



**Progress Report to
PAME II-2013 meeting
Group of Experts on the Ecosystem
Approach to Management**

PAME
Protection of the Arctic Marine Environment

Progress Report to PAME II-2013 meeting Group of Experts on the Ecosystem Approach to Management

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Progress report to PAME II-2013

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 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 Plans for 2011-2013 and 2013-2015. These work plans are included as Annexes 1 and 2.

The co-leads presented a written Progress Report to the PAME II-2012 meeting in Halifax, Canada, 18-20 September 2012. This report is available at the PAME web-page (<http://www.pame.is/ea-progress-reports>). An oral report was given to the PAME I-2013 meeting in Rovaniemi, Finland, 12-14 February 2013.

Below is an updated Progress Report on the activities and products of the EA Expert Group during the last year.

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) 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 (or 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. It is now being edited and will be printed as a PAME report.

The short version of the EA Concept paper, the 'EA brochure', was presented to PAME I-2013, where it was agreed that the paper should be circulated to the PAME-led EA expert group and PAME with deadline of 15th of March to submit comments to the PAME Secretariat. The aim was to update the 'brochure' and have it printed prior to the Arctic Council Ministerial Meeting in May this year. We were not able to meet this deadline, but the 'EA brochure' is now undergoing the final editing to be printed as a PAME product.

Revision of the Arctic LME map

The revision of the Arctic LME map was completed in May this year 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/arctic-large-marine-ecosystems-lme-s>

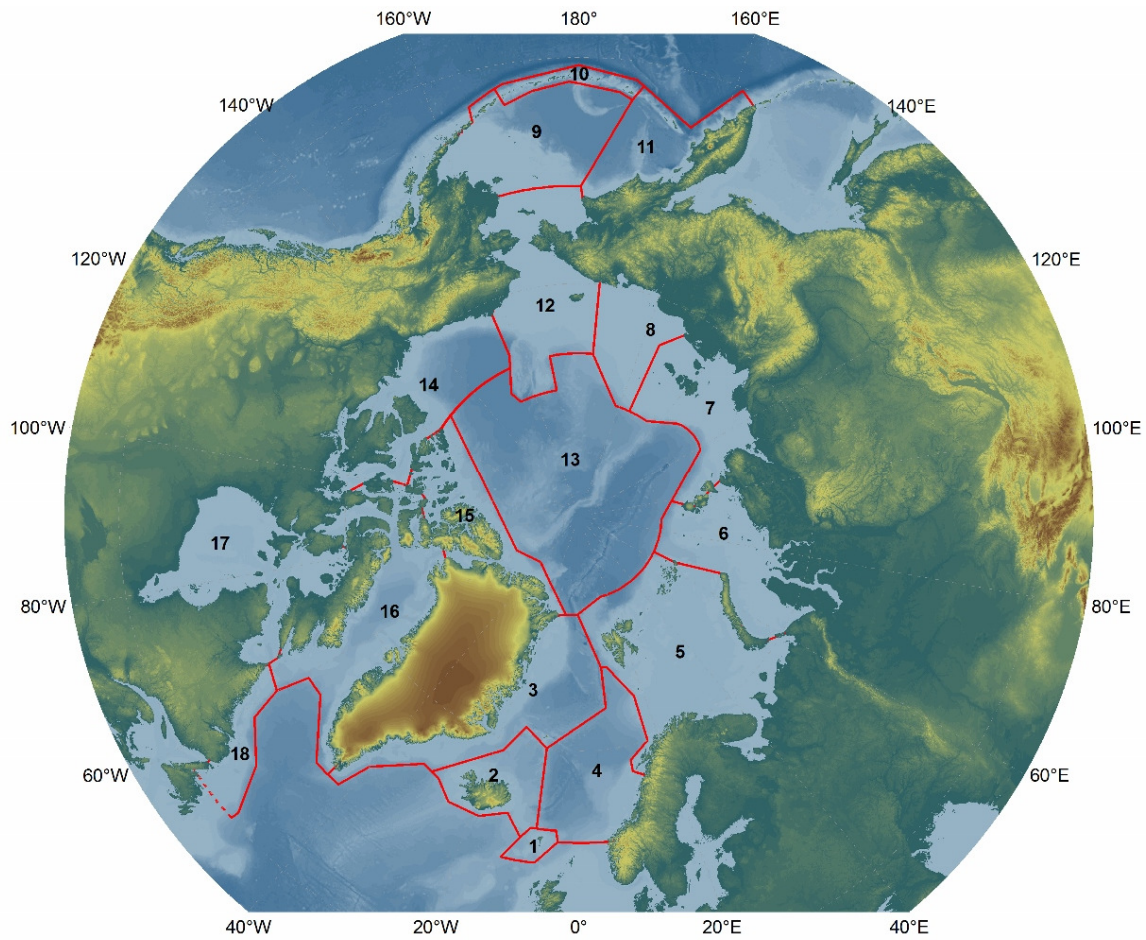


Fig. 1. Revised map of 18 Arctic Large Marine Ecosystems (LMEs).

The major changes relative to the 2006 working map are:

- ✓ The Aleutian Islands has been identified as a new and separate LME in the Bering Sea area.
- ✓ The boundary between the East and West Bering Sea LMEs has been moved further west.
- ✓ The boundary between the Bering and Chukchi seas LMEs has been moved south from the Bering Strait to south of St. Lawrence Island, and the Chukchi Sea LME has been renamed as the Northern Bering-Chukchi Sea LME.
- ✓ The northern boundary of the N Bering-Chukchi Sea LME has been extended north to include the Chukchi Plateau.
- ✓ The northernmost islands in the Canadian Arctic Archipelago (the Queen Elisabeth Islands including Ellesmere and the Sverdrup Basin area) along with northern Greenland has been identified as a separate LME, the Canadian High Arctic-North Greenland LME.
- ✓ The eastern and central parts of the Canadian Arctic Archipelago have been included along with Baffin Bay and Davis Strait as the Canadian Eastern Arctic- West Greenland LME.

Third EA workshop on ‘data issues’

The third EA workshop was held at 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>).

Integrated assessment

The EA-EG will continue work on Integrated Assessment (IA) as a core element of the EA to management. We will note and bring to the attention of the Arctic States relevant ‘data issues’ in this work, such as availability, data gaps, and interoperability of data management systems. We aim to collect and share information on work on IA in Arctic LMEs (or steps towards such assessments) including the approach and methodologies that are used. ICES has established working groups for IA of regional ecosystems including one for the Norwegian Sea LME. Work products from bodies of experts now working on IA and EA within ICES will be important sources of information for development of this topic in the Arctic. One issue which we will consider is the extent to which it is possible to develop a common body of knowledge and general guidelines for carrying out IA within Arctic LMEs, especially for those that straddle international boundaries.

Ecological objectives

Ecological objectives (or Ecological Quality Objectives, EcoQOs) are a key component of the EA to management. Setting Ecological objectives is the step where sustainable use and sustainability is defined in practical terms. They define collectively how much use, how much conservation, and how much precaution there should be in a management system or plan. Ecological objectives are part of the overall suite of management objectives, and it is a political and management responsibility to define them within the context of scientific information and advice. Defining ecological objectives is a scientifically very challenging task because marine ecosystems are highly dynamic and variable, while the objectives we seek are often thought of as more stable reference points for the desired state of ecosystems and ecosystem components.

We will now start work on this item. The work is seen as progressing in three main steps:

- 1 Survey information on existing management objectives related to commercially exploited species, threatened species, habitats, contaminant levels, and other topical areas.
- 2 Reviewing the information with the circumpolar IA and EA communities of the Arctic States and interested others to identify commonalities and differences.
- 3 Identifying to the extent practicable Reviewing the ‘state-of-the art’ in defining ecological objectives, including the 20+ years of work on EcoQOs in OSPAR, the EU Marine Strategic Framework Directive, and any other relevant work.

Identified areas of heightened ecological significance

The AMSA IIC report on areas of heightened ecological and cultural significance is now finalized and printed by AMAP. This report contains information on ecologically important areas in each of the Arctic LMEs. It builds in part on a comprehensive compilation of information on species and ecological features in the Arctic LMEs that was done as part of the Assessment of Arctic Oil and Gas Activities (OGA) by AMAP. The identified areas are used by fish, birds and marine mammals during their annual migratory and life cycles. The

information is therefore linking species and habitats in an LME context. We will consider specifically how this basic information on species, habitats and ecologically important areas can be used as one layer of information supporting the work on IA of the Arctic LMEs.

Annex 1-EA Work 2011-2013¹

Actions	Activities	Lead(s)
<p>2) Update the status of the Arctic Marine Strategic Plan (AMSP 2004)</p>	<p>Phase I (2011-2013):</p> <p>The PAME led EA Expert Group to contribute input to the development of the AMSP Phase I 2011-2013 scoping process. The delivery from AMSP Phase I should include a suggested outline for a future AMSP to be submitted to the respective working groups for consideration.</p> <p>Refer to Annex 6 for the work plan on updating AMSP</p>	<p>Norway US</p>
<p>3) Ecosystem approach to management (7.4 in the AMSP)</p>	<p>(i) Complete the revision of the working map of Arctic LMEs for consideration at PAME II-2011.</p> <p>(ii) Prepare an inventory of existing or planned reports relevant to ecosystem status reporting based on the information compiled at the workshop and additional information supplied by members of the expert group.</p> <p>(iii) Plan the further development of ecosystem status reports for the various LMEs.</p> <p>(iv) Identify possible arrangements for cost-effective integration of monitoring and assessment that draw upon existing national and international programs (e.g. by AMAP and CAFF) and form an integral component of the ecosystem approach to management of the Arctic LMEs.</p> <p>(v) Review methods and progress in determining ecological objectives for species and habitats that can serve as a part of the management objectives for the ecosystem approach to management of Arctic LMEs.</p> <p>(vi) Refer to AMSP action Item 2) above.</p>	<p>Norway US</p>

¹ Refer to the PAME 2011-2013 Work Plan

Annex 2 - EA work plan 2013-2015²

3) Ecosystem Approach to Management

PAME will continue work on integrated assessment and comparing cases and reviewing existing methodologies.

- ✓ To resolve data issues, PAME will continue to work from the 3rd EA workshop (June 2013) at two levels: LMEs and pan-Arctic.
- ✓ On its ecological objectives, PAME will begin and continue compiling information on higher level objectives and species management objectives for species and habitats; review methodology for setting ecological quality objectives.
- ✓ PAME will consider the use of identified areas of heightened ecological significance in relation to EA for the Arctic LMEs.
- ✓ Planning tools include mapping of human uses and habitats in LMEs in relation to integrated assessments and other tools for EA.
- ✓ Explore the feasibility of developing pilot projects to demonstrate outcomes from the other EA activities.

² Refer to the PAME 2013-2015 Work Plan

Ecosystem Approach (Agenda Item 6)

- ✓ *PAME welcomes the final draft version of the EA concept paper and agrees that it be circulated to the EA expert group and PAME for final review by 1st of March. The paper will be edited and published as a PAME report.*
- ✓ *PAME agrees that the EA concept paper, short version (“EA brochure”) is circulated to the PAME-led EA expert group and PAME with deadline of 15th of March to submit comments to the PAME Secretariat. The EA brochure will be updated based on comments received and published prior to the 2013 Arctic Council Ministerial meeting as a deliverable.*
- ✓ *PAME welcomes the revised map of Arctic Large Marine Ecosystems (LMEs), and agrees to forward the revised LME map, including the supporting explanatory text on the revised LME boundaries, to the SAOs and the 2013 Arctic Council Ministerial meeting for their approval.*
- ✓ *PAME welcomes the plan to convene the 3rd EA workshop in Reykjavik, Iceland, during the week of 10-14 June 2013 for 2-2 1/2 days with the aim to consider data issues related to integrated assessments for EBM.*
- ✓ *PAME urges the EA co-leads and the PAME led EA expert group 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. Furthermore, the EA workshop planning process should coordinate with the other planned PAME workshops during this week (i.e. the AMSP Workshop and the AMSA II(C)/AMSA II(D) Workshop).*

