


ArcticNet Annual Report

2021/2022

Working together
in a changing
Canadian Arctic



ArcticNet
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ArcticNet is a Network of Centres of Excellence of Canada that brings together Arctic researchers, engineers and managers studying human health, natural and social sciences in the Arctic.

With partners from Inuit organizations, northern communities, 35 Canadian universities, eight federal and 11 provincial government agencies, ArcticNet works collaboratively with international research teams throughout Denmark, Finland, France, Greenland, Japan, Norway, Poland, Spain, Sweden, the United Kingdom and the United States, to study the impacts of rapid climate, environmental and socio-economic change.

ArcticNet is hosted at Université Laval with support from the University of Ottawa.



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Introduction

Note from Leadership

2021/22 marked the third year of ArcticNet 2.0, solidifying ArcticNet's exciting future-focused direction and building on the significant successes of two decades of ArcticNet research.

Over the past year, ArcticNet expanded its core research and North-by-North programs, created a new High Impact Publications program, and launched three Calls for Proposals to fund new research addressing the most pressing concerns in Arctic and Northern research.

ArcticNet led the commissioning of a Council of Canadian Academies (CCA) assessment by leveraging over \$500,000 from 31 partner groups to conduct a study on the future of Arctic and northern science, with an aim of improving connections and effectiveness of the Arctic research ecosystem in Canada. This year also saw the growth of equity, diversity and inclusion (EDI) initiatives for a more informed, inclusive and diversified Arctic research community, as well as enhanced training and networking opportunities for the next generation of cold-region specialists.

During this third year of ArcticNet 2.0, we focused on building on what we have learned over the past two decades to be ready for a strong future. In 2021/22, we strengthened partnerships, established new partnerships, and developed our strategic focus towards a transformed ArcticNet. We are excited to move into the new phase of our organization at the conclusion of the NCE program, and are confident ArcticNet's solid foundation and enthusiastic Network will ensure we continue the momentum.

We are proud of the hard work, commitment and passion for the Canadian Arctic lived daily by our researchers, partners, Board, committee members, and dedicated staff. Together, this Network is generating world-leading knowledge, creating new opportunities, and developing an inclusive, welcoming community to lead Canada into the future of northern and Arctic research.

ArcticNet Leadership:



Jackie Dawson
Scientific Director



Philippe Archambault
Co-Scientific Director



Donna Kirkwood
Chair of the Board of Directors



Christine Barnard
Executive Director

ArcticNet by the Numbers



Active projects



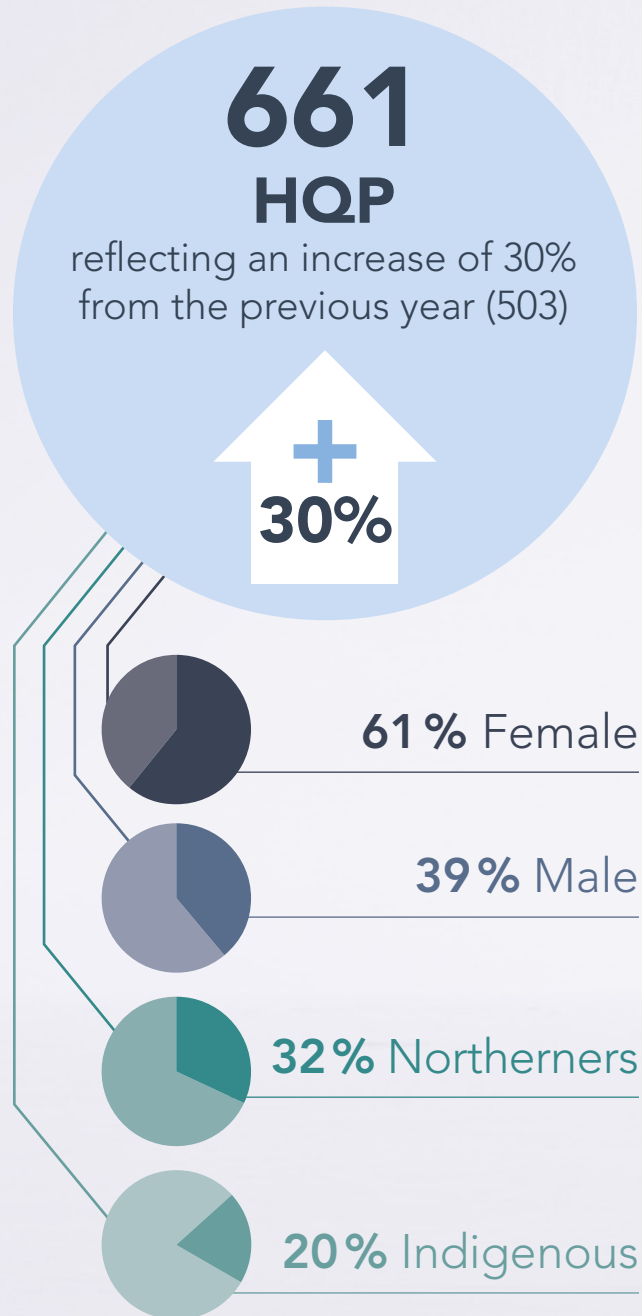
Researchers



Universities

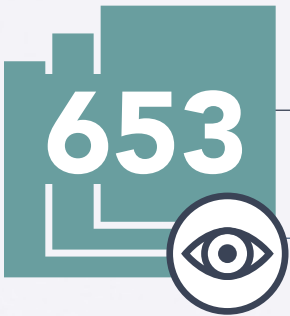


**Colleges, northern
post-secondary institutions,
and Inuit communities**





Participants at the virtual **Annual Science Meeting's Student Day**



Publications in the 2021/22 fiscal alone

367 of which are peer-reviewed



Participants at the **ASM 2021 online**

362 Northern participants





About ArcticNet

A world-leading research network studying the Canadian North

ArcticNet began as a Network of Centres of Excellence first incorporated in 2003. Since those early beginnings, the organization has grown and developed into a world-leading research network bringing together communities, governments, partners, and researchers working toward a common goal: a strong, thriving, and resilient Canadian Arctic.

Earth's rising temperatures are causing tremendous environmental and socio-economic consequences felt first and most severely in Arctic communities and territories. ArcticNet contributes to the growth and distribution of knowledge required to strengthen capacity and economic development in the Arctic and establish national policies and strategies to assist Canadians with the impacts and opportunities of climate change.

ArcticNet brings together more than 171 Arctic researchers from 52 Canadian post-secondary institutions and Inuit organizations with northern communities, research institutes, industry partners, governments, and international agencies to create a uniquely diverse approach to northern research. ArcticNet works collaboratively with international research teams from Denmark, Finland, France, Greenland, Japan, Norway, Poland, Spain, Sweden, the United Kingdom and the United States, to study the impacts of climate and socioeconomic changes in the Canadian North.



Vision

A future where improved observations, modelling, capacity-building, and knowledge exchange enable researchers, Inuit, Indigenous communities, Northerners, and decision-makers to co-develop adaptation strategies minimizing negative impacts and maximizing positive outcomes resulting from the transformation of the Canadian Arctic

Mission

- Deliver world-class science addressing national and Indigenous priorities,
- Advance and prioritize Indigenous-led research in the North, for the North, and by the North,
- Connect Canada's diverse Arctic knowledge assets to enhance discovery, decision making, inclusion, and leadership,
- Advance and transform the management of Arctic science in Canada through support of Indigenous self-determination in research,
- Train and mentor Canada's next generation of northern and southern Arctic experts,
- Train and mentor Arctic youth in Indigenous self-determined research, research management and administration, and knowledge co-production,
- Support decision makers and Arctic leaders through rapid knowledge assessments and the dynamic ArcticKT Portal, and
- Enhance international leadership and Canadian-led innovations in Arctic science.

Building on two decades of research, relationship building, and knowledge sharing to understand the changing Arctic region, ArcticNet is well poised to continue building coordinated, collaborative, and sustainable Arctic research in Canada.

The Year in Review

ArcticNet continues to support a portfolio of research across multiple disciplines, regions, communities and institutions. At the close of the 2021/22 fiscal year, ArcticNet was funding 87 active projects with over 171 researchers from 35 universities and 12 colleges, northern post-secondary institutions, and Inuit communities.

The 2021/22 year marked the third year of ArcticNet 2.0 with a significant expansion of its existing research programs (**core** and **North-by-North**), and the creation of a new program to build on two decades of ArcticNet research, known as the High Impact Publications program.

In 2021/22, ArcticNet welcomed a new cohort of projects under the **Core Research Program** that address emerging Arctic science priorities in Canada. This program was released in partnership with UNESCO's Intergovernmental Oceanographic Commission (IOC), Fisheries and Oceans Canada (DFO), Mitacs, and Students on Ice. The new cohort consists of 11 projects with a total budget of \$2.5M.

The **High Impact Publications Program** is a new program that was also launched this year in response to feedback received from the RMC and larger community of Arctic researchers to make use of the diverse data sets and knowledge that has been generated throughout ArcticNet's rich history via interdisciplinary teams aiming to generate high impact synthesis papers.

This year, the Inuit Qaujisarnimut Pilirijjutit (IQP) – formerly known as the Inuit Nunangat Research Program (INRP) – released its second Call for Proposals. A competitive review process conducted by the Inuit Research Management Committee (IRMC) resulted in the approval of a roster of new projects to commence in the 2022/23 fiscal year. A total of \$1.6M will support 11 Inuit-led research projects across Inuit Nunangat.

ArcticNet's focus on HQP includes a robust commitment to training from the North and South, expanding our focus with North-to-North training among researchers and knowledge holders. With the full implementation of the North-by-North program, training capacity was enhanced throughout and within the North. HQP continue to fill essential roles in all programs and governance committees.





In the past year, we continued to grow and strengthen our partnerships as a vital component to our programming and strategic planning. We saw the value of a partnered approach as we led the commissioning of the CCA assessment to produce external, independent perspectives on Arctic science and policy to help ArcticNet and the Arctic research community as a whole, chart its path forward. Our emphasis on partnerships was demonstrated by our work with local, regional and global partners to leverage funds for research and garner support for Indigenous-led research. Through new and old partnerships, we brought together researchers from diverse knowledge systems, sectors, and disciplines.



As a well-oiled machine and mature network, ArcticNet leadership has taken the reins on defining its future as the leading Canadian Arctic science funder and convener. With Indigenous and federal partners, we have carved out a niche in the Canadian Arctic research scene. Moving into the future, we will continue to support inclusive research and cutting-edge science to address the challenges and opportunities faced by the North and the global society.



Funding Research

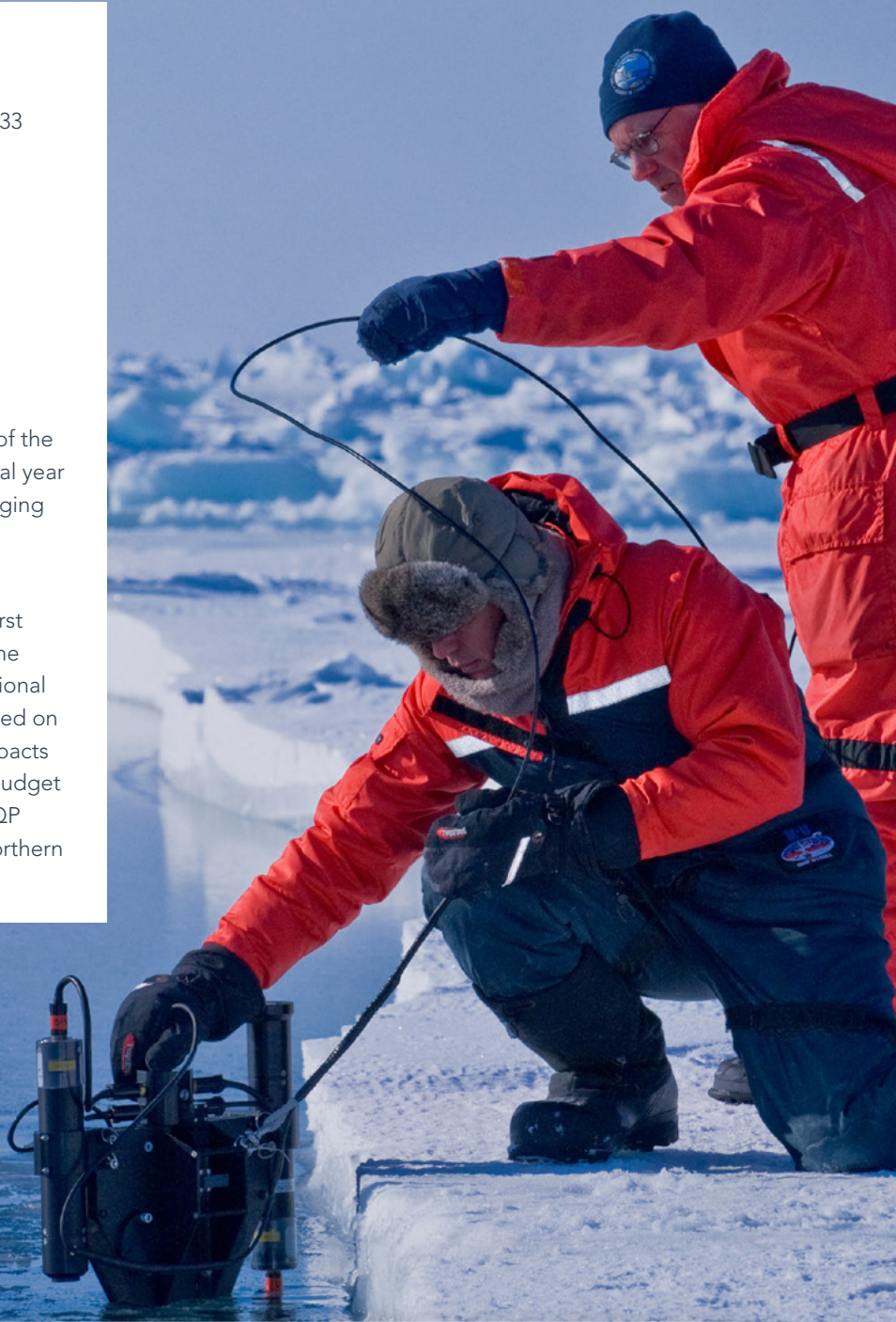
Core Research Program

ArcticNet's Core Research Program includes 33 projects, organized into five main themes:

1. marine systems;
2. terrestrial systems;
3. Inuit health, education, and adaptation;
4. northern policy and development; and
5. knowledge transfer.

ArcticNet broadened the scope and impact of the Core Research Program in the 2021/2022 fiscal year with a new suite of projects addressing emerging Arctic science priorities in Canada.

The **Core Research Extension Program** granted high-performing projects from the first Core Research Program cohort (2019-2024) the opportunity to extend their work by an additional year. A total of 11 projects were selected based on their research and training outcomes and impacts to date. The extensions were issued a total budget of \$762K to enable continued support for HQP training, additional outcomes, support for northern communities and Inuit researchers.



North-by-North Program

Inuit Qaujisarnirmut Pilirijjutit (IQP)

Under the **North-by-North Program**, the **Inuit Qaujisarnirmut Pilirijjutit (IQP)**, formerly known as the Inuit Nunangat Research Program, continued to support 11 existing projects and funded a roster of 11 new projects (\$1.6M) that will begin in fiscal year 2022/2023 following another successful open Call for Proposals. The Inuit Research Management Committee (IRMC) led the full process following key principles of the National Inuit Strategy on Research (NISR), and developed and applied an adapted proposal review process based on ongoing community feedback in order to ensure that all funded projects respond to regional research priorities and regional standards for research and community engagement.

North-by-North Program: Northern Research Leaders Program

The **Northern Research Leaders Program** supported 25 research and research-support positions in the 2021/22 fiscal year (\$750K; \$1.5M in 2022/2023) at Yukon University, Aurora College, Nunavut Arctic College, and Labrador Campus of Memorial University substantially expanding research capacity in northern universities and colleges.



The research focus areas supported through this program include:

- 1 Permafrost
- 2 Hydrology
- 3 Northern business and economy
- 4 Indigenous approaches to environmental management
- 5 Health and community
- 6 Oral history
- 7 Institutional case studies
- 8 Climate-sensitive health outcomes
- 9 Indigenous mental health
- 10 Inuit-led conservation science
- 11 Northern food systems



Satellite Research Program

ArcticNet’s Satellite Research Program is designed to leverage NCE-funded projects into the international Arctic science landscape to enhance our research impact, mobilize research findings, and grow our network.

Some initiatives from the Satellite Research Program:

1. The Northern Freshwater project (Dr. Rautio) collaborated as part of the circumpolar project T-MOSAIc involving 16 countries and is an ArcticNet initiative under the auspices the International Arctic Science Committee. An MoU was signed between ArcticNet and T-MOSAIc in 2021, and ArcticNet is sponsoring a special T-MOSAIc issue of Arctic Science.
2. Dr. Else’s team contributed to a policy brief summarizing the ecosystem services provided by sea ice, where they detailed the role of sea ice biogeochemistry in supporting habitat, provisioning, cultural, and climate regulating services. This brief, presented at the Cryosphere pavilion during [COP26](#), contributes to monitoring of marine protected areas at both poles.
3. Drs. Little and Kenny contributed to the [Human Health in the Arctic 2021](#), a report published under the umbrella of the Arctic Monitoring and Assessment Program Human Health Expert Group.
4. Dr. Dawson is co-leading a workshop package on Arctic shipping risks in the Horizons 2020 funded project called Arctic Passions which involves over 12 countries and a budget of over 21.5 million (CA)
5. Several ArcticNet researchers are playing leadership roles in the CINUK (Canada Inuit Nunangat United Kingdom) program led by Natural Environment Research Council (NERC) in the UK and supported by several Canadian organizations (i.e. ITK, Polar Knowledge Canada, FRQ, and National Research Council).

Research Highlights

ArcticNet supports a wide range of world-leading research teams generating knowledge, building partnerships, training highly qualified personnel, and mobilizing knowledge to end-users. The following highlights showcase a few of the 87 currently active projects in ArcticNet's funding portfolio; to read about these and other projects in more detail, please visit www.arcticnet.ulaval.ca.

Marine Systems

Community Biogeochemistry project

Global carbon budgets are required to better predict future climate change and to take full account of its impacts. Led by Dr. B. Else (Core Program), the *Community Biogeochemistry* project developed a new and powerful method that allowed them to conduct the first ever high-resolution survey of dissolved nitrous oxide (N₂O) and methane (CH₄) concentration in surface Arctic Ocean water. Findings suggest that enhanced glacial melt could drive enhanced sea-air fluxes of these gases. Dr. Else's team also showed that state-of-the-art scientific projects can evolve to meet modern visions of Arctic research, where meaningful community engagement is crucial. By diversifying the platforms from which their research was conducted, Dr. Else's team published 10 papers based on community-based work in Cambridge Bay. Utilizing community-based sample collection, they were able to observe the transport of massive amounts of CH₄ and N₂O from an Arctic river into the ocean.

Impacts

- 1 Furthers knowledge of the full impacts of CH₄ and CO₂ concentrations in Arctic waters
- 2 Improves community-based monitoring of the Arctic environment
- 3 Equips northern communities with knowledge to prepare for the impacts of glacial melt

The Marralik estuary beluga project

The *Marralik estuary beluga project* in Kangiqsualujjuaq and Kuujjuaq, Nunavik, led by J. May and the Regional Nunavimmi Umajulirijiit Katuqiatigininga (IQP program), has advanced understanding about the Marralik estuary, a traditional beluga-hunting site, and conservation concerns around its beluga population. Through youth and Elder engagement in data collection, monitoring activities, harvest and knowledge sharing during hunting camps, this project has provided a regional model for a holistic approach to community-engaged and led research for a topic of great concern to nearby villages. This project has laid the foundation of a long-term monitoring program, with results aimed at re-evaluating the current hunting ban and additional country food options nearby.

Impacts

- 1 Improves understanding about the Marralik estuary
- 2 Informs policy decisions regarding hunting bans
- 3 Equips communities with the tools to begin long-term monitoring of the Marralik estuary



Terrestrial Systems

Northern Freshwater project

Lakes and rivers are major features of the Canadian Arctic. These northern aquatic ecosystems are highly vulnerable to ongoing climate change and considered sensitive indicators. Working in five hydro-ecosystems across the Canadian Arctic, Dr. M. Rautio (Core program) is leading the *Northern Freshwater* project that contributes to the increased understanding of microbial, plankton and macroinvertebrate diversity in northern freshwater bodies. The project advances the knowledge of freshwater food web structure and energy transfers from microbes to fish, with important consequences on the local communities using lakes as drinking water and fish sources. Results show that with warming and consequent changes in hydrology and permafrost thaw, the ecology and biogeochemistry of these waterbodies are impacted. For instance, the activity of microorganisms regulating carbon flux (greenhouse gas emissions) is altering and chemosynthesis of particulate organic carbon in affecting carbon cycling.

Impacts

- 1 Predicts the impacts of climate change on northern aquatic ecosystems
- 2 Improves understanding of the interaction between the freshwater food web structure and energy transfers from microbes to fish

Kaujvalliajut nillikulunnik | Getting to know little geese

This project, led by M. Purcell and the Torngat Secretariat (IQP program), aims to 'get to know' a new arrival to Nunatsiavut, a medium-bodied goose, and to respond to community questions about their origin, threat, and potential for an additional food source. Community members play an active and valuable role in this project by organizing community outreach events in all five coastal communities and participate in training for deploying camera stations and identifying sites for trapping geese in the fall. Results from genetic, stable isotope, camera trapping, and spatial tracking methods will support future bird monitoring projects and explore other outstanding community questions about the Lesser Geese.

Impacts

- 1 Incorporates community members into the project and thus improves community-based monitoring of wildlife
- 2 Improves understanding of a newly arrived species in Nunatsiavut and its potential benefits and risks



Inuit Health and Adaption

Assessment of the viability of goose harvesting as a response to food sovereignty in Arviat

This project, led by K. Baker and the Aqqiumavvik Society (IQP program) in Arviat, Nunavut, has engaged the community in a study focused on exploring promising options for promoting increased consumption of geese and eggs. The project builds on the results of a previous study conducted on the impacts of overpopulation of local snow geese. This project has gathered historical knowledge about the relationship to geese, impact data around interruptions to goose consumption, especially resulting from historical bans on harvesting, and has reviewed current regulations relative to goose harvesting. Through a community survey, concerns that may be limiting consumption of geese will be investigated. Through engaging the Young Hunters Program in data gathering and related activities, this project is building new capacity among young people in the full use of harvested animals (i.e., butchering, processing, and preserving of geese for food products).

Impacts

- 1 Informs youth of traditional goose harvesting and equips them with the knowledge to harvest animals
- 2 Equips the community with the tools needed to achieve food sovereignty

One Health

Strong connections among the land, wildlife, and people in the Canadian North require a One Health approach to address complex challenges at the interface of human, animal, and ecosystem health by engaging multiple disciplines and non-academic stakeholders. Led by Drs. E. Jenkins and P. Leighton (Core Program), the *One Health* project aims at building a network of researchers and community partners to monitor, model, and mitigate One Health threats across the changing Canadian North. Over the past year, the team built a rabies model that allows simulations of the risk of rabies on a pan-Arctic scale. This was possible thanks to a unique combination of parameters, including high quality telemetry data on Arctic fox movement; analysis of a 50-year time series of rabies outbreaks across the Arctic; availability of new high-resolution climate and sea ice projections under climate change; the development of an entirely new agent-based modeling platform applicable to animal diseases worldwide; and securing competitive external funding to fully exploit the unique high-performance computing infrastructure of Compute Canada.

Impacts

- 1 Equips the community with the tools needed to manage and mitigate threats to the north's ecosystems
- 2 Applies the One Health approach to the Canadian North, integrating environmental and public health for a holistic ecosystem-level view.



Knowledge Transfer

Dehcho Collaborative on Permafrost

Permafrost thawing is one of the most critical impacts of climate change in terrestrial ecosystems. Led by Dr. W. Quinton (Core Program), the *Dehcho Collaborative on Permafrost project* aims at improving the understanding of and the ability to predict and adapt to permafrost thaw in the Dehcho region. Dr. Quinton's team developed a new permafrost probability map which is an invaluable tool for resource managers and planners. Moreover, Dr. Quinton and his Indigenous partners have made significant progress with the transition of the Scotty Creek Research Station into Canada's first Indigenous-led research park, an "ArcticNet flagship" for Indigenous-Scientific collaboration and engagement.

Impacts

- 1 Equips managers and planners with a mapping tool to determine permafrost probability
- 2 Inform management and adaptation strategies
- 2 Provides communities with tools needed to preserve permafrost supporting infrastructure

Hilap Aulaniit Qanuq Atayut (The World and its Connections)

This project, led by E. Angulalik and the Pitquhirnikkut Ilihautiniq / Kitikmeot Heritage Society (IQP program), is an Inuit-driven project, coordinated by Elders and Inuinnaqtun experts in Cambridge Bay to document environmental terms and knowledge to build an environmental lexicon for the Inuinnaqtun language. This team works with community members and partners to host land-based workshops documenting detailed Inuinnaqtun knowledge of the natural world and create new access points to this knowledge through print and digital resources. The team planned and coordinated, and will execute and evaluate, an Inuinnaqtun approach to documenting Inuinnaqtun environmental knowledge. This project is a response to English being the *lingua franca* of environmental sciences in the North, and this lexicon will contribute to the revitalization of Inuinnaqtun concepts and terminology describing culturally unique knowledge and relationships with the Arctic environment.

Impacts

- 1 Equips Inuit to use their own languages in engaging in Arctic and northern sciences
- 2 Mobilizes and disseminates Inuit traditional and environmental knowledge to a wider audience

Northern Policy and Development

NRLP program

The research program at Labrador Campus led by Northern research leader Dr. N. Pollock (NRLP program), focuses on Northern Indigenous mental health, Northern Indigenous child and youth welfare, and rural and remote health systems. Specifically, NRLP program funding has led to leveraging funds from the University of Alberta and the Canada Research Chairs program to create a robust, national, first-of-its-kind in Canada survey on climate change and mental health. Launched April 1, 2022, this survey will provide national data on the prevalence and distribution of various climate-sensitive mental and emotional health outcomes. Working in close collaboration with Indigenous and Northern health authorities and organizations in Labrador and throughout the Circumpolar North, this research has direct relevance for policy, programming, and planning.

Impacts

- 1 Linking the impacts of climate change on public health, particularly mental health

ACCCPE

Led by Dr. G. Stern, the ACCCPE project aims at understanding the effects of climate change and industrial development on contaminant processes and exposure in the Canadian Arctic marine ecosystem. During the past year, they succeeded in reproducing Arctic springtime photochemical phenomena in a mesocosm experiment. This new approach can supplement, bridge, and integrate the laboratory and field-scale studies to advance our understanding of the cryo-photochemical processes and meteorological conditions leading to bromine explosion events, ozone and mercury depletion events in the Arctic. The results aid the development and parameterization of mechanistic models to allow better projection of their sensitivities to climate change in the Arctic, and allow a better understanding of the implications for biogeochemical cycles across the ocean-sea ice-atmosphere interface.

Impacts

- 1 Improve understanding of biogeochemical cycles in the marine Arctic environment, to help better predict the impacts of climate change on sensitive northern regions

Satellite Research Program

The Northern Freshwater project

The Northern Freshwater project (Dr. Rautio) collaborated as part of the circumpolar project T-MOSAIC involving 16 countries and is an ArcticNet initiative under the auspices of the International Arctic Science Committee. An MoU was signed between ArcticNet and T-MOSAIC in 2021, and ArcticNet is sponsoring a special T-MOSAIC issue of Arctic Science.

The CommHousingCDNNorth project

The CommHousingCDNNorth project (Dr. Christensen) collaborated as part of the At Home in the North Partnership, which includes over 40 community partners from across the Canadian North, Alaska, and Greenland. By integrating her ArcticNet research into this broader research program, she connects her research activities into this international research network.

Supporting the next generation of Arctic researchers

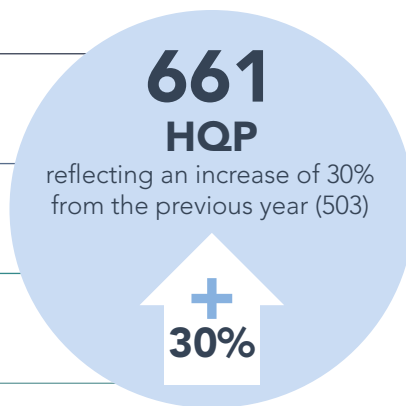
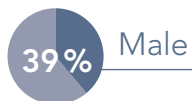
ArcticNet Training Funds

A key component of ArcticNet's focus in 2021/22 was on enhancing our **North-to-North** training among researchers and knowledge holders who are all facing similar research challenges across the North. Training programs often focus on south-to-south, south-to-north, and north-to-south training within formal university structures. With the full implementation of the North-by-North program, we have greatly enhanced our training capacity throughout the Network and particularly within the north.

This past fiscal year, all ArcticNet-funded research projects and programs count over 661 HQP, reflecting an increase of 30% from the previous year (503). Within the network, HQP of the ArcticNet community are associated with 40+ universities and over 15 organizations across Canada.



Demographics



Universities



12 organizations
across Canada

Training Fund Highlights

Numerous HQP initiatives, training and funding opportunities (i.e., student training, ethical research training, and safety in remote areas funds), as well as distinctions were enabled and enhanced through partnerships with several organizations.

1. A partnership with ACUNS enabled an ArcticNet-sponsored and adjudicated *Best Northern Engagement Research Prize* at the 2021 ACUNS Student Conference on Northern Studies.
2. The launch of a new joint funding opportunity, the ArcticNet-MEOPAR Arctic-Marine and Coastal [Postdoctoral Fellowship program](#), enabled five Postdoctoral fellow HQPs to advance their research management skills, build stronger connections with Northern communities and researchers, while playing a greater leadership role in Northern capacity building.
3. By partnering with [École en Réseau](#), HQPs from ArcticNet expanded their outreach and teaching skills by co-developing a “mini-ASM” where HQP shared presentations and met with high school students to discuss their work in the North (*Meet researchers of the Arctic, ArcticNet conference for high schools, December 13-16, 2022*).

ArcticNet Student Association

The ArcticNet Student Association (ASA) brings together undergraduate, Masters and PhD students from across Canada studying the Arctic. With support and close collaboration with ArcticNet, the ASA is run by students and for students. This gives the executives of the ASA the opportunity to build leadership capacity and provide training opportunities for the next generation of Arctic researchers.

This year, the ASA spearheaded the Annual Scientific Meeting (ASM) with the annual student day, which boasted 160 participants (14% of all conference registrants). The annual student day was designed around workshops with highlights including: a panel about regional perspectives on research priorities; research licensing processes and expectations with panelists from all northern regions; a session with [Ikaarvik](#) discussing concrete ways to help early career researchers stitch Indigenous community needs and knowledge “SciQ” together with scientific research goals; and a session dedicated at pulling back the curtain on the publishing process and exploring the editorial processes involved to support the publication of scientific work. Beyond organizing the ASM Student Day, the ASA supported HQP development by hosting a series of 2-hour writing sprints on Zoom as a peer-support space for focused thesis and manuscript writing.



Mobilizing, Transferring and Exchanging Knowledge

Knowledge And Technology Exchange And Exploitation (KTEE)

Knowledge must move beyond the researcher's desk to realize impact. Publications, workshops, training sessions and conferences all contribute to ArcticNet's knowledge exchange and the translation of our growing understanding of the Arctic.

From project excellence and wide-ranging scientific dissemination activities, Network-level initiatives including partnered workshops, training sessions and webinars, integrated regional impact assessments and the freely-accessible web portal [ArcticKT](#), to the scope of our annual conference, the largest Arctic science conference in the world, ArcticNet's knowledge mobilization activities are holistic and far-reaching. Below is a subset of knowledge transfer initiatives led by and within ArcticNet.

Initiatives launched:

1. A monthly series of webinars and online workshops, [Skills for Northern Research Impact](#), was launched in January 2022 in the framework of ArcticNet's strategic objectives to: offer unique trans-sectoral training guided by a holistic approach; catalyze the synthesis, dissemination, and exchange of knowledge to inform socio-economic and ecological issues; and provide tools and opportunities to facilitate the development of capacities and diversified skills for HQPs, including ECRs, as well as to promote access to training.
2. In February 2022, ArcticNet, in partnership with [ICC Canada](#) and [Live It Earth](#), officially launched [Atauttikkut – Inuit Youth Connect](#), a project financially supported by the [US Consulate General](#) and the [Société du Plan Nord](#). The [Atauttikkut](#) project engages and connects Inuit youth from different parts of the North American Arctic, providing them with an opportunity to discuss climate change issues important to them, to share their realities and develop action plans on common aspirations through the development of media skills, the production of short videos, and the participation in a virtual exchange forum.
3. ArcticNet launched the fully functional end-user interface of its ArcticKT Portal in 2021-2022
4. ArcticNet trained over 40 people directly through our training funds, such as the [Ethical Research Training Fund](#) and the [Fieldwork Safety Training Fund](#).

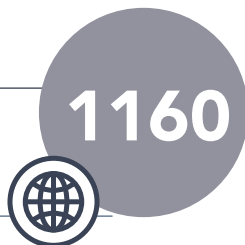
Annual Scientific Meeting 2021



With the global COVID-19 pandemic still in effect, the virtual Annual Scientific Meeting (ASM 2021) was held December 6-10, with 1166 attendees tuning in online from across Canada and around the world. 363 Northern participants, representing 31% of total participants, was the highest Northern participation thus far. Participants watched more than 200 presentations, joined in live question and answer sessions and online chats with panelists and speakers, connected on the virtual conference platform, viewed Town Halls, and participated in play-to-win games and challenges. An average of 400 people live-streamed each of the daily plenaries. During the week, sessions and conference events were viewed more than 13K times.

Participants at the **ASM 2021 online**

362 Northern participants



Publications in the 2021/22 fiscal alone

367 of which are peer-reviewed

ArcticNet in the News

In the 2021/22 fiscal year, ArcticNet was mentioned in 174 media articles and ArcticNet Network Investigators were mentioned in 2,005 media articles. ArcticNet also continued to grow its social media presence and engagement, connecting with an audience of over 7700 on Twitter.

Publications

ArcticNet's projects comprise over 653 publications in the 2021/22 fiscal alone, 367 of which are peer-reviewed.

Publication Highlights

- 1 [The World Has One Big Chance to Fix Plastics](#) featuring ArcticNet NI Max Liboiron, posted on MSN with a reach of 198M.
- 2 [Powerful 'rivers in the sky' could cause Antarctic Peninsula's biggest ice shelf to collapse](#) featuring NI Julienne Stroeve posted in CNN with a reach of 174M
- 3 [Northern glaciers that feed into ocean 'losing area size of Isle of Wight every year'](#) featuring NI Luke Copland, posted on Yahoo News with a reach of 65M.
- 4 ['A damning indictment': U.N. releases dire new climate change report](#), featuring NI Sherilee Harper posted on Yahoo News with a reach of 65M.
- 5 [Marine Bacteria in Canadian Arctic Can Eat Up Oil and Diesel: Study](#), featuring NI Casey Hubert posted on NDTV with a reach of 59M.

Partnerships

With the breadth of research and geography within ArcticNet, including an extensive representation of diverse communities, people, organizations, governments and industry partners, ArcticNet is a vital convening ground for facilitating effective Arctic and northern research. Canada's Arctic and northern research community must be shaped by the diverse rightsholders and stakeholders involved. This year, ArcticNet continued building partnerships with various communities, organizations, governments, industries, and universities, including:

- [Atauttikkut](#) – Inuit Youth Connect (US Consulate General, Société du Plan Nord, LiveIT, Inuit Circumpolar Council Canada) project aims to engage and connect Inuit youth from different parts of the North.
- During the ASM 2021, ArcticNet, in partnership with UNESCO's Intergovernmental Oceanographic Commission (IOC), DFO, Mitacs, and Students on Ice launched a Call to fund new Core Research Program (2022-24) projects relevant to the Network's [mandate](#). This Call supported innovative, multidisciplinary, state-of-the-art, and inclusive projects addressing the challenges and opportunities created by the rapidly changing natural environment, and social and cultural systems.
- Marine proposals funded as part of the CFP are endorsed as a contribution to the United Nations (UN) Decade of Ocean Science for Sustainable Development 2021-2030 ("Ocean Decade"). These became part of a highly visible, shared, global effort to advance ocean science by opening up opportunities to create new collaborations across disciplines, geographies and generations, and to establish access to new sources of support. In addition to ArcticNet's investment, DFO committed \$500k to supporting marine projects under the Call as part of the official Canadian response to the Ocean Decade.



The successful ASM 2021 was again virtual, though our partners at the Canadian Museum of Nature kindly offered space to ArcticNet and LiveIT staff to run the conference and offered their Arctic gallery as a wonderful location for the Network's first in-person event since the pandemic commenced. The ASM welcomed several new sponsors this year including, but not limited to: Canadian Mountain Network, Arctic Science Journal, SmartICE, Canadian Nuclear Laboratories, Canadian Museum of Nature, MEOPAR, ASL Environmental Sciences, Canadian Permafrost Association, Polar Knowledge Canada, and many others.

With the breadth of research and geography within ArcticNet, including an extensive representation of diverse communities, people, organizations, governments and industry partners, ArcticNet is a vital convening ground for facilitating effective Arctic and northern research. This is best exemplified through one of the Network's largest activities in the 2021/22 fiscal, the commissioning of the Council of Canadian Academies (CCA) assessment "The Future of Arctic and Northern Research in Canada". Following months of consultations and meetings in 2021 with partners from across the northern research community, two major workshops averaging 45-55 participants, several drafts, and feedback from 29 individuals from 15 different organizations and departments, ArcticNet leveraged almost \$600K from 26 different partners, including 12 universities, and submitted a proposal to commission an assessment in November 2021. This proposal is accepted and will examine this question: 'Based on assessment of current knowledge and evidence, what are the key foundational elements to create an inclusive, collaborative, effective, and world-class Arctic and northern science system in Canada?'

Amongst major initiatives, ArcticNet continues to build new partnerships and provide partnership support to many projects and programs. ArcticNet is able to connect such groups to relevant others in its role as a convener and, when relevant, provide additional staff support, thus increasing the efficacy and impact of all supported initiatives. Such initiatives from the past year include, but are not limited to:

- Government of Yukon - Research program supporting Yukon's COVID-19 recovery and economic growth extended. ArcticNet partnered with the Government of Yukon, Yukon University, Mitacs, and University of Alberta North to extend funding for another year to support the Mitacs student internship program. This program supports Yukon's understanding of the social, cultural, economic, environmental, and health impacts of the COVID-19 pandemic.
- Climate Changed Preparedness in the North (CCPN) – CIRNAC. ArcticNet continues to partner with CCPN to make the knowledge of its virtual meetings accessible to communities across the North that were unable to attend in person.
- ACUNS – partnership on an award at their meeting this year, but also developed an MOU for ACUNS to merge their student conference with the ArcticNet ASM's Student Day.
- MEOPAR – partnership on a joint Postdoctoral Fellow program enabling additional support for Inuit applicants during this year's IQP process as well as top-up funding and professional development opportunities for these exemplary researchers.
- Weston Family Foundation (WFF). ArcticNet was pleased to welcome WFF as a partner to the IQP this year. Negotiations are under way for WFF to support at least one Inuit-led project under the program starting in fiscal year 2022/2023.
- Navigating the New Arctic Community Office (NNA-CO)– an ArcticNet representative co-chairs their Research Advisory Board. Through this connection, the two programs are supporting international development in training and KM initiatives for both organizations.
- Partnered with NCE BioCanRx and EDI company InclusiveKind to develop an independent and confidential reporting system (a hotline) named HearU which is accessible by all, the Multi-Network Safe Environment.

ArcticNet Directors



Dr. Jackie Dawson, Scientific Director

Dr. Dawson is now a Tier 1 Canada Research Chair in the Human and Policy Dimensions of Climate Change after successfully converting her Tier II Chair into a Tier 1 chair this year. She was a lead author on two chapters in the IPCC 6th Assessment Report (AR6) 2022 and was recently appointed by Fisheries and Oceans Canada (DFO) to be one of five Canadian Champions for the UN Decade of Ocean Science. Her work was also widely featured in news publications, with some highlights from Nunatsiq News: [Ban on commercial fishing in central Arctic Ocean comes into force](#), [Ship noise could change marine mammals' behaviour, research suggests](#), and [Feds building two icebreakers to upgrade coast guard's fleet](#).



Dr. Philippe Archambault, Co-Scientific Director

Dr. Archambault was the only Canadian researcher selected to be a part of the [One Ocean Science](#) project, which reached over 9 million people globally, and opened Ocean Action Day at COP26 (available [here](#)). He was invited to a panel (Evolving nature of US-Canada Arctic Cooperation), and a meeting ([International Arctic Collaborations](#)) organized by the American Embassy and Consulates in Quebec City and Montréal. His work was also widely featured in the news, with some highlights including: [Les espèces envahissantes en milieu polaire](#), [Les Années lumières](#), Radio-Canada; [Université Laval applies the best minds to solve global challenges](#), Globe and Mail; [L'impact positif de nos chercheurs sur la société et la planète](#), Université Laval; and [Embrace kelp forests in the coming decade](#), Science.



Dr. Christine Barnard, Executive Director

Dr. Christine Barnard is a bilingual northern research and infrastructure executive with more than sixteen years of leadership experience in Arctic and northern research networks. As Executive Director at ArcticNet since 2019, Dr. Barnard leads the team to develop and propel multidisciplinary and cross-cultural Arctic research and training programs. She has transformed ArcticNet operations and program management, and steered ArcticNet into a new phase of its mandate, focused on efficiency and inclusion, thereby empowering northern researchers and communities. In doing so, she has strengthened national and international connections and partnerships that deliver Canada's Arctic assets and knowledge systems to

the world. Dr. Barnard brings a wealth of senior leadership experience managing Arctic research and infrastructure programs. She co-developed research stations with many Inuit communities and managed millions of infrastructure dollars. Since 2006, Dr. Barnard has served, and currently serves, on numerous national and international boards and advisory committees. She is passionate about northern communities and the role research can play in supporting the sustainable development of a healthy and vibrant North. Dr. Barnard holds a Master's and Ph.D. in Environmental Sciences.

ArcticNet Board of Directors

The **Board of Directors** is responsible for the overall governance of the network and acts in accordance with the By-Laws of ArcticNet Inc. A majority of Board members are senior officials of organizations other than Network Member Institutions, coming from Inuit organizations, government, industry, non-governmental organizations and not-for-profit organizations. Subcommittees of the Board of Directors include the Executive Committee, the Audit and Finance Committee, the Governance and Nomination Committee, and the Transformation Committee.



Voting Members

- **Dr. Philippe Archambault**
Co-Scientific Director, ArcticNet/Professor,
Université Laval
- **Cedar Bradley-Swan**
Chief Executive Officer, Adventure Canada
- **Dr. Jackie Dawson**
Scientific Director, ArcticNet/Professor,
University of Ottawa
- **Dr. Jean Holloway**
Postdoctoral Fellow, University of Ottawa
- **Dr. Digvir Jayas**
Vice-President (Research and International),
University of Manitoba
- **Dr. Brendan Kelly**
Executive Director, Study of Environmental
Arctic Change (SEARCH) Program
- **Dr. Donna Kirkwood**
Chair of the Board of Directors
- **Lisa Koperqualuk**
President, Inuit Circumpolar Council Canada
- **Megan Leslie**
President and CEO, World Wildlife Fund Canada
- **Guy Levesque**
Associate Vice-President (Research Support
and Infrastructure), University of Ottawa
- **Dr. Olivier Moroni**
Assistant to the Vice Rector and Head of Research
Infrastructures and Special Projects, Université Laval
- **Natan Obed**
President, Inuit Tapiriit Kanatami
- **Dr. Milla Rautio**
Professor, Université du Québec à Chicoutimi

Non-Voting Members

- **Dr. Christine Barnard**
Executive Director, ArcticNet
- **Francois Santerre**
Senior Program Manager,
Networks of Centres of Excellence

ArcticNet Committees

The **Research Management Committee** (RMC) manages the Core Research Program, High Impact Publications Program, advising on the ASM scientific program, and ensures ongoing assessment of all projects to provide recommendations to the BOD regarding research priorities and budget allocations.

The **Inuit Research Management Committee** (IRMC) provides guidance, recommendations and direction to the ArcticNet Board of Directors related to Inuit research needs and priorities, policy development, and research activities. The IRMC leads all stages of ArcticNet's North-by-North (NxN) program development and implementation with specific responsibility for the Inuit Qaujisarnimut Pilirijjutit. Voting members of this committee are representatives from the Inuvialuit Regional Corporation (IRC), Makivik Corporation, Kativik Regional Government (KRG), Nunavut

Tunngavik Inc. (NTI), and Nunatsiavut Government. Non-voting observers include the Inuit Circumpolar Council Canada (ICC), Inuit Tapiriit Kanatami (ITK), ArcticNet directors and North-by-North Program staff

The **Inuit Research Advisors** help facilitate research in each of the four Inuit Land Claim regions of the Canadian Arctic.

The **Territorial Advisory Committee** (TAC) provides guidance and recommendations related to needs and priorities of Northern post-secondary institutions and the territories with regards to strategic planning, research needs/gaps, input of traditional knowledge, community involvement, training and education. The members are actively involved in the North-by-North Program, specifically the **Northern Research Leaders Program**.



Research Management Committee

Members

- **Jean Allen**
Senior Research Advisor, Nunavut Tunngavik Inc.
- **Andrew Applejohn**
Senior Science Advisor, Government of the Northwest Territories
- **Dr. Philippe Archambault**
Co-Scientific Director, ArcticNet
- **Pascale Bourbonnais**, Research Manager
FedNav Limited
- **Nicole Couture**
Manager/Researcher, Geosciences & CC, NRCan/
Government of Canada
- **Dr. Dorthe Dahl-Jensen**
Professor, University of Manitoba
- **Dr. Jackie Dawson**
Scientific Director, ArcticNet
- **Dr. Chris Derksen**
Research Scientist, Environment and Climate Change
Canada
- **Jeremy Ellsworth**
Environment and Research Coordinator, Inuit
Circumpolar Council Canada
- **Véronique Gilbert**
Assistant-Director Environment & Land, Kativik
Regional Government
- **Dr. Sherilee Harper**
Associate Professor, University of Alberta
- **Helen Joseph**
Consultant, HCJ Consulting – Committee Chair
- **Sarah Kalhok Bourque**
Chair – Northern Contaminants Program, INAC/
Government of Canada
- **Dr. Susan Kutz**
Professor, University of Calgary
- **Dr Zou Zou Kuzyk**
Associate Professor, University of Manitoba
- **Rodd Laing**
Director of Environment, Nunatsiavut Government
- **Eric Loring**
Senior Policy Advisor, Inuit Tapiriit Kanatami
- **Dr. Lisa Loseto**
Research Scientist, Fisheries and Oceans Canada
- **Dr. Guillaume Nielsen**
Industrial Research Chair, Yukon University
- **Ryan Mazan**, en remplacement de Jenn Parrott
Research Manager, Inuvialuit Regional Corporation
- **Enooyaq Sudlovenick**
ASA President/Ph.D. Candidate, University of
Manitoba
- **Dr. Kevin Turner**
Assistant Professor, Brock University

Observers

- **Dr. Christine Barnard**
Executive Director, ArcticNet
- **Claude Lévesque**
Research Program Manager, ArcticNet
- **Alexa Reedman**
Research and Partnerships Manager, ArcticNet
- **Dr. Pascale Ropars**
Science Manager, ArcticNet
- **François Santerre**
Senior Program Manager, Networks of Centres of
Excellence

Inuit Research Management Committee

Members

- **Jean Allen**
Senior Research Advisor, Nunavut Tunngavik Inc
- **James Bolt**
Inuit Research Advisor, Nunavut Tunngavik Inc
- **Gregor Gilbert**
Director of Environment, Wildlife and Research, Makivik Corporation
- **Monica Nashak**
Inuit Research Advisor, Kativik Regional Government
- **Rodd Laing**
Director of Environment, Nunatsiavut Government
- **Carla Pamak**
Chair, Inuit Research Advisor, Nunatsiavut Government
- **Dr. Shanay Williams**
Research Administration and Programs Manager, Inuvialuit Regional Corporation
- **Kendra Tingmiak** (left August 2021)
Inuit Research Advisor, Inuvialuit Regional Corporation

Observers

- **Dr. Christine Barnard**
Executive Director, ArcticNet
- **Dr. Jackie Dawson**
Scientific Director, ArcticNet
- **Jeremy Ellsworth**
Environment and Research Coordinator, Inuit Circumpolar Council Canada, Program Support
- **Eric Loring**
Senior Policy Advisor, Inuit Tapiirit Kanatami
- **Shirin Nuesslein**
Inuit Research Advisor (IRA) Coordinator, ArcticNet
- **Alexa Reedman**
Research and Partnerships Manager, ArcticNet

Inuit Research Advisors

- **James Bolt**
Inuit Research Advisor, Nunavut Tunngavik Inc.
- **Monica Nashak**
Inuit Research Advisor, Kativik Regional Government
- **Carla Pamak**
Inuit Research Advisor, Nunatsiavut Government
- **Kendra Tingmiak** (left August 2021)
Inuit Research Advisor, Inuvialuit Regional Corporation

Territorial Advisory Committee

Members

- **Andrew Applejohn**
Senior Science Advisor, Government of the Northwest Territories
- **Dr. Davon Callander**
Manager – Research and Scholarly Activities, Research Service Office, Yukon University
- **Sabrina Kinsella**
Acting Senior Science Advisor, Government of Yukon
- **Joel McAlister**
Director (Western Arctic Research Centre), Aurora College
- **Jamal Shirley**
Manager (Research Design and Policy Development), Nunavut Research Institute

Observers

- **Dr. Christine Barnard**
Executive Director, ArcticNet
- **Dr. Ashlee Cunsolo**
Founding & Interim Dean School of Arctic & Subarctic Studies, Labrador Campus
- **Dr. Jackie Dawson**
Scientific Director, ArcticNet
- **Shirin Nuesslein**
Inuit Research Advisor Coordinator
- **Alexa Reedman**
Research and Partnerships Manager, ArcticNet

ArcticNet Student Association Executive Committee

Executive Members

- **Enooyaq Sudlovenick**
(University of Manitoba), President
- **Elena Nogaeva**
(University of Eastern Finland-Finland) Vice President
- **Carol-Anne Villeneuve**
(University of Montreal), Student Day Coordinator
- **Fowzia Ahmed**
(University of Winnipeg), Secretary
- **Camille Lavoie**
(Universite Laval), Education and Outreach Coordinator
- **Ariane Benoit**
(Laval University), French Communications Officer
- **Danielle Nowosad**
(University of Guelph), English Communications Officer
- **Katie Manning**
(University of Saskatchewan), Northern Communications Officer
- **Galina Jonat**
(Carleton University), Executive at Large

Commitment to equity, diversity, and inclusion

As in past years, ArcticNet continues to put its strong commitment to Equity, Diversity, and Inclusion (EDI) into action in new and exciting ways.

ArcticNet's new EDI initiatives include:

- 1** Four EDI-inspired webinars in partnership with [Sentinel North \(SN\)](#) and [Kelly Nolan](#) (Simon Fraser University):
 - *Canadian research landscape – Redefining excellence examined through an EDI lens* (April 2022)
 - *Identity and belonging – Impacts of identity in achieving inclusion* (April 2022)
 - *Allyship – The good, the bad, the ugly, where to find evidence-based resources* (May 2022)
 - *Successful EDI case studies – Novel examples that overcome the normal practices and inspire change* (May 2022).
- 2** Partnered with NCE BioCanRx and EDI company InclusiveKind to develop an independent and confidential reporting system (a hotline) accessible by all, the Multi-Network Safe Environment.
- 3** Partnering with [M&C Consulting](#) to develop [Key Performance Indicators \(KPI\)](#) that will allow us to track and measure our EDI commitments. After numerous consultations, discussion sessions and a literature review of best practices, we presented the results of our work on June 16, 2021 and we launched the [ArcticNet's Key Performance Indicators report](#).



Full list of projects

Core Research Program

Marine Systems

- **Camera community-based Arctic marine mammal studies (CCAMMS)**
Marianne Marcoux, University of Manitoba
- **An ecosystem approach to quantifying behavioural and energetic impacts of anthropogenic disturbance to Arctic whales**
Sarah Fortune, Dalhousie University
- **Rapidly changing ecosystem dynamics in the Arctic Ocean's Last Ice Area (RED-AO)**
Audrey Limoges, University of New Brunswick
Mathieu Ardyna, Université Laval
- **Weather and aajurait (lead) Monitoring for sea ice safety during the break-up season**
Derek Mueller, Carleton University
- **A co-operative observation network to address community research priorities while studying marine biogeochemistry**
Brent Else, University of Calgary
- **Arctic seafloor mapping data processing and dissemination**
Jean-Carlos Montero-Serrano, Université du Québec à Rimouski
- **Community-based research on winter water modifications in the coastal domain of Hudson Bay: Implications for freshwater-marine coupling, biological productivity and the carbon cycle**
Zou Zou Kuzyk, University of Manitoba
- **Downscaling future oceanography projections in the Canadian Arctic and Subarctic**
Eric Oliver, University of Dalhousie
- **Fate of kelp forests in a rapidly changing Arctic (ArcticKelp)**
Philippe Archambault, Université Laval
- **GO-Ice: Glacier-ocean-iceberg dynamics in a changing Canadian Arctic**
Luke Copland, University of Ottawa
- **Improved Canadian Arctic Sea Ice Thickness Estimates**
Julienne Stroeve, University of Manitoba
- **Nutrient fluxes and living marine resources in the Inuit Nunangat**
Jean-Éric Tremblay (Université Laval)
- **Understanding climate change impacts on fish species in Ungava Bay (Kuujuuaq, Québec)**
Michael Power, University of Waterloo
- **Microplastics and associated chemicals: transport to and within the Canadian Arctic (MPACs)**
Liise Jantunen, University of Toronto

Terrestrial Systems

- **Thermokarst Lakes: Dramatic increases in the removal of thermokarst lakes from the Canadian Arctic Landscape (TLRemoval)**
Philip Marsh, Wilfrid Laurier University
- **Trying to make fetch happen: including tall shrubs in the atmospheric carbon budget of western Inuit Nunangat**
Oliver Sonnentag, Université de Montréal
- **Understanding Arctic grizzly bear range expansion: a community-oriented approach**
Douglas Clark, University of Saskatchewan
- **Snow changes Impacts on Kangiqsualjjuamiut (SCIK)**
Alexandre Roy, Université du Québec à Trois-Rivières
- **Indigenous Knowledge of Berries in the Northwest Territories**
Erin Cameron, Saint Mary's University
- **Changing nutrients and food web health in northern lakes and rivers**
Milla Rautio, Université du Québec à Chicoutimi
- **Developing seasonal multi-layer network models to evaluate cumulative impacts on Arctic ecosystems**
Pierre Legagneux, Université Laval
- **Ensuring water security in the High Arctic: understanding the impacts of changing permafrost and hydrology on water quality and aquatic ecosystems**
Melissa Lafrenière, Queen's University
- **Long-term hydrological dynamics of Canada's largest watershed: climate controls on water quantity and quality of the Mackenzie River Basin**
Jennifer Galloway, University of Calgary
- **Nunataryuk – Permafrost thaw and the changing Arctic coast: the MacKenzie delta and coastal waters sampling**
Marcel Babin, Université Laval
- **Understanding and predicting future coastal climate-vegetation-cryosphere interactions in coastal Labrador**
Robert Way, Queen's University

Inuit Health Education Adaptation

- **Community-led housing in the Canadian North: mobilizing the development of supportive housing plans through knowledge sharing and engagement in the NWT and Nunavut**
Julia Christensen, Memorial University
Mylène Riva, McGill University
- **Effective teachers for successful students: An investigation of the preparation and resiliency of Northern educators**
Ruth Kane, University of Ottawa
Kathy Snow, University of Prince-Edward Island
- **Moving from understanding to action on food security in the Canadian Arctic**
Matthew Little, University of Victoria
Tiff-Annie Kenny, Université Laval
- **Qanuikkat Siqinirmut? Towards an understanding of southern Quebec Inuit health and wellbeing**
Christopher Fletcher, Université Laval
- **Qanuilirpita 2017 – Understanding the determinants of health and well-being to support the implementation of population health promotion programmes, interventions, and services in Nunavik**
Mylène Riva, McGill University
- **Supporting humans in a thawing landscape**
Fabrice Calmels, Yukon University
- **The Canadian Arctic One Health Network**
Emily Jenkins, University of Saskatchewan
Patrick Leighton, Université de Montréal

Northern Policy and Development

- **Future Arctic Mobilities: Informing transportation adaptation through climate observations and model projections of changing snow and ice**
Sapna Sharma, York University
- **Arctic Shipping and Transportation in a Rapidly Changing Arctic**
Jackie Dawson, University of Ottawa
- **ArcticFish: Fisheries resources in the changing Canadian Arctic Ocean**
Maxime Geoffroy, Memorial University
- **Mitigating arctic shipping risks through improved prediction of conditions leading to besetments in pressured ice in the Hudson Strait**
Andrea Scott, University of Waterloo
- **Modernizing Ecosystem Monitoring to Support Sustainable Development in the Eastern Canadian Arctic**
Paul Smith, Carleton University
- **Supporting sustainable development of community Greenland halibut fisheries in the Eastern Canadian Arctic**
Nigel Hussey, University of Windsor
- **Towards a marine management plan for Nunatsiavut: Coastal ecosystem research in support of priority concerns of Inuit**
Tanya Brown, University of Windsor
Max Liboiron, Memorial University
- **Understanding the effects of climate change and industrial development on contaminant processes and exposure in the Canadian Arctic marine ecosystem (ACCCPE)**
Gary Stern, University of Manitoba

Knowledge transfer

- **Dehcho Collaborative on Permafrost**
William Quinton, Wilfrid-Laurier University
- **KUUK-SHIPI-SHIPU Building bridges and local capacities to track change: community-based environmental monitoring in the George River watershed, Nunavik, Canada**
Esther Lévesque, Université du Québec à Trois-Rivières
- **Understanding Inuit community uses and needs for weather, water, ice and climate information and services**
Gita Ljubicic, McMaster University
- **Using Co-Produced Knowledge to Understand and Manage Subsistence Marine Harvests in a Changing Climate**
Lisa Loseto, University of Manitoba

North-by-North Program • IQP

Terrestrial Sciences

- **Inuit knowledge and molecular biology addressing industrial impacts in the Kivalliq**
Clayton Tartak, Kivalliq Wildlife Board
- **The effects of coastal storms on beaches in and around Cabin/Camping areas, Ausuittuq, Nunavut**
Terry Noah, Ausuittuq Adventures
- **Investigating Water Quality in Fish-bearing Lakes in Imaryuk**
Shanay Williams, Inuvialuit Regional Corporation
- **Water sampling to establish environmental baseline conditions for rivers supporting Arctic char near Naujaat**
Johnny Tagornak (Arviq Hunters and Trappers Organization)
- **Kaujivalliajut nillikulunnik | Getting to know little geese**
Meredith Purcell (Torngat Secretariat)
- **Study of Arctic char catches and stock assessment and winter disappearance in Tasirjuarusik**
Noah Eetook (Northern Village of Kangirsuk)
- **Health of Arctic Char near Kugluktuk, Nunavut**
Eric Hitkolok (Kugluktut Hunters and Trappers Organization)

Marine Systems

- **Qikiqtani inshore fisheries surveys: studying coastal marine species in Kinngait, Sanikiluaq, Sanirajak and Igloodik**
Jawanda, Jesslene, Qikiqtaaluk Corporation
- **Acoustic monitoring for community empowerment at Clyde River, Nunavut**
Malcolm Ranta (Ilisaqsivik Society, Ittaq Heritage and Research Centre)
- **Marralik estuary beluga project**
James May (Regional Nunavimmi Umajulirijii Katujiqatigininga)
- **Walrus health and population dynamics in the context of climate change**
Mathilde Lapointe St-Pierre (Nunavik Research Centre, Makivik Corporation)

Northern Policy and Development

- **Kitikmeot Inuit Qaujimajatuqangit framework for polar bear monitoring and management**
Pamela Wong, Kitikmeot Regional Wildlife Board

Inuit Health Education Adaption

- **Understanding Homelessness and Housing Through Piliriqatigiinniq – An Extensive Mixed Methods Study Across Nunavut’s Three Regions**
Jordan Babando, Nunavummi Disabilities Makinnasuaqtiit Society
- **Visualizing Rigolet Perspectives on the Muskrat Falls Project**
Jessica Penney, Nunatsiavut Government
- **Understanding Patterns of Social Interactions in the Inuvialuit Settlement Region to Support Prevention and Management of Infectious Diseases**
Jenn Parrott (Inuvialuit Regional Corporation)
- **Bringing back the beluga whale harvest in Aklavik**
Michelle Gruben (Aklavik Hunters and Trappers Committee)
- **Assessment of the viability of goose harvesting as a response to food sovereignty in Arviat**
Kukik Baker (Arviat Hunters and Trappers Organization)
- **Hilap Aulaniit Qanuq Atayut (The World and its Connections)**
Emily Angulilak (Pitquhirnikkut Ilihautiniq/ Kitikmeot Heritage Society)

Knowledge Transfer

- **Ujjiqsurniq Avatiptini (Ability to Observe our Surroundings): A knowledge exchange between Mittimatalingmiut and Arviarmiut**
Natasha Simonee, Aqqiumavvik Society
- **Using Traditional and Local Knowledge to Better Understand the State of the Beaufort Sea**
Tess Forbes, Inuvialuit Regional Corporation
- **Youth research training program with the Foxe Basin Kivalliq North Sapujiyiit/Guardians of the Sea Society**
Sarah Newell, Foxe Basin Kivalliq North Sapujiyiit/ Guardians of the Sea
- **Approach to Knowledge Sharing for Understanding Culturally Important Marine Areas in Inuit Nunangat**
Justin Milton, Ikaarvik

Financial Report

Statement of operations

| REVENUES | |
|---|---------------------|
| Networks of Centres of Excellence Grant (NCE) | 5 563 000 \$ |
| Network partner contributions (Non-NCE) | 277 418 \$ |
| Others | 151 997 \$ |
| Total revenues | 5 992 415 \$ |
| EXPENSES | |
| Research projects | 3 478 052 \$ |
| Research and logistics support | 625 950 \$ |
| Knowledge mobilization | 494 693 \$ |
| Networking and Training | 330 477 \$ |
| Communications | 132 870 \$ |
| Administrative Centre | 1 094 316 \$ |
| Total expenses | 6 156 358 \$ |
| Excess of revenues over expenses | -163 943 \$ |

Balance Sheet

| ASSETS | |
|--|----------------------|
| Cash | 13 871 659 \$ |
| Accounts receivable | 39 274 \$ |
| Prepaid expenses | 99 030 \$ |
| Sub-total | 14 009 963 \$ |
| Capital assets | 21 295 \$ |
| Total | 14 031 258 \$ |
| LIABILITIES | |
| Accounts payable and accrued liabilities | 504 500 \$ |
| Total | 504 500 \$ |
| NET ASSETS | |
| Invested in capital assets | 21 295 \$ |
| Unrestricted Assets | 13 505 463 \$ |
| Total | 14 031 258 \$ |



