# **Table of Contents**

Message from the Staff	3
Introduction to the NCE	4
Approach of the NCE	4
Goals of the NCE	5
Organizational Structure	6
2000-2001 Steering Committee	6
NCE Staff	7
Project Highlights	. 10
NCE Website	. 10
NCE Email Network	
Workshop – Taking Action on Climate Change in the Yukon	. 10
Exchanging Ideas on Climate Change in the Yukon	
NCE Newsletter and Factsheets	. 11
AAAS Conference Session on Climate Change Networking	. 12
Central Yukon Climate Change Workshop	. 12
Circumpolar Climate Change Summit and Exposition: Uncertain Future, Deliberate Action	. 13
Northern Review Special Edition on Climate Change	
Northern Climate Change Schools Program	. 14
NCE Brochure	. 15
NCE Poster	. 15
Climate Change Policy Options for Northern Canada	. 15
Northern Research Forum	. 15
NCE Representation on Working Groups/Steering Committees	. 16
Northern Assessment of the Impacts of Climate Change	. 16
Database of Northern Climate Change Information	. 18
Database of Northern Climate Change Practitioners and Researchers	
NCE Visioning Session	. 19
Financial Report	. 20
Planning for Growth in 2001-2002	
C-CIARN North	
Yukon Public Education and Outreach Hub	
Pan-Northern Climate Change Community Based Monitoring Strategy	. 23



#### OFFICE OF THE DEPUTY MINISTER

Message from Bill Oppen for NCE's 2000-2001 Annual Report

I am very pleased to see the first Annual Report from the Northern Climate ExChange (NCE), which opened in February 2000. The NCE is a unique institution, funded by the Government of Canada, the Government of the Yukon, and Yukon College, and built on partnerships between Yukon College, four levels of government, and a variety of stakeholder groups.

During its first year, NCE has developed several very successful products and projects. It has developed posters, newsletters, fact sheets, and a web-site. NCE has also held several community consultation workshops, and the Circumpolar Climate Change Summit and Exposition that was held in March 2001 with over 300 participants coming from all over the circumpolar north. Within one year, the NCE has become a very important institution in the area of climate change.

All this work could not have been done in only one year without the leadership of NCE's Aynslie Ogden. Her dedication and prolific work has been essential to the NCE's success.

Climate change is an extremely important issue, particularly in the North, as it will receive the first and most severe effects of climate change. For the coming year for the NCE, I look forward to seeing a number of new projects being developed, such as the northern node of the Canadian Climate Impacts & Adaptation Research Network (C-CIARN North) and Yukon's Public Education & Outreach (PEO) Hub. These and other projects will help reduce greenhouse gas emissions, make people more aware of climate change effects, and how we can adapt to a changing world.

Bill Oppen Deputy Minister Department of Renewable Resources Yukon Government



# Message from the Staff

It is my pleasure to provide you with the first annual report of the Northern Climate ExChange (NCE). I have had the privilege of being involved with the NCE since its beginnings in February 2000. It seems like this was just yesterday, until I consider all that has been accomplished over the past year! In a short time, we have established our home within the Northern Research Institute of Yukon College, gained a tremendous support, and completed a number of successful projects that we can be proud of.

The creation of the NCE has provided an important new resource for Northerners to learn more about the climate change issue, and to contribute their knowledge so that a shared response to climate change can be developed. This interdisciplinary, interjurisdictional centre has been an experiment in a new form of co-operation and it is my expectation that, due to the nature of the climate change issue, the NCE will no-doubt adapt and evolve alongside changing climate, environmental, and technological conditions. Ongoing discussions on the role of the NCE will be essential to identify what kinds of services should be provided to support impacts research and the design of adaptation strategies into the future.

We have benefited from tremendous support, advice and assistance over the year. Steering Committee members, staff, contractors, partners and many others have made invaluable contributions to the work of the centre. As a staff member, I sincerely appreciate the combined efforts of a number of dedicated individuals who have helped the NCE get to where it is today.

Aynslie Ogden, M.Sc., R.P.F., R.P.Bio., P.Ag. Project/Research Officer



# Introduction to the NCE

The **Northern Climate ExChange** opened in February 2000, at the Northern Research Institute of Yukon College. The centre was created in response to growing concern over the impacts of climate change on the land, life, and communities of northern Canada. The effects of climate change are projected to be greatest and to come most swiftly to the polar regions of the world, and there is growing evidence that the impacts of climate change are already being noticed in northern Canada.

While its primary regional focus is the Yukon, the NCE has received funding to undertake projects that encompass all of northern Canada. Funding and support are from the Climate Change Action Fund, the Yukon Government and Environment Canada (P&Y Region). The NCE is directed by a steering committee with representatives from Yukon and federal governments, co-management boards, municipalities, first nations, the energy sector, and conservation groups.

The mission of the Northern Climate ExChange is to provide a credible independent source of information, develop shared understanding and promote action on climate change in northern Canada.

### Approach of the NCE

Work carried out by the NCE adheres to a number of guiding principles. The approach of the NCE:

- recognizes that community participation in research and decision making is essential to long term resource, environmental and cultural sustainability in the North;
- realizes the opportunity to strengthen links across northern Canada and among circumpolar nations through the exchange of knowledge and expertise; and

• places appropriate emphasis on the collection of documented traditional, local and scientific knowledge and perspectives in order to reflect northern insight and needs.

### Goals of the NCE

Programs, projects and initiatives carried out by the NCE are consistent with one or more of the following goals:

- Facilitate a clearer understanding of the impacts of climate change on the northern economy, environment and social fabric;
- Support circumpolar indigenous peoples in contributing to the climate change knowledge base by promoting the acceptance of traditional knowledge and aboriginal expertise;
- Increase science and research capacity among northerners and improve the links between scientific and traditional northern ecological knowledge;
- Promote local economic opportunities in the development of resource efficient technologies and practices that can contribute to mitigating climate change impacts;
- Foster circumpolar partnerships and strengthen Canada's role as a scientific and political leader in the circumpolar north;
- Contribute to regional and national northern policy decisions and development of policy tools;
- Foster consensus-based decision making especially among northern communities;
- Facilitate the development of a circumpolar "trade route" to share knowledge, expertise and technology; and
- Increase general awareness of the issue of climate change, its impacts on the north, and the global benefits of northern-based research.
- Advance a virtual framework for circumpolar climate change research alongside the University of the Arctic developments; and
- Promote the establishment of a series of coordination points in the North to anchor climate change research activities.
- Provide public education and outreach programs on the impacts of, and adaptations to, climate change in the north.

# Organizational Structure

In the 2000-2001 fiscal year, the NCE consisted of two staff members whose work was guided by a steering committee. Descriptions of the NCE steering committee and staff positions are provided below.

### 2000-2001 Steering Committee

The NCE Steering Committee is responsible for providing overall guidance to the operations of NCE. The NCE Steering Committee has been meeting on a monthly basis since March 2000.

Comprised of representatives from government, community, industry, and education, the Steering Committee provides overall guidance and expertise to the NCE by:

- guiding the activities of the NCE;
- assisting the NCE in accomplishing its goals;
- assisting the NCE in developing partnerships with organizations at the local, regional, national, and international scale,
- providing representation on the Committee on behalf of the agency/organization(s) for which they are the designate,
- relaying activities of the NCE to the agency/organization they are representing,
- Undertaking other activities relevant to accomplishing the goals of the NCE.

At the conclusion of the 2000-2001 fiscal year, key stakeholders agreed it was time to review the NCE to examine progress to date and to assess the extent to which the operations were contributing to achieving the goals. A visioning

#### 2001/2002 Steering Committee Members

- Stewart Cohen Impacts and Adaptations Research Group, Environment Canada
- Cindy Dickson, Council of Yukon First Nations
- Joan Eamer, Canadian Wildlife Service, Environment Canada/ Wildlife Management Advisory Council - North Slope
- Robert Jackson, Council of Yukon First Nations
- Neils Jacobson, Yukon Fish and Wildlife Management Board
- Scott Milton, Department of Economic Development, Government of Yukon
- Mark O'Donoghue, Village of Mayo Council Representative, Association for Yukon Communities
- Craig Olsen, Yukon Conservation Society
- Bengt Pettersson, Department of Renewable Resources, Government of Yukon
- Clint Sawicki, Northern Research Institute, Yukon College
- Harley Trudeau, Intergovernmental Affairs, Government of Yukon
- Joy Waters, Department of Renewable Resources, Government of Yukon

session was held in May 2001 that discussed, among other topics, the management structure of the organization. At this meeting, a restructuring of the Steering Committee was proposed to consist of a relatively small management committee and a larger advisory committee. A management committee would take responsibility for guiding the ongoing management of the NCE, while a larger advisory group would provide advice on strategic direction and ensure the views of a broader stakeholder group are incorporated into the management and operations of the NCE. The management committee would meet on a monthly basis and the advisory committee at least annually.

# NCE Staff

Staff at the NCE during the 2000-2001 fiscal year included the Project/ Research Officer, Research Assistant and Youth Intern. Over a dozen contractors were also employed at the NCE to assist with specific project tasks including workshop facilitation, web site maintenance, and research. Descriptions of the staff positions are provided below.

**Project/Research Officer** This position was established in February 2000 to coordinate the day-to-day operations of the NCE and its research, public education, and economic development programs. This full-time staff position co-ordinates the day-to-day operations of the NCE by:

- Identifying research gaps and study opportunities;
- Establishing and maintaining databases/web sites;
- Ensuring projects operate in accordance with the goals and policies of the NCE and its supporting partners;
- Planning, co-ordinating, and advertising occasional forums and other public events/sessions/consultations;
- Developing and maintaining a network of climate change contacts, in the scientific, public education and economic sectors;
- Identifying strategically important organizations and proactively seeking partnerships with those organizations;
- Developing and maintaining on-going relationships with supporting agencies and members of the Steering Committee;
- Planning, arranging and assisting with the meetings and work of the Steering Committee and providing for secretariat services;
- Co-ordinating research, public education, and technology adaptation activities;
- Serving as the public's principal "point of contact" with the NCE;
- Seeking new project funding and negotiating new agreements between the NCE and new

partners/participants; and

• Developing and maintaining a communications strategy.

**Research Assistant** The Research Assistant position was established in October 2000 to provide project support and research assistance to the NCE Project/Research Officer. This position assists with research projects and project clients. This position was a 0.8 time term position that ended on March 31, 2001.

The Research Assistant provides project support and research assistance to the NCE Program by:

- Corresponding and co-operating with project clients;
- Conducting research;
- Collecting, collating, and analyzing data;
- Assisting with report writing and correspondence;
- Working in and/or constructing project databases;
- Ensuring completion of deliverables as defined by Program Officer;
- Providing secretarial support to the Steering Committee;
- Contributing information to the NCE website.

**Youth Intern** The NCE has been assisted by Youth Interns from Environment Canada. Sponsored by the Treasury Board of Canada Secretariat and delivered by Canada's Career Edge Program and YMCA Canada, Federal Public Sector Youth Internship Program (FPSYIP) Interns are employed for a one-year period. Interns have assisted the NCE from June 1999 to June 2000 and March 2001 to March 2002.

FPSYIP was launched October 1, 1997 due to Federal Government concern over the significant youth unemployment problem. The purpose of the program is to provide youth with the opportunity to acquire practical work experience through paid internships. There are separate programs for youth without a high school diploma and youth that have graduated from a secondary or post-secondary institution.

Northern Climate ExChange Annual Report 2000-2001

# **Project Highlights**

The mandate of the NCE includes being a credible, independent source of information on climate change in northern Canada. In addition, we seek to develop shared understanding and promote action on climate change. What follows are descriptions of some of the projects underway at the NCE that are directed at these goals.

#### NCE Website



Launched in summer 2000, the NCE web site (www.taiga.net/nce) is an interactive, up-to-date site for climate change information relevant to Canada's North. The site contains information on the projects and programs underway at the NCE and throughout the North. Along with information about the NCE, the web site provides current climate change news, reports, information, conferences, resources, and funding opportunities. The website has had over 7,000 hits during its first year of operation.

#### NCE Email Network

The NCE email network distributes regular updates to subscribers on the latest in climate change news, funding opportunities, events, reports, and projects relevant to northern Canada. Information distributed on the email network is northern-focused or of interest to northerners. Over 200 people subscribe to the email network.

#### Workshop – Taking Action on Climate Change in the Yukon

On May 15-17, 2000, the NCE hosted a workshop and public information session called *Taking Action on Climate Change in the Yukon*. The purpose of the workshop was to involve communities, industry, scientists, educators and policy-makers in identifying needs and options, and to assess priorities for action to address climate change in the Yukon. The main objective of the workshop was to define the role of the NCE, and other agencies/organizations, in developing and carrying out this work. The outcome of the workshop was summarized into proceedings and 150 copies were distributed. The proceedings are also posted on the NCE website. Over 70 people attended the workshop and 65 the public information session.

#### Exchanging Ideas on Climate Change in the Yukon

During the summer of 2000 the NCE undertook a tour of Yukon communities. This work involved informal meetings and public information sessions in Yukon Communities including Mayo, Dawson, Watson Lake, Teslin, Faro, Haines Junction, Beaver Creek, Burwash Landing. Recommendations for the community tour arose from the NCE workshop *Taking Action on Climate Change in the Yukon* and included:

- Visit as many communities as possible
- Contact local stakeholder groups.
- Introduce the Northern Climate ExChange
- Discuss priorities for research, monitoring, education, and policy development
- Document local observations and concerns related to climate change, and list 'red flags' such as fewer birds, ice depth changes, then follow up on these.
- Ask communities what should be accomplished in the Yukon to tackle climate change over a three-year term.
- Increase public awareness



The NCE met with municipal staff, conservation officers, DIAND field staff, first nations lands and resources officers, renewable resource council members during its community tour. Public information sessions were also hosted in some communities. Communities that were visited included: Mayo, Keno, Elsa, Carmacks, Dawson, Watson Lake, Teslin, Faro, Haines Junction, Burwash, and Beaver Creek. Findings of the community tour are summarized in a report and poster.

#### NCE Newsletter and Factsheets

Two editions of the NCE Newsletter "What's up with the Weather?" have been produced and distributed. The newsletter was designed pilot test this method of providing up-to-date information on projects, research and knowledge about climate change in Canada's north. The newsletter is geared towards a general audience.

#### AAAS Conference Session on Climate Change Networking



The NCE chaired a session at the Arctic Science Conference in September 2000 on Climate Change Networking. The objective of this session was to advance networking and partnership development among climate change researchers and communities. The session consisted of presentations by a panel of community

leaders, researchers and government representatives. Panel members began by discussing existing climate change research network initiatives and the potential for establishing partnerships across the Circumpolar North, and the session was then open for discussion amongst audience participants. At the conference NCE staff also delivered presentations entitled *Knowledge into Action: Barriers to and Opportunities for Formulating Responses to Climate Change in the North* and *Climate Change State of Knowledge Assessment for Impacts in Northern Canada.* 

#### Central Yukon Climate Change Workshop

On February 19-20, 2001, the Northern Climate ExChange, Village of Mayo and the First Nation of Nacho Nyak Dun hosted a workshop to discuss climate change and its impacts on the Central Yukon. The workshop reviewed historical records compiled by Vicky McCoy and Chris Burn of Carleton University. The purpose of this work was to investigate changes in the environment of central Yukon. Economic, social and environmental data from historical



records were compiled and analyzed for the region. This work provided a baseline understanding of climate change in central Yukon, by determining how conditions in the 1990s differed from the rest of the century. The workshop also discussed ways in which long-range planning can be undertaken to prepare for the possible impacts of climate change on infrastructure and the environment within and surrounding the community. Experts on land-use planning, municipal planning, emergency response planning and ecosystem management discussed how to consider changing climate and environmental conditions when planning and managing infrastructure, renewable resources, communities, land use, and emergency response.

#### Circumpolar Climate Change Summit and Exposition: Uncertain Future, Deliberate Action

From March 19-21, 2001, the NCE hosted a 3-day summit and exposition to share northern Canadian climate change knowledge. This conference, Uncertain Future, Deliberate Action – Climate Change in the Circumpolar North, provided an opportunity for northerners and those with an interest in the North, to learn more about climate change. During the Summit, participants were introduced to an outstanding line-up of internationally recognized experts, business leaders, professionals, and community leaders who shared their ideas about climate change and the circumpolar north. Discussions, talks, exhibits and posters were structured around three themes.

The first theme – Understanding Climate Change in the North: State of Knowledge and New Directions in Research – acknowledges that further action is required to address remaining gaps in our ability to detect and understand climate change to reduce uncertainties and project future climate changes. This is especially true considering even the most sophisticated climate models fail to produce good local and regional scenarios of climate change. Understanding the current state of knowledge will help to establish priorities for climate change research, monitoring, technological development, and policy development in the circumpolar North.

The second theme was **Responding Climate Change in the North: Measures to Reduce Greenhouse Gas Emissions and our Vulnerability to a Changing Climate.** Responding to the climate change challenge requires both and adaptation. Mitigation (reducing greenhouse gas emissions) is necessary to slow the rate of global warming. Adaptation is needed to minimize the negative impacts of climate change, and to take advantage of new techniques, information and technology as they arise.



The third theme was – **Policy and Planning Responses to Climate Change in the North**. Northerners will need to respond to the effects of climate change on water and land resources. The unique geography, economy, social and political situation in the North creates barriers and opportunities to formulating policy and planning responses to climate change. These responses will be influenced by the political, lifestyle and economic choices made by policy makers, community leaders, and industry leaders in response to new global and local conditions.

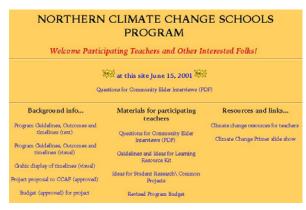
During the opening plenary, participants were challenged to provide up to three actions that they felt to be most important in response to the question: What actions should be taken to address climate change and its impacts on the circumpolar North? During the event, responses were gathered and compiled verbatim into a Background Document. The Summit Planning Committee sorted and grouped the responses according to action items and underlying needs, and distilled the over 300 responses into a draft Declaration. The draft Declaration was presented to participants for review and, following revision was released for signing prior to the end of the Summit. Both the Background Document and the Declaration are posted on the NCE website <u>www.taiga.net/nce</u>. The Whitehorse Declaration is symbolic of the strong desire held by northerners to work towards northern-relevant solutions on the climate change issue. Proceedings of the Summit will be published in a special edition of the scholarly journal, *The Northern Review* which is being edited and compiled by NCE staff.

#### Northern Review Special Edition on Climate Change

Proceedings for the Circumpolar Climate Change Summit and Exposition will be published in a special edition of, *The Northern Review*. This special edition is being edited and compiled by NCE staff. The proceedings will include a summary report prepared by Infolink Consultants Inc., and submissions that complement this special edition and address the main conference themes.

The Northern Review, a multi-disciplinary journal of northern issues, is the only scholarly journal published North of 60 in Canada. Published by Yukon College, it has published over fifty literary pieces, more than 130 papers, including conference proceedings, in both general and special thematic issues, in the arts, social sciences and humanities. The papers have covered a broad range of circumpolar human issues and topics.

#### Northern Climate Change Schools Program



pan-northern project А committee developed a proposal for a flexible, projectbased pilot program to introduce climate change into the curriculum of northern schools. Partners in this project include Departments of Education, Renewable Resources. non-governmental organizations, and environmental groups with representation from the three northern territories. Students and educators at elementary and secondary grade levels across the North are involved in a pilot

project that involves hands-on data collection, community outreach and internet exchanges and where possible in partnership with existing organizations and programs. The project involves developing an experience-based program that integrates many subject areas and maximizes the use of new technology. Tangible project outcomes include a learning resource package for other northern teachers, student research projects, and a project web site. The project committee is working in partnership with educators to implement the program and provide resources in the areas of project co-ordination and support, in-service teacher training, development of presentational materials and technical expertise

#### NCE Brochure

A colour brochure with information on projects and activities underway at the NCE was developed. Over 1500 copies of the brochure have been distributed at conferences and events throughout Canada.

#### NCE Poster

The NCE prepared a colour poster introducing the NCE and describing the impacts of climate change in the Yukon. This poster has been displayed at numerous workshops, conferences, and other events over the past year.

#### Climate Change Policy Options for Northern Canada

The NCE, with assistance from John Newton and Associates, prepared a policy options paper to explore domestic and international policy options for northern Canada in response to the climate change issue. The paper addresses not only policy options for reducing greenhouse gas emissions, but also options that address the impacts of climate change on the northern environment and socio-economic systems. This work includes a background document that reviews key initiatives in northern climate change policy. The paper includes recommendations for additional work, and highlights priority areas for attention by policy makers in the Canadian north. This paper will be published within the special climate change edition of the scholarly journal, *The Northern Review*.

#### Northern Research Forum

NCE staff was invited to participate in the first Northern Research Forum held in Akureyri, Iceland from 4 to 6 November 2000. The theme of this session was "North meets North" with particular emphasis on: the relevance of history to contemporary issues of peace and security;



Northern economies in the global economy; regionalism and governance; Implementation of the Northern Dimension; and Science and technology application in the north. NCE staff delivered a paper during the town hall session entitled *Taking Action on Climate Change in Northern Canada*.

Dr. Olafur Ragnar Grimsson, the President of Iceland, launched the idea of the NRF in September 1998 and the NRF began its work in Reykjavik in October 1999 with the formation of a Steering Committee. The purpose of the NRF is to promote intensive dialogue between members of the research community and a wide range of other arctic stakeholders. The dialogue addresses the critical issues, problems, and opportunities facing circumpolar peoples in the context of social and environmental changes and economic globalization. The NRF convenes every second year, rotating among the countries of the circumpolar north in order to address subregional and local concerns. Participants at each session of the NRF include researchers, educators, politicians, business leaders, civil servants, community leaders, resource users and managers. The forum encourages participation by younger people and people with new and unconventional approaches. The NRF has strong links to other University of the Arctic programmatic activities. The summary meeting of the first NRF was held at Bessastaðir, the presidents residence and chaired by the President of Iceland, Dr. Ólafur Ragnar Grimsson.

#### NCE Representation on Working Groups/Steering Committees

In keeping with the mandate of the NCE, is to provide a credible independent source of information, develop shared understanding and promote action on climate change in northern Canada, the NCE is involved on a number of working groups and steering committees including:

- The Yellowknife CCAF climate change impacts and adaptation workshop planning committee;
- Arctic Science 2000 conference organizational committee;
- Public Education and Outreach Hub Pilot Advisory Team;
- Yukon Government's Climate Change Coordination Committee;
- C-CIARN National Steering Committee;
- CCME Canadian Climate Change Indicators Project Committee; and
- NAICC-CC Impacts and Adaptation Working Group (IAWG).

#### Northern Assessment of the Impacts of Climate Change: Defining our Knowledge Base and Research Priorities

A 'state of knowledge' assessment was prepared by the NCE and partners to determine our current understanding of climate change and its impacts in Northern Canada. Information and key references were entered into a database, synthesized in matrix format, and interpreted for patterns in our state of knowledge. This assessment will help facilitate the identification of priorities for climate change research, monitoring, technological development, and policy development in Canada's north. The project deliverables are intended for use by northern communities, the interested Canadian public, researchers, and policy makers

To complete the assessment, northern Canada was divided into various sectors, including ecosystems (Boreal Forest, Tundra, Coastal etc.) and socio-economic systems (Mining, Community Health, Agriculture etc.). Our knowledge of the potential impacts of climate change scenarios were ranked as good, fair, or poor for components of each of these systems, and descriptions of what type of knowledge exists was included.

Expert input to the project was also sought through two methods: personal communication, and an on-line survey (http://www.taiga.net/nce/survey.html). Experts were asked to provide their assessment of the state of knowledge of the impacts of climate change in their area of expertise. We also requested a ranking as to how much study and knowledge there is for each scenario.



The wider community of stakeholders was engaged through a workshop, held in September 2000. The workshop brought together government, community representatives, practitioners and researchers from across the north to assist with assessing the state of knowledge of climate change impacts on various human and natural systems in northern Canada. Workshop participants provided recommendations that assisted the project team in providing products that are of greater value to the users.

Oral presentations about the project were given at the

following conferences: Arctic Science 2000 Conference, Crossing Borders: Science and Community (September 2000) and Circumpolar Climate Change Summit and Exposition (March 2001). At this conference, an entire session was devoted to the project. Poster presentations on the project were given at the Arctic Science Summit (April 2001) and the Ecological Monitoring and Assessment Network meeting (May 2001). In addition, a special session of the 2000 Yukon North Slope Conference was devoted to this project. At the North Slope Workshop, we discussed what people in North Slope communities do, and what is of concern relating to climate change. The question 'so what?' was used to challenge most comments. This was to keep the focus on practical applications of climate change research and knowledge, relating to the communities' seasonal activities.

This project has yielded a number of products. Products are in hard copy, CD-ROM, and in searchable Internet format (at www.taiga.net/nce) and include:

• An executive report that includes a description of primary literature, summaries and

interpretations of the current state of climate change knowledge across northern systems and regions;

- Four technical reports from project collaborators
- A complete set of matrices outlining the current state of knowledge of climate change and its impacts across the 17 northern systems;
- A searchable matrix maker to assist in quickly finding out what is known about climate change impacts in Northern Canada www.yukon.taiga.net/matrix;
- A searchable database containing climate change information sources for northern Canada www.yukon.taiga.net/infosources/;
- A searchable directory of climate change contacts in the Canadian North www.yukon.taiga.net/contacts/.
- A central web site specific to the results of the project, the NCE Knowledge Site, was also developed. The site contains links to the above products, report summaries, and links to related sites.

#### Database of Northern Climate Change Information

The NCE has developed a database of local, traditional and scientific sources of climate change information in northern Canada. The focus was on climate change impacts in northern Canada, however more general information sources on climate change or on northern Canada were also included. The database is searchable by keyword, region, or information format, and where possible, abstracts and contact information is provided. The database will be posted on the NCE website and will be updated on a regular basis.



# Database of Northern Climate Change Practitioners and Researchers

The NCE has developed a database of practitioners and researchers involved in climate change in northern Canada. The database provide information on people whose work or area of expertise are related to climate change and northern Canada, and will list the organization, contact information, and specific areas of knowledge for each of the people listed in the database. Users can search this database for contacts by field or region of interest. An easy-tocomplete web-based form is provided for individuals and organizations to complete if you do, or have done, work related to climate change in northern Canada.



#### NCE Visioning Session

In April 2001, after a little more than a year of operation, the key stakeholders agreed it was time to review the ExChange to examine progress to date. A visioning session was held in May 2001 to assess the extent to which the operations were contributing to achieving the goals. A report summarizing the outcome of the session was prepared by the workshop facilitator, Malloch Graham and Associates.

# **Financial Report**

The Northern Climate ExChange received funding from Yukon College, Government of Yukon, and Government of Canada during the 2000-2001 fiscal year. The following statements summarize NCE revenues received during this period. Detailed financial statements are available upon request.

Funding Source	Description	Amount
Foundation		
Climate Change Action Fund	Salary, Steering Committee Support	\$50,000
Government of Yukon – Department of Renewable Resources	Salary, Steering Committee Support (funds carried over from 1999-2000 FY)	\$50 <b>,</b> 000
Public Education and Outred	ach	
Government of Yukon – Department of Renewable Resources	Public Education and Outreach	\$75,000
Government of Yukon Environmental Awareness Fund	Mayo Workshop	\$5,000
Nacho Nyak Dun First Nation	Mayo Workshop	\$5,000
Government of Yukon – Department of Economic Development	Summit	\$20,100
Department of Foreign Affairs and International Trade	Summit - Travel Assistance, Policy Options Paper	\$20,000
Sponsorships	Summit	\$15,000
Registration Fees	Summit	\$45,000
Climate Change Action Fund - Public Education and Outreach	Summit	\$50,000
Climate Change Action Fund - Public Education and Outreach	Northern Climate Change Schools Project	\$15,000
Northern Research Forum	NRF Meeting	\$2,500

Environment Canada - Northern	Yellowknife Workshop/	\$10,000
Ecosystem Initiative	Community Consultation	
Environment Canada	HPAT Meeting	\$1,000
Science, Impacts and Adap	tation	
Climate Change Action Fund - Science, Impacts and Adaptation	Gap Analysis Project	\$53,500
In Kind Support		
Yukon College	Administration, Office Space, Facility Rental	\$50,000
Environment Canada – P&Y	0.3 PY Staff Time	\$25,000
Environment Canada – NEI	Gap Analysis Project	\$15,000
Environment Canada – P&Y	Career Edge Internship	\$15,000
Total Cash Revenues		\$417,100
Total In-Kind Support		\$105,000
TOTAL BUDGET		\$522,100

# Planning for Growth in 2001-2002

The NCE is planning for growth in 2001-2002. New initiatives were announced to help northerners with future climate changes that will be administered by the NCE. These initiatives have received funding from the Climate Change Action Fund (CCAF), the Yukon government, and the Northern Ecosystems Initiative.

The NCE is very pleased about the opportunities provided by these new initiatives because these initiatives will provide critical support for ongoing research and information exchange. Delegates of the Circumpolar Climate Change Summit released the *Whitehorse Declaration on Northern Climate Change*, outlining actions to be taken to address climate change and its impacts, and the new initiatives provide an opportunity to build upon outcomes of the Climate Change Summit."

### C-CIARN North



Canadian Climate Impacts and Adaptation Research Network

The NCE has been involved with developing a vision for the northern node of the Climate Change Impacts and Adaptation Research Network, or C-CIARN North. C-CIARN is a national

network of centres for coordinating climate change impacts and adaptation research and for disseminating information and research results. A node is a point of entry into a region and a region's point of entry to the national network. The objectives of the node are to facilitate and build capacity in climate change impacts and adaptation research, maintain a database and Web Site, and communicate research throughout the region. CIARN facilitates research and training, promotes stakeholder involvement, and provides continuity in the effort to develop scholarship and a shared understanding of present-day and future climate impacts, vulnerabilities, risks, and adaptation. The three Northern Research Institutes have received funding for a partnership approach to implement this initiative in the North. The NCE will host the C-CIARN North office, and activities of the office will be guided by a pan-northern steering committee and regional working groups.

### Yukon Public Education and Outreach Hub

In 2001-2002, the Centre will expand its operations to develop the Yukon "hub" of the national Public Education and Outreach Network. PEO Hubs are being established in each province and territory to provide coordination and a focal point for regional climate change PEO activities, linked and guided at the national level by the Hub Pilot Advisory Team. The

primary focus of a PEO Hub is to help Canadians understand climate change, its impacts on communities and people's lives and the actions that can be taken to adapt to climate change and mitigate its impacts. Public education and outreach is essential if Canadians are to understand what climate change means to them, and if they are to take action to reduce personal greenhouse gas emissions. Outreach is also critical in building public support for broader policies and actions that will be put in place as governments and businesses move to address climate change.

The NCE has pilot tested a number of PEO initiatives including an email network, website, brochure, poster, community consultation, newsletter and factsheets. These pilot initiatives have taught us many lessons about what type of programs are desired by northerners, and will assist us in joining the national network.

### Pan-Northern Climate Change Community Based Monitoring Strategy

Northern regions are predicted to receive the earliest and most extreme impacts of a changing climate, and many of these impacts are currently being noticed. It is extremely important that agencies, organizations and communities in northern Canada work together to develop a strategy to monitor these changes. Currently, a number of efforts are underway or proposed to document these changes. The NCE has received funding from the Northern Ecosystem Initiative to facilitate the development of a strategy to co-ordinate and expand upon these initiatives to make the best use of limited resources and avoid duplication of efforts.