

CLIMATE CHANGE IN NUNAVIK AND NORTHERN QUEBEC

ACCESS TO LAND AND RESOURCES



CONTEXT

Communities in Nunavik and Northern Quebec use a network of informal trails, mainly snow and ice, to access the territory for harvesting activities (hunting, fishing, trapping, etc.) and for travel between communities. However, the use of these trails is becoming more hazardous because of changing climate conditions. Changes in precipitation patterns as well as in the length of the winter season are affecting their safety and access to their territory and resources, with significant socio-economic impacts on the region's residents.

OBJECTIVES

- Assist Northern communities in identifying and understanding the impacts of climate change, in particular with respect to the use of ice trails for hunting, fishing, trapping and other harvesting activities.
- Work closely with the participating communities to develop adaptation strategies, based on traditional and scientific knowledge, to help cope with the current and anticipated impacts of climate change.

PROJECT OVERVIEW

The research relied on the active participation of community members and involved residents throughout the project. Local researchers, supported by the project manager, collected data to identify the current ice trail network, hazardous areas as well as alternate routes by interviewing elders and experienced hunters and validating the findings through workshops in the communities. The researchers also took field measurements (snow and ice thickness) and recorded qualitative descriptions of conditions along the trails.

Indicators that could incorporate traditional knowledge and scientific analyses were identified with Ouranos.

PROJECT START DATE AND LENGTH

January 2004 • 5 years

Information:

projet@ouranos.ca

514 282-6464

www.ouranos.ca

PARTNERS/FUNDING

- Kativik Regional Government
- ArcticNet
- Centre d'études nordiques – Université Laval
- Centre Nasivvik – CHUL
- Kativik Environmental Advisory Committee
- Ouranos
- Environment Canada – Northern Ecosystem Initiative
- Makivik
- Ministère des Transports du Québec
- Kawawachikamach Naskapi Nation
- Natural Resources Canada – Climate Change Action Fund

TEAM

Lead Researcher

Martin Tremblay

Kativik Regional Government

Associate Researchers

Christopher Furgal

Centre Nasivvik

Tuumasi Annanack

Kangiqsualujjuaq

Eli Angiyou

Akulivik and Ivujivik

Noah Swappie

Kawawachikamach

Peter Tookalook

Umiujaq

Michael Barrett

Kativik Regional Government

Michel Allard

Centre d'études nordiques

Jean-Pierre Savard, Diane

Chaumont and Caroline Larrivée

Ouranos

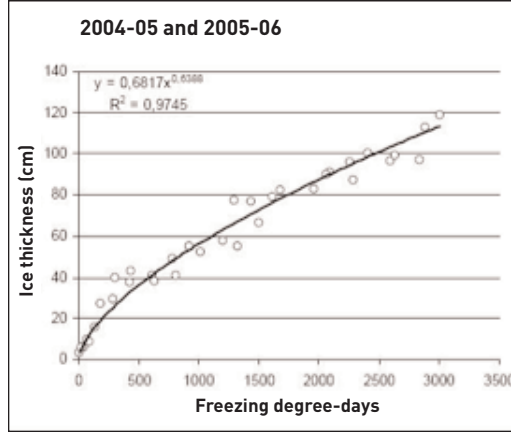
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The 6 Northern communities participating in the research project.

Source: Kativik Regional Government, 2005.



Relationship between total freezing degree-days and lake ice thickness.

Source: Ouranos, 2006.

RESULTS

The study showed that:

- Some coastal communities in this region are already feeling impacts associated with environmental changes, particularly along ice trails.
- Residents of these communities use alternate routes in winter to avoid inaccessible or increasingly risky spots. They also report using routes closer to the coast in summer when travelling by boat to limit risks related to less-predictable weather conditions.
- Carrying along a boat when travelling by snowmobile in spring is one example of adaptation to the significant environmental changes that have already been observed.
- Field data collected by local researchers have been linked with indicators provided by Ouranos (freezing degree-days) to establish scenarios for travel-safe ice conditions and predict how these conditions will evolve in a context of climate change.

The project generated several deliverables, available on the trilingual project Website (<http://climatechange.krg.ca>).

IMPACT

Aside from the interest the results and project approach have generated for other Inuit communities elsewhere in Canada, project spinoffs also include:

- training local researchers to carry out an ice monitoring program and conduct interviews;
- documenting some traditional Inuit knowledge;
- increasing community awareness of climate change issues;
- developing awareness activities for community youth.