



Natural Resources Canada

Partnership Helps Nunavut Communities Adapt to Climate Change

By Marisa Brennan
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Clyde River, Nunavut. Population 820.

The Earth's climate is always changing due to natural processes. But many experts believe that today's human activities are causing a much faster rate of change — and this is hitting Canada's Arctic regions hard. In Nunavut, residents and visiting scientists alike have observed significant changes — such as permafrost degradation, changes in sea-level and sea ice, and coastal erosion — that are already affecting the safety and sustainability of communities and their infrastructure.

Nunavut Climate Change Partnership

To help communities adapt to these changes, [Natural Resources Canada's](#) (NRCan's) Climate Change Geoscience program — in partnership with the [Government of Nunavut](#), the [Canadian Institute of Planners](#) and [Indian and Northern Affairs Canada](#) — is working to build climate change planning capacity at local, regional and territorial levels through the Nunavut Climate Change Partnership. The partnership is currently collaborating on a priority-driven initiative called Atuliqtuq, meaning "coming into force" in Inuktitut, which is working in three main areas:

- **Capacity building** for climate change adaptation planning within the Government of Nunavut and individual Nunavut communities. This involves piloting the development of adaptation action plans in seven Nunavut communities — Clyde River, Hall Beach, Iqaluit, Arviat, Whale Cove, Cambridge Bay and Kugluktuk — and using the results to develop planning tools for the rest of the territory.
- **Creating scientific information** that is regionally and locally relevant for dealing with community climate change adaptation and planning work. The collection and development of this information includes research on permafrost degradation and the resulting landscape hazards, sea-level change and coastal erosion, and freshwater supply.
- **Developing tools** to collect, publish and share climate change adaptation knowledge across the communities of Nunavut and beyond. This work is leading to the development of a new Web site to disseminate information.

An important multi-stakeholder response to new environmental conditions, this climate change initiative is attracting much attention. "Atuliqtuq has facilitated close collaboration between two levels of government, community planning professionals, Nunavut communities and scientists," says Daniel Shewchuk, Nunavut's Minister of Environment. "It has also equipped Nunavummiut with the valuable tools, resources and knowledge needed to adapt to the uncertainties of a changing climate."

Community Engagement



Example of a permafrost sediment core underlying Nunavut community infrastructure. The dark lenses are made of ice.

From the initiative's beginning, community engagement and participation in both the planning and scientific research have been an important part of Atuliqtuq, involving community presentations and events, poster displays, radio shows and one-on-one meetings with hamlets, hunter and trapper organizations, and other community groups.

And from a research and training perspective, the initiative has helped community members and summer students become expert field assistants for permafrost, geophysics, sea-level change, watershed and other monitoring activities, as well as active participants at scientific and planning conferences.

New Opportunities

This practical involvement has led to specialized professional careers. One summer student, Lee Ann Pugh, went on to become the climate change coordinator for Nunavut and is now the territorial coordinator of land use planning and claims implementation.

The development of the community-run Ittaq Heritage and Research Centre in Clyde River, Nunavut, offers another community engagement success story. Thanks to collaboration with NRCan's Climate Change Geoscience Program scientists and the Canadian Institute of Planners, the centre developed a business plan, built up community logistical support services, produced a community climate change adaptation plan and hired people from the community. Since 2007, Ittaq has employed over 33 people from Clyde River, which has an unemployment rate of 24 percent.



Gordon Kautuk, the first full-time coordinator of the Ittaq Heritage and Research Centre in Clyde River.

Local involvement is an important component of Atuliqtuq, for many practical reasons. "We really value our partners at the community level and what they bring to the table, in terms of addressing climate change adaptation issues," says NRCan's project leader David Mate. "Being able to work with Ittaq in Clyde River has enabled everyone to achieve much more from the research."

And the project as a whole is paving the way for future climate change adaptation work. Says David: "We will strive to synthesize results in the form of reports, posters and maps so that communities and decision-makers across Nunavut can use them to help inform their own independent adaptation strategies and programs."

For more information about Atuliqtuq and other northern community impact assessment projects, visit NRCan's *Enhancing Resilience in a Changing Climate* [Web site](#).

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