



# Northern Climate ExChange

independent information, shared understanding, action on climate change

2008-09 Annual Report

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May 2009

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**Executive Summary**

The Northern Climate Exchange (NCE), a program of the Northern Research Institute at Yukon College, was established in February 2000 to provide a credible independent source of information, develop shared understanding and promote action on climate change in northern Canada. Its mandate is to promote increased understanding of, and appropriate responses to climate change in the North. The NCE is designed to serve as a catalyst for multidisciplinary climate change research in the Canadian North, to facilitate the collection and assessment of scientific and traditional knowledge, and to advance a virtual framework for circumpolar climate change research. The Government of Canada, Government of Yukon and Yukon College have been the primary funders of NCE programs and activities.

NCE had a number of staffing changes over the last year including a new Coordinator. Jen Turner left the NCE in September 2008 and was replaced by Lacia Kinnear in January 2009. Two new positions were created in March 2008 through funding from the Northern Strategy Trust. Lewis Rifkind was hired as the Community Adaptation Project Manager, whom left the NCE in July 2008 and was replaced by Ryan Hennessey. Sebastian Jones was hired for the local adaptation coordinator position in Dawson. The NCE also hired John Streicker to advise on and administer various NCE projects

This annual progress report describes work completed by the NCE between April 1, 2008 and March 31, 2009.



## Project Highlights

### *Climate Change Communications and Outreach*

NCE carried out a number of presentations and outreach activities, including:

- Presentation and participation on a panel at the Canadian Science Writers' Conference in May 2008.
- Presentation at the Yukon Environmental Forum in May 2008.
- Displays for Canadian Environment Week displays in at the Elijah Smith Building in Whitehorse in June 2008.
- Presentation as part of CMHC (Canadian Mortgage and Housing Corporation) Northern Sustainability Symposium in Dawson in June 2008.
- Presentation at the Canadian Institute of Planner's *Planning for Climate Change* Symposium in Iqaluit in July 2008.
- Education and outreach on Northern Regions Chapter of the National Assessment Report *From Impacts to Adaptation: Canada in a Changing Climate 2007* (July – Oct 2008). This work was funded by Indian and Northern Affairs and involved presentations and meetings in 8 Yukon communities.
- Development and distribution of a 2-page bulletin on the Northern Chapter of Health Canada's *Human Health in a Changing Climate: A Canadian Assessment of Vulnerabilities and Adaptive Capacity* (Sept. –Oct. 2008). This brief was distributed across the Yukon at both conferences and in Health Centers.
- McBride Museum and NCE Climate Change speaker series (5 weeks Feb - March 2009) an included 5 speakers for 5 consecutive Wednesday Evenings.
- Climate Change in Our Backyard II Conference held by Champaign Aishiak First Nation in Haines Junction, March 9-12, 2009. The workshop followed an initial workshop hosted by the same community two years prior. The NCE had a strong presence at the workshop including four presentations and three facilitators who helped guide small break-out groups. Our attendance at the workshop not only helped to build adaptation planning capacity for the First Nation hosting the event, but we also built many relationships and potential partnership projects with other organizations and individuals in attendance: we will follow up on these partnerships and projects in spring 2009.
- NRCan Calendar Club (Jan to May 2009). Promotion and distribution of contest information through mail outs.
- Adaptation Times Newsletter – A communication piece for Dawson City to highlight progress of the Dawson Adaptation Plan coordinated by the NCE.



<p><i>Climate Change Communications and Outreach</i></p>	<ul style="list-style-type: none"> <li>• <u>Climate Change North website</u>, educational publications for teachers and students. The website was taken over from the Yukon Conservation Society and updated by the NCE in February 2009. It is extensive and includes resources for both teachers and students for all three Canadian territories. The website address is: <a href="http://www.climatechangenorth.ca">www.climatechangenorth.ca</a></li> <li>• <u>NCE weekly email updates</u> on recent climate change news, research, and announcements. The contact list for the weekly update is approximately 400 people, although we anticipate this number is higher as we've been told that once sent out, our email updates get forwarded as part of other list services.</li> </ul>
<p><i>NCE Website</i></p>	<p>The NCE website is an interactive, up-to-date site for climate change information relevant to Canada's North. Primarily maintained by the NCE Coordinator with assistance from our web technician, the site contains information on the projects and programs underway at the NCE and throughout the North. Along with information about the NCE, the website provides current climate change news, reports, information, conferences, resources, and funding opportunities. Statistics indicate our site received almost 200,000 hits in the last year (an average of 623 page views per day).</p> <p>The NCE library is kept up to date with current climate change-related publications and videos. The library database became searchable online over the summer of 2008 and materials can be borrowed free of charge.</p>



***Northern Strategy  
Community Climate Change  
Adaptation Project***

The Northern Strategy Community Adaptation project officially started in March 2008 with the signing of a contribution agreement with the Yukon Government. This four-year project (funding confirmed to March 2012) will assist three Yukon communities with developing climate change adaptation plans.

NCE has taken a number of steps to ensure that a community-based rather than a community placed approach to planning is used in the Community Climate Change Adaptation Project. These steps include the employment of a local resident as NCE Community Adaptation Coordinator, establishment of a Local Advisory Committee, and the identification of a local Project Champion.

Dawson City was the first community selected for the Adaptation Planning project. Some of the early tasks of 2008-2009 included hiring a local coordinator, setting up a Dawson office, setting up the local advisory committee, holding a kick-off open house, and conducting research interviews over the summer and early fall. The mayor of Dawson City volunteered to be the Project Champion. In the Fall of 2008, technical workshops were held in Dawson and Whitehorse to help gather information from Governments, NGO'S, industry and academic stakeholders to help facilitate the plan.

The Community Adaptation project in Dawson is working in close partnership with an International Polar Year project - CAVIAR (Community Adaptation and Vulnerability in Arctic Regions). CAVIAR is part of a circumpolar endeavor examining ways in which communities can most effectively adapt to environmental change. The IPY project will provide historic research and community interviews that will help form the basis of the adaptation plan.

The Dawson Community Adaptation Plan is scheduled to be released in May 2009.



<p><b><i>International Polar Year</i></b></p>	<p>NCE was involved in a number of International Polar Year projects including:</p> <p><i>Canadian Science Writers' Conference, Whitehorse May 2008.</i> NCE was involved in the planning for this conference, assisted with logistics, co-lead a session on climate change adaptation and did a presentation to highlight NCE's work.</p> <p><i>CAVLAR (Community Adaptation and Vulnerability in Arctic Regions) projects in Whitehorse and Dawson.</i> These two projects are part of a \$1.4 million research effort in over 12 communities across the Canadian North. The focus of the CAVIAR Project is to increase understanding and enhance the capacity of northern communities to deal with social, economic and ecological changes related to the current and expected impacts of climate change.</p> <p><i>Old Crow IPY Climate Change Conference.</i> The NCE coordinator attended this conference in January 2009. The goal of the conference was to bring IPY researchers and Old Crow youth and Elders together to exchange ideas and information. The conference took place in Old Crow over 4 days and included seminars, workshops, talking circles and presentations.</p>
<p><b><i>From Impacts to Adaptation: Canada in a Changing Climate 2007</i></b></p>	<p>NCE provided education and outreach on the Northern Regions Chapter, building on a number of communication tools developed in the report released in February 2008.</p> <p>From June to October 2008, NCE visited 8 Yukon communities and 9 First Nations and conducted face to face meetings with over 60 stakeholders, including the public and private sector, non-governmental associations and researchers. The following sectors were covered in the meetings: Environment, Forestry, Geology, Tourism, Health, Education, Planning, Assessment, Energy, Agriculture, Hydrology, Transportation, Public Works, Heritage, Lands and Wildlife. In addition, the NCE mounted an information display / booth at the Council of Yukon First Nations General Assembly held this year on the Ta'an Kwach'an Traditional Territory. These meetings were valuable for gaining insight into the level of awareness of climate change issues and adaptive capacity.</p>
<p><b><i>Human Health in a Changing Climate: A Canadian Assessment of Vulnerabilities and Adaptive Capacity</i></b></p>	<p>NCE developed a two-page brief on the Northern Chapter of Health Canada's Assessment Report. The intended audience for the brief was decision-makers, communicators, practitioners and program developers in the health sector. This two-pager was reviewed by key individuals in the health sector, including Health Canada. Once finalized, it was distributed to over 250 people, largely program and policy people, within YG, First Nations Health Centers and organizations working in the climate change network in the Yukon. The NCE was also instrumental in distributing the full Health Canada report within the territory.</p> <p>This work was funded under the National Assessment funding contribution with Indian and Northern Affairs and was carried out over September and October of 2008. The final brief and link to the full report are available on the NCE website.</p>



<p><b><i>Iqaluit, Planning for Climate Change Conference</i></b></p>	<p>The Canadian Institute of Planners held a conference in Iqaluit from July 20-23, 2008. NCE did a joint presentation with Frank Duerden (IPY) to present the adaptation planning project in Dawson.</p> <p>Participation in this conference was partially funded by Environment Canada's <i>Adaptation and Impacts Research</i> Division.</p>
<p><b>Situation Analysis of Yukon Climate Change Education Resources</b></p>	<p>In February 2009, the NCE hired a coordinator to investigate climate change education within formal and informal education systems in the Yukon and to assess the needs for climate change education programs. The report will be used to better assist the NCE in preparing and developing educational programs, tools to assist educators and key climate change messages for youth and the public. This report will also be used to enhance the material on the Climate Change North website as noted below.</p> <p>Meetings were held with a multitude of stakeholders involved in the climate change field in the Yukon, to investigate current initiatives and the need for more or ongoing programs. Derived from meetings with teachers, governments, NGO's and concerned citizens, a survey was developed that will be distributed to teachers in May 2009 to better understand curriculum links and effective tools for climate change education in the Yukon. The report is extensive, covering a variety of initiatives and recommendations. A brief will be developed in 2009-2010 that will be distributed across the Yukon. Individuals who provided input into the report have already emphasized the usefulness of the report and an interest in following up on the recommendations.</p>



<p><b><i>Climate Change Impacts, Atlin BC Summary Report</i></b></p>	<p>NCE has partnered with the Pacific Climate Impacts Consortium (PCIC) to produce a plain language summary of climate change conditions in the Atlin-Taku watershed for the Canadian Parks and Wilderness Society (CPAWS). The summary documents the results of three projections (CGCM3, HadCM3 and HadGEM) for the 2050's (2041-2070). Each model generated a projection of the future mean annual temperature, January minimum temperatures, March minimum temperatures, mean annual precipitation, May to September precipitation, precipitation as snow, growing degree days, frost free period, and the summer heat moisture index. Each projection was compared to baseline conditions recorded from 1961-1990. Projections were supported by an analysis of 50-year trends observed in the Atlin-Taku watershed from 1951-2007 and complimented by an assessment of the influences that the Pacific Decadal Oscillation (PDO) and the El Niño/Southern Oscillation (ENSO) have had in the region. The summary will be used to support a larger discussion of the potential vulnerability that climate change may create for biodiversity in the region, which CPAWS has prepared for policy makers currently developing the Atlin-Taku Land Use Plan.</p>
<p><b><i>Climate Change North Website; Educational Resource for Teachers and Students</i></b></p>	<p>In February 2009 the Yukon Conservation Society approached the NCE to take ownership over the Climate Change North website, which is an extensive educational tool for teachers and students. The website required resource updates and research to enhance the already existing material. Funding was provided from Environment Canada to do this work and to transfer the user domain to the NCE. Currently, the NCE is in the process of developing outreach tools to encourage students and teachers in the Yukon to use the website, and to offer suggestions regarding use and implementation in the classroom. The NCE has put out many media releases on the utilization of the website, including coverage on CBC radio and Chon FM.</p>
<p><b><i>Carbon Emission Reduction Club Workshops</i></b></p>	<p>A member of the Sierra Club BC visited the Yukon in March 2009 to present workshops about Carbon Emissions Reduction Clubs to members of the Federal and Territorial Governments. NCE partnered with these government bodies to host two community workshops that were open to the public with no-charge. The workshops focused on ways communities can organize themselves to take action on climate change by being accountable to each other through their carbon emissions. The Sierra Club provided the tools and methods necessary to not only establish the club, but also to ensure success and sustainability from lessons learned from past experiences with similar clubs in BC. In total, fifteen people attended the workshops at Yukon College and most committed to forming a Carbon Emissions Reduction Club which will be administered by the NCE. The first meeting will take place May 12, 2009 with a goal to meet once per month to make commitments, report on progress and host workshops. The NCE hopes to increase the number of individuals in the club over the course of the 2009-2010 fiscal year.</p>

***NCE Partnerships***

A number of new partnerships, as reflected in the list below, have largely developed over the last year through NCE's work in the Yukon, Atlin BC and the Northern Strategy Community Adaptation project.

In 2008-09 the NCE held funding agreements with:

- Yukon Environment
- Indian and Northern Affairs Canada
- Environment Canada

NCE worked collaboratively on projects with the following organizations:

- Yukon Environment
- Yukon Energy, Mines and Resources
- Energy Solutions Centre
- Yukon Forestry Management Branch
- Arctic Borderlands Ecological Knowledge Coop
- City of Whitehorse
- Pacific Climate Impacts Consortium
- Arctic Council
- Canadian Science Writers Association
- Canadian Institute of Planners
- Indian and Northern Affairs Canada
- Natural Resources Canada
- Yukon College
- Ryerson University
- University of British Columbia
- Arctic Health Research Network
- Canadian Parks and Wilderness Society – B.C. Chapter
- Sierra Club of Canada – B.C Chapter
- Yukon Federal Council
- Yukon Conservation Society
- Pembina Institute



**Financial Report**

The Northern Climate ExChange received core and project funding from Yukon Government, Department of Environment and additional project funding from Indian and Northern Affairs Canada, Environment Canada, and Natural Resources Canada.

In total NCE cash and in-kind revenues were \$578,100 for 2008-09. In total, NCE cash expenditures were \$260,372.53.

The following tables summarize NCE revenues and expenditures received during this period from April 1, 2008 to March 31, 2009.

Detailed financial statements are available upon request. This summary is not an audited financial statement and is extracted from the Yukon College financial records.

**Table 1  
NCE 2008-09 Cash Revenues Summary**

The following table summarizes cash revenues for the NCE between April 1, 2008 and March 31, 2009.

<b>Funding Source</b>	<b>Description</b>	<b>Amount</b>
Government of Yukon Department of Environment	Core funding for NCE activities.	\$75,000.00
Government of Yukon Department of Environment	Northern Strategy Community Adaptation Project	\$265,000
Indian and Northern Affairs Canada	Networking and Capacity-Building for Northern Regions. Impacts and Adaptation in Yukon communities and Chapter brief of NRCan's <i>From Impacts to Adaptation Report</i> and Health Canada's <i>Human Health in a Changing Climate: A Canadian Assessment of Vulnerabilities and Adaptive Capacity</i> .	\$30,000
Environment Canada	Capacity building and outreach	\$20,000
<b>Total Revenue (Cash)</b>		<b>\$390,000</b>



**Table 2**  
**NCE 2008-09 In-Kind Revenues Summary**

The table below summarizes in-kind revenues for the NCE between April 1, 2008 and March 31, 2009.

<b>Funding Source</b>	<b>Description</b>	<b>Amount</b>
Yukon College	Administrative support	\$58,500
Yukon College	Office space	\$41,250
Arctic Borderlands Coop	Server space	\$1,500
UNEP-GRID	Server	\$1,300
INAC, Michael Westlake	Advice and expertise	\$2,500
NCE Management Committee, and NCE Advisors	Advice and expertise	\$20,000
Arctic Health Research Network	Advice and expertise	\$2,000
Dawson CAVIAR	Advise and expertise	\$60,000
Dawson Technical Advisory Committee	Advise and expertise	\$1,050
<b>Total Revenue (In-Kind)</b>		<b>\$188,100</b>

**Table 3**  
**NCE Core Expense Summary**

The following table summarizes expenses associated with the NCE core activities between April 1, 2008 and March 31, 2009.

<b>Project Item</b>	<b>Expense</b>
Salaries	\$74,037.16
Admin	\$2,671.43
Travel	\$6,005.23
Capacity and Training	\$2,250.31
Communications and Outreach	\$10,570.33
<b>Total Expenditures</b>	<b>\$95,534.46</b>

**Table 4**  
**Northern Strategy Expense Summary**

The following table summarizes expenses associated with Northern Strategy activities between April 1, 2008 and March 31, 2009.

<b>Project Item</b>	<b>Expense</b>
Salaries	\$96,578.26
Admin	\$6,272.94
Outreach	\$12,863.72
Climate Modeling	\$12,150.00
Workshops	\$6,143.10
<b>Total Expenditures</b>	<b>\$134,008.02</b>



**Table 5**  
**Indian and Northern Affairs Expense Summary**

The following table summarizes expenses associated with Indian and Northern Affairs activities between July 1<sup>st</sup>, 2008 and October 31<sup>st</sup>, 2008.

<b>Project Item</b>	<b>Expense</b>
Salaries	\$27,632.34
Admin	\$261.75
Travel	\$2,936.41
<b>Total Expenditures</b>	<b>\$30,830.05</b>