Development and Implementation of the Ecosystem Approach to Management in the Arctic Council

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The Ecosystem Approach to Management (EA) or Ecosystem-based Management (EBM), which are synonymous terms, is a globally accepted principle. It envisions holistic integration of the management of activities across all human sectors that use and impact ecosystems. It aims to enable sustainable use of the ecosystems and the natural resources there. The Arctic Council (AC) adopted in 2013 the following definition of EA or EBM:

Ecosystem-based management is the 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.

An Arctic Council Expert Group on ecosystem-based management (EBM) for the Arctic environment (2011-2013) delivered its report to the Senior Arctic Officials (SAOs) in 2013. In addition to the above definition, the report contained a recommended set of nine principles and a number of additional recommendations to advance EA implementation in the Arctic. The principles and recommendations were adopted by the Arctic Council in 2013. A follow-up workshop was held concurrent with the Arctic Biodiversity Congress in December, 2014, to examine current Arctic Council efforts as they related to the EBM Expert Group findings. The workshop recommended a set of next steps for the Arctic Council Working Groups and their partners.

The project '*Best Practices in Ecosystem-based Oceans Management in the Arctic*' (BePOMAr) was carried out in 2007-2009 by SDWG and PAME. BePOMAr was built around case studies of how countries develop and implement ecosystem-based oceans management in the Arctic, in addition to a chapter on indigenous issues. Based on the case studies, a set of eight core elements for successful EA implementation in the Arctic was identified. In addition, a set of six conclusions were drawn including aspects such as science-based decision making, political commitment, transboundary perspectives, and adaptive management.

PAME established in 2007 an Expert Group on the Ecosystem Approach to Management led by the USA with Norway joining as co-lead in 2010. The group was transformed to a Joint Expert Group (EA-EG) in 2011 with participation of other Arctic Council working groups - AMAP, CAFF and SDWG. Focused exclusively on marine and coastal areas, the EA-EG has convened workshops from 2011 to 2015 on five topics: boundaries of Large Marine Ecosystems (LMEs; 2011), EA framework (2012), data issues (2013), Integrated Ecosystem Assessment (IEA; 2014), and ecological objectives (2015).

The two main achievements of the EA-EG are a) an EA concept paper (2012) containing an EA framework consisting of six interconnected management and operational elements, and b) an Arctic LME map where the marine Arctic has been subdivided into 18 LMEs. The LMEs were used as assessment units in the Assessment of Oil and Gas Activities in the Arctic by AMAP, the Arctic Marine Shipping Assessment by PAME, and the Identification of Arctic marine areas of heightened ecological and cultural significance (AMSA IIC) by AMAP, CAFF and SDWG.

The Arctic Ocean Review project that was carried out by PAME 2009-2013 had a chapter on EBM and provided a number of implementation-related recommendations to the Arctic Council.

The BePOMAr documents, the work of the Joint EA-EG, the Arctic Ocean Review, and the recommendations from the EBM Expert Group and subsequent workshop have all contributed to the follow-up on the recommendations from the Kiruna Declaration in 2013. An important goal of this conference is to provide information and share experiences from the development of IEA and EA/EBM implementation, in order to assist current and future work in this respect in the Arctic.