

# Canadian Preparations International Polar Year 2007-2008

Helmut Epp  
NWT Centre for Geomatics  
Government of Northwest Territories  
Canadian National IPY Committee





# IPY 2007-2008



Largest-ever international program of coordinated research and observations focussed on the polar regions

Involves more than 60 nations

Opportunity for the international science community to:

- do collaborative scientific research in polar regions
- leave a legacy of enhanced research capacity and infrastructure, data, communication tools, and a new generation of scientists

Estimates are that:

- 35-50% of IPY projects include Canadian involvement and/or activity in Canadian Arctic



# Nations Represented in Fully Endorsed Projects

*Argentina*

*Australia*

*Austria*

*Belgium*

*Bermuda*

*Brazil*

*Bulgaria*

*Canada*

*Chile*

*China*

*Columbia*

*Czech Republic*

*Denmark*

*Egypt*

*Estonia*

*Finland*

*France*

*Germany*

*Greece*

*Greenland*

*Hungary*

*Iceland*

*India*

*Ireland*

*Israel*

*Italy*

*Japan*

*Kazakhstan*

*Malaysia*

*Mexico*

*Monaco*

*Mongolia*

*Morocco*

*Netherlands*

*New Zealand*

*Norway*

*Philippines*

*Poland*

*Portugal*

*Romania*

*Russia*

*South Africa*

*South Korea*

*Spain*

*Sweden*

*Switzerland*

*Turkey*

*U.K.*

*Ukraine*

*Uruguay*

*U.S.A.*

*Venezuela*



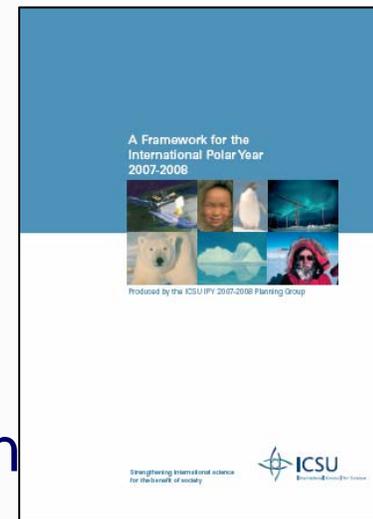
# International IPY Themes

1. Current Status of Polar Regions
2. Change in the Polar Regions
3. Global Linkages
4. New Frontiers
5. Polar Regions as Vantage Points
6. The Human Dimension  
(Human Dimension runs through ALL Themes)

Observational Initiatives

Data Management

Education, Outreach & Communication



# Canada and IPY 2007-2008

## Call for Expressions of Intent

Jan – Nov 2005 (>1200 submitted)

## Call for Full or Coordination Proposals

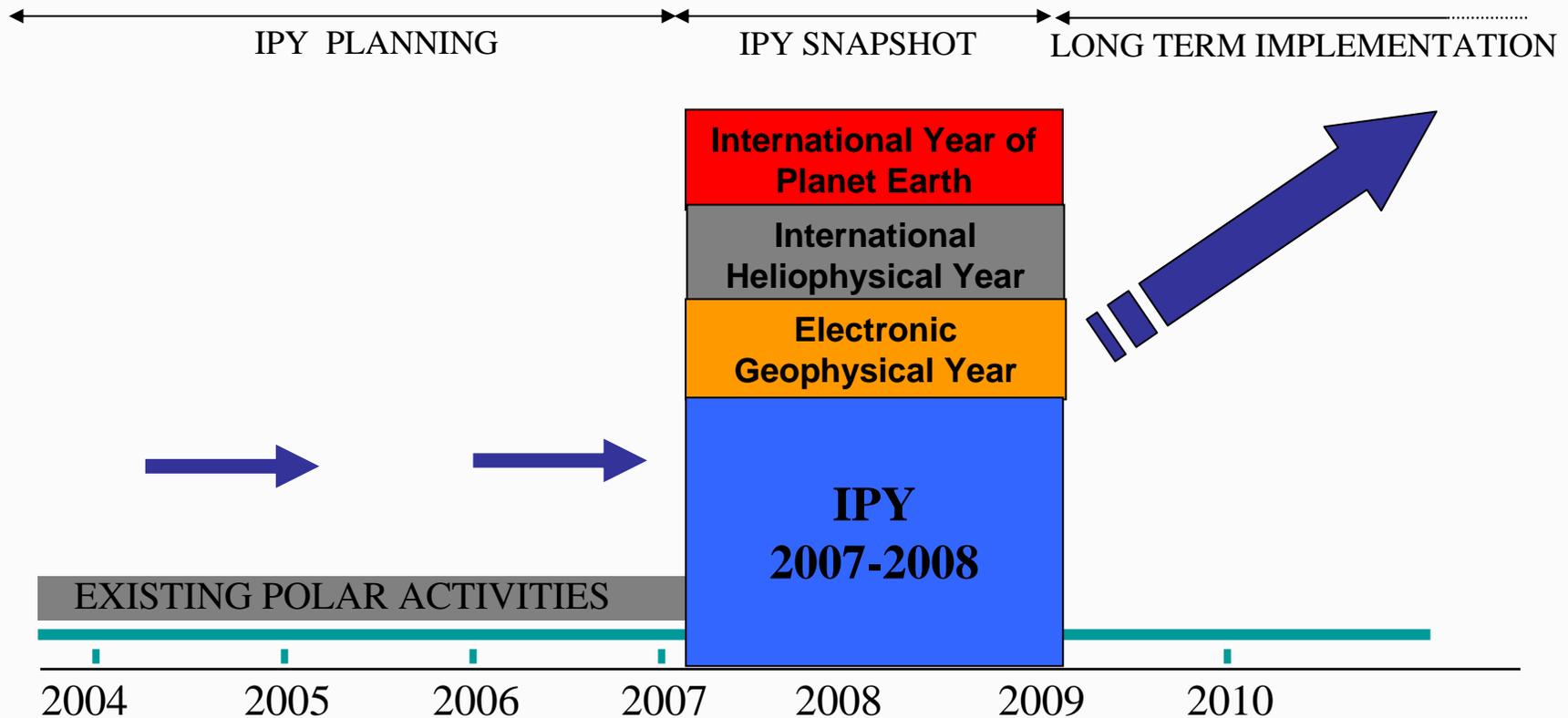
Jun & Sept 2005 and Jan 2006 (~420 submissions)



Approximately 60% involve Canadians



# IPY as 'Snapshot' - - - and Legacy



# Canada's Program for IPY 2007-2008



# Planning for IPY in Canada

## National Committee

(22 members from gov't, Universities and Colleges, the North)

## Federal IPY Program Office

(hosted by INAC)

## Northern Nodes (x4)

(hosted by northern organizations)

## Canadian IPY Secretariat

(hosted by University of Alberta)

## Canadian Polar Commission

## IPY Youth Steering Committee

(youth and early career scientists)

## Federal IPY working group

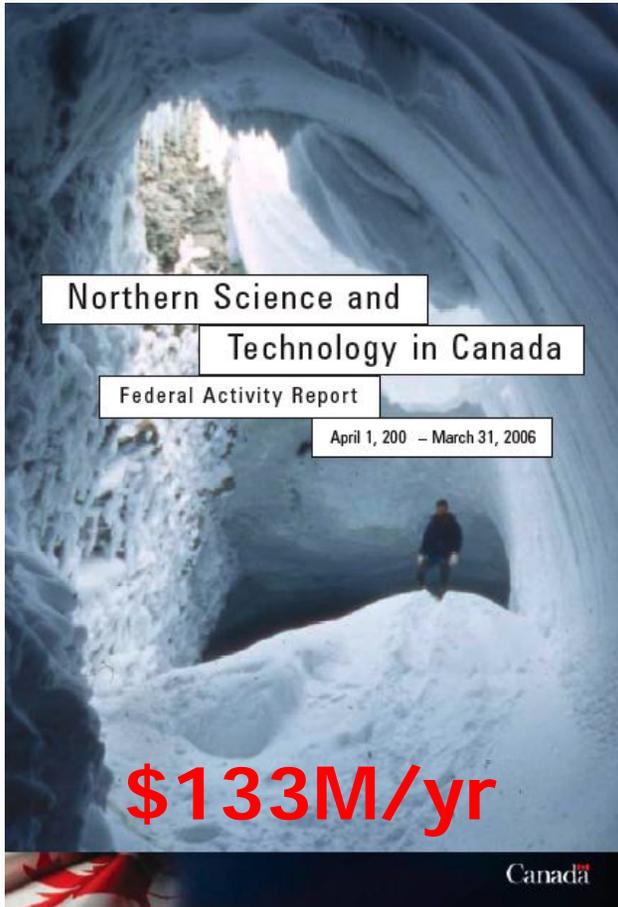
(>20 departments and agencies)

## Territorial IPY Committees

(NWT, Nunavut, Yukon)



# Canadian granting agencies & federal depts support many northern research activities:



**NSERC Northern Research Chairs**  
**SSHRC Northern Research Development Grants;**  
**involvement in BOREAS**  
**CIHR Institute for Aboriginal Peoples Health;**  
**Northern and Rural Programs**  
**Northern Contaminants Program**  
**Northern Ecosystems Initiative**  
**Arctic-NET Network of Centers of Excellence**  
**Polar Continental Shelf**  
**NSTP**  
**etc, etc**



# New Funding for Canadian IPY activities

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Home	Site Map	Program Guides	Program News	On-line Services
About NSERC	Funding			
Science and Engineering Research Canada				

For Professors — Overview — Grants Programs — Special Research Opportunity

## Request for Proposals International Polar Year Projects in the Natural Sciences and Engineering

### Extension of Deadline for NSERC Request for Proposals to Support Participation of Canadian Researchers in the International Polar Year 2007-08

The deadline for the submission of proposals in support of International Polar Year (IPY) projects has been extended to November 28, 2005. This is a result of the recent federal announcement of further funding to support Canada's participation in IPY (<http://www.ipy-api.ca/english/index.html>).

The new federal funding initiative is focused on "Climate Change Impacts and Adaptation" and "Health and Well-Being of Northern Communities," and NSERC is not directly involved in this program. NSERC expects that applications related to these areas will be submitted to the federal departments managing this funding process. Applications received at NSERC that we determine are more appropriate for this, or other funding initiatives, will be redirected to the appropriate program.

To be considered for NSERC funding, the proposed IPY project must be endorsed by either the national or international IPY Committee. A proposal may be submitted to NSERC for a project that has not yet received official IPY



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## *News Release Communiqué*

2-02709

### GOVERNMENT OF CANADA ANNOUNCES \$150 MILLION FOR CANADIAN PARTICIPATION IN INTERNATIONAL POLAR YEAR

**EDMONTON (ALBERTA) September 21, 2005** - The Honourable Anne McLellan, Deputy Prime Minister and Member of Parliament (Edmonton Centre), today announced Canada's participation in International Polar Year 2007 - 2008, the largest ever international research program in the polar regions. The Government of Canada will provide \$150 million in new funding over six years to carry out an innovative, interdisciplinary program for International Polar Year (IPY) along with our international partners.

"We are an Arctic nation. Nearly one-quarter of the Arctic region falls within Canada's borders," said Minister McLellan. "This International Polar Year will mark the first time in fifty years that so many nations will focus their collective efforts on major questions of science in the Earth's polar regions. This is our generation's opportunity to move the markers ahead on northern science and research, and, as has been done in past International Polar Years, achieve those breakthroughs in knowledge that change forever the way we understand and consider our northern and Arctic regions."

**NSERC  
\$6M**

**Government of Canada  
\$150M**

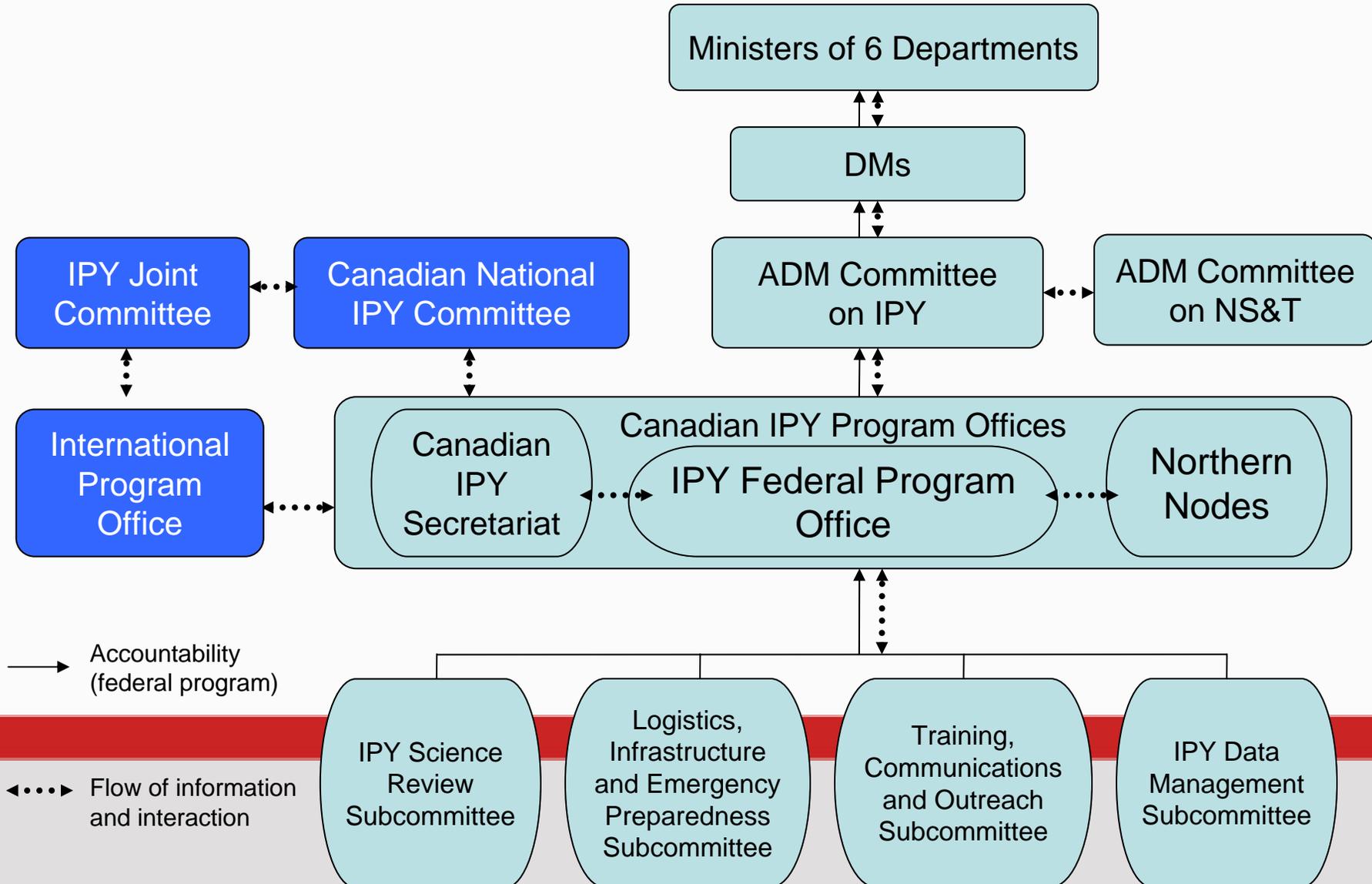
# Government of Canada Program for IPY

**\$150M in funding over six years starting FY 2006-07 for Canadian participation in:**

- 1) Science and research** focused on science for climate change impacts and adaptation and health and well-being of northern communities
- 2) Training & capacity-building**
- 3) Communications & outreach**
- 4) Logistics, infrastructure, emergency preparedness, data management**
- 5) Support for licensing, coordination and administration**



# Coordinating IPY: an evolution



# Canadian IPY Program Offices

## **IPY Federal Program Office**

Established in December 2005, through partnerships between 6 federal departments.

## **Canadian IPY Secretariat**

Located at the University of Alberta, supports planning and implementation of the Canadian IPY program.

## **IPY Northern Nodes**

Currently hosted by 4 Northern Organizations, act as points of contact and facilitate northern research.



# IPY Northern Nodes

## Northern Nodes

**Yukon:** Council for Yukon First Nations

**NWT:** Aurora Research Institute

**Nunavut:** Nunavut Research Institute

**Nunavik & Labrador:** Nunavik Research Centre

## Purpose / role:

- establish point of contact in key northern regions
- facilitate integration of northern communities and organizations in proposed IPY research
- develop regional networks and act as a liaison
- information to researchers on licences, permit requirements in the northern regions



# Canadian Science & Research Proposals

**Call for Proposals:** issued December 19, 2005, closed March 31, 2006.

Peer review process to begin April, 2006.

Two critical Canadian policy and science interests:

- Climate Change Impacts and Adaptations,
- Health and Well Being of Northern Communities.



NOTE: There will be additional targeted CfP in coming months

# Challenges for All Investigators

## Infrastructure and logistics support

- Polar Continental Shelf Project
- Accommodation
- Transportation
- Aircraft
- Ships
- Access to research stations
- Earth Observation platforms

## Licenses and Permits

## Hiring of local staff

## Health & safety procedures

## Engaging northern communities

## Partnerships and collaboration

## Communications, outreach, & education

## Data and information management



**Don't take these  
for granted!!**



# Community Involvement

Communities are getting involved in IPY in various ways (i.e. research leaders, resource providers, etc.)

## Benefits for communities:

- Opportunities for increased access to research/researchers
- Opportunities to lead research
- Enhanced capacity and opportunities for the next generation of youth
- Economic impacts of increased local activity



# Permitting, Licensing, IPR issues



- Overview Report on Research Licensing in Northern Canada
- Primer on Conducting Research in Canada's Northern Territories
- Primer on Conducting Research in the Northern Regions of Canada's Provinces

## Research Licensing in Northern Canada

### An Overview



Canadian IPY Secretariat  
March 2005

Prepared by:  
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Tel. (867) 667-6332 | Email [claire@northwestel.net](mailto:claire@northwestel.net)

## Forthcoming:

- Intellectual Property and Traditional Knowledge
- Environmental Assessment Process
- Researcher Mobility (immigration/security)
- Communicating IPY Research



# Training, Communications & Outreach

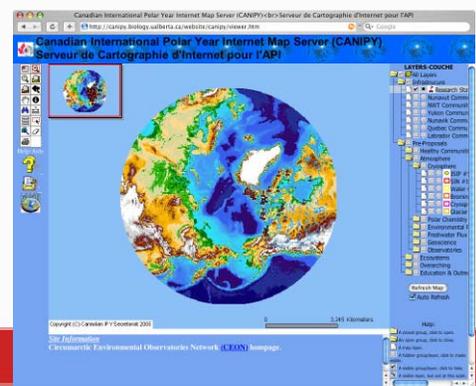


[www.ipycanada.ca](http://www.ipycanada.ca)

Newsletters



Posters



CANIPY IMS

# Education & Outreach Partners

For Example:

**Ends of the Earth: From Polar Bears to Penguins**  
Exhibit Plan

Science North Science Nord

Currently under development at Science North, **Ends of the Earth: From Polar Bears to Penguins** is a travelling exhibit that will now visitors from one end of the globe to the other to explore the fascinating (and cold!) worlds of the Arctic and Antarctic.

Discover a polar bear, a muskox, or an emperor penguin and find out how these animals are adapted to live at the poles. Build an igloo and make a dog sled. Watch how a penguin and incubate an egg in the Antarctic winter. Meet usages and pack up. Follow the tracks of polar explorers, and more!

**Ends of the Earth** explores the uniqueness of the world's polar regions, the current science being undertaken there, and helps us understand how these regions are indicators of climate change.

Design+Communication Inc., for Science North, February 2005

Science North

**YOUTH SCIENCE FOUNDATION CANADA**

## POLAR SCIENCE AND INTERNATIONAL POLAR YEAR

**2007-08**

**POLAR SCIENCE AND IPY 2007-2008** **YSF CANADA**

**THE ARCTIC AND THE CANADIAN IMAGINATION**

The Arctic's stark, extreme beauty has long been a source of inspiration for artists and writers. But the Arctic is much more than a source of inspiration. It is a source of profound scientific and economic viability. One quarter of the world's oil reserves are located in the Arctic. At the same time, its distant early warning system is the most profound, system of the world. As befitting a polar nation, it is innovative, interdisciplinary and

**CANADA: A POLAR NATION**

Canada is a polar nation. Some of our most spectacular achievements and innovations have come from grappling with the extreme climate and conditions many of us live with daily. Celebrating our polar heritage – from early technologies like the igloo, the kamook and the kayak to the extreme climate engineering that makes pipeline techniques possible – underscores the importance of the north to who we are as Canadians. Many of our contributions to the world of science and engineering are informed by this polar identity.

**INTERNATIONAL POLAR YEAR: 2007-2008**

The largest-ever international research program, IPY will involve nearly 60 countries from around the world. Thanks to Canada's human dimension will be a focal point of the historical and social processes that have made societies resilient and sustainable will be studied unique contribution to global diversity and citizens.

The first IPY in 50 years, IPY 2007-2008 (IPY-aplica) will be an international program of coordinated, interdisciplinary science, research and observation 24-month period. Research activities will be conducted in both the Arctic and Antarctic, to deepen our understanding of global linkages, and to increase our ability to detect changes. This IPY will involve Arctic residents with research activities and capture the imagination while attracting and developing the next generation of polar scientists.

Previous International Polar Years have contributed enormously to our understanding of the polar regions, telecommunications, ocean science, the aurora borealis – and led to the Antarctic Treaty. It is by Canada during IPY will support the implementation of Project Green

YSF gratefully acknowledges the support of the International Polar Year Foundation

International Polar Year Foundation

Youth Science Foundation Canada

www.ysf.ca

**ENCOURAGE YOUR STUDENTS TO PARTICIPATE**

With its links to energy, the environment and climate change, polar science will play an increasingly central role in the lives of the next generation of young Canadians. Youth Science Foundation Canada wants to ensure Canada has a talented pool of young scientists who will build on the remarkable science planned for IPY. Help your students start a project involving polar themes, invite a researcher to visit your school, or get them involved with the events being planned by the Youth Steering Committee.

Students from Aurora College, such as the Aboriginal from Thompson, Northwest Territories Labour Centre, will play an active role in the Student Environmental Research Project in the Beaufort Sea. To protect the concentration and the marine environment, it is necessary to understand the nature and distribution of conditions related to offshore Arctic hydrocarbon development.

**YOUNG CANADIANS: INTERNATIONAL LEADERS**

Canadian Amber Eberhart and Tyler Ruhn are co-chairs of the International IPY Youth Steering Committee as well as the Canadian IPY Youth Steering Committee.

Amber grew up in Foho National Park in the Rocky Mountains and now lives in Whitehorse, Yukon. She completed an honours undergraduate degree at the University of Victoria and will be starting a master's in a surficial geology and climate change science in the fall.

Born and bred in the Yukon, Tyler completed a degree at the University of Victoria, focusing on paleontology, and is set to begin his master's at Simon Fraser University in September 2006. IPY Youth Steering Committee: <http://www.natb.ca/~ip/ysf/about.html>

Youth Science Foundation



# Interactive Map Server

<http://www.ualberta.ca/~ipy/CANIPY>

## CANIPY How To Guide

[Download in PDF Format](#)  
[Télécharger en format PDF](#)

## Data Providers



## Links

[IPY International](#)  
[Government of Canada IPY](#)  
[Canadian IPY Portal](#)  
[Canadian IPY Secretariat](#)

## Data

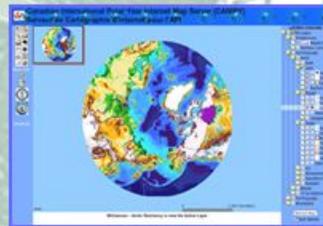
[Pre-proposals](#)  
[Full-proposals](#)  
[Arctic Stations](#)  
[Antarctic Stations](#)



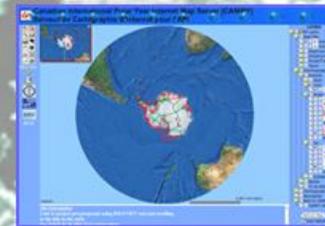
Please feel free to contact us with suggestions and/or for help at

## Welcome to CANIPY IMS Bienvenue à CANIPY IMS

Canadian International Polar Year Internet Map Server  
Serveur de cartographie internet de l'Année Polaire Internationale



[Arctic / Arctique](#)



[Antarctic / Antarctique](#)

**\* Due to the large amount of information, the website will take some time to appear completely. Also avoid checking a whole folder, check one item at a time.**

**\*Dû à la quantité d'information, ce site prendra un certain temps à apparaître proprement. Évitez de cocher un dossier complet, cochez plutôt un item à la fois.**

Low speed connections are not recommended for this website. Please see the DATA section on the left to download CANIPY data alone.

Les connexions à basse vitesse ne sont pas recommandées pour ce site. Veuillez vous référer à la section de données «DATA» à gauche de l'écran pour télécharger les données utilisées pour CANIPY sans accès à la carte interactive.

[CANIPY How-to Guide / CANIPY Guide d'Instructions](#) :

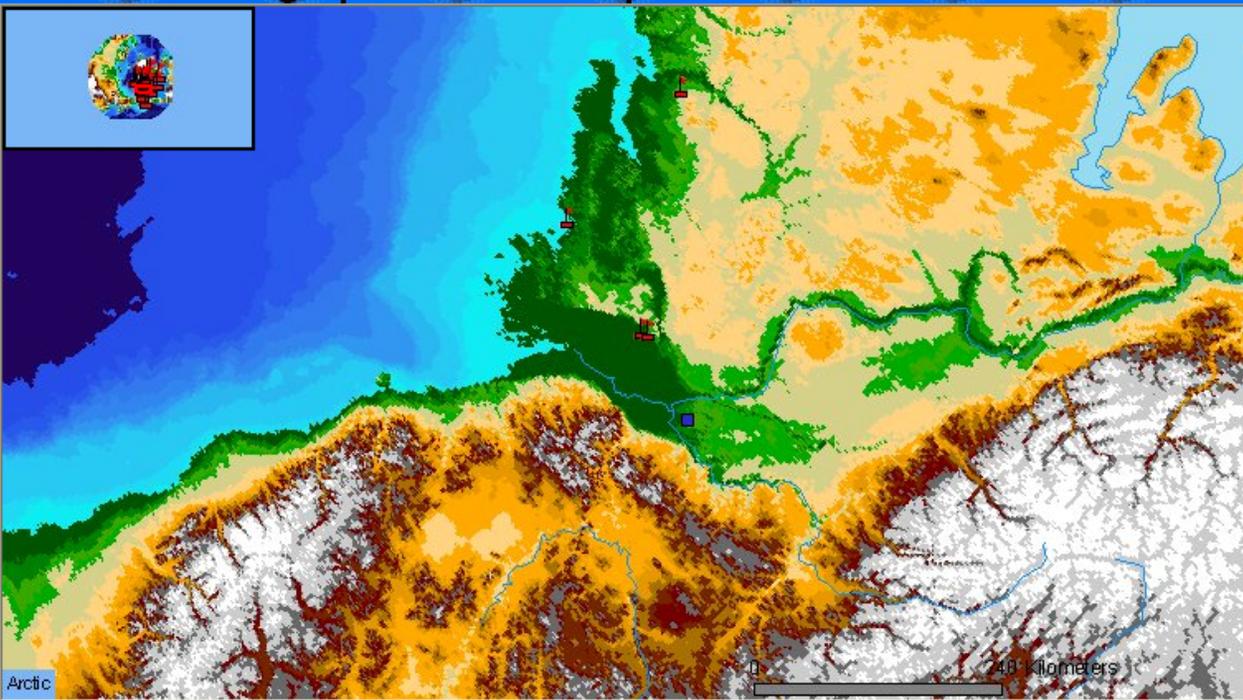
# Canadian International Polar Year Internet Map Server (CANIPY) Serveur de Cartographie d'Internet pour l'API



Help/Aide



ANTARCTIC



### LAYERS-COUCHEs

- All Layers
- Infrastructure
- Research St
- Northern Commu
- Full-Proposals
  - Asia
  - Europe
  - North America
    - Canada
      - Zheng
      - Sawick
      - McGre
      - Living
      - Irwin -
      - Gauth
      - Levass
      - William
      - Goodwin
    - Greenland
    - USA
  - Oceania
  - Pre-Proposals
  - Boundaries

Refresh Map

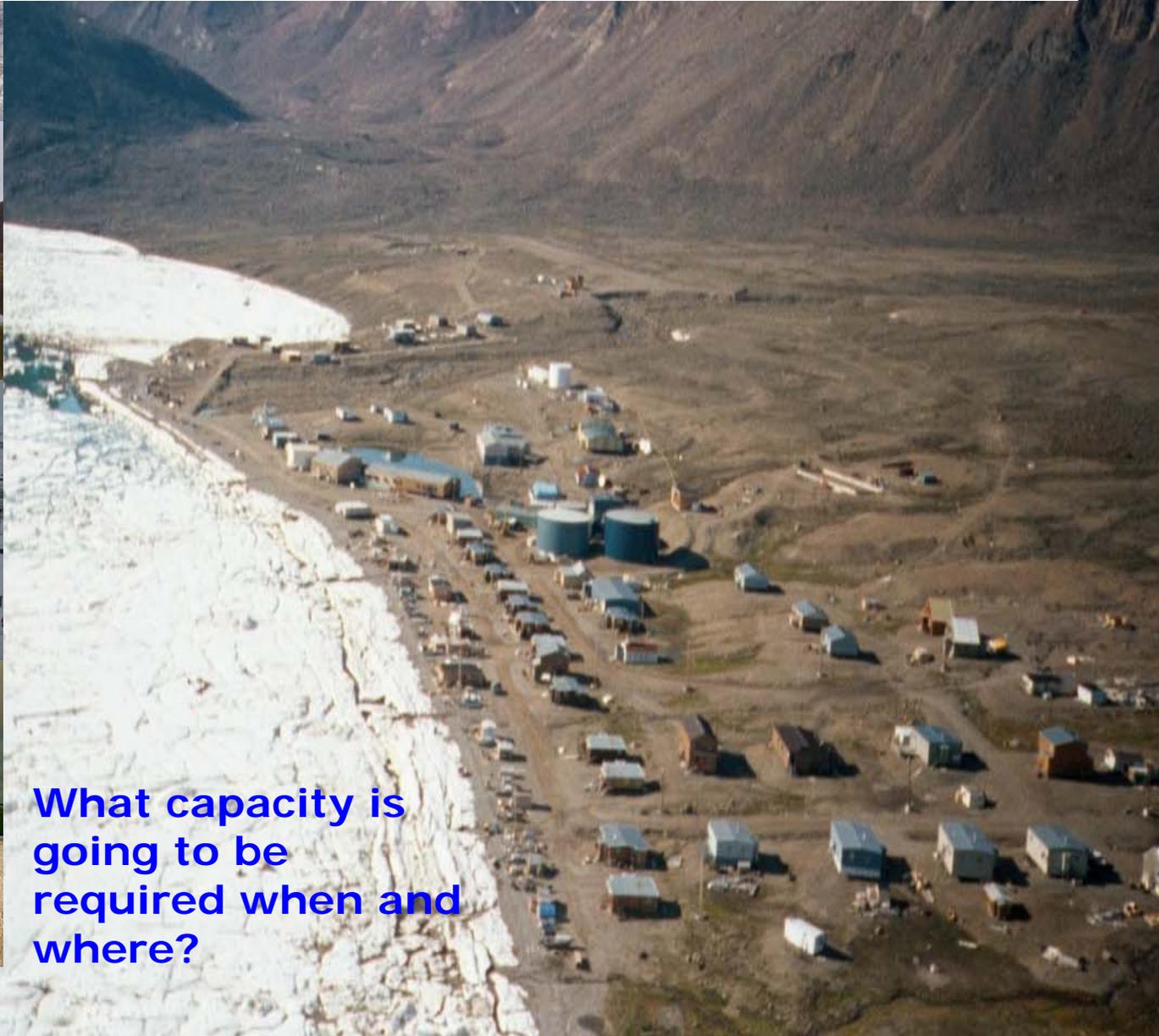
Auto Refresh

Help:

### Gauthier - Arctic WOLVES

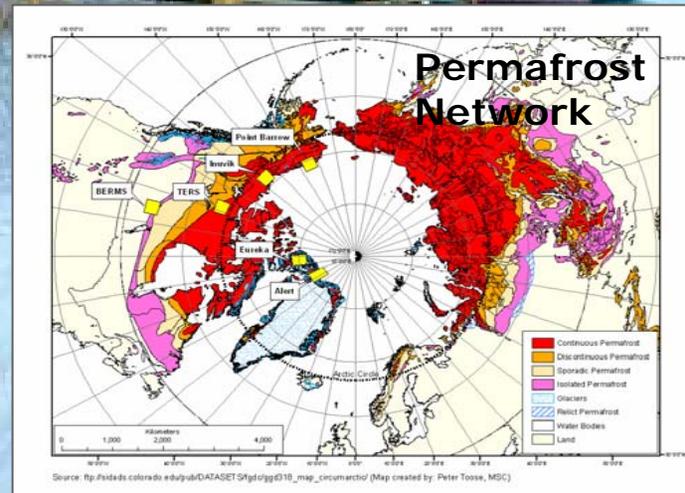
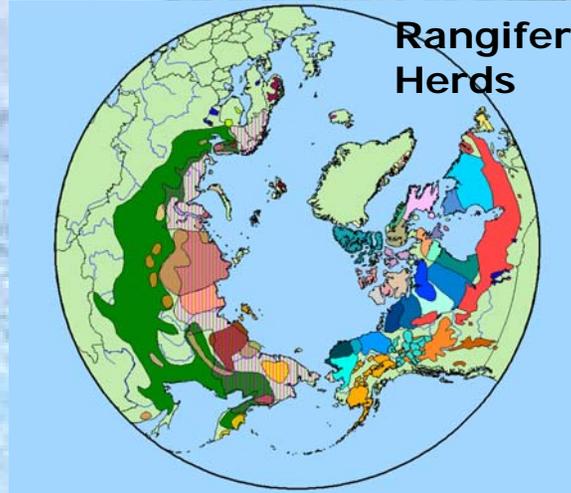
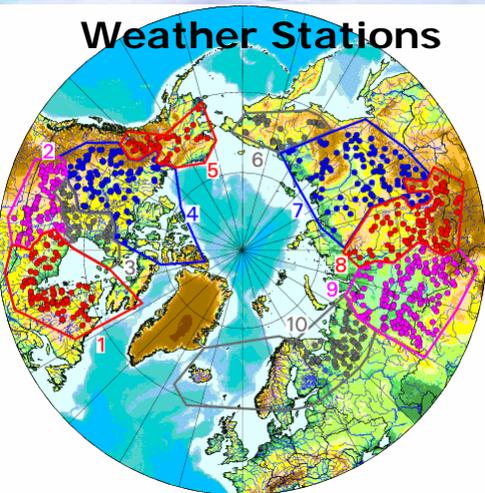
Field Name	Field Value
INT_	11
LEAD_COUNT	Canada
OTHER_COUN	USA, Denmark, Norway, Sweden, Netherlands, Finland, Germany and Russia
PROJECT_NA	Arctic Wolves

# Research Stations/Communities



What capacity is going to be required when and where?

# Observation Networks



# IPY Data & Information

## IPY Data Policy

- Free and unrestricted exchange
- Timely exchange
- Quality control
- Metadata submission
- Preservation of data
- Easy access
- Use and enhance existing facilities
- Reporting requirements
- Sensitivity of traditional knowledge



# IPY Data & Information

My Account | Site Map | Privacy

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## Canadian Cryospheric Information Network

Navigation

- Home
- Data
- Links
- CRYSYS
- SOCC
- Contacts

Enhance awareness and allow access to Canadian cryospheric information and related data.

What's New

**Landsat Images of Queen Elizabeth Islands.** Landsat 4, 5 and 7 from 1992 - 2001. More Info...

**Great Lakes and East Coast.** RADARSAT-1 derived images for ice displacement calculations. More Info...

**Snow on the Ground -- Graph Tool.** Measurements of snow depth at Canadian synoptic stations. More Info...

**Snow Water Equivalent maps for Canadian prairies.** Derived from passive microwave SWE data. More Info...

LINKS

Information  
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Conversion

Featured Content

<b>Data</b> <a href="#">Search Data</a> <a href="#">MapManager</a> <a href="#">GeoConnections</a> <a href="#">Submit Data</a> <a href="#">Request Data</a>	<b>Science</b> <a href="#">Research Objectives</a> <a href="#">CRYSYS Publications</a> <a href="#">On-line Documents</a> <a href="#">Results</a>	<b>Education</b> <a href="#">Snow</a> <a href="#">Lakeice</a> <a href="#">Seaice</a> <a href="#">Glaciers</a> <a href="#">Permafrost</a>
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CCIN Introduction | Abstract | Objective | Technical | Newsletter

Fast Links

- ArcticNet
- Land Cover Mapping
- CEOS Centre for Earth Observation Science
- Search cry related publi
- Nunav Environ Datab
- Nunavik Bib
- CRYSYS Inf Mini-t
- 2005 CRYS Meetii
- National Sr Ice Data

March 5,

IPY data policies are currently under discussion and need to be coordinated with international and program initiatives -

- enhance existing networks
- build new networks

ASTIS

SISTA

The Arctic Science and Technology Information System (ASTIS) database contains over 58,000 records describing publications and research projects about northern Canada. ASTIS is maintained by the [Arctic Institute of North America](#) at the University of Calgary, and is part of the [Canadian Polar Information Network](#).

If you wish to bookmark this site, or create a link to it, please do so to this page. The pages that follow cannot be bookmarked.

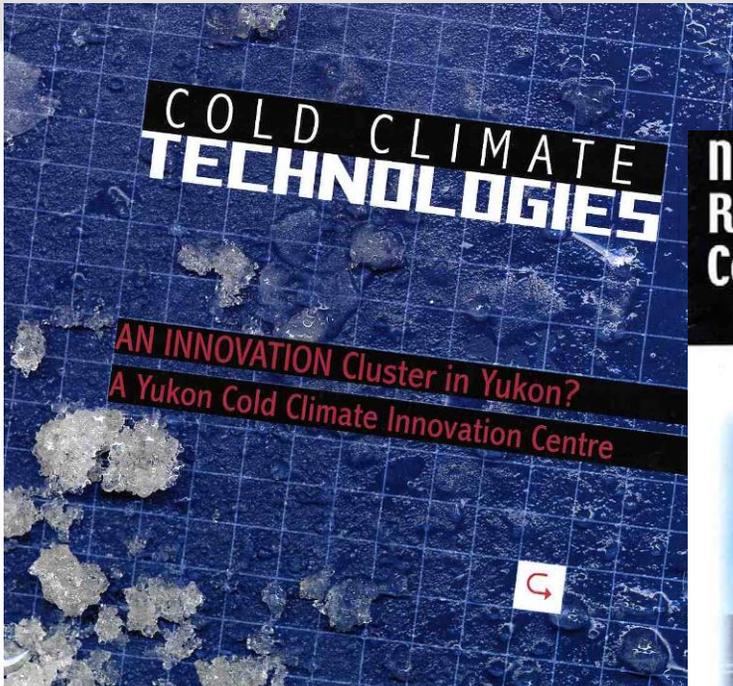
La banque de données du Système d'Information sur les Sciences et la Technologie Arctiques (SISTA) renferme plus de 58 000 enregistrements décrivant des publications et projets de recherche sur le nord du Canada. SISTA est tenu à jour par l'[Institut Arctique de l'Amérique du Nord](#) situé à l'Université de Calgary et fait partie du [Réseau canadien d'information polaire](#).

Si vous désirez marquer ce site d'un signet, ou créer un lien pour y accéder, veuillez le faire sur cette page. Les pages qui suivent ne peuvent être marquées d'un signet.

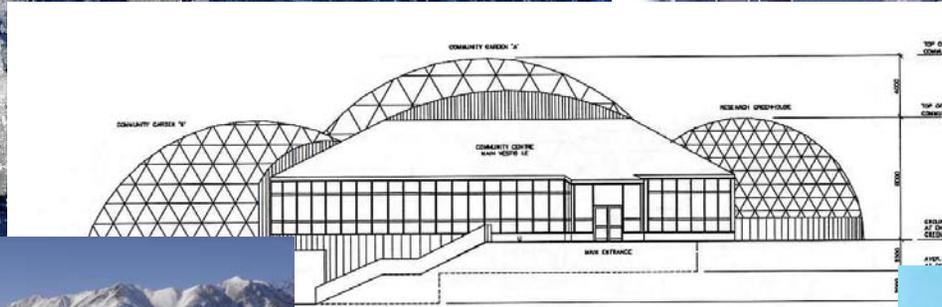
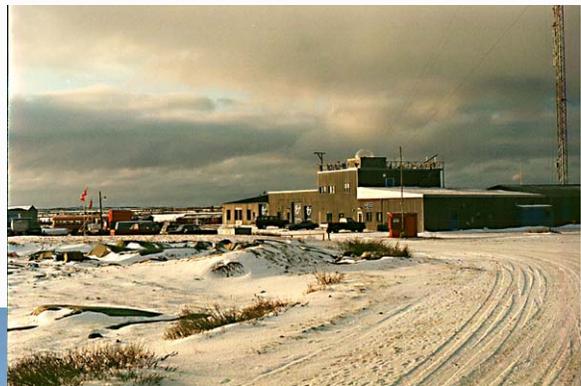
English  Français

Search = Recherche

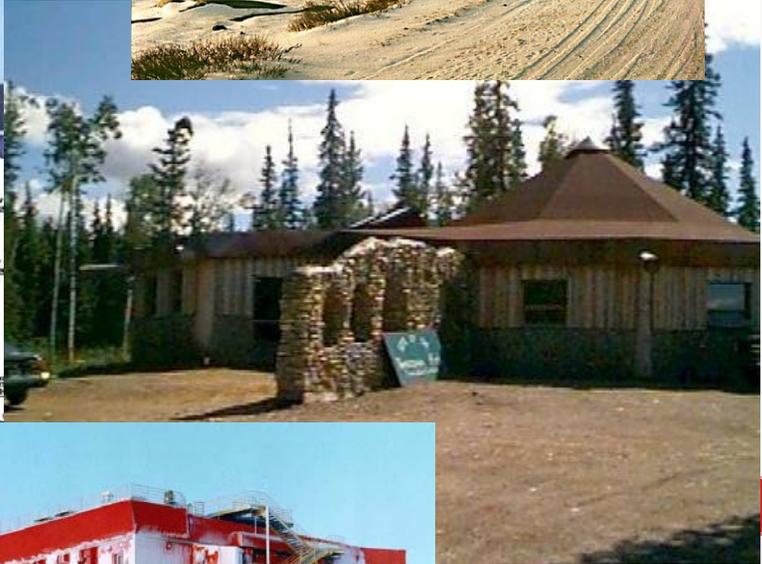
# Finally, IPY as a catalyst for developing northern research infrastructure and programs



**Nunavik Research Centre**  
Its Facilities and Expertise



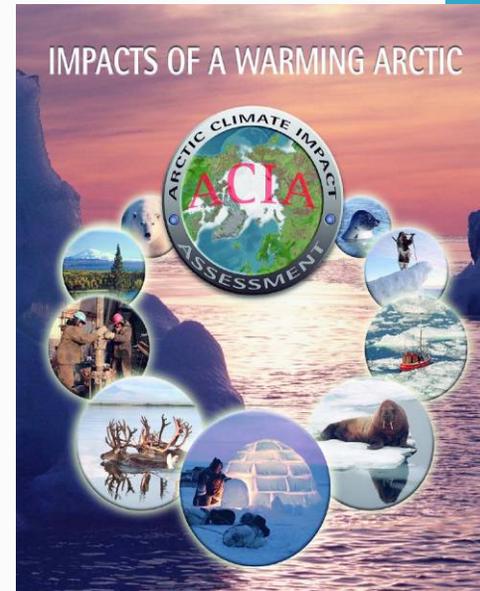
NORTH ELEVATION  
SCALE 1:100  
CANADIAN ARCTIC BIOSPHERE  
Concept Design



# IPY comes at a critical time for our circumpolar neighborhood...



© 2001. Her Majesty the Queen in Right of Canada, Natural Resources Canada. / Sa Majesté la Reine du chef du Canada, Ressources naturelles Canada.



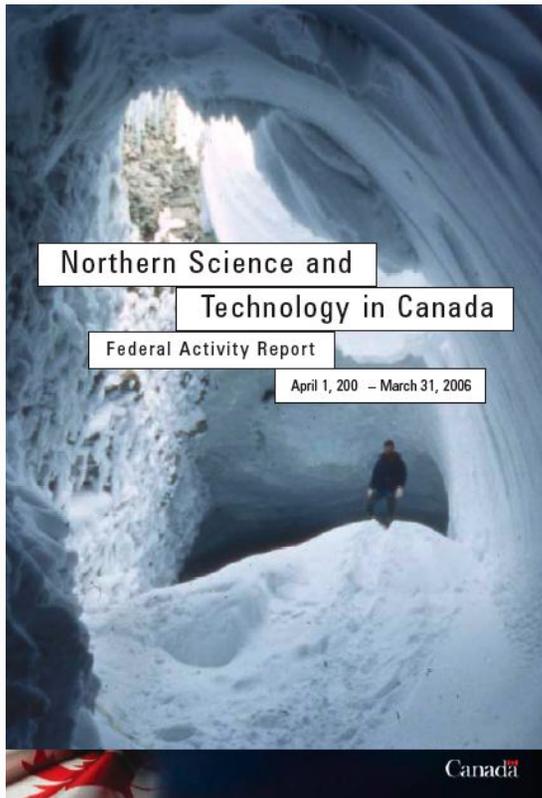
The cover of the Arctic Human Development Report, featuring a large globe with a photograph of a reindeer herd in the foreground.

**ARCTIC HUMAN DEVELOPMENT REPORT**

**ARCTIC COUNCIL**  
**ARCTIC MARINE STRATEGIC PLAN**

**VISION**  
A healthy and productive Arctic Ocean and coasts that support environmental, economic and socio-cultural values for current and future generations.

# ...and IPY comes at a good time for Canada



*“...Canadian northern research... requires a long-term commitment to capacity-building and rejuvenation of the northern research community through a targeted but highly flexible funding initiative.”*



# Contacts

## Federal Program Office

International Polar Year  
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10 Wellington Street, 9th Floor  
Gatineau, QC, K1A 0H4, Canada

E-mail: [API-IPY@ainc-inac.gc.ca](mailto:API-IPY@ainc-inac.gc.ca)

Phone : (819) 953-2077

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## Canadian IPY Secretariat

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