



Northern Climate ExChange

independent information, shared understanding, action on climate change

2009-10 Annual Report

**Prepared by:
Northern Climate ExChange
Northern Research Institute
Yukon College**

June 2010

Northern Climate ExChange 2009-10 Annual Report

Table of Contents

Executive Summary3
Project Highlights4
Climate Change Communications and Outreach 5
Climate Change Communications and Outreach 6
Consultations 7
NCE Website..... 7
Northern Strategy Community Adaptation Project 8
Northern Strategy Community Adaptation Project 10
Whitehorse Green Guide 11
Climate Change North” Schools for Change Challenge..... 12
Atlin Vulnerability Assessment..... 13
NCE Partnerships..... 14
Financial Report15



Executive Summary

The Northern Climate Exchange (NCE), a program of the Northern Research Institute at the 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 an 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.

This report highlights the activities of the NCE during the 2009-2010 fiscal year.

One new position was created in May 2009 through funding from the Northern Strategy Trust. John Streicker was hired for the local adaptation coordinator position in Whitehorse.

In August 2009, a fourth year student from the University of Guelph came to volunteer at the NCE for three weeks. During this time, the student developed a presentation that could be disseminated to schools across the Yukon to promote our Climate Change North educational tool.

To heighten our communication and outreach capacity, the NCE was approved by the YWCA Eco-Internship program to host an intern for 9 months. The intern, Meghan Larivee, started in Jan 2010 as our communications intern. Meghan was responsible for developing communication tools/materials (handouts, posters, etc), organizing outreach events (workshops, speaker series, etc), and planning the NCE 10 year anniversary celebration for the 2010-2011 fiscal year.

This annual progress report describes work completed by the NCE between April 1, 2009 and March 31, 2010.



Project Highlights

Below are descriptions of some of the many projects from the fiscal year.

Climate Change Communications and Outreach

NCE carried out a number of presentations and outreach activities during the 2009-2010 year, including:

Association of Yukon Communities (April 2009) A presentation which highlighted the community adaptation work we have completed in Dawson and are conducting in WH.

Yukon Environmental Forum (April 2009) The NCE presented information about community based climate change adaptation planning methods and tools for the Yukon.

Arctic Securities Working Group Conference (May 2009) The NCE presented a climate change 101 presentation to communicate how changing climate may affect arctic security.

Dawson Gold Show (May 2009) The NCE presented a display to highlight adaptation plan in Dawson.

Yukon Youth Outside the Box, Yukon Government (August 2009) The NCE Coordinator was one of five people on a facilitation team for the Yukon Governments Yukon Youth Outside the Box gathering. At this conference the NCE was responsible to facilitate the climate change science component of the three- day gathering.

Young Leaders Summit on Climate Change (Inuvik, August 2009) Two NCE staff members attended the summit and provided information about climate change science, policy, adaptation, and mitigation. To help in communication for the event, NCE was a sponsor.

Alliance for Resilient Cities (Oct 2009): NCE presented an online presentation to a national audience on climate change adaptation planning in Yukon. Topics covered included challenges of adaptation planning in the North, the NCE planning methodology, and CCCAP.

Climate Change Media Briefing (Nov 2009) The NCE invited media personnel to attend a three hour briefing about Climate Change science and policy in preparation for Copenhagen 2009.

FH Collins High School Climate Change Panel (Nov 2009) An NCE representative was one member on a panel to discuss climate change in the north and consequences for the world. Other members of the panel included the Minister of Environment, political leaders, and Climate Change experts.

Arctic Net (Dec 2009): NCE representatives presented on the importance of adaptive capacity in adaptation planning.



Climate Change Communications and Outreach

INAC Environmental Stewardship Workshop (Jan 2009) The NCE did a general presentation on climate change adaptation; about what it is, why it is important, and why communities should plan for it.

Agricultural Canada Climate Change Workshop (Jan 2009) The NCE was asked to talk about agriculture in Yukon. Specifically, how agriculture in the territory is influenced by climate, how climate change may create opportunities, and how residents thought they could take advantage of these opportunities.

Alaska Environmental Forum (Feb 2010) The NCE presented information about community based climate change adaptation planning in Dawson, Whitehorse, and Atlin B.C.

Engineers Climate Change Seminar (Nov 2009 & May 2010) The NCE science advisor offered a two day seminar to the Association of Professional Engineers. Sessions included climate change science, policy, adaptation, mitigation and relevant climate change tools for engineers in the north.

McBride Museum and NCE Climate Change speaker series (5 weeks Feb - March 2010) The NCE hosted a lecture series which included five speakers presenting issues related to climate change for five consecutive Wednesday Evenings at the McBride Museum.

NRCan Calendar Club (Jan to May 2010) Promotion and distribution of contest information through mail outs. The NCE also judged the contest and awarded the winner with prizes provided by NRCan.

NCE weekly email updates (weekly) 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 have been told by other organizations that once sent out, our email updates get forwarded as part of other list services.



Consultations

The NCE has led and/or assisted with consultation processes for a variety of organizations interested in climate change information, including:

Canadian Standards Association (January 2010) The NCE was asked to take the lead to coordinate a consultation session for the Canadian Standards Association for the development of a national guideline on permafrost, climate change and community infrastructure.

Agricultural Canada Climate Change Workshop (Jan 2009) The NCE was asked to speak about agriculture in Yukon. Specifically, how agriculture in the territory is influenced by climate, how climate change may create opportunities, and how residents thought they could take advantage of these opportunities.

UNESCO Youth Advisory Group (August, 2009) The NCE, in partnership with Energy Solutions and Climate Change Secretariat, organized and hosted UNESCO's Youth Advisory Group for the Yukon consultation process for the UNESCO youth forum.

NCE Website

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 12, 000 hits in the last year.



Northern Strategy Community 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 will assist three Yukon communities with developing climate change adaptation plans.

Dawson Community Adaptation Plan (DCAP)

The Dawson Community Climate Change Adaptation Plan was completed Dec 2009, and the second stage of the project “implementation” began in summer of 2009 with a total budget of \$120,000 for community-based projects. The Local advisory committee selected the projects for implementation in September 2009. Project selection was based on an extensive proposal uptake which required proponents to first submit conceptual proposals in August 2009 and then detailed proposals in September 2009. Seven conceptual proposals were submitted, five were selected for implementation.

All projects were interpreted from the recommended adaptations in the Dawson Community Climate Change Adaptation Plan. The following projects were selected as interpretations of the following adaptations (in brackets):

- *Dawson Climate and Science Centre Feasibility Study* (additional research, education, and outreach)
- *Selective Fishing Project* (adapting to changes in flora and fauna)
- *Electric Truck Project* (increase energy independence/increase local food security)
- *Community Greenhouse Feasibility Study* (increase local food security)

A portion of the implementation budget was allocated to the Conservation Klondike Society (CKS) to fund a Climate Change Adaptation Implementation Officer position (October 2009 - June 2010) whose role is to identify funding to support implementation of the adaptation plan.



Northern Strategy Community Adaptation Project

Whitehorse Community Adaptation Plan (WhiteCAP)

Evaluating the vulnerability of Whitehorse to changing climate conditions was completed from June 2009 to January 2010. This assessment began with the compilation of a history of environmental stresses and responses in Whitehorse from 1930 to 2009. Local trends and climate change projections were also compiled to support the Whitehorse Community vulnerability assessment.

The NCE facilitated a bioregional mapping session over the course of two workshops in November 2009. The bioregional maps spatially depict biophysical and socio-cultural features that were important to participants. These maps indicate what participant's value in the landscape and provide a basis for discussing how community values/lifestyles may be affected by climate change. The 15 maps were displayed at the January open house to support community vulnerability discussions. A Scenario Development Meeting was held in November 2009. Participants at the meeting were asked to assist the WhiteCAP Team with developing four community vulnerability scenarios to be used in preparing the Whitehorse Adaptation Plan to allow for a more effective evaluation of climate change vulnerability and uncertainty. The scenarios explore what variables may affect the community as a combined product of development and climate change by 2050.

Public activities for the Whitehorse Adaptation Project during 2009-2010 concluded with the Whitehorse Community Input Session and Café in January 2010. Participants at the session were divided into four groups, one group per scenario. Discussion topics included how the community may be affected by the climate change and developed accordingly. In the afternoon, participants were asked to provide responses (or adaptations) to the consequences of climate change identified in the morning. An open house or Community Input Café was held the following week. Open invitations were provided to the community via newspaper advertisements in the Whitehorse Star and Yukon News to review, comment and build-on the results of the Whitehorse Community Input Session.



***Northern
Strategy
Community
Adaptation
Project***

Mayo Community Adaptation Plan (MCAP)

Project activities in Mayo for 2009-2010 focused on project start-up and partnership development. Mayo was selected from a list of the three communities (Mayo, Carmacks, and Haines Junction) that proposed to participate in CCCAP as the third community. A formal letter selecting Mayo as the third community was submitted to the Climate Change Secretariat for approval in September 2009.

Both the municipal and First Nation council were informed of Mayo's successful application. NCE attended a Joint-Council Meeting of the First Nation of Na-cho Nyak Dun and the Village of Mayo on 16 November 2009. A project overview was provided to refresh both Councils on the project. A strategy for hiring the Mayo Local Adaptation Coordinator was discussed. Follow-up meetings were held with department heads from both governments to obtain relevant background documents and to promote the Mayo Adaptation Project.



Whitehorse Green Guide

The first edition of the Whitehorse Green Guide was developed through a partnership with the Northern Climate Exchange, Yukon College, Energy Solutions Center (Yukon Government), Climate Change Secretariat (Yukon Government) City of Whitehorse, and Yukon Federal Council.

Originating from the initial facilitated partners meeting, 'green' products and services were defined as those which have one or more of the attributes and/or certifications that promote any or all of the following outcomes: increased energy efficiency; reduction of greenhouse gas emissions; reduction of toxins; and/or waste reduction.

The information to be included in the green guide database was collected using an on-line survey in the winter/spring of 2010. The opportunity to complete the survey was widely advertised in Whitehorse including on television, radio, in newspapers, on partner's websites, and e-mails.

Just under a hundred businesses and organizations either completed the survey on their own or with assistance. We relied on those completing the survey to provide information on their products and/or services that was both accurate and to the best of their knowledge and reflected a 'greener' option as defined above.

The final guide was produced in the form of a website with a search tool that allows the public to search an online database to find 'green' products and services in Whitehorse. The goal of the Whitehorse Green Guide was to help people in Whitehorse identify where and what green products and services are available in Whitehorse and to provide information to help people make more sustainable choices. The website includes additional resources and information on green principles and practices and provides links to other supporting information and resources.

The first edition of the Whitehorse green guide is accessible at: www.taiga.net/whitehorsegreenguide.



Climate Change North “Schools for Change Challenge”

The Climate Change North website (climatechangenorth.ca) was developed in 2005 by the Yukon Conservation Society. Significant resources were used to develop the website and it was anticipated to be a highly used educational tool for Yukon, NWT and Nunavut teachers. The Northern Climate Exchange, who currently hosts the website, noted that there was very little activity being reported back to the website. As a result, a project was developed to promote and assess the general use and future possibilities for the Climate Change North (CCN) website.

To increase teacher and student participation and feedback on the CCN website, the NCE hosted a “school for Change Challenge” for all Yukon Schools. Participation in the contest was based on 1) a teacher registering, and reporting the results of any lessons back to the website or 2) a teacher securing a Northern Climate Exchange (NCE) representative to offer a lesson from CCN to a class with follow up material to be reported to the website. The contest draw date was set for April 22nd (Earth Day).

From across the Yukon we had 37 teachers from 12 schools participate – including the involvement of over 900 students. First prize was a \$1000 gift certificate for Yukon Gardens, and second and third prizes were a \$750 gift certificate for Canadian Tire.



Atlin Vulnerability Assessment

The purpose of the *Atlin Climate Change Project* was to assess the extent to which the community is vulnerable to the impacts of a changing climate and evaluate adaptive capacity and vulnerabilities as the first stage in developing a community climate adaptation plan. The project recognized that the extent to which communities, such as Atlin, may be affected by a changing climate is very much a reflection of local geography, economy, and capacity to deal with events.

Assessment of Atlin's vulnerabilities and capacities is based on a number of sources. Analysis of information describing the community's geography and economy, detailing environmental history and experience in dealing with natural hazards set the scene by providing background on the way the community may be exposed to the physical environment and its experience in addressing environmental stresses. Analysis of climate trends projections provides information on the types of conditions the community may have to cope with in the future, and (importantly) the anticipated rate of environmental change. Surveys of businesses and households along with community workshops yielded data on community vulnerabilities, perceptions of change, the propensity to adapt to change, the manner in which the community responds to environmental stresses, and overall ability to adapt to changing conditions.

Community input and feed-back through the course of this project was facilitated through the community project coordinator (Nan Love) and ensured through a Local Advisory Committee representing a range of community members. The Committee commented on project design and critically and constructively evaluated the project's direction and progress.

Two community workshops were centrally important in generating and verifying information and perspectives detailed in this report. In the first workshop (November 2009) participants identified climate related events they viewed as potentially problematic, evaluated their potential impact and commented on the ability of the community to respond. The second workshop (February 2010) focused on adaptive strategies and the capacity of community institutions to respond and adapt to events and changing conditions.

The final report was written by researcher Frank Duerden, and distributed to the community in April 2010.



NCE Partnerships

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

In 2009-10 the NCE held funding agreements with:

- Yukon Environment (Climate Change Secretariat)
- Indian and Northern Affairs Canada
- Environment Canada
- City of Whitehorse
- Yukon Energy, Mines and Resources (Energy Solutions Center)
- Yukon Federal Council
- Canadian Standards Association

NCE worked collaboratively on projects with the following organizations:

- Yukon Environment
- Yukon Energy, Mines and Resources
- Council of Yukon First Nations
- Energy Solutions Centre
- Greenthink Canada
- Arctic Borderlands Ecological Knowledge Coop
- City of Whitehorse
- Scenarios Network for Alaska Planning
- Canadian Standards Association
- Pacific Climate Impacts Consortium
- Arctic Council
- Canadian Institute of Planners
- Indian and Northern Affairs Canada
- Natural Resources Canada
- Yukon College
- Ryerson University
- University of British Columbia
- Arctic Health Research Network



Financial Report

The Northern Climate Exchange received core and project funding from the Yukon Government and the Department of Environment. Additional project funding was provided by Indian and Northern Affairs Canada and Environment Canada.

In total NCE cash and in-kind revenues were \$592,184.90 for 2009-10. In total, NCE cash expenditures were \$475,718.17.

The following tables summarize NCE revenues and expenditures received during this period from April 1, 2009 to March 31, 2010.

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 2009-10 Cash Revenues Summary

The following table summarizes cash revenues for the NCE between April 1, 2009 and March 31, 2010.

Funding Source	Description	Amount
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	\$295,000
Indian and Northern Affairs Canada	Networking and Capacity- Building for Northern Regions Chapter 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>	\$101,669
Environment Canada		\$19,500
Yukon Federal Council; Energy Solutions Center (Yukon Government); Climate Change Secretariate (Yukon Government); City of Whitehorse	Development of Whitehorse Green Guide	\$6750 (respectfully: \$1500; \$2250; \$1500; and \$1500)



Canadian Standards Association	Yukon Consultation Coordination of Infrastructure Guidelines in areas of Permafrost	\$950
Association of Professional Engineers Yukon	Climate Change 101 workshop for Professional Development and Climate Change Decision Making	\$1500
Northern Research Institute, Yukon College	Co-coordination of CCCSN Scenarios Project	\$7,665.90
Total Revenue (Cash)		\$508, 034.90

Table 2 NCE 2009-10 In-Kind Revenues Summary

The table below summarizes in-kind revenues for the NCE between April 1, 2009 and March 31, 2010.

Funding Source	Description	Amount
Yukon College	Administrative support	\$42,900
Yukon College	Office space	\$41,250
Total Revenue (In-Kind)		\$84, 150



Table 3 NCE Core Expense Summary

The following table summarizes expenses associated with the NCE core activities between April 1, 2009 and March 31, 2010.

Project Item	Expense
Coordination Salaries	\$78,848.98
Admin	\$6,048.12
Contract Salaries	\$36,423.52
Capacity and Training	\$2,094.06
Communication and Outreach	\$5,743.86
Travel	\$5,775.12
Total Expenditures	\$134,933.66

Table 4 Northern Strategy Expense Summary

The following table summarizes expenses associated with Northern Strategy activities between April 1, 2009 and March 31, 2010.

Project Item	Expense
Salaries	\$130,809.73
Admin	\$ 6,160.01
Outreach	\$ 25,003.20
Implementation	\$ 43,810.00
Research	\$ 24,654.45
Total Expenditures	\$ 230,437.39



Table 5 Indian and Northern Affairs Expense Summary

The following table summarizes expenses associated with Indian and Northern Affairs activities between April 1st, 2009 and March 31st, 2010.

Project Item	Expense
Salaries	\$72,924.13
Admin	\$14,010.00
Open House	\$ 259.09
Program Materials	\$2,154.52
Travel	\$13,119.84
Workshop	\$7,879.54
Total Expenditures	\$110,347.12