



Martin Fortier, James Ford, Trevor Bell photos / ArcticNet

- *Regional priority issues review*
- *IRIS-2 report structure*
- *ArcticNet research compendium*
- *Priority issues references*

## Fall 2010 – Newsletter #3

## Regional Priority Issues review

Considerable effort has been invested in the identification of the impacts of climate change on communities in the Eastern Arctic region over the past decade. Various surveys and studies have documented environmental changes and related impacts as observed by local people and scientists (e.g. workshops, conference, projects reports, and scientific literature – see list on page 3).

Our preliminary assessment represents an attempt to summarize the knowledge accumulated on climate change priority issues in Nunavut based on Inuit Quajimajatuqangit (IQ), community knowledge and research.

The following list summarizes the main concerns raised by various stakeholders with respect to the impacts of climate variability, longer-term climate change and modernisation on human and natural systems in the Eastern Canadian Arctic.

- Unpredictable and more variable weather patterns (e.g. sudden storms)
- Changing sea ice conditions (e.g. earlier break up, later freeze up, more dangerous ice)
- Changing snow conditions and melting glaciers
- Changes in animal species distribution, health and abundance
- Thawing permafrost (ground subsistence)

- Change in coastal system dynamics (e.g. coastal erosion, stronger storm surges)
- Contaminants and environmental pollution resulting from local population growth, resource development, global transport, etc.
- Loss of traditional land skills, language and cultural knowledge
- Changing health status of community members

These changing conditions have direct or indirect influence on human systems and are presenting many challenges to the **health, culture, economy, safety, and infrastructure** of Nunavut communities. At the same time the social and demographic conditions of Nunavut are changing.



## Changing Eastern Arctic landscape

The priority science issues as identified by current *ArcticNet* investigators involved in the Eastern Canadian Arctic IRIS-2 region will be presented in the next newsletter (#4). The IRIS-2 report structure and table of content will be designed based on both the regional and scientific priority issues.

## IRIS-2 Report structure

Based on the key climate change impacts identified for the IRIS-2 region and building on a tentative outline of an IRIS report structure reflecting both the regional and scientific priority issues, we have generated a draft outline of the IRIS-2 report contents, as a basis for discussion.

The following are proposed major section headings and topics that will guide the reporting process for the IRIS-2 report:

## 1) Safety and security

Includes safety in transportation (on land and sea), natural hazards, especially with respect to extreme events.

## 2) Human health

Includes food availability and quality, water availability and quality, food security, diseases, contaminant and environmental pollution, modern diet, UV exposure, psycho-social.

### 3) Socio-economic development

Includes subsistence harvesting, sovereignty, land use planning, waste management, sustainable resource development of renewable resources (wildlife, fisheries, forestry, flora, berry picking) and non-renewable resource (industrial development, mining, oil and gas), sustainable management of parks and protected areas (terrestrial, marine, freshwater), establishment of representative protected areas (environment, biodiversity and ecosystem protection).

#### 4) Community infrastructure integrity

Includes community development, transportation, municipal services (e.g. local water and waste management systems).

#### 5) Culture and lifestyle

Includes community demographics, contemporary lifestyles, transmission of traditional knowledge, skills and practices, education.

#### 6) Climate change adaptation policy development

Includes examples of adaptation planning and policy responses to climate change, and reconciliation of different knowledge bases.

#### Work in progress:

After compiling the scientific priority issues (newsletter #4) a more complete version of the report structure and table of content will be distributed.

#### IRIS-2 report collaboration

The IRIS-2 team is collaborating with ArcticNet researchers and partners to prepare a regional report that draws on *ArcticNet* knowledge to inform regional issues.

The IRIS-2 steering committee will continue to facilitate consultation and effective feedback from the region during the preparation of the IRIS-2 report. Through collaboration we hope the report will inform climate change adaptation strategies and community planning in the Eastern Arctic.

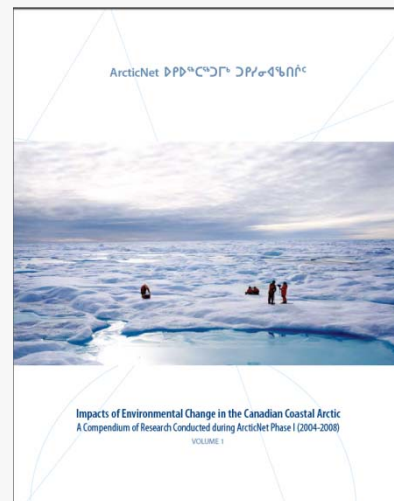
#### IRIS-2 report companion document

We are working on the concept of a companion document to the IRIS-2 report that would help communicate the key report messages at the community level and serve as a decision-making tool.

### ArcticNet compendium of research (2004-2008)

*ArcticNet* is pleased to inform you that the research network most recent publication: *Impacts of Environmental Change in the Canadian Coastal Arctic: A Compendium of Research Conducted during ArcticNet Phase I (2004-2008)* is now available for download on their website at:

[www.arcticnet.ulaval.ca/research/compendium.php](http://www.arcticnet.ulaval.ca/research/compendium.php)



This compendium of research presents the strategic framework of *ArcticNet*, and the approaches, findings and legacy of its first four years (2004-2008). The text is extensively illustrated with photographs taken by *ArcticNet* researchers in the course of their fieldwork in the North, and also includes a list of scientific publications from this initial phase of the program.

#### For more information on the Eastern Arctic IRIS-2 contact:

##### Philippe LeBlanc

ArcticNet IRIS Coordinator  
Eastern Arctic Region (IRIS-2)  
Memorial University of Newfoundland  
[pleblanc@mun.ca](mailto:pleblanc@mun.ca)

Visit our website at:

[www.arcticnet.ulaval.ca/research/iris\\_2\\_info.php](http://www.arcticnet.ulaval.ca/research/iris_2_info.php)

### ***Report, Conference and Workshop***

Climate change Priority issues in Nunavut, Canadian Institute of Planners, December 2008

Communities of Arctic Bay, Kugaaruk and Repulse Bay, Nickels, S., Furgal, C., Buell, M., Moquin, H. 2005. Unikkaaqatigiit – Putting the Human Face on Climate Change: Perspectives from Nunavut. Ottawa: Joint publication of Inuit Tapiriit Kanatami, Nasivvik Centre for Inuit Health and Changing Environments at Université Laval and the Ajunnginiq Centre at the National Aboriginal Health Organization.

GN, 2005. Inuit Qaujimajangit Hilap Alanguminganut/Inuit Knowledge of Climate Change: A Sample of Inuit Experiences of Climate Change in Nunavut. Baker Lake, Arviat, Clyde River, Pond Inlet, Resolute Bay, Grise Fjord, Pangnirtung and Iqaluit. Nunavut. 2001-2003. Government of Nunavut, Department of Environment, Environmental Protection Services.

Government of Nunavut. 2003. Nunavut climate change strategy. Iqaluit: Government of Nunavut. 26 p.

Maxwell, B., 1997. Responding to Global Climate Change in Canada's Arctic. Vol. II. The Canada Country Study: Climate Impacts and Adaptation. Environment Canada, 82p.

Nickels, S., C. Furgal, J. Casteldon, P. Moss-Davies, B. Armstrong, D. Dillon, and R. Fonger. 2002. Putting the Human Face on Climate Change Through Community Workshops. Pgs 300-344. In: Igor Krupnik and Dyanna Jolly, eds. The Earth is Faster Now: Indigenous Observations of Arctic Environmental Change. Fairbanks, Alaska: Arctic Research Consortium of the United States. 384pp.

Nunavut Research Institute. 1996. Nunavut Research Agenda. Research Policy and Priorities for Nunavut. Background Study and Discussion Document. Iqaluit, NU: NRI. 44p.

Nunavut research needs survey. Canadian Climate Impacts and Adaptation Research Network (C-CIARN North). Summary report.

Nunavut Tunngavik Inc. (NTI), Elders' Conference on Climate Change, March 29-31, 2001, Cambridge Bay, Nunavut.

Nunavut Tunngavik Inc. (NTI), summary workshop report, March 15-17, 2005, Iqaluit.

### ***Scientific publications***

Fox, S. (1996). The Potential Impacts of Arctic Climate Change on Inuit/Wildlife Relationships: A Case Study of Igloodik, NT and the Atlantic Walrus (*Odobenus rosmarus rosmarus*). Department of Geography, Faculty of Environmental Studies. Waterloo, University of Waterloo.

Fox, S., 1998. Inuit Knowledge of Climate and Climate Change. M.A. Thesis, University of Waterloo, Canada.

Fox, S. (2000). Arctic Climate Change: Observations of Inuit in the Eastern Canadian Arctic. Boulder, Colorado, Arctic Climatology Project, Environmental Working Group Arctic Meteorology and Climate Atlas, F. Fetterer and V. Radionov (eds.). Boulder, CO: National Snow and Ice Data Center, CD-ROM.

Fox, S., 2002. These are things that are really happening: Inuit perspectives on the evidence and impacts of climate change in Nunavut. In: I. Krupnik and D. Jolly (eds.). The Earth is Faster Now: Indigenous Observations of Arctic Environmental Change, pp. 12-53. Arctic Research Consortium of the U.S., Fairbanks, Alaska.

Fox, S., 2004. When the Weather is Uggianaqtuq: Linking Inuit and Scientific Observations of Recent Environmental Change in Nunavut, Canada. Ph.D. Dissertation, University of Colorado.

Ford, J., 2005. Living with change in the Arctic. World-Watch, September/October, pp. 18-21. Ford, J., Smit, B., 2004. A framework for assessing the vulnerability of communities in the Canadian Arctic to risks associated with climate change. Arctic 57, 389-400.

Ford, J., and B. Smit. 2004. A Framework for Assessing the Vulnerability of Communities in the Canadian Arctic to Risks Associated with Climate Change. Arctic, 57 (4): 389-400.

Ford, J., B. Smit, and J. Wandel. 2006. Vulnerability to climate change in the Arctic: A case study from Arctic Bay, Nunavut. Global Environmental Change, 16(2): 145-160.

Ford, J., B. Smit & J. Wandel. 2005. Living with Change in Nunavut: Vulnerability of Two Inuit Communities to Risks Associated with Climate Change. Report to the Nunavut Department of Environment. 16 pgs.

Ford, J., T. Pearce, B. Smit, J. Wandel, M. Allurut, K. Shappa, H. Ittusujurat and K. Qrunnut. 2007. Reducing vulnerability to climate change in the Arctic: The case of Nunavut, Canada. Arctic, 60(2): 150-166.

Ford, J., and Wandel, J. (2006). Responding to climate change in Nunavut: Policy recommendations, in White, Wingert, Beavon, and Mazim (Eds), Aboriginal Policy Research: Moving Forward, Making a Difference, Thompson Educational Publishing, Toronto: 103-122.

Krupnik, I. and D. e. Jolly (2002). The Earth is Faster Now: Indigenous Observations of Arctic Environmental Changes: Fairbanks, Arctic Research Consortium of the United States.

Reidlinger, D., S. Fox, et al. (2001). Inuit and Inuvialuit Knowledge of Climate Change in the Northwest Territories and Nunavut. Native Voices in Research: Northern and Native Studies. J. Oakes and R. Riewe. Winnipeg, Native Studies Press, University of Manitoba.

Thorpe, N. (2000). Contributions on Inuit Ecological Knowledge to the Understanding of Climate Change on the Bathurst Caribou Herd in the Kitikmeot Region, Nunavut. School of Resource and Environmental management. Vancouver, Simon Fraser University.