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ANNUAL REPORT

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RAPPORT ANNUEL

ArcticNet

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ArcticNet is hosted at Université Laval, Quebec City, Canada.

ArcticNet is funded by the Government of Canada through the Networks of Centres of Excellence program, a joint initiative of the Natural Sciences and Engineering Research Council, the Canadian Institutes of Health Research, the Social Sciences and Humanities Research Council and Industry Canada.

The Networks of Centres of Excellence are unique partnerships among universities, industry, government and not-for-profit organizations aimed at turning Canadian research and entrepreneurial talent into economic and social benefits for all Canadians. An integral part of the federal government's Innovation Strategy, these nation-wide, multidisciplinary and multisectorial research partnerships connect excellent research with industrial know-how and strategic investment.

The ArcticNet Network of Centres of Excellence was incorporated as a not-for-profit corporation under the name "ArcticNet Inc." in December 2003.

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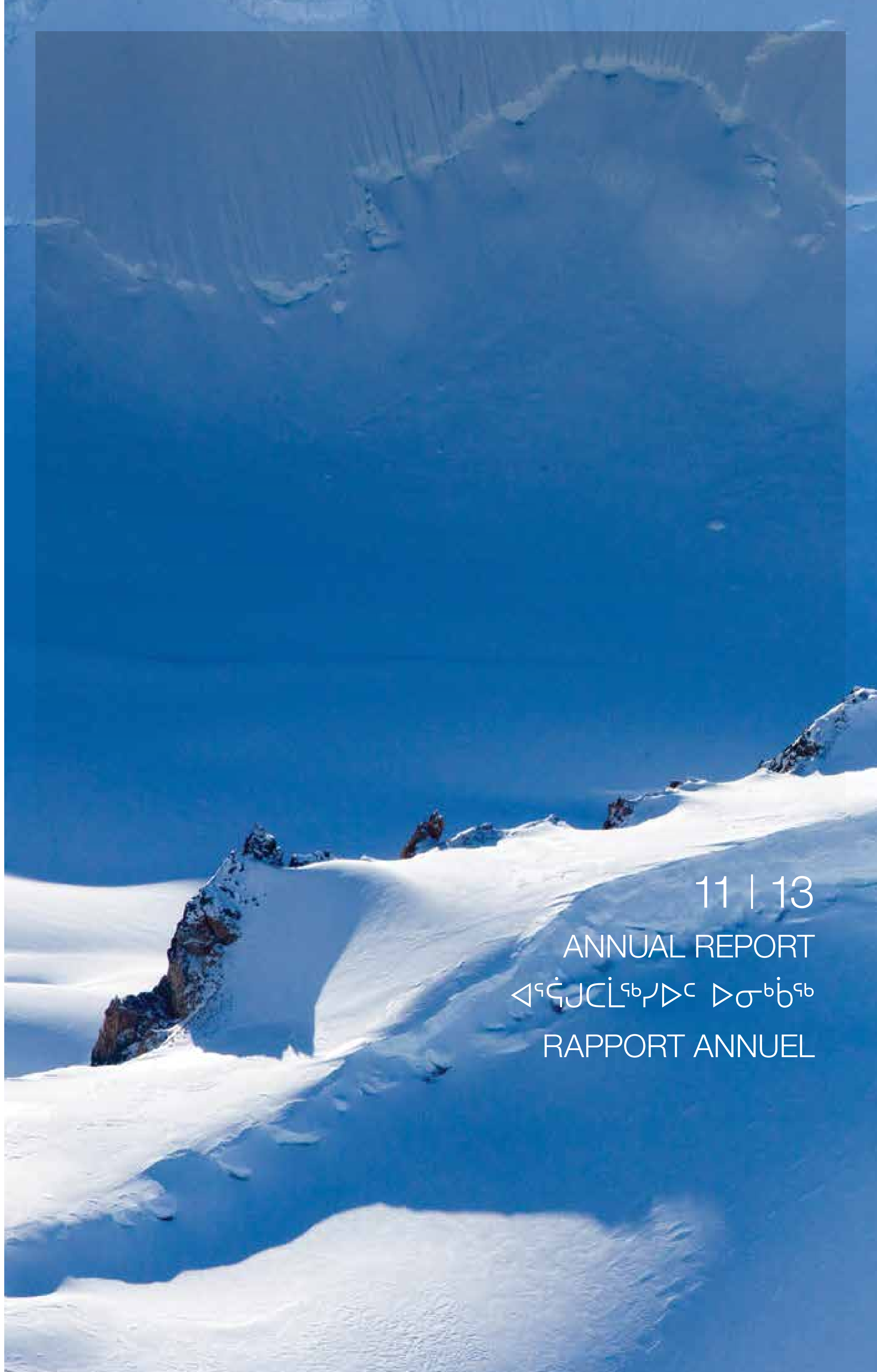
Le centre administratif d'ArcticNet se situe à l'Université Laval, Québec, Québec, Canada.

ArcticNet est financé par le Programme des Réseaux de centres d'excellence du gouvernement du Canada, un projet conjoint du Conseil de recherches en sciences naturelles et en génie, des Instituts de recherche en santé du Canada, du Conseil de recherches en sciences humaines et d'Industrie Canada.

Les Réseaux de centres d'excellence constituent des partenariats uniques entre les universités, l'industrie, le gouvernement et les organismes à but non lucratif visant à transformer la recherche et le talent entrepreneurial canadien en avantages socio-économiques pour tous les Canadiens. Partie intégrante de la stratégie d'innovation du gouvernement fédéral, ces partenariats de recherche nationaux, multidisciplinaires et multisectoriels assurent la jonction d'une recherche de haut niveau avec un savoir-faire industriel et un investissement stratégique.

Le Réseau de centres d'excellence ArcticNet a été incorporé en tant qu'organisme à but non lucratif sous le nom « ArcticNet inc. » en décembre 2003.

Canada



TOGETHER IN THE STUDY OF A CHANGING CANADIAN ARCTIC

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TRAVAILLER ENSEMBLE À L'ÉTUDE DE L'ARCTIQUE CANADIEN DE DEMAIN

TABLE OF CONTENTS

CORPORATE PROFILE

150+
Partner organizations

14
Countries

145
Network Investigators

1000+
Graduate students, postdoctoral fellows, research associates, technicians and other specialists

32
Canadian Universities

38
Research projects

Understanding the present transformation of the Arctic environment and anticipating its consequences is one of the great challenges faced by Canadians, the Canadian government and the national and international scientific communities.

ArcticNet brings together scientists and other experts in the natural, human health and social sciences with their partners in Inuit organizations, northern communities, governments and the private sector to help Canadians prepare for the impacts and opportunities brought by climate change and modernization in the Arctic. Over 140 researchers and 1000 graduate students, postdoctoral fellows, research associates, technicians and other specialists from 32 Canadian universities and numerous federal, provincial and regional departments and agencies collaborate on 38 ArcticNet research projects with over 150 partner organizations from 14 countries.

Our Vision

A future where knowledge exchange, monitoring, modelling and capacity building will have enabled scientists, Northerners and decision makers to jointly attenuate the negative impacts and maximize the positive outcomes of the transformation of the Canadian Arctic.

Our Mission

- Build synergy among Centres of Excellence in the natural, human health and social arctic sciences.
- Involve Northerners, government and the private sector in the steering of the Network and scientific process through bilateral exchange of knowledge, training and technology.
- Increase and update the observational basis needed to address the ecosystem-level questions raised by climate change and modernization in the Arctic.
- Provide academic researchers and their national and international collaborators with stable access to the coastal Canadian Arctic.
- Consolidate national and international collaborations in the study of the Canadian Arctic.
- Contribute to the training of the next generation of experts, from north and south, needed to study, model and ensure the stewardship of the changing Canadian Arctic.
- Translate our growing understanding of the changing Arctic into regional impact assessments, national policies and adaptation strategies.

MESSAGE FROM THE CHAIR OF THE BOARD, SCIENTIFIC DIRECTOR AND EXECUTIVE DIRECTOR

From Knowledge to Policy: Engaging Scientists and Stakeholders in Strategic Planning

As we enter our second funding cycle, one of ArcticNet's strategic objectives is to increase the understanding of change and its impacts on ecosystems, human health, society, governance and industry in the Canadian coastal Arctic. A measure of our success in achieving this objective is the number of scientific publications produced by ArcticNet members. During fiscal years 2011-2012 and 2012-2013, ArcticNet researchers and students delivered over 1400 publications (over 500 in the peer-reviewed literature), reaching a new summit in the steady growth of our knowledge of Arctic processes. In addition, many research projects led by ArcticNet Network Investigators received significant media coverage as represented by the dissemination of over 300 articles and programs at the international, national and northern levels.

Mr. Bernie Boucher, Chair of the Board of Directors

Dr. Martin Fortier, Executive Director, Vice-President and COO

Dr. Louis Fortier, Scientific Director, President and CEO

2011-2013 Message from the Chair of the Board, Scientific Director and Executive Director

"Our ongoing assessments clearly show that the impacts of climate change and modernization are already extensive and are intensifying in the Canadian Arctic, as was witnessed by the record low sea ice and snow cover extent in the Northern Hemisphere in 2012."

ArcticNet's uniqueness in the world of Arctic research is expressed through its constant efforts to translate scientific knowledge into recommendations that inform policy and help decision-making. Among the many initiatives to achieve this goal, the long-term engagement of ArcticNet's researchers and students in the Integrated Regional Impact Study (IRIS) framework of the Network has come to fruition in 2011-2013. Remarkable progress in the synthesis and integration of accumulated knowledge was accomplished for the Western and Central Arctic (IRIS 1), the Eastern High Arctic (IRIS 2) and the Eastern Subarctic (IRIS 4) regions. Under the indefatigable leadership of Dr. Michel Allard and Dr. Mickaël Lemay, the IRIS 4 Nunavik and Nunatsiavut Integrated Regional Impact Assessment was successfully published and extremely well received by the Network's Inuit partners and policy makers in the regional, provincial and federal governments. This landmark achievement by the IRIS 4 team of scientists, Inuit authorities, and policy makers, demonstrates that: (1) the ambitious objectives of the Network's IRIS framework can be achieved; (2) an evidence-based assessment of present and future impacts at the regional scale does provide the means to take action on an informed basis; and (3) the IRIS framework can contribute directly to the implementation of national and regional strategies such as Canada's Northern Strategy, Québec's Nord pour tous and Nunavik's Plan Nunavik. Our ongoing assessments clearly show that the impacts of climate change and modernization are already extensive and are intensifying in the Canadian Arctic, as was witnessed by the record low sea ice and snow cover extent in the Northern Hemisphere in 2012. In this context, both the determination of ArcticNet's researchers and the willingness of the Network's Inuit and government partners to participate in this effort are essential to its realization and must be hailed and encouraged. As recognition of its success, the ArcticNet IRIS framework is now being used internationally to inform and shape the upcoming Adaptation Action for a Changing Arctic (AACA) assessment of the Arctic Council. ArcticNet IRIS leaders, researchers and directors are playing a leadership role in the AACA that is due in 2017.

Over the past two years, the Network and its researchers made giant strides in further connecting with stakeholders and consolidating national and international partnerships. We successfully completed major research collaborations with the oil and gas industry in the study of the offshore Beaufort Sea environment in anticipation of exploration in the area. This research now continues through four new ArcticNet-led research programs on ocean circulation, fish distribution, surface geology, and sea ice regime funded as part of the Beaufort Regional Environmental Assessment (BREA) program of Aboriginal Affairs and Northern Development Canada (AANDC). With the support of the Makivik Corporation, ArcelorMittal and ArcticNet, Dr. Thierry Rodon established the Northern Sustainable Development Research Chair with a mission to improve knowledge of northern issues and reframe development models in order to inform decision-making by Inuit organizations and by all levels of government. Under the leadership of Dr. Warwick Vincent, Scientific Director of the Centre d'études nordiques (CEN) and ArcticNet project leader, a team of Canadian Arctic researchers and their international collaborators were awarded the first ever NSERC Discovery Frontiers grant for their program entitled Arctic Development and Adaptation to Permafrost in Transition (ADAPT). Continued collaboration with our Inuit partners at the Amaujaq National Centre for Inuit Education was instrumental in further developing our research program on Inuit education. The Network plans to support additional research on this important issue during this funding cycle. On the international scene, one of ArcticNet's major centres of excellence, University of Manitoba's Centre for Earth Observation Science (CEOS), signed a new memorandum of understanding with Aarhus University in Denmark and the Greenland Institute of Natural Resources to establish the Arctic Science Partnership (ASP) for science and education cooperation in the Arctic.

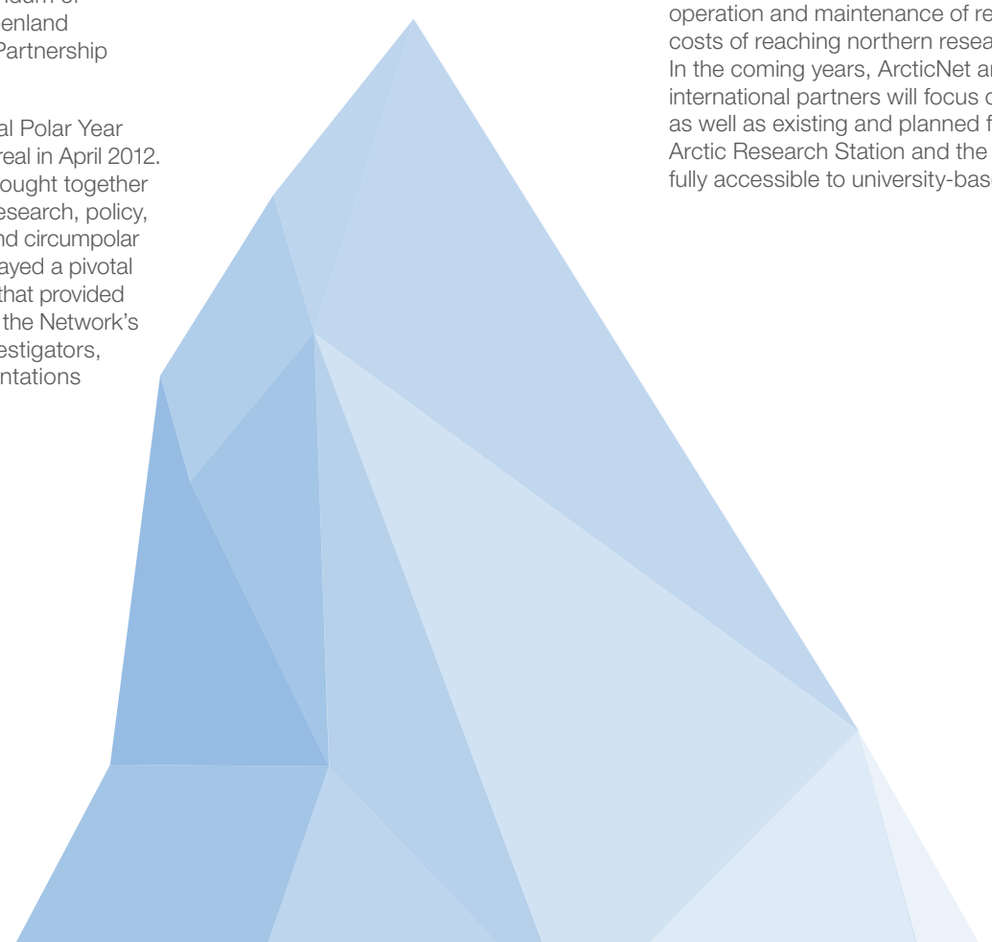
One of the highlights of the last two years was the International Polar Year (IPY) 2012 conference, *From Knowledge to Action*, held in Montreal in April 2012. Organised under the leadership of AANDC, the conference brought together more than 3,000 participants from 50 countries representing research, policy, academia, industry, government, non-government, education and circumpolar communities. As a major sponsor and contributor, ArcticNet played a pivotal role in the scoping, organization, and delivery of the conference that provided a tremendous opportunity to showcase ArcticNet research and the Network's successes in informing policy. In total, ArcticNet Network Investigators, collaborators and students contributed more than 400 presentations to the conference.

2011-2013 Message from the Chair of the Board, Scientific Director and Executive Director

ArcticNet is also honored and proud to manage the new $1 million CAD Arctic Inspiration Prize launched at the IPY2012 Conference. The Prize is awarded annually to recognize and promote the extraordinary contribution made by teams in the gathering of Arctic knowledge and their plans to implement this knowledge into real world applications for the benefit of the Canadian Arctic, Arctic Peoples and therefore Canada as a whole. The initiative is made possible through the generous endowment of the S. and A. Inspiration Foundation, the commitment of ArcticNet to manage the Prize, as well as the contribution of numerous volunteers and partners.

With pride and excitement, we also welcomed the extraordinary news that our major research infrastructure, the Canadian Research Icebreaker CCGS *Amundsen,* would adorn the new Canadian $50 bank note starting on 26 March 2012. The dedication, passion, determination and excellence of our researchers and partners all contributed to the notoriety, visibility and recognition that led to the selection of the CCGS *Amundsen*, confirming the vessel's standing in Canadian History.

As illustrated throughout this report of our 2011-2013 activities, ArcticNet continues to thrive. But as we look forward, many challenges arise in maintaining the powerful momentum provided to Canadian-led Arctic research by programs such as the IPY and ArcticNet. While new and exciting initiatives such as the Canada Excellence Research Chairs and NSERC's Climate Change and Atmospheric Research programs are consolidating our research effort in the Arctic, the want of support for the operation and maintenance of research infrastructure and the increasing costs of reaching northern research sites are increasingly taking their toll. In the coming years, ArcticNet and its extensive network of national and international partners will focus on solutions to ensure that the Arctic, as well as existing and planned facilities such as the Canadian High Arctic Research Station and the polar icebreaker *Diefenbaker*, remain fully accessible to university-based scientists and their collaborators.



MESSAGE FROM THE CO-CHAIR OF THE BOARD

Driven by a changing climate, the Arctic region's global economic and geopolitical importance is being transformed. Not only is this rapid and often unpredictable change linked to environmental alterations, it is also linked to the evolution of northern communities and the opportunities and challenges that new economic prospects will bring to these communities. ArcticNet has risen to the challenge of this change, it has embraced partnerships with the peoples of the Canadian Arctic which has enhanced its effectiveness and continues to work to build bridges with industry and academic partners.

Mr. Duane Smith, Co-Chair of the Board of Directors and President of the Inuit Circumpolar Council (Canada)

The issues emerging in the Arctic require a solid foundation of science and traditional knowledge for decision making. Responsible development of natural resources, research regarding the health and wellness of Inuit and northern residents including food security, infrastructure needs in support of resource development, shipping, and tourism and knowledge to inform fisheries management within a precautionary and stewardship approach all require a strong foundation of knowledge. A daunting list that requires vision and commitment and one that informs the ongoing research program of ArcticNet.

ArcticNet has now settled into the research program approved under the renewal of 2011. As one of the most highly respected research programs undertaken in the Arctic, ArcticNet continues to exceed expectations and evolve in response to the needs of Arctic researchers, indigenous peoples, northern residents and industry partners. With a mission to support coastal Canadian Arctic communities to adapt to climate change and modernization, ArcticNet continues to provide knowledge that helps us identify the effects of climate change and to strategically prepare to meet the changes in our homes, communities and country. Only with knowledge, will we meet the challenges of Arctic change and advance the sustainable development of communities in Canada's North.

2011-2013 Message from the Co-Chair of the Board

"As one of the most highly respected research programs undertaken in the Arctic, ArcticNet continues to exceed expectations and evolve in response to the needs of Arctic researchers, indigenous peoples, northern residents and industry partners."

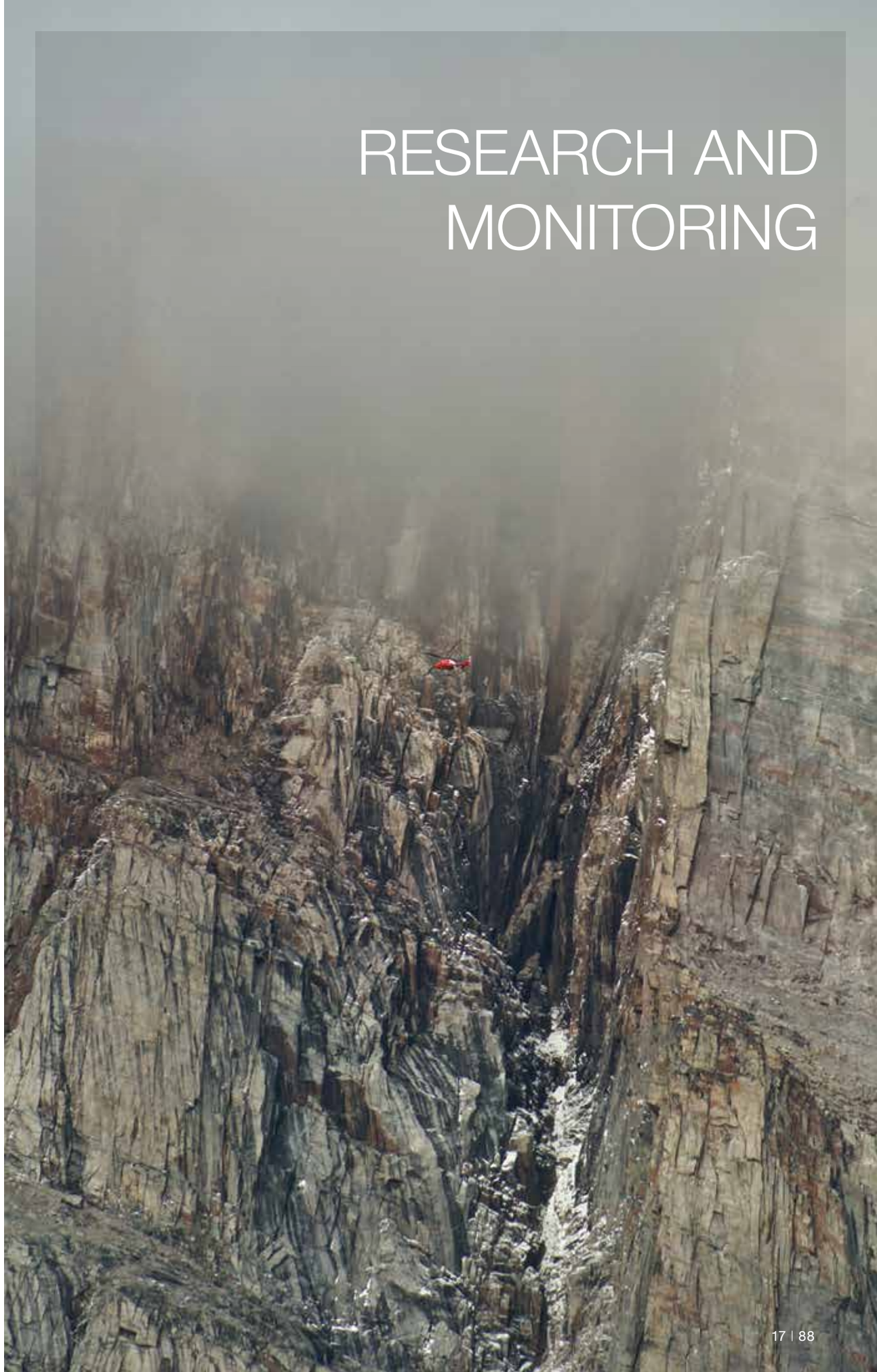
The past two years saw a transition in Arctic interest, we have moved from the attention the International Polar Year (IPY) brought to Arctic research, to the Canadian chairmanship of the Arctic Council. Under the leadership of the Canadian IPY Program Office, ArcticNet helped bring this extraordinary research effort to a close through the highly successful *Knowledge to Action* Conference in Montreal, April 2012. A strong fabric throughout the Conference was Arctic change, and the thread throughout the conference was the need and value of traditional knowledge in Arctic decision making. Later in 2012, the Prime Minister announced support for construction and operation of the Canadian High Arctic Research Station (CHARS), to be built in Cambridge Bay, Nunavut. Building on Canada's Northern Strategy and aligned with the mandate of ArcticNet, CHARS will undertake science and technology research that will support the responsible development of Canada's North, inform environmental stewardship, and enhance the quality of life of Northerners and all Canadians. As we lose some long term and established research facilities we must look carefully at the vision of Arctic research and the required infrastructure and ensure that the research supported benefits all Canadians and our global commitments.

ArcticNet and its partners continue to work to enhance the development and direction of strategic Arctic research and work with international Arctic interests to develop innovative and global approaches to Arctic change. The task now becomes two-fold, as the path forward in the Arctic emerges we must maintain the IPY momentum and interest in critical research needs in the Arctic, enhance this interest and investment and just as importantly, use the knowledge gained from the enormous research effort to date. ArcticNet and its partners have a responsibility to ensure that the wealth of science and traditional knowledge generated through the program is available to decision makers at all levels of the individual, community, regional, national, circumpolar and global fora. Further to the ambition of enhanced knowledge, Inuit have a vision of evolving research 'with' Inuit to research 'by' Inuit which expresses our goal of community based and community led collaborative projects to address our own specific needs and interests. Our Inuit Research Advisors (IRAs) highlighted this at the ArcticNet Annual Science Meeting in December 2012 in Vancouver as one of their main objectives in liaising between Inuit regions and communities and researchers. Their efforts will undoubtedly and directly advance our aspirations and understanding of sustained development of Highly Qualified Inuit Personnel (HQIP). Inuit partners anticipate that the more recent work to examine education research gaps and needs will also progress to a research program and partnerships that address our needs in this realm in a culturally appropriate and substantive way. The Integrated Regional Impact Study (IRIS) framework is the instrument that bridges the science policy divide and all four IRISes are well underway.

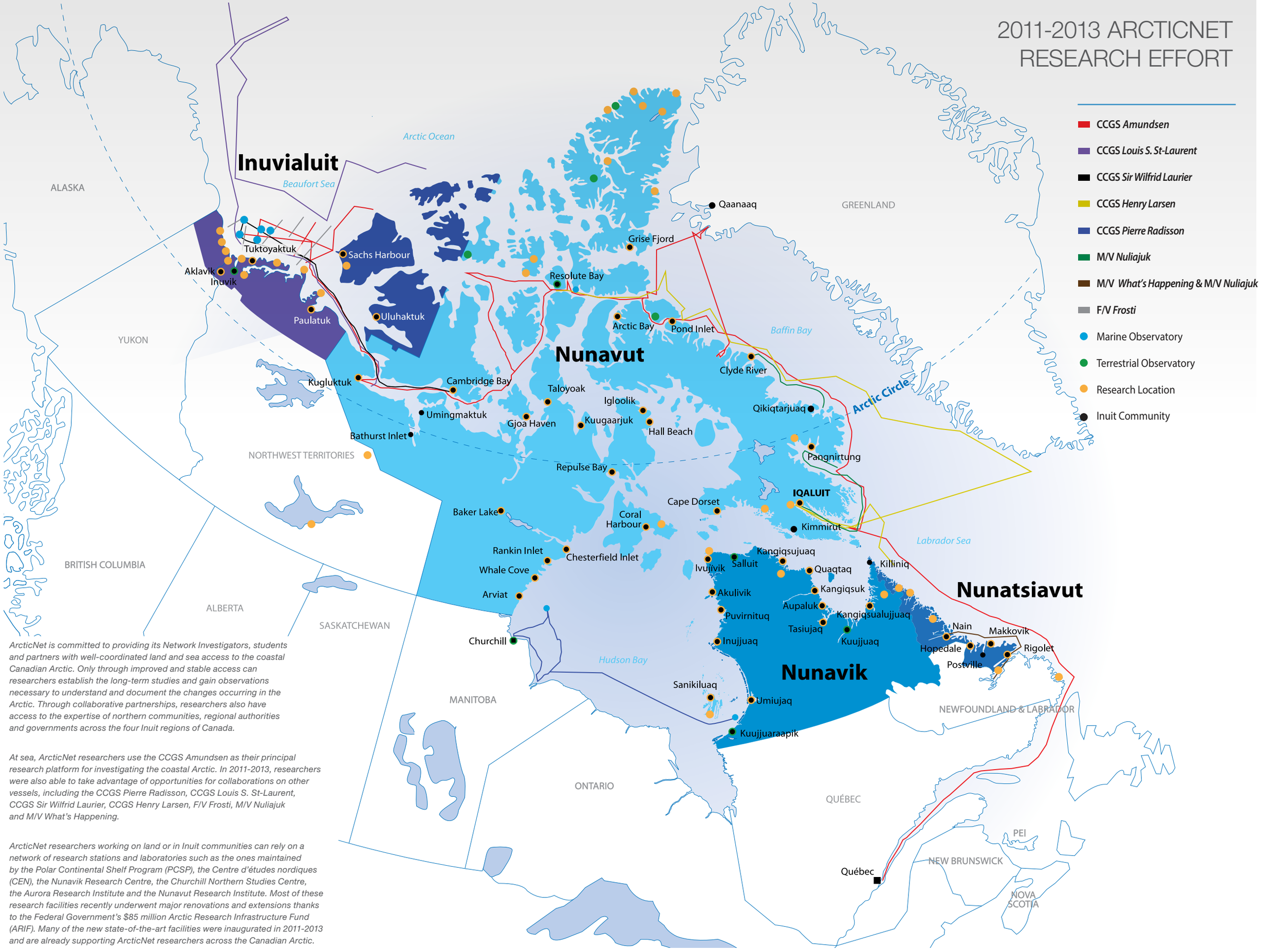
As we move from the challenges of 2011-2013, including major repairs to the CCGS *Amundsen* and the loss of sea ice extent that rivaled the record low in 2007, ArcticNet continues to provide a foundation to move forward through change with confidence. We may have well passed the infamous tipping point and now are entering an era of feedback loops regarding climate change in the Arctic – more than ever we need to act with determination. Unprecedented summer storms over the Arctic Ocean, this season, destroyed an immense area of sea ice cover. Huge chunks of northern ice shelves broke off into the sea. Ninety-four per cent of Greenland's ice cap surface experienced melting. Together with warming oceans, the impacts of climate change are felt from the Arctic to the small island states and everywhere in between, as was witnessed with flooding in New York City and Venice. Effects of Arctic climate change have major and irreversible impacts on the livelihood and well-being not only of Indigenous peoples and Arctic communities but the entire global community.

In May 2013, Canada became host to the eight nation Arctic Council. Established under the 1996 Ottawa Declaration, the Council serves as the forum for Arctic states to address shared challenges in the far North, including biodiversity conservation, environmental protection, resource development, and socioeconomic development. The theme of Canada's second chairmanship of the Arctic Council is "Development with the People of the North" and comes at a pivotal time in the 16-year old organization's history. ArcticNet and Canadian Inuit partners have a huge responsibility, but an equally large opportunity. Inuit, not only in Canada, but in the United States, Russia and Greenland, through the Inuit Circumpolar Council as Permanent Participants have direct input into the activities of this multilateral Arctic body. ArcticNet is positioned to be a key contributor of knowledge to the Council during the Canadian Chairmanship, not only for the scientific expertise it is commended for, but also for the partnerships with industry, government and not least, Inuit. The Arctic has changed since we last hosted the Arctic Council – and all eyes will be on us during this important time in the Arctic's political history. ArcticNet, in partnership with Inuit and others can offer a foundation of knowledge to support and ensure the policy directions developed through the Council are evidenced based. Canada will have a strong leadership role during our hosting of the Arctic Council Chairmanship and will champion initiatives that benefit northern communities throughout the circumpolar region and ArcticNet's partnership experience with Inuit provides an excellent basis to advance such an initiative. As hosts we must ensure we take advantage of this opportunity to guide the Arctic Council through a very important time. Inuit as capable, generous and experienced Arctic hosts will welcome the Arctic Council and continue to support the activities under ArcticNet to ensure we are strategic and effective and the Arctic continues to sustain Inuit and the broader global community.

RESEARCH AND MONITORING



2011-2013 ARCTICNET RESEARCH EFFORT



ArcticNet is committed to providing its Network Investigators, students and partners with well-coordinated land and sea access to the coastal Canadian Arctic. Only through improved and stable access can researchers establish the long-term studies and gain observations necessary to understand and document the changes occurring in the Arctic. Through collaborative partnerships, researchers also have access to the expertise of northern communities, regional authorities and governments across the four Inuit regions of Canada.

At sea, ArcticNet researchers use the CCGS Amundsen as their principal research platform for investigating the coastal Arctic. In 2011-2013, researchers were also able to take advantage of opportunities for collaborations on other vessels, including the CCGS Pierre Radisson, CCGS Louis S. St-Laurent, CCGS Sir Wilfrid Laurier, CCGS Henry Larsen, F/V Frosti, M/V Nuliajuk and M/V What's Happening.

ArcticNet researchers working on land or in Inuit communities can rely on a network of research stations and laboratories such as the ones maintained by the Polar Continental Shelf Program (PCSP), the Centre d'études nordiques (CEN), the Nunavik Research Centre, the Churchill Northern Studies Centre, the Aurora Research Institute and the Nunavut Research Institute. Most of these research facilities recently underwent major renovations and extensions thanks to the Federal Government's $85 million Arctic Research Infrastructure Fund (ARIF). Many of the new state-of-the-art facilities were inaugurated in 2011-2013 and are already supporting ArcticNet researchers across the Canadian Arctic.

2

ArcticNet Network Investigators hold Canada Excellence Research Chairs

30+

ArcticNet Network Investigators hold Research Chairs

ArcticNet's research program continues to support a multidisciplinary approach to address the challenges facing the coastal Canadian Arctic, with the objective of filling identified knowledge gaps to help the formulation and implementation of policies and adaptation strategies. ArcticNet addresses the present state of the coastal Canadian Arctic, and aims to anticipate the nature and magnitude of the impacts of climate change and modernization at the regional level over the coming 40 years.

Helping Canadians, particularly Inuit and other Northerners living in the coastal communities of the Canadian Arctic, adapt to their changing environment is at the core of the Network's research program. Diverse research teams from 32 universities across Canada, collaborate with stakeholders from Inuit organizations, northern communities, research institutes, industry as well as government and international agencies, creating a unique multi-disciplinary and cross-sectorial environment for managing the Canadian Arctic of tomorrow.

The Network's 38 research projects focus on five main themes: marine systems; terrestrial systems; Inuit health, education and adaptation; northern policy and development and knowledge transfer, and operate across northern Manitoba, northern Yukon and the four Inuit regions of Canada: the Inuvialuit Settlement Region, Nunavut, Nunavik and Nunatsiavut.

ARCTICNET IRISES

ArcticNet's 38 research projects also contribute to four Integrated Regional Impact Studies (IRISes) that each underpin an Integrated Regional Impact Assessment (IRIA). Along with the results of other Arctic research programs and assessments, and the expertise of the Network's partners, the scientific conclusions and recommendations produced by ArcticNet projects are compiled in the Assessments developed for each region. As most ArcticNet projects operate across the Canadian Arctic, many contribute to several of the four Assessments.

IRIS 1:
Western and Central Arctic

Leader: *Gary Stern, Fisheries and Oceans Canada & University of Manitoba*

Coordinator: *Ashley Gaden*

IRIS 2:
Eastern Arctic

Leader: *Trevor Bell, Memorial University of Newfoundland*

Coordinator: *Philippe Leblanc*

IRIS 3:
Hudson Bay

Leader: *David Barber, University of Manitoba*

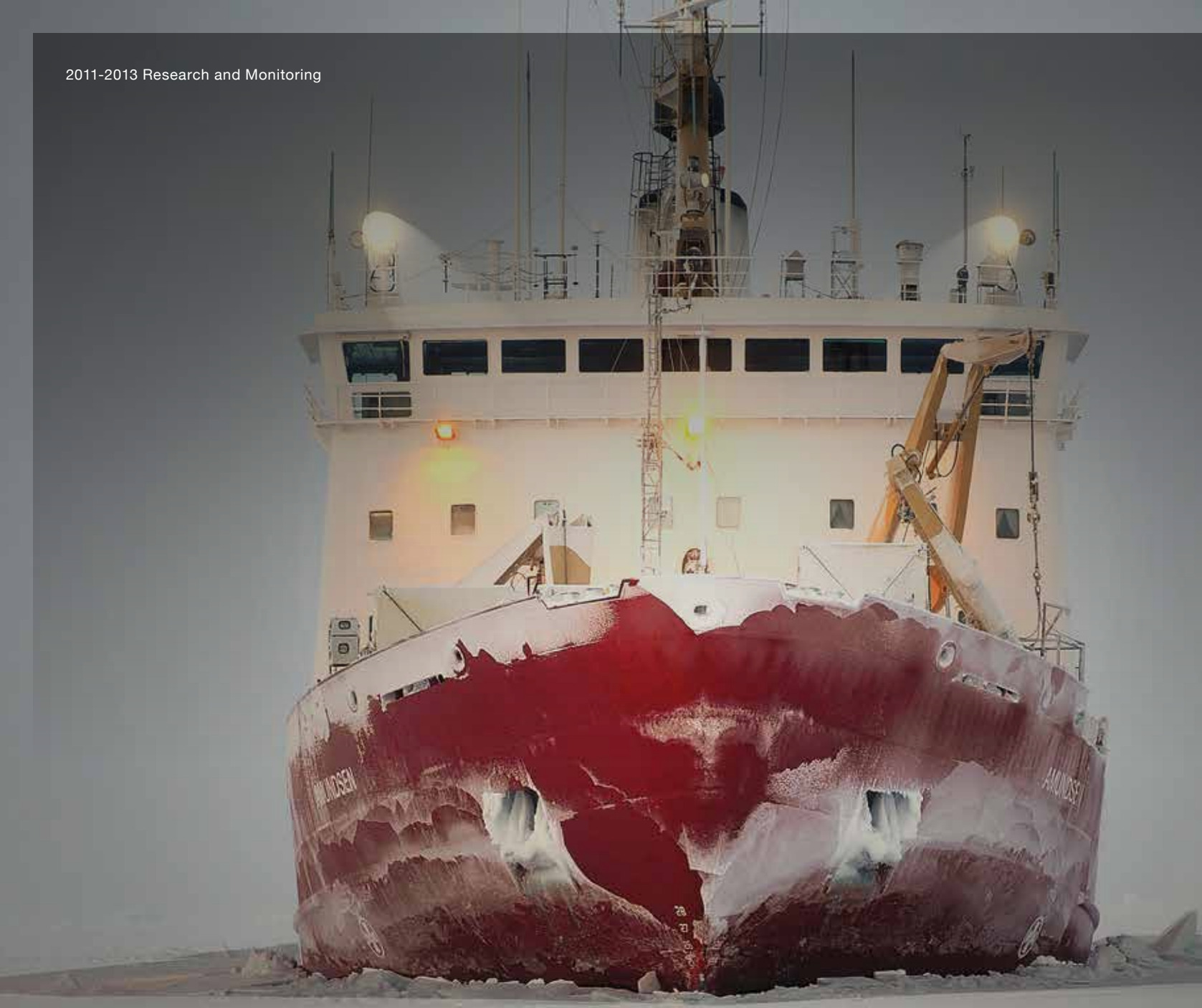
Coordinator: *Brian Horton*

IRIS 4:
Eastern Subarctic

Leader: *Michel Allard, Université Laval*

Coordinator: *Mickaël Lemay*

2011-2013 Research and Monitoring



CCGS *AMUNDSEN*

19,000+

nautical miles transited during the 2011 CCGS *Amundsen* expedition

150,000+

nautical miles travelled by the CCGS *Amundsen* since 2003

1,400+

research days at sea on the CCGS *Amundsen* since 2003

On 19 July 2011, for an eighth consecutive season, the state-of-the-art Canadian research icebreaker CCGS *Amundsen* left her homeport of Quebec City for a 103-day expedition in support of ArcticNet's ongoing marine-based research program and a third year of collaborations with industry partners in the Beaufort Sea. During the three-leg expedition, the *Amundsen* travelled along the coasts of Labrador and Baffin Island, through Lancaster Sound to Resolute Bay, then Kugluktuk. The vessel spent six weeks in the Beaufort Sea conducting operations with ArcticNet's industry partners and as part of research funded through the Beaufort Regional Environmental Assessment (BREA) initiative. In early October, the *Amundsen* began its transit back east, sampling stations in M'Clintock Channel, Parry Channel and Baffin Bay. The ship returned to Quebec City on 30 October 2011, after travelling more than 35,000 km throughout the coastal Canadian Arctic.

In 2012, the *Amundsen* underwent major repairs to her engines and service generators at the Seaway Marine and Industrial Inc. dry-dock in St. Catharines, Ontario. As the vessel was not available in 2012, the CCGS *Pierre Radisson* and CCGS *Sir Wilfrid Laurier* were used as the main platforms to conduct the core activities of ArcticNet's marine-based research program. In addition, ArcticNet provided shiptime funding for some ArcticNet Network Investigators to conduct their research on alternative vessels including the CCGS *Henry Larsen*, CCGS *Louis S. St-Laurent*, *F/V Frosti*, M/V *Nuliajuk* and M/V *What's Happening*.

MARINE SYSTEMS

In 2011 and 2012 ArcticNet utilized the CCGS ***Amundsen*** as well as several other vessels to evaluate changes in the marine environment of the coastal Canadian Arctic. Collaborations with industry continued and ArcticNet researchers led several new research initiatives as part of two Canada Excellence Research Chairs on Arctic remote sensing and Arctic geomicrobiology and three ArcticNet projects funded by the Beaufort Regional Environmental Assessment (BREA) program of Aboriginal Affairs and Northern Development Canada (AANDC).

Oceanographic sampling was conducted along the coasts of Labrador and Baffin Island, and included the deployment of ice instruments on a massive fragment of the Petermann Ice Island in the Labrador Sea and an acoustic fish survey in Cumberland Sound in collaboration with the Government of Nunavut's new research vessel M/V ***Nuliajuk***. Numerous marine sampling stations were visited throughout the coastal Canadian Arctic to examine carbon flow across the air-ice-ocean interface; track contaminant levels in the atmosphere, sea water and sediments; quantify variations in primary production resulting from climate change; and map nutrient distribution throughout the water column.

In the Beaufort Sea/Mackenzie Shelf/Amundsen Gulf region, ArcticNet researchers continued collaborations with the Network's partners at BP, ExxonMobil and Imperial Oil to collect sea ice, bathymetric, geophysical and biophysical data. As part of these collaborations and within the BREA framework, ArcticNet researchers also carried out surveys using the newly installed SX90 fish finding sonar, established two new long-term oceanic observatories in the Beaufort Sea and conducted dedicated ocean bottom surveys for seabed geo-hazard assessment.

Remote Sensing of Canada's New Arctic Frontier

Project Leader: *Marcel Babin (Université Laval)*

The objectives of this project are aligned with those of the Canada Excellence Research Chair on "Remote Sensing of Canada's New Arctic Frontier" to: (1) Augment the observation of arctic marine ecosystems by implementing new algorithms for remote-sensing; (2) Develop, validate, and implement the ecosystem models that will help anticipate the impacts of climate change and industrialization on Arctic resources and services; (3) Adapt new observing technologies to the extreme conditions of the Arctic Ocean; (4) Mesh the expertise of ArcticNet and project partners into the development of state-of-the-art geo-referenced data archiving systems.

Sea Ice, Climate Change and the Marine Ecosystem

Project Leader: *David Barber (University of Manitoba)*

The arctic system is changing from one dominated by multiyear sea ice to one dominated by first-year sea ice-related processes. In the next few decades, marine ecosystems will come under incremental pressure, industrial activity will increase as more exploration and development occurs, and Inuit will find it more and more challenging to use sea ice for cultural and subsistence purposes. This project provides sea ice expertise to the coordinated ArcticNet Integrated Regional Impact Studies of the coastal Canadian Arctic, supplying the required information for sound management of these issues.

Freshwater-Marine Coupling in Hudson Bay

Project Leaders: *David Barber (University of Manitoba) and Kevin Sydor (Manitoba Hydro)*

Climate models predict warming in the Hudson Bay watershed that may alter the amount and timing of runoff and therefore the load of suspended solids, dissolved organic matter, nutrients, and heat delivered to the Bay. The overarching objective of this project is to describe the impact of such runoff on marine processes within Hudson Bay and to examine the cumulative impacts of climate change and hydroelectric development on these processes.

Impacts of Global Warming on Arctic Marine Mammals

Project Leader: *Steven Ferguson (University of Manitoba / Fisheries and Oceans Canada)*

Knowing how polar ecosystems may change with global warming will help develop strategies for conservation and species management. It is important to recognize the changing distribution and numbers of Arctic mammals, as Northerners depend on these species as a food source and integral part of their unique culture. This project examines climate change and its effects on water-based mammals in the Arctic. Research results will help Inuit communities adapt to changes in marine mammal distribution and abundance.

The Arctic Cod (*Boreogadus saida*) Ecosystem Under the Double Pressure of Climate Change and Industrialization

Project Leader: *Louis Fortier (Université Laval)*

The Arctic cod is a key component of the Arctic Ocean pelagic ecosystem that effects up to 75% of the energy transfer between the plankton and the vertebrate fauna. Well adapted to life in ice-covered seas, Arctic cod is likely to be displaced by southern generalists (capelin, sand lance) as the ice regime becomes less severe. This project collaborates closely with other ArcticNet marine research projects to map the distribution and reproduction of Arctic cod in the Canadian Arctic, and to measure variations in its early life history in relation to changes in ice regime, surface temperature, and zooplankton abundance.

Long-Term Marine Observatories in the Canadian Arctic

Project Leader: *Yves Gratton (Institut national de la recherche scientifique - Eau, Terre et Environnement)*

This project correlates sub-surface ocean properties recorded by ArcticNet moored instruments to satellite records of surface temperature, chlorophyll, suspended sediments and sea ice type and thermodynamic state. The objectives are 1) to provide long-term detailed observations of the ocean-sea ice-atmosphere coupling in the Canadian High Arctic, 2) to identify the oceanic/atmospheric processes underlying changes in these variables, and 3) to provide baseline physical information required to understand the complexities of physical-biological coupling in the Arctic marine environment.

The Canadian Arctic Seabed: Navigation and Resource Mapping

Project Leader: *John Hughes Clarke (University of New Brunswick)*

This project undertakes the core seabed mapping component of the ArcticNet research program. Acoustic mapping of the seabed relief, sediment distribution and shallow subsurface sediments are the prime datasets used by researchers to understand the geological processes shaping the seafloor, to assess natural hazards, hazards to navigation and coastal habitats, and to reconstruct the history of past climatic changes.

Carbon Exchange Dynamics in Coastal and Marine Ecosystems

Project Leader: *Tim Papakyriakou (University of Manitoba)*

Absorption and release of carbon dioxide (CO_2) by the oceans is one of the primary factors controlling atmospheric CO_2 concentration, and some of the highest CO_2 uptake rates reported anywhere have been observed within the Arctic's peripheral seas. Project researchers are undertaking field studies to parameterize the effects of several factors affecting both the distribution of dissolved CO_2 in Arctic surface water and the mechanism by which the gas is exchanged with the atmosphere. A newly developed coupled atmosphere-sea ice-ocean biogeochemistry model is used to learn how the ocean's response to climate change and variability will affect the atmosphere-ocean cycling of CO_2.

Arctic Geomicrobiology and Climate Change

Project Leader: *Søren Rysgaard (University of Manitoba)*

Biogeochemical transformations of carbon in sea ice will have a direct impact on the concentration of carbon dioxide in the atmosphere, and, therefore, the rate of climate change. Under the aegis of the newly funded Canada Excellence Research Chair in Arctic Geomicrobiology and Climate Change, this project is studying microbial activity and chemical transformations within sea ice and ocean sediments as they occur and will be the first to intensely investigate the Arctic at the micro-scale.

Effects of Climate Change on Contaminant Cycling in the Coastal and Marine Ecosystems

Project Leaders: *Gary Stern, Robie Macdonald, and Feiyue Wang (University of Manitoba / Fisheries and Oceans Canada)*

Contaminants pose a potential hazard to Arctic fish and marine mammal health, and ultimately to Northerners that consume their meat. The project research will help assess the vulnerability of coastal Inuit communities to climate change, document and project impacts of climate change on traditional food security and community health, and provide the information required to develop adaptation strategies.

Marine Biological Hotspots: Ecosystem Services and Susceptibility to Climate Change

Project Leaders: *Jean-Éric Tremblay (Université Laval), Michel Gosselin (Université du Québec à Rimouski), Philippe Archambault (Université du Québec à Rimouski)*

Microalgae growing in sea ice or in surface waters are the primary source of energy for the Arctic marine food web. Changes affecting the base of the food web will ultimately impact the energy intake and spatial distribution of higher trophic level marine animals such as fish, seals, whales, and polar bears. This project examines how changes in the physical environment affect the productivity and species dominance of marine organisms, particularly at the base of the food web. A comprehensive synthesis of the entire Arctic marine food web will then be assembled and made available to inform stakeholders.

TERRESTRIAL SYSTEMS

Terrestrially, warmer temperatures are already affecting wildlife and freshwater systems, and the degradation of permafrost is disrupting transportation and destabilizing infrastructures across the Arctic. These aspects have direct impacts on northern peoples who rely on this environment for their livelihood and wellbeing. On land, ArcticNet is focused on monitoring and evaluating these changes to the physical environment and formulating recommendations for adaptation strategies.

Throughout 2011-2013, geomorphological studies, geophysical surveys, and soil and vegetation sampling were conducted to map permafrost throughout the Arctic and Subarctic, and monitoring to prevent permafrost degradation critical to infrastructure and ecosystem stability was implemented. Water and sediment sampling of streams, rivers, permafrost thaw ponds and tundra lakes; and the collection of snow and ice data from Ellesmere Island's ice shelves and the Torngat Mountain glaciers helped ArcticNet researchers to monitor physical changes to terrestrial and coastal systems as well as to track contaminants in the Arctic environment.

Inuit community members were involved in the design and implementation of vegetation sampling and berry collection programs, and new plots to facilitate berry production were established as part of Nunavik's environmental monitoring program. The observation and monitoring of Arctic wildlife through acoustic tagging and field surveys helped researchers to identify vulnerabilities to climate change for numerous animal populations including caribou, arctic fox, wolves, Arctic charr and Peregrine Falcons.

Permafrost and Climate Change in Northern Coastal Canada

Project Leaders: *Michel Allard (Université Laval) and Wayne Pollard (McGill University)*

How is permafrost likely to respond to a changing climate? Using regional climate models to determine ground surface temperatures, this project monitors changes to the landscape, including the development of landforms, modification of drainage patterns, and coastal erosion. The project will provide policy makers, managers and land use planners with the tools needed to assess the impact of landscape modifications on northern communities and ecosystems.

Effects of Climate Change on Canadian Arctic Wildlife

Project Leader: *Dominique Berteaux (Université du Québec à Rimouski)*

Northern biological systems are undergoing major shifts related to climate change. An understanding of this transformation and its consequences is critical to anticipating ways in which effects on wildlife populations may be mitigated or addressed. Through the implementation of a wildlife monitoring program, the project identifies the main vulnerabilities of arctic wildlife using the collected data to analyze past and present responses of wildlife to climatic variability. Decision makers in the wildlife sector will be provided with a sound basis for developing appropriate management and adaptation strategies.

Climate Analysis and Scenario Development for the Canadian Arctic and Subarctic

Project Leader: *Ross Brown (Environment Canada)*

This project will provide researchers, stakeholders, decision-makers and communities with more accurate knowledge of current and anticipated climate changes and support sustainable development in this complex and rapidly changing environment. The main objectives of the project are: 1) to supply climate change information in support of the ArcticNet IRISes, 2) to build a climate database to support impact and adaptation studies and the production of climate projection scenarios, 3) to analyze the recent climate trends and the natural climate variability over the IRIS regions and assess the potential of the climate model to capture the observed variability and physical processes, 4) to track state-of-the-art developments in coupled cryosphere/atmosphere/ocean models to improve the reliability of climate scenarios.

Population Dynamics of Migratory Caribou in Nunavik/Nunatsiavut

Project Leader: *Steeve Côté (Université Laval)*

Migratory caribou are now declining almost everywhere in Canada, including northern Quebec and Labrador. The factors responsible for these declines are poorly known. This project is establishing how climate, population density, and industrial activities affect caribou abundance and distribution in the Arctic. It will provide new tools to monitor the demography of caribou and improve their conservation in the face of a changing Arctic.

Impacts of Vegetation Change in the Canadian Arctic: Local and Regional Assessments

Project Leader: *Greg Henry (University of British Columbia)*

The tundra across the Canadian Arctic is already reacting to climate change. This research team studies changes to tundra vegetation near Arctic communities across the North, including changes in the amount of berries produced annually in traditional picking areas. Community members are involved in designing the studies and in conducting measurements. The results will be used by communities and will contribute to national and international efforts to understand the responses of tundra ecosystems to climate variability and change.

High Arctic Hydrological, Landscape and Ecosystem Responses to Climate Change

Project Leaders: *Scott Lamoureux and Melissa Lafrenière (Queen's University)*

Research at the Cape Bounty Arctic Watershed Observatory, Melville Island, Nunavut, investigates how climate change affects rivers, permafrost, soils, vegetation, greenhouse gas emissions and the release of contaminants into High Arctic rivers and lakes. Impact models based on river flow and related environmental systems are being developed. This integrated watershed network will provide an unprecedented understanding of the sensitivity and anticipated future effects of climate change on the High Arctic ecosystem.

Growth Variability and Mercury Tissue Concentration in Anadromous Arctic Charr

Project Leader: *Michael Power (University of Waterloo)*

This project examines climate change related impacts on land-locked and migratory populations of Arctic charr. Differences in total mercury accumulation rates in the two types of charr are analysed to assess the relative influences of diet, temperature and habitat on growth and total mercury accumulation along a north-south gradient. An enhanced understanding will permit more accurate prediction of the effects of climate change on the important migratory stocks of Arctic charr used by Inuit in traditional subsistence fisheries. This research will also inform policy on the issues associated with country food consumption in the face of climate change.

Freshwater Resources of the Eastern Canadian Arctic

Project Leader: *Warwick Vincent (Université Laval)*

Lakes and wetlands are major ecological features of the circumpolar Arctic, and they provide many essential services including habitats for wildlife, drinking water supplies for northern residents, and water for industrial activities. This project continues and extends observations on lakes and wetlands at key sites in the eastern Canadian Arctic to identify and measure aquatic indicators of environmental change in the past and present. These studies will allow assessments of future changes in northern freshwater ecosystems to help guide the formulation of environmental management and monitoring policies.

Hydro-ecological Responses of Arctic Tundra Lakes to Climate Change and Landscape Perturbation

Project Leader: *Fred Wrona (University of Victoria)*

Significant changes in climatic regimes are expected to have far-reaching impacts on the hydrology and ecology of Arctic freshwater ecosystems. This project is aimed at conducting integrated landscape-lake process and modelling studies to improve the regional understanding of the upland tundra lakes sensitivities and responses to climate variability and change. An integrated landscape-geochemical, lake-ice, hydro-ecological model for Arctic systems will be developed and validated. Project outputs will inform adaptation options for the conservation, protection and management of Arctic freshwater ecosystems.

INUIT HEALTH, EDUCATION AND ADAPTATION

The central objective of ArcticNet is the formulation of adaption strategies to help Inuit and other Northerners face the impacts and opportunities of climate change and modernization across the coastal Arctic. Over the last two years, ArcticNet teams conducted multidisciplinary research in each of the four Inuit regions of Canada: Inuvialuit, Nunavut, Nunavik and Nunatsiavut. Many of Canada's 53 Inuit communities were visited in 2011-2013 as part of ArcticNet's effort to address issues important to Northerners and to involve communities in the scientific process through exchange of knowledge, training and technology.

ArcticNet researchers collaborated with Inuit organizations, regional governments and community members to examine key themes ranging from human health to education and landscape stability. Country food samples were collected and analyzed to identify key protective nutrients for Inuit health. Recruitment of community members continued as part of an *H. pylori* bacteria testing initiative and an *H. pylori* treatment program was launched in Tuktoyaktuk. Other community research initiatives focused on improving access to education, evaluation of wild/traditional food security, improvement of community food programs, and documentation and transmission of Traditional Knowledge to younger generations.

With the goal of developing community sustainability plans adapted for climate change, monitoring and survey sites were established to measure environmental impacts to coastal communities caused by changing sea levels, storms, sea ice and wave conditions. Other community adaptation projects examined the integration of scientific and traditional knowledge of coastal systems and wildlife with information on community use of these ecosystem services.

Instability of Coastal Landscapes in Arctic Communities and Regions

Project Leaders: *Trevor Bell (Memorial University) and Don Forbes (Memorial University / Natural Resources Canada – Geological Survey of Canada)*

Future climate scenarios and impacts modelling predict changes in climate variables that may increase coastal landscape instability and hazard risk. Through improved understanding of changes in climate, sea level, sea ice, storms and waves, this project assesses integrated impacts on coastal landscape stability, including flooding, erosion, habitat integrity, and community vulnerability. Together with northern communities and partners, the project will promote informed choices of adaptation measures and enhanced resilience in northern coastal communities.

Understanding and Responding to the Effects of Climate Change and Modernization in Nunatsiavut

Project Leaders: *Trevor Bell (Memorial University) and Tom Sheldon (Nunatsiavut Department of Lands and Natural Resources)*

With the involvement of Inuit and other partners, Nunatsiavut Nuluak is addressing Inuit concerns about the impacts of climate change, modernization and contaminants on the health of marine ecosystems and communities of Northern Labrador. Project findings are used to develop adaptation strategies and polices that have direct relevance for the people, industries and environment of Northern Labrador.

Food Security, Ice, Climate and Community Health: Climate Change Impacts on Traditional Food Security in Canadian Inuit Communities

Project Leaders: *Laurie Chan (University of Northern British Columbia) and Christopher Furgal (Trent University)*

Collaborating with Canadian Arctic communities, this project is investigating how and to what extent climate change is presently affecting the traditional diet profile of northern aboriginal residents and how and to what extent it may affect it in the future, and subsequently, what implications this may have for individuals' health. The project focuses on nutrition and potential changes in nutrient intake, exposure to contaminants, and levels of food security.

Country Foods Health Benefits in a Changing Canadian Arctic

Project Leader: *Éric Dewailly (Université Laval)*

For centuries, to survive in the Arctic, Inuit had to rely on fish, mammals and some plants such as wild berries. However, since the 1990s, they have increasingly adopted a western diet, which has led to excessive intake of carbohydrate, salt and trans-fatty acids. Cardiovascular diseases and risk factors have recently become major health issues. This project studies the overall benefits of nutrients present in the country foods consumed in Nunavik with the goal of informing public policies aiming to improve country food consumption and food security, minimize the risks from environmental contaminant exposure and limit the emergence of obesity, diabetes and cardiovascular diseases in Arctic peoples.

International Inuit Cohort Study: Developing the Next Phase

Project Leader: *Éric Dewailly (Université Laval)*

This project merges the data from the major Inuit health surveys conducted in Canada and Greenland. From this new database, health indicators of global changes will be extracted to show geographical differences according to Inuit regions and IRIS territories. New information will also be collected at the community level in order to understand if different infrastructure or demographic variables are associated with chronic diseases or risk factors.

Climate Change and Food Security in Regional Inuit Centres

Project Leader: *James Ford (McGill University)*

Food insecurity is a chronic problem affecting many Inuit communities and is likely to predispose Inuit food systems to the negative effects of climate change. Using in-depth case studies, this project aims to identify and characterize the vulnerability of food systems in four regional Inuit centres to climate change as a basis for identifying adaptation entry points.

Inuit Knowledge and Geospatial Ontologies in Nunatsiavut

Project Leaders: *Chris Furgal (Trent University) and Tom Sheldon (Nunatsiavut Department of Lands and Natural Resources)*

This project undertakes a participatory geographic information system (GIS) and geospatial ontology research exercise with expert knowledge holders in the Nunatsiavut Settlement Area. The goal is the development of a geospatial ontology application and interface that complements existing GIS for land-use planning, environment and development decision-making, as well as Inuit knowledge representation and transmission in Nunatsiavut.

Community-Driven Research on *H. pylori* Infection in the Inuvialuit Settlement Region

Project Leader: *Karen Goodman (University of Alberta)*

Helicobacter pylori infection has become a major concern for many northern communities and their health care providers. These concerns initiated a large collaborative project to investigate the health risks of *H. pylori* and develop locally appropriate control strategies. This project seeks to expand these efforts to include other northern communities and ultimately to improve the success of *H. pylori* infection treatment methods, provide health authorities with information to guide relevant public health policy, and to help concerned community members understand *H. pylori* health risks.

Improving Access to University Education in the Canadian Arctic

Project Leader: *Thierry Rodon (Université Laval)*

This project provides evidence-based research on Inuit participation in university education with the objective of promoting a national discussion amongst providers of university programs in Inuit Nunaat, northern institutions and Inuit organizations in order to define a more coordinated effort in program delivery and curriculum development.

Adaptation in a Changing Arctic: Ecosystem Services, Communities and Policy

Project Leader: *Barry Smit (University of Guelph)*

This project documents the changing physical, biological and socio-economic conditions that are affecting people in the Arctic and identifies policies and strategies to assist communities in dealing with these changes. The main focus of the project involves integrating scientific and traditional knowledge of ice, permafrost, coastal dynamics and wildlife with information about community use of these ecosystem services.

Inuit Qaujimajatuqangit and the Transformation of High School Education in Nunavut

Project Leader: *Fiona Walton (University of Prince Edward Island)*

How can Inuit educational leaders work with parents in communities to create a school system to meet the challenges of the 21st century? How can a curriculum grounded in traditional beliefs and values contribute to the personal and academic success of Inuit high school students? This project aims to explore these questions and to document the role of culture and language in student learning in order to provide ideas and examples as tools for northern communities attempting to transform local education.

NORTHERN POLICY AND DEVELOPMENT

ArcticNet's research effort is aimed at the development and dissemination of knowledge to formulate adaptation strategies and national policies for Canadians as well as other stakeholders including industry (oil and gas, navigation, mining, tourism, hydroelectric) and government, whose mandate it is to manage a changing Arctic. Throughout 2011-2013, numerous workshops, interviews, meetings and panels were held by ArcticNet researchers to address a developing northern landscape, from the resolution of geopolitical boundary disputes to the assessment of shipping traffic through the Northwest Passage.

ArcticNet researchers continued to work with regional, federal and international government agencies and departments on a range of activities pertaining to policy formulation and the opening of the Arctic, including: conducting field research with the Canadian Rangers throughout Newfoundland and Labrador and in Cambridge Bay; developing and delivering a course on Arctic Governance for foreign service officers at the invitation of the Department of Foreign Affairs and International Trade; advising various government departments and the Canadian Forces on Arctic security issues; standing as witnesses before the House of Commons Standing Committee on Foreign Affairs; and participating in Operation Nanook with the Canadian Forces in Inuvik, Tuktoyaktuk and Tsiigehtchic. In addition, archival research, field interviews, and historical data collection helped researchers evaluate the impacts of past and present mineral exploration and development in several Arctic communities.

The Law and Politics of Canadian Jurisdiction on Arctic Ocean Seabed

Project Leader: *Michael Byers (University of British Columbia)*

The possibility that the Arctic Ocean seabed contains vast deposits of hydrocarbons is attracting considerable attention. This research project focuses on several outstanding maritime boundary disputes—involving the United States, Denmark and potentially Russia—that must be resolved before Canada can submit a comprehensive package of information to the UN Commission on the Limits of the Continental Shelf by 2013. The project will analyze the legal and political differences involved in the different disputes, explore the various options for resolving them, and provide detailed recommendations.

Integrating and Translating ArcticNet Science for Sustainable Communities and National and Global Policy and Decision-Making

Project Leaders: *David Hik (University of Alberta) and Chris Furgal (Trent University)*

This project investigates the arctic policy landscape and how ArcticNet science contributes to informed policy decisions in Canada and globally. The conclusions from this project will allow ArcticNet to address the most effective ways to use and translate ArcticNet research results on urgent issues such as climate change into "action" or decision-making at the local, regional, national or international levels.

The Emerging Arctic Security Environment

Project Leaders: *Rob Huebert (University of Calgary) and Whitney Lackenbauer (St. Jerome's University)*

This project aims to better understand the developing Arctic security trends in the circumpolar region by addressing these questions: (1) What are the reasons behind the new foreign, defence and security policies of Arctic states? (2) What are the ramifications of these actions and the possibilities/probabilities for conflict and cooperation in the region? The project will also systematically analyze the relationship between sovereignty, security and safety in Canadian political discourse and policy, and critically examine the historic and contemporary practice of Arctic sovereignty and security assertion in evolving cultural, political and spatial contexts.

Adaptation, Industrial Development and Arctic Communities

Project Leader: *Arn Keeling (Memorial University)*

This project is engaging in community-based, historical and comparative research on industrial development as a driver of social, cultural and environmental change in the Arctic. In particular, researchers explore the cultural, economic and environmental impacts of mineral exploration and development on three Arctic communities. Ultimately, this project will be useful for communities and policy makers in assessing the potential benefits and impacts of current development proposals.

Climate Change and Commercial Shipping Development in the Arctic

Project Leader: *Frédéric Lasserre (Université Laval)*

Is Arctic shipping really going to develop as fast as generally predicted in Canada? What sectors of the shipping industry might be interested in plying a seasonal, poorly mapped, unsupported northern route? Will containerized cargo liners between Europe and Asia rush to utilize the route? Working closely with international shipping companies, this project will address these questions in order to evaluate the issues of shipping development in the region.

KNOWLEDGE TRANSFER

Information derived from ArcticNet's research efforts and initiatives such as the International Polar Year feeds into ArcticNet's knowledge management and transfer system which included in 2011-2013 the funding of two new projects. To date, these projects have focused on: the deployment of a new server and storage infrastructure for the Polar Data Catalogue (PDC) database, improvements to the PDC search application and improved security, establishment of new connections for sharing metadata, and the development of the streamlined "PDCLite" search tool which functions at the low bandwidths typically available in the North and allows searching for projects around a specific northern community.

Research on system and infrastructure needs for an Inuit-specific integrated information management system (IIMS) tailored to Inuit needs was commenced, as was a procedure for establishing links between the IIMS and the PDC and ASTIS. Inuit-specific data needs were also targeted through the development of a streamlined procedure for research requests to Inuit organizations, work related to the establishment of a bibliographic database of grey literature and methods for conducting systematic literature reviews, and the determination of data priorities in relation to Inuit health research.

Polar Data Management for Northern Science

Project Leader: *Ellsworth LeDrew (University of Waterloo)*

The central objective of this project is to facilitate exchange of information and data about the polar regions among researchers and other user groups, including northern communities and international programs. Initially established by ArcticNet and CCIN, the Polar Data Catalogue (PDC) is now Canada's primary on-line source for data and information on research in the polar regions. The project team is now working with other national and international projects toward integrated data management systems to ensure (1) that polar metadata and datasets are preserved for the long term and are publicly accessible on the PDC in a timely and user-friendly format, and (2) the development of PDC data tools for use by various stakeholders, especially northern communities.

Enabling the Coproduction of Inuit and Science Knowledge Through Integrated Information Management

Project Leader: *Scot Nickels (Inuit Tapiriit Kanatami)*

Led by Inuit Qaujisarvingat: The Inuit Knowledge Centre (IQ) of Inuit Tapiriit Kanatami (ITK), the goal of this project is to develop and maintain an Inuit-specific integrated information management system (IIMS) that supports the ethical collection, discovery, preservation and use of Inuit knowledge and provides access to this information. The project will initially focus on: 1) procedural tools, 2) a database of funded Arctic research projects, and 3) datasets including bibliographic databases, Inuit health data, and local environmental knowledge data. The development of this IIMS will give Inuit and northern researchers in Canada and abroad the appropriate levels of data and information required to prepare for the changes to their world.

EDUCATION AND TRAINING

Since its inception, ArcticNet has been implementing a comprehensive training strategy to recruit and train a complete generation of researchers and technicians critical for studying and monitoring the transformation of the North. ArcticNet continues to strive to increase the awareness of young Canadians to Canada's Arctic dimension and to the possibilities of fascinating careers in the North.

Over 50 undergraduate students, 400 graduate students and post-doctoral fellows and 500 research associates and technical staff are currently completing their training or are working within ArcticNet's unique multidisciplinary, trans-sector and international network. Whether at sea, on the Arctic tundra, across glaciers and ice shelves, in Inuit communities, or attending international schools and meetings, ArcticNet's young researchers are working, discussing and debating with the best Canadian and foreign experts in the natural, health and social Arctic sciences. They have formed the remarkably active ArcticNet Student Association (ASA), which hosts Student Day during the Annual Scientific Meeting as well as regional workshops to discuss how to adapt student research to meet Network objectives. ArcticNet's Training Fund has supported the participation of dozens of Network students in international Arctic schools. The accomplishments of these hundreds of young ArcticNet researchers provide a positive direction for future Arctic research and the management and stewardship of a rapidly changing Arctic world.

SCHOOLS ON BOARD & SCHOOLS ON TUNDRA

Initiated in the first year of ArcticNet, Schools on Board is an outreach program that bridges the gap between Arctic sciences taught in the classroom and research conducted in the field. The ultimate goal of the program is to engage youth from northern and southern communities in Arctic sciences and highlight the education and career opportunities that involve studying and managing the changing Arctic environment. The main thrust of Schools on Board is the field program 'on board' the CCGS *Amundsen,* where students and teachers have the unique opportunity to participate in an educational experience completely integrated into the research activities of the ArcticNet science teams.

From 22 September to 4 October, 2011, fourteen Schools on Board participants boarded the CCGS *Amundsen* to take part in ArcticNet's marine field program. Schools from communities across Canada were represented, including: Inuvik, NT, Kugluktuk, NU, Baker Lake, NU, North Saanich, BC, Winnipeg, MB, Toronto, ON, Ottawa, ON and Montreal, QC.

Departing Kugluktuk, NU, the ship sailed to the Beaufort Sea through the Northwest Passage and Amundsen Gulf. Participants took part in on-deck operations during rosette, net, and box core deployments; helped with sorting and processing of samples in the labs; and attended meetings, lectures and presentations. After returning to Kugluktuk, the team was hosted by the local high school where they interacted with local high school students and community members, exchanging knowledge and cultural experiences.

As a new initiative for 2013, the ArcticNet Schools on Tundra program took place from 23 February to 6 March. Eleven students and two teachers from Quebec City, QC, Montreal, QC, Iqaluit, NU, Baker Lake, NU, Churchill, MB, and Winnipeg, MB, participated in the outreach program hosted at the Churchill Northern Studies Centre in Churchill, Manitoba. Boarding the train in Winnipeg, participants travelled through Manitoba's plains, boreal forest subarctic and arctic regions. Once in Churchill, participants worked with scientists collecting data for a variety of research projects, engaged with community leaders and elders, and participated in a variety of learning activities focused on the history and culture of Churchill and the surrounding area.

Over the last two years, Schools on Board was highly involved in a variety of activities related to the International Polar Year *From Knowledge to Action* conference (IPY2012) held in Montreal in April 2012. In conjunction with the conference, Schools on Board held its bi-annual Arctic Climate Change Youth Forum in partnership with Lower Canada College in Montreal, QC. Keynote speakers included Sheila Watt-Cloutier, Nobel Peace Prize nominee, and Dr. David Barber, senior Arctic scientist. Over 220 students from 20 high schools in five provinces came to Lower Canada College to learn about and discuss *Science and Implications of Arctic Climate Change.*

Schools on Board also partnered with the International Institute for Sustainable Development for the Circumpolar Indigenous Youth Leaders Program. This program brought thirteen circumpolar youth from Canada, the United States, Finland, Greenland, and Russia together to discuss a variety of social and environmental issues at the IPY conference.

"I love that I have learned how everything is connected and works together. The field program has shown me that no matter what you are interested in, you can be connected to the Arctic and I am now even more sure of following with my career path in environmental engineering."

2011 Schools on Board participant

"The biggest 'aha' moment for me (because I experienced many) was understanding why the Arctic is being affected faster then the rest of the world by climate change."

2013 Schools on Tundra participant

ARCTICNET STUDENT ASSOCIATION

Representing over 500 students, the ArcticNet Student Association (ASA) promotes student learning, leadership, research and networking opportunities between students, academics, governmental partners, and Northerners.

2011-2013 represented another successful period for the ASA. The Executive Committee, composed of highly motivated graduate students from across Canada, organized many outreach and training activities designed to broaden the ArcticNet student experience. These activities included the organization of regional and national meetings, support for the Schools on Board program, and collaboration with the international Association of Polar Early Career Scientists (APECS).

IPY2012 Workshop: From Knowledge to Careers

The ASA organized a two-day international training workshop in collaboration with APECS which was held in advance of the IPY2012 conference, and was attended by 150 students from 23 countries. Led by an impressive roster of internationally recognized scientists, administrators and educators, training sessions focused on developing research, management, and outreach skills not normally discussed in the academic setting. The workshop received high praise from attendees and mentors alike, and strengthened the ASA's reputation for organizing first-class training events.

2012 Student Day: Survival Skills for the Arctic Scientist

Building on the success of the IPY2012 Student Day, the ASA held its most dynamic and involved session to date at ArcticNet's ASM in Vancouver, BC. The one and a half day event featured plenary speeches, 16 break-out sessions, and significant involvement from Inuit partners including ArcticNet's Inuit Research Advisors, Inuit Tapiriit Kanatami (ITK), and the Inuit Circumpolar Council (ICC). Approximately 150 students benefitted from workshops presented by 30 mentors that ranged from hands-on skills like Arctic safety, to understanding Inuit culture, as well as more traditional workshops such as grant writing and publishing, allowing them to develop skills applicable to graduate work both in the office and the field.

Regional Training and Outreach Events

The ASA provided support for training events at the University of Manitoba and Université Laval. At the University of Manitoba, the ASA continued to support the very successful ArcticNet Seminar Series in collaboration with Dr. David Barber. At Université Laval, the ASA provided support for *Du génome au biome: Colloque de biologie*, an annual biology symposium attended by many ArcticNet students.

The ASA was also instrumental in the organization and execution of *Arctic Science Day* in Winnipeg, which was attended by 80 high-school students and teachers in 2011, and expanded to include over 170 students and teachers from middle school and high school in 2012. In 2012, through collaboration with Schools on Board, the ASA outreach sub-committee created a polar outreach reimbursement process, which will reimburse expenses (up to $500) incurred while holding an ASA related outreach event. ASA students also remained active in presenting their research and organizing outreach activities in the northern communities where they work.

TRAINING FUND

60+ graduate students have benefited from ArcticNet's training fund since 2004

Well established within the Network since 2005, the ArcticNet Training Fund encourages ArcticNet students to take part in international field schools covering different aspects of Arctic research. The field courses provide students with an opportunity to interact with world-renowned scientists and fellow students to share expert insight and technical training in fields ranging from glaciology and climate to remote sensing and microbial ecology. Over 60 ArcticNet graduate students have taken advantage of the training fund since its inception. In 2011-2013, 15 students were granted a total of over $39,000 to attend high level international training offered by leading Arctic researchers in Argentina, Austria, France, Greece, Italy, Norway, Nunavut, Turkey, and the United States.

"Although I arrived at the Academy with a fairly extensive knowledge of some areas of the law of the sea, the course has alerted me to intricacies and complexities in the field of which I had lacked awareness previously."

Graduate Student, University of British Columbia

"Through the generous support of ArcticNet I was able to attend the University of Ottawa's Glaciology Field Course in Patagonia. The lessons on glacier dynamics will be particularly meaningful as I move forward in my PhD studies."

Graduate Student, University of Ottawa

RECOGNITION OF EXCELLENCE FOR ARCTICNET STUDENTS

In addition to the numerous ArcticNet students who were awarded highly competitive scholarships from national and provincial granting councils, ArcticNet is proud to have a number of its graduate students among the recipients of the prestigious 2011-2012 and 2012-2013 academic awards for student research in northern Canada.

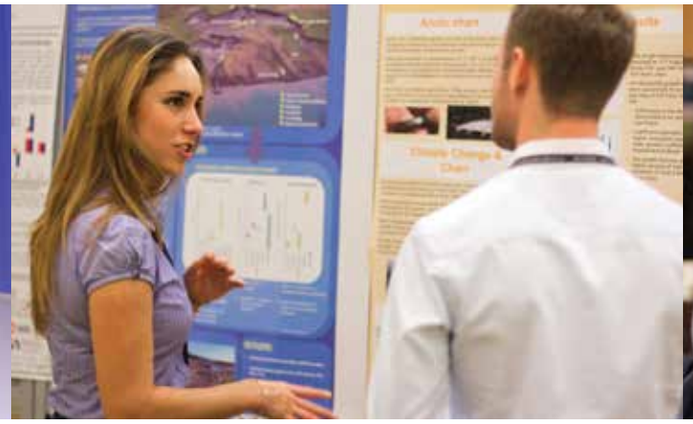
Banting Postdoctoral Scholarships

Canada's most prestigious awards for postdoctoral researchers, the Banting Fellowships are awarded by the three granting councils of Canada to help build world-class research capacity by recruiting top-tier Canadian and international postdoctoral researchers at an internationally competitive level of funding. The program awards 70 new fellowships per year, each valued at $70,000 annually, for up to two years.

» Mélanie Lemire, Université Laval, Country foods and cardiovascular health in Nunavik, northern Quebec: studying the complex balance between nutrients and environmental contaminants.

Canadian Polar Commission Scholarship ($10,000)

» Craig Emmerton, PhD Candidate, Ecology, University of Alberta


W. Garfield Weston Awards

The Garfield Weston Awards for Northern Research were initiated by the W. Garfield Weston Foundation to encourage Canada's leadership in northern studies during the International Polar Year. Students are selected on the basis of academic excellence and commitment to the North. Successful recipients demonstrate an understanding of how their research contributes to northern scholarship and are willing to publicly promote the importance of tackling northern scientific challenges.

Postdoctoral Fellowships ($50,000)

» Dr. Igor Lehnherr, Earth and Environmental Sciences, University of Waterloo

Doctoral Scholarships ($40,000)

» Kaitlin Breton-Honeyman, Environmental and Life Sciences, Trent University

» Étienne Godin, Geography, Université de Montréal

» Andrew Hamilton, Environmental Fluid Mechanics, University of British Columbia

» Samuel Iverson, Biology, Carleton University

» Cory Matthews, Biological Sciences, University of Manitoba

» Barry Robinson, Ecology, University of Alberta

» Cortney Watt, Biological Sciences, University of Manitoba

Masters Scholarships ($15,000)

» Stéphanie Coulombe, Geography, Université de Montréal

» Catherine Doucet, Habitat and Wildlife Management, Université du Québec à Rimouski

» Véronique Gélinas, Environmental and Life Sciences, Trent University

» Valérie Mathon-Dufour, Geography, Université Laval

» Alysa McCall, Biological Sciences, University of Alberta

» Michel Paquette, Geography, Université de Montréal

» Robert Way, Geography, Memorial University of Newfoundland

» Adrienne White, Geography, University of Ottawa

Disseminating the findings and the results of our research is a key component of ArcticNet's mission. We share our knowledge with an increasing number of stakeholders, from decision makers to fellow scientists and the general public. Published research results also spur new and more innovative projects, and widen the possibilities for collaborations. At the community level, access to results enables individuals to make informed decisions about their environment. It also helps decision makers in addressing the issues that Northerners deal with on a daily basis.

ARCTICNET SCIENTIFIC PUBLICATIONS

www.aina.ucalgary.ca/arcticnet

1,400+

Scientific publications by ArcticNet researchers in 2011-2013

500+

Refereed publications by ArcticNet researchers in 2011-2013

2,400+

Publications in the ArcticNet Publications Database

1,300+

Refereed publications in the ArcticNet Publications Database

The number of ArcticNet scientific publications continues to progress year after year, reflecting the successful implementation of ArcticNet's research plan and the breadth of activities undertaken by Network researchers. It illustrates the expansion of our understanding of the on-going transformation of the Arctic and its impact on northern ecosystems and societies. In the past two years, ArcticNet members delivered over 1,400 scientific publications, including more than 500 in refereed books and journals including *Geophysical Research Letters*, *Journal of Marine Systems*, *Ecology*, *Journal of Geophysical Research*, *American Journal of Public Health*, *Marine Policy* and *Global Environmental Change*.

The ArcticNet Publications Database now lists a total of over 2,400 publications including 1,360 refereed publications. This online database describes many of ArcticNet's refereed publications as well as those stemming from the Canadian Arctic Shelf Exchange Study (CASES) and International North Water Polynya Study (NOW) and will be updated annually over ArcticNet's second cycle (2011-2018). It is maintained by the Arctic Science and Technology Information System (ASTIS), a project of the Arctic Institute of North America at the University of Calgary.

POLAR DATA CATALOGUE

www.polardata.ca

ArcticNet recognizes the importance of managing the wealth of knowledge and data generated by polar research to ensure and maximize the exchange and accessibility of relevant data, and to leave a lasting legacy. The Polar Data Catalogue (PDC) is the public metadata and data repository for ArcticNet, and for a growing number of research institutions, programs and organizations in Canada and internationally such as the Canadian Cryospheric Information Network (CCIN), the Northern Contaminants Program (NCP), the Circumpolar Biodiversity Monitoring Program (CBMP), and the International Polar Year (IPY) Program. The PDC was initially developed as a collaborative effort between ArcticNet, CCIN, and Fisheries and Oceans Canada (DFO) to facilitate the exchange of information on the Canadian Arctic between researchers and other user groups, including northern communities and international programs. This discovery portal describes and provides access to diverse Arctic and Antarctic datasets. The records cover a wide range of disciplines from natural sciences and policy, to health and social sciences. The catalogue includes a geospatial search tool that is available to the public, and that allows searching for data using a web-based mapping interface, in combination with other search parameters (i.e., keywords, date, research group). The PDC has been recognized as a repository for polar metadata and data by both Canadian and US granting agencies and the Canadian federal government. The management of the Polar Data Catalogue is coordinated by the inter-agency Polar Data Management Committee, which includes representatives from ArcticNet, the ArcticNet Student Association, CCIN, Centre for Northern Studies, NCP, DFO, Environment Canada and Inuit Tapiriit Kanatami.

Throughout 2011-2013, full data archiving and the publishing of datasets online were implemented, allowing for searching and downloading of datasets directly from the PDC search results web page. Best Practices documents for sharing and archiving datasets are available on the PDC website and a PDC guide for students has been added to the ASA website. A "polardata" Twitter account was also created to announce the latest metadata and data.

INFORMING POLICY

Communicating results to non-scientific audiences is central to the Network's mission and ArcticNet strives to provide information that will allow policy makers to make informed decisions. To address identified knowledge gaps and research challenges, ArcticNet's 38 research projects contribute to four Integrated Regional Impact Studies (IRISes), corresponding to the main political-physiographic-oceanographic regions of the coastal Canadian Arctic. ArcticNet is working together with its partners in the four Inuit regions of Canada: the Inuvialuit Settlement Region, Nunavut, Nunavik and Nunatsiavut as well as stakeholders from the public, private and government sectors to focus its research efforts on priority issues for Canadians as they deal with the challenges and opportunities of climate change and modernization in the North.

IRIS 4 Launch - Kuujjuaq, Nunavik

ArcticNet released the first of four regional impact assessments, *Nunavik and Nunatsiavut: From Science to Policy. An Integrated Regional Impact Study (IRIS) of Climate Change and Modernization* (M. Allard & M. Lemay eds.) in Kuujjuaq, Nunavik, Québec on 29 November 2012. The document is a synthesis of research results, and most importantly, recommendations to policy makers highlighting key topics of concern for Canadians such as human health, safety and security, infrastructure vulnerability, and resource exploitation in the changing Canadian North.

The assessment was presented to Nunavik's Kativik Regional Government Council (http://www.krg.ca) and Makivik Corporation (http://www.makivik.org) and was extremely well received by all, with Maggie Emudluk, Chair of the Kativik Regional Government, stating, "*This study is a great tool to express our needs…This work will help us in our community consultations as we continue to develop Parnasimautik (Plan Nunavik).*"

Johannes Lampe, Minister of Tourism, Culture and Recreation for the Nunatsiavut Government was also pleased with the results of the report, commenting, "*The ArcticNet Integrated Regional Impact Study presents a unique foundation for synthesizing research through integrated, co-managed projects that are meaningful to Nunatsiavut and the Arctic community as a whole, while allowing the region to continue to evaluate and expand existing studies, with a focus on the health and well-being of Labrador Inuit.*"

IRIS 2 Regional Workshop – Iqaluit, Nunavut

ArcticNet's Eastern Arctic (IRIS 2) Regional Science Meeting (RSM) was held from 6 to 8 November 2012 in Iqaluit, Nunavut. The meeting brought together the lead authors of IRIS 2 to share and present their draft chapters to a wide range of decision-makers for feedback. The meeting was organized around daily workshops focused on key regional issues which also form the structure of the report: 1) Public Health and Safety, 2) Resource Management, and 3) Socio-economic Development.

More than 100 regional decision-makers and experts from 21 organizations contributed to the discussions. Through this consultation process, priority issues have been identified and examined to ensure that the recommendations contained in the final report will target regional needs.

THE 2011 INTERNATIONAL SCIENCE SUMMIT

From 31 July to 5 August 2011, the CCGS *Amundsen* hosted the International Science Summit, welcoming Canadian and international dignitaries onboard to exchange information on issues surrounding climate change and modernisation in the Arctic, develop and solidify Arctic research partnerships and showcase the world-class research capabilities of Canada's icebreaker CCGS *Amundsen*.

Among the 14 participants present onboard with ArcticNet's Scientific Director Louis Fortier were Michel Rocard, former French Prime Minister and current Ambassador to the Poles for France, Denis Brière, Rector of Université Laval, Julie Payette, Québec's Scientific Delegate to the United States, and two of Québec's former Ministers. The Summit was covered onboard by journalists from L'Actualité and the Financial Times.

Sailing from Pond Inlet to Resolute, Nunavut, participants had the opportunity to engage with ArcticNet scientists on-deck and in the labs to discuss the ongoing transformation of the Arctic and its ecosystems, and participate in seminars and debates on the geopolitical, socio-economic and human impacts of this transformation. The event was highly successful in solidifying ArcticNet's research partnerships with France, as well as further developing new collaborations. The voyage culminated with the Polar Continental Shelf Project's annual Open House in Resolute Bay and the inauguration of their new research facilities.

THE CCGS *AMUNDSEN* FEATURED ON CANADA'S NEW $50 NOTE

With pride and excitement, ArcticNet received the fantastic news that its major research infrastructure, the Canadian Research Icebreaker CCGS *Amundsen,* would adorn the new Canadian $50 polymer bank note.

The new notes were launched on 26 March 2012 during a ceremony held at the Canadian Coast Guard base in Quebec City where Bank of Canada Governor Mark Carney officially announced their entry into circulation. Carney was joined at the event by Shelly Glover, Parliamentary Secretary to the Minister of Finance, Marc Grégoire, Commissioner of the Canadian Coast Guard, and Louis Fortier, Scientific Director of ArcticNet.

ArcticNet is thankful to all those who contributed to the wonderful adventure of the *Amundsen* project since its early beginning in 2002. Through major national and international successes like CASES, ArcticNet, IPY, CFL, Malina and the Inuit Health Surveys, their dedication, passion, determination, excellence and camaraderie has contributed to the notoriety, visibility and recognition that led to the selection of the CCGS *Amundsen* as the new theme for the Bank of Canada's new polymer $50 bill, affirming the vessel's place in Canadian History.

ARCTICNET IN THE NEWS 2011-2013

ArcticNet research featured in

300+

media articles and broadcasts in 2011-2013

With ArcticNet's high level of knowledge and expertise, the Network's managers and researchers are often called upon by the media for interviews regarding issues of critical importance to Canada's North, its People and the Arctic in general. Many projects led by ArcticNet Network Investigators received intense national and international media coverage throughout 2011-2013, bringing Arctic research to the attention of many viewers and readers worldwide. ArcticNet entered the social media scene via Twitter in 2012, providing a new medium for information exchange and broadcasting of the Network's research and activities. The work of ArcticNet researchers was featured in print, broadcast and new media, informing the public about the rapidly changing Arctic. Some of the highlights include:

» Over 300 articles and programs featuring ArcticNet research were printed and broadcast by international (Al Jazerra, Bloomberg Businessweek, CNN, The Economist, Financial Times, Forbes, International Herald Tribune, The Moscow Times, New Scientist, The New York Times, Reuters, Science News, Scientific American, The Wall Street Journal), national (CBC, Calgary Herald, Canadian Geographic, CTV, Embassy Magazine, The Globe and Mail, L'Actualité, La Presse, Montreal Gazette, National Post, Ottawa Citizen, Radio-Canada, Toronto Star, Toronto Sun, Vancouver Sun, Winnipeg Free Press) and northern (Northern News Services, Nunatsiaq News) media and from many countries including Canada, Qatar, Russia, the UK, and the United States.

85+

articles and news stories generated from IPY2012 and ASM2012 conferences

» Between the International Polar Year conference in Montréal in 2011 and ArcticNet's Annual Scientific Meeting in Vancouver in 2012 (ASM2012), over 85 articles and news stories were generated in written, online and broadcast media. Interviews were held with many of ArcticNet's researchers before, during and after the conferences including Scientific Director, Louis Fortier, Executive Director, Martin Fortier, Network Investigators, David Barber, Daniel Fortier, Kim Juniper, Derek Mueller, Thierry Rodon, and Jean-Éric Tremblay and several of ArcticNet's students. The award of the first ever Arctic Inspiration Prize at the ASM2012 was a highlight for local and national media.

» The Bank of Canada's release of the new $50 polymer bank note featuring the CCGS *Amundsen* received extensive national and international media coverage. The launch ceremony held in March 2012 at the Canadian Coast Guard base in Quebec City was highlighted, celebrating Canada's commitment to the Arctic and northern communities through the efforts of ArcticNet's researchers.

2011-2013 Sharing Knowledge

» Shrinking sea ice and melting ice shelves were hot topics throughout 2011-2013. ArcticNet's Derek Mueller and Luke Copland communicated extensively to the media and to the general public about their efforts to map the dwindling extent of Canada's ice shelves using satellite imagery. After a record shattering sea ice minimum was measured in September 2012, ArcticNet's David Barber and Louis Fortier were called on for numerous print, online and radio interviews.

» The official renewal of ArcticNet for another 7-year cycle was announced by Minister of Industry and Minister of State, Christian Paradis at Université Laval in September 2011. Media coverage of the Government of Canada's $67.3 million commitment to the Network highlighted this positive pledge to Arctic science and climate change research.

» The launch of the Northern Sustainable Development Research Chair held by ArcticNet Network Investigator Thierry Rodon at Université Laval in December 2011 received TV and media coverage. The Chair will enable Dr. Rodon to continue his work with Canada's Inuit, incorporating social and environmental needs into northern development planning through improvement of northern research capacity and support for training and education programs for Northerners.

» The February 2012 opening of the new Sea-ice Environmental Research Facility at the University of Manitoba followed by the opening of the Nellie Cournoyea Arctic Research Facility in March 2013 received extensive media coverage. Combined with research conducted on board the CCGS *Amundsen*, the new facilities will be critical in helping ArcticNet Network Investigators like Feiyue Wang, Gary Stern, David Barber, Tim Papakyriakou and Søren Rysgaard as well as numerous other researchers and students in the study of Arctic systems and the effects of contaminants on the Arctic environment.

POLAR PHOTOGRAPHY

www.polarphotogallery.com

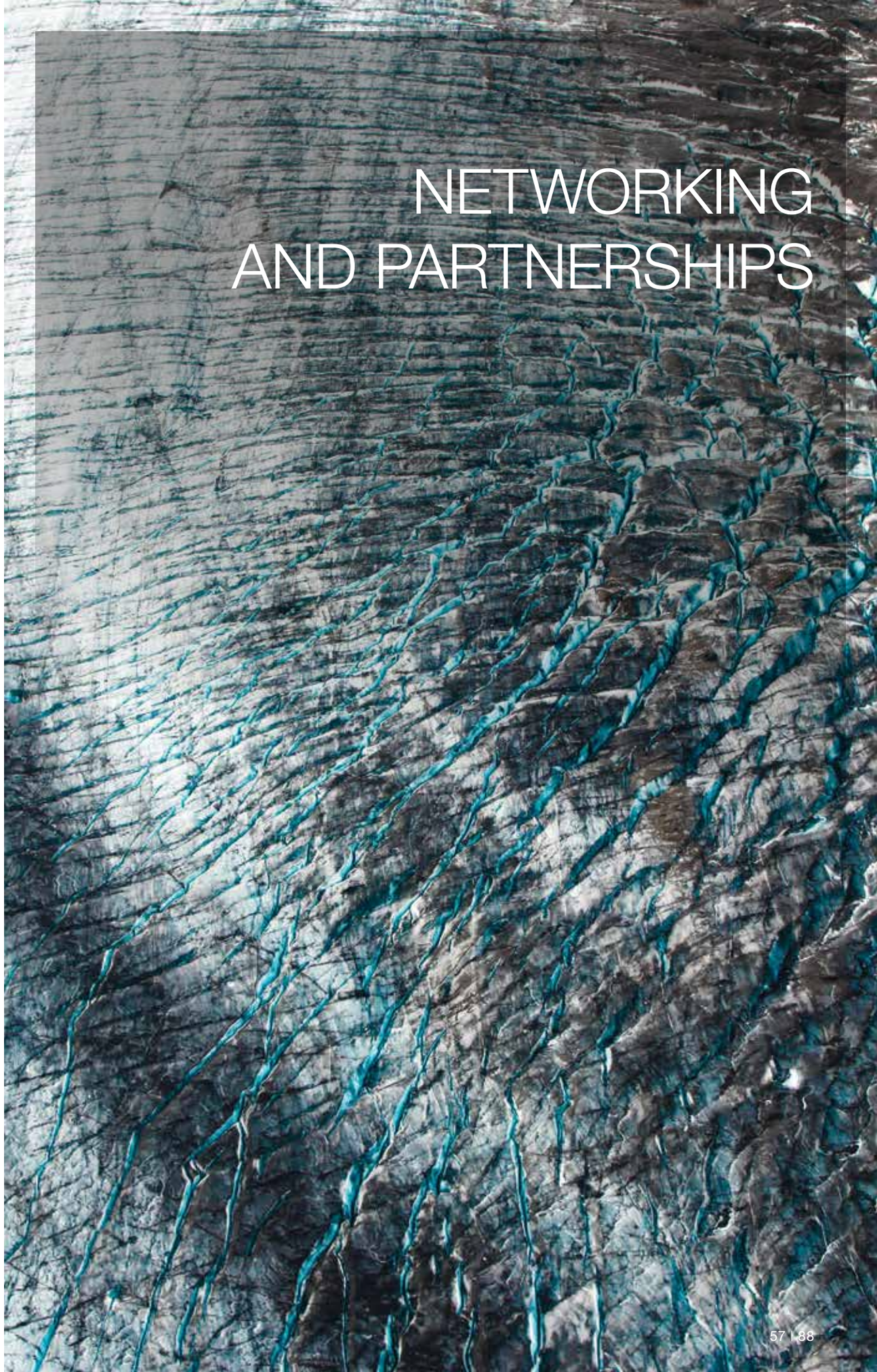
Over the years, ArcticNet's photo gallery has been an important tool for the Network to communicate and illustrate its research activities and share images of the rapidly changing Arctic with the general public. ArcticNet photos have been featured in dozens of prominent national (The Gazette, Ottawa Life, Globe and Mail, UpHere, Above & Beyond, Canadian Geographic) and international (Time Magazine, GEO Magazine, Washington Post, Le Monde, Al Jazeera) print and electronic media publications. Our photos have also illustrated numerous policy relevant documents such as Canada's Northern Strategy, Canadian Polar Commission reports, and numerous AANDC reports.

In 2012, building on the success of the ArcticNet photo gallery, the Network launched Polar Photography, a collection of photos showcasing the research, landscapes, wildlife and people of the Polar regions, captured through the efforts of the Network as well as other organizations and individuals.

There are currently over 750 dynamic and eye-catching photos of the Arctic and Antarctic regions showcased on the site with a growing number of contributions from external organizations and professional photographers. In the coming years, the site will continue to grow and develop with the addition of video imagery.

POLAR PHOTOGRAPHY

NETWORKING AND PARTNERSHIPS



ArcticNet Member Institutions and Canadian Partners / ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᑐᑭᓯᓂᐊᖅᑲᑎᒌᒃᑯᓐᓂᑦ ᐃᓚᒋᔭᐅᔪᑦ ᑎᒥᖁᑎᖑᓐᓂᑦ ᐊᒻᒪᓗ ᑲᓇᑕᒥᐅᑦ ᐃᓚᐅᖅᑲᑕᐅᔪᑦ/ Établissements membres et partenaires canadiens d'ArcticNet

Yukon

AANDC
- Yukon Region

Yukon College
Yukon Government

Northwest Territories

AANDC
- Cumulative Impact Monitoring Program

Environment Canada
- Canadian Wildlife Service - Northern Conservation Division

Government of the Northwest Territories
Institute for Circumpolar Health Research
NWT Health and Social Services
Stanton Territorial Health Authority

Inuvialuit

Aklavik Health Centre
Aklavik Health Committee
Aurora Research Institute
Beaufort-Delta Health & Social Services
Fisheries Joint Management Committee
Inuvialuit Joint Secretariat
Inuvialuit Regional Corporation
Olokhaktomiut Hunters and Trappers Committee
Parks Canada
- Western Arctic Field Unit

Paulatuk Hunter and Trappers Committee
Sachs Harbour Community Corporation
Sachs Harbour Hunters and Trappers Committee

Nunavut

Canada Nunavut Geoscience Office
Cape Dorset Hunters and Trappers Organization
Coalition of District Education Authorities of Nunavut
Department of Health and Social Services (Iqaluit)
Environment Canada
- Canadian Wildlife Service - Eastern Arctic Unit

Government of Nunavut
Government of Nunavut Wildlife Management Division
Inuit Heritage Trust
Iqaluit Community Tukisigiarvik Society
Kitikmeot Heritage Society
Natural Resources Canada
- Polar Continental Shelf Program

Nunavut Arctic College
Nunavut Department of Education
Nunavut General Monitoring Plan
Nunavut Implementation Fund
Nunavut Tunngavik Incorporated
Nunavut Research Institute
Nunavut Wildlife Management Board
Parks Canada
- Nunavut Field Unit

Qaujigiartiit Health Research Centre

British Columbia

Canadian Scientific Submersible Facility
Environment Canada
- Canadian Centre for Climate Modelling and Analysis

Fisheries and Oceans Canada
- Institute of Ocean Sciences

Natural Resources Canada
- Geological Survey of Canada (Pacific)

S. and A. Inspiration Foundation
Simon Fraser University
The Axys Group
University of British Columbia
University of Northern British Columbia
University of Victoria
Westgrid
Wildlife Genetics International

Alberta

Alberta Ingenuity Fund
Arctic Institute of North America
Arctic Raptors Inc.
BP Exploration Operating Company Ltd
Campbell Scientific
Canadian Circumpolar Institute
Canadian North Helicobacter pylori (CANHelp) Working Group
Centre for Military and Strategic Studies
Environment Canada
- Canadian Wildlife Service - Prairie and Northern Region

Golder Associates
Imperial Oil Resources Ventures Limited
Natural Resources Canada
- Geological Survey of Canada (Calgary)

The King's University College
University of Alberta
University of Calgary

Saskatchewan

University of Saskatchewan
Western Ag Innovations

Manitoba

Centre for Earth Observation Science (CEOS)
Churchill Northern Studies Centre
Fisheries and Oceans Canada
- Freshwater Institute

Manitoba Hydro
Manitoba Innovation Fund
Province of Manitoba
University of Manitoba
University of Winnipeg

Ontario

AANDC
- Northern Contaminants Program
- Northern Scientific Training Program
- Environmental Studies Research Fund

Agnico-Eagle Mines
Aquatic Bio-Services
Baffinland Iron Mines Corporation
Balsillie School of International Affairs
C-Change ICURA
Carleton University
Canadian Association of Zoos and Aquariums
Canadian Cryospheric Information Network
Canadian Museum of Nature
Canadian Space Agency
Canadian Trade Commissioner Service
Canadian Wildlife Federation
Centre for International Governance Innovation
Environment Canada
- Aquatic Ecosystem Protection Research Division
- Atmospheric Science and Technology
- Canada Centre for Inland Waters
- Canadian Ice Service
- Canadian Wildlife Service - National Capital Region
- Science and Technology Branch
- National Water Research Institute

First Air
Fisheries and Oceans Canada
- Canadian Hydrographic Service
- Center of Expertise in Marine Mammalogy
- Central & Arctic Region
- Integrated Science Data Management
- Science Sector
- Species at Risk Act

Georgian College
Geosensors Inc.
Government of Ontario
International Development Research Centre
Inuit Circumpolar Council (Canada)
Inuit Tapiriit Kanatami
JF Boucher Consulting Ltd
Lakehead University
Let's Talk Science
McMaster University
Nasivvik Centre for Inuit Health and Changing Environments
National Aboriginal Health Organization
National Defense
Natural Resources Canada
- Canada Centre for Remote Sensing
- Climate Change Impacts and Adaptation Division
- Earth Sciences Sector
- Environmental Studies Research Fund
- Geological Survey of Canada
- Program of Energy Research and Development (PERD)

Nunavut Sivuniksavut
Ontario Ministry of Natural Resources
Public Health Agency of Canada
Queen's University
Royal Military College of Canada
St. Jerome's University
Sensors by Design
Statistics Canada
The Kenneth M Molson Foundation
The W. Garfield Weston Foundation
Walter & Duncan Gordon Foundation
Wildlife Conservation Society Canada
World Wildlife Fund Canada
Transport Canada
Trent University
University of Guelph
University of Ottawa
University of Toronto
University of Waterloo
University of Western Ontario
University of Windsor
Wilfrid Laurier University
York University

Nunavik

Kativik Regional Government
Kativik School Board
Makivik Corporation
Nayumivik Landholding Corporation
Nunavik Inuit Land Claims Agreements
Nunavik Marine Region Wildlife Board
Nunavik Regional Board of Health and Social Services
Nunavik Research Center

Quebec

AANDC
- Beaufort Regional Environmental Assessment (BREA)
- Northern Science and Contaminants Research Directorate

Air Inuit
Association des étudiantes et des étudiants de Laval inscrits aux études supérieures
Bishop's University
Cégep de Sainte-Foy
Cégep Marie-Victorin
Centre d'étude des politiques étrangères et de sécurité (CEPES)
Centre d'études nordiques
Centre de recherche du Centre hospitalier de l'Université Laval
Centre for Indigenous Peoples' Nutrition and Environment
Centre hospitalier universitaire de Québec
Centre interuniversitaire d'études et de recherches autochtones (CIÉRA)
Chaire Raoul Dandurand – UQAM
Concordia University
Coopération Québec Bavière, Chancellerie Bavaroise
École nationale d'administration publique
Fednav Limited
Institut des sciences de la mer de Rimouski
Institut de recherche en biologie végétale
Pêches et Océans Canada
- Garde côtière canadienne
- Maurice Lamontagne Institute

École nationale d'administration publique
Environment Canada
- Canadian Wildlife Service - Quebec Region

Fonds québécois de recherche sur la nature et les technologies
Fonds québécois de recherche sur la société et la culture
Groupe Desgagnés
Hydro-Québec
Institut national de la recherche scientifique - Eau, Terre et Environnement
Institut national de la recherche scientifique - Institut Armand-Frappier
Institut national de santé publique du Québec
Les productions Oxydant
McGill University
Ministère des affaires municipales et des régions du Québec
Ministère des Ressources Naturelles et de la Faune
Ministère des transports du Québec
Ministère Développement économique, innovation et exportation (MDEIE)
Natural Resources Canada
- Geological Survey of Canada (Québec)

Ouranos
Québec-Océan
Québec Outfitter Federation Inc.
Quest Rare Minerals
SNC – Lavalin
Unité de recherche en santé publique
Université de Montréal
Université de Sherbrooke
Université du Québec à Chicoutimi
Université du Québec à Montréal
Université du Québec à Rimouski
Université du Québec à Trois-Rivières
Université Laval
Wapikoni
Xstrata Nickel - Raglan Mine

New Brunswick

Environment Canada
- Canadian Wildlife Service - Atlantic Region

Mount Allison University
University of New Brunswick

Prince Edward Island

Beachwalker Films
University of Prince Edward Island

Nova Scotia

Dalhousie University
Fisheries and Oceans Canada
- Bedford Institute of Oceanography

Kongsberg Maritime
Natural Resources Canada
- Geological Survey of Canada (Atlantic)

Ocean Tracking Network
ROMOR Ocean Solutions

Nunatsiavut

Kangidluasuk
Nain Research Centre
Nunatsiavut Government
Nunatsiavut Department of Lands and Natural Resources
Parks Canada
- Torngat Mountains National Park Reserve

Newfoundland and Labrador

Fisheries and Oceans Canada
- Science Branch Newfoundland

Food Security Network of Newfoundland and Labrador
Government of Newfoundland and Labrador (Environment and Conservation)
Labrador Institute of Memorial University
Memorial University of Newfoundland
Sikumiut Environmental Consulting

ArcticNet is a truly pan-Canadian network with strong international connections, reflecting the global dimension of Arctic issues. Over 140 ArcticNet researchers and 1000 graduate students, postdoctoral fellows, research associates, and technicians from 32 Canadian universities, and numerous federal, provincial and regional departments and agencies participate meaningfully in the Network. These partners are distributed throughout all Canadian provinces, northern territories and Inuit Land Claim Settlement Regions, covering not only the usual east-west dimension of Canada, but her south-north dimension as well. An increasing number of academic and government-based partners in the United States, Norway, France, Denmark, the UK, Spain, Russia, Japan and Germany provide ArcticNet's international dimension.

2011-2013 Networking and Partnerships

Since 2004, ArcticNet has engaged Inuit directly at all levels of the planning of the research program and the strategic framework. ArcticNet collaborates closely with Inuit Tapiriit Kanatami (ITK), the Inuit Circumpolar Council (Canada) and all four Regional Inuit Land Claim organizations in developing and conducting its research program and defining its Strategic Plan. Members from all six organizations serve on our Research Management Committee and Board of Directors.

Consulting Inuit and northern stakeholders in over 50 remote coastal Arctic communities scattered over millions of km^2 presents important logistical and financial challenges. In collaboration with the Northern Contaminants Program (NCP), the Nasivvik Centre for Inuit Health and Changing Environments, and the Regional Inuit Land Claim organizations, ArcticNet supports an Inuit Research Advisor (IRA) position in each of the four Inuit regions. The mandate of the IRAs includes the facilitation of community visits and consultations to present research projects to northern communities and research licensing bodies and the collection of input by Northerners into specific projects and the overall research program of ArcticNet.

As part of the ASM2012 Student Day in Vancouver, the IRAs facilitated two extremely successful workshops on Inuit culture and knowledge exchange between northern community members and researchers. The IRAs and Inuit members of the RMC also meet annually as members of the ArcticNet Inuit Advisory Committee, making Inuit specific recommendations with regards to the research program and priorities. The IRAs have been highly involved in the steering committees for the compilation of the IRIS reports and made critical contributions to the IRIS 4 report published in 2012.

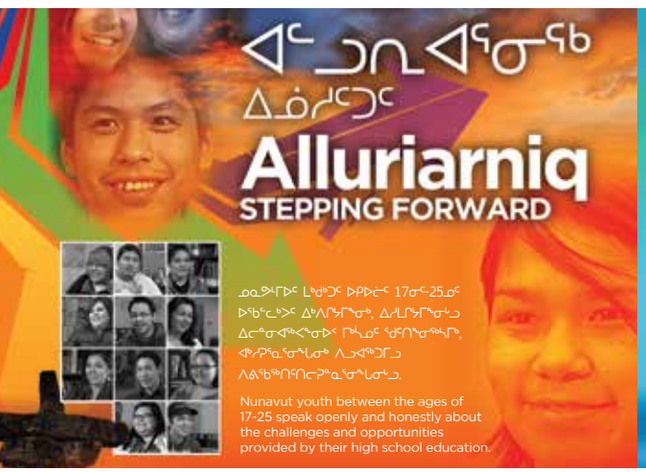
INUIT EDUCATION

Despite efforts to improve student success by reflecting Inuit language and culture in schools, Inuit K-12 graduation rates are among the lowest in Canada for aboriginal populations. Though Northern colleges provide programs in specific fields, access to post-secondary education remains extremely limited for Inuit despite some ad hoc initiatives by southern universities. Inuit are acutely aware that a common solution to several of the trials of their societies is improved access to an education system that will prepare the young generations for the specific tasks and opportunities of the ongoing transition to modernity.

Two new ArcticNet projects focused on Inuit Education were funded in 2010-2011 under Thierry Rodon, Université Laval, and Fiona Walton, University of Prince Edward Island, and are helping to transform secondary and post-secondary education in Canada's North. Working with northern students, educators, school boards and Inuit organizations like Inuit Tapiriit Kanatami (ITK), Rodon and Walton are identifying gaps in northern education and improving access to higher quality learning for Northerners. Initiatives such as the online Tukitaarvik Inuit Student Centre (www.tukitaarvik.ca) and the documentary film, *Alluriarnaq-Stepping Forward: Youth Perspectives on High School Education in Nunavut* (http://nunavut.upei.ca) represent some of the successful outputs of their research.

Forum on Research in Inuit Education

Following the establishment of the National Committee on Inuit Education (NCIE) in 2009, the 1st Forum on Research in Inuit Education was held in Iqaluit, Nunavut from 19-21 February 2013. The Forum was held in response to one of the ten recommendations contained in *First Canadians, Canadians First: The National Strategy on Inuit Education* released in 2011. The three-day session was facilitated by Mary Simon, Chair of Inuit Tapiriit Kanatami's National Committee on Inuit Education and former Co-Chair of the ArcticNet Board of Directors, and Natan Obed, Director of Social and Cultural Development at Nunavut Tunngavik Inc. and current ArcticNet Board Member. Funding was provided by ArcticNet, as well as regional organizations and governments, and the Forum was attended by several ArcticNet managers, researchers and partners.



GRAND OPENING OF THE NELLIE COURNOYEA ARCTIC RESEARCH FACILITY

ArcticNet's researchers and directors were on hand for the grand opening of the Nellie Cournoyea Arctic Research Facility on 18 March 2013 at the University of Manitoba, along with Mr. Clayton H. Riddell who donated $2.5 million toward the facility and Ms. Nellie Cournoyea for whom the facility was named. The $15 million state-of-the-art complex, including classrooms, laboratories, offices and specialized research space, will allow numerous ArcticNet researchers to analyze Arctic systems down to the molecular level. The event followed the February 2012 opening of the Sea-ice Environmental Research Facility (SERF) at the University of Manitoba, a project funded through the Canadian Foundation for Innovation and led by ArcticNet Network Investigators David Barber, Tim Papakyriakou, Søren Rysgaard, and Feiyue Wang.

CONSOLIDATING CANADIAN-LED NETWORKS

Under the leadership of Dr. Warwick Vincent, scientific director of Université Laval-based Centre d'études nordiques (CEN) and ArcticNet project leader, a team of Canadian Arctic researchers and their international collaborators were awarded the first ever NSERC Discovery Frontiers grant. Entitled, Arctic Development and Adaptation to Permafrost in Transition (ADAPT), the initiative aims to produce an 'Integrated Permafrost Systems Science' framework that will be used to help generate sustainable development and adaptation strategies for the North in the context of rapid socio-economic and climate change. Funded at a level of $1 million per year for four years, the Discovery Frontiers grants bring together groups of researchers that will incorporate new and emerging ideas, and combine their complementary expertise to conduct transformative, paradigm-changing research.

GROWING INTERNATIONAL COLLABORATIONS

In past years, ArcticNet has benefited from incredible opportunities to create and strengthen its ever-growing international collaborations. Building even further on the momentum of IPY and the International Partnership Initiative (IPI) of the Network of Centres of Excellence program, ArcticNet has consolidated many partnerships that have in turn enhanced the Network's recognition and contribution at a global level.

International Polar Year 2012 Conference

400+

Presentations by ArcticNet members at the IPY2012 conference

2,000+

Visitors on the CCGS *Amundsen* during the IPY2012 conference

For the first time since 2004, ArcticNet did not host its Annual Scientific Meeting in 2011 deciding instead to invest its efforts and resources in the third and final International Polar Year Conference (IPY2012) held in Montreal from 22-27 April 2012. Organised under the leadership of Aboriginal Affairs and Northern Development Canada (AANDC), the IPY2012 *From Knowledge to Action* conference was the largest international gathering of polar scientists and experts to date. Bringing together more than 3,000 participants from 50 countries representing research, policy, academia, industry, non-government, education and circumpolar communities, IPY2012 was a tremendous occasion to disseminate ArcticNet knowledge and facilitate ongoing and emerging international collaborations.

In addition to being one of the conference's main sponsors, ArcticNet played key roles at different stages of the event. ArcticNet managers and researchers served on the various conference organizing committees, chaired conference themes and sessions, hosted events and ceremonies, delivered keynote and other oral presentations and responded to numerous media requests. In total, ArcticNet Network Investigators, collaborators and students contributed more than 400 presentations to the conference.

ArcticNet also developed and maintained the conference's website, and during the event, ArcticNet staff members helped manage media relations, organize media interviews, and updated the website and photo gallery on a continuous basis.

The Canadian Research Icebreaker CCGS *Amundsen,* ArcticNet's core marine research infrastructure, traveled from its home port of Quebec City for the conference and was docked in Montreal's Old Port where it was open for visits by conference participants, the media and the general public. More than 2,000 people had the opportunity to meet the ship's officers and crew and exchange with ArcticNet scientists who presented their work and some of the ship's science equipment and laboratories.

INTERACT

In 2011, the Université Laval-based Centre d'études nordiques (CEN), one of ArcticNet's major centres of excellence, became a partner in the EU-funded (9M Euro for 2011 to 2014) Seventh Framework Programme entitled, International Network for Terrestrial Research and Monitoring in the Arctic (INTERACT). INTERACT is a Circum-Arctic network of 33 terrestrial field bases in northern Europe, Russia, the United States, Canada, Greenland, Iceland, the Faroe Islands and Scotland that seeks to improve the environmental observation capacity of the Arctic by facilitating knowledge exchange and consolidating existing infrastructures and networking activities throughout the Arctic. With its own major network of Arctic research stations, CEN is involved in the development and use of a platform for exchange of information between station managers and participants within INTERACT. CEN members can now submit proposals to the Network's Trans-National Access program that offers travel and logistical support to research stations across northern Europe and Russia.

CONSOLIDATING COLLABORATIONS WITH THE PRIVATE SECTOR

As an important part of its mandate, ArcticNet continues to consolidate collaborations between the academic and the private sector. In 2011-2013, ArcticNet completed its major research collaboration with Imperial Oil Resources Ventures Limited and BP Exploration Operating Company Limited, allowing network researchers to increase their environmental, geophysical and geological data collection efforts onboard the CCGS *Amundsen* in the offshore areas of the Beaufort Sea awarded as exploration licenses by the Government of Canada. Owned by ArcticNet, the additional data collected through this novel collaborative approach will not only assist industry in its design and operational planning, but will also benefit other stakeholders, including regulators, Northerners and the public, by making the data publicly available. As an independent academic network, ArcticNet provides a scientifically endorsed mechanism for making the same reliable data accessible to all parties when proposing developments and when stipulating regulatory conditions. Through these collaborations and other ongoing network research activities, ArcticNet is now an important player in informing policy makers on the complex issues linked to oil and gas development in the Canadian Arctic. ArcticNet researchers also continued to expand upon existing partnerships with Manitoba Hydro in Hudson Bay and formulated new partnerships with organisations such as St. John's, Newfoundland-based C-CORE and Ferring Pharmaceuticals.

BEAUFORT REGIONAL IMPACT ASSESSMENT (BREA)

Following a Call for Proposals initiated in March 2011, ArcticNet researchers were very successful at securing funding for research projects that form the core of the Beaufort Regional Environmental Assessment (BREA), a multi-stakeholder initiative to sponsor regional environmental and socio-economic research that will gather new information vital to the future management of the Beaufort Sea. ArcticNet researchers are leading four of the 15 currently funded BREA research projects, with three of them successfully initiated as part of the 2011 ArcticNet annual expedition to the Beaufort Sea onboard the CCGS *Amundsen*. The four projects listed below will receive a total of over $5M over the next 4 years (2011-2015).

- Active Acoustic Mapping of Fish in the Beaufort Sea, Louis Fortier, Université Laval
- Deep Water Seabed Geohazards, Steve Blasco, Geological Survey of Canada-Natural Resources Canada
- Southern and Northeastern Beaufort Sea Marine Observatories, Martin Fortier, Université Laval, ArcticNet and Malcolm Lowings, IMG-Golder
- Radarsat Mapping of Extreme Ice Features in the Southern Beaufort Sea, David Barber, University of Manitoba

ArcticNet's success in securing BREA funding is directly linked to its capacity and expertise developed in the Beaufort Sea over the last decade as well as its recent partnerships with industry in the region. The results collected by ArcticNet will directly contribute to BREA's key goal of producing relevant scientific and socio-economic information that simplifies project-level environmental assessment and regulatory decision-making for oil and gas activities, while strengthening the relationship between environmental assessment and integrated management and planning in the region.

ARCTICNET ANNUAL SCIENTIFIC MEETING: CANADA'S PREMIER ARCTIC RESEARCH CONFERENCE

"Year after year, the ArcticNet annual meeting is raising the bar on the quality of presentations and the diversity of participants. Nowhere else can you find such a high-level gathering of major Canadian Arctic research stakeholders. The ASM continues to be the best networking event on Arctic issues in Canada."

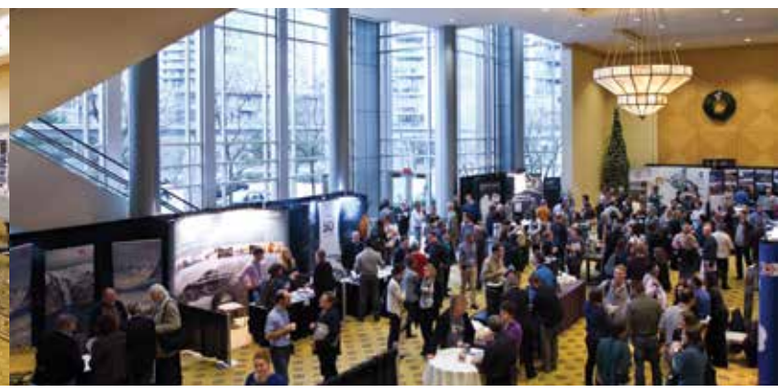
2012 ASM Attendee

Soon after its first edition in December 2004, ArcticNet's Annual Scientific Meeting (ASM) became THE annual Arctic science meeting in Canada. Filling an obvious gap, the ASM has now developed into an established, recurrent and extremely well attended national and international Arctic research conference.

ArcticNet hosted its eighth annual meeting at the Westin Bayshore in Vancouver, British Columbia from 10 to 14 December 2012. With close to 500 participants, the ASM2012 proved to be a successful and dynamic networking event, providing an excellent opportunity for Network Investigators, post-doctoral fellows, graduate students, research staff, and network partners from governments, Inuit organizations and industry, as well as Board and committee members to meet and discuss the latest in Arctic science.

More than 150 oral presentations and 150 scientific posters from the social and natural fields of Arctic research were presented during the meeting, reflecting the tremendous research effort supported by ArcticNet and its multidisciplinary program.

As evidence of a promising future for Canadian Arctic research, more than 275 graduate students, post-doctoral fellows and researchers attended the seventh ArcticNet Student Day. Moreover, ten students were awarded prizes for the excellence of their posters and their work.



ARCTIC INSPIRATION PRIZE

www.arcticinspirationprize.ca

Addressing the challenges and seizing the opportunities of accelerating changes in the Arctic environment, culture, technology and economy require innovative approaches, mobilizing the best knowledge from various sources into concrete solutions.

In this context, the new $1 million CAD Arctic Inspiration Prize was launched at the International Polar Year 2012 conference in Montreal in April 2012. The Prize is awarded annually to recognize and promote the extraordinary contribution made by teams in the gathering of Arctic knowledge and their plans to implement this knowledge into real world applications for the benefit of the Canadian Arctic, Arctic Peoples and therefore Canada as a whole. The initiative is made possible through the generous endowment of the S. and A. Inspiration Foundation, the commitment of ArcticNet to voluntarily manage the Prize, as well as the contribution of numerous volunteers and partners.

The first ever Arctic Inspiration Prize Awards Ceremony was held in December 2012 in Vancouver, BC, in conjunction with ArcticNet's Annual Scientific Meeting (ASM). The $1 million award was shared amongst four Canadian teams whose projects address pressing issues facing Canada's Arctic and its Peoples. The Arctic Food Network received $360,000 of the prize money to help with its food-gathering system that enables communities to strengthen traditions of hunting and sharing. The Nunavut Literacy Council received $300,000 for its project to embed literacy skill development into non-formal education programs for youth. Inuit Qujimajatuqangit received $240,000 for its book project –What Inuit Have Always Known to be True – which will describe Inuit culture and traditional knowledge. The Thaidene Nene Initiative received $100,000 of the prize money to help with the stewardship, protection and co-management of a 33,000 km^2 national park reserve in Canada's Northwest Territories, which has great cultural and environmental significance to the Lustel K'e Dene First Nation.

ArcticNet and the Prize founders are grateful to the distinguished individuals - known for their commitment to the Canadian Arctic and its Peoples - who have devoted their time and expertise as members of the 2012 Prize Selection Committee: Susan Aglugark (*Inuk singer, songwriter and Juno Award winner);* Erin Freeland Ballantyne (*Rhodes scholar and founder of Dechinta: Bush University Centre for Research and Learning);* Peter Harrison (*Professor, Stauffer-Dunning Chair and Director, School of Policy Studies, Queen's University);* The Right Honourable Michaëlle Jean, C.C., C.M.M., C.O.M., C.D. (*Former Governor General and Commander-in-Chief of Canada, Co-President of the Michaëlle Jean Foundation, UNESCO Special Envoy for Haiti and Chancellor of the University of Ottawa);* Kyla Kakfwi-Scott (*Senior Advisor, Department of Health and Social Services, Government of the Northwest Territories);* Peter Mansbridge, O.C. (*Chief Correspondent, CBC News and Anchor, The National);* Tom Paddon (*President & Chief Executive Officer, Baffinland Iron Mines Corporation);* Geraldine Van Bibber (*Chancellor of Yukon College, Former commissioner of Yukon);* and Sheila Watt-Cloutier, O.C. (*Nobel Peace Prize nominee and Inuit activist*) as well as ex-officio Committee members Arnold Witzig (*Director, S. and A. Inspiration Foundation) and* Martin Fortier (*Executive Director, Arctic Inspiration Prize and ArcticNet).*

AWARDS AND RECOGNITIONS

Louis Fortier – Weston Family Prize for Lifetime Achievement in Northern Research

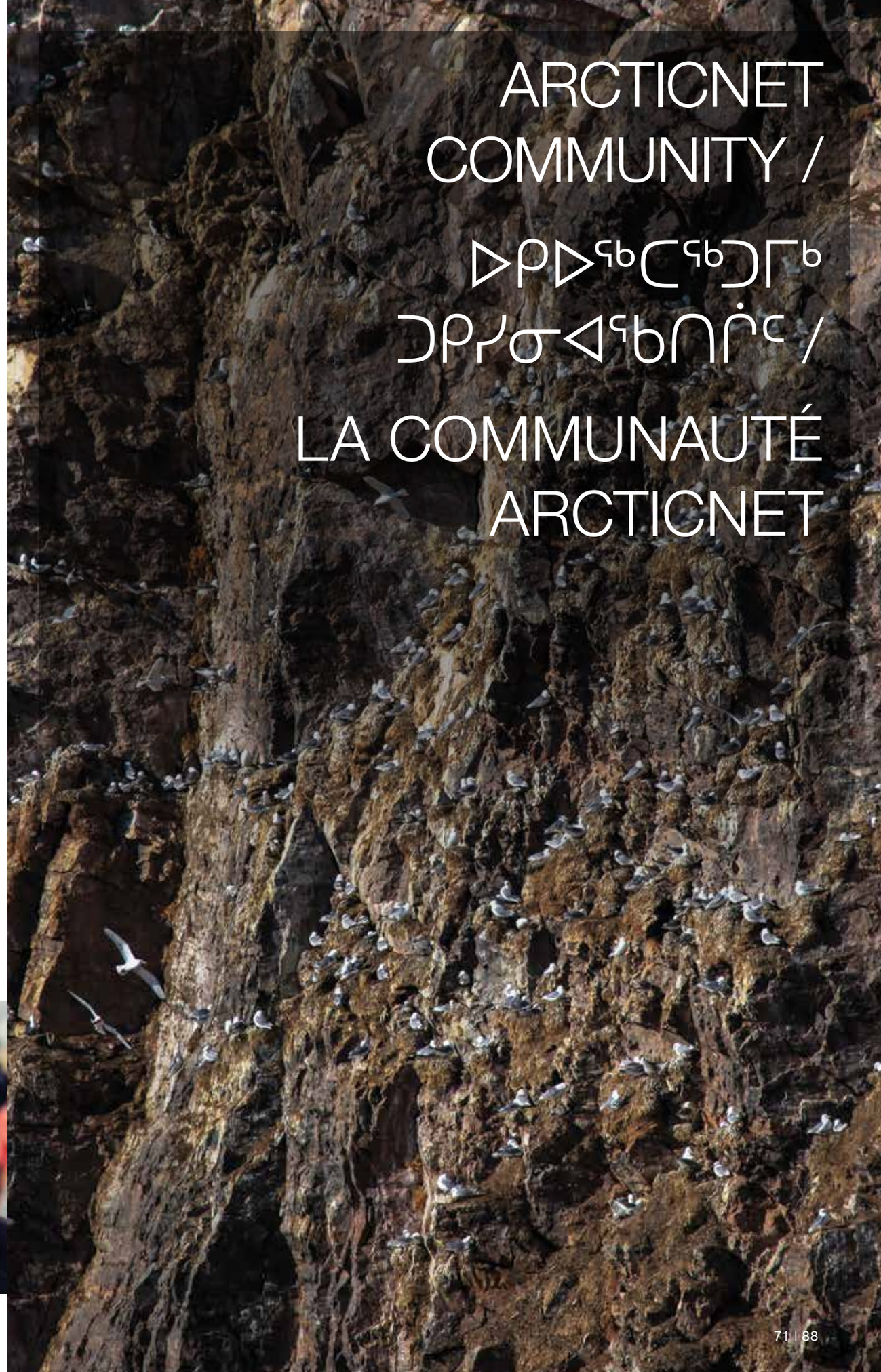
On 25 April 2012, ArcticNet's Scientific Director, Dr. Louis Fortier, was awarded the *Weston Family Prize for Lifetime Achievement in Northern Research.* The $50,000 prize is not only a recognition of his research, but also of his leading role in mobilizing major research networks for the study of the impacts of climate change on the Arctic.

"Dr. Fortier embodies what a lifetime of research can achieve," said Michael Goodyear, Executive Director, Churchill Northern Studies Centre. **"By actively engaging Northerners in the early planning stages of ArcticNet and through his dedication to the multidisciplinary use of the Canadian Research Icebreaker Amundsen, Dr. Fortier has helped ensure that arctic science not only remains top of mind for Canadians, but also serves the people of the North."**

Dr. Fortier was also the recipient of the 2012 Timothy R. Parsons Award for Excellence in Ocean Sciences established by Fisheries and Oceans Canada (DFO) to recognize a Canadian scientist for outstanding lifetime contributions to multidisciplinary facets of ocean sciences. Dr. Fortier was acknowledged "*for his incredible contribution to international collaboration and mentoring interdisciplinary scientists, including through ArcticNet; work that has contributed significantly to the further development of multidisciplinary ocean science."*

Duane Smith – Indspire Award for Politics

Co-Chair of ArcticNet's Board of Directors and President of the Inuit Circumpolar Council (Canada), Duane Smith, was awarded the 2013 Indspire Award for Politics. Through his work internationally, nationally, regionally and locally, he has represented Inuit and Indigenous rights, promoted environmental awareness and ensured Inuit engagement. The annual Indspire awards celebrate Indigenous professionals and youth who demonstrate outstanding career achievement in Canada.



ARCTICNET COMMUNITY / ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᑐᑭᓯᓂᐊᖃᑎᒌᑦ / LA COMMUNAUTÉ ARCTICNET

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Terry Audla, President, Inuit Tapiriit Kanatami

William Barbour, Member of the Nunatsiavut Assembly for Nain

Yves Bégin, Director, Institut national de la recherche scientifique

Louis Fortier, Scientific Director and CEO, ArcticNet Inc. *(Ex-officio)*

Martin Fortier, Executive Director and COO, ArcticNet Inc. *(Ex-officio, non-voting)*

Paul Fortier, Vice-Rector, Research and Innovation, Université Laval (until June 2012)

Brian Gray, Assistant Deputy Minister, Natural Resources Canada

Udloriak Hanson, Special Advisor to the President, Inuit Tapiriit Kanatami (until June 2012)

Digvir Jayas, Vice-President Research, University of Manitoba

Janet King, Assistant Deputy Minister, Aboriginal Affairs and Northern Development Canada

Danielle Labonté, Director General, Aboriginal Affairs and Northern Development Canada (until October 2011)

Charles Lin, Director General, Environment Canada

Carmen Loberg, President and CEO, NorTerra Inc. (until June 2011)

Denis Mayrand, Assistant Vice-Rector, Research and Innovation, Université Laval

Natan Obed, Director Nunavut Tunngavik Inc.

Tom Paddon, President & Chief Executive Officer, Baffinland Iron Mines Corporation

Tom Paterson, Vice-President, Fednav Limited

Mike Peters, Northern Canada Operations, Canadian Association of Petroleum Producers (until October 2011)

David J. Thomas, President and Chairman, The Axys Group

Brigit Viens, Senior Program Manager, Networks of Centres of Excellence *(Observer)*

Shelagh Jane Woods, Director General, Health Canada, First Nations and Inuit Health Branch (until April 2012)

Ed Wojczynski, Division Manager of Portfolio Projects Management, Manitoba Hydro (until June 2012)

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Louis Fortier, Scientific Director and CEO, ArcticNet Inc.

Martin Fortier, Executive Director and COO, ArcticNet Inc.

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Brian Gray, Assistant Deputy Minister, Natural Resources Canada – Earth Sciences Sector

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Michael Barrett, Assistant Director, Kativik Regional Government

Trevor Bell, Professor, Memorial University of Newfoundland

Leah Braithwaite, Chief, Strategic Planning, Canadian Ice Service, Environment Canada

Karley Campbell, President, ArcticNet Student Association *(Ex-officio, non-voting)*

Larry Carpenter, Chair, Joint Secretariat Council (NWT), Inuvialuit Joint Secretariat

John Cheechoo, Director, Inuit Tapiriit Kanatami

Réjean Couture, Acting Program Manager, Natural Resources Canada, Geological Survey of Canada

Brent Else, President, ArcticNet Student Association *(Ex-officio, non-voting,* until February 2012)

Louis Fortier, Scientific Director and CEO, ArcticNet Inc. *(Ex-officio)*

Martin Fortier, Executive Director and COO, ArcticNet Inc. *(Ex-officio, non-voting)*

Chris Furgal, Professor, Indigenous Studies Department, Trent University

Helen Joseph, Director, Oceanography and Climate Branch, Fisheries and Oceans Canada

Gayle Kabloona, Policy Advisor, Nunavut Tunngavik Inc.

Stephanie Meakin, Technical Advisor, Inuit Circumpolar Council (Canada) (until March 2012)

Pitsey Moss-Davies, Research Coordinator, Inuit Circumpolar Council (Canada)

Tim Papakyriakou, Associate Professor, Centre for Earth Observation Science, University of Manitoba

David J. Scott, Director, Northern Canada Division, Geological Survey of Canada (until March 2012)

Tom Sheldon, Director, Environment Division, Department of Lands and Natural resources, Nunatsiavut Government

Gary Stern, Senior Research Scientist, Freshwater Institute, Fisheries and Oceans Canada and Adjunct Professor, University of Manitoba

Kevin Sydor, Senior Hydrotechnical Studies engineer, Manitoba Hydro

Brigit Viens, Senior Program Manager, Networks of Centres of Excellence *(Observer)*

Inuit Advisory Committee / ᐃᓄᐃᑦ ᖃᐅᔨᒪᔨᑕᑦ ᑲᑎᒪᔨᐊᓛᑦ / Comité consultatif inuit

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John Cheechoo, Director, Inuit Tapiriit Kanatami

Martin Fortier, Executive Director and COO, ArcticNet, *Ex-officio, non voting*

John Lampe, Inuit Research Advisor, Nunatsiavut

Stephanie McDonald, Inuit Research Advisor, Nunavut

Kendra Tagoona, ArcticNet Coordinator for Inuit Tapiriit Kanatami

Pitseolalaq Moss-Davies, ArcticNet Coordinator for Inuit Circumpolar Council (Canada)

Louisa Thomassie, Inuit Research Advisor, Nunavik

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Bernie Boucher, President, JF Boucher Consulting Ltd. (until June 2012)

Martin Fortier, Executive Director and COO, ArcticNet Inc. *(Ex-officio, non-voting)*

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David J. Thomas, President and Chairman, The Axys Group (until June 2012)

Industry Partnership Committee / ᑮᓇᐅᔾᔭᓴᓕᕆᔨᓂᒃ ᐱᓕᕆᖃᑎᖃᕐᓂᕈᑦ ᑲᑎᒪᔨᖏᑦ / Comité de partenariat avec l'industrie

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Martin Fortier, Executive Director and COO, ArcticNet *(Ex-officio, non-voting)*

Brian Gray, Assistant Deputy Minister, Natural Resources Canada

Tom Paddon, President & Chief Executive Officer, Baffinland Iron Mines Corporation

Tom Paterson, Vice-President, Fednav Limited

Duane Smith **(Co-Chair),** President, Inuit Circumpolar Council (Canada)

Ed Wojczynski, Division Manager of Portfolio Projects Management, Manitoba Hydro (until June 2012)

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Katie Blasco, Communications Officer, ArcticNet

Christophe Bourillon, Director - Communications & Public Affairs, ArcticNet

Réal Choquette, Administrative Director, ArcticNet

Christine Demers, Executive Assistant, ArcticNet

Natalie Desmarais, Finance Coordinator, Treasurer, ArcticNet

Louis Fortier, Scientific Director and CEO, ArcticNet

Martin Fortier, Executive Director and COO, ArcticNet

Keith Levesque, Ship-Based Research Coordinator, ArcticNet

Josée Michaud, Data Manager, ArcticNet

Shawn Meredyk, Mooring Instrumentation Professional, ArcticNet

Sylvain Tougas, Website Developer, ArcticNet

IRIS Coordinators / ᑲᑎᓯᒪᔪᑦ ᐊᕕᒃᑐᖅᓯᒪᔪᓂᐅᔪᓂᒃ ᐊᒃᑐᐃᓂᕐᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᒥᒃ ᑲᒪᔩᑦ / Coordonnateurs IRIS

Mickaël Lemay, IRIS Lead Coordinator & IRIS 4 - Eastern Subarctic

Ashley Gaden, IRIS 1- Western and Central Arctic

Brian Horton, IRIS 3 - Hudson Bay (Dan Leitch previous)

Philippe Leblanc, IRIS 2 - Eastern High Arctic

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Kiah Hachey, Nunavut

Shannon O'Hara, Inuvialuit

Betsy Palliser, Nunavik

Carla Pamak, Nunatsiavut

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2011 ArcticNet Student Association Executive Committee / ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᑐᑭᓯᓂᐊᕐᕕᑎᑦ ᐃᓕᓐᓂᐊᖅᑎᑦ ᑲᑐᔾᔨᖅᑎᕐᕖᖅᑕ ᐊᖓᔪᖅᑳᖏᑦ ᑲᑎᒪᔨᖏᑦ / Comité exécutif de l'Association Étudiante ArcticNet

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Vasiliki Douglas (University of Northern British Columbia), Secretary

Frédéric Bilodeau (Université Laval), French Communications Officer

Karita Neghandi (INRS-Eau, Terre & Environnement), English Communications Officer

Karley Campbell (University of Manitoba), Student Day Coordinator

Sophie Charvet (Université Laval), Education & Outreach Coordinator

Geoff Gunn (University of Manitoba), Education & Outreach Coordinator

Virginie Roy (Université du Québec à Rimouski-ISMER), Network Liaison

2012 ArcticNet Student Association Executive Committee / ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᑐᑭᓯᓂᐊᕐᕕᑎᑦ ᐃᓕᓐᓂᐊᖅᑎᑦ ᑲᑐᔾᔨᖅᑎᕐᕖᖅᑕ ᐊᖓᔪᖅᑳᖏᑦ ᑲᑎᒪᔨᖏᑦ / Comité exécutif de l'Association Étudiante ArcticNet

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Karen Foster (University of Manitoba), Education & Outreach Coordinator

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Virginie Roy (Université du Québec à Rimouski-ISMER), Network Liaison

2013 ArcticNet Student Association Executive Committee / ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᑐᑭᓯᓂᐊᕐᕕᑎᑦ ᐃᓕᓐᓂᐊᖅᑎᑦ ᑲᑐᔾᔨᖅᑎᕐᕖᖅᑕ ᐊᖓᔪᖅᑳᖏᑦ ᑲᑎᒪᔨᖏᑦ / Comité exécutif de l'Association Étudiante ArcticNet

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Beth Cowen (Memorial University of Newfoundland), Student Day Sub-Committee

Armelle Simo (Université du Québec à Rimouski), Education & Outreach Sub-Committee

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Grant Gilchrist
Elyn Humphreys
Derek Mueller

Dalhousie University
Helmuth Thomas

École nationale d'administration publique
Stéphane Roussel

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Frédéric Laugrand
Maurice Levasseur
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André Marette
Reinhard Pienitz
Thierry Rodon
Jean-Éric Tremblay
Jean-Pierre Tremblay
Warwick Vincent

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Alastair Franke
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University of Northern British Columbia
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University of Ottawa
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Daniel Peters
Terry Prowse
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Ellsworth LeDrew
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University of Western Ontario
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University of Winnipeg
Samantha Arnold

York University
Christian Haas
Kathy Young

*Non-signatory institutions listed for NIs who are not receiving ArcticNet funds / Établissements non signataires énumérés pour les chercheurs ne recevant pas de fonds ArcticNet / ᐊᑎᓕᐅᖅᑕᐅᓯᒪᙱᑦᑐᑦ ᑎᒥᐅᔪᑦ NI-ᙳᑦ ᐃᓕᔭᐅᓯᒪᔪᑦ ᑮᓇᐅᔭᖅᑲᖅᑎᑕᐅᓯᒪᙱᑦᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᑐᑭᓯᓂᐊᖅᑎᒌᒃᑯᙳᑦ

ARCTICNET PARTNERS / ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᑐᑭᓯᓂᐊᕐᑲᑎᒌᑦ ᐱᓕᕆᕐᑲᑎᒋᔭᖏᑦ / PARTENAIRES D'ARCTICNET

Federal Departments and Agencies / ᒐᕙᒪᑐᖃᒃᑯᑦ ᐱᓕᕆᕝᕕᖏᑦ ᑭᒡᒐᖅᑐᖅᕕᖏᓪᓗ / Ministères et organismes fédéraux

- Aboriginal Affairs and Northern Development Canada
  - Beaufort Regional Environmental Assessment (BREA)
  - Cumulative Impact Monitoring Program
  - Environmental Studies Research Fund
  - Northern Contaminants Program
  - Northern Science and Contaminants Research Directorate
  - Northern Scientific Training Program
  - Yukon Region
- Canada Nunavut Geoscience Office
- Canadian Space Agency
- Canadian Trade Commissioner Service
- Environment Canada
  - Aquatic Ecosystem Protection Research Division
  - Atmospheric Science and Technology
  - Canada Centre for Inland Waters
  - Canadian Centre for Climate Modelling and Analysis
  - Canadian Ice Service
  - Canadian Wildlife Service - Atlantic Region
  - Canadian Wildlife Service - Eastern Arctic Unit
  - Canadian Wildlife Service - National Capital Region
  - Canadian Wildlife Service - Northern Conservation Division
  - Canadian Wildlife Service - Prairie and Northern Region
  - Canadian Wildlife Service - Quebec Region
  - National Water Research Institute
  - Science and Technology Branch
- Fisheries and Oceans Canada
  - Bedford Institute of Oceanography
  - Canadian Hydrographic Service
  - Center of Expertise in Marine Mammalogy
  - Central & Arctic Region
  - Freshwater Institute
  - Garde côtière canadienne
  - Institute of Ocean Sciences
  - Integrated Science Data Management
  - Maurice Lamontagne Institute
  - Science Branch Newfoundland
  - Science Sector
  - Species at Risk Act
- National Defense
- Natural Resources Canada
  - Canada Centre for Remote Sensing
  - Climate Change Impacts and Adaptation Division
  - Earth Sciences Sector
  - Environmental Studies Research Fund
  - Geological Survey of Canada
  - Geological Survey of Canada (Atlantic)
  - Geological Survey of Canada (Calgary)
  - Geological Survey of Canada (Pacific)
  - Geological Survey of Canada (Québec)
  - Polar Continental Shelf Program
  - Program of Energy Research and Development (PERD)
- Parks Canada
  - Nunavut Field Unit
  - Torngat Mountains National Park Reserve
  - Western Arctic Field Unit
- Public Health Agency of Canada
- Statistics Canada
- Transport Canada

2011-2013 ArcticNet Community / ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᑐᑭᓯᓂᐊᕐᑲᑎᒌᑦ / La communauté ArcticNet

Provincial Departments and Agencies / ᐊᕕᒃᑐᖅᓯᒪᔪᖅᔪᐃᑦ ᐱᓕᕆᕝᕕᖏᑦ ᑭᒡᒐᖅᑐᖅᕕᖏᓪᓗ / Ministères et organismes provinciaux

- Alberta Ingenuity Fund
- Coopération Québec Bavière, Chancellerie Bavaroise
- Fonds québécois de recherche sur la nature et les technologies
- Fonds québécois de recherche sur la société et la culture
- Government of Newfoundland and Labrador (Environment and Conservation)
- Government of Nunavut
- Government of Nunavut Wildlife Management Division
- Government of Ontario
- Government of the Northwest Territories
- Institut national de santé publique du Québec
- Manitoba Innovation Fund
- Ministère des affaires municipales et des régions du Québec
- Ministère des Ressources Naturelles et de la Faune
- Ministère des transports du Québec
- Ministère Développement économique, innovation et exportation (MDEIE)
- Nunavut Department of Education
- Nunavut Implementation Fund
- NWT Health and Social Services
- Ontario Ministry of Natural Resources
- Province of Manitoba
- Yukon Government

National and International Inuit Organizations / ᑲᓇᑕᒥ ᓄᓇᕐᔪᐊᕐᒥᓗ ᐃᓄᐃᑦ ᑎᒥᖏᑦ / Organisations inuites nationales et internationales

- Inuit Circumpolar Council (Canada)
- Inuit Tapiriit Kanatami

Regional Organizations, Agencies and Governments / ᐊᕕᒃᑐᖅᓯᒪᔪᓂᒃ ᑎᒥᐅᔪᑦ, ᑭᒡᒐᖅᑐᖅᕖᑦ ᒐᕙᒪᐅᔪᓪᓗ / Gouvernements, agences et organisations régionales

Inuvialuit Region

- Inuvialuit Joint Secretariat

Nunatsiavut

- Nunatsiavut Government
- Nunatsiavut Department of Lands and Natural Resources

Nunavik

- Kativik Regional Government
- Kativik School Board
- Makivik Corporation
- Nunavik Inuit Land Claims Agreements
- Nunavik Marine Region Wildlife Board
- Nunavik Regional Board of Health and Social Services
- Nunavik Research Center

Nunavut

- Nunavut Tunngavik Incorporated
- Nunavut Wildlife Management Board

Northern Communities / ᐅᑭᐅᖅᑕᖅᑐᕐᒥᑦ ᓄᓇᓖᑦ / Communautés Nordiques

Aklavik, NT

Akulivik, QC

Aqvituq, NL (Hopedale)

Arviat, NU

Ausuittuq, NU (Grise Fjord)

Churchill, MB

Clyde River, NU

Happy Valley-Goose Bay, NL

Igluligaarjuk, NU (Chesterfield Inlet)

Iglulik, NU (Igloolik)

Ikpiarjuk, NU (Arctic Bay)

Inuvik, NT

Iqaluit, NU

Iqaluktuttiaq, NU (Cambridge Bay)

Ivujivik, QC

Kangiqliniq, NU (Rankin Inlet)

Kangiqsualujjuaq, QC

Kangiqsuk, QC

Kangiqtugaapik, NU (Clyde River)

Kangirsujuaq, QC

Kikiak, NL (Rigolet)

Kugluktuk, NU

Kuugaarjuk, NU (Kugaaruk)

Kuujjuaq, QC

Kuujjuaraapik, QC

Marruuvik, NL (Makkovik)

Mittimatalik, NU (Pond Inlet)

Naujaat, NU (Repulse Bay)

Nunainguk, NL (Nain)

Panniqtuuq, NU (Pangnirtung)

Paulatuk, NT

Puvirnituq, QC

Qamani'tuaq, NU (Baker Lake)

Qausuittuq, NU (Resolute Bay)

Qipuqqaq, NL

Quaqtaq, QC

Sachs Harbour, NT

Salliq, NU (Coral Harbour)

Salluit, QC

Sanikiluaq, NU

Sanirajak, NU (Hall Beach)

Talurjuaq, NU (Taloyoak)

Tasiujaq, QC

Tikirarjuaq, NU (Whale Cove)

Tuktoyaktuk, NT

Uluhaktuk, NT (Holman)

Umiujaq, QC

Uqsuqtuuq, NU (Gjoa Haven)

Industry / ᑮᓇᐅᔾᔭᒃᓴᖅᑐᓕᕆᔩᑦ / Industries

Agnico-Eagle Mines

Air Inuit

Baffinland Iron Mines Corporation

Beachwalker Films

BP Exploration Operating Company Ltd

Campbell Scientific

Fednav Limited

First Air

Geosensors Inc.

Golder Associates

Groupe Desgagnés

Hydro-Québec

Imperial Oil Resources Ventures Limited

Inuvialuit Regional Corporation

JF Boucher Consulting Ltd

Kongsberg Maritime

Les productions Oxydant

Manitoba Hydro

Québec Outfitter Federation Inc.

Quest Rare Minerals

romor Ocean Solutions

Sensors by Design

Sikumiut Environmental Consulting

SNC - Lavalin

Sovereign Geographic Inc.

The Axys Group

Western Ag Innovations

Westgrid

Wildlife Genetics International

Xstrata Nickel - Raglan Mine

Universities and Institutes / ᓯᓚᑦᑐᖅᓴᕐᕕᒃᔪᐃᑦ ᑎᒥᐅᔪᓪᓗ / Universités et instituts

Alfred Wegener Institute Foundation for Polar and Marine Research

Arctic and Antarctic Research Institute

Arctic Institute of North America

Aurora Research Institute

Australian National University

Balsillie School of International Affairs

Bishop's University

Bodø Graduate School of Business

Canadian Circumpolar Institute

Carleton University

Centre de Recherche du Centre hospitalier de l'Université Laval

Centre for Earth Observation Science (CEOS)

Centre for Military and Strategic Studies

Centre interuniversitaire d'études et de recherches autochtones (CIÉRA)

Chaire Raoul Dandurand - UQAM

Columbia University - Lamont-Doherty Earth Observatory

Concordia University

Cornell University

Courant Institute of Mathematical Sciences

Dalhousie University

Duke University

Durham University

École nationale d'administration publique

GIPSA-Lab

Harvard University

Institut des sciences de la mer de Rimouski

Institut de recherche en biologie végétale

Institute for Circumpolar Health Research

Institute of the North

Institut national de la recherche scientifique - Eau, Terre et Environnement

Institut national de la recherche scientifique - Institut Armand-Frappier

Labrador Institute of Memorial University

Lakehead University

Louisiana State University

McGill University

McMaster University

Memorial University of Newfoundland

Mount Allison University

Norwegian School of Veterinary Science

Old Dominion University

Oregon State University

Queen's University

Royal Military College of Canada

Royal Veterinary College, University of London

Simon Fraser University

St. Jerome's University

Stanford University

Stony Brook University

The King's University College

Trent University

Université catholique de Louvain

Université de Lausanne

Université de Liège

Université de Montréal

Université de Sherbrooke

Université du Québec à Chicoutimi

Université du Québec à Montréal

Université du Québec à Rimouski

Université du Québec à Trois-Rivières

Université Laval

Université Pierre et Marie Curie

University of Aberdeen

University of Alaska Anchorage

University of Alaska Fairbanks

University of Alberta

University of British Columbia

University of Calgary

University of Cambridge

University of Colorado

University of Colorado at Boulder - CIRES

University of Connecticut

University of Guelph

University of Kiel

University of Lomonosov Moscow

University of Manitoba

University of Miami - Rosenstiel School of Marine and Atmospheric Science

University of Munich

University of New Brunswick

University of Northern British Columbia

University of Oslo

University of Ottawa

University of Oxford - Linacre College

University of Plymouth

University of Prince Edward Island

University of Saskatchewan

University of Sheffield

University of South Carolina

University of Southern Denmark

University of the Sunshine Coast

University of Toronto

University of Tromso

University of Victoria

University of Washington

University of Waterloo

University of Western Ontario

University of Windsor

University of Winnipeg

US Naval War College

Wilfrid Laurier University

Woods Hole Oceanographic Institute

York University

Other / ᐊᓯᖏᑦ / Autres

Aklavik Health Centre

Aklavik Health Committee

Alaska National Park Service

Aquatic Bio-Services

Arctic Raptors Inc.

Association des étudiantes et des étudiants de Laval inscrits aux études supérieures

Beaufort-Delta Health & Social Services

C-Change ICURA

Canadian Association of Zoos and Aquariums

Canadian Cryospheric Information Network

Canadian Museum of Nature

Canadian North Helicobacter pylori (CANHelp) Working Group

Canadian Scientific Submersible Facility

Canadian Wildlife Federation

Cape Dorset Hunters and Trappers Organization

Cégep de Sainte-Foy

Cégep Marie-Victorin

Centre d'étude des politiques étrangères et de sécurité (CEPES)

Centre d'études nordiques

Centre for Indigenous Peoples' Nutrition and Environment

Centre for International Climate and Environmental Research

Centre for International Governance Innovation

Centre hospitalier universitaire de Québec

Centre national de la recherche scientifique

Churchill Northern Studies Centre

Coalition of District Education Authorities of Nunavut

Department of Health and Social Services (Iqaluit)

East Iceland Natural History Institute

Embassy of the Russian Federation in the Netherlands

European Space Agency

Extreme North Agricultural Research Institute

Fisheries Joint Management Committee

Food Security Network of Newfoundland and Labrador

Geological Survey of Denmark and Greenland

Georgian College

Greenland Institute of Natural Resources

Hauser Bears

International Arctic Science Committee

International Development Research Centre

Inuit Heritage Trust

Iqaluit Community Tukisigiarvik Society

Kangidluasuk

Kitikmeot Heritage Society

Land-Ocean Interactions in the Coastal Zone (LOICZ)

Let's Talk Science

Les Entretiens Jacques Cartier

Museo National de Ciencias Naturales

Nain Research Centre

Nasivvik Centre for Inuit Health and Changing Environments

National Aboriginal Health Organization

National Institute of Public Health - Denmark

National Museum of Natural History of France

Nayumivik Landholding Corporation

Norwegian Institute for Defense Studies

Norwegian Water Resources and Energy

Nunavut Arctic College

Nunavut General Monitoring Plan

Nunavut Research Institute

Nunavut Sivuniksavut

Ocean Tracking Network

Olokhaktomiut Hunters and Trappers Committee

Ouranos

Paulatuk Hunter and Trappers Committee

Qaujigiartiit Health Research Centre

Quark Expeditions

Québec-Océan

Resilience Alliance

Russian Academy of Sciences

S. and A. Inspiration Foundation

Sachs Harbour Community Corporation

Sachs Harbour Hunters and Trappers Committee

Stanton Territorial Health Authority

The James Hutton Institute

The Kenneth M Molson Foundation

The Peregrine Fund

The W. Garfield Weston Foundation

Unité de recherche en santé publique

USGS Alaska Science Center

Walter & Duncan Gordon Foundation

Wapikoni

Wildlife Conservation Society Canada

World Wildlife Fund Canada

Yukon College

FINANCIAL SUMMARY / ᑮᓇᐅᔭᓕᕆᓂᖏᑦ ᓇᐃᓈᖅᓯᒪᔪ ᐅᓂᒃᑳᑦ / SOMMAIRE FINANCIER

ArcticNet was audited in May 2012 and June 2013 in accordance with generally accepted Canadian auditing standards. The following figures and financial summary are prepared from the unqualified financial statements.

ArcticNet a été vérifié en mai 2012 et juin 2013 selon les normes de vérification généralement reconnues du Canada. Les données financières suivantes sont extraites des rapports financiers produits sans restriction.

Revenues, expenses and net assets / Revenus, dépenses et actif net

For the fiscal year ending 31 March/ Pour l'année fiscale se terminant le 31 mars.

Revenues / Revenus	2013	2012
Networks of Centres of Excellence Grant / Subvention des Réseaux de centres d'excellence	9,580,000	9,559,000
Network partner contributions / Contributions des partenaires du réseau	1,834,232	6,964,392
Arctic Inspiration Prize / Prix Inspiration Arctique	1,000,000	0
Others / Autres	181,155	80,716
Total revenues / Revenus totaux	**$12,595,387**	**$16,604,108**
Expenses / Dépenses		
Research Projects (NCE) / Projets de recherche (RCE)	4,270,617	4,452,764
Research Projects (Non-NCE) / Projets de recherche (Non-RCE)	326,964	3,026,699
Core infrastructure (NCE) / Infrastructure majeure (RCE)	1,049,194	3,131,946
Core infrastructure – (Non-NCE) / Infrastructure majeure – (Non-RCE)	609,005	3,306,854
Amortization of equipment / Amortissement de l'équipement	352,020	263,798
Arctic Inspiration Prize / Prix Inspiration Arctique	1,055,539	0
Administrative Centre / Centre administratif	2,632,061	1,771,267
Total expenses / Dépenses totales	**$10,295,400**	**$15,953,328**
Excess (deficiency) of revenues over expenses Excédent (déficit) des revenus sur les dépenses	**$2,299,987**	**$650,780**
Net assets, beginning of year / Actifs net, début de l'exercice	2,112,425	1,461,645
Net assets, end of year / Actifs net, fin de l'exercice	**$4,412,412**	**$2,112,425**

Balance Sheet as of 31 March / Bilan au 31 mars

ASSETS / ACTIF	2013	2012
Cash / Encaisse	8,008,703	4,185,364
Accounts receivable / Comptes à recevoir	139,829	440,032
Prepaid expenses / Frais payés d'avance	683,276	768,085
	$8,831,808	**$5,393,481**
Capital assets / Immobilisations	1,823,662	1,874,875
	$10,655,470	**$7,268,356**
LIABILITIES / PASSIF		
Accounts payable and accrued liabilities / Comptes à payer et frais courus	576,521	847,117
Deferred grants / Apports reportés	5,666,537	4,308,814
	$6,243,058	**$5,155,931**
NET ASSETS / ACTIF NET		
Invested in capital assets / Investi en immobilisations	39,709	21,684
Unrestricted Assets / Actif non affecté	4,372,703	2,090,741
	$10,655,470	**$ 7,268,356**

Statement of cash and in-kind contributions / Sommaire des contributions en espèces et en nature

	Cash / En espèces		In-kind / En nature	
	2012-2013	**2011-2012**	**2012-2013**	**2011-2012**
NCE / RCE	9,580,000	9,559,000	0	0
Non-NCE[1] / Non-RCE[1]				
Provincial / Provinciales	1,648,607	864,287	470,600	324,000
Federal[2] / Fédérales[2]	4,599,946	4,664,118	5,366,750	6,670,874
University / Universitaires	1,114,886	354,659	2,699,911	1,222,280
Industry / Industrielles	565,000	7,551,972	300,200	2,291,600
Others / Autres	1,705,683	857,943	1,866,650	4,495,583
Non-NCE / Non-RCE	9,634,122	14,292,979	10,704,111	15,004,337
Total NCE and non-NCE Total RCE et non-RCE	**$19,214,122**	**$23,851,979**	**$10,704,111**	**$15,004,337**

1 Certain funds contributed by Network Partners to support research projects are forwarded directly to researchers and are not managed by the ArcticNet Administrative Centre / Certaines contributions des partenaires du réseau aux projets de recherche parviennent directement aux chercheurs et ne sont pas gérées par le centre administratif d'ArcticNet.

2 These federal contributions do not include contributions received from the Federal granting councils, the Canada Foundation for Innovation and Genome Canada. / Ces contributions fédérales n'incluent pas les contributions des conseils de recherche, de la fondation canadienne pour l'innovation et de Génôme Canada.

In Memoriam

Martin "Marty" Bergmann

1956 – 2011

The international Arctic research community lost one of its most dedicated champions in 2011. A colleague and friend to so many around the circumpolar world, Marty's legacy lives on, helping us carry the torch that suddenly got dimmer without him.

La communauté internationale de recherche arctique a perdu un de ses plus dévoués champions en 2011. Un collègue et ami pour tant de gens du monde circumpolaire, Marty nous a laissé en héritage son dévouement de toute une vie, nous aidant à porter le flambeau, soudainement devenu moins brillant en son absence.

ᓄᓇᕐᔪᐊᕐᒥᐅᑦ ᐅᑭᐅᖅᑕᖅᑐᕐᒥᒃ ᕿᐅᔨᓴᖅᑎᐅᖃᑎᒌᑦ ᐃᓚᖕᒐᓚᐅᖅᑐᑦ ᐊᒃᓱᕈᐃᓐᓇᖃᖅᑕᖅᑐᕐᒥᒃ ᐱᓕᕆᖃᑦᑕᓚᐅᖅᑐᕐᒥᒃ 2011-ᖑᑎᓪᓗᒍ. ᐊᑖᑦᑎᐊᕙᐅᓚᐅᖅᑐᖅ, ᐅᐃᑦᑎᐊᕙᐅᓪᓗᓂ, ᐃᖅᑲᓇᐃᔮᖃᑎᑦᑎᐊᕙᒃ ᐊᒻᒪᓗ ᐃᓚᓐᓇᕆᔭᐅᓚᐅᕐᒥᔪᖅ ᐅᓄᖅᑐᐊᓗᖕᓄᑦ ᐅᑭᐅᖅᑕᖅᑐᓕᒫᕐᒥᑦ, ᒫᑎ ᐃᖅᑲᐅᒪᔭᐅᑦᑎᐊᖅᑐᖅ ᐳᐃᒍᖅᑕᐅᔮᖏᓐᓂᓗ, ᑕᒪᓐᓇᓗ ᐅᕙᑦᑎᓐᓄᑦ ᐃᑲᔪᕈᑕᐅᖏᔪᖅ ᑲᔪᓯᑦᑎᑦᑕᓱᒃᑎᓪᓗᑕ ᐱᓕᕆᐊᕆᕙᓚᐅᖅᑕᖓᓂᒃ ᖃᐅᒪᓂᖅᑎᑐᑦ ᑭᓯᐊᓂ ᖃᐅᒪᓗᐊᕈᓐᓇᐃᑲᓴᓚᐅᖅᑰᒐᓗᐊᖅ ᐅᕐᑯᒪᐃᓕᓂᖅᓴᐅᓪᓗᓂᓗ ᑕᐃᒪᐅᔪᓐᓇᐃᕋᒥ.

This report is available in English, French and Inuktitut
ᐅᓇ ᐅᓂᒃᑳᖅ ᐊᑐᐃᓐᓇᐅᔪᖅ ᖃᑦᑐᓈᑎᑐᑦ, ᐅᐃᒍᑐᑦ ᐊᒻᒪ ᐃᓄᒃᑎᑐᑦ
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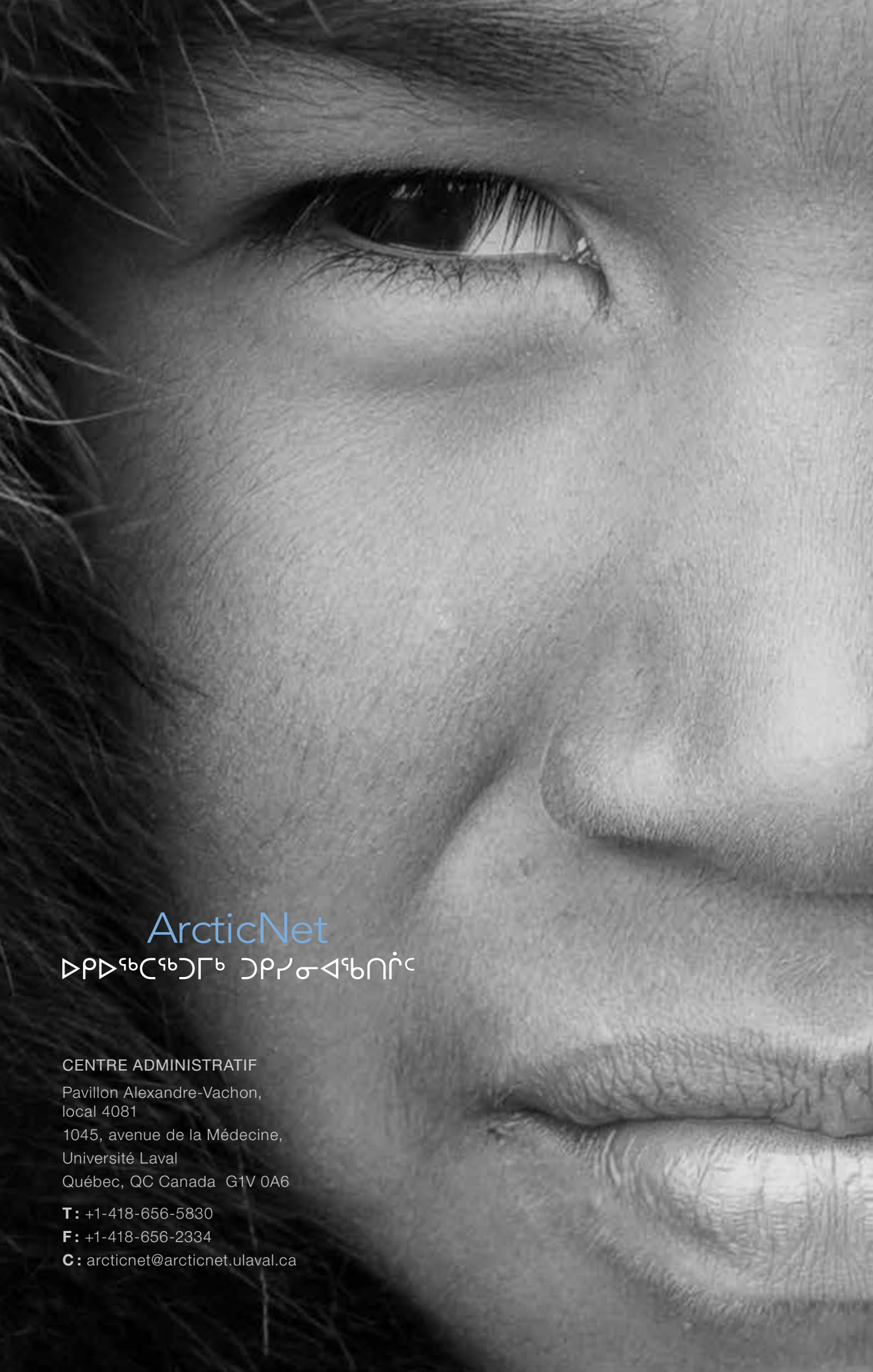

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