



# ENVIRONMENTAL GOVERNANCE

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## Introduction

Governance of marine ecosystems within the Arctic marine area is a critical issue, due to the growing pressure of activities like shipping, drilling and fisheries that will be exacerbated by global climate change. Although less is known about the marine environment as compared to the terrestrial environment, loss of sea ice will reduce habitat for ice-dependent species, while increasing open water habitat that could benefit other species. Some commercial fisheries (e.g. cod and herring in the North Atlantic) may benefit from warmer temperatures, although changes in biological processes throughout the entire ecosystem make the distribution and size of fish stocks hard to predict (ACIA 2005).

Since the end of the Cold War, development of pan-arctic cooperation especially through the Arctic Council, the North Atlantic Marine Mammal Commission (NAMMCO) and the Inuit Circumpolar Council<sup>1</sup> has strengthened the voice for indigenous peoples and provided increased knowledge of the Arctic environment. The challenge is to further

enhance these efforts to promote strategies to adapt to the impacts of global climate change.

## Background on Environmental Governance

Governance is an overarching and general term used to describe methods and institutions that guide human behaviour toward certain goals. Environmental governance can be defined as follows:

“the formal and informal arrangements, institutions, and mores which determine how resources or an environment are utilized: how problems and opportunities are evaluated and analyzed; what behaviour is deemed acceptable or forbidden; and what rules and sanctions are applied to affect the pattern of resource and environment use” (Juda 1999).

Due to the inherent complexity of natural resource use, a myriad of approaches have been applied to governance. These approaches range from targeting a single species, sector or issue (e.g. pollution) to broader cross-cutting strategies, such as ecosystem-based management. These approaches involve various actors from the local to international levels and will be further challenged by the impacts of global climate change, as access to, and distribution of these resources change.

One approach to help distinguish priority areas is the Large Marine Ecosystem (LME) concept, built on the general principles of ecosystem management. LME boundaries are becoming widely used at the international scale to distinguish highly productive areas around the globe for marine ecosystem management.<sup>2</sup> As shown in Figure 1, the Arctic Council Protection of the Arctic

<sup>1</sup> The Inuit Circumpolar Conference (later renamed Council) was established in 1977, but did not include indigenous peoples from Russia until 1989.

<sup>2</sup> LMEs are used among others by UNEP, UNDP, World Bank, US NOAA, and the Arctic Council.

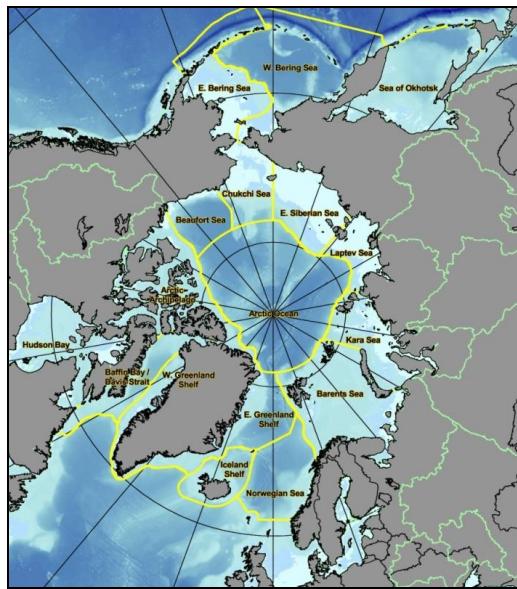


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Marine Environment (PAME) working group has developed LMEs in the Arctic to use as the framework for the Arctic Marine Strategic Plan. LMEs will provide a foundation for a joint project through the PAME and Sustainable Development Working Groups (SDWG) on Best Practices in Ecosystem-Based Ocean Management in the Arctic that is a priority for the Norwegian Chairmanship.

**Figure 1. Draft map of Large Marine Ecosystems (LMEs) in the Arctic.**



(Source: Adapted from PAME October 2006 Draft map.  
<http://www.lme.noaa.gov>)

## Legal and Policy Framework

Governance of marine Arctic ecosystems includes a complex array of international treaties, conventions and programmes, bilateral agreements, national and sub-national laws, and nongovernmental and governmental initiatives. Both governmental and non-governmental institutions are involved, including entities such as the Marine Mammal Commission, the Nordic Council, the Barents Euro-Arctic Council, the Alaska Nanuuq Commission, and the Russian Association of the Peoples of the North (RAIPON). Starting from the early- and mid-20th century, a series of conventions and treaties have been put in place covering various ecosystem issues:

- **regulation of specific parts of the Arctic marine ecosystems** (the International Convention on the Regulation of Whaling, the UN Fish Stocks

Agreement or the International Agreement for the Conservation of Polar Bears),

- **regulation in specific geographical segments of the Arctic marine area**, including both ecosystem and single-species approaches (the Convention on the Protection of the Marine Environment of the North-East Atlantic (OSPAR), the Six-nation agreement on the protection of Pollock stocks in the Bering Sea or North Atlantic Marine Mammal Commission (NAMMCO)); and
- **regulation of specific activities potentially influencing the Arctic marine area** (UNCLOS, the International Convention for the Prevention of Pollution from Ships (MARPOL) or the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter).

In addition, there are non-binding policies that require the ongoing support of participating countries, which are a function of current national priorities and interests.

## Examples of environmental governance in the Arctic marine environment

### Species-based approach: Polar bear

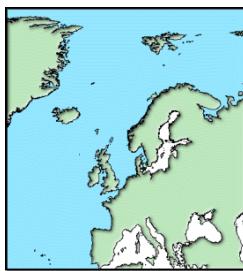
Polar bear management presents a unique example of several governance mechanisms – multilateral and bi-national agreements, national laws, sub-national regulations and co-management schemes – and their interaction, that are geared toward protecting and conserving polar bears in the Arctic. In general, polar bear stocks were considered to be stable in the Arctic, and the international agreement along with the national frameworks were deemed effective in conserving polar bear stocks. However, recent climate change induced environmental effects have altered this outlook. Proceedings of the 14<sup>th</sup> Working Meeting of the IUCN Polar Bear Specialist Group reported that many populations were not at risk of decline over the next ten years, but were nevertheless threatened by contaminants, economic activities, the effects of climate change and the resulting decline of sea ice in the Arctic (IUCN, 2006).

## Species-based approach: Beluga whale

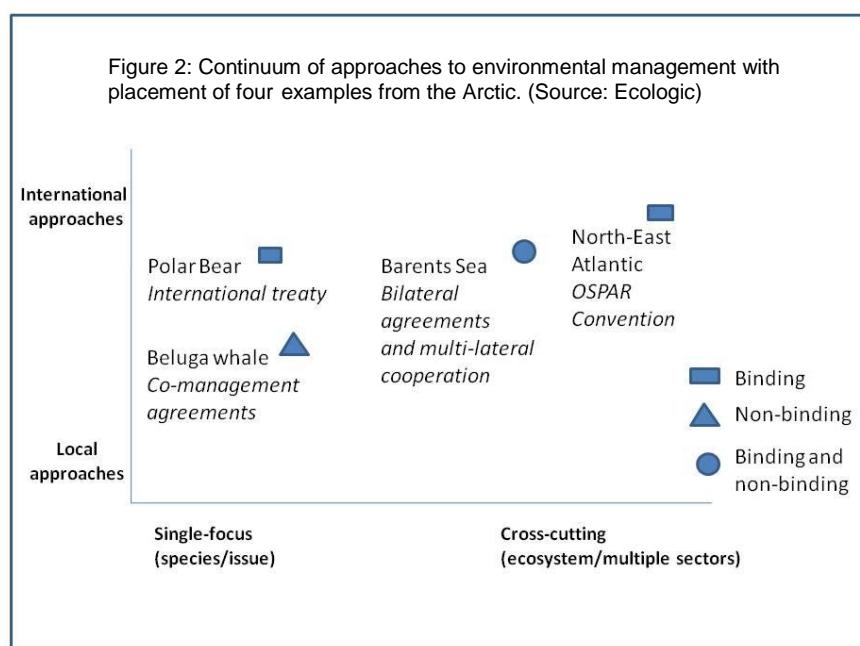
Beluga whales are not included in the International Convention for the Regulation of Whaling despite interest from some members to the Convention. In the US and Canada, there are multiple examples of co-management agreements between the federal government and local indigenous populations for the beluga and other marine mammals. Co-management has been widely applauded as an effective tool to increase user participation and has resulted in increased knowledge about species health and distribution for hunters and scientists (ACIA, 2005). However, it is also important to note that in some cases, researchers have shown that the indigenous communities feel that the co-management approach is one-sided, with management quotas dictated by federal agencies (Tyrell 2007).



**Polar Bear**  
Source: USFWS



**North-East Atlantic**  
Source: OSPAR



**Barents Sea**  
Source: Wikipedia Commons



**Beluga Whale**  
Source: NOAA

## Regional approach: Barents Sea

The Barents Sea comprises Norwegian and Russian territories, their respective exclusive economic zones (EEZs) as well as a high seas region known as the Barents Loophole, which is outside of the EEZs of the two countries. Significant international cooperation has taken place in order to manage the Barents Sea including the multilateral Barents Euro-Arctic Council (BEAR), the inter-regional

Barents Regional Council and bilateral cooperation between Norway and Russia such as the Norwegian-Russian Commission on Environmental Protection. In addition, Norway has a management plan for the Barents Sea, which seeks to strengthen the Joint Norwegian-Russian Commission on Environmental Protection and makes multiple mention of the Joint Norwegian-Russian Fisheries Commission as well as the efforts of the European Commission and OSPAR Convention as relates to maritime policy.

## Regional approach: North-East Atlantic

The North-East Atlantic is regulated in part by the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (adopted 1992, entered into force 1998), which combines the former Oslo (1972) and Paris (1974) Conventions on marine dumping and land based

sources of pollution respectively. Annex V of the Convention aims to apply an 'integrated ecosystem approach', however, it excludes fisheries management and maritime transport.

There is concern that the overlapping legal framework of the international, EU, national and local laws creates confusion that could inhibit positive action (Ducrotoy, 1999). As the EU develops its Marine Strategy Directive, OSPAR is

promoting its policy advances in light of a potential shift in need and structure of the Convention.

### Summary of examples of Arctic governance

Approaches to environmental governance are often combined and difficult to separate from one example to the next. The four examples presented above provide a snapshot of the multiple approaches to governance in the Arctic. A way to communicate the complexity of these and other existing approaches may be to place them on the continuum of governance approaches as presented above (see Figure 2). As seen in the figure, both the management of the polar bear and beluga whale are single-species approaches, although the polar bear approach is legally binding while the beluga whale is non-binding. While the beluga whale co-management agreement involves local and national actors, the polar bear management regime is through a multilateral treaty. The Barents Sea and North-East Atlantic regimes both address more than one issue. The Barents Sea is governed by overlapping soft law agreements through the Barents Euro-Arctic Region (BEAR) and bilateral agreements of the Joint Norwegian-Russian Fisheries and Environmental Commissions, while the OSPAR Convention is governed by a Commission that can also take legally binding decisions (subject to the acceptance of the contracting parties).

### Perspectives on the way forward

Some experts<sup>3</sup> have argued that the existing patchwork of specific conventions and agreements will not adequately facilitate a sustainable management of the Arctic marine environment in the near future. To address this challenge, multiple new initiatives aim to integrate and coordinate governance, spanning from the country, to circumpolar to global levels and including governmental and non-governmental stakeholders such as the indigenous peoples, industry and environmental organisations. There is an opportunity to create synergy among these efforts to effectively address the coming challenges for the Arctic marine ecosystems. The key question is whether existing treaties and initiatives provide an

adequate foundation, or whether new institutions are needed for appropriate governance.

### Questions for discussion

As a possible starting point for further reflection and discussion, the following questions may provide a useful starting point:

- Uniqueness: what unique adaptation needs does the Arctic marine environment have that should guide the adaptation of governance regimes for the marine Arctic?
- Content: Where are the gaps and overlaps in the current governance structure?
- Approaches: What are the advantages and trade-offs of the various possible approaches? (e.g. flexibility versus enforceability)
- Transatlantic contribution: How can transatlantic policies contribute to the adaptation of governance in the marine Arctic to climate change?

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### ARCTIC TRANSFORM Transatlantic Policy Options for Supporting Adaptations in the Marine Arctic

For additional information about the project, please refer to the project website:

<http://www.arctic-transform.org>

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<sup>4</sup> This policy brief is abridged from the full Arctic Transform background paper on environmental governance.

<sup>3</sup> See, for example, Nowlan, 2001; Rayfuse, 2008.