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ARCTIC COUNCIL

PAME

Protection of the Arctic Marine Environment

Arctic Council and Ecosystem Approach to Management: Integrating Ecosystem Service Science into Guidelines

Elizabeth Logerwell

Hein Rune Skjoldal

PICES Annual Meeting, Yokohama
October 30, 2018

Arctic Council

A high level intergovernmental forum to provide a means for promoting cooperation, coordination and interaction among the Arctic States, with the involvement of the Arctic Indigenous communities and other Arctic inhabitants...

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Finnish Chairmanship

Learn more about the 2017-2019 Finnish Chairmanship of the Arctic



Fairbanks Declaration

Read the Arctic Council's guiding document for 2017-2019, signed at



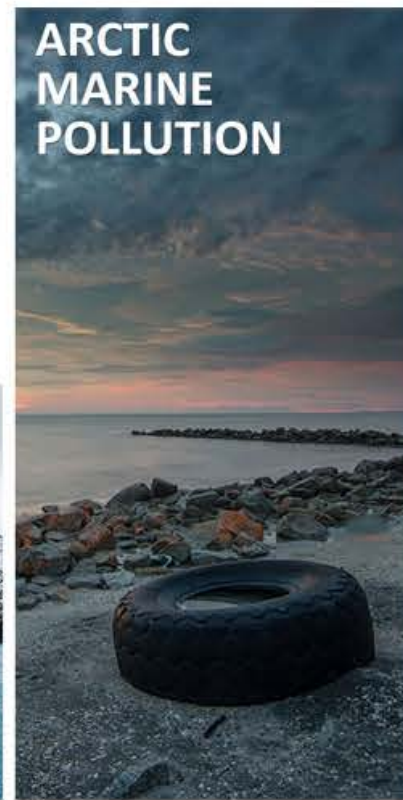
Working Groups

Learn about the six Arctic Council Working Groups, which produce



Media Resources

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ECOSYSTEM APPROACH TO MANAGEMENT

[+ EA Documents and Report](#)[+ Large Marine Ecosystems of the Arctic](#)[+ Circumpolar Community of Practice](#)[+ EA International Conference](#)

The concept of the Ecosystem Approach to management (EA) has been around for at least 30 years and has been extensively discussed, elaborated and developed. This approach is known by a number of different names; ecosystem-based management (EBM), ecosystem approach to management (EAM), or simply the ecosystem approach, EA, which is the term used here.

The EA was adopted as an overarching principle and approach by Arctic Council Ministers in 2004 as part of the Arctic Marine Strategic Plan (AMSP) and described in the following manner:

"An integrated ecosystem-based management approach requires that development activities be coordinated in a way that minimizes their impact on the environment and integrates thinking across environmental, socioeconomic, political and sectoral realms. The management of resource activities needs to be focused on realistic, practical steps that are directed toward reducing environmental damage, protecting biodiversity and promoting the health and prosperity of local communities. For such an approach to be successful, the relevant ecosystems need to be better understood, monitored and reported on. Actions must be based on clear objectives and a sound management structure, employing best available knowledge and practices, integrated decision-making and, where appropriate, a coordinated, regional approach."

EA Documents and Reports

PAME regularly publishes EA documents and reports. [Click here to access PAME's EA documents.](#)



PAME EA Projects 2017-2019

- Preparation of Guidelines for EA/EBM Implementation in the Arctic
(Lead: Norway, United States, Joint EA Expert Group)
- Integrated Ecosystem Assessment of the Central Arctic Ocean
(Lead: ICES/PICES/PAME)

EA Brochure



Joint EA-Expert Group

PAME established in 2007 an EA expert group to better focus its work on EA within its mandate for the protection of the Arctic marine environment. The scope and membership of this expert group was extended in 2011 to include the participation of relevant Arctic Council working groups addressing marine-related

What is the Ecosystem Approach?

Arctic Council Ministers (Kiruna Declaration, 2013):

Comprehensive, integrated management of human activities based on best available scientific and traditional knowledge about the ecosystem and its dynamics, in order to identify and take action on influences that are critical to the health of ecosystems, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity.

Ecosystem Approach Expert Group (EA-EG)

- Formed in 2007
- Current chairs: Hein Rune Skjoldal (Norway) and Libby Logerwell (USA)
- Goals
 - Integration of EA implementation into work of the Arctic Council
 - Facilitate exchange and review of information and experiences
 - Support development of a common and coordinated approach to EA implementation by Arctic states

Stakeholder interactions

- 8 Arctic Council States
- Permanent Participants
 - Aleut International Association (AIA)
 - Arctic Athabaskan Council (AAC)
 - Gwich'in Council International (GCI)
 - Inuit Circumpolar Council (ICC)
 - Russian Association of Indigenous Peoples of the North (RAIPON)
 - Saami Council (SC)
- Observers
 - Non-Arctic States
 - Intergovernmental and Inter-Parliamentary Organizations
 - Non-Governmental Organizations

Ecosystem Approach (EA) Workshops

- 2011 1st Workshop, Tromsø, LME boundaries
- 2012 2nd Workshop, Stockholm, EA framework
- 2013 3rd Workshop, Reykjavik, Data issues
- 2014 4th Workshop, Vancouver, Beaufort Sea LME
- 2015 5th Workshop, Bergen, Setting Ecological Objectives
- 2017 6th Workshop, Seattle, Ecosystem Approach Guidelines

Workshop reports

ICES WKEAMA Report 2018
 ICES INVITED ECOSYSTEM APPROACH'S STUDY GROUP
 ICES CM 2018/EG:01
 BY ACOW AND SCICOM

Report of the PAME (Joint EA-EG) / ICES
 Workshop on the development of guidelines for
 Ecosystem Approach to management (EAM)
 in the Arctic (WKEAMA)

9-11 January 2018
 Seattle, USA




WORKSHOP REPORT
 PAME, CAFF, AKAP, SEWIS
 5th Ecosystem Approach to Management Workshop

Methodology and status of development of ecological
 rational objectives for Arctic Large Marine Ecosystems

Bergen - Norway
 26-27th May 2015



ICES WKEAMA Report 2018
 ICES INVITED ECOSYSTEM APPROACH'S STUDY GROUP
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9-11 January 2018
 Seattle, USA



6th Ecosystem Approach to Management
 Workshop Report.
 9.-11th of May, 2018
 Seattle, USA

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WORKSHOP REPORT
 6th Ecosystem Approach to Management Workshop
 Integrated Ecosystem Assessment (IEA)

Understanding National Approaches and Reviewing Progress on EA
 in Arctic LMEs: identifying national boundaries
 The Sea Area and Borealis Seas

Vancouver, Canada
 June 16-18
 2014



4th Ecosystem Approach to
 Management Workshop Report.
 June 16-18, 2014
 Vancouver, Canada

[DOWNLOAD PDF](#)

5th Ecosystem Approach to Management
 Workshop Report.
 26.-27th of May, 2015
 Bergen, Norway

[DOWNLOAD](#)



PAME
 Third Ecosystem Approach
 to Management Workshop Report
 Reykjavik, Iceland
 June 16-17, 2015




3rd Ecosystem to Approach to
 Management Workshop Report.
 June 10-11, 2013
 Reykjavik, Iceland


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Implementing Recommendations for Ecosystem-Based
 Management in the Arctic
 1. December, 2014
 Trondheim, Norway

[DOWNLOAD](#)



**REPORT FROM
 THE PAME WORKSHOP
 ON ECOSYSTEM APPROACH
 TO MANAGEMENT**
 22-23 MARCH, 2012
 STOCKHOLM, SWEDEN



2nd Ecosystem Approach to
 Management Workshop Report.
 March 22-23, 2012
 Stockholm, Sweden

[DOWNLOAD PDF](#)

Guidelines for Implementing an Ecosystem Approach (EA) to Management of Arctic Marine Ecosystems

- Arctic Council Ministers have recognized the need for practical guidelines for EA implementation in the Arctic
- Assist scientists, policy-makers, managers and communities in implementing an ecosystem approach for Arctic marine ecosystems

EA Guidelines – General points

- Arctic peoples' knowledge (indigenous, local, traditional) is essential to all aspects of EA
- Communication, participation and inclusivity are important
- Implementation of EA is a dynamic and ongoing process (monitor, evaluate and adapt)

EA Framework

Possible Methodology for Applying EA

FUNDAMENTAL

IDENTIFY
the ecosystem



DESCRIBE
the ecosystem



OPERATIONAL

Set ecological
OBJECTIVES



ASSESS
the ecosystem



VALUE
the ecosystem



MANAGEMENT

MANAGE
human activities

Identify

- Large Marine Ecosystems (LMEs) define geographic scale and boundaries for EA

Describe

- What are the key characteristics of the ecosystem?
- How are they connected into a functional unit?

Ecological objectives

- Reflect ecological features and be related to the impacts of human activities
- Linked to management, social and cultural objectives

Value

- Cultural, social and economic goods and services produced by the ecosystem
- Include indigenous peoples and local communities in the process of valuation
- Non-monetary/non-market values are important (e.g., social, cultural)

Assess

- Integrated Ecosystem Assessment (IEA)
- Assessment of the status and trends in all relevant ecosystem components

Manage

- Provide updated information on the changes that are taking place in the ecosystem, thereby allowing adaptive adjustment of management decisions and actions, in accordance with new conditions

Value – Discussion questions

- How to include indigenous peoples and local communities?
 - Community workshops to develop conceptual models
 - Other ideas?
- How to assess non-monetary/non-market values?
 - Revealed and/or stated preference methods
 - Other ideas?
- Are some features of the ecosystem non-negotiable (e.g., irreplaceable, irreversible, essential to human culture)?
- Value only key ecosystem goods and services that hold large value and/or affect management decisions?

Upcoming Arctic Council Ecosystem Approach Events

- 2nd International Ecosystem Approach Conference
 - “The Ecosystem Approach to Management of Arctic Marine Ecosystems: Integrating information at different scales in the framework of EA implementation”
 - May-June 2019, Bergen Norway
- 7th Ecosystem Approach Workshop
 - 2020, date and location TBD
 - Topic: value and valuation