Food Security, Ice, Climate and Community Health: Climate change impacts on traditional food security in Canadian Inuit communities

Summary

Project Leader(s)
Chan, Laurie
Furgal, Christopher

The importance of traditional/country food as a critical resource for the health and well-being of northern populations is well documented (VanOostdam et al., 2005). Traditional/country foods are critical resources for physical, as well as mental, social and economic health of individuals and communities across the Arctic. Despite this, shifts in traditional/country food consumption have been taking place over the past 15 – 20 years related to a variety of changes in northern ecological, social, political and economic systems. Those related to ecological shifts have been primarily associated with reduced confidence in food safety due to identified threats from environmental contaminants such as mercury and PCBs (e.g. VanOostdam et al., 2005), and more recently the changes in species availability and accessibility due to shifting climatic conditions (e.g. Guyot et al., 2006; Berner et al., 2005). Specifically, climate related changes and variability in the North have been associated with changes in animal, fish and plant population health and distribution (Wrona et al., 2005; Loeng, 2005; Callaghan, 2005), while changes in ice, snow, precipitation regimes, and other environmental factors have the potential to influence human travel and transportation in the North, and thus Inuit access to these wildlife resources (Tremblay et al., 2006; Furgal and Seguin, 2006). As such, climate change and variability has the potential to influence nutrition and health status among Inuit via impacts on aspects (availability, accessibility and quality) of traditional/country food security. During Phase I of this project (Project 4.4, Climate change, key traditional/country food species and community health in the Arctic) both positive and negative changes in the traditional/country food harvest of five Inuit communities were reported in relation to changes and variability in climatic conditions. It was documented that environmental changes are already having impacts on both the availability of wildlife species and hunters' access to them in all regions studied (Nunavik and Nunavut). Additionally, during the Nunavik Regional Inuit Health survey, respondents reported some influence of climate and environmental change on wildlife access and availability in comparison with the same hunting season in previous years (Furgal and Rochette, 2007). However, as documented in Phase I of this project, the impacts are not homogenous among all hunters and communities and both individuals and households show differential ability to adapt successfully. Factors such as access to economic resources and equipment, experience, and the nature of the adaptive strategy used appear to influence the success of hunter adaptations. Therefore, it is important to study further these factors among individuals and households in Inuit communities. Further, through the analyses of harvest and local consumption data in Nunavut we determined that it is feasible to relate wildlife harvest data to traditional/country food use at both community and regional levels. Thus, it is possible to begin to model the relationship between climate projections, impacts on key environmental variables influencing availability of wildlife and/or Inuit access to traditional/country food species (e.g. ice conditions), and the level of viable consumption of those species in the community. These two pieces of information are critical for furthering our understanding of the major determinants of traditional/country food consumption in Arctic communities and of the current and future impacts of climate variability and change on traditional/country food consumption. As the pace and variability of change increases, it is important to identify key aspects of individual and collective adaptive capacity that require enhancement to effect positive change and support effective responses to protect and promote traditional/country food consumption for Arctic Aboriginal populations into the future. Our understanding of such factors can be further enhanced by extending our work to a larger group of individuals in multiple communities, and exploring regional patterns of change and adaptability. The detailed diet information collected in the Inuit Health Survey (IHS) in Nunavut, Inuvialuit and Nunavutsiavut in 2007-8 provides opportunities to study impacts of climate change on food security and nutrition. This study (Phase II) has built on and extended the work of project 4.4 Phase I and the IHS data to further our understanding of the impacts of climate change and variability on traditional/country food security, and Inuit community health.

People

Network Investigators
Chan, Laurie - University of Northern British Columbia
Furgal, Christopher - Trent University

Collaborators & Research Associates
Barrett, Michael - Kativik Regional Government
Blanchet, Carole - Institut national de santé publique du Québec
Bruneau, Suzanne - Institut national de santé publique du Québec
Déry, Serge - Nunavik Regional Board of Health and Social Services
Gagnon, Melissa - Kativik Regional Government
Gauthier, Marie-Josee - Nunavik Regional Board of Health and Social Services
Nickels, Scot - Inuit Tapiriit Kanatami
Rochette, Louis - Institut national de santé publique du Québec
Sheldon, Tom - Nunatsiavut Department of Lands and Natural Resources

Post-Doctoral Fellows
Douglas, Vasiliki - University of Northern British Columbia
Laird, Brian - University of Northern British Columbia

PhD Students
Ostertag, Sonja - McGill University

Masters Students
Alain, Judith - Université Laval
Organ, Jennifer - Dalhousie University
Rajdev, Vinay - Trent University

Honours Undergraduate Students
Turnbull, Kris - University of Northern British Columbia

Undergraduate Students
Kouril, Diana - Trent University
Murphy, Cait - University of Northern British Columbia
Robinson, Maija - Trent University
Slade, Rachel - Trent University

Technical Staff
Laing, Rodd - University of Manitoba
McTavish, Kristeen - Nasivvik Centre for Inuit Health and Changing Environments

Project Staff
Kaufer, Laura - University of Northern British Columbia
Shaw, Alyssa - University of Northern British Columbia

Northern Research Staff
Andersen, Andrew - Community of Nain
Archie, Billy - University of Northern British Columbia
Bennett, Boaz - Community of Nain
Bennett, Susan - Community of Nain
Dicker, Gus - Sikumiut Environmental Consulting
Dicker, Maria - Community of Nain

Jararuse, John - Nunatsiavut Government
Karpik, Sarah - Nunatsiavut Government
Kojak, Toby - Community of Nain
Obed, Elias - Community of Nain
Pilgrim, Alice - Community of Nain
Webb, Ron - Sikumiut Environmental Consulting
Webb, Shannon - Nunatsiavut Government

Partners

Canadian Institutes of Health Research
Indian and Northern Affairs - International Polar Year
Indian and Northern Affairs Canada - Northern Contaminants Program
Institut national de santé publique du Québec
Inuit Tapiriit Kanatami
Nasivvik Centre for Inuit Health and Changing Environments

Publications

Articles Published in Refereed Publications

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