized that the 6 elements of the implementation of the EA to management developed in a [concept paper](#) will form the basis of the work of the EA-EG. The work is carried out according to a work plan as part of the agreed PAME Work Plan for 2015-2017 (Annex 1).

An [EA progress report](#) including summary of achievements for the period 2013-2015 was presented to PAME I-2015. The section on the EA agenda item in the RoDs from PAME I-2015 is included as Annex 2.

EA activities and achievements in 2015

Fifth EA workshop on ecological objectives

The 5th EA workshop was held at the Institute of Marine Research (IMR) in Bergen, Norway, 26-27 May 2015. The topic of the workshop was "*Methodology and status of development of ecological (quality) objectives for Arctic Large Marine Ecosystems*". The workshop was attended by 20 participants from 6 countries (Canada, Finland, Iceland, Norway, South Korea and USA). Follow the link to the final [workshop report](#).

At the workshop we reviewed existing ecological objectives in national legislation and management with examples from Canada, Norway and the USA. We also reviewed developments toward more comprehensive and integrated sets of ecological objectives with examples from the Marine Strategy Framework Directive (MSFD) of the European Union and the work on integrated management plans in Norway. There was also a session on perspectives of Indigenous Peoples with presentations on cultural values and ecological objectives inherent in indigenous knowledge (IK) and indigenous management practices. It was recognized that objectives are rooted in cultural values and that the ecological objectives inherent in IK are essential constituents of the ideal set of ecological objectives to be used in implementing the ecosystem approach to management in the Arctic.

A background document was prepared for the workshop (included as [Annex 3 in the 5th EA workshop report](#)). This document will be further elaborated and used as the basis for a report "Status of Setting Ecological Objectives in the Arctic" to be finalized in spring 2016 (item 1 c on the Work plan).

The workshop agreed a number of recommendations and next steps (Annex 3). Information on existing ecological objectives will be sought from more countries and we are also seeking more information on Indigenous management practices. The information will be used for extended analysis to be included in the status report on ecological objectives. One

recommendation is to explore the need for common guidelines for how to set ecological objectives in the Arctic.

ICES/AMAP/CAFF/PAME workshop on IEA for the Central Arctic Ocean (ICES WKICA)

A second workshop was held in Bergen (at IMR) back-to-back with the 5th EA workshop on 28-29 May 2015. The topic of the workshop was to consider the purpose and scope for an Integrated Ecosystem Assessment (IEA) for the Central Arctic Ocean and suggest next steps to initiate such work. The [workshop report](#) is also available at ICES and also from [PAME](#) (The Executive Summary of the workshop is included here as Annex 4).

The workshop agreed that it would be worthwhile and good if ICES established a working group (WG) on IEA for the central Arctic Ocean in collaboration with Arctic Council (AC) working groups. Such a new WG could start in 2016 and items for the Terms of Reference/Work Plan were identified.

It was suggested that the thematic scope of an IEA should include three main pressures or human activities: climate change, shipping and fisheries. In relation to shipping, the workshop noted the need to identify sensitive and vulnerable areas (with regard to oil spills and shipping) as a basis for considering the needs for measures to regulate shipping activities in the central Arctic Ocean.

Third Meeting of Scientific Experts on Fish Stocks in the Central Arctic Ocean

In order to pursue the objective of enabling a pan-Arctic IEA, members of the EA EG participated in the third scientific meeting on Arctic fish stocks in Seattle, Washington (April 14 – 16, 2015). The purposes of the third meeting ([terms of reference](#)) were to identify ongoing Arctic research and monitoring activities, and to continue the process of developing the scientific information necessary to support the development of an international agreement on fishing in the Arctic in areas outside the territorial waters of the five Arctic coastal states (the Kingdom of Norway, the Russian Federation, the United States of America, Canada, and the Kingdom of Denmark). Following the third scientific meeting diplomatic representatives of the Arctic coastal states met in Oslo in July where they [reached an agreement](#) on fishing in the central Arctic Ocean that, among other provisions calls for the state of currently available scientific information to be improved by an international program of research and monitoring, JPRSM, to reduce the substantial uncertainties associated with Arctic fish stocks. The agreement also called on Korea, Japan, China and Iceland to join in the international agreement and to participate in implementing the JPRSM. Members of the EA EG plan to participate in the development of the JPRSM, as a logical extension of the pan-Arctic IEA.

LME briefs

With support from the Oak Foundation, the PAME secretariat has produced short (2 pages) information leaflets or briefs for individual Arctic LMEs. Draft versions for the Beaufort Sea LME and the Kara Sea LME have been produced and are available for display. Similar briefs for the rest of the 18 Arctic LMEs will be prepared.

New version of EA brochure

An [EA concept paper](#) produced by the EA-EG has been available from PAME since (July 2014). A shorter version, [the EA brochure](#), has now been prepared as an outreach product to raise awareness and understanding of what the EA to management of Arctic LMEs means.

Next (6th) EA meeting

Work Plan item 3 is about implementation of the EA in the Arctic. Item 3a is:

Convene a workshop (possible 6th EA workshop) or conference on the status of implementing the EA in the Arctic – spring/summer 2016.

There have been five EA workshops since 2011:

1. Tromsø, Norway, January 2011 – LME boundaries
2. Stockholm, Sweden, March 2012 – EA concept and role of IEA
3. Reykjavik, Iceland, June 2013 – data issues for IEA
4. Vancouver, Canada, June 2014 – progress on IEA, Beaufort Sea pilot
5. Bergen, Norway, May 2015 – ecological objectives

The theme for the next meeting is status of implementation of the EA for Arctic LMEs. This could include both scientific issues related to monitoring and IEA and management aspects related to the development from existing to more integrated management systems. The scope of this meeting is envisioned to include policy and indigenous cultural experts, in addition to natural science experts and management practitioners. The format of this meeting is proposed to be an international conference in 2016 with two products: a conference proceedings and contribution to a status report on the implementation of the EA for Arctic LMEs (work plan items 3 b and c) to be delivered to the ministerial meeting in spring 2017. We will start a planning process by identifying a planning group and decide on time and venue for the meeting, tentatively in autumn 2016.

Annex 1 – EA Work plan items 2015-2017

Ongoing activities are based on the work of the Joint Ecosystem Approach (EA) Expert Group (EA-EG) as per the revised Terms of References (ToR) (as a separate document).

EA activities are structured according to the six identified elements in the framework for implementation of the EA.

- i. Contribute to development of ecological objectives: Convene a workshop (the 5th EA workshop) on the issue of ecological objectives, summer 2015; 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 prepare a Report “Status of Setting Ecological Objectives in the Arctic” for the SAO meeting spring 2016 (By LMEs, by Work Group).
- ii. Follow up actions on Integrated Ecosystem Assessments: Consider methodological developments in IEA in collaboration with ICES (ICES WGs on IEA for Barents Sea, Norwegian Sea) and other relevant organizations; Contribute to/review progress in the development of Transboundary Beaufort project; 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 prepare a briefing “Work on Integrated Ecosystem Assessments of Arctic LMEs” for consideration by the working groups in Fall 2016/Spring 2017
- iii. Implementation of EA in the Arctic: Convene a workshop (possible 6th EA workshop) or conference on the status of implementing the EA in the Arctic – spring/summer 2016; Prepare a workshop report or conference proceedings – Autumn 2016; and prepare a 2017 Report to Ministers “Status of Implementation of the Ecosystem Approach to Management in the Arctic” (By LME, by Work Group)
- iv. Consider issues of scale in EA: 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 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.
- v. Supporting activities: Support development of a network of experts (community of practice) working to implement EA in the Arctic; and support development of a bibliographic resource that identifies key works in EA and IEA.
- vi. Reporting: The EA-EG will provide half-yearly progress reports on the work to PAME and the other AC WGs

Annex 2 - Record of Decisions from PAME I-2015***Ecosystem Approach (Agenda item 7)***

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.

Annex 3 - Conclusion and Workshop Recommendations from the 5th EA Workshop

Workshop Recommendations and Next Steps:

- ✓ Arctic states are encouraged to supply overviews of national ecological objectives to the EA-EG for inclusion to the status report on ecological objectives (currently the background document).
- ✓ Permanent Participants are encouraged to supply overviews of their key management practices (footnote: many are not written down but engrained in their cultures) relevant to ecological objectives to the EA-EG for inclusion to the status report on ecological objectives (currently the background document).
- ✓ Compile and further analyze the information received to inform the extent to which there are similarities and differences.
- ✓ Continue to review and learn about Indigenous management practices (IMPs) with the aim to comprehensively document the practices to facilitate their incorporation into the ecological objectives used to implement the ecosystem approach to management in the arctic and elsewhere.
- ✓ Continue to review/compile information on processes to develop and implement holistic and integrated sets of ecological objectives (e.g. EU MSFD, HELCOM, OSPAR).
- ✓ Based on the analysis, explore the need for common guidelines for how to set ecological objectives in the Arctic.
- ✓ Explore mechanisms that allow for equitable incorporation of value systems into ecological objectives.

Annex 4 - Executive Summary from ICES WKICA

The joint **ICES/AMAP/CAFF/PAME Workshop on Integrated Ecosystem Assessment (IEA) for the Arctic Ocean (WKICA)** met in Bergen, Norway, 28–29 May 2015. Eighteen participants from five countries (Canada, Iceland, Norway, Russia and USA) attended the workshop.

The purpose of an IEA for the central Arctic Ocean (ToR a) was seen as twofold: 1) provide a holistic and integrated view on the status, trends and pressures, and 2) contribute to implementation of the EA to management of the central Arctic Ocean. Regarding the review of data and information that could be used for an IEA (ToR b), the meeting noted findings from an Inventory of Arctic Research and Monitoring (IARM) resulting from the Third Meeting of Scientific Experts on Fish Stocks in the Central Arctic Ocean in April 2015.

The geographical scope of an IEA (ToR c) should include the Central Arctic Ocean LME and the slope regions of the adjacent shelf LMEs and also shelf portions where relevant. The fluxes and properties of water through the Atlantic and Pacific gateways need also to be taken into account when addressing physical and biological variability of the basins of the Arctic Ocean.

The thematic scope of an IEA should include three main pressures or human activities: climate change, shipping and fisheries. The Arctic Ocean is undergoing change as part of the global climate change, with extensive loss of summer sea ice (by nearly 75%) since the ‘pre-melting’ period in the 1970s. An assessment of the current ecological status of the Central Arctic Ocean is to a considerable degree also an assessment of the impacts of climate change. In addition, the IEA could include impacts of continued warming and loss of sea ice towards a potentially ice-free Arctic Ocean in summer based on climate projections. There is a need to identify sensitive and vulnerable areas (with regard to oil spills and shipping) as a basis for considering the needs for measures to regulate shipping activities in the Arctic Ocean. Regarding fisheries the IEA could address questions whether there are fishable concentrations and what is the potential fish production in the central Arctic Ocean. Other topics that could be included in an IEA are pathways of contaminants, pollution effects, and the risk of introduction and spread of invasive species.

WKICA agreed that it would be worthwhile and good if ICES established a working group on IEA for the central Arctic Ocean (WGICA) jointly in collaboration with Arctic Council (AC) working groups. It is suggested that the new group should consider the approach and methodologies for doing an IEA the first year as well as starting to assemble data and information building from IARM. Conducting the IEA could then be done over the next two years including integrated data analyses across datasets and preparing the IEA report.