

What if the winter doesn't come?



**Inuit Perspectives on Climate
Change Adaptation Challenges in
Nunavut**

**- Summary Workshop Report -
March 15-17, 2005
Iqaluit**

Introduction

From March 15 to 17, 2005, Nunavut Tunngavik Inc. (NTI) hosted a workshop on climate change adaptation. Forty people gathered in Iqaluit to take part in this 3-day workshop intended to highlight Inuit perspectives on climate change adaptation issues in Nunavut. Participants included Inuit Elders, Hunters and Trappers Organization (HTO) and Regional Wildlife Organization (RWO) members, Inuit organization (Regional Inuit Associations, NTI, Inuit Tapiriit Kanatami and Inuit Circumpolar Conference) staff, representatives of federal and territorial governments, as well as scientists. The workshop was chaired by Joanasi Akumalik, Director of Government and Public Relations at NTI. ArcticNet and the Government of Canada's Environmental Capacity Development Initiative program contributed the bulk of the funding required to hold the workshop.

Workshop Background:

In Cambridge Bay, March 2001, NTI hosted an *Elder's Conference on Climate Change*. The 3-day workshop brought together 18 elders from across Nunavut as well as representatives from Inuit organizations, federal and territorial levels of government, and institutions of public government. Elders shared their knowledge and experiences concerning climate change in Nunavut and confirmed that the impacts of climate change were, without a doubt, already felt at the community level. Three years later, the release of the *Arctic Climate Impact Assessment* (ACIA), under the auspices of the Arctic Council, came as an international endorsement of these testimonies. In turn, the ACIA policy recommendations highlighting the need for further focus on adaptation issues related to climatic and environmental change are supported by the following quotations from the earlier Elder's conference:

"The question we should be asking ourselves include what will we do next? How can we adapt and survive?" Joe Arragutainaq, Sanikiluaq

"Our lives as Inuit have been affected by this climate change. We have to prepare for the upcoming changes so that our youth can have a fighting chance." Norman Attungalak, Baker Lake

Workshop Rationale:

Although community-based and science-based knowledge recognize the existing and projected impacts of climate change in Nunavut, neither has of yet focused on adaptation challenges resulting from these impacts. However, due in large part to the release of the ACIA and to the relentless work of the Inuit Circumpolar Conference, climate change research is likely to turn towards the consideration of mitigation and adaptation issues. It is therefore crucial that Inuit express their views and concerns before research agendas are unilaterally set according to southern priorities and interests. In addition, land claims implications and Inuit Qaujimajatuqangit, or Inuit societal values, need to be brought to light if they are to influence decision-making processes. In Nunavut, bringing both the holders of community-based and science-based knowledge around the same table is the most conducive approach to achieving this goal.

Key Considerations

A clear consensus emerged between the holders of community-based and science-based knowledge that climate change is increasingly affecting Nunavut's environment and wildlife. While scientific predictions were acknowledged as giving a preview of what might lie ahead, and allowing for the reduction of potential future impacts, Inuit observations were recognized as the most systematic and regular insight on the current status of Nunavut's environment and wildlife. There was also general agreement that observations and monitoring are needed to detect and identify environmental and socio-economic changes. The non-implementation of the Nunavut General Monitoring Plan, under Subsection 12.7.6 of the *Nunavut Land Claims Agreement* (NLCA), therefore deprives Inuit of their right to be informed on the status of their land.

However, Inuit Qaujimagatuqangit (IQ) and scientific or governmental outlook do not so readily complement each other in terms of adaptation to the impacts of climate change. In many ways, adaptation is an academic concept to Inuit hunters who must, at every single outing on the land or the sea ice, base their behaviour on the conditions of the day. Adapting is not necessarily a conscious effort to respond to conditions now brought upon because of climate change; it is just something that you do. Further, climate change adaptation focuses on human populations, whereas Inuit are primarily concerned about the impacts climate change has on wildlife populations and their food sources. In other words, climate change is more of a pressing issue because of its impact on Arctic wildlife and its potential to accelerate the loss of the traditional Inuit hunting culture and the associated socio-economic importance of country foods, than it is an issue through its impacts on areas such as infrastructure. Lastly, in very broad terms, Inuit are concerned for the well-being of future generations whereas science is project-driven and government is mandate-driven. The challenge therefore lies in focusing research on the challenges that tomorrow's youth will be facing because of climate change.

In essence, the fundamental issue revolves around Inuit control over what happens within the Nunavut Settlement Area because of climate change, such as, for example, the potential opening of the Northwest Passage to international shipping. Because of its impacts on Nunavut's environment and wildlife, and therefore on the socio-cultural and economic aspects of Inuit harvesting, climate change is, in the end, interconnected with an agreement that is meant to protect Inuit rights and encourage Inuit self-reliance and socio-cultural well-being: the *Nunavut Land Claims Agreement*.

Highlights

Relationship between Inuit Qaujimagatuqangit and science:

- Inuit Qaujimagatuqangit cannot be incorporated or integrated into science because societal values are broader than traditional knowledge which is anyway, by nature, unlike scientific knowledge
 - Both need to parallel each other
- Inuit observations complement scientific measurements, and vice-versa
 - Knowledge must be shared in both directions
- Especially because of the lack of coordinated data on Nunavut's environment, Inuit observations are essential in informing and guiding scientific research
 - The challenge is to steer research towards issues relevant to communities
- While it is unusual for Inuit to predict years ahead into the future, scientific knowledge can help to anticipate change and prevent being so suddenly faced with it
 - Thought must be given to future challenges and opportunities

Impacts on the sea ice and the marine environment:

- Sea ice is generally thinner and its properties seem to be changing
 - Impact on seal den and seal hole hunting techniques, and floe edge hunting
- Sea ice freezes up later and breaks up earlier
 - Impact on subsistence hunting; seals don't fully moult before break-up
- Winds are obviously stronger and more erratic
 - Impact on ice formation/break-up and on the boating season
- The depletion of sea ice affects the health and movements of polar bears
 - Incidents with 'problem bears' are increasing
- Melting/absence of multiyear ice near communities means that the calming effect of icebergs on surrounding waters/ice is disappearing, along with the traditional use of iceberg water for tea
- Currents are stronger and tides are more pronounced
- Commercial fishery potential may be increasing

Impacts on snow and the terrestrial/freshwater environment:

- Caching meat is now difficult because it is too warm and the meat spoils
 - Proper community freezers needed
- River and lake water levels are dropping
 - Many traditional weirs are now useless and char in certain rivers have difficulty heading upstream to spawn
- Berries aren't as abundant as they used to be in traditional 'picking spots'
- Predominant winds are shifting, generally from northerlies to easterlies
 - Impossible to continue relying on snowdrifts as navigation aids
- Snow texture is changing
 - Often difficult or almost impossible to build igloos

Impacts on wildlife:

- Wildlife is more in contact with the environment than humans
 - Much can be learned of changing conditions by observing animals
- The distribution and abundance of insects, birds and mammals are changing
 - 'Foreign' insects could affect the health of caribou and parasites might be able to complete additional life cycles in warmer conditions
- Caribou have in some cases altered their migration routes due to sea ice conditions and have abandoned areas because certain rivers no longer freeze over
 - Some traditional camping sites are now purposeless
- Caribou and fish are skinnier, more unhealthy-looking
 - Some people now buy country food or have it flown in from relatives living in other communities, but less fortunate others must depend on local wildlife
- The quality of skins and furs is deteriorating
 - It is increasingly difficult for seamstresses to make traditional clothing
- Harder for caribou to forage due to rainfalls during abnormally warm winter spells

Impacts on lifestyle and livelihood:

- Climate change is not only an environmental issue, but also human one because Inuit food sharing and hunting culture relies on the wildlife species and the environmental conditions that are being affected by climate change
- The lifestyle and livelihood of the next generations will be affected by climate change
 - But climate change needs to be viewed in a broader context, since many other socio-economic and political changes are directly impacting Nunavut Inuit
- Many Inuit depend on the snow to travel between communities
 - Interaction between communities may decrease if snow cover is insufficient to allow travel by dog team or snowmobile, because airline connections are sometimes nonexistent or infrequent, and always costly
- It is increasingly difficult to survive on the traditional economy, so there is more and more pressure to adopt, and develop, the wage economy
 - Less full-time harvesters/seamstresses means fewer young adults acquiring the knowledge/skills required to help the adaptation of younger generations
 - Less traditional/land-related skills means more dependence on Government
- The weather forecasts of Elders are now often incorrect because climatic changes affect the meaning of the observations they base their predictions on
 - Increased reliance on the weather office's predictions, and a tendency of youth to dismiss the words or predictions of Elders as 'stories of old'; an Elder had even been called a liar as a result of a wrong forecast
- Drastic disruption of household and livelihood when harvesting equipment is lost because of unusual conditions (mainly out on the sea ice)
 - Need for harvester's insurance and/or emergency compensation funds
- Youth and 'weekend hunters', who are less experienced and don't pay as much attention to conditions, are not as equipped to detect, and face, potential dangers
 - The additional risk factor brought upon by changing conditions increases the knowledge gap of younger harvesters

Impacts on Infrastructure:

- Noticeable shoreline erosion and melting of permafrost
 - Community planning must include updated building design and techniques
- Lone airstrips in communities were built to parallel prevailing winds
 - Crosswinds may become a safety issue warranting alternative airstrips
- Past and current industrial reclamation relies on permafrost to encapsulate wastes
 - Monitor reclaimed DEW Line and mine sites for seepages of contaminants
- Stronger winds are knocking down power lines
 - Consider burying cables because winter power outages are hardships
- Docks/breakwaters and community freezers are needed in more communities

Impacts on the *Nunavut Land Claims Agreement (NLCA)*:

- Irregardless of changes, the NLCA will always be there to protect Inuit rights
- Inuit negotiated the NLCA for the benefit of future generations
 - Since climate change is a long-term event, it necessarily touches the NLCA
- Climate change increases the need to identify, and be informed of, the environmental health of the Nunavut Settlement Area and the socio-economic condition of Inuit
 - The full implementation of Subsection 12.7.6 (Nunavut General Monitoring Plan) is critical
- Wildlife, and access to wildlife, are intricately linked to harvesting rights and the socio-cultural wellbeing of Inuit
 - Article 5 (Wildlife) needs to provide Inuit the opportunity to manage Nunavut's land and wildlife so that, despite the pressures exerted by environmental change, Inuit can preserve their traditional culture and values
- The Institutions of Public Government (IPGs), such as the Nunavut Wildlife Management Board, are based on the relative stability of the environment
 - If sufficient resources are not allocated to the IPGs, they may not be flexible enough to take into account current environmental changes into their management regimes and plans
- Impacts and adaptation mainly occur at the community level
 - Meaningful involvement of Inuit in the design, development and delivery of socio-cultural policies, programs and services (Article 32) will become even more of a challenge for Government than it already is

Adaptation:

- Inuit adaptation to climate change will be based on Inuit Qaujimajatuqangit
- The peoples' whose activities are mainly at the source of human-induced climate change should be the ones doing the bulk of the adapting (to minimize the changes and impacts that Arctic populations end up dealing with firsthand)
 - It is not only Northerners who will have to adapt; the message has to be conveyed to the rest of the world that, ultimately, what happens in the North will affect their lives and they too will have to adapt to climate change

Adaptation (continued):

- Recognition that community needs differ from one another and that climate change adaptation vulnerabilities/needs assessments must be carefully planned and conducted
 - We can assess all we want, but actions must be taken as a result
- Language retention and cultural grounding are important adaptation tools
 - Need to look into what linguistic and cultural aspects are potentially more at risk because of climate change
- Must ensure that research results are made available very quickly to those who have to make short-term planning decisions in Nunavut
- Youth need to be trained and taught the skills that they will need to successfully adapt to their changing environment without relinquishing their culture in doing so
 - Need to focus on the challenges of tomorrow's youth
- Some adaptation will need to be done quickly and it will sometimes require money
- Interest to look into floatable equipment and amphibious vehicles
- Largely unanswered concerns were voiced around the impact of UV radiation
- Dog teams act as 'built-in' danger indicators and navigation tools
 - 'Reverting' to dog teams could increase our ability to adapt to a changing environment

Adaptation Priorities:

- Inuit tend to consider all wildlife and living things on an equal footing
 - Priorities are essentially the tools of researchers and policy-makers
- Inuit, governments, leaders and scientists need to work together if anything meaningful is to be accomplished on this issue
- Research on the impacts of climate change on wildlife and their food sources
- Communication and monitoring (basically to know what it is we need to adapt to)
- Translation of climate change information into both Inuktitut and Inuinnaqtun
- Identification of barriers to adaptation
 - Inflexibility of legal and management regimes making it more difficult to cope with changes?
- Identify and investigate potential opportunities, such as commercial fisheries

Lastly, NTI wishes to thank all workshop participants for sharing their knowledge and insight on climate change adaptation and respectfully welcoming the viewpoints of others.



Inuit Perspectives on Climate Change Adaptation Challenges in Nunavut

March 15-17, 2005 (Building 981, Iqaluit)

Tuesday, March 15

Morning (9am - 12am)

Introductions

- What do Inuit Qaujimajatuqangit and science tell us about climate change in Nunavut?
- What do we still need to know about present and future climate change in Nunavut?

Afternoon (1:30pm - 4:30pm)

- What are the current impacts of climate change in Nunavut communities?
- How are Nunavut communities adapting to those impacts?

Wednesday, March 16

Morning (9am - 12am)

- What are the projected (next 20 years) impacts of climate change in Nunavut communities?
- What will Nunavut communities need to adapt to those projected impacts?
 - What are possible implications for cultural and harvesting activities?

Afternoon (1:30pm - 4:30pm)

- What are community, organizational and research challenges of climate change adaptation?
- How can we cooperatively address those challenges?

Thursday, March 17

Morning (9am - 12am)

- Are rights protected under the *Nunavut Land Claims Agreement* vulnerable to climate change?
- Where can Nunavut communities find regional, national and international support in their adaptation to climate change?

Afternoon (1:30pm - 4:30pm)

- What are climate change adaptation priorities for Nunavut?
- How should Inuit organizations, research and governments address the issue of adaptation to climate and environmental change in Nunavut?

Closing remarks

Workshop Participant List

Elders

Gino Akkak (Kugaaruk) **Jerome Tattuinee** (Rankin Inlet)
Bob Konana (Gjoa Haven) **Apak Qaggasiq** (Clyde River)
Emily Alerk (Baker Lake) **Jamesie Mike** (Pangnirtung)

Hunters and Trappers Organizations and Regional Wildlife Organizations

Peter Qayutinaaq (Taloyoak) **Lucassie Arragutainaq** (Sanikiluaq)
Willie Nakoolak (Coral Harbour) **Nathan Qamaniq** (Igloodik)
John Kaunaq (Repulse Bay) **Koonoo Oyukuluk** (Arctic bay)
Agnes Egotak, KitHTA (Kugluktuk) **Joannie Ikkidluak, QWB** (Kimmirut)

Institution of Public Government

Guy Kakkiarniun, Nunavut Water Board (Kugaaruk)

Regional Inuit Organizations

Joe Amagoalik, QIA (Iqaluit) **Lynn Carter, KitIA** (Kugluktuk)

Nunavut Tunngavik Inc.

James Eetoolook (Cambridge Bay) **Paul Irngaut** (Iqaluit)
Joanasie Akumalik (Ottawa) **Jenny Ipirq** (Iqaluit)
Jeannie Ehaloak (Cambridge Bay) **Philippe Lavallée** (Iqaluit)
David Kunuk (Iqaluit) **Marius Tungilik** (Iqaluit)

International and national Inuit organizations

Sheila Watt-Cloutier, ICC (Iqaluit) **Tommy Akulukjuk, ITK** (Ottawa)
Paul Crowley, ICC (Iqaluit) **Heather Moquin, ITK** (Ottawa)

ArcticNet/Researchers

Mark Nuttal (Edmonton) **Jaime Dawson** (London, ON)
Johanna Wandel (Guelph) **Shari Fox-Gearheard** (Clyde River)

Nunavut Research Institute

Jamal Shirley (Iqaluit)

Government of Canada

Don Lemmen, NRCan (Ottawa) **Donna Mandeville, EC** (Ottawa)
Robyn Abernathy-Gillis, INAC (Iqaluit) **Marie-Ève Néron, INAC** (Ottawa)

Government of Nunavut

Ian Rumbolt, Environment (Iqaluit)

Nunavut Arctic College

Melanie Howell, Environment Technology Program (Iqaluit)