

An underwater photograph showing a large school of Atlantic cod swimming over a dense bed of brown seaweed. The fish are silvery with a dark stripe along their sides. The water is clear and blue.

# **Ecosystem Approach Expert Group PAME**

## **Progress Report PAME I 2015**

**Akureyri, Iceland**

**Feb 4, 2015**

**Hein Rune Skjoldal and Phil Mundy Co-Chairs**

**IMR Norway**

**NOAA US**

## EA Action Items for PAME-I 2015

- Approve revised terms of reference
- Adopt revised work plan 2015-2017 and receive progress report 2013-2015
- Approve 5<sup>th</sup> EA workshop prospectus on ecological objectives

## **SUMMARY OF ACCOMPLISHMENTS 2013 – 2015**

### **Completed Projects**

- Revised Large Marine Ecosystems of the Arctic Council
- EA Concept Paper and Brochure
- Two EA Workshops and Workshop Reports,  
3<sup>rd</sup> and 4<sup>th</sup> 2013, 2014

### **Works in Progress**

EA Community of Practice (Oak Foundation Project)

EA Road Map – EA implementation concepts

Spatial information areas of heightened ecological significance

## EA COORDINATION ACTIVITIES 2014

- **June 4<sup>th</sup>** EA Workshop w/CAFF, AMAP, SDWG
- **July** ICC Quadrennial Meeting in Inuvik (Oak)
- **Sept** Inuvialuit Game Council in Whitehorse (Oak)
- **Oct** SDWG Meeting in Yellowknife (Oak)
- **Dec** EBM Workshop in Trondheim (Oak)
- **Dec** Arctic Biodiversity Congress in Trondheim

# Ecosystem-Based Management in the Arctic

**Terms of Reference and Work Plan 2015-2017 proposals are substantially revised in response to the EBM report adopted by the Arctic Council in Kiruna**



ARCTIC COUNCIL

Report submitted to Senior Arctic Officials  
by the Expert Group on Ecosystem-Based Management  
May 2013

# EAEG REVISED TERMS OF REFERENCE 2015 – 2017

## PROPOSED

**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.



# PAME

Protection of the Arctic Marine Environment

## The Ecosystem Approach to Management

[WWW.PAME.IS](http://WWW.PAME.IS)

Revised work plan 2015-2017 is organized according to six elements of implementing the ecosystem approach to management

# CONCEPT PAPER

# **Six Elements of the Ecosystem Approach (PAME EA-EG)**

- 1. Identify the ecosystem**
- 2. Describe the ecosystem**
- 3. Set ecological objectives**
- 4. Assess the ecosystem**
- 5. Value the ecosystem**
6. Manage human activities



## **Work Plan Elements 2015 - 2017**

- Contribute to development of ecological objectives
  - 5th EA workshop on ecological objectives 2015
- Follow up actions on Integrated Ecosystem Assessments
- Implementation of EA in the Arctic
  - 6<sup>th</sup> Workshop or Conference Implementing Arctic EA 2016
  - Report Status of Implementation EA 2017
- Consider issues of scale in EA
- Supporting activities
  - EA Community of Practice and Online Bibliography
- Reporting: provide half-yearly progress reports to PAME and AC WGs

**Fifth Ecosystem Approach Workshop (PAME,  
CAFF, AMAP, SDWG)**

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

**May (?) 2015 Norway**

# Arctic Ocean IEA Workshop ICES/Arctic Council

Consider the purpose and scope of an Integrated Ecosystem Assessment (IEA) for the Central Arctic Ocean.

Review the data and information available from past and on-going monitoring and research that could be used in and inform the conduct of an IEA.

Consider the geographical scope for a Central Arctic Ocean IEA, in particular the relationships to the 'up-stream' Atlantic (Barents Sea and Fram Strait) and Pacific (Bering Strait and Chukchi Sea) gateways.

Consider the thematic scope of an IEA, e.g. impacts from climate variability and change, contaminants and pollution, shipping, and fisheries.

Suggest practical steps for initiating and carrying out an IEA for the Central Arctic Ocean.

**The End**

# Elements of the Ecosystem Approach

1. **Identify the ecosystem** the ecosystem as a geographical entity based on ecological criteria. **Arctic Large Marine Ecosystems, [www.pame.is](http://www.pame.is)**

2. **Describe the ecosystem** in terms of its biological and physical characteristics (species and habitats), as well as the physical and biological processes and relationships that forge them into an ecosystem. **CAFF, AMAP, PAME, SDWG, and Arctic States**

3. **Set ecological objectives** for ecosystem components (species and habitats) and for the overall state of the ecosystem by defining the envelope of conditions for ecosystem state compatible with sustainable use. **In Element 6** ecological objectives are translated into management objectives.

# Elements of the Ecosystem Approach

4. **Assess the ecosystem** by gathering synoptic observations on the status and trends of all relevant ecosystem components in an **integrated assessment**. Integrated assessment includes measuring or estimating the impacts by various human activities such as fishing, pollution, coastal development, as well as the overall or **cumulative impacts** of those activities.

5. **Value the ecosystem** by identifying and valuing its goods and services in order that those economic, social and cultural values may be more fully incorporated into mainstream socioeconomics ('greening of the economy'). Socioeconomics in the broadest sense (including cultural, political and other aspects) come into play in all elements of the EA.



# EBM is fundamental to implementing recommendations of the Arctic Biodiversity Assessment.

## ***Ecosystem-based management***

3. Advance and advocate ecosystem-based management efforts in the Arctic as a framework for cooperation, planning and development.

## ***Climate change***

2. Incorporate resilience and adaptation of biodiversity to climate change into plans for development in the Arctic.

## ***Identifying and safeguarding important areas for biodiversity***

6. Develop guidelines and implement appropriate spatial and temporal measures where necessary to reduce human disturbance to areas critical for sensitive life stages of Arctic species outside protected areas

7. Develop and implement mechanisms that best safeguard Arctic biodiversity under changing environmental conditions, such as loss of sea ice, glaciers and permafrost.

## ***Addressing individual stressors on biodiversity***

## ***Improving knowledge and public awareness***