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**Climate Change  
and Arctic Sustainable Development :  
scientific, social, cultural and educational challenges**

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## **ABSTRACT: BIODIVERSITY AND ECOSYSTEM SERVICES**

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### **Sustainable Development or Sustaining Development? Arctic governance in a changing climate**

In the last 20 years, the Arctic has changed from a relatively static region on the periphery of the global consciousness to being central to the discussions about the impacts of climate change and development. This presentation will address the meeting's three key questions by examining Arctic governance issues related to biodiversity and ecosystem services. And it will raise a fourth question: "Given the rapid and accelerating effects of climate change in the Arctic, is sustainable development achievable?"

Under normal cold conditions, the Arctic provides vital ecosystem services to the planet by cooling it and keeping water and methane frozen, which in turn helps regulate the earth's climate. Global efforts to reduce greenhouse gas emissions will have a direct effect on the Arctic's ability to continue functioning as the earth's cooling system. We are already seeing the impacts of rapid warming in the Arctic and the 2007 IPCC IV Assessment identified it as being particularly vulnerable to climate change, along with other regions like the Small Island Developing States.

At its 2008 Governing Council meeting in Monaco, the United Nations Environment Programme issued a declaration that acknowledged "the efforts of Arctic States, individually and collectively, to protect the Arctic environment and manage activities in the Arctic to minimize the impact of those activities" on the region's environment. Entitled *Sustainable Development of the Arctic region*, this decision of the governing council encourages UNEP "to co-operate, as requested, with the Arctic Council, relevant Multilateral Environmental Agreements and other relevant regional and international bodies, as appropriate".<sup>1</sup>

This direction came at the same time as numerous political and policy efforts<sup>2</sup> to come to grips with how the Arctic should be governed in the face of rapid climate change. No discussion of biodiversity and ecosystem services in the Arctic can take place without

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<sup>1</sup> United Nations Environment Programme. Report of the Governing Council/Global Ministerial Environment Forum on the work of its tenth special session. Monaco, 20-22 February 2008.

<sup>2</sup> Examples include the *Illulissat Declaration* by Five Arctic Coastal States (28.05.2008), 8<sup>th</sup> *Conference of Parliamentarians of the Arctic Region* (14.08.2008), Nordic Council of Ministers – *The European Union and the Arctic* (24.06.2008), United States – *Arctic Region Policy* (09.01.2009)

considering the existing governance mechanisms, how they work or don't work, how they might be altered to help adapt to climate change in the Arctic, what gaps exist in the current regimes, what needs to be done to ensure an interdisciplinary approach is taken, and that arrangements are designed to secure the long-term sustainable development of the region.

As UNEP's Key Polar Centre, GRID-Arendal has the responsibility for coordinating a project that will assess and monitor the performance of MEAs in slowing the rate of biodiversity loss in the Arctic, analyze gaps and present options for improvement.

But while this work is being carried out, and while we are discussing governance and biodiversity in the Arctic, we need to examine the concept of sustainable development itself and come to some consensus on it. If sustainable development was ever possible in the Arctic, is it achievable in the context of rapid accelerating climate change?

The Brundtland Commission definition is widely known:

*Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.*<sup>3</sup>

The second sentence in that definition is less quoted but perhaps more relevant to this discussion:

*The concept of sustainable development does imply limits - not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities.*

At the end of 2008, new research demonstrated unequivocal evidence that the Arctic is warming faster than climate models predicted, and that it is happening about a decade before expected.<sup>4</sup> As the multi-year sea ice retreats and there are longer ice free periods in the Arctic, the pressure to exploit the region's natural resources will intensify. Given the long term *unsustainability* of hydrocarbon use and increasing inability "of the biosphere to absorb the effects of human activities," how do we have a conversation about "sustainable development in the Arctic"?

### **Recommendations:**

- Recommendations on biodiversity and ecosystem services developed at the UNESCO meeting need to take into account other discussions on Arctic governance<sup>5</sup>;
- Arctic nations need to recognize the importance and value of non-Arctic stakeholders in efforts to manage the common areas in the region and reduce the effects of climate change;
- The UNFCCC Copenhagen climate change agreement scheduled to be completed in December of this year must provide sufficient resources to allow the world's vulnerable regions to adapt to rapid climate change. In the Arctic, this means that these resources must be provided by the states which have sovereignty in the region;
- In light of the latest scientific findings, and in order to preserve the Arctic's role as the planetary cooling system, UNESCO needs to support efforts by the Small Island Developing States and other vulnerable regions, including the Arctic, to achieve a climate change treaty that will ensure that global average temperature increases are kept below 1.5 degrees Celsius (above pre-industrial levels).

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<sup>3</sup> <http://www.un-documents.net/ocf-ov.htm#L.3> (accessed 18.02.2009)

<sup>4</sup> The Independent, 16.12.2008. "Has the Arctic melt passed the point of now return?" <http://www.independent.co.uk/environment/climate-change/arctic-melt-passes-the-point-of--no-return-1128197.html> (accessed 18.02.2009).

<sup>5</sup> Perhaps this is better as part of the preamble.