



**PROGRESS REPORT TO
PAME II-2011
MEETING GROUP OF EXPERTS
ON THE ECOSYSTEM APPROACH
TO MANAGEMENT**

PAME

Protection of the Arctic Marine Environment

Progress Report to PAME II-2011 meeting Group of Experts on the Ecosystem Approach to Management

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Progress report to PAME II-2011

Norway and USA as co-leads presented a progress report on behalf of the PAME Group of Experts on the Ecosystem Approach to Management to PAME I-2011 held in Oslo, 15-17 February. There we reported on the work carried out under the Work Plan for the 2009-2011 period. The report included suggested elements for the next work period, 2011-2013.

PAME I-2011 welcomed the progress report and agreed to inclusion of the proposed work plan items into the PAME 2011-2013 Work Plan. The Record of Decision on the agenda item on Ecosystem Approach from PAME I-2011 is included as Annex 1. The work plan items for the 2011-2013 period is included as Annex 2.

Broadening of the expert group

The Workshop on Ecosystem Approach (EA) in Tromsø (with participation both from AMAP and CAFF) had suggested broadening the scope and membership of the EA expert group by inviting the other Arctic Council working groups to take part in the work. PAME agreed to this suggestion (*"...agreed to invite all Arctic Council working groups working on marine-related issues to participate in the PAME led EA Expert Group on the ecosystem approach to management according to its terms of reference"*).

Review of the Arctic Marine Strategic Plan (2004)

The Arctic Marine Strategic Plan (AMSP) was adopted by the Arctic Council in 2004. It contains objectives for the management of the Arctic marine environment with related strategic actions. PAME considers it now timely to review the AMSP from 2004 and to update and expand it as relevant.

It is recognized that there is an essential need to apply the ecosystem approach to manage all Arctic marine related issues. PAME also recognized the need to cooperate with the other Arctic Council working groups with regard to the AMSP. PAME agreed to include the review and revision of the AMSP as one of the items of the work plan for the EA Expert Group. The PAME led EA Expert Group (with broadened participation from the other working groups) is asked to contribute input to the development of the AMSP Phase I 2011-2013 scoping process.

The Project plan on updating the AMSP (2004) is included as Annex 6 to the PAME Work Plan 2011-2013.

A new group on ecosystem-based management

In the Nuuk Declaration from the 7th Ministerial Meeting of the Arctic Council, the Ministers decided to establish an expert group on Arctic ecosystem-based management (EBM) for the Arctic environment to recommend further activities in this field for possible consideration by the SAOs before the end of the Swedish chairmanship. The SAO Report suggests that the Expert Group should consider developing a common understanding of EBM, consider EBM principles for marine and terrestrial areas, and consider developing Arctic-specific guidelines for applying the ecosystem approach to all relevant areas of work in the Arctic Council. The terms of reference for the work of this new expert group will be further elaborated at the Expert Group meeting scheduled for October

17-19, 2011, in Washington, DC. An SAO Solicitation for Expert Participants from the US SAO Julie Gourley is given in Annex 3, while Annex 4 provides a definition of what constitutes an 'EBM Expert'.

For many aspects related to the concepts, principles and practical implementation of the ecosystem approach to management (which is understood to be synonymous with ecosystem-based management), it would seem that the existing PAME led expert group (with broadened participation from other AC working groups) could substantially contribute in detail and breadth for the marine ecosystems. There could be other aspects, such as institutional arrangements and instruments for cooperation and collaboration that would facilitate implementation of the ecosystem approach, as well as endeavors to draw connections between marine, coastal, and terrestrial EBM efforts, where the new group could complement the existing group.

There is a need to clarify the relationship between the existing PAME led EG and the new group.

Workshop on Ecosystem Approach to Management, Tromsø, 22-23 January 2011

The main results from the workshop were presented at the PAME I-2011 meeting in February.

The report from the workshop was finalized and made available by PAME for the 7th Ministerial Meeting in Nuuk, 12 May 2011. The report is available from the PAME webpage at:

http://www.pame.is/images/stories/EA_workshop_report_22-23_Jan_2011_copy_copy_copy_copy.pdf

Co-lead planning meeting in Paris, 11 July 2011

Hein Rune Skjoldal and Ken Sherman, representing the co-lead countries Norway and the USA, met together with the PAME Secretary Soffia Gudmundsdottir in Paris in the afternoon on 11 July. This meeting was held in conjunction with the IOC-IUCN-NOAA Large Marine Ecosystem 13th Consultative Committee Meeting and the ICES Working Group on Large Marine Ecosystem Best Practice (WGLMEBP) the two next days (12-13 July). We also had a meeting with Gennady Matishov from Russia on 13 July.

At the meetings, several of the items on the work program for the EA expert group were discussed. The outcome of the discussions is reflected under the various work plan items in the following.

One item which is not specifically on the work program but which was discussed is the issue of concepts and terminology related to ecosystem approach to management (or Ecosystem-based management, or integrated ocean management). It was agreed to prepare a draft concept paper for further consideration within the expert group. The concept paper will reflect considerations and developments in international forums and frameworks, such as the LME process, UN Convention on Biological Diversity, UNICPOLOS (UN 'Informal Consultative Process'), UN Food and Agriculture Organization (FAO, Ecosystem Approach to Fisheries), IUCN (Marine Program and Commission on Ecosystem Management), and others. The aim is to produce the concept paper later this year for discussion within the EG (possibly at a workshop) before it is forwarded to PAME (I-2012).

The concept paper will be used to prepare a shorter brochure on the EA, possibly in the form of a short list (10 points) of 'commandments' or guidance points.

2011-2013 Work Plan items (Annex 2)

Revision of the working map of Arctic LMEs (item i)

The Tromsø workshop produced a version of the working map of Arctic LMEs under revision with suggested changes or options for changes of LME boundaries shown (Fig. 5 on page 10 in the workshop report). It was recognized that further consultations with national experts were needed before conclusions could be reached.

At the co-leads planning meeting in Paris in July, two follow-up meetings were planned, one in Russia in August and a second possibly in Seattle later this autumn.

Meeting in Rostov-on-Don in South Russia, 18-19 August 2011

A meeting was held with Prof. Mathishov and 5 other Russian experts at the premises of the Southern Science Center of the Russian Academy of Sciences (SSC RAS) in Kagalnik and Rostov-on-Don to discuss boundary issues for the LMEs in the Russian Arctic. Agreement was reached on adjustments of the boundaries between the Kara Sea, Laptev Sea, East Siberian Sea, and Chukchi Sea LMEs, as detailed in the report from the meeting (included as Annex 5). Boundaries between the Chukchi Sea and Bering Sea LMEs were briefly discussed but no attempt was made to draw conclusions as that would require involvement of experts from the USA.

Planned meeting in Seattle, late autumn 2011

We are aiming to hold a meeting in Seattle with US and Russian experts to consider boundary issues for the Bering Sea and Chukchi Sea LMEs. This meeting will include experts from the NOAA Arctic Fisheries Science Center and others. The time and venue for the meeting are not yet fixed but we will try to do so by the time of the PAME meeting in September.

Consultations with Denmark/Faroe Isles/Greenland and Canada

There is a need for consultations with experts from the Faroe Isles regarding the boundaries of the Faroe LME. There may also be further consultations with Canadian experts and experts from Denmark and Greenland regarding boundaries in the North Water, Baffin Bay and Labrador region.

Completion of the revision of the map of Arctic LMEs

At the workshop in January it was stated that the aim was to complete the revision in time for the PAME II-2011 meeting. This was somewhat optimistic and we are now working toward completion of the revision in time for the PAME spring 2012 meeting. The revised map will be accompanied by a text that gives the explanation and justification of each of the boundaries. This explanatory text will build from the information in the Tromsø workshop report (including the annotations to the agenda) as well as information in the Oil and Gas Assessment Chapter 6 that is now being readied for publication.

Inventory of ecosystem status reports (item ii)

The aim has been to compile information on existing or planned reports relevant to ecosystem status reporting. Regular reporting on the status and trends (including pressures from human activities) is

seen as an important component of an ecosystem approach to management (EA). This may include more narrow and thematic reports such as on the climatic conditions, plankton and plankton productivity, and population status of fish, birds and mammals. It also includes broader and more integrated reports on many components of the ecosystem and the influences and impacts by human activities such as fishing, harvesting, and industrial activities on the status of species and habitats in the ecosystem.

The Tromsø workshop provides a first compilation of information on such reports prepared in international frameworks or nationally, where they are often linked to management systems. The aim is to develop this into an inventory by LMEs (or groups of LMEs) with links to the reports where such are available. The inventory will be hosted at the PAME webpage.

Members of the EA expert group, PAME representatives and others are asked to provide more information on status reports to allow updating of the inventory.

Further development of ecosystem status reports and integration of monitoring and assessment (items iii and iv)

The existing or planned ecosystem status reports (including reports on ecosystem components such as status for bird or mammal populations) can form a basis for the further development into more integrated ecosystem status or assessment reports. Such development should be linked to, and be an integral part of, the implementation of the EA for each of the LMEs. Examples of reports of this type are the 'Joint Norwegian-Russian environmental status 2008 Report on the Barents Sea Ecosystem' and the 'Beaufort Sea Large Ocean Management Area: Ecosystem Overview and Assessment Report' (see the Tromsø workshop report for more details).

The aim is not for the EA expert group to develop integrated ecosystem status reports. Rather, the objective is to facilitate exchange of information on the development of ecosystem status reports between different Arctic regions. Possibly a review of the state-of-the-art could be carried out including some general guidance based on the practical experiences that can be extracted from such a review. This could build-on from the 'Assessment of assessments' that was carried out a few years ago. The International Council for Exploration of the Sea (ICES), where all Arctic countries are members, could possibly be consulted or involved in providing a review and guidance on best practices. ICES has established a working group on LMEs (Working Group on Large Marine Ecosystems Best Practices (WGLMEBP)) which could potentially be a partner in this work.

Monitoring is necessary to provide updated information for assessments. There is much monitoring ongoing both nationally and internationally coordinated. Item iv on the work plan deals with the further integration of monitoring and assessment to support the implementation of the EA in separate LMEs. There is no specific work started on this item yet but it should be a priority item for the work in 2012. If there is to be a meeting or workshop of the PAME-led expert group (with broadened membership) in the spring next year (back-to-back with the spring meeting of PAME I-2012), the issue of integration of monitoring and assessment could be the main topic for the meeting.

There is a scale-issue related to the topic of monitoring and assessment. There is the specific need for monitoring and assessment as part of the implementation of the EA at the scale of LMEs. At the same time there is a need to aggregate and report on information at the pan-arctic scale. At this scale there is also the aspect of comparing trends and status between different regions of the Arctic. The relationship and balance between emphasis on the LME scale and the pan-Arctic scale is an issue that should be given attention in the revision of the Arctic Marine Strategic Plan (AMSP; Item vi below).

The proposed Arctic Change Assessment (ACA) is an activity where the dual scales of LMEs and the pan-Arctic should be used. Animal populations (fish, birds, mammals) occur at the scale of LMEs (even if some migrate between neighboring systems). Their trophic interactions are key features of the regional ecosystems (LMEs), while they are the biological units that are impacted directly or indirectly by climate change, pollution, harvesting, disturbances and other factors.

Ecological objectives (item v)

The setting of ecological objectives (for species and habitats) is a key component of the implementation of the EA. The aim for this item on the work program is to collect information on management objectives that exist in the various LMEs and to review progress and methodology in developing integrated and coherent sets of ecological objectives as part of the suit of management objectives (including socio-economic aspects) as part of the EA approach.

The first step should be to compile information on existing management objectives from members of the EA expert group and others.

Review of the Arctic Marine Strategic Plan (item vi)

The PAME led EA Expert Group is asked to contribute input to the development of the AMSP Phase I 2011-2013 scoping process. How this should be taken forward will be discussed at the upcoming PAME meeting in September.

Annex 1 - From Record of Decisions and follow-up actions on Ecosystem Approach as per PAME I-2011 meeting

The Meeting agreed to the following:

- *Welcome the progress report from the co-leads Norway and USA and the updating of the main outcomes of the Workshop on Ecosystem Approach to Management EA workshop held 22-23 January in Tromsø and look forward to receiving the final workshop report.*
- *Agree to include the work plan items as presented by the co-leads in the PAME 2011-2013 Work Plan.*
- *Recognizing the increased emphasis on the ecosystem approach to management (and integrated ocean management) as the foundation of the Arctic Councils' work and the essential need to apply the ecosystem approach to manage Arctic marine-related issues. In this regard it is agreed to invite all Arctic Council working groups working on marine-related issues to participate in the PAME led EA Expert Group on the ecosystem approach to management according to its terms of reference.*
- *Welcome the AMSP project proposal and agree to annex its project plan to the PAME 2011-2013 Work Plan.*
- *Request 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.*

Annex 2 – EA from PAME Work Plan 2011 - 2013

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>

Annex 3 - Letter from US SAO soliciting experts for new EBM expert group

September 01, 2011

Dear SAOs and PPs:

I am writing to propose next steps with respect to establishing the Experts Group on Arctic Ecosystem-Based Management.

You will recall that the Ministers at Nuuk issued a mandate for the Experts Group, as follows:

“Decide to establish an expert group on Arctic ecosystem-based management (EBM) for the Arctic environment to recommend further activities in this field for possible consideration by the SAOs before the end of the Swedish chairmanship, ...”

In order to begin this work, the United States offers to host the first, organizational meeting of the Experts Group on **October 17-19** at the U.S. Department of the Interior, 1849 C St., NW, Washington, DC.

We propose that Evan Bloom, Director of the Office of Ocean and Polar Affairs at the U.S. State Department, and Magnus Johannesson, Secretary General at the Icelandic Ministry for Environment co-chair the Experts Group. Sweden is also actively considering providing a third co-chair.

At this first meeting, it will be important for the group to discuss its objectives and plans for the coming two years. The work of the Experts Group can help advise the Arctic Council by: a) identifying common EBM principles for Arctic environments (including marine, coastal, terrestrial, aquatic), b) developing a common language of practice for EBM in the Arctic, and c) considering the development of Arctic-specific guidelines for making effective use of EBM in relevant areas of work in the Arctic Council. The initial meeting could include a discussion of issues such as:

- What is the EBM process and why is it useful?
- How has EBM been applied in the Arctic and elsewhere?
- Why does the Arctic lend itself to effective implementation of EBM?
- Scenarios: What does successful implementation of EBM look like in the Arctic?
- What broad principles might best characterize effective EBM in the Arctic?

At an earlier SAO meeting, questions arose as to what constitutes an “EBM expert”. To assist you in that determination, I have attached some guidance you may find useful in identifying your experts.

We would appreciate it if you would designate one EBM point of contact for your delegation. We’ll be in communication with your points of contact in advance of the workshop to request EBM case studies to support the process.

Please let us know by September 21 who from each Arctic State and Permanent Participant Organization will attend the October 17-19 Washington meeting (3 persons maximum per delegation).

Best regards,

Julie Gourley, US SAO

Annex 4 - Definition of expert for EBM expert group

Ecosystem-Based Management Arctic Council Expert Group

Who is an Ecosystem-Based Management (EBM) Expert?

EBM is a multi-disciplinary decision-making process that minimizes impacts on the environment and integrates scientific, environmental, economic, social, and political objectives. As such, a meeting of experts on ecosystem-based management, as called for by the 2011 Arctic Council Nuuk Declaration, should include officials with diverse arrays of skills and backgrounds such as:

A government or academic scientist who:

- Has conducted extensive research in the Arctic and has an understanding or appreciation of the need to integrate science with decision-making; and/or
- Has contributed to, participated in, or has an understanding of EBM processes.

A government official who:

- Works on issues pertaining to the management of local, regional, or national resources in the Arctic and seeks to understand and/or incorporate EBM principles into these management activities; or
- Has an interest in the problem-solving capacity of EBM as it relates to natural, cultural, and subsistence resources in the Arctic.

A member of an Arctic Council permanent participant organization who:

- Has expertise in natural, cultural, or subsistence resource management in the Arctic, with a particular interest or experience in utilizing an EBM approach; and/or
- Has conducted extensive research in the Arctic and has an understanding or appreciation of the need to integrate science with decision-making; and/or
- Has, or has access to, extensive traditional knowledge of the Arctic environment.

Representation from Arctic Council Working Groups

As much as possible, governments and organizations are encouraged to consider EBM experts who have been previously or are currently involved in projects under the working groups of the Arctic Council. This will help participants to build on the substantial EBM thinking that has already taken place. This previous work includes, for example:

- CAFF Circumpolar Biodiversity Monitoring Program
- CAFF Arctic Biodiversity Assessment
- SDWG/PAME Best Practices in Ecosystem-based Oceans Management in the Arctic (BEPOMAR)
- PAME Arctic Marine Strategic Plan
- PAME EBM Experts Group

Number of Participants

In order to ensure productive discussions, Arctic States and Permanent Participants should send delegations of no more than 3 to participate in the U.S.-hosted October meeting.

Annex 5 - Meeting on LME boundaries in the Russian Arctic, Rostov-on-Don, Russia, 18-19 August 2011

Background

The PAME (Protection of the Arctic Marine Environment) Working Group of the Arctic Council agreed in 2006 a working map on delineation of the Arctic area into 17 Large Marine Ecosystems (LMEs). The issue of the Ecosystem Approach to management (EA) based on LMEs is co-lead by Norway and the USA under PAME. The work is carried out through an expert group with a work program agreed by PAME. One item on the work program for the 2009-2011 period has been to consider revision of some of the boundaries on the working map (“Review the working map of Arctic LMEs. There is need for some further discussion on some boundaries, possibly at a workshop”).

A PAME workshop was held in Tromsø, Norway, 22-23 January 2011, where LME boundary issues were discussed. Options for boundary adjustments were noted for several of the LMEs, including in the Russian Arctic, and in the Bering Sea and the Bering Strait region. Those options were to be considered further in consultations with national experts, with the aim to have a revised version of the map of the Arctic LMEs with justification of chosen boundaries forwarded to PAME at the following meeting in autumn 2011. This has been changed to the spring meeting in 2012. In consultations in Paris (in conjunction with the 13th LME Consultative Committee Meeting 12-13 July 2011) between Prof. Gennady Matishov, Dr. Ken Sherman (representative of co-lead country the USA) and Dr. Hein Rune Skjoldal (leader of PAME expert group from co-lead country Norway), it was agreed to hold a meeting in Rostov-on-Don, Russia, to consider LME boundary issues for the Russian Arctic.

Participants

Russian experts

Dr. Sergey Dzhenyuk (MMBI, Murmansk; oceanography - geography),

Prof. Dr. Elena Ponomareva (SSC RAS, Rostov-on-Don and Astrakhan; biology - aquaculture - aqua bioresources),

Prof. Dr. Natalia Lebedeva (MMBI - SSC RAS, Rostov-on-Don; biology - ornithology),

Dr. Andrey Kondakov (MMBI - SSC RAS, Rostov-on-Don; biology - marine mammals),

Dr. Pavel Balykin (SSC RAS, Rostov-on-Don; biology - ichthyology).

From Norway

Dr. Hein Rune Skjoldal (Institute of Marine Research, Bergen; biology)

Meeting agenda

The meeting on 18 August was held at the RAS SSC research station in Kagalnik (Rostov Region). Dr. Matishov opened the meeting with introductory remarks on the objective and scope of the meeting. Dr. Skjoldal gave a presentation with some background information on the use of LMEs in two assessments under the Arctic Council: the Assessment of oil and gas activities in the Arctic (OGA), and the Arctic Marine Shipping Assessment (AMSA) and the follow-up on AMSA Recommendation IIC on the identification of areas of heightened ecological (and cultural) significance in the Arctic. Dr. Dzhenyuk gave a presentation on the LME boundaries in the Russian Arctic, followed by short presentations or statements by the other Russian experts. The presentations by Dr. Skjoldal, Dr. Dzhenyuk, and others were followed by questions and some initial discussion. The meeting on the second day (19 August) was held at the premises of the Southern Scientific Centre (SSC) of the Russian Academy of Sciences (RAS) in Rostov-on-Don. The format of the meeting was in the form of a discussion of specific LME boundaries between the Kara and the Laptev Seas LMEs, between the East Siberian and Chukchi Seas LMEs, and the western boundary of the Barents Sea LME. The boundaries in the northern Bering and Chukchi Seas were discussed briefly, but it was decided not to conclude the discussion as more experts including from the USA needed to be involved.

To increase the effectiveness of the LME concept and ecosystem approach application, the Russian side proposed to introduce sub-regions (hot spots) which have definite and specific ecological features (frontal zones, seabirds' colonies, marine mammal colonies, etc.).

Conclusions

1. It was agreed to keep the East Siberian Sea as a separate LME.
2. The boundary between the Kara Sea and Laptev Sea LMEs was suggested moving westwards so that the western side of the Severnaya Zemlya would belong to the Kara Sea LME and the eastern side to the Laptev Sea LME. The polynya northeast and east of the Severnaya Zemlya is an important spring staging and summer feeding area for seabirds from the colonies on the eastern side of the archipelago. It is also an important migration corridor for the Laptev (summer feeding) population of beluga or white whale (*Delphinapterus leucas*).
3. The boundary between the Laptev Sea and East Siberian Sea LMEs was suggested moving eastward so that all of the New Siberian Islands Archipelago (but not including the De Long Islands) and the polynya north of the archipelago would become part of the Laptev Sea LME. With this change and the adjustment of the western boundary of the Laptev Sea LME, all of the 'Great Siberian Polynya' system would fall within the Laptev Sea LME. This polynya system is globally unique and constitutes an important spring staging and feeding area for

seabirds and waterfowl, as well as forming an important part of the habitat for the distinct Laptev walrus population.

4. The boundary between the East Siberian Sea and Chukchi Sea LMEs was suggested moving west to include the whole of Wrangel Island including the seabird colonies on the western end and the shallow waters off western Wrangel Island with the Chukchi Sea LME. The coasts and waters around Wrangel Island are commonly covered with high-productive Pacific water (Anadyr-Bering Shelf water) and constitute important staging, moulting and feeding areas for marine birds (seabirds, waterfowl, shorebirds), as well as summer feeding areas for Pacific walrus.

5. The western boundary of the Barents Sea LME was suggested at the Tromsø workshop in January to be adjusted to include the Lofoten area, which is the main spawning area of the Barents Sea cod stock, with the Barents Sea LME. The Russian experts, who thought that the Lofoten area as the northernmost part of the mid-Norwegian shelf should remain as a sub-region of the Norwegian Sea LME, questioned the suggestion.

6. The northern boundaries of the Barents Sea, Kara Sea, and Laptev Sea LMEs have been variously placed at the shelf edge (approximated by the 200 m isobath) or placed down the slope to include the upper slope with the respective LMEs. The inflow of Atlantic water from the West Spitsbergen Current into the Arctic Ocean basins flows as a slope current in this region with the core between about 200 and 600-800 m. The upper part of the slope current flows into trenches and depressions on the northern shelves (such as St. Anna and Voronin Troughs in the northern Kara Sea) and carries with it Atlantic plankton species (e.g. the copepod *Calanus finmarchicus* and the krill *Thysanoessa longicaudata*) which form part of the trophodynamic linkages in the northern parts of these LMEs. Including the upper slope with the Barents Sea, Kara Sea, and Laptev Sea LMEs provides a more complete ecosystem representation for these LMEs and is, therefore, recommended.