



CONFERENCE OF PARLIAMENTARIANS OF THE ARCTIC REGION

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“Climate Change from an Arctic perspective”

(Summary by Mr. Bjørn Willy Robstad)

Looking at the history of climate change on earth, an Ice Age occurs about every 100,000 years. The current interglacial period is very long compared to all the interglacial periods. The last 20, 000 years seems to have been ideal for the development of human societies, it has been an historic “Sweet Spot”.

The IPCC WG 1 (2007) stated:

“The global increases in carbon dioxide concentration are due primarily to fossil fuel use and land-use change, while those of methane and nitrous oxide are primarily due to agriculture”.

So what will happen to the temperature on earth? If we continue at the current rates of emissions we are likely to arrive at 3 degrees Celsius higher average sometime mid-to late 21st century. The different IPCC scenarios vary from 1.5 to 4.5 degrees Celsius by about 2100. This rise in temperature will impact food security, water issues, ecosystems, extreme weather events and the risk of rapid climate change and irreversible impact. The regional and national impact will vary.

Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.

There is now higher confidence in projected patterns of warming and other regional-scale features, including changes in wind patterns, precipitation and some aspects of extremes and of ice.

Anthropogenic warming and sea level rise will continue for centuries due to the time scales associated with climate processes and feedbacks, even if greenhouse gas concentrations were to be stabilized.

The Arctic is experiencing some of the most rapid and severe climate change on Earth. Over the next 100 years, climate change is expected to accelerate, contributing to major physical, ecological, social, and economic changes. Changes in the Arctic climate will also affect the rest of the world.

The extent of sea ice reached a minimum in recorded history September 14 2007. Especially the last few years the extent of sea ice has decreased dramatically. One consequence could be increased shipping, as the Northern Sea Route is 45 % shorter than the Suez Canal. The Arctic is also expected to hold large parts of the worlds undiscovered petroleum resources. The melting ice may make these resources more accessible.



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Major geopolitical issues are unresolved across the Arctic Basin:

1. Access: Issues of Access and Rights of Passage through the Northern Sea Route (Russia) and the Northwest Passage (Canada)
2. Seaward Claims: Claims of seaward ownership within the Arctic oceanic basin. Median Line Method (i.e., Divide into areas proportional to the amount of coastline of a country), and the Sector Method (Divide into areas by essentially longitudinal line from the countries to the pole).
3. Boundary disputes: Many boundary disputes still exist.
4. Land claims: Many still unresolved across the Arctic region
5. Venue: Is the Law of the Sea the venue to resolve these geopolitical issues, or other international frameworks required?

The Greenland ice sheet dominates land ice in the Arctic. From May to September 2007 the melt area was the highest if the 29 – years of satellite records, and the melt area had increased by almost 30% since 1979.

A rise in sea level by 1 meter will have dramatic consequences for countries like Denmark and the Netherlands, and for Florida and Louisiana in the US.

The Concept of “Tipping Points”

Compared to past changes in a physical, bio-ecological and/or human system, a “tipping point” is when:

- The change is abrupt and
- The ability of the system to return to its original state is not very likely, that is: Hence, the system is now in a new state.

The changing climate influences the biodiversity and shifting in weather types and locations:

- Spruce bark beetle dramatically changes the forest, the landscape, and ecological systems.
- The polar bears are profoundly impacted by the loss of ice.
- Thunderstorms have migrated northward, along with lightning, which apparently caused the first known wildfire north of the Brooks Range in Alaska, which occurred last summer.

The Fourth International Polar Year (IPY) 2007-2009 is addressing uncertainties and gaps in knowledge. The IPY has more than 50, 000 participants from more than 60 nations, covering the Arctic and the Antarctic.

Focus scientific & public attention on Polar Regions by addressing these themes:

- Enhanced understanding of current status
- Past & future changes
- Linkages to global processes
- Investigate frontiers of science in polar regions
- Vantage point to earth history & to space
- Social & cultural dynamics & adaptability

Indigenous peoples knowledge and community issues are important parts of the research.



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The IPY is addressing priority issues at a critical time in human history, and is delivering insights and essential information by collaboration among many scientists and nations.

The 27-29 May 2008, governmental representatives from the five coastal states in the Arctic (Russia, the US, Canada, Norway and Denmark/Greenland) met in Ilulissat, Greenland to discuss the Arctic Ocean. "The Ilulissat Declaration" was adopted.

"The Arctic Ocean stands at the threshold of significant changes. Climate change and the melting of ice have a potential impact on vulnerable ecosystems, the livelihoods of local inhabitants and indigenous communities, and the potential exploitation of natural resources." (Quote from "The Ilulissat Declaration").