Projects funded by Polar Knowledge Canada 2017-19

Polar Knowledge Canada (POLAR) has a unique role to advance our collective understanding of polar environments by mobilizing current knowledge produced by others, in a meaningful and accessible way, to create new knowledge and to address the gaps and concerns of Northern communities.

43 Science and Technology and Knowledge Management projects across Canada's North have received funding as a result of POLAR's 2017-2019 Competitive Funding Process.

SCIENCE AND TECHNOLOGY

This program conducts and supports science and technology resear	ich and monitoring across canada's North.
PROJECT	INSTITUTION
CAT-TRAIN: Canadian Arctic Tidal Transect Research and Infrastructure Network	Arctic Research Foundation
The state of Northwest Territories country food systems: Planning for long-term sustainability	Aurora College
Improving Canada's climate change projections by incorporating Arctic shrub feedbacks	Carleton University
Gamèti Diesel Use Reduction Strategy	Community Government of Gamèti
Laboratory testing of a cross-flow turbine in super-cooled water	Énergies Marines Renouvelables Québécoises
Kitikmeot wolverine monitoring - non-invasive and community-based initiative	Government of Nunavut
Gwich'in Tribal Council's multi-use on-the-land centre energy upgrade and training project	Gwich'in Tribal Council
Arviat Wind + Solar Resource Assessment	Hamlet of Arviat
Promotion and dissemination of the CAIMAN network environmental information database	Institut National de la recherche scientifique
Inuit knowledge and science to provide weather baseline data, weather knowledge, and weather information service for Clyde River *	llisaqsivik Society
Lutsel K'e diesel use reduction strategy	Lutsel K'e Dene First Nation
What mechanisms drive habitat choice by caribou? *	Environmental Resource Management
Nunavut metals management program demonstration project: Environmental risk mitigation, legacy metal waste reduction, and community training in Cape Dorset, Nunavut	Qikiqtaaluk Business Development Corporation
Achieving benefits through greywater treatment and reuse in Northern buildings and communities	Terragon Environmental Technologies, Inc.
Small scale primary sawmill and district biomass heating initiative	Teslin Tlingit Council
Inuit Qaujimajatuqangit study into impacts of snow goose overpopulation on land, animals and people near Coral Harbour and Arviat, Nunavut	Kivalliq Wildlife Board
Ecological monitoring in the North Baffin region: open-access data diffusion, technological innovations, and development of new community partnerships	Université Laval
Migrations of sea run Arctic char in a changing Arctic: Integrating acoustic telemetry, physiology, and genomics	Université Laval
The Arctic Zoonoses Network: a community-centred monitoring network for vector-borne diseases and wildlife zoonosis in a changing Arctic	Université de Montréal
Ecosystem health of Arctic freshwaters	Université du Québec à Chicoutimi
Development of a multi-scale cryosphere monitoring network for the Kitikmeot region and Northwest Territories using modelling and remote sensing	Université du Québec à Sherbrooke
Impacts of climate change on wildfire risk in boreal forests in the Northwest Territories	Université du Québec en Abitibi-Témiscamingue
Cryosphere-climate monitoring at Kluane Lake Research Station, Yukon	University of Calgary
The DEW-line for caribou and muskox health: Generating, integrating, and mobilizing local, traditional and scientific knowledge for pro-active wildlife management	University of Calgary
Community-driven sea ice and ocean research in the contrasting coastal domains of Hudson Bay	University of Manitoba
Multi-scale remote sensing of sea ice in the Kitikmeot Sea: Utilizing new Earth observation constellation missions for monitoring and predicting sea ice conditions	University of Victoria
Wastewater in the Canadian North: Mitigating ecotoxicological risks for sustainable growth	University of Winnipeg
Old Crow Solar Project	Vuntut Gwitchin Government
Tłįchǫ Aquatic Ecosystem Monitoring Program	Wek'èezhìı Renewable Resources Board
Consortium for Permafrost Ecosystems in Transition	Wilfrid Laurier University



Distribution of POLAR-funded projects













Photos: POLAR, Jean-Sébastien Moore, ACTUA

Yukon College

 $\label{thm:continuous} \textbf{Mapping permafrost vulnerability in Vuntut Gwitchin Traditional Territory:}$

PROJECT	INSTITUTION
Mobilizing knowledge for developing Indigenous community champions for climate change adaptation in Yukon	Arctic Institute of Community-Based Research
Education and outreach to support the development of science, technology, engineering, and mathematics (STEM) opportunities for youth in the Beaufort Delta region, NWT	Aurora College
Food security and sustainable fishery development: Seasonal and spatial variations in hunting and fishing in Gjoa Haven, Nunavut	Carleton University
Growing North	Growing North
Enabling the co-production of Inuit and scientific knowledge through integrated information management	Inuit Tapiriit Kanatami
Kitikmeot Caribou Inuit Qaujimajatuqangit Mapping and Monitoring Project	Kitikmeot Region Wildlife Board
Food, fire and ice: Integrating local knowledge, plant response, and cryosphere dynamics to predict future food and fuel	Memorial University
Pond Inlet: Attakalik Community Hall Solar Panel *	Municipality of Pond Inlet
Enhancing capacity for Northern-led monitoring of snow, ice and ocean conditions	Ocean Networks Canada
The Hudson Bay Consortium: Mobilizing knowledge for environmental stewardship	The Arctic Eider Society
IMIQ-AQUABIO: A community-driven monitoring program of water quality and contaminants in the George River watershed	Université du Québec à Trois-Rivières
A weather station network to support safe travel and build Nunavummiut environmental monitoring capacity	University of Calgary

^{*} Agreement under negotiation

POLAR operates the Canadian High Arctic Research Station (CHARS) campus year-round, giving researchers a permanent place to conduct research and foster ongoing connections to Indigenous partners, communities, and other Arctic partners.

For more information about research priorities, projects and funding, or about Polar Knowledge Canada, connect with us at:

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https://www.canada.ca/en/polar-knowledge/advancingpolarknowledge.html