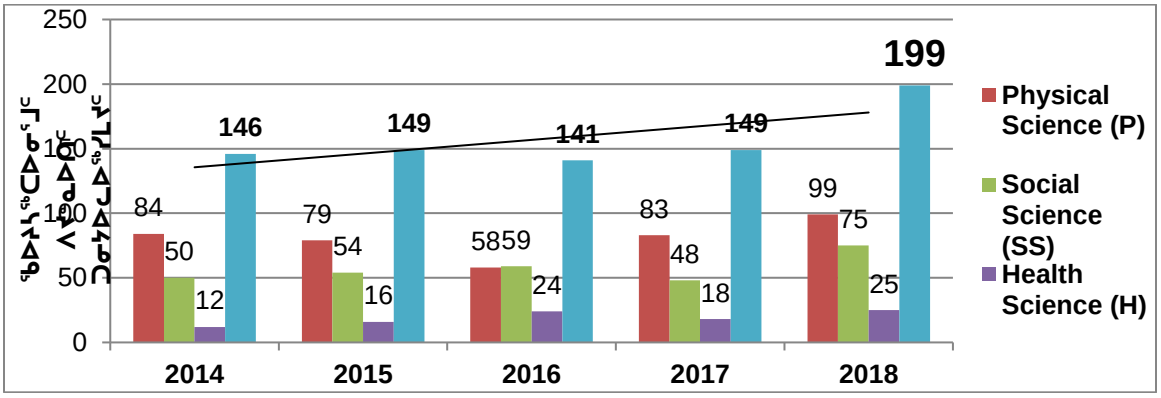
2018 Compendium of Nunavut Research
2018 ᓄᐊᑕᐅᓯᒪᔨᓂᒃ ᓄᓇᕗᑦᑎᒃ ᖃᐅᔨᓴᕐᓂᖅᓯᓂᒃ

Contents

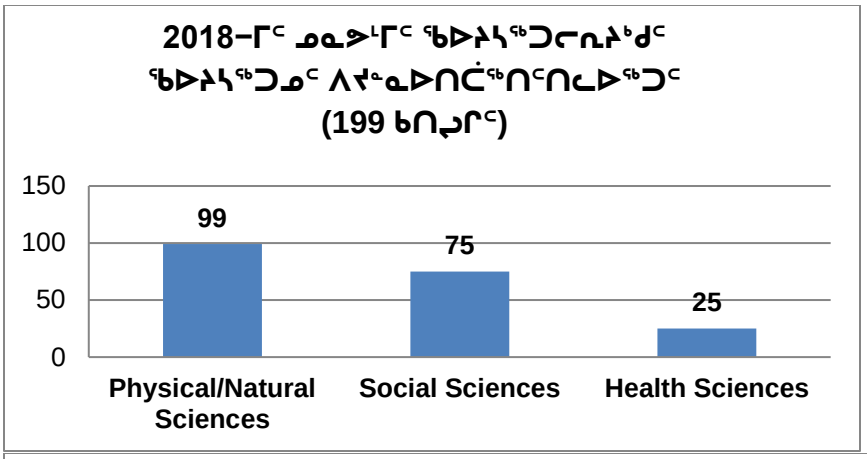
⊃Pᒧ⊲ᖅᑎᑕᐅᑦ ᐅᖃᐅᓂᒃᖁᓕᒋᐊᖅ ᐃᓂᒪᒃᖁᓂᓂᐅᕐᓂᓄᑦ ᖃᐅᔨᖁᓂᒋᓪᓗᑦ

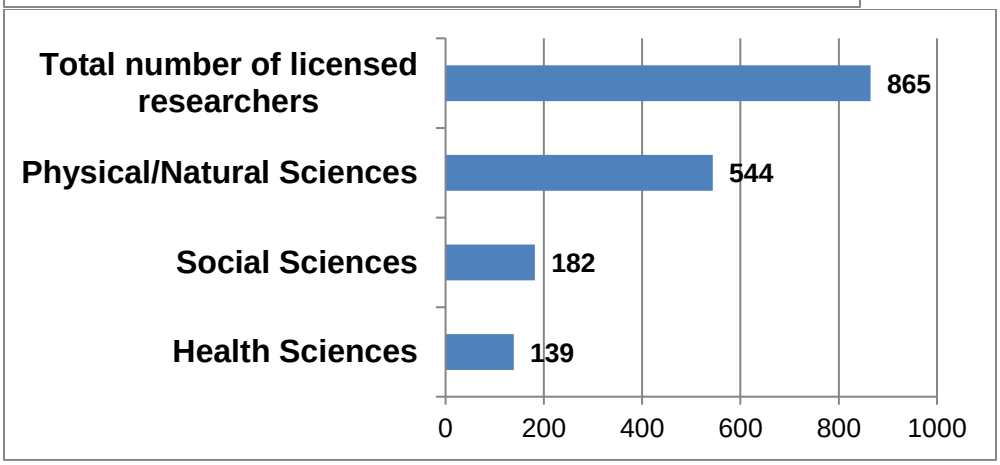
ᓄᓇᕗᒻᒥᑦ ᖃᐅᔨᖁᓂᑐᑕᓱᐅᑦ ᐱᓕᒃᖁᖃᖅᓯᑦ ᐱᓯᓇᐅᑎᒋᕆᓂᓂᒃᓴᖅᑐᓂᑦ ᖃᐅᔨᖁᓂᖅᓯᓗᑦ ᓄᓇᕗᒻᒥᑦ ᐱᖁᑯᐅᓂᒪᔪᒥᑦ ᒪᑕᒃᓴᓂᑦ ᓄᓇᕗᒻᒥᑦ *ᖃᐅᔨᖁᓂᖅᑎᓄᑦ ᐱᖁᑯᖏᓐᓂᑐᒥᑦ.* ᐊᑕᐊᓇᐃᒍᓱᒃᓯᒪ ᓴᖅᑭᑕᑐᓇᕆᐅᑯᑦ ᖃᐅᔨᖁᓂᖅᓯᒪᓕᕐᓂᑦ 2018–ᒥᑦ ᑐᓴᒪᒃᖁᓂᖅᓴᓂᑐᒃ 199–ᓂᑦ ᖃᐅᔨᖁᓂᑕᐅᓪᓕᐅᖅᓯᒪᔪᓂᑐᒃ ᐱᑕᓱᐊᖏᔪᓂᑐᒃ ᐱᓯᓇᐅᑎᖃᖅᓴᓂᑦ ᓇᒥᑕᒻᒥᖅ ᓄᓇᕗᒻᒥᑦ ᖃᓄᐃᖏᑕᐅᑎᐊᖅᓂᒪᓕᒋᑦ, ᓄᓇᑕᓱᓂᒪᓕᒋᑦ/ᑎᒥᑕᓱᓂᒪᓕᒋᑦ ᐃᓅᓵᖃᑎᒌᖅᓂᒪᓕᒋᓪᓗᑦ ᖃᐅᔨᖁᓂᖅᑎᓪᓗᑎᑦ.

ᓄᓇᕗᒻᒥᑦ 2018-ᖏᑎᓪᓗᒍ ᐊᖏᕐᕋᔭᑕᐅᖅᓯ ᖃᐅᔨᖁᐅᑕᖅᑎᓪᓗᑎᑦ. 2018–ᒥᑦ ᓄᓇᕗᒻᒥᑦ ᖃᐅᔨᖁᓂᑐᑕᓱᐅᑦ ᐱᓯᓇᐅᑎᖃᓂᖅᓴᓂᖅᖁᔨᑕᐅᖅᓱᑦ ᖃᖏᕐᓱᐃᓇᓇᐅᓪᓚᕆᐊᓂ ᐊᖏᕐᕋᔭᓂ ᑕᐃᒪᓐᓇᓂ 1995–ᖏᑎᓪᓗᒍ ᐊᐅᓪᓚᑎᓵᖏᓱᓇᐊᖃᐅᔨᑦᑕ ᒪᑕᓪᓗᒍ ᖃᐅᔨᖁᓂᖅᑎᓄᑦ ᐱᖁᑯᖏᓐᓂᓂ. 1995–ᒥᑦ 2014–ᒧᑦ, ᐱᑕᓱᐊᖅᑐᓯᑦ ᖃᐅᔨᖁᓂᑕᐅᑎᓪᓗᑎᑦ ᐱᓯᓇᐅᑎᖃᐃᓇᓇᐅᓪᓚᕆᐊᓂ ᐊᖏᕐᕋᔭᒪᒃᑯᖅ. ᑭᓱᐊᓂᑕᐅᖅ, 2014–ᒥᑦ 2018–ᒧᑦ ᐱᑕᓱᐊᖅᑐᓯᑦ ᐱᓯᓇᐅᑎᓐᓂᑦ ᐅᓄᖅᓱᑎᐊᖅᓱᒪᔪᓂᑦ 30%-ᓗᐊᒥᑦ, ᐅᓄᖅᓂᖅᓯᓐᓄᓱᒪᔪᓂᑦ ᐃᓄᑕᓱᓂᒪᓕᒋᑦ ᖃᐅᔨᖁᓂᑕᐅᓱᑕᐅᖅᑐᑦ ᖃᓄᐃᖏᑕᐅᑎᐊᓂᒪᓕᒋᓪᓗᑎᑦ.

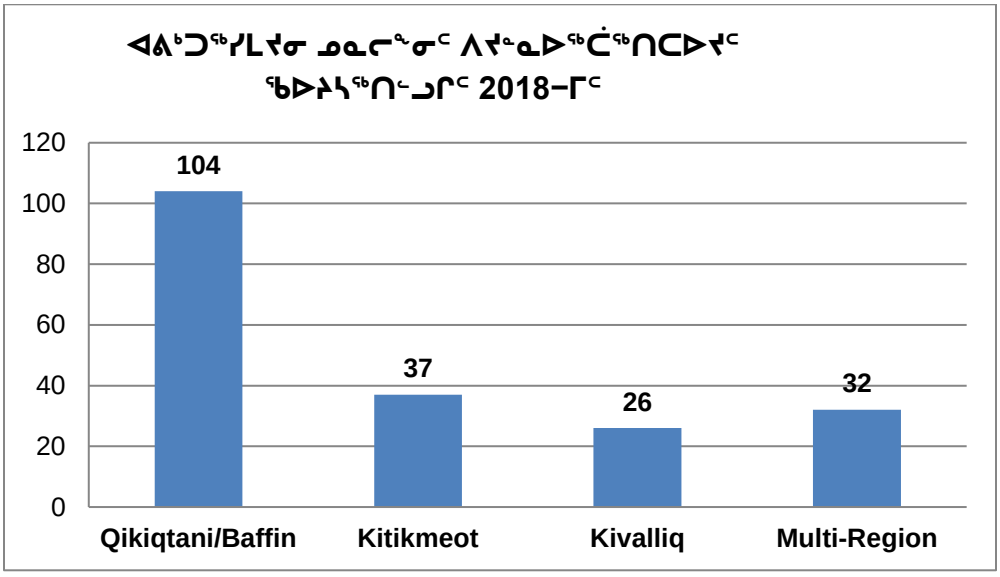


ᖃᖏᕐᕋᔭᓐᓇᖅᑐᖅ ᖃᐅᔨᖁᓂᓂᒃᖁᓂᖅᖃᖅᑕᑕᓱᐅᑦ ᖃᓄᐃᖏᑕᐅᑎᐊᖅᓱᒪᔪᓂᑦ ᐃᓅᓵᖃᑎᒌᖅᓂᒪᓕᒋᓪᓗᑎᑦ, ᑎᒥᒃᑯᓂ ᓄᓇᑕᓱᓂᒪᓕᒋᓪᓗᑎᑦ ᖃᐅᔨᖁᓂᖅᓂᒃᖁᓂᖅᖃᖅᓴᓂᖅ ᓄᓇᕗᒻᒥᑦ ᑲᑎᒪᓂᑦ ᖃᐅᔨᖁᓂᑕᐅᖅᑕᖅᑐᑦ. 2018–ᒥᑦ ᓄᓇᕗᒻᒥᑦ ᐱᓯᓇᐅᑎᖃᑕᖅᑎᑎᑕᐅᓪᓚᕆᐊᓂ ᐊᖏᕐᕋᔭᓂᒃᑯᓂᑎᑕᐅᓪᓚᕆᐊᓂ ᖃᐅᔨᖁᓂᑕᐅᓱᓇᐊᖃᐅᔨᑦᑕ 62%–ᖏᓪᓕᐅᖅᑐᑦ.

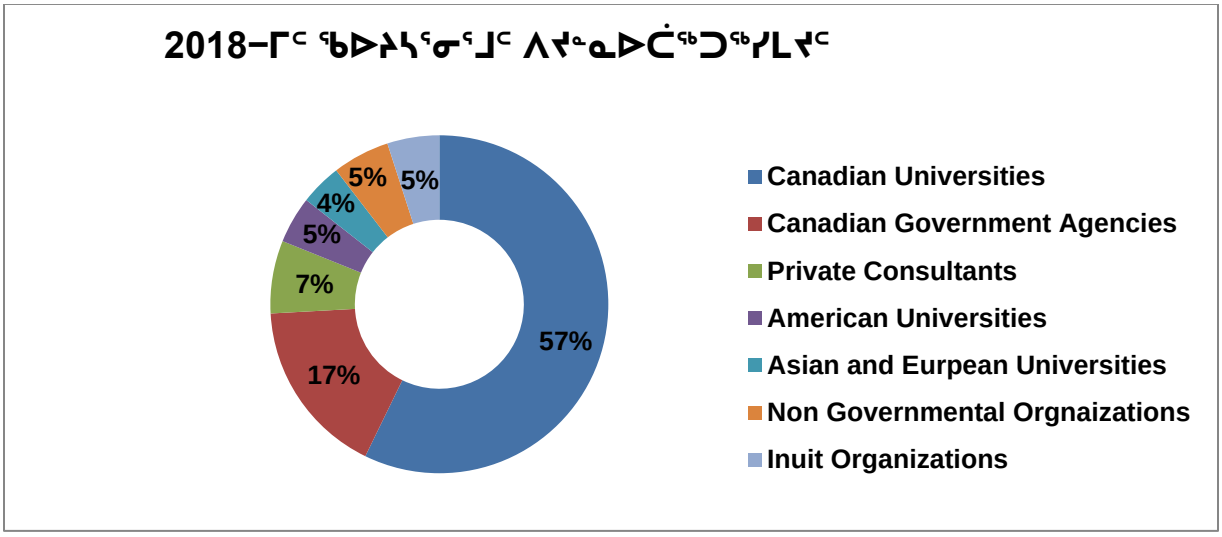




2018-ᖃᒧᑎᑦᓯᒍ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ ᐱᔪᓐᓇᐅᑎᑦᑎᓂᖅᓴᓕᐅᓪᓚᐅᖅᓴᐅᑦ ᖁᑭᖅᑲᓐᓂᒃᑯᑦ ᐊᑐᕐᓯᓐᓂᒃᑯᓂᑦ ᓄᓇᕗᑦ ᐊᕐᕌᒍᓕᕆᓂᑦ ᑭᖑᓂᐊᓂ ᐊᖏᕐᓗᒍᓕᐅᖅᑐᓂ.



ᖃᐅᔨᓴᖅᑏᑦ ᓇᒥᑐᐃᓐᓇᖅ ᑲᓇᑕᒥᑦ ᓱᓚᕝᕙᐊᒥᓪᓗ ᓱᓚᑦᑐᖅᓴᕝᕕᒃᔭᐊᖏᓐᓂ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐱᔪᓐᓇᐅᑎᑖᖅᑐᖅᓯᒪᕗᑦ ᓄᓇᕗᒻᒥᑦ ᖃᐅᔨᓴᖅᑐᓕᕆᔾᑯᓐᓂ 2018-ᒥᑦ. ᑮᓯᐊᓂᑦᑕᐅᖅ ᑭᖑᓂᐊᓂ ᐊᕿᒍᑖᖅᑐᓂ, ᐱᔪᓐᓇᐅᑎᑖᖅᑐᖅᓯᒪᔪᑦ ᐅᓄᕐᓂᖅᓴᐅᓚᐅᖅᐳᑦ 2018–ᒥᑦ (57%)-ᒥᑦ ᖃᐅᔨᓴᖅᑎᓂ ᑲᓇᑕᒥᑦ ᓱᓚᑦᑐᖅᓴᕝᕕᒃᔭᐊᖏᓐᓂᑦ.



ᓄᓇᕗᒻᒥᑦ ᖃᐅᔨᓴᕈᓐᓇᖏᓚᑦ ᑭᓯᐊᓂ ᐃᑲᔪᖅᑎᖃᑦᑎᐊᕐᓗᑎᑦ, ᐱᖃᑕᐅᔪᖃᕐᓗᓂ ᐊᐅᓚᑦᑎᔾᖃᓗᑎᒃᑯ ᓄᓇᕗᒻᒥᐅᓂ ᖃᐅᔨᓴᓂᓕᒫᖕᒐᓂ. ᓄᓇᕗᒻᒥᐅᑦ ᑯᔭᒋᓯᒪᕙᒃ ᑐᓴᐅᒪᑎᑦᑎᖃᑦᑕᕋᒥᑦ ᖃᐅᔨᒪᔭᕐᒥᓂ, ᖃᖓᒃᑯᑦ ᐃᑲᔪᖅᑎᒪᓇᓂᖏᓐᓂᒃᑯ ᓄᓇᕗᒻᒥᑦ ᖃᐅᔨᓴᖅᑐᓕᕆᔾᑯᓐᓂ ᐱᔪᓐᓇᐅᑎᓕᐅᓇᐊᖃᓚᐅᖅᑎᓪᓗᒋᑦ 2018–ᒥᑦ. ᖃᐅᔨᓴᕐᓂᖅ ᐃᖅᑲᓇᐃᔾᔩᓪᓚᓇᐅᕗᖅ ᑮᓇᐅᔭᖅᓴᕈᑎᐅᕙᒃᓗᓂᓗ ᓄᓇᕗᒻᒥᐅᒐᓚᖕᓂᑦ ᑐᓴᐅᒪᑎᑦᑎᖃᑦᑕᕋᒥᑦ ᑐᕌᒐᖕᒋᓐᓂ ᐱᔭᓇᐊᖃᖅᑕᖕᒋᓐᓂ ᓄᓇᑦᑎᓐᓂ. 2018–ᒥᑦ ᐊᓕᐊᓇᐃᒍᓱᒃᐳᖓ ᐅᓐᓂᖅᓯᐅᕆᓐᓇᖅᓯᒐᒪᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐱᔪᓐᓇᐅᑖᖅᑎᑕᐅᓚᐅᖅᓯᒪᓂᖕᒋᓄᑦ ᐅᓄᖅᑑᕗᑦ ᓄᓇᕗᒻᒥᑦ. ᓄᓇᕗᑦ ᓱᓚᑦᑐᖅᓴᕝᕙᖕᒐᓂ ᖃᐅᔨᓴᖅᑐᓕᕆᔾᑯᓐᓂᖕᒖᖅᐹᖕᒐ, ᓄᓇᕗᒻᒥᑦ ᖃᐅᔨᓴᖅᑕᐅᓕᕆᔾᑯᑦ ᖃᐅᓴᕈᒪᓂᖃᖅᐳᑦ ᐊᒻᒪ ᓄᓇᕗᒻᒥᐅᓄᑦ ᐊᑐᐃᓐᓇᐅᑎᑦᑎᔪᒪᕗᑦ ᐃᓕᓐᓂᐊᕐᓗᑎᑦ ᐱᖃᑕᐅᓗᑎᒃᑯ ᖃᐅᔨᓴᖅᑎᓪᓗᒋᑦ.

ᖃᓄᐃᓐᓇᖅ ᖃᐅᔨᓴᖅᑕᐅᔪᒥᑦ ᑐᓴᕈᒪᓗᓂ ᑲᑎᖅᓱᖅᑕᕕᓂᑦᑎᓂ, ᖃᐅᔨᒋᐊᒃᑲᓐᓂᕈᒪᓐᓂᕈᕕᑦ ᐱᓕᕆᐊᕆᖃᑦᑕᖅᑕᑦᑎᓐᓂ ᐱᔨᑦᑎᖅᑕᐅᑎᓐᓂᒃᑯ, ᐃᑭᐊᕿᕗᕕᒍᑦ ᑕᑯᒋᐊᕈᓐᓇᖅᑕᓯwww.NRI.nu.ca–ᒥᑦ.

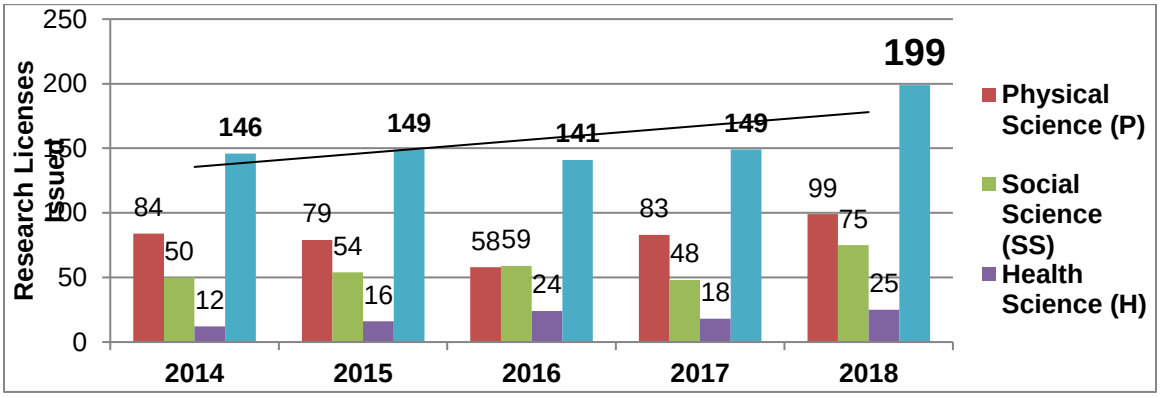
ME Thomas

ᒥᐊᓕ ᐃᓪᓕᓐ ᑖᒪᔅ
ᑐᑭᒧᐊᒃᑎᑦᑎᔨ, ᐃᓱᒪᒃᓴᓯᐅᕈᑎᓕᐅᕐᓂᖅ ᖃᐅᔨᓴᕐᓂᕐᓗ
ᓄᓇᕗᒻᒥ ᖃᐅᔨᓴᖅᑐᓕᕆᔾᑯᑦ ᓄᓇᕗᒻᒥ ᓱᓚᑦᑐᖅᓴᕝᕕᒃ

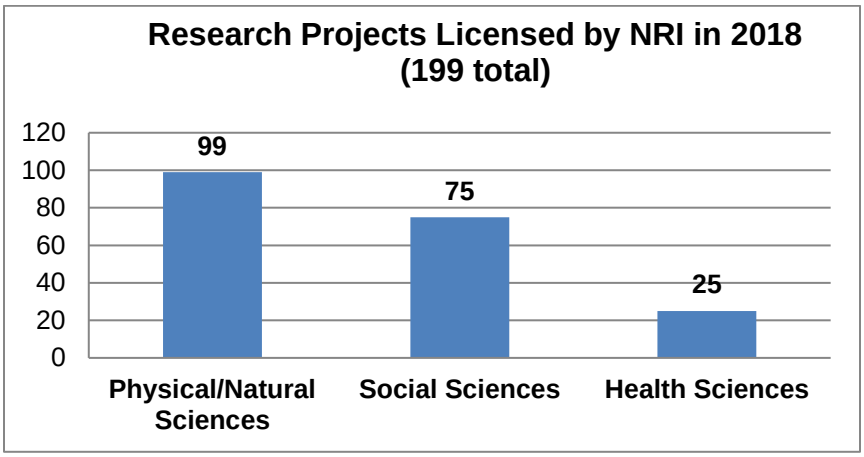
A Message from the Director of Innovation and Research

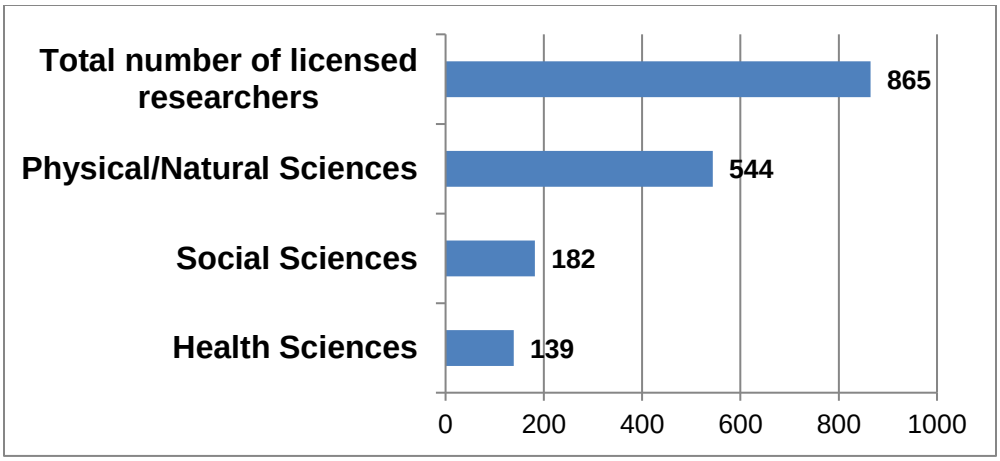
The Nunavut Research Institute (NRI) is responsible for licensing scientific research in Nunavut as required under Nunavut's *Scientists Act*. I am pleased to present our compendium of research for 2018 which provides information for 199 research projects licensed across Nunavut in the health, natural/physical, and social research disciplines in 2018.

2018 was a very active year for research in Nunavut! The NRI issued more research licenses in 2018 than in any previous year since 1995 when we became responsible for administering the Scinstists Act. From 1995 to 2014, the number of research projects licensed annually remained relatively stable. However, from 2014 to 2018, the number of licensed projects grew by almost 30%, with the largest increase occurring in the social sciences and health research disicplines.

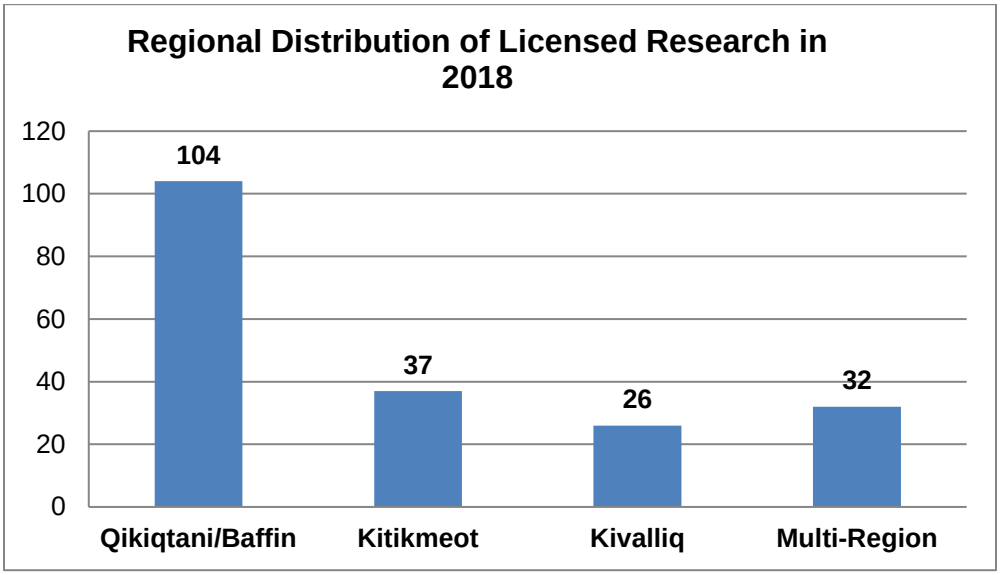


Despite the recent growth in health and social science research activity, the physical and natural sciences remain the largest research discipline in Nunavut in terms of total research activity. Almost 50% of the licenses issued in 2018 were for projects in the physical and natural sciences which accounted for 62% of all licensed researchers active in Nunavut in 2018.

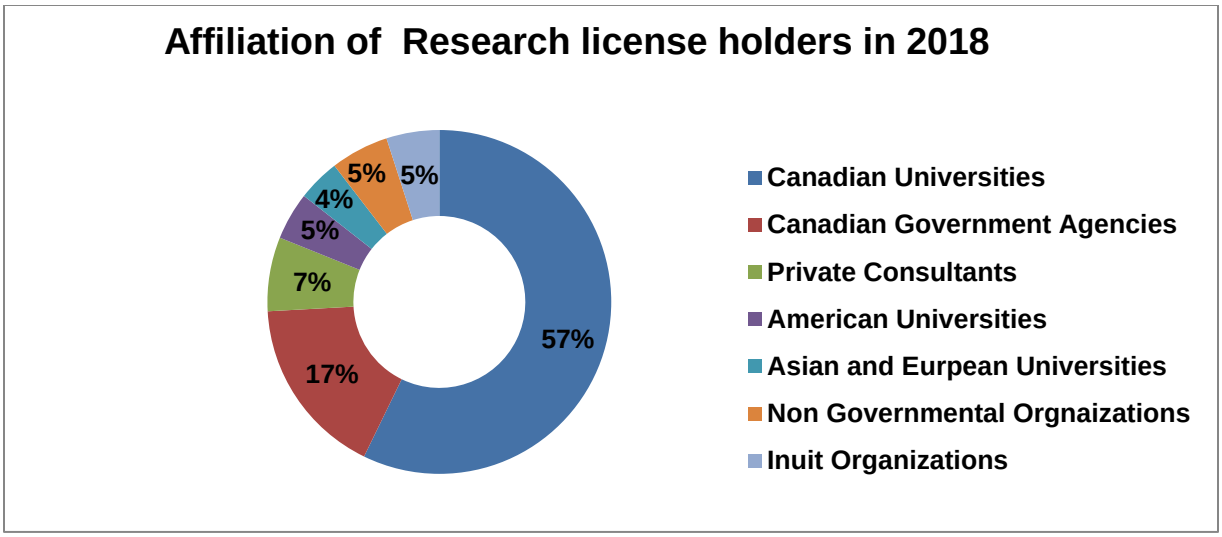




The majority of research licensed in 2018 was carried out the Qikiqtani (Baffin) region which is similar to the regional distribution of research observed in previous years.



Researchers from a broad range of Canadian and international institutions obtained research licenses from the NRI in 2018. As in previous years however, the majority (57%) of licenses issued issued in 2018 were to investigators from Canadian Universities.



Research in Nunavut is not possible without the dedicated support, involvement, and leadership of Nunavummiut throughout all stages of research. I would like to exptend a special thanks all those Nunavummiut who shared their valuable knowledge, time, and expertise to support the NRI's research licensing process in 2018. Research is an important source of employment and income for many Nunavummiut and also provides valuable knowledge to help address the needs of our communities. I am pleased to note that 19 research licenses in 2018 were issued to principal investigators from Nunavut for studies in the multiple disciplines. As the science division of Nunavut Arctic College, the NRI is committed to building research capacity in Nunavut and to fostering opportunities for Nunavummiut to learn and participate in science.

To receive information on any of the research projects described in our compendium, or to learn more about the NIRI's programs and services, please visit our website at www.NRI.nu.ca.

Mary Ellen Thomas
Director, Innovation and Research
Nunavut Research Institute, Nunavut Arctic College

*The NRI research compendium does not include information on wildlife or archeology research which is not subject to licensing under the *Scintists Act*.

PHYSICAL AND NATURAL SCIENCES RESEARCH

Monitoring the Ice Edge Break up in Eclipse Sound

License Number: 02 051 18R-M

Principal Investigator: Dumont, Dany

Affiliation: Institut des sciences de la mer de Rimouski
Universite du Quebec a Rimouski
Rimouski, Quebec, Canada
dany_dumont@uqar.ca

Number in Party: 6

Research Area: North Baffin

Fieldwork Locations: Eclipse Sound

SUMMARY

The purpose of this project is to monitor and characterize the land-fast ice sheet covering Eclipse Sound before, during, and after its break up in late-spring and early-summer, by way of two autonomous time lapse camera systems deployed on high lands on both sides of the eastern end of Eclipse Sound. Each system consists of an insulated box containing the camera and hardware powered by one battery and one solar panel. The equipment will be brought on site by snowmobiles for installation in May, and recovered by boat at the end of summer, with the help of hunters from Pond Inlet. Results will be shared with project partners and the community through the Ocean's North website. Research results and data will be shared with the community, the Nunavut Research Institute and Oceans North Canada, and may result in a publication in a scientific journal.

Arctic Aerosol and Gas Measurements, Resolute Bay, Pond Inlet

License Number: 02 039 18R-M

Principal Investigator: Sharma, Sangeeta

Affiliation:
Environment & Climate Change Canada
Toronto, Ontario, Canada
sangeeta.sharma@canada.ca

Number in Party: 4

Research Area: North Baffin

Fieldwork Locations: Pond Inlet, Resolute Bay

SUMMARY

The proposed measurements will allow us to estimate changes in the climate and air quality-related properties of the atmospheric aerosol and gases. The measurements will be used to verify EC models for the prediction of Arctic climate and air quality. We have already established baseline measurements at Resolute Bay and are now proposing to install the same set of instruments at Pond Inlet, starting measurements in July, so that the baseline conditions can be monitored before ship traffic increases significantly across the region. This site will also be a complimentary site to an already operational site in the high Arctic at Alert, Nunavut.

Lake Ice in the Canadian High Arctic

License Number: 02 001 18R-M

Principal Investigator: Brown, Laura

Affiliation: Department of Geography
University of Toronto Mississauga
Mississauga, Ontario, Canada
lc.brown@utoronto.ca

Number in Party: 3

Research Area: North Baffin

Fieldwork Locations: Resolute, Polar Bear Pass

SUMMARY

The purpose of this project is to monitor lake ice in Canada, as it is an important part of the cryosphere and recent projections suggest thinner and shorter duration of ice cover in the future. The objective of this research is to better understand the links between lake ice and climate, particularly in response to a changing cryosphere.

SuperDARN Radar Sites

License Number: 02 003 18R-M

Principal Investigator: McWilliams, Kathryn

Affiliation: Department of Physics & Engineering Physics
University of Saskatchewan
Saskatoon, Saskatchewn, Canada
rls757@mail.usask.ca

Number in Party: 5

Research Area: North Baffin & Kivalliq

Fieldwork Locations: Clyde River, Rankin Inlet

SUMMARY

Super Dual Auroral Radar Network (SuperDARN) Canada is a network of high-frequency (HF) radars located throughout the northern hemisphere. The purpose of the SuperDARN is to study plasma in the near-Earth space system, its interaction with the Earth's atmosphere and geospace environment, its effects on the terrestrial "hard" infrastructure (e.g. communications, energy, transportation, etc…), and it's role in the Sun-Earth system. SuperDARN convection/voltage maps are essential for studies of the impact of space weather at Earth. Space weather researchers rely on SuperDARN data for putting their localized observations in context. SuperDARN radars are extremely reliable, being easily accessible for repairs and upgrades. This reputation has made SuperDARN a favourite tool for space weather scientists.

Evaluation of Simulated Snow Properties Across the Arctic

License Number: 04 001 18R-M

Principal Investigator: Langlois, Alexandre

Affiliation:
University of Sherbrooke
Sherbrooke, Quebec, Canada
a.langlois@usherbrooke.ca

Number in Party: 7

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay

SUMMARY

The project is motivated by the increase in extreme weather events in the Arctic such as rain-on-snow (ROS) events. ROS are known to be the consequence of global warming, and given the anticipated increase in arctic temperatures; more events are likely to occur. Those events lead to the formation of ice layers that affect transportation, travel on the land, and will have direct consequences on permafrost melt. ROS events also affect caribou grazing conditions, and several events killed many animals, not only in Canada but also in other parts of the Arctic.

Lithologic and Tectonic controls on Paleoproterozoic banded Iron Formation-hosted/associated Gold – A study of the Amaruq Gold Zones

License Number: 03 004 18R-M

Principal Investigator: Mercier-Langevin, Patrick

Affiliation:
Natural Resources Canada
Quebec City, Quebec, Canada
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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Amaruq Property

SUMMARY

The proposed work would be to study gold mineralization associated with faults and iron formation-bearing volcano-sedimentary rock successions with the purpose to advance the understanding of the controlling factors on gold deposits formation and develop improved exploration models.

Iqaluit MET Mast

License Number: 01 002 18R-M

Principal Investigator: Nimchuk, Sheldon

Affiliation:
Qikiqtaaluk Business Development Corporation
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Number in Party: 5

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The Iqaluit MET mast project includes installation of a meteorological mast, collecting wind data for a minimum of 1 year and a maximum of 2 years, with periodic site visits for maintenance, and dismantling and removing of the mast and all materials/equipment from the site at the end of the project duration. Erection of the meteorological mast is necessary to support the wind monitoring instruments. The purpose of collecting wind data is to assess and validate the wind resource in Iqaluit for potential wind energy generation. At this initial phase, there are no long-term developments planned. Depending on the outcome of this initial phase, any future developments will go through the NPC and NIRB proposed project application process as well as full community and stakeholder consultations.

Sanikiluaq MET Tower

License Number: 01 003 18R-M

Principal Investigator: Nimchuk, Sheldon

Affiliation:

Qikiqtaaluk Business Development Corporation
Iqaluit, Nunavut, Canada
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Number in Party: 0

Research Area: South Baffin

Fieldwork Locations: Sanilkiluaq

SUMMARY

The Sanikiluaq MET Tower project includes installation of a meteorological tower (MET tower), collecting wind data for a period of 1 year, with periodic site visits for tower maintenance, and dismantling and removing of mast and all materials/equipment from the site at the end of the project duration. Erection of the MET tower is necessary to support the wind monitoring instruments.

GEM-2 North Baffin Bedrock Mapping Project

License Number: 02 005 18R-M

Principal Investigator: Skipton, Diane

Affiliation:

Geological Survey of Canada
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Number in Party: 10

Research Area: North Baffin

Fieldwork Locations: Pond Inlet Area

SUMMARY

The proposed project will cover all of NTS map sheet (scale 1:250 000) 37G and the southern (on-land) portion of map sheet 38B in the Pond Inlet – Mary River area of northern Baffin Island, Nunavut. Mapping would be conducted out of Pond Inlet from July 2nd to August 20th 2017, and followed by analytical and map production work in Ottawa in 2017-2018. Geological maps and reports for this area are outdated or have never been published. New maps from this project would document the rocks, minerals and history of the land, and help identify potential mineral resources and carving stone. The project would be undertaken by 11-12 scientists and students based out of rented accommodation in Pond Inlet, supported by 1 helicopter. Fieldwork would involve foot traverses by teams of two, causing minimal disturbance. Fist-size rock samples will be collected using a rock hammer. Other observations include GPS locations, hand-held compass measurements and digital photographs.

Hydrographic survey in the Foxe Channel and Hudson Strait

License Number: 02 006 18N-A

Principal Investigator: Lavoie, Denis

Affiliation: Geological Survey of Canada
Natural Resouces Canada
Quebec City, Quebec, Canada
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Number in Party: 24

Research Area: North & South Baffin

Fieldwork Locations: Hudson Strait, Foxe Basin

SUMMARY

There is circumstantial evidence, largely from satellite radar images, that petroleum is possibly seeping from the seafloor of Foxe Channel (north of Southampton Island) and Hudson Strait (north of Akpatok Island). Information collected during this project will help support community and government decisions on the presence and nature of the suspected natural oil seeps on the seafloor. The data will be collected using a high resolution sonar system. The frequency of which does not conflict marine mammals communication. The major goals of this proposed research for 2017 would be: 1) to investigate natural leakage of buried oil and gas deposits at the seabed. Oil and gas can leak out from natural processes. Our research will help to determine how much oil and gas is leaking and where it is coming from, 2) to learn more about what types of bedrock are exposed at the seabed. Knowledge of the bedrock in Hudson Strait and Foxe Channel would provide important information about how they formed and to accurately assess resources.

Mass Balance of Glaciers and Ice Caps in the Queen Elizabeth Islands, Canada

License Number: 02 008 18R-M

Principal Investigator: Burgess, David

Affiliation:
Geological Survey of Canada
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Number in Party: 1

Research Area: North Baffin

Fieldwork Locations: Queen Elizabeth Islands

SUMMARY

Knowledge of the mass balance of ice caps and glaciers in the Canadian high Arctic provide important insight into understanding patterns of climate change, and validating current estimates of global sea-level contributions from this region. Through continuation of the long-term time series (~50 years) of annual surface mass balance measurements for the Northwest Devon ice cap, Meighen ice cap, Melville ice cap, and Agassiz ice fields, this project contributes towards the fulfillment of NRCan's mandate and ESS strategic outcomes through activities in the ESS Climate Change Geoscience Programme (CCG) – Essential Climate Variables (ECV).

Western Hudson Bay Geoscience for Infrastructure

License Number: 03 005 18R-M

Principal Investigator: Oldenborger, Greg

Affiliation:
Natural Resources Canada
Ottawa, Ontario, Canada
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Number in Party: 4

Research Area: Kivalliq

Fieldwork Locations: Rankin Inlet

SUMMARY

The western coast of Hudson Bay, in the Kivalliq region of Nunavut, is undergoing significant infrastructure development associated with natural resources, shipping and community sustainability. Permafrost and ground ice are important features of this landscape that can significantly affect land-based infrastructure through influence on ground stability and drainage patterns. Knowledge of permafrost conditions is required to characterize climate change impacts. However, there are only limited studies of permafrost and ground temperature data in the Kivalliq region. The proposed activity will provide valuable permafrost information along the western Hudson coast of Nunavut.

Mary River Project

License Number: 02 009 18R-M

Principal Investigator: Hoyle, Megan-Lorde

Affiliation:

Baffinland Iron Mines Corporation
Oakville, Ontario, Canada
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Number in Party: 12

Research Area: North Baffin

Fieldwork Locations: Steensby Port,Mary River,Milne Port/Road

SUMMARY

Data collection and analysis for environmental monitoring, analysis, and management of the Mary River project as required under Nunavut Impact Review Board Certificate No. 005, and under the Amended Type "A" Water License 2AM-MRY1325.

Onshore Stratigraphy, Northern Baffin Bay Region

License Number: 02 010 18R-M

Principal Investigator: Haggart, Jim

Affiliation: Natural Resources Canada
Geological Survey of Canada
Vancouver, British Columbia, Canada
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Number in Party: 5

Research Area: North Baffin

Fieldwork Locations: Pond Inlet, Bylot Island, Scott Inlet

SUMMARY

Cretaceous-Cenozoic outcrops on Bylot Island and Baffin Island in the vicinity of Pond Inlet and Scott Inlet will be studied to determine details of the stratigraphic succession and its age. New and previously-collected samples will be precisely located in measured stratigraphic sections, providing information on age, sedimentology and depositional environments, chemical composition and physical properties of the strata, and organic geochemistry to better constrain the extent of possible source rocks. Detailed understanding of age and outcrop sedimentology will allow identification of regional and local unconformities, and provide a sequence stratigraphic framework for the onshore succession.

Community – Based Monitoring of Sea Ice and Eider Duck Populations around the Belcher Islands, Nunavut

License Number: 01 009 18R-M

Principal Investigator: Heath, Joel

Affiliation: Arctic Eider Society
St. Johns, Newfoundland, Canada
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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Belcher Islands

SUMMARY

Our objective is to understand how changing sea ice conditions influence the movements and population dynamics of eider ducks. Our ongoing use of time lapse photography and Inuit field surveys have led to the implementation of a multi-scale community-based research and monitoring program that allows us to simultaneously monitor the dynamics of sea ice formation and habitat use by eiders around southeastern Hudson Bay.

Ice Dynamics and Cryospheric Changes in Northern Canada

License Number: 02 013 18R-M

Principal Investigator: Copland, Luke

Affiliation: Department of Geography, Environment & Geomatics
University of Ottawa
Ottawa, Ontario, Canada
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Number in Party: 7

Research Area: North Baffin

Fieldwork Locations: Glaciers and Ice Caps of the Queen Elizabeth Islands

SUMMARY

This research program will continue work on the current characteristics and stability of the northern Ellesmere Island ice shelves and adjacent multiyear landfast sea ice. Fieldwork started at this location in 2008, and will continue for the foreseeable future. Almost all of the ice shelves in this region have experienced dramatic break-ups over the last eight years, so this project aims to improve understanding of the causes of these events and the fate of the remaining ice shelves and related ice features.

Toward a Sustainable Fishery for Nunavummiut (TSFN)

License Number: 04 002 18R-M

Principal Investigator: Walker, Virginia

Affiliation: Department of Biology
Queens Univeristy
Kingston, Ontario, Canada
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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: King William Island & Gjoa Haven

SUMMARY

The project study area (approximately 580 km x 360 km) is located within the Kitikmeot region around King William Island and the community of Gjoa Haven. The proponent will conduct water sampling to increase the scientific understanding of how microbes from Arctic char and whitefish interact with the fish and their surroundings. Research activities in 2017 will be carried out from September 01 to October 31. The research program will continue until December 31, 2019.

A Weather Station Network to Support Safe Travel and Build Nunavummiut Environmental Monitoring Capacity

License Number: 04 003 18R-M

Principal Investigator: Else, Brent

Affiliation: Department of Geology
University of Calgary
Calgary, Alberta, Canada
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Number in Party: 5

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay

SUMMARY

Over the past two years, our team at the University of Calgary has set up three weather stations near Cambridge Bay, Nunavut. The weather stations have scientific objectives to study sea ice melt and air-sea carbon dioxide exchange. They also have practical objectives to provide real-time weather information along important travel routes for the residents of Cambridge Bay. The stations have been set up in collaboration with the Ekaluktutiak (Cambridge Bay) Hunters and Trappers Organization, and two of the stations have been placed at the HTO's request at important hunting and fishing locations. The weather stations are permitted under an existing NRI multi-year license that covers a wide range of natural science activities.

Back River Project Baseline Studies

License Number: 04 005 18R-M

Principal Investigator: Pickard, Mathew

Affiliation:

Sabina Gold and Silver Corporation
Vancouver, British Columbia, Canada
mpickard@sabinagoldsilver.com

Number in Party: 8

Research Area: Kitikmeot

Fieldwork Locations: Back River - Goose Camp:
Latitude (degree/minute): 65° 32.701’
Longitude (degree/minute): -106° 25.718’

George Camp:
Latitude (degree/minute): 65° 55.281’
Longitude (degree/minute): -107° 27.547’

SUMMARY

Sabina Gold & Silver Corp. (Sabina) is in the process of permitting the proposed Back River Project (the Project), located in the West Kitikmeot region of Nunavut, to occur. Sabina leads coordinating research activities for the project and engages multiple specialists to support research acquisition. The proposed ongoing baseline program would be conducted starting on January 1, 2018 and could continue for a full year until December 31, 2018. However, the same baseline and scientific studies may continue in subsequent years.

Connecting Snow Melt to River Discharge in the Kitikmeot Region and Northwest Territories

License Number: 04 006 18N-M

Principal Investigator: Brown, Kristina

Affiliation: Department of Fisheries and Oceans Canada
Institute of Ocean Sciences
Sidney, British Columbia, Canada
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Number in Party: 2

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Kugluktuk

SUMMARY

An increase in temperatures, increased frequency of extreme weather events, and shifts in the timing of freeze-thaw conditions will directly impact the Arctic hydrological cycle. In particular, changes to the timing of snow accumulation and subsequent melt on land will influence the delivery of freshwater to river systems and, ultimately, to the ocean. This project is motivated by a need to better characterize and quantify the impacts of changing snow conditions on river discharge within the Kitikmeot Region and Northwest Territories in order to better understand freshwater contributions to the ocean under a changing climate.

Arctic Coastal and Drifting Ice Processes and Dynamics

License Number: 02 016 18R-M

Principal Investigator: Mueller, Derek

Affiliation: Department of Geography & Environmental Studies
Carleton University
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Number in Party: 9

Research Area: North Baffin

Fieldwork Locations: Queen Elizabeth Islands, Ellesmere Island, Devon Island, Baffin Island

SUMMARY

Changes in Arctic climate have profound implications for the break-up of coastal ice. In the recent past, there have been large calving events of ice shelves and glaciers that have produced many vast ice islands and icebergs that drift through Nunavut waters. Our research is focused on understanding how various types of coastal ice interact with the atmosphere above, the ocean below as well as meltwater and glacier ice from the adjacent land. In particular, we are interested in how both thick ice (ice tongues, ice shelves) and thin ice (landfast sea ice and lake ice) are melting and breaking-up in a changing climate. In addition, we study how large ice masses (icebergs and ice islands) that break away from the coast, drift and deteriorate.

Community-Driven Sea Ice and Ocean Research in the Contrasting Coastal Domains of Hudson Bay

License Number: 03 008 18N-M

Principal Investigator: Kuzyk, Zou Zou

Affiliation:
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Winnipeg, Manitoba, Canada
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Number in Party: 11

Research Area: Kivalliq

Fieldwork Locations: Marine Environment between the communities of Chesterfield Inlet and Naujaat

SUMMARY

The objective of this project is to expand the highly successful community-driven research in eastern Hudson Bay to northwest Hudson Bay (Chesterfield Inlet and Naujaat), with a goal towards establishing comparison sites in eastern and western Hudson Bay. This comparison will support bay-wide monitoring objectives, promote inter-jurisdictional information exchange, and help test scientific hypotheses about contrasting oceanography and marine life between northwest and southeast Hudson Bay.

Winter to Summer Transitions in the Arctic-Ice Covered Ecosystems (Arctic-ICE)-Multiyear Project

License Number: 04 008 18R-M

Principal Investigator: Mundy, CJ

Affiliation: Centre for Earth Observation Science
University of Manitoba
Winnipeg, Manitoba, Canada
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Number in Party: 25

Research Area: Nunavut Wide

Fieldwork Locations: Dease Strait, Wellington Bay, Queen Maude Gulf, Finlayson Islands

SUMMARY

Climate warming has induced rapid change in the ice-covered marine ecosystem of the high Arctic. In this project we will investigate: (1) physical and biological processes controlling the timing of marine primary production, which has been hypothesized as an indicator of potential change in the ecosystem, (2) the influence of rivers and sea ice melt on the freshwater budget and organic carbon cycle in coastal bays near Cambridge Bay, and (3) microbial diversity in sea ice, seawater and marine sediments as it relates to in situ biogeochemical cycling and the potential microbial response to increased industrial activity (e.g., oil spills).

Origin of Coloured Spinel Occurences in Southern Baffin Island, Nunavut: Implications for local gemstone potential

License Number: 01 010 18R-M

Principal Investigator: Belley, Philippe

Affiliation: Department of Earth, Ocean and Atmospheric Science
University of British Columbia
Vancouver, British Columbia, Canada
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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Kimmirut & surrounding area

SUMMARY

Our goal is to expand ongoing research by completing additional, more detailed field work at spinel and sapphire occurrences on the True North Gems property. Rock samples of interest to our research will be picked up (when loose), or extracted with hand tools. Small power tools may be used to extract small amounts of rock (< 1 m^3) where hand tools are ineffective. The quantity of samples taken from each site are expected to range from 1-20 kg, depending on the complexity of the rock.

CANDAC-The Canadian Network for the Detection of Atmospheric Change

License Number: 02 019 18R-M

Principal Investigator: Drummond, James

Affiliation: Department of Physics & Atmospheric Science
Dalhousie University
Halifax, Nova Scotia, Canada
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Number in Party: 4

Research Area: North Baffin

Fieldwork Locations: Eureka

SUMMARY

Canadians have a special responsibility for their sovereign Arctic territory. The unique environmental conditions – extreme cold, low humidity, and seasonal daylight variations - give rise to unusual climate and chemistry processes, many of which are poorly understood. Gaps in our scientific knowledge of the Arctic impair our ability to effectively steward Canada's North. This lack of knowledge has serious social, environmental and biodiversity implications. In 2002 a group of researchers joined together to form the Canadian Network for the Detection of Atmospheric Change (CANDAC) with the objective of improving the state of observational atmosphere research in Canada.

NEIGE (Northern Ellesmere Island in the Global Environment)

License Number: 02 021 18R-M

Principal Investigator: Vincent, Warwick

Affiliation: Department of Biology
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Number in Party: 12

Research Area: North Baffin

Fieldwork Locations: Quttinirpaaq National Park, Resolute Bay Lakes, Markham Ice Shelf

SUMMARY

This is a follow-up to our work with the program "NEIGE", to continue monitoring environmental measurements in Quttinirpaaq National Park's lakes, fiords and vicinity. We will determine the diversity of microbial life in shallow water communities using state of the art molecular techniques, characterize the physical characteristics and processes within northern Ellesmere Island's meromictic lakes, and define the structure and function of microbial food webs within Lake A, C1, Ward Hunt, Disraeli Fjord and Milne Fjord using HPLC and flow cytometry analyses at Laval University. Our climate stations will continue to provide long-term air and soil monitoring data for this globally important site.

Airborne and Ground-Based Electromagnetic Measurements of the Sea Ice Mass Balance

License Number: 02 022 18R-M

Principal Investigator: Haas, Christian

Affiliation: Department of Earth and Space Science and Engineering
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Number in Party: 7

Research Area: North Baffin

Fieldwork Locations: Lincoln Sea

SUMMARY

The planned work will study changes of the sea ice mass balance as a result of variations of the thermodynamic and dynamic boundary conditions for ice growth, melt, and deformation, including the role of the snow cover. The focus of my research is the establishment of long-term, systematic ice mass balance observations of thick, multi-year ice in the Arctic Ocean between the coast of Canada and the North Pole. These observations will include biennial airborne electromagnetic measurements of the seasonal and interannual ice thickness variability, as well as observations of ice deformation and snow properties. In situ measurements will be complemented by satellite remote sensing and modeling work, and will contribute to the validation of new satellite products and model results. The research is significant as the areal coverage of Arctic sea ice is rapidly decreasing, at a pace much faster than predicted by any climate model. This demonstrates our limited understanding of climate processes and feedbacks in the Arctic. The disagreement can partially be explained by a misrepresentation of the sea ice mass balance in existing climate models, which is largely due to a general lack of systematic ice thickness observations in the Arctic Ocean.

An Investigation of the Sensitivity of High Arctic Permafrost to Climate Change

License Number: 02 023 18R-M

Principal Investigator: Pollard, Wayne

Affiliation: Department of Geography
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Number in Party: 7

Research Area: North Baffin

Fieldwork Locations: Ellesmere Island, Axel Heiberg Island

SUMMARY

This is the last year of a long-term project that examines how global warming, in particular warmer summer temperatures, affects the stability of high Arctic permafrost conditions, landscapes and infrastructure. There are 4 main aims: (1) to identify and measure changes in different landscapes (e.g. tundra, polar desert, wet lands, shorelines), (2) to assess local climate variability, (3) to evaluate the nature and extent of ground ice in permafrost and its vulnerability to climate change, and (4) to determine the amount and rate of landscape change caused by warming and melting permafrost (thermokarst).

Functional, Structural and Biodiversity Studies of Arctic Freshwaters

License Number: 04 012 18N-M

Principal Investigator: Culp, Joseph

Affiliation: Faculty of Science
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Number in Party: 0

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay surrounding area

SUMMARY

This project investigates how human-induced changes in Arctic freshwater may impact the health of rivers and lakes. We will establish baseline conditions of streams and rivers in the Lake Greiner system. Water chemistry, ecosystem metabolism, algae, benthic invertebrates and small fish will be sampled. The aim is to describe how the function and structure of aquatic ecosystems support the production of fishes. Sampling sites will be located in rivers and streams within the Greiner Lake watershed. At least 15 sampling locations will be established.

Impacts of Air Pollution on Terrestrial and Aquatic Ecosystem on Southern Baffin Island

License Number: 02 052 18R-M

Principal Investigator: Aherne, Julian

Affiliation:
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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Iqaluit, Kimmirut

SUMMARY

The impact of atmospheric emissions on air quality in the Arctic is expected to increase as new and expanded economic developments trigger growth in marine traffic and resource extraction. Emissions of sulphur dioxide and nitrogen oxides can contribute to ecosystem acidification and eutrophication in regions characterized by acid sensitive geology and nutrient poor soils, such as Baffin Island. This project will utilise a critical loads approach to quantify the assimilative capacity of arctic terrestrial and aquatic ecosystems. Lake water in the Kimmirut and Iqaluit regions (~100 sites) will be sampled for chemical analysis. In addition, moss and soil samples will be collected at a sub-set of the study sites (~20 sites) to assess terrestrial ecosystem impacts.

Geotechnical and Environmental Baseline Studies – Iqaluit Port Development

License Number: 01 024 18R-M

Principal Investigator: Burdett-Coutts, Victoria

Affiliation:
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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The studies will be performed for the Government of Nunavut in two locations. One site near the municipal wharf, and the other in the proposed deep water port area and quarry. Geotechnical and environmental baseline studies are required to support the design of upgrades proposed for the municipal wharf, and a new deep water port.

Geotechnical and Environmental Baseline Studies – Pond Inlet Small Craft Harbour Development

License Number: 02 056 18R-M

Principal Investigator: Coutts, Victoria Burdett

Affiliation:
Advisian
Burnaby, British Columbia, Canada
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Number in Party: 2

Research Area: North Baffin

Fieldwork Locations: Pond Inlet

SUMMARY

The Pond Inlet Offset Plan consists of two components, the Monitoring Program and the Research Program. The goal of the Monitoring Program is to assess the habitat characteristics within the footprint of the proposed project. In future years, after construction of the facility, this will be compared to the habitat provided by the boulders/rocks that are a component of project design for shoreline protection. Rocks provide a multi-dimensional habitat where marine organisms can find refuge in the spaces between them. The goal of the Research Program is to investigate the primary prey species of Arctic char in Eclipse Sound and the waters surrounding the proposed small craft harbour.

Geology Research in Baffin Bay

License Number: 02 057 18R-M

Principal Investigator: Bennett, Robbie

Affiliation:

Natural Resources Canada
Dartmouth, Nova Scotia, Canada
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Number in Party: 2

Research Area: North & South Baffin

Fieldwork Locations: Baffin Bay, Davis Strait, Southwing Fiord

SUMMARY

The expedition, proposed to take place in August 15 to September 11, 2018 is a collaborative venture, including research activities from the Canada-Nunavut Geoscience Office (CNGO), and the Geological Survey of Canada's programs Geomapping for Energy and Minerals (GEM), and Public Safety Geoscience (PSG). Information collected during this project will help support community and government decisions on use of offshore areas and provide communities with better knowledge for improving public safety. The proposed research expedition would take place in Baffin Bay, Davis Strait, and Southwing Fiord. Community visits were conducted in early 2013 in relation to the first phase of study in Baffin Bay. During the summer of 2013, we conducted a research expedition to Baffin Bay and returned to the communities to present some of the new research results early in 2014. The original application for the research licence occurred in 2015. At the time, a 1 month-long marine geology expedition was planned for August-September 2015. After the research licence was granted, the expedition was postponed until 2017 due to issues with the research vessel. In May 2015 and March 2016, community engagement sessions were held in Clyde River, Qikiqtarjuaq, Pangnirtung and Iqaluit. In 2016 and 2017, the research licence was renewed, but no fieldwork was conducted again due to research vessel issues.

Impacts of Wastewater at Baker Lake, Nunavut

License Number: 03 017 18N-M

Principal Investigator: Wong, Charles

Affiliation: Department of Environmental Studies and Sciences and
Department of Chemistry
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Number in Party: 5

Research Area: Kivalliq

Fieldwork Locations: Baker Lake

SUMMARY

This scientific research endeavor is to study the impacts of wastewater releases at Baker Lake, Nunavut on local and regional receiving waters. This would provide an understanding of water quality issues around wastewater and its releases at Baker Lake, and would also produce baseline information useful for planning any future potential improvements to the wastewater treatment facility. We will periodically collect water samples from the Baker Lake wastewater lagoon, and effluent in water bodies downstream of its outfall (Finger Lake, Airplane Lake, and Baker Lake itself at the effluent site, the drinking water intake site, and an offshore site), at 9 sites total. These samples would be analyzed on-site for basic water quality parameters such as pH, dissolved oxygen, conductivity, and temperature.

Spatially Distributed Modelling of Carbon, Water, and Nutrient Fluxes for Arctic Community Source Water Catchments

License Number: 02 058 18N-M

Principal Investigator: Atkinson, David

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Number in Party: 1

Research Area: North Baffin

Fieldwork Locations: Pond Inlet

SUMMARY

There are both direct and indirect connections between a changing climate and water quantity and quality. These climate-induced changes can easily impact a community's source water if they occur within a source water watershed; proving harmful to the supply of community fresh water. The protection of source (raw) water is critical to ensuring the sustainability of clean community drinking water and local ecosystem health and function. There exists an immense lack of detailed data in regards to source water landscapes, the hydrological regime, and water quality for most Nunavut communities. Local community researchers from Pond Inlet, with the aid of University research mentors, will measure and monitor various biophysical and hydrological variables for the development of local hydrological models to explore future climate change scenario impacts of climate change.

Monitoring Seasonal Environmental Change in Rivers of the Kitikmeot Region

License Number: 04 037 18N-M

Principal Investigator: Brown, Kristina

Affiliation: Department of Fisheries and Oceans Canada
Institute of Ocean Sciences
Sidney, British Columbia, Canada
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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: Tree River, Hood River, Burnside River, Western River

SUMMARY

Rivers directly link the land and the ocean by delivering freshwater, heat, nutrients, and carbon to the coastal system. Observing river systems is therefore key to understanding the impacts of terrestrial environmental change on Arctic ocean health. This project aims to enhance our capacity to directly observe the physical and biogeochemical characteristics of rivers across the Kitikmeot Region by developing in-situ observational systems ("river moorings") to carry out these measurements continuously. These river moorings will provide the first time series observations of river physical and biogeochemical parameters in the Kitikmeot Region, observations that are crucial to understanding and predicting the impacts of terrestrial change on the Kitikmeot marine system.

Defence Research and Development Canada (DRDC) Gascoyne Inlet

License Number: 02 059 18R-M

Principal Investigator: MacNeil, Erin

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Number in Party: 15

Research Area: North Baffin

Fieldwork Locations: Gascoyne Inlet, Devon Island

SUMMARY

The DRDC Northern Watch Technology Demonstration Project will demonstrate an Arctic maritime surveillance capability to the Department of National Defence and other concerned federal departments. This is a multi-year undertaking and is based at Gascoyne Inlet. The surveillance demonstration system will be unmanned, semi-autonomous, and remotely controlled through a satellite system connection to one of the DRDC centres. In preparation for the for the technology demonstration annual trips to the Gascoyne Inlet camp will be required. Once the team has arrived to the camp their main tasks will include: conduct routine camp maintenance and conduct testing on equipment. The on-site team for the 2017 field season is expected to range from 10 to 20 persons, with the normal load being approximately 15 people. The duration of their time on site is expected to be 31 July 2017 – 1 September 2017.

Back for the Future: Long-term Observations of Vegetation and Snowcover in the High Arctic

License Number: 04 038 18N-M

Principal Investigator: Schaefer, Jim

Affiliation:
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Number in Party: 4

Research Area: Kitikmeot

Fieldwork Locations: Wellington Bay

SUMMARY

Long-term observations are critical to understanding long-term environmental change. The Arctic tundra, under climate change, is expected to experience profound changes, including shrub encroachment and a disrupted snow regime. Direct, long-term field observations to monitor and assess these changes, however, are rare. The goal of this research project is to provide such data. In 1991, during my PhD research on Victoria Island, I established 80 permanent plots where I quantified the cover of plant species; I also monitored the hardness and thickness of snow during two winters. These field observations represent important data for assessing changes over the past quarter-century. They also represent valuable baseline data for the future. This proposal is to evaluate changes in the past 25 years in vegetation and snow conditions and to ensure sustained, long-term monitoring of those conditions.

The Analytical Quandary of Chert Quarries: A Multi-Scalar Approach to Understanding Palaeo-Inuit Technological Organization and Novice Skill on Southern Baffin Island

License Number: 01 026 18R-M

Principal Investigator: Milne, Brooke

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Number in Party: 1

Research Area: South Baffin

Fieldwork Locations: Amadjuak Lake, Mingo Lake

SUMMARY

Using a combined methodological approach that draws together GIS modelling, archaeological field survey, remote sensing, and lithic technological and provenance analyses, this project will further explore Palaeo-Inuit quarry use to understand how stone procurement influenced seasonal mobility and settlement patterns on southern Baffin Island.

Hydrological processes and change, Apex River, Iqaluit area

License Number: 01 027 18R-M

Principal Investigator: Lamoureux, Scott

Affiliation: Department of Geography
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Kingston, Ontario, Canada
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Number in Party: 5

Research Area: South Baffin

Fieldwork Locations: Iqaluit/Apex

SUMMARY

We plan to develop a long-term watershed monitoring program in a river that has important uses for community members and the City of Iqaluit. This information will help manage the river and inform users of changes that are occurring.

Community-Driven Sea Ice and Ocean Research in the Contrasting Coastal Domains of Hudson Bay

License Number: 03 008 18N-M-Amended

Principal Investigator: Kuzyk, Zou Zou

Affiliation:
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Number in Party: 11

Research Area: Kivalliq

Fieldwork Locations: Marine Environment between the communities of Chesterfield Inlet and Naujaat

SUMMARY

The objective of this project is to expand the highly successful community-driven research in eastern Hudson Bay, to northwest Hudson Bay (Chesterfield Inlet and Naujaat), with a goal towards establishing comparison sites in eastern and western Hudson Bay. This comparison will support bay-wide monitoring objectives, promote inter-jurisdictional information exchange, and help test scientific hypotheses about contrasting oceanography and marine life between northwest and southeast Hudson Bay.

Tree River Geoscience Project

License Number: 04 041 18N-A

Principal Investigator: Reimink, Jesse

Affiliation:

Carnegie Institute for Science
Washington, DC, Uunited States
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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: Tree River

SUMMARY

The proposed project consists of a collaboration between the University of Alberta, and the Carnegie Institution for Science (Washington, DC). This project is focused on reconnaissance sample collection for various graduate student projects. We will be staying at the Plummer's Tree River Lodge for the duration of our trip. We will take a Bush Hawk float plane and access lakes within 10 km of the Lodge and collect small rock samples from these areas. No waste will be left behind and only ~1kg rock samples will be removed, samples that will be used for scientific research. The research team will consist of three geologists and the float plane pilot, all of whom will be staying at the Plummer's Lodge. We will stay at Plummer's Lodge for 5 nights and perform our sampling during those 4 days.

ArcticNet 2018 Expedition: Integrated Regional Impact Study of the Canadian High Arctic

License Number: 05 013 18R-M-Amended

Principal Investigator: Merzouk, Anissa

Affiliation:
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Quebec City, Quebec, Canada
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Number in Party: 4

Research Area: Nunavut Wide

Fieldwork Locations: Baffin Bay, Nares Strait, NW Passage, Queen Maud Gulf, Maxwell Bay, various rivers in the Kitikmeot and Qikiqtaaluk Regions

SUMMARY

The main objective of the proposed research program is to assess the changes occurring in the Canadian Arctic coastal marine ecosystem in response to climate warming. Using the Canadian research icebreaker, CCGS Amundsen, to access the vast expanses of the coastal Canadian Arctic, sampling operations in Nunavut waters are scheduled to take place between June 10 – September 7, 2018. The ArcticNet marine-based research program is a long-term program scheduled to run every year until 2018. Shipboard sampling will be carried out along the ship track and at designated sampling stations in Hudson Strait, Baffin Bay, Lancaster Sound and the Northwest Passage. Shipboard operations will include mapping of the ocean floor with sounding technologies. We will also be conducting beach surveys on foot and collection of a small number of empty beach shells for radiocarbon dating, as well as collection of river water samples for chemical analysis, including measurement of greenhouse gases. ArcticNet teams and participants will also conduct activities on another vessel, the R/V William Kennedy, as part of the GENICE research project.

Concept Advancement for a Raw Water Intake on the Sylvia Grinnell River, Iqaluit, NU

License Number: 01 034 18N-A

Principal Investigator: Sibbald, Carey

Affiliation:
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Iqaluit, Nunavut, Canada
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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Iqaluit, Sylvia Grinnell River

SUMMARY

To move forward with preliminary engineering and design of a water intake at the Sylvia Grinnell River, Nunami needs to complete a field study to identify the best possible intake location. Nunami is planning to complete the field study in September 2018 to measure the depth to bedrock on the shoreline where pumping equipment might be located. Two sites along the Sylvia Grinnell River, outside (north) of the Sylvia Grinnell Territorial Park are to be investigated. At each site, depth to bedrock will be measured on-land, on the shore of the Sylvia Grinnell River, and water depth across the river will also be measured. The two sites will be accessed with a truck or ATV, using existing roads and trails. No structures will be built and very little land disturbance is expected.

Characterizing Iqaluit's Baseline Municipal Wastewater Containment Loadings to the Marine Environment

License Number: 01 031 18N-M

Principal Investigator: Hanson, Mark

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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Iqaluit, Koojesse Inlet

SUMMARY

This project will enable the collection of coastal environmental baseline data to characterize the current state of the ecosystem in the Iqaluit region, Frobisher Bay, and surrounding areas as it relates to wastewater contaminants. The project will also contribute to the capacity building of key parties to collect environmental data as part of the implementation of the Oceans Protection Plan. Results will not only provide an open source of data that can characterize ecosystems, but may also support evidence-based decision making (such as assessments for marine spatial planning around conservation, cumulative effects, traditional harvesting, infrastructure development, city planning, public health policy, etc.). The Canadian North is in the process of rapid economic and demographic shifts, driven by both a changing climate, increasing expansion of resource extraction and development, as well as expanded tourism with longer open water seasons. A larger northern population will result in increased infrastructure and operational challenges related to wastewater treatment. This expanding human presence will result in greater stresses to northern infrastructure and ecosystems in the immediate region of these effluent releases. It is thus crucial to understand local and regional inputs of contaminants to these ecosystems now in order to better predict the impact of expanded wastewater discharge from an increasing population.

Croker Bay Study and NW Passage Transit to Gjoa Haven

License Number: 04 042 18N-A

Principal Investigator: Trenholm, Nicole

Affiliation:
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Number in Party: 3

Research Area: North Baffin, Kitikmeot

Fieldwork Locations: Waters of The NorthWest Passage

SUMMARY

Throughout the Arctic, increasing summer temperatures cause the surface of ice sheets to melt and drain. Canadian researchers question why the glaciers of Croker Bay, which drain into Lancaster Sound, exhibit melt variations that are synchronous but do not align with any glacier velocity classification. Across Baffin Bay, baseline ice mass loss factors have been addressed at neighboring Northwest Greenland glacial fjords to assess the stability of the Greenland Ice Sheet (GIS). GIS glaciers have melt patterns that are influenced by warmer waters that originate from the Atlantic Ocean. Further into Lancaster sound, the Barrow Strait Realtime Observatory and offshore Baffin Bay observations demonstrate evidence of Atlantic water. This research is invetigating whether Atlantic water also incfluences glaciers in Croker Bay off the Devon Ice Cap.

Watershed and Permafrost Responses to a Changing Climate in the Resolute Bay Area

License Number: 02 063 18N-M

Principal Investigator: Lamoureux, Scott

Affiliation: Department of Geography
Queen's University
Kingston, Ontario, Canada
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Number in Party: 2

Research Area: North Baffin

Fieldwork Locations: Resolute Bay, McMaster River

SUMMARY

As climate warms, permafrost degradation is accelerating, with numerous impacts on ground stability and soil erosion. Simultaneously, precipitation regimes are expected to shift toward more rainfall and less snow, affecting late summer water quality and sediment transport in rivers. The modification of hydrology is a concern for water quality and availability in Arctic communities and will directly impact freshwater ecosystems, which are among the most vulnerable yet the most poorly understood in North America. This project is aimed at investigating potential effects of permafrost degradation and of increased rainfall on the hydrology, water quality and sediment dynamics of the McMaster River near Resolute Bay, Nunavut. This research will act as a parallel study to the watershed the community is using as a water source, and will provide crucial knowledge of permafrost and hydrological conditions in and around the community.

Ocean Wise Scientific Diving Field Research on Board One Ocean Expeditions Cruise

License Number: 02 064 18N-A

Principal Investigator: Solomon, Eric

Affiliation:

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Vancouver, British Columbia, Canada
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Number in Party: 4

Research Area: North Baffin

Fieldwork Locations: Lancaster Sound, Jones Sound

SUMMARY

Four Ocean Wise research scuba divers would like to dive in various locations around Cornwallis, Devon, Somerset, southern Ellesmere and North Baffin Islands to take photographs and video of life at the bottom and record what they see in order to identify and catalogue what is there. Our divers have been offered the opportunity to travel aboard the One Ocean Expeditions ship, the Akademik Ioffe, from August 14-23 and will conduct their dives at the ships regular planned stops. The information will help us better understand what lives in these coastal areas and to track over time how things change. They will also collect some 1-5 of any one species samples of fish and invertebrates - no mammals or large fish - in order to get their DNA, which is used to help identify species. They will record water temperature and other conditions as well. Some invertebrates and fish may also be collected for use by the Vancouver Aquarium for displays and exhibits. The dives will be non-destructive. They will collect a small number of fish and invertebrates by hand and using hand-held nets. Examples include: anemones, sea stars urchins, etc.

Stream Occupancy of Young-of-Year Arctic Grayling (Thymallus arcticus) and the Associated Impact from the Wastewater Treatment Facility in Baker Lake, Nunavut

License Number: 03 023 18N-M

Principal Investigator: Ellenor, Jared

Affiliation:
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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Baker Lake

SUMMARY

Currently, the Hamlet of Baker Lake uses a passive wastewater treatment system, where wastewater is released through a series of tundra ponds/lakes and into Baker Lake. This type of system, which is common in Northern communities, takes advantage of natural biological processes and is only capable of providing primary treatment. As a result, relatively high levels of nutrients are released into the system, which can ultimately affect fish and fish habitat. Based on significant positive feedback from the community, an upgraded wastewater treatment facility is anticipated to be constructed in Baker Lake in 2020.

URI Northwest Passage Trip 2018

License Number: 02 064 18N-A

Principal Investigator: Knowlton, Christopher

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Number in Party: 36

Research Area: North & South Baffin, Kivalliq, Kitikmeot

Fieldwork Locations: Marine Environment from Cambridge Bay to Iqaluit

SUMMARY

The Northwest Passage Project (NPP) is a U.S. National Science Foundation funded program to explore the changing Arctic through an innovative expedition that will engage diverse audiences through real time interactions from sea, a high definition 2-hour documentary, and related community events. The expedition will be conducted onboard the Akademik Ioffe, operated by One Ocean Expeditions. Telepresence technologies will allow for shore-based participation in the project. Expedition participants include undergraduate and graduate students, scientists, historians, journalists, and a documentary film crew.

Polar Knowledge Canada (POLAR) Camp on Greiner Lake, Cambridge Bay

License Number: 04 023 18R-M

Principal Investigator: McLennan, Donald

Affiliation:
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Ottawa, Ontario, Canada
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Number in Party: 10

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Grenier Lake

SUMMARY

Due to location access issues, POLAR camp has been erected on the northern shore of Greiner Lake at a slightly different location, at 69.217607°, -104.926355°, instead of the previously submitted coordinates, one 14-foot Weatherhaven tent was installed instead of the two metal frame (3x4 m) tents installed. Due to the rocky nature of the camp site, we would like to erect plywood platforms for the individual all-season tents. While we will dismantle most of the camp by September 30, 2018, we would like to keep in place the Intershelter 14-foot Polar Dome, as well as the 14-foot Weatherhave tent year-round, in order for them to serve as emergency shelters, for both POLAR staff, and Cambridge Bay community members. Therefore, we would like to request the extension of the camp operating date until December 31, 2018.

Concept Advancement for a Raw Water Intake on the Sylvia Grinnell River, Iqaluit, NU

License Number: 01 034 18N-A-Amended

Principal Investigator: Sibbald, Carey

Affiliation:
Nunami Stantec
Iqaluit, Nunavut, Canada
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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Iqaluit, Sylvia Grinnell River

SUMMARY

To move forward with preliminary engineering and design of a water intake at the Sylvia Grinnell River, Nunami needs to complete a field study to identify the best possible intake location. Nunami is planning to complete the field study in September 2018 to measure the depth to bedrock on the shoreline where pumping equipment might be located. Two sites along the Sylvia Grinnell River, but outside (north) of the Sylvia Grinnell Territorial Park are to be investigated. These are Site A and Site B on the attached map. At each site, depth to bedrock will be measured on-land, on the shore of the Sylvia Grinnell River, and water depth across the river will also be measured. The two sites will be accessed with a truck or ATVs using existing roads and trails. No structures will be built and very little land disturbance is expected.

Contaminants in Shellfish, Water and Sediment in Frobisher Bay, Nunavut

License Number: 01 036 18N-A

Principal Investigator: Kuzyk, Zou Zou

Affiliation:
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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Frobisher Bay

SUMMARY

We plan to measure contaminant levels in sediments, clams and seawater at sites near Iqaluit and at reference locations, distant from any local sources. By comparing the contaminant levels near Iqaluit with those from reference sites, we will determine the relative importance of local contaminant sources, such as waste sites or wastewater discharges, versus long-range sources, such as ocean water and the atmosphere. We will also collect and analyze sediment cores from deeper sites in Frobisher Bay, which contain a record of contaminant inputs over time. From these records, we will assess whether the contaminant sources have changed over time, for example, as the town has grown larger and ship traffic has increased. The contaminants to be measured include heavy metals (cadmium, mercury, and lead), PCBs, petroleum hydrocarbons, micro plastics, and contaminants of emerging concern (e.g., PFASs).

Before Igloolik: Exploring Iglulingmiut Settlement and Subsistence in the Early 20th Century

License Number: 02 041 18R-M

Principal Investigator: Desjardins, Sean

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Number in Party: 4

Research Area: North Baffin

Fieldwork Locations: Avviajja (Igloolik)

SUMMARY

Between late July and mid-August 2018, I will carry out a small research project on historic Inuit life at the now-abandoned historic village site Avvajja, near Igloolik. Along with a small field crew of one to three field assistants and an Inuit high-school student, I hope to achieve the following at Avvajja: (1) on-site consultation with Iglulingmiut elders who have firsthand knowledge of life at the site; (2) detailed mapping of the Inuit-built sod house features at the site, as well as the Tuniit houses located nearby; and (3) limited archaeological testing of parts of the site identified by elders as places where animal bones and other food waste were deposited. The crew will travel to Avvajja by boat, and will maintain a small campsite for the duration of the project (approx. four weeks). No permanent structures will be erected; our impact on the cultural heritage at the site and the land itself will be minimal.

Airborne Geophysical Characterization of the Hypersaline Subglacial Lake Complex Beneath Devon Ice Cap and their Surrounding Subglacial Environment

License Number: 02 037 18R-M

Principal Investigator: Criscitiello, Alison

Affiliation:
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Number in Party: 7

Research Area: North Baffin

Fieldwork Locations: Devon Ice Cap, Ellesmere Island, Axel Heiberg Island

SUMMARY

A recent study has identified evidence for a hypersaline subglacial lake complex underneath the Devon Ice Cap, Canadian Arctic, Nunavut. The purpose of this project is to collect data to derive the full spatial extent of these subglacial lakes, to characterize their surrounding bedrock conditions and to derive their hydrological connectivity with the surrounding subglacial environment. Knowledge of the full extent of the subglacial lakes and the surrounding hydrological conditions, along with glacier surface and ice thickness measurements are important input parameters for modeling efforts in order to understand the physical and chemical characteristics of these hypersaline subglacial lakes.

Churchill Marine Observatory - Environmental Observing (CMO-EO) System

License Number: 03 015 18N-M

Principal Investigator: Mundy, C.J.

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Number in Party: 26

Research Area: Kivalliq, North Baffin, South Baffin

Fieldwork Locations: Shorelines of West Hudson Bay, Hudson Strait & Foxe Basin

SUMMARY

Led by the University of Manitoba, the Churchill Marine Observatory (CMO) is a major research infrastructure funded by the Canada Foundation for Innovation (CFI) in partnership with the provincial governments of Manitoba and Alberta and numerous other governmental, industrial, and nongovernmental organizations, including the Arctic Research Foundation. Once completed, CMO will be a globally unique, highly innovative, multidisciplinary research facility based out of Churchill, Manitoba, adjacent to North America's only Arctic deep-water port.

Fury and Hecla Geoscience Project

License Number: 02 031 18R-M

Principal Investigator: Steenkamp, Holly

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Number in Party: 12

Research Area: North Baffin

Fieldwork Locations: Between Igloolik and Arctic Bay

SUMMARY

The Fury and Hecla Geoscience Project will be led by the Canada-Nunavut Geoscience Office (CNGO) in collaboration with experts and students from several Canadian Universities. The project's mandate is to fill some of the last remaining gaps in geoscience knowledge on Baffin Island. In 2018, field work will be staged from Igloolik and based from a temporary camp on the lower Gifford River from July 11 to August 15. Bedrock and surficial geology mapping and sampling will be focused on the southern half of the study area. Two helicopters will be used to transport crews to their work sites each day. Mapping teams will collect visual observations, photographs, fist-size samples, and the natural magnetic and radioactive properties of the rocks and sediments.

Geotechnical and Environmental Baseline Studies – Iqaluit Port Development

License Number: 01 024 18R-M

Principal Investigator: Coutts, Victoria-Burdett

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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The studies will be performed for the Government of Nunavut in two locations. One is near the municipal wharf, and the other is in the proposed deep water port area and quarry. Geotechnical and environmental baseline studies are required to support the design of upgrades proposed for the municipal wharf, and a new deep water port.

Climate □ Terrestrial Biodiversity Investigation in Tundra Vegetation Along an Arctic Longitudinal Gradient

License Number: 04 028 18N-M

Principal Investigator: Uchida, Masaki

Affiliation:
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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay

SUMMARY

Our team would like to conduct field studies of plants, soil, and lake or pond sediments. Our main objective is to clarify the biodiversity of tundra vegetation, microorganisms living in the soil and sediments (solid substances) that settle at the bottom of a tundra lake and/or pond. In addition, we also would like to clarify relationships between the diversity of plants, microorganisms and environmental factors such as climate condition, carbon and nitrogen content.

Periglacial and Paleoglacial Investigation of the Haughton Impact Structure and Surrounding Terrains, Devon Island, Nunavut

License Number: 02 036 18R-M

Principal Investigator: Godin, Etienne

Affiliation: Department of Earth Sciences`
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Number in Party: 6

Research Area: North Baffin

Fieldwork Locations: Devon Island

SUMMARY

The objective of this project is to carry out comparative planetary geology aimed at refining our understanding of the origin and dynamics of gullies and subglacial channels. These linear landforms, quite visible on high-resolution imagery either in the Arctic and Mars, have great implications regarding the role of water in arid and cold environments.

Climate - Terrestrial Biodiversity Investigation in Tundra Vegetation along an Arctic Longitudinal Gradient

License Number: 02 044 18N-M

Principal Investigator: Uchida, Masaki

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Number in Party: 5

Research Area: North Baffin

Fieldwork Locations: Pond Inlet

SUMMARY

Our team would like to conduct field studies of plants, soil, and lake or pond sediments. Our main objective is to clarify the biodiversity of tundra vegetation, microorganisms living in the soil and sediments (solid substances) that settle at the bottom of a tundra lake and/or pond. In addition, we also would like to clarify relationships between the diversity of plants, microorganisms and environmental factors such as climate condition, carbon and nitrogen content.

Permafrost Atmospheric Science in Cambridge Bay, Canada

License Number: 04 018 18R-M

Principal Investigator: Jung, Ji Young

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Number in Party: 14

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay

SUMMARY

This research will focus on interactions that drive critical climate feedbacks within these environments, through greenhouse gas fluxes and changes in surface energy balance associated with permafrost degradation. Subsurface microbial, geochemical, and hydrologic processes that determine the fate of organic carbon will need to be characterized to better predict CO_2, CH_4 and N_2O fluxes from Arctic landscapes. An improved understanding of organic matter vulnerability in thawing permafrost with nitrogen cycle will greatly improve modeling of greenhouse gas flux from subsurface environments and the atmosphere.

Deployment of Environmental Instrumentation in Grenier Lake, Cambridge Bay

License Number: 04 015 18R-M

Principal Investigator: McLennan, Donald

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Number in Party: 6

Research Area: Kitikmeot

Fieldwork Locations: Grenier Lake Watershed, Cambridge Bay

SUMMARY

The following installation and maintenance activities are proposed for the 2018 field season: (1) replacement of the damaged sensor and power cables, and the armouring of all cables of the POLAR weather station, and bringing the station online; (2) redeployment of sensor of the east watershed station, and bringing this station online shortly after ice melt; (3) moving the First Lake river gauging station from its present location to the new site proposed in 2017; (4) assessment of the damage, replacement, and armouring of the cables of the upland eddy covariance tower; (5) continuation of the installation of the wetland eddy covariance tower after protecting all its cables by metallic armour; (6) repairing the damage of the ADAPT permafrost monitoring station; (7) installation and operation of the automated soil CO_2 chamber system in the IMA.

Dynamics and Change of the Devon Ice Cap, Nunavut

License Number: 02 029 18R-M

Principal Investigator: Sharp, Martin

Affiliation: Department of Earth & Atmospheric Sciences
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Number in Party: 3

Research Area: North Baffin

Fieldwork Locations: Devon Island

SUMMARY

The goal is to: (1) understand how Arctic ice caps are responding to climate warming, and quantify the contribution of glacier melt in Arctic Canada to sea level change; (2) to service and recover data from 5 GPS sensors installed on bedrock around Devon Ice cap that record vertical motion of the Earth's crust in response to changes in the ice cap's mass; (3) to conduct ground-based radar surveys and collect shallow ice cores from the upper 5-10 m of the ice cap to describe the extent/thickness of ice bodies formed by refreezing of meltwater in the snow and firn. The presence of such ice bodies may increase the fraction of meltwater that runs off to the ocean since they prevent meltwater from draining into the snow and firn where it can refreeze and instead promote horizontal drainage.

Cambridge Bay Nearshore Ecological Surveys

License Number: 04 031 18R-M

Principal Investigator: Kent, Danny

Affiliation:

Ocean Wise
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eric.solomon@ocean.org

Number in Party: 5

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Outer Bay, Finlayson Islands

SUMMARY

Divers will be recording (video and stills) of bottom-associated marine life in several locations around Cambridge Bay in late July, 2018. These dives will be non-destructive. Some marine benthic invertebrates (anemones, sea stars, urchins, etc.) and fish will be collected for use by the Vancouver Aquarium in displays and exhibits, for DNA barcoding, and for photographing and identification. The purpose is to document areas representative of different benthic (bottom-associated) ecosystems, habitats and marine life. Local Cambridge Bay community members will be hired as boat operators/guides and we will seek local knowledge of marine habitats in the area as part of our dive location planning process. We will also collect some marine invertebrates and possibly some fish which will be used to present local marine life to the Cambridge Bay schools and others in the community. We anticipate meeting with community members to gather information about known marine benthic habitats in the area in order to help inform the selection of our dive locations.

Land and Water Research at the Cape Bounty Arctic Watershed Observatory (CBAWO), Melville Island

License Number: 02 035 18R-M

Principal Investigator: Lamoureux, Scott

Affiliation: Department of Geography & Planning
Queens University
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Number in Party: 18

Research Area: North Baffin

Fieldwork Locations: Cape Bounty

SUMMARY

Our work is intended to determine how climate change affects the land and water quality. Our work involves taking sediment and water samples from the lakes and streams at Cape Bounty. We have chosen these lakes and rivers because the rivers appear to supply an abundant sediment and deep lakes are needed to preserve the sediments for our research.We have been doing this work since 2003 and hope to continue for several more years.

ATKA Expedition

License Number: 05 011 18N-A

Principal Investigator: Aebischer, Stephane

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Number in Party: 7

Research Area: Nunavut Wide

Fieldwork Locations: NWP from Pond Inlet to Kugluktuk

SUMMARY

ATKA, which means ”icebreaker” in the Inuit traditional language, is a 50-foot sailboat fully equipped to sail in the polar regions. Owned by François Bernard, who is also the expedition leader, this relative small boat (max 6 passengers) compared to usual scientific platforms constitutes a key asset to navigate and explore costal environments, especially the ones in shallow waters. During the last 2-years, ATKA sailed along the Greenland ice sheet. ATKA is presently preparing its Arctic Ocean circumnavigation aimed at measuring the impact of human activities as well as of the climate change in the Arctic region. Two scientific campaigns are planed during the ATKA circumnavigation expedition of the Arctic Ocean. The first one will take place during the summer of 2018.

GEM-2 Boothia-Somerset: Integrated Geoscience along the Northwest Passage

License Number: 04 013 18R-M-Amended

Principal Investigator: Barrie, Mary Sanbourn

Affiliation: Natural Resources Canada
Geological Survey of Canada
Ottawa, Ontario, Canada
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Number in Party: 12

Research Area: Kitikmeot

Fieldwork Locations: Boothia Peninsula, Somerset Island

SUMMARY

The research project Boothia-Somerset: Integrated Geoscience of the Northwest Passage is primarily undertaking bedrock mapping by foot traverse of a 17,500 km2 region for which knowledge stems from 1963 and 1986 mapping without benefit of aeromagnetic constraints or age constraints. This activity will significantly upgrade the outdated geoscience framework of this area, expand the impact of new geo-constraints on the mainland (GEM-2 RAE Thelon Activity findings), and provide relevant data and knowledge to this remote region of Nunavut that, because of global warming and the resulting increased shipping, will increasingly be exposed to matters related to resource assessment and economic development.

Synthesis of Glacial History and Dynamics in the Western Rae Geological Province

License Number: 04 022 18N-M

Principal Investigator: Campbell, Janet

Affiliation:
Geological Survey of Canada
Ottawa, Ontario, Canada
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Number in Party: 4

Research Area: Kitikmeot

Fieldwork Locations: South of Back River

SUMMARY

The proposed study area is situated south of Back River, in Kitikmeot region, and into the N.W.T., between Aylmer Lake and Thelon Wildlife Sanctuary. Several sites are located within the sanctuary. The geological field work will be conducted out of Aylmer Lake Lodge, N.W.T. between July 4 to July 17, 2018 by a 4-person team, supported by helicopter. Work at field sites will include collecting observations and small samples of surface soil or bedrock.

Identifying and Implementing Adaptation Measures for Permafrost Degradation in Kugluk Territorial Park

License Number: 04 026 18R-M

Principal Investigator: Coulombe, Stephanie

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Number in Party: 6

Research Area: Kitikmeot

Fieldwork Locations: Kugluk Territorial Park

SUMMARY

This project takes place in Kugluk Territorial Park, which is approximately 12 km outside the community of Kugluktuk, near the Coppermine River. The park area is a very important area to the community for access to traditional camping and hunting grounds that are essential for sustenance, culture, and well-being. The park area has been a site of continuous human use associated with seasonal fishing and caribou hunting for subsistence for over 7,000 years. In 1969, the site was targeted for protection as a park because of its cultural, historic and scenic value. With the creation of Nunavut (1999), the responsibility of the park was transferred to the Government of Nunavut.

Barrow Strait Real Time Observatory

License Number: 02 033 18R-M

Principal Investigator: Richards, Clark

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Number in Party: 5

Research Area: North Baffin

Fieldwork Locations: Barrow Strait

SUMMARY

The goal of this project is to provide a real-time ice and ocean data delivery system that includes an ice onset and break-up prediction capability in Barrow Strait at the eastern end of the Northwest Passage. This will provide the ability to monitor and predict the evolution of the ice cover for the improved safety and efficiency of Arctic marine operations, make ice cover data and ocean measurements available to hunters and other interested parties, provide data for ice/ocean forecast models, and provide a technology that is applicable to other strategic Arctic locations.

Geological Framework of the Northern Rae Province on Eastern Devon and Southeastern Ellesmere Islands

License Number: 02 043 18N-M

Principal Investigator: Osinski, Gordon

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Number in Party: 6

Research Area: North Baffin

Fieldwork Locations: Ellesmere Island, Devon Island

SUMMARY

The objectives of this project are to: 1) provide new age, thermal, and pressure constraints related to the crustal architecture of units exposed on eastern Devon and southeastern Ellesmere Islands; and 2) evaluate the usage of remote sensing images and spectral data to predict the bedrock geology of eastern Devon Island and southeastern Ellesmere Islands.

Permafrost Dynamics in Response to Climate Change on Victoria Island, Nunavut

License Number: 04 034 18N-M

Principal Investigator: Coulombe, Stephanie

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Number in Party: 5

Research Area: Kitikmeot

Fieldwork Locations: Victoria Island

SUMMARY

This project will be anchored at the campus of the Canadian High Arctic Research Station (CHARS) located in Cambridge Bay. It will help collect baseline knowledge of permafrost and landscape changes in the Kitikmeot Region of Nunavut. Our field studies cover the southern part of Victoria Island, with a special focus on Cambridge Bay and its surrounding area. This research program specific objectives are to characterize the permafrost condition, monitor changes in the landscape due to thawing and to assess the impacts of permafrost disturbances on the water quality of lakes and streams.

Hope Bay Belt Project Scientific Research

License Number: 04 017 18R-M

Principal Investigator: Curran, Oliver

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Number in Party: 13

Research Area: Kitikmeot

Fieldwork Locations: Hope Bay Belt

SUMMARY

A comprehensive range of data collection supporting the project certificate and licences will continue to be conducted in fulfillment of compliance and monitoring requirements. This work is a continuation of that evaluated and conducted previously and will continue to support information utilized for compliance and baseline information.

Arctic Driftwood as a Proxy Record of Environmental Change: a Pilot Study

License Number: 01 048 18N-A

Principal Investigator: Dowdeswell, Julian

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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Qikiqtarjuaq, Sunshine Fiord, Cape Mercy, Pangnirtung, Monumental Island, Lower Savage Islands, Iqaluit

SUMMARY

The objectives of the proposed research are to collect and analyse driftwood from Arctic coastlines to reconstruct ocean current dynamics, changes in sea-ice extent and relative sea level over the last centuries to millennia. In addition, we expect to gain information on past climate during the life cycle of the tree itself through the analysis of growth-ring characteristics. The majority of driftwood samples collected to date are from East Greenland, Svalbard and northwest Iceland. Collecting and analysing driftwood from Arctic coastlines in Baffin Island and West Greenland will contribute substantially to our enhanced understanding of the ocean-transport and temperature history of the area.

National Research Council of Canada

License Number: 02 042 18R-M

Principal Investigator: Brown, Jeffrey

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National Research Council of Canada
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Number in Party: 3

Research Area: North Baffin

Fieldwork Locations: Nanisivik Deep Water Harbor

SUMMARY

We aim to study the ice loads on the deep water harbor at Nanisivik and compare the load measurements with the movement of the ice bustle against the harbour with tidal action. Goals & objectives are to measure loads, measure the ice bustle and observe the movement of the bustle under tidal action. We will communicate with the local hunters and trappers association to arrange for transportation and wildlife monitoring. All equipment is part of the Nanisivik Naval Facility and has been installed as part of that construction. Equipment to measure the ice profile will consist of pylons, tripods, poles and will be retrieved. The load monitoring system is part of the Naval Facility and, as such, is accounted for in their long-term retrieval plans. All ice profile equipment will be retrieved from the site at the completion of our work.

Peregrine Diamonds Ltd. Chidliak Property Baseline Environmental Studies

License Number: 01 022 18R-M

Principal Investigator: Langlois, Karla

Affiliation:
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Number in Party: 4

Research Area: South Baffin

Fieldwork Locations: Hall Peninsula

SUMMARY

This is a renewal of baseline environmental studies completed at Chidliak Property from 2009 to 2016. The NIRB Screening File No. is 09YN041. This is a continuation of our previous work completed from 2009 - 2016, and only includes ground-based surveys to minimize possible disturbance. Chidliak Property is located approximately 120 km northeast of Iqaluit, on the Hall Peninsula of Baffin Island, Nunavut. The objectives are to identify existing baseline wildlife conditions and to report any important or sensitive wildlife areas to minimize or avoid adverse wildlife effects from any exploration activities. Baseline environmental studies include: water quality sampling, fish and fish habitat survey, and non-intrusive bird, caribou, and other wildlife surveys. The field surveys are expected to be completed over one to two field events from mid-June to late September each year.

Spatial Mapping of Water Chemistry Using ChemYak

License Number: 04 025 18R-M

Principal Investigator: Manning, Cara

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Number in Party: 5

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay Coastal Ocean, Grenier Lake, Freshwater Lake

SUMMARY

A group from the University of British Columbia and Woods Hole Oceanographic Institution (USA) plans to use a new scientific tool to make measurements of water chemistry in waters near Cambridge Bay, Nunavut, including the coastal ocean, Freshwater Creek, and Grenier Lake. Water will be analyzed using the ChemYak, a kayak with a gasoline engine that has a variety of scientific sensors installed to measure the concentrations of carbon dioxide, methane, oxygen, and nitrate, as well as the water temperature and salinity. The ChemYak also has a weather system attached to measure wind speed and atmospheric pressure, and a GPS unit for recording the vessel's location.

Characterizing the Ecology of Aquatic Systems in the Iqaluit Area

License Number: 01 018 18R-M

Principal Investigator: Medeiros, Andrew

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Number in Party: 4

Research Area: South Baffin

Fieldwork Locations: Iqaluit & Surrounding Area

SUMMARY

During the summer of 2018, we propose to sample many lake and stream systems in Iqaluit, Nunavut. We hope our research in the area will provide valuable new information on recent changes in water flow, water chemistry and status of aquatic insect populations. We will collect water quality data and aquatic insect samples during June 1- August 31, 2018. We will remove a small sample of water (~1 L) from each sampling site, as well as a small volume of mud (~ several cm^3) to analyse for indicators of environmental change.

Water Resource Assessment: Igloolik and Hall Beach, Nunavut

License Number: 02 046 18N-M

Principal Investigator: Medeiros, Andrew

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Number in Party: 6

Research Area: North Baffin

Fieldwork Locations: Hall Beach, Igloolik

SUMMARY

Sustainable clean sources of water are a critical aspect of northern community development and planning, yet northern regions may face looming water crises due to growth, development, and environmental change that put pressure on a limited existing supply. Arctic regions are particularly vulnerable to shifts in seasonality that would impact the summer recharge of reservoirs, from both decreased precipitation and increased evaporative stress. As many northern communities are also rapidly growing with increased industry and development, water resource assessments are critical tools which provide municipalities with the data requisite for water management strategies. However, many northern communities in Canada lack baseline knowledge of their own existing water supply, baseline demand, or recharge potential. Here, we examine communities with current and looming water crises due to limited supply and increased demand.

MAP (Multidisciplinary Arctic Program) - Last Ice

License Number: 02 040 18R-M

Principal Investigator: Michel, Christine

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Number in Party: 9

Research Area: North Baffin

Fieldwork Locations: Off Shore Alert, Lincoln Sea

SUMMARY

The general objective of this project is to better understand the sea ice ecosystem in the northern Canadian Archipelago, in particular the old multiyear ice.We will use snowmobiles to go to a station on the sea ice where ice conditions are safe. We will have a temporary shelter tent on the ice, which will be used to process sea ice and water samples. At the station, we will collect sea ice cores and cut them in sections for analysis of the ice conditions. We will also collect water samples using sampling bottles and measure salinity and biological conditions. We will use oceanographic instruments to measure the properties (temperature, salinity) of the water column. We also plan to install instrumentation to measure meteorological conditions, ocean currents, and zooplankton during the spring.

Ancient DNA in Lake Sediment

License Number: 02 034 18R-M

Principal Investigator: Miller Gifford

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Number in Party: 6

Research Area: South Baffin

Fieldwork Locations: Burton Bay, Area East of Qikiqtarjuaq

SUMMARY

Three members of our team will be conducting the same kind of field research as we did in 2016 and 2017, except that we will be sampling three lakes near Qikiqtarjuaq, Baffin Island. This will require two short field seasons. From 24 April - 15 May, a team of three will use snow mobiles to access the three lakes and use the lake ice to recover sediment from the lakes. We will hire two Inuit from Qikiqtarjuaq to assist in the transport to the lakes and with the coring operations. From 25 July -20 August, a second team will visit the same lakes when they are snow-free to map the plants around the lakes and to install thermometers to record air, soil, and water temperatures. This will require access to the site by boat and hiking. We will hire local Qikiqtarjuaq guides to transport by boat, and to help take the sampling gear to the sites, as well as in mapping the vegetation.

Cambridge Bay Ocean Observatory

License Number: 04 030 18R-M

Principal Investigator: Moran, Kate

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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay

SUMMARY

Underwater sensors and a camera provide continuos information on seawater properties, ice thickness and marine organism activity. Data from the underwater instruments and the weather station are transmitted by a WiFi link to a server in the Nunavut Government building, where data are transmitted via satellite to our ONC data centre at the University of Victoria and made available to all. We also plan to collect seawater and mud samples in the vicinity of the platform, to calibrate our instruments.We would also need to collect specimens of seafloor life (invertebrates) around the platform, so that our experts can identify the species we are observing.

Geological Survey of Canada's “Southampton MT”

License Number: 03 012 18N-A

Principal Investigator: Roberts, Brian

Affiliation: Natural Resources Canada
Geological Survey of Canada
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Number in Party: 4

Research Area: Kivalliq

Fieldwork Locations: Southampton Island

SUMMARY

The Southampton Island field area was selected for study in 2018 to provide a better understanding of how ancient fluid flowed through rocks on the island and to help assess the possible locations for where hydrocarbon may be trapped in the rocks. A ground based geophysical survey would be performed on Southampton Island, Nunavut, to provide information on the subsurface rocks and help identify the potential for hydrocarbon reservoirs. Our proposed geoscience work would lead to new publically available information that can be used to inform decision-making and land-use planning by communities, governments, and industry.

GEM-2 North Baffin Bedrock Mapping

License Number: 02 025 18R-M

Principal Investigator: Saumur, Benoit

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Number in Party: 10

Research Area: North Baffin

Fieldwork Locations: Steensby Inlet, Barnes Ice Cap, Pond Inlet

SUMMARY

The proposed project is a continuation of the successful 2017 geological bedrock mapping field campaign, which covered NTS map sheets 37G and 38B near Pond Inlet and the Mary River mine. The 2018 campaign would cover all of NTS map sheets (scale 1:250 000) 37F and 37E, in the vicinity of Steensby Inlet and Barnes Ice Cap, northern Baffin Island, Nunavut. Mapping would be conducted out of a temporary camp located along the Isortoq River from July 9 to August 19, 2018 (about 6 weeks), and followed by analytical and map production work in Ottawa in 2018-2019.

CAT-TRAIN: Canadian Arctic Tidal Transect Research and Infrastructure Network (2018-2020)

License Number: 04 014 18N-M

Principal Investigator: Schimnowski, Adrian

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Number in Party: 10

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Finlayson Islands, Dease Strait, Lauchlan River

SUMMARY

Arctic Research Foundation (ARF) have recently expanded their approach to cover both land and ocean with the introduction of self-sustaining portable research laboratories, called Mobile Marine-Archeology-Geology Network (M-MAG-N) labs. They are designed to accommodate a wide variety of instrumentation, making them suitable for interdisciplinary research and each lab will be fitted with a weather station, with the data made available to local communities. They generate enough green electricity using solar and wind energy to power peripheral structures (e.g. tents, small buildings) making them potentially useful for supporting community activities (e.g. shelter, communications, search and rescue). Our goal for this project is to deploy and maintain this key research infrastructure in areas where it will be useful to research projects in the Kitikmeot Region.

The McGill Arctic Research Initiatve (MARI)

License Number: 02 032 18R-M

Principal Investigator: Ward, Melissa

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Number in Party: 8

Research Area: North Baffin

Fieldwork Locations: Expedition Fiord, Resolute Bay

SUMMARY

The McGill Arctic Research Initiative (MARI) is concerned with research and training for undergraduate students in Arctic science including research design, field methods, field safety, logistics and general best practices. Launched in 2016 MARI is a student research, mentoring and training program that forms part of McGill University's unique field studies semester program. In 2018 MARI will involve 10-12 senior (3rd & 4th year) undergraduate students that will be selected from a group of applicants based on their background preparation and aptitude for research. Their research project will address questions of environmental sustainability and are linked to their supervisors NSERC funded programs.

Microbial investigations of perennial springs, permafrost and ground ice in the high Arctic

License Number: 02 050 18R-M

Principal Investigator: Whyte, Lyle

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Number in Party: 6

Research Area: North Baffin

Fieldwork Locations: Axel Heiberg

SUMMARY

The microbial biodiversity in unique habitats including cold perennial salt springs and permafrost environments have not been fully explored, and molecular traits that enable microorganisms to survive and thrive in the Canadian High Arctic are unknown. My research program examines microbial biodiversity and ecology in unique polar habitats and aims to expand our knowledge of polar microbial communities.

Kitikmeot Region Marine Science Study

License Number: 04 019 18R-M

Principal Investigator: Williams, Bill

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Number in Party: 9

Research Area: Kikitmeot

Fieldwork Locations: Coastal and Marine areas around King William Island and Gjoa Haven

SUMMARY

The project is located within the Kitikmeot region, between Dolphin and Union Strait in the west and Larsen Sound in the north and east. The proponent will utilize the research vessel (RV) Martin Bergmann (sixty two feet (ft) in length) to collect baseline oceanographic data and evaluate marine ecosystem structure in the study area. The program will take place from August to September 2017, and will involve seasonal research activities until 2021.

Biodiversity and Microhabitat Associations of Terrestrial Arthropods on Axel Heiberg Island, Nunavut, in the High Arctic

License Number: 02 047 18N-M

Principal Investigator: Zerafa, Anthony

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Number in Party: 3

Research Area: North Baffin

Fieldwork Locations: Axel Heiberg Island

SUMMARY

The purpose of this project is to establish a baseline understanding of High Arctic microhabitat associations of terrestrial arthropods on Axel Heiberg Island across both spatial and temporal gradients. This project is the foundational step for a proposed long-term arthropod monitoring program on Axel Heiberg Island.

SOCIAL SCIENCES RESEARCH

Women, Labour and the Inuit Parka: A History of Sewing in the Canadian North

License Number: 03 001 18N-M

Principal Investigator: Williamson, Christina Lynn

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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Arviat

SUMMARY

This project traces the production of parkas as a key aspect of Inuit women's labour in the Kivalliq region of Nunavut, in the Canadian Arctic, from the 1900s to today. By surveying the sewing work of parkas, this project emphasizes the contemporary importance and value of women's work in the Arctic by examining historic parkas. Using parkas as the central focus of the project connects women's labour to the historical colonial economies of whaling, the fur trade, the settlement period and also to Inuit-First Nations interactions. This project focuses on Inuit women from the region of Kivalliq because the people of this region have interacted with non-Inuit – both First Nations and Qallunaat (non-Indigenous) – for centuries. Kivallirmiut have dealt with Qallunaat explorers, whalers, government officials and military from the south and, because Kivallirmiut live just north of the treeline, were also in frequent contact with Sayisi Dene First Nations people, who would visit the same trading posts and hunt in the same areas as Kivallirmiut.

Engaging Inuit Men and Boys in Reducing Violence Against Inuit Women and Girls II

License Number: 05 001 18N-M

Principal Investigator: Michaels, Samantha

Affiliation:
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Number in Party: 1

Research Area: Nunavut Wide

Fieldwork Locations: Rankin Inlet, Clyde River, Baker Lake, Hall Beach, Igloolik, Iqaluit, Pangnirtung, Gjoa Haven

SUMMARY

Funded through Status of Women Canada, Pauktuutit is undertaking a three-year project to involve Inuit men and boys in reducing violence against women and girls. The objective of the first phase of the project was to develop and strengthen the skills of Inuit men and boys, working in partnership with women and girls, to identify and respond to issues of gender-based violence in the communities. The project will build on the successful work that Pauktuutit completed in 2015.

Pedagogy in Practice for Secondary Teachers in the Northern Context

License Number: 01 008 18N-A

Principal Investigator: Thurber, Tess

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Number in Party: 1

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

Teacher turnover rate and shortage is currently an issue throughout Nunavut. This research is targeted specifically at beginning teachers who are starting their careers in Nunavut. Acquiring a better understanding of the challenges that these teachers face could help to influence future policy to increase teacher retention within Nunavut. Increased teacher retention is of benefit to Nunavut in several ways. First, it will be economically beneficial, as the costs involved through the hiring and relocation processes will decrease. Second, and most importantly, one of the difficulties in many schools is having new teachers come in and out of student lives constantly. This hardly allows for consistency in the school for students. Students are continuously forming bonds with teachers who then leave, and are forced to then form new bonds with different teachers every year. The building and maintaining of pedagogical relationships between teachers and students is arguably a critical component to success of both parties in their roles in schools. Learning more about the teachers' experience will hopefully influence this dynamic positively in Nunavut.

Inuit Workforce Barriers Strategy (IWBS) Study.

License Number: 03 003 18N-M

Principal Investigator: Wright, Jennifer

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Number in Party: 3

Research Area: Kivalliq

Fieldwork Locations: Arviat, Baker Lake, Chesterfield Inlet, Coral Harbour, Naujaat, Rankin Inlet, Whale Cove

SUMMARY

The IWBS aims to identify strategies to improve the ability of Inuit to achieve their life goals through engagement in the Agnico Eagle Mine (AEM) Kivalliq workforce. It will identify barriers and success factors for Inuit employment with AEM and related contractors. This will be accomplished by talking to Inuit and others about employment dynamics including job search, job retention, career progression and re-entry.

National Centre for Collaboration in Indigenous Education

License Number: 01 001 18Registry

Principal Investigator: Newhouse, David

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Number in Party: 1

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The National Centre for Collaboration in Indigenous Education (NCCIE) aims to promote and support sustainable and synergistic relationship-building for practitioners involved in educating Indigenous and non-Indigenous peoples of all ages. To support the establishment of NCCIE and the pursuit of this important goal, this project begins the work of the NCCIE, that of initiating conversations with educators, service providers, and traditional knowledge holders, and gathering examples of innovative programs and practices in Indigenous education.

Africans in Nunavut: A Test of African Resiliency in the Arctic

License Number: 01 021 18Amended

Principal Investigator: Mandeya, Francisca

Affiliation:

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Number in Party: 1

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The Arctic and Africa are poles apart and geographically different, with notable temperature differences that go up to 100 degrees Celsius. Despite the elements, it is noteworthy that Africans have found home in Nunavut and are raising their children the Arctic way. A lot of people do not really believe that Africans can survive in the Arctic. If they do happen to stay there, they are deemed crazy. In fact, even some Canadians from other provinces are not convinced they can have a life in Nunavut. It is therefore worth exploring the lives of the Africans who have braved the Arctic and are living normal lives: raising children, working and participating in the economic, political, social and cultural spheres with the owners of the land, Inuit and other Nunavummiut.

COMPASS: Cohort Study Evaluating how changes in School Programs, Policies, and Resources impact Youth Health Behaviours

License Number: 01 004 18R-M

Principal Investigator: Leatherdale, Scott

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Number in Party: 3

Research Area: South Baffin, Kivalliq

Fieldwork Locations: Cape Dorset, Coral Harbour, Iqaluit, Pangnirtung

SUMMARY

COMPASS is a Canadian Institutes for Health Research and Health Canada-funded longitudinal study designed to follow a cohort of high school students attending a sample of secondary schools for up to five years, to understand how changes in school environment characteristics (policies, programs, built environment) are associated with changes in youth health behaviours. COMPASS originated to provide school stakeholders with the evidence to guide and evaluate school-based interventions related to obesity, healthy eating, tobacco use, alcohol and marijuana use, physical activity, sedentary behaviour, school connectedness, bullying, and academic achievement. A mental health module will be introduced starting in the 2017-18 school year.

Understanding Down Collection in the Canadian Arctic

License Number: 01 006 18N-A

Principal Investigator: Dey, Cody

Affiliation: Great Lakes Institute for Environmental Research
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Number in Party: 3

Research Area: North & South Baffin

Fieldwork Locations: Cape Dorset, Kimmirut, Sanikiluaq

SUMMARY

The collection of eider down for use in clothing and blankets is a traditional practice in Nunavut. While eider down is still collected by many Nunavummiut, this practice is changing because of new technologies (faster, bigger boats) and because of changes to wildlife populations. Climatic changes in Nunavut are leading to increased polar bear predation of common eider nests, which could cause changes in eider colony size and location, and expose down collectors to increased risk of polar bear encounters. The primary goal of our study is to understand the current practices used for down collection in Nunavut, and to explore how changes in wildlife populations might impact down collection in the future. These data will help Nunavummiut manage and adapt to changing ecological conditions caused by climate change.

Supporting Community Information Needs in Environmental Assessment in Nunavut

License Number: 02 004 18N-M

Principal Investigator: Hanna, Kevin

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Number in Party: 1

Research Area: Kitikmeot, South Baffin

Fieldwork Locations: Cambridge Bay, Pangnirtung

SUMMARY

Environmental assessment (EA) has a long and influential history in Northern Canada. It was the 1977 Mackenzie Valley Pipeline Inquiry, which established an international standard EA in the Arctic and elsewhere, and created expectations about the potential for EA. Much of the current EA regulatory system in the North was developed from comprehensive land claims agreements, and is administered through a variety of regional boards and agencies. Through co-management boards and committees, EA in Canada's Arctic is arguably more, and perhaps better, integrated into regional resource development planning than it typically is in the south.

Expectations and Perception Mapping Study (E&P Study)

License Number: 03 004 18N-M

Principal Investigator: Wright, Jennifer

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Number in Party: 3

Research Area: Kivalliq

Fieldwork Locations: Arviat, Baker Lake, Chesterfield Inlet, Coral Harbour, Naujaat, Rankin Inlet, Whale Cove

SUMMARY

This research study is an important part of Agnico Eagle Mines' (AEM) Inuit Impact Benefit Agreement for the Kivalliq region. The research will help AEM and the Kivalliq Inuit Association (KIA) explore Inuit opinions regarding AEM activities in the Kivalliq. The poll results will increase the understanding of Inuit expectations and how well they are perceived to be met.

Inuit Knowledge of the Cumulative Impacts of Environmental Change in Eastern Hudson Bay

License Number: 01 007 18R-M

Principal Investigator: Sheremata, Megan

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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Sanikiluaq

SUMMARY

Southeastern Hudson Bay communities in Nunavik and Nunavut have observed many changes in the local environment since the development of the hydroelectric projects began in the 1970s. Sea ice and coastal waters are central to Inuit livelihoods, and have been impacted by both hydroelectric reservoir management and climate change. Since 2011, the Arctic Eider Society (AES) has worked with community members in Sanikiluaq, Inukjuak, Umiujaq, Kuujjuaraapik and Chisasibi to conduct community-driven research to better understand these changes, including changes in water and sea ice characteristics. To support this recent research, communities have requested that interviews with local hunters and elders be conducted to better understand the historical context of these changes using Inuit knowledge.

Work/Journey/Home: Exploring the Impacts of Fly-In-Fly-out Work Practices in the Kivalliq Region, Nunavut on Employees and Families

License Number: 03 006 18R-M

Principal Investigator: Cater, Tara

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Research Area: Kivalliq

Fieldwork Locations: Rankin Inlet

SUMMARY

Mining operations in Nunavut require a Fly-in-Fly-out (FIFO) workforce, which involves workers living at a remote mine site for two week shifts away from their families and communities. Drawing on contemporary experiences from the Meadowbank mine and the Meliadine Gold project, the objective of this research is: to determine how FIFO work practices are organized in the Kivalliq Region; understand how participation in FIFO work practices effects workers and their families, particularly as understood by Inuit workers and their families in Rankin Inlet. We aim to produce knowledge that will help in the development of relevant mining family support network materials and tolls for employees and families in Rankin Inlet participating in FIFO work practices at Agnico Eagle mine sites.

Monitoring the Health of Simirlik National Park through Inuit Knowledge: Pilot Project

License Number: 02 011 18R-M

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Number in Party: 4

Research Area: North Baffin

Fieldwork Locations: Pond Inlet, Arctic Bay

SUMMARY

The overall goal of the project is to include Inuit Knowledge in Parks Canada's assessment of the health of the park's ecosystems. The immediate objective of the project is to test a method for monitoring/studying the health of the Park's ecosystems/environment through Inuit Knowledge in the long term.

Understanding Food Policy in Nunavut

License Number: 02 012 18R-M

Principal Investigator: Stephenson, Eleanor

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Number in Party: 1

Research Area: North & South Baffin

Fieldwork Locations: Clyde River, Iqaluit

SUMMARY

This research study is about food security and food policy in Nunavut. The purpose of this study is to better understand how government policy addresses food insecurity in Nunavut, and how food-related policy measures affect Nunavummiut. The research is being conducted by Eleanor Stephenson, a PhD student in the Department of Geography at McGill University. The research is supervised by Dr. George Wenzel. The research will begin in early summer 2017. The project will be completed in summer 2018.

A Collaborative Research Project with Inuit Youth, Families and their Communities about Informal Education Practices, Community Driven Science Research and Life Long Learning with Important Implications for Inuit Education and Perserverance

License Number: 05 007 18R-M

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Number in Party: 5

Research Area: Kivalliq, North & South Baffin

Fieldwork Locations: Arviat, Sanikiluaq, Pond Inlet

SUMMARY

The purpose of the collaborative community project is the description and documentation of Inuit ways of learning with Inuit youth, families and their communities. The three year collaborative community project is also closely aligned with the research priorities of the National Strategy of Inuit Education. We initiated collaborations with four programs in three Nunavut communuties to pursue our goal of describing life long learning and a holistic model of Inuit education.

Towards a Sustainable Fishery for Nunavummiut

License Number: 04 004 18R-M

Principal Investigator: Schott, Stephan

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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Gjoa Haven, Taloyoak

SUMMARY

The Traditional Ecological Knowledge (TEK) Sharing and Mapping Workshop is a component of the larger four year research project, "Towards a Sustainable Fishery for Nunavummiut," led by a diverse research team of government, university, non-profit and local collaborators. The larger project will deliver essential genomics and microbiome data; stock management tools; population genomics maps for Arctic char, cod and shrimp, and guidelines for a community-based fisheries plan, which will serve as a model for other regions. The purpose of the project is to improve the understanding of the use and status of arctic char, cod, and shrimp in the Lower Northwest Passage in order to strengthen food security, create a baseline of the status and value of fish stocks and to evaluate economic development opportunities.

Opportunities for Climate Change Adaptation: Comparative Research on Indigenous Fisher Communities in the Canadian Arctic and Eastern Sri Lanka

License Number: 02 015 18R-M

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Number in Party: 1

Research Area: North Baffin

Fieldwork Locations: Pangnirtung

SUMMARY

The goal of this study will be to identify, examine, and evaluate opportunities for resilience building and vulnerability reduction (i.e., adaptation) with respect to the impacts of climate change on remote Indigenous fisher populations. To achieve these objectives, participant observation, semi-structured interviews, and focus group discussions will be used as data collection methods.

Assessment of the Current State of Coastal Restoration Needs in Nunavut

License Number: 05 009 18N-M

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Research Area: North Baffin, Kivalliq

Fieldwork Locations: Clyde River, Chesterfield Inlet, Coral Harbour, Arviat, Whale Cove, Naujaat, Igloolik, Hall Beach, Resolute Bay, Grise Fiord, Sanikiluaq

SUMMARY

The objective of the research project is to engage each of Nunavut's 25 communities to identify and address the stressors impacting fish, marine mammals, and aquatic habitats. Seeking input from all communities, the project will implement at least 3 restoration projects over a five-year period based on local knowledge and science. The project also aims to build capacity at the local level via community-based monitoring; to document Inuit Qaujimajatuqangit (IQ); and to support each community in environmental restoration and stewardship initiatives.

Muskox Health and Resilience: Muskox Health Surveillance on Victoria Island to Support Food Security, Food Safety, Public Health and Muskox Health

License Number: 04 007 18R-M

Principal Investigator: Tomaselli, Matilde

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Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay

SUMMARY

The proposed project aims to develop a community-based muskox health surveillance system in the community of Cambridge Bay in order to monitor muskox health over time and be able to detect disease emergence. This surveillance system will be built through community involvement and will incorporate traditional and local knowledge about muskox health and diseases.

Oral Histories of Auyuittuq National Park

License Number: 02 017 18R-M

Principal Investigator: Routledge, Karen

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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Pangnritung, Qikiqtarjuaq

SUMMARY

Parks Canada is collecting oral histories about the area that is now Auyuittuq National Park. These stories will mainly be used to help Parks Canada staff, residents of Pangnirtung and Qikiqtarjuaq, and visitors understand the history of Auyuittuq National Park.

Auyuittuq National Park Place Names Project

License Number: 02 018 18R-M

Principal Investigator: Routledge, Karen

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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Qikiqtarjuaq, Pangnirtung

SUMMARY

It is a priority of Parks Canada to use Inuktitut place names, but our information about place names in Auyuittuq National Park was incomplete. In collaboration with Inuit, Parks Canada is making a map of Inuktitut place names within Auyuittuq National Park. The map also includes some additional information, including meanings of names. In the future, if we have the approval of our partners, Parks Canada may suggest making some or all of these names official. Parks Canada will present the map for discussion at the next meeting of the Auyuittuq National Park JPMC. If the committee raises points that require further discussion, we will schedule another conference call with the IKWGs. When the JPMC has quorum and is satisfied with the map, we will ask for a formal motion to approve it. Once it is approved, we will distribute copies to participants, make the map available publicly as well as to Inuit Heritage Trust, and use it in park programming.

Rehabilitation and Criminal Justice: Learning What Inuit Think Should Happen if Young Inuit Men Break the Law

License Number: 03 009 18R-M

Principal Investigator: Ferrazzi, Priscilla

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Number in Party: 3

Research Area: Kivalliq, South Baffin

Fieldwork Locations: Arviat, Iqaluit

SUMMARY

Aboriginal people are considered 10 times more likely to be jailed than non-Aboriginal Canadians. Efforts to solve this problem - including Criminal Code changes and the Supreme Court of Canada decisions in Gladue (1999) and Ipeelee (2012) directing a different approach to Aboriginal sentencing - have had limited success. In the mainly Inuit territory of Nunavut, stressors, including the presence of Western institutions and values, have been linked to crime rates 5.5 times higher than the rest of Canada and to disproportionate numbers of Inuit caught in the justice system. Young Inuit men, in particular, are vulnerable. While Nunavut criminal courts routinely apply Gladue principles and include Inuit elders' panels at sentencing and Inuktitut interpretation, the otherwise conventional Western approach to the administration of justice continues to raise concerns that it unintentionally marginalizes Inuit participation and values. The goal of this project is to create knowledge to help inform a rehabilitation-oriented court model for Nunavut.

Patterns of Resilience among Youth in Contexts of Climate Change in the Global North and Global South

License Number: 04 009 18R-M

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Number in Party: 4

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Kugluktuk

SUMMARY

Our objective is to discover, along with youth as co-researchers and citizen scientists, the sources of biopsychosocial resilience of young people over time and its relationship to the resilience of ecological systems where there are disruptions related to climate change. Each of the four community case studies (of which Cambridge Bay is one) have the opportunity to focus broadly on young people's stress levels, psychological well-being, social development, community processes and the integrity of local physical environments. A series of research activities will be co-developed with youth and carried out over a period of five years.

Inuit Qaujimajatuqangit (IQ) about the Impact of Light Geese Abundance on Land, Wildlife, and People, and Recommendations for Light Geese Management in the Kivalliq Region of Nunavut

License Number: 03 011 18R-M

Principal Investigator: Carter, Natalie Ann

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Number in Party: 4

Research Area: Kivalliq

Fieldwork Locations: Arviat, Coral Harbour

SUMMARY

In the Canadian Arctic, populations of light geese (Lesser Snow and Ross') have increased dramatically in the last 50 years. Near Coral Harbour and Arviat, light geese have negatively affected vegetation over large areas. Scientists are conducting studies to understand the impact that geese are having on the land and other animals that share the same habitat. In Nunavut, light geese are harvested by Inuit for non-commercial use. Few studies have documented Inuit Knowledge of goose populations or past and current interactions of geese with the land, water, other animals, and people.

Developing Best Practices for Community Engagement in, and Co-management of, Narwhal Health in Coastal Regions of Nunavut

License Number: 02 024 18R-M

Principal Investigator: Tomaselli, Matilde

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Number in Party: 2

Research Area: North Baffin

Fieldwork Locations: Pond Inlet

SUMMARY

The purpose of this study is to gather traditional and local knowledge from community residents to better understand narwhal population health and its drivers. Traditional and local knowledge from this study will be integrated with existing scientific knowledge gathered in the region. This project will also support the development of participatory tools that will allow the long term and real-time monitoring of narwhal health.

Climate Communication and Adaptation: Engaging Maritime Publics in Resource Management

License Number: 04 010 18R-M

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Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Kuglukluktuk

SUMMARY

The purpose of this research is to study climate change communication and compare maritime communities in diverse climate zones to identify differences and similarities in local perceptions of climate change and global climate action, and associated effects on local participation in resource management. The research question is: Does climate change communication mobilize or constrain local public engagement, and do those effects vary depending on the particular spatial and socio-ecological attributes of places experiencing environmental change? The objectives are to understand how local resource environments and challenges are perceived and communicated in the context of climate change, how climate change is perceived as a societal and ecological phenomenon, and how different actors participate in climate change communication and resource management.

Jenny Gilbertson in the Arctic

License Number: 02 053 18N-A

Principal Investigator: Main, Shona

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Number in Party: 1

Research Area: North Baffin

Fieldwork Locations: Grise Fiord

SUMMARY

Jenny Gilbertson, the Scottish documentary filmmaker, lived and filmed in Coral Harbour and Grise Fiord between 1970-1978. Largely forgotten, her work is beginning to gain interest. The fieldwork for this practice-led PhD, combining film and written theses, will see me visit Grise Fiord to investigate how she made these films. From this I will establish an account of Gilbertson's filmmaking in the Arctic and consider what her approach can teach documentary filmmakers today. Preparation involves archival research, critical reading (Inuit history, early filmmaking, documentary ethics, ethnography) and learning Inuktitut (through tusaalanga.ca). Interactions which generate data will be recorded by email, sound recorder, film and journal, the latter to scrutinise Gilbertson's methods and reflect on how this experience informs my own.

Franklin Expedition Inuit Oral History Research

License Number: 04 040 18N-M

Principal Investigator: Shackleton, Ryan

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Number in Party: 1

Research Area: Kitikmeot

Fieldwork Locations: Gjoa Haven, Terror Bay/Ugjulik

SUMMARY

This project will document Inuit Oral Histories of the 1845 Franklin expedition, specifically of the shipwreck sites of the HMS Erebus and HMS Terror. It will involve a close collaboration with community members in Gjoa Haven and other Kitikmeot communities, the Nattilik Heritage Centre in Gjoa Haven, the Franklin Interim Advisory Committee; to gather knowledge of Ugjulik and Terror Bay Nunavut, as well as the history of the Franklin Expedition. The project will provide Inuit Elders with the opportunity to share with the Canadian public, their knowledge not only about the expedition, but also the traditional uses of the natural setting of the wrecks and surrounding areas, which will demonstrate to the Canadian public that these shipwrecks are part of Inuit Homelands. It also provides Inuit youth and adults alike with the opportunity to build skills that will enable them to collect and present Oral Histories in their own communities.

Nunavut Water Resouce Management

License Number: 02 054 18N-M

Principal Investigator: Wesche, Sonia

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Research Area: North Baffin

Fieldwork Locations: Hall Beach, Igloolik

SUMMARY

Sustainable freshwater sources are important for northern community development and planning however, many northern communities in Canada lack knowledge about their existing water supply, baseline demand, and recharge potential. The communities of Igloolik and Hall Beach were identified as having limited capacity for future growth in their municipal water supply. This project involves water resource assessments in Igloolik and Hall Beach to understand how water supply and capacity will be influenced by continued population growth and climate change, and to provide decision‐makers with data for improved water management. We will focus on Inuit perspectives about water in their communities, water‐related health concerns, and potential alternative water sources that may be used (or preferred) in the future.

Canada's Arctic Waste Future: A Pilot Project

License Number: 01 023 18N-A

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Research Area: South Baffin

Fieldwork Locations: Iqaluit, Pangnirtung

SUMMARY

The aim of the proposed project is to highlight waste issues in Nunavut within the context of settler colonialism and contemporary national and international natural resource development in the Arctic. In Phase I of our proposed project, we will meet with permanent and non-permanent residents of Pangnirtung and Iqaluit, to discuss the feasibility of creating a multi-disciplinary art project on the theme of waste. This will include conversations with community group members, resident educators, government officials, local journalists, scientists, policy makers and artists. Part of our focus will be on the oral histories of Inuit and other lifelong Nunavut residents to begin to examine longer-term understandings of waste and settler colonialism. Using art as our common language, our long-term goal is to facilitate the development, creation and performance of an original work of performance art that will respond to the topic of waste from both a socio-political and personal point of view.

OceanCanada: Climate Change and Oceans in Canada

License Number: 02 055 18R-M

Principal Investigator: Mauro, Ian

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Number in Party: 4

Research Area: South Baffin

Fieldwork Locations: Pangnirtung

SUMMARY

Researchers seek to work collaboratively with the community of Pangnirtung to collect, conserve and communicate Inuit Qaujimajatuqangit regarding oceans, climate change and industrial development impacts. This research will use video-based methodologies to collect qualitative social science data.

Arctic ULINNIQ: Inuit Knowledge of and Experience With Earthquakes and Tidal Waves

License Number: 02 061 18N-M

Principal Investigator: Wenzel, George

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Number in Party: 1

Research Area: North Baffin

Fieldwork Locations: Clyde River, Igloolik, Pond Inlet

SUMMARY

Gathering this valuable knowledge will involve several methods, one will be by face-to-face interviews, especially with Elders. Information from their own experiences and what their parents and grandparents have passed to them about changes to the landscape, sudden or unexpected disturbance to the land or unusual waves on the sea. Also important are where and when they were living at the times of their experiences or where the ancestors who passed on information about earthquakes and unusual ocean waves lived at those times. Another method will be to bring hunters together to discuss what they have observed in their travels. Again, when, where, and how they sensed disturbances will be important. All this information, whether about the far past or the last few years, will help Inuit and researchers understand the real experience of these earthquakes and waves and landslides they may have caused. Equally important is for researchers to understand how Inuit coped with any effects that they have experienced. Likewise, because people have travelled so widely, they may have observed changes to the landscape that were not there when a place was previously visited.

Indigenous Knowledge in Protected Areas Management: Adaptatio, Sustainablility and Opportunities in the Circumpolar North

License Number: 02 060 18N-A

Principal Investigator: Siivola, Delia Caroline

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Research Area: South Baffin

Fieldwork Locations: Pangnirtung, Qikiqtarjuaq

SUMMARY

The goal is to obtain a better understanding how Indigenous knowledge is used, and can be better used, in park management. This research is being done as part of a university degree for Delia Siivola through the University of the Sunshine Coast, Australia. Through her time living and working in the Canadian north over the past ten years, Delia has observed that researchers may be missing things Indigenous Peoples know about Indigenous knowledge and how it can help with land management. There are not many Indigenous people doing this type of academic research and, although Delia is not an Indigenous person, through this study she will try to bring Indigenous understandings to the research world. A main goal is to work together with local people and share their voices on how they feel their knowledge is being used, and how it could be better used.

Do Inuit Inhabitants in Nunavut Use and See the Internet as a Tool of Emancipation; Politically, Culturally and Economically?

License Number: 01 029 18N-A

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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

This field study, part of a political sciences thesis about telecommunications networks in the Arctic, aims to collect qualitative data by doing semi-directive interviews of local inhabitants about the internet in the Arctic. It will help validate, or disprove, the hypothesis that the internet is a tool of emancipation for Inuit, favoring economic development, culture sharing and political influence through social media to bypass traditional media.

Arctic climatic extremes and country food security: a qualitative study in two Inuit communities in Nunavut, Canada

License Number: 04 039 18Registry

Principal Investigator: Gilbert, Sappho Zoe

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Research Area: North Baffin, Kitikmeot

Fieldwork Locations: Pond Inlet, Cambridge Bay

SUMMARY

This study is led by researchers at the Yale School of Public Health in close collaboration with the Division of Poverty Reduction in the Government of Nunavut's Department of Family Services. Through face-to-face conversations with adult (18 years or older) hunters, trappers, and elders, the team aims to explore their perspectives on what it means to have a "bad year" for getting country food and how communities are immediately affected in those times. There will be 12 to 15 interviews done in each of two communities with robust Hunter and Trapper Organizations (HTOs): Cambridge Bay and Pond Inlet. Interviews will take place between late June and the end of August 2018. Analysis will continue for up to approximately one year, with dialogue and interpretation alongside local stakeholders, and results will be presented to the communities.

Local Perspectives and Concerns Related to Potential Marine Oil Spills

License Number: 03 024 18N-M

Principal Investigator: Hostetler, Glen

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Research Area: Kivalliq

Fieldwork Locations: Chesterfield Inlet

SUMMARY

The proposed research is part of exploring the ethical, environmental, economic, legal, and social (GE3LS) aspects of the GENICE project. The GE3LS team will continue to engage with the community beyond this research; however, funding to expand the work in future years is under review and so the exact nature of future work is not yet known. Future work will include additional communities in the Kivalliq region and build on the research proposed here, and a separate licensing application will be submitted. The objective of the proposed research is to understand local people's perspectives and concerns related to marine oil spills that could affect their community and areas of importance to them. The purpose is to ensure that local interests guide the scientific research (e.g., sampling of areas identified as at increased risk of spills and/or of socio-cultural and economic importance), and to ensure that local perspectives on marine spill preparedness and response are included in recommendations to policy makers.

Coffee Shop Politics Meets the Review Board: Rural Community, Agency, Consent & Develpoment in Canada

License Number: 03 019 18N-A

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Research Area: Kivalliq

Fieldwork Locations: Baker Lake

SUMMARY

Across Canada, many small communities are trying to figure out how to deal with government reviews of land-use policy, especially relating to major developments such as mines, pipelines and factories, given their limited resources and the complicated, formal nature of government policy-making that favours trained ‘experts.’ The concepts of 'consent' and 'social licence' have become more common in discussions surrounding Indigenous communities and development in Canada, but it is not always clear what these ideas mean. In my research, I would like to interview community organizers and local officials in Baker Lake, Nunavut, a small, primarily Inuit community that has had to deal with a few of these land-use policy reviews in the past and is currently seeking to ensure that its ability to control the use of the surrounding lands is respected in the recently-delayed Nunavut Land Use Plan. In this and previous project reviews, some people from Baker Lake have stated that they want a referendum of community members before the construction of any uranium mine near their community to be part of the official process, an approach that is unique in Canada. I hope to conduct interviews with local policy-makers, members of the Hunters’ and Trappers’ Organization and local community organizers to ask about their engagement in the various review and policy making processes.

Unsettling Ground: Fluid Geology and Arctic Urbanism

License Number: 03 021 18N-M

Principal Investigator: McMillan, Jason

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Number in Party: 1

Research Area: Kivalliq

Fieldwork Locations: Arviat

SUMMARY

This research is being undertaken for a Master of Architecture thesis out of the University of Waterloo School of Architecture. The purpose of this project is to understand the relationship between land and the buildings constructed since the 1960's in Arviat. Regulation shapes the growth of towns, and their relationship to traditional economies of the land. The housing shortage and rapid population growth are opening difficult questions about climate adaptation, decolonization, traditional knowledge and economic challenges into how town spaces and buildings are made.

Mapping the Journey: Inuit Perspectives on the Role and Value of Participatory Mapping

License Number: 05 014 18R-M

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Number in Party: 2

Research Area: North & South Baffin, Kitikmeot

Fieldwork Locations: Clyde River, Pangnirtung, Iqaluit, Cambridge Bay, Baker Lake, Gjoa Haven

SUMMARY

Participatory mapping is commonly used in projects across the Arctic as a tool for Inuit to document, represent, and share their cultural and environmental knowledge by drawing places, routes, or areas of importance on available maps. Map biographies collected to support Inuit land claims assertions are the foundation of comprehensive land claims agreements across Inuit Nunagat (homelands) in Canada. The broad research question driving this project is: What is the role and value of participatory mapping according to Inuit perspectives in Nunavut? To address this question, we have established a partnership with Nunavut Sivuniksavut (NS), a post secondary training program for Inuit youth based in Ottawa.

Community Based Monitoring of Marine Mammal Health and Distribution within Tasiujaq

License Number: 02 062 18N-M

Principal Investigator: Elgin, Ross

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Number in Party: 1

Research Area: North Baffin

Fieldwork Locations: Pond Inlet

SUMMARY

The waters of Tasiujaq (Eclipse Sound) provide an essential lifeline to the community of Pond Inlet where a healthy ecosystem remains a major concern of local Inuit in the face of a changing arctic. Following the recent conclusion of a community based marine monitoring pilot jointly carried out by the Qikiqtani Inuit Association (QIA) and Pond Inlet, this project will build on these experiences to create a longer term monitoring program. The new program will support the creation of baseline ecosystem and climatic data to identify changes in land use patterns and environmental health within the Tallurutiup Omanga National Marine Conservation Area.

Mobilizing Inuit Qaujimajatuqangit for Sea-Ice Safety: A Sikumiut case study to support Inuit Self-Determination in Research

License Number: 02 065 18N-M

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Number in Party: 2

Research Area: North Baffin

Fieldwork Locations: Pond Inlet

SUMMARY

The purpose of this project is to support Inuit self-determination in research through a case study in Mittimatalik (Pond Inlet), Nunavut. The goals of the project are to advance Inuit research leadership, decision-making, knowledge, approaches and capacity building. Sikumiut (people of the sea ice) is the 12-person management committee in Mittimatalik that governs the SmartICE community-based sea-ice monitoring program. At a recent meeting, Sikumiut identified the need to document their Inuit Qaujimajatuqangit (IQ) of sea-ice to support safe sea-ice travel, assess the impacts of climate change and resource development, and to share this knowledge with the community and future generations.

Inuit Knowledge about Polar Bear Health for the Davis Strait Polar Bear Population

License Number: 01 028 18Registry

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Research Area: South Baffin

Fieldwork Locations: Iqaluit, Kimmirut, Pangnirtung

SUMMARY

The main goal of this project is to document Inuit knowledge about polar bear health, abundance and distribution to support management decisions and strategies for the Davis Strait polar bear population. The specific objectives of our work are: (1) to gather and compile Inuit knowledge about polar bear health, abundance and distribution for the Davis Strait polar bear population; (2) to combine and compare Inuit and scientific knowledge available for the Davis Strait polar bear population and discuss implications for polar bear management; and (3) to build community capacity for polar bear health assessment and co-management in Nunavut. We will document Inuit knowledge (IK) about polar bears in the three Nunavut communities located within the boundaries of the Davis Strait polar bear population (Iqaluit, Kimmirut and Pangnirtung). We will use participatory research tools and methods for the collection of IK (a combination of interviews with local experts, group discussions and mapping exercises). We will then compare documented IK with available scientific information for the Davis Strait polar bear subpopulation. Lastly, we will contribute to building community capacity for Inuit knowledge documentation by offering Nunavummiut training workshops on the collection of local knowledge for wildlife health assessment. This project is supported by HTOs in Iqaluit, Kimmirut and Pangnirtung and will be conducted in close collaboration with residents from these three communities.

Inuit String Figures (ajaraarniq) : Traditional Knowledge on Making Figures and Storytelling with a String among Canadian Inuit

License Number: 01 032 18R-M

Principal Investigator: Petit, Celine

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Number in Party: 1

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

This proposed study on Canadian Inuit string figures is part of a collective research project which aims to compare the processes of making figures with a loop of string, as a practice known in different societies with an oral tradition.

Shipwrecks in Cumberland Sound

License Number: 02 068 18N-M

Principal Investigator: Routledge, Karen

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Number in Party: 6

Research Area: South Baffin

Fieldwork Locations: Pangnirtung, Cumberland Sound

SUMMARY

We want to work with knowledge holders in Pangnirtung as part of Parks Canada underwater archaeology project about whaling shipwrecks in Cumberland Sound. Our goals are: (1) community members will share knowledge of whaling era shipwrecks in Cumberland Sound, and (2) Parks Canada will share information from its archaeological work in ways that are relevant and useful for the community.

Understanding the Role of Youth Engagement in Scientific Research in Nunavut

License Number: 02 066 18N-M

Principal Investigator: Sadowsky, Hilary

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Number in Party: 3

Research Area: North Baffin

Fieldwork Locations: Pond Inlet

SUMMARY

There is a growing movement for researchers to partner with northern communities and individuals in scientific research. As this process becomes more common place, opportunities for employment and education in research also increase for local Inuit, and researchers seek partnerships with knowledgeable, skilled community members. Experienced hunters and trappers are often hired by researchers, as they possess the resources and knowledge necessary to assist in environmental research, yet opportunities for youth to engage in similar relations are limited. Nunavummiut believe that researchers have the responsibility to include Inuit youth in environmental research and enhance their scientific literacy through that inclusion. This research aims to examine the roles of researchers in engaging Inuit youth in land-based environmental research and opportunities for enhancing scientific literacy in remote northern communities. It will also explore the unique perspectives that Inuit youth bring to environmental research and how these perspectives contribute to research.

Young Hunters Ujjiqsuiniq Project Evaluation

License Number: 03 022 18Registry

Principal Investigator: Tagalik, Shirley

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Number in Party: 9

Research Area: Kivalliq

Fieldwork Locations: Arviat

SUMMARY

The Young Hunters Program is a community-based project designed to develop sustainable harvesting in youth between the ages of 8 to 25. In the 5 years that the project has been operating, extensive work has been done with community Elders to document the knowledge and skills required for youth to become masters in sustainable harvesting, but also to become capable, confident and contributing human beings, according to inunnguiniq principles. Although some of this material may specifically refer to local harvesting conditions and practices, most of the content is broadly inclusive of Inuit Qaujimajatuqangit principles and beliefs and training processes inherent in Inuit cultural practices. As such it has value for Inuit anywhere.

Mining, Social Justice, Culture and Environmental Risk in the Kivalliq Region, Nunavut: Women's Approaches and Perspectives to Fairness

License Number: 03 027 18N-M

Principal Investigator: Pylkkanen, Jasmiini

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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Rankin Inlet

SUMMARY

The impacts of resource extraction – from exploration to actual mining operations and remediation after mine closure – are connected to many social and environmental issues in the North, particularly in the Kivalliq communities. Past developments and experiences influence today's realities. The history of the North Rankin Nickle Mine and Meadowbank, Amaruq and Meliadine mines tell us that Rankin Inlet is a place where mining, social justice, culture and environment all seem somehow interconnected. This research looks into those connections more closely.

Exploring the Factors Influencing the Development of Suicide Prevention Strategies in the Northern Context

License Number: 01 033 018Registry

Principal Investigator: Valiquette, Eve-Marie

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Number in Party: 1

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

Suicide Prevention is a number one priority for Nunavut and Inuit regions of Canada. The past few years have seen a marked number of prevention strategies and actions. Our project is meant to support community agents who do suicide prevention. Research and our own work in Nunavik suggests that community mobilization strategies and needs may vary based on community context. This research aims to identify the factors that will have an impact on the development of these local initiatives, such as the management and availability of resources or the attitude of leaders, for example. We hope that it can help fieldworkers in their work by supporting them in the assessment of those factors, in order to maximize the effectiveness of those strategies. We are currently developing frameworks that help assess community needs, and suicide prevention practices. We will offer these materials to those we interview and any partners that they believe can benefit from these frameworks. We will make sure that the objectives correspond to the needs of community and that the results are useful for the participants in their fieldwork.

Learning about ringed seal health from contaminants science and Inuit knowledge: an educational workshop in Arviat, Nunavut

License Number: 03 025 18N-M

Principal Investigator: Henri, Dominique

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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Arviat

SUMMARY

The ringed seal is a species of high cultural, economic and nutritional importance for Inuit living in Nunavut. This project addresses a shared interest among Nunavummiut and scientific researchers for increasing community involvement in research about ringed seals and contaminants. The project will engage youth, elders, community members and scientific researchers in learning about ringed seals from both Inuit knowledge and scientific perspectives through an educational workshop that will take place in Arviat, Nunavut. The main goal of the workshop is to allow scientists working on contaminants in ringed seals to share information about their work with northern residents (and Inuit youth, in particular). The workshop will also provide an opportunity for Inuit elders to share their knowledge with students and researchers about seal ecology and traditional methods for butchering seals, preparing seal skin and identifying abnormalities in harvested game.

Understanding the Qajuqturvik Soup Kitchen Community

License Number: 01 037 18N-A

Principal Investigator: Searles, Edmund

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Number in Party: 1

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The purpose of the project is to learn more about who volunteer and eat at the Qajuqturvik Soup Kitchen, as well as to learn more about its wider impact on the community of Iqaluit and on food security in Nunavut. As an anthropologist who studies the importance of sharing country food to the ongoing resilience of Nunavut Inuit culture and society, my goal is to explore if Qajuqturvik serves a similar function in Iqaluit. What motivates those who volunteer at Qajuqturvik? What do those who dine here regularly think of the place? Does it reinforce Inuit and other local values? Does it connect people beyond the Kitchen? Finally, another objective of my research is to learn more about local attitudes towards the role Qajuqturvik plays in responding to high rates of food insecurity in Iqaluit.

Literacy Instruction in Nunavut

License Number: 05 015 18N-M

Principal Investigator: Bartlett, A. Katherine

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Number in Party: 1

Research Area: Nunavut Wide

Fieldwork Locations: All Communities

SUMMARY

The focus of this research study will be to collect the stories of Nunavut educators as they implemented and continue to implement a new literacy framework. The purpose of collecting their stories is to examine them, to uncover lessons about literacy instruction in a bilingual environment and about the implementation of educational initiatives in Nunavut. Discovering both the shared and unique experiences will provide Nunavut educational leaders with information that will help improve not only the on-going implementation of the literacy framework, but also future educational initiatives.

Integrating Local Knowledge of Ecologically Sensitive and Culturally Importany Marine Areas in Arctic Canada

License Number: 02 067 18R-M

Principal Investigator: Carter, Natalie Ann

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Number in Party: 2

Research Area: Kivalliq, Kitikmeot

Fieldwork Locations: Coral Harbour, Cambridge Bay

SUMMARY

The intent of the Northern Marine Transportation Corridors (NMTC) initiative, co-led by the Canadian Coast Guard is to reduce the liklihood of marine incidents by providing predictable levels of service to mariners transiting the corridors. However, the corridors do not adequetely consider marine areas used by northern communities for traditional or cultural activities - nor do they consider non-commercial use of the marine environment, including tourism vessels that are likely to travel off the corridors into uncharted waters and under serviced regions. The proposed research is in direct reaction to this challenge.

Kitikmeot Caribou Inuit Qaujimajatuqangit (IQ) and Mapping Project

License Number: 04 043 18N-M

Principal Investigator: Panioyak, Thomas

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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Kugluktuk

SUMMARY

Due to an interest across the Kitikmeot to increase the role of IQ in caribou monitoring and management, Kitikmeot Regional Wildlife Board (KRWB) is designing an IQ-based caribou mapping and monitoring program in the Kitikmeot region of Nunavut. This project will begin in Cambridge Bay and Kugluktuk to closely record, document, and archive IQ on caribou. This work involves: (1) providing training for data management, archiving, interviewing, and on-the-land monitoring methods for community members; (2) interviewing elders for IQ on caribou in each community; and (3) developing a mobile survey based on IQ.

Developing Best Practices for Community Engagement in, and Co-Management of, Dolphin and Union Caribou Health in Costal Regions of Nunavut

License Number: 04 033 18N-M

Principal Investigator: Hanke, Andrea

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Number in Party: 2

Research Area: Kitikmeot

Fieldwork Locations: Kugluktuk

SUMMARY

The purpose of this study is to gather local knowledge from community residents to better understand Dolphin and Union (DU) caribou health and population dynamics. Local knowledge from this study will be coproduced with scientific information gathered from regional hunter harvested samples. This project will also support the development of participatory tools that will allow the long term and real-time monitoring of DU caribou health. This project is an expansion of Matilde Tomaselli's work, "Developing best practices for community engagement in, and co- management of, narwhal health in coastal regions of Nunavut."

Community Based Determination of the Stessors Affecting Muskoxen

License Number: 04 032 18N-M

Principal Investigator: Di Francesco, Juliette

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Number in Party: 2

Research Area: Kitikmeot

Fieldwork Locations: Kugluktuk

SUMMARY

The overall aim of this project is to determine the stressors affecting muskoxen. More specifically, the goals will be to collect traditional knowledge on the factors that are affecting muskox health and well being, their importance, when they occur throughout the year, and how they have changed over time. We aim to improve our understanding of the stress patterns we observe in muskxoen. For this, scientific data gathered by measuring stress levels in hair samples collected from regional hunter harvested muskoxen will be analyzed with the participants.

In Our Own Words: The Voice of Inuit RCMP Special Constables from Nunavut

License Number: 05 010 18R-M

Principal Investigator: Webster, Deborah

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Number in Party: 1

Research Area: Nunavut Wide

Fieldwork Locations: All Nunavut Communities

SUMMARY

This project will create a record of Nunavut RCMP special constables' roles and contributions in their own words. Information gathered from interviews will be used to write biographies anout each special constable to include in a book about Our Inuit Special Constables.

Monitoring the Health of Simirlik National Park through Inuit Knowledge: Pilot Project

License Number: 02 011 19R-M

Principal Investigator: Mahy, Maryse

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Number in Party: 9

Research Area: North Baffin

Fieldwork Locations: Pond Inlet, Arctic Bay

SUMMARY

The overall goal of the project is to include Inuit Knowledge in Parks Canada's assessment of the health of the park's ecosystems. The immediate objective of the project is to test a method for monitoring/studying the health of the Park's ecosystems/environment through Inuit Knowledge in the long term.

Art Gallery of Hamilton Chedoke Inuit Art Collection Research Project

License Number: 02 026 18N-M

Principal Investigator: Anilniliak, Nancy

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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Pangnirtung

SUMMARY

The purpose of the research is two fold: (1) to conduct round table consultation sessions in Pangnirtung with former Chedoke (mountain) Sanatorium Hamilton patients who participated in the Occupational Therapy/Arts and crafts program (which inlcuded stone carving and fabric arts) during their hospitalization at the sanatorium; (2)to locate artists or a surviving family member, and conduct telephone interviews with Inuit artists with art work inlcuded in the Art Gallery of Hamilton (AGH) Chedoke Inuit Art Collection. This will be used by the Art Gallery of Hamilton to communicate directly with the artists or their kin concerning various official communications and procedures between the AGH concerning art works inlcuded in the collection.

Representation of Northern Women in the Media

License Number: 03 013 18R-M

Principal Investigator: Glennie, Cassidy

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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Rankin Inlet

SUMMARY

For my honours undergraduate thesis, I collaborated with local indigenous organizations in Rankin Inlet, Nunavut to facilitate focus groups on how Inuit women view the portrayal of their culture in mainstream Western music videos. To ensure the project met ethical standards and was culturally sensitive, the research was approved not only by the Mount Allison University Ethics Review Board (MTA REB) but also by the Nunavut Research Institute (NRI) who granted me a social science research license. I arranged to have participant consent forms translated into Inuktitut and consulted closely with local community leaders to organize the focus group in a cultural sensitive manner.

Reconciliation and the Arts: The Role of Indigenous Festivals in (Re)storying the Past and (Re)building Indigenous-Settler Relations

License Number: 01 015 18N-A

Principal Investigator: Chong, Carolyn

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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The purpose of this study is to consider to what extent music and intercultural events such as Indigenous arts festivals help address historical wrongs, raise public awareness, and support decolonization within Indigenous and settler society in the current context of official apology and "reconciliation." The goal is to understand how efforts towards reconciliation and social justice are shaped by individuals, communities, and governments through engagement with intercultural arts initiatives like festivals, and the impacts of cultural programming and policy-making on the value of such events. The objective is to identify and compare the features and practices used in intercultural performances and festivals that improve or hinder relationships within and between Indigenous peoples and settlers in Canada and Norway.

On the Syntactic Status of Person and Number Markers in Inuktitut

License Number: 01 019 18R-M

Principal Investigator: Compton, Richard

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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The goal of this research is to better understand the structure of Inuktitut; how words and sentences are formed, which properties differentiate Inuktitut from other languages, and which properties it shares with other languages. The larger goal of linguistic research is to expand our knowledge of human language.

2018 Hope Bay Project: Socio-Economic and Land Use

License Number: 04 016 18R-M

Principal Investigator: Curran, Oliver

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Number in Party: 7

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Kugluktuk, Kugaaruk,Gjoa Haven, Taloyoak, Kugaaruk

SUMMARY

For the socio-economic study, the baseline research focuses on the communities of the Kitikmeot Region. The land and resource use study focuses on land uses in the areas surrounding the Hope Bay Project, and data was also collected regarding land use activities in areas surrounding Kitikmeot communities. The primary goal of the research was to gather and update data on the social, economic, cultural, education, governance and land use characteristics at community, regional and territorial levels. This includes current socio-economic profiles and description of the study communities, and the identification and description of land and resource uses. Research methods included a desk-based review of existing literature and statistics, including quantitative and qualitative information. The field study program built upon this desktop research through meetings, interviews, focus groups and workshops in the communities.

Inuit Knowledge about Polar Bear Health for the Davis Strait Polar Bear Population

License Number: 01 028 18Registry

Principal Investigator: Henri, Dominique

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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Iqaluit, Kimmirut, Pangnirtung

SUMMARY

The main goal of this project is to document Inuit knowledge about polar bear health, abundance and distribution to support management decisions and strategies for the Davis Strait polar bear population. The specific objectives of our work are: (1) to gather and compile Inuit knowledge about polar bear health, abundance and distribution for the Davis Strait polar bear population; (2) to combine and compare Inuit and scientific knowledge available for the Davis Strait polar bear population and discuss implications for polar bear management; and (3) to build community capacity for polar bear health assessment and co-management in Nunavut. We will document Inuit knowledge (IK) about polar bears in the three Nunavut communities located within the boundaries of the Davis Strait polar bear population. We will use participatory research tools and methods for the collection of IK (a combination of interviews with local experts, group discussions and mapping exercises). We will then compare documented IK with available scientific information for the Davis Strait polar bear subpopulation. Lastly, we will contribute to building community capacity for Inuit knowledge documentation by offering Nunavummiut training workshops on the collection of local knowledge for wildlife health assessment. This project is supported by HTOs in Iqaluit, Kimmirut and Pangnirtung and will be conducted in close collaboration with residents from these three communities.

Advancing Community Capacity in Water Research: Toward a Safe Water Plan in Pond Inlet, Nunavut

License Number: 02 038 18N-M

Principal Investigator: Gagnon, Graham

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Number in Party: 6

Research Area: North Baffin

Fieldwork Locations: Pond Inlet

SUMMARY

The objectives of this project are to: (1) build local capacity for advanced drinking water quality analyses in Nunavut, including: community monitoring, experimental design development, acquisition of local equipment and implementation of a QA/QC program for sampling procedures; (2) understand the drivers for biofilm formation in household drinking water holding tanks and the extent of metals (e.g., lead) release to potable water from premise plumbing; (3) introduce water safety planning and hazard identification as a risk assessment tool to improve community infrastructure and health.

Identifying determinants of school completion, post-secondary education, and education success in Nunavut

License Number: 01 006 17Registry-Amended

Principal Investigator: Healey, Gwen

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Number in Party: 2

Research Area: Nunavut Wide

Fieldwork Locations: All Communities

SUMMARY

The purpose of the project is to explore determinants of secondary school completion, post-secondary education, and education success in Nunavut. This study will include both qualitative and quantitative data collection to triangulate findings and ensure the production of a detailed picture of the determinants of education success in Nunavut. There will be five parts to the data collection including: online survey with post-secondary and Grade 12 students, drawing voice with Grade 12 students, narratives from key informants (parents, counsellors and teachers), and narratives from high school dropouts.

Reclaiming Early Ethnography Through Contemporary Inuit Cultural Production

License Number: 02 030 18N-A

Principal Investigator: Humble, Shaina

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Number in Party: 2

Research Area: North Baffin

Fieldwork Locations: Igloolik

SUMMARY

The film, The Journals of Knud Rasmussen, was a joint effort by many Igloolik community members. I am proposing field work to consult with members of the crew to better understand how they were involved with the film's production. I wish to gain a holistic understanding of the production process of the film with the objective of attending to the film as a community minded endeavour.

Returning an Inuk Gaze: The 1950s Photographs of Joseph Idlout and their Legacy

License Number: 02 028 18N-M-Amended

Principal Investigator: Payne, Carol

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Number in Party: 2

Research Area: North & South Baffin

Fieldwork Locations: Pond Inlet, Resoulte Bay, Iqaluit

SUMMARY

The proposed research in Pond Inlet (Mittimatalik) and Resolute (Qausuittuq) is part of a larger research program, Returning an Inuk Gaze: The 1950s Photographs of Joseph Idlout and their Legacy. The specific case study for this research program is a remarkable body of approximately 300 photographs taken between 1951 and 1958 by the Inuk hunter Joseph Idlout (also known as Idlouk). Idlout (?-1968) was probably the most extensively photographed and filmed Inuk of his day. Yet, his own practice as a photographer remains unknown in Nunavut and the South. This research project will be the first scholarly study of these historically significant images. In addition to archival research, oral accounts by Idlout's family and with community members in the Nunavut communities where he lived, Pond Inlet (Mittimatalik) and Resolute (Qausuittuq) will form the core of the project's research.

Achieving Benefits through Greywater Treatment & Reuse in Northern Buildings and Communities

License Number: 04 020 18N-M

Principal Investigator: Pristavita, Ramona

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Number in Party: 3

Research Area: Kitimeot

Fieldwork Locations: Cambridge Bay

SUMMARY

The project will take place in one of the triplexes that are part of the CHARS; it will demonstrate the potential for a multi-occupant building to achieve water savings and reduced sewage output through greywater reuse. The results will be transferable to other multi-occupant buildings in Northern regions, and consideration will be given as to how the technology could be used in home-based and community-based approaches.

Introducing the Emotional and Affective Geographies of Law: Strengthening Community Through the Practice and Feeling(s) of Inuit Law

License Number: 04 021 18R-M

Principal Investigator: Robertson, Sean

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Number in Party: 2

Research Area: Kitikmeot

Fieldwork Locations: Kugaaruk

SUMMARY

The aim of this research is to better understand Inuit and legal social norms related to subsistence activities and other areas of hamlet life. The Advisory Committee chose sealing and fishing. In resonance of Inuit way of knowing that go beyond rational thinking, the project also seeks to learn more about the role of the body, emotions and "the feeling" in certain areas related to the enactment of norms. Topics include norms pertaining to the management of resources, the settling of disputes, interactions with non-Inuit normative orders (e.g. Canadian Law), etc.

Toward Best Practices in Socio-Ecological Sustainability: A Critical Evaluation of Community-Based Monitoring Programs in Northern Coastal North America

License Number: 02 027 18R-M

Principal Investigator: Spiers, Kent

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Number in Party: 2

Research Area: North Baffin

Fieldwork Locations: Pond Inlet

SUMMARY

The goal of this study is to identify the specific circumstances that prevent or facilitate a meaningful, productive and respectful collaboration among scientists and northern coastal peoples engaged in Community Based Monitoring (CBM) programs. CBM has the potential to positively affect individual and community well-being of people through their participation in the co-design and execution of research. I hope to look at programs operating in Pond Inlet in order to understand best practices for satisfying the objectives of all collaborators on CBM programs. With my research partnerships this work will provide a means for assessing CBM programs, and tools to ensure the use of best practices for collecting usable data and information that meets community needs for decision making around coastal resource management. My project has the potential to contribute to policy development, including protocols and conduct for CBM programs.

Relative Clauses in Inuktitut

License Number: 03 014 18N-M

Principal Investigator: Spreng, Bettina

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Number in Party: 1

Research Area: Kivalliq

Fieldwork Locations: Rankin Inlet

SUMMARY

This is an initial study to describe certain clauses in Inuktitut spoken in Rankin Inlet (Kangiqsliniq). Of particular interest is the distribution of "-si" (-hi), "-saq" (if present), and "-liq", "lauq" and "-qqau" as found on verbs. I wish to initiate descriptive work, and develop relationships with speaker of Rankin Inlet who might be interested in working as language consultants and research collaborators for descriptive work in the long term.

HEALTH RESEARCH

Investigation of Vaccine-induced Antibody Levels and Protection 15-18 Years Following Primary Hepatitis B Virus Vaccination in Arviat, Nunavut

License Number: 03 002 18N-A

Principal Investigator: Osiowy, Carla

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Number in Party: 3

Research Area: Kivalliq

Fieldwork Locations: Arviat

SUMMARY

The primary purpose of the research study is to determine the level of immune protection present in adolescents aged 15-18 years against HBV infection. An earlier study throughout Nunavut showed that this age group, vaccinated 15-18 years earlier, has very little detectable protective antibody. This result was not expected in comparison to other vaccinated populations. Thus, the project is being undertaken to ensure the adolescent population is adequately protected against HBV infection and that the vaccination program is completely effective.

Integrating and Measuring the Effect of Sex, Gender and Gender Transformative Approaches to Substance use Treatment, Prevention and Harm Reduction in Canada

License Number: 01 011 18N-M

Principal Investigator: Greaves, Lorraine

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Number in Party: 4

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The goal of this research is to collaborate with substance use practitioners and managers to implement and measure the impact of the integration of sex, gender and gender transformative concepts in programs, messages and/or materials to address: cannabis, alcohol, opioids, and tobacco.

Mental Health Services for Children & Youth: General Population Survey

License Number: 02 014 18N-A

Principal Investigator: Pellerin, Nancy

Affiliation: Iqaluit, Nunavut, Canada
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Number in Party: 3

Research Area: North & South Baffin, Kivalliq, Kitikmeot

Fieldwork Locations: Clyde River, Hall Beach, Igloolik, Iqaluit, Pangnirtung, Pond Inlet, Baker Lake, Chesterfield Inlet, Rankin Inlet, Cambridge Bay, Kugluktuk

SUMMARY

The systemic review will focus on access to child and youth specific mental health services in Nunavut. To gather input for this review, surveys and interviews will be used to look at what is working to support the mental health needs of Nunavummiut children and youth, as well as, the related challenges that are present and what needs to be done to improve these support systems.

Canadian Domestic Homicide Prevention Initiative with Vulnerable Populations (CDHPIVP)

License Number: 05 002 18R-M

Principal Investigator: Jaffe, Peter

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Number in Party: 7

Research Area: Nunavut Wide

Fieldwork Locations: Iqaluit

SUMMARY

The purpose of the CDHPIVP is to enhance and inform domestic violence risk assessment, risk management and safety planning strategies in order to decrease the risk of lethality for particular vulnerable populations (i.e., Indigenous people; rural, northern, and remote communities; immigrants/refugees; and children exposed to domestic violence).

Living Conditions and Healthy Aging in Inuit Nunangat Communities

License Number: 03 007 18N-A

Principal Investigator: Baron, Marie

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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Baker Lake

SUMMARY

In the last decades, life expectancy has increased in Nunavut. One consequence of this is the growth of the aging population in Nunavut. People face specific health and social challenges as they grow older. For example, they can experience a decrease in mobility, an increased degree of disabilities, and may experience disease. Literature shows that there are several resources that can support aging, helping people thrive in later-life as housing conditions, availability of services, social and family support change. Typically, these resources are available in the living environment. To date, no project has been conducted in Inuit communities to identify the resources that are available and helpful for aging people. This project aims to identify the resources that could support aging in Inuit communities and how aging people rely on the resources to thrive in health, as they grow older. There will be a special focus on housing conditions.

Disparities in Accessibility to Radiotherapy within High and Low Income Countries

License Number: 05 003 18Registry

Principal Investigator: Chan, Jessica

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Number in Party: 11

Research Area: Ontario

Fieldwork Locations: Ottawa

SUMMARY

Radiotherapy is an important component of cancer treatment. When looking at access to radiotherapy worldwide, low-income countries are reported to have poor access compared to high-income countries, such as Canada. However, even within a high-income country like Canada, numerous challenges exist that result in certain populations and regions (especially those in rural, remote and Northern areas) experiencing poor access to health services including radiotherapy, and may be comparable to a low-income country. These regional differences are not considered when looking at access to radiotherapy worldwide, and have not yet been described. We propose a study to describe and compare accessibility to radiotherapy, sociodemographic variables and cancer epidemiology between a region within a high-income country (Nunavut, Canada) and a low-income country. We hypothesize that they will be similar, and ultimately hope to improve national and international awareness of the unequal access to radiotherapy in Canada, helping to start an international partnership between high-income countries with similar challenges.

Adapting the Community Readiness Model (CRM) for HIV/AIDS Prevention, Education and Screening with Inuit Communities Developing Strategies for HIV Prevention with Community Input & Collaboration

License Number: 02 006 18R-M

Principal Investigator: Steenbeek, Audrey

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Number in Party: 9

Research Area: North Baffin, Kivalliq, Kitikmeot

Fieldwork Locations: Arviat, Kugluktuk, Clyde River

SUMMARY

HIV infections are a real threat for Inuit communities, and since every community is different, we are not sure how ready communities are in dealing with HIV. The main purpose of this research is to help Inuit communities identify how ready they are to deal with HIV infections, using the community readiness model. The community readiness model is a tool that can help communities determine how ready they are to deal with a specific issue. For this project, we are looking at initiatives that focus on HIV prevention, education and screening. Our research project aims to adapt, pre-test and use the CRM to identify how ready 3 Nunavut communities are to deal with HIV.

Understanding the role of the CPT1A P479L variant in infant and child health outcomes in Nunavut

License Number: 05 005 18R-M

Principal Investigator: Arbour, Laura

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Number in Party: 6

Research Area: Nunavut Wide

Fieldwork Locations:

SUMMARY

CPT1A (carnitine palmitoyltransferase 1A) is a liver protein that uses fat for energy when sugar is not available (during fasting or prolonged exercise). Classical CPT1A deficiency is caused by a genetic change (mutation) in the CPT1A gene causing the protein to not function properly. Although this usually does not cause problems, since most energy comes from sugars, people with these mutations (especially infants) can have problems during illness or fasting, resulting in low blood sugar, seizures and even unexpected sudden infant death. Treatment involves frequent feeding in the first years of life and medical aid if the child becomes ill. Early diagnosis and education saves lives.

A Qualitive Study of the Experience of Cancer, and Death from Cancer, among Nunavut Residents

License Number: 05 008 18Registry

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Number in Party: 3

Research Area: Nunavut Wide

Fieldwork Locations:

SUMMARY

Following recent efforts by the Government of Nunavut (GN) to determine the scope of cancer in the territory, this research examines the experience of cancer diagnosis and treatment from the perspective of patients, families and communities.

Girls Talk Back: A Media Workshop About Us by Us

License Number: 03 018 18N-M

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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Rankin Inlet

SUMMARY

The overarching aim of this partnership is to study and advance the use of innovative approaches to knowledge-production, policy-making, and communication in addressing sexual violence against girls and young women in South Africa and Canada. This 6 year, $2.5 million initiative seeks to have a positive impact on the lives of current and future generations of girls and young women in Indigenous communities - in Canada and South Africa. At various locations across the two countries, this research will examine how girl-led media influences community practitioners and policy-makers. In so doing, the project aims to shift the boundaries of knowledge production and inform policy change.

Understanding the Journey: A Qualitative Study to Understand the Experiences of Inuit who Travel to Urban Settings to Receive Healthcare outside of Nunavut

License Number: 01 025 18Registry

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Number in Party: 2

Research Area: Ontario

Fieldwork Locations: Ottawa

SUMMARY

We have planned a study to be done with a team who are active in Nunavut's health care systems and communities in the Baffin region of Nunavut and in Ottawa, Ontario. The purpose of the study is to gather stories from those who have traveled for their cancer care outside of Nunavut. These stories will be used to understand the experiences of Nunavummiut who are receiving health care in urban settings. The information from this study will be used to develop supports for Nunavummiut and to enhance their participation in health care.

Childrearing among Inuit families in today's changing society

License Number: 01 030 18N-M

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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

This is a study that focuses on developing an understanding of the supports and challenges encountered by Inuit/non-Inuit caregivers when raising an Inuk child. This knowledge will first be obtained through face-to-face interviews with interested participants. Data will be analyzed to identify common themes. Hired local actors will develop a script that will be performed to a live community audience based on these themes. During the performance the audience members will have an opportunity to alter the script's dialogue via a technique developed for "Theatre of the Oppressed (TO)", a participatory performance approach developed in Brazil (Boal, 1979). The performance will be used to share the knowledge of the interviewed community members, while the techniques of Theatre of the Oppressed methodology will allow audience members to actively engage with the performance. Prior to starting, a brief disclosure speech will inform the audience members that their participation and comments will be collected and analyzed for more themes. If any participants do not wish to actively engage with the performance then they can still observe the interaction. The results will be 1) a non-technical report will be distributed to academic committee members, and any interested community stakeholders, 2) published in peer-reviewed journals, and 3) presented at conferences either nationally or internationally.

Describing Aajiiqatigiingniq: Inuit-specific Community Wellness Indicators for a Prospective Nunavut Wellness Court

License Number: 03 026 18N-M

Principal Investigator: Ferrazzi, Priscilla

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Number in Party: 4

Research Area: Kivalliq

Fieldwork Locations: Arviat

SUMMARY

The goal of the research is to facilitate an Inuit community's independent capacity to provide culturally responsive, therapeutic support to a possible future Wellness Court. Wellness Courts seek to improve the mental health of justice-involved individuals. The study will identify Inuit-defined wellness indicators and be guided in the development of these indicators by a consensus process that aligns with the Inuit principle of aajiiqatigiingniq. This principle of traditional Inuit knowledge (Inuit Qaujimajatuqangit or IQ) is intended to restore individual wellbeing and ensure participation as a productive, caring member of the community.

Building on Strengths in Naujaat - A Youth Initiative

License Number: 03 020 18R-M

Principal Investigator: Anang, Polina

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Number in Party: 7

Research Area: Kivalliq

Fieldwork Locations: Naujaat

SUMMARY

Youth in the Inuit community of Naujaat, Nunavut will be consulted in the design and implementation of a mental health-promoting intervention. A Participatory Action Research (PAR) approach will be applied to engage young people of Naujaat in formulating visions for their future. This approach emphasizes collaboration in inquiry and investigation within a specific community with the goal of making systemic change in order to resolve specific problems. Outside researchers engage community members and facilitate the translation of this engagement into a self-determined path to creating new opportunities. Acknowledging tensions created by past and present western post-colonial research encounters, we are drawing on indigenous frameworks to create respectful relationships that support local agency.

The Prevalence of Anaphylaxis in Iqaluit

License Number: 01 016 18R-M

Principal Investigator: Ahmed, Ahmed

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Number in Party: 1

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The project is about about understanding the prevalence of anaphylaxis in Iqaluit, its main triggers, use of EpiPen before and after arriving to the emergency department and the rate of admissions and death in relation to anaphylaxis The research will be conducted by secondary use of data that was already collected during the visit to the emergency department, with no patient identifiers collected, therefore, no recruitment or consent form is needed.The information to be filled by the emergency department physicians in the data sheet will include the date of encounter, age of patient, gender, ethnicity, being from Iqaluit versus another community, suspected trigger of the anaphylaxis, whether EpiPen was used before arrival to the emergency department or not, were EpiPen, steroids or antihistamine used at the emergency department and what was the outcome.

Making SPARX Fly in Nunavut

License Number: 05 012 18R-M

Principal Investigator: Bohr, Yvonne

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Number in Party: 18

Research Area: Nunavut Wide

Fieldwork Locations: All Baffin and Kitikmeot Communities

SUMMARY

The proposed research evaluates a holistic, multi-generational intervention designed to enhance resilience and increase mattering. It seeks to integrate Cognitive Behavior Therapy (CBT), an evidence-based approach to preventing depression and suicide, with Indigenous cultural practices that have historically been shown to support resilience in youth. The intervention builds on a recent pilot study that established the usefulness of the SPARX e-intervention in providing CBT strategies to 22 youth at risk for depression in 11 Nunavut communities. The proposed, expanded intervention will build on feedback from the pilot study participants, namely that: a) SPARX is an effective tool for teaching emotion regulation (ER) and CBT strategies, b) SPARX reduces hopelessness, self-blame, rumination and catastrophizing, c) SPARX should be adapted to provide a repertoire of culturally valid, constructive cognitive strategies for problem-solving for optimal effectiveness.

Should Newborn Screening Be Initiated in Nunavut for Mild CPT1 (Carnitine Palmitoyl Transferase-1) Deficiancy?

License Number: 05 006 18R-M

Principal Investigator: Arbour, Laura

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Number in Party: 3

Research Area: Nunavut Wide

Fieldwork Locations:

SUMMARY

CPT1 deficiency is caused by a genetic change (mutation) in the Carnitine Palmitoyl Transferase-1 gene. This gene normally produces a protein that is involved in producing energy from the fats we eat. We all have two copies of this gene (all of our genes come in pairs) as we inherited one copy from our mother and one copy from our father. People who have a mutation in both copies of their CPT1 gene produce a protein that does not work properly. These individuals have trouble producing energy from fats. The mutations do not usually affect people in their day to day life, because we get most of the energy we need by breaking down sugars from our food rather than fats. However, when we get sick or are not eating enough food for other reasons our bodies start to break down our fat stores for energy. Thus, individuals (particularly infants) who have CPT1 mutations in both copies of the gene can run into health problems during periods of illness or fasting because they cannot produce enough energy from fats.

Gathering Community Perspectives on Infant Sleeping Practices in Nunavut

License Number: 05 004 18R-M

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Number in Party: 5

Research Area: Nunavut Wide

Fieldwork Locations: Arviat, Cambridge Bay, Iqaluit

SUMMARY

Nunavut has the highest rate of infant deaths (deaths under 1 year of age) in Canada. One important cause of infant death in Nunavut is sudden infant death syndrome (SIDS), where an infant dies during sleep without an obvious cause. When this occurs, it is devastating for families. Safe sleeping practices with a newborn infant are very important and may reduce the occurance of SIDS. Sleeping practices that can make a difference include the position the baby is put to sleep in, sleep surfaces, other people in the same bed as the baby, and more. In partnership with Nunavut Tunngavik Inc. (NTI) and the Qaujigiartiit Health Research Centre, this project will hold multigenerational focus groups to explore traditional and current sleep practices (positioning, co-sleeping etc). Information from the focus groups and knowledge of Inuit cultural practices will help in development of a health promotion strategy encouraging safe sleep practices and culturally relevant Maternal Child Health practices.

Maternal Health and the Childbirth Experiences of Inuit in Nunavut: “What was, what is, and what could be”

License Number: 01 012 18R-M

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Number in Party: 6

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

This proposed research constitutes a doctoral thesis project for Laura Jane Weber, a PhD candidate at the University of Guelph. Based on meetings in November 2016 and April 2017 with representatives from the Government of Nunavut, NRI, NTI, Qikiqtani General Hospital, Iqaluit Public Health, and Qaujigiartiit Health Research Centre, key areas for maternal health research in Nunavut were identified. Key areas included food security and nutrition during pregnancy, the experience of obstetric evacuation for women and their families, and the need for baseline descriptive data on maternal health. The purpose of this research is to provide opportunities for women, their families, and community members in Iqaluit to share stories of their historical experiences of childbirth (“what was”), their current experiences of childbirth (“what is”), and what healthcare and health policy “could be”, going forward.

Hearing Loss Prevalence in Nunavut Children 2017-2018

License Number: 05 008 19Registry

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Number in Party: 7

Research Area: Nunavut Wide

Fieldwork Locations: Pond Inlet, Igloolik, Arviat, Whale Cove, Kugluktuk, Cambridge Bay

SUMMARY

The prevalence of hearing loss in the Canadian Arctic is reported to be up to 40% higher than in the south (Bowd, 2005). This includes transient hearing loss from ear infections, but also permanent hearing loss from noise exposure and complications from poorly managed ear infections. These statistics have not improved since data was first reported more than 40 years ago (Baxter, 1999; Baxter & Ling, 1974). The World Health Organization (WHO) also identified the Indigenous population in Canada's Arctic regions as having one of the highest incidences of hearing loss in the world (WHO, 1999). The research consistently points to significantly higher numbers of children with hearing loss in Inuit populations in the high Arctic than in non-Inuit children in the south.

Walking the Prevention Circle: Researching Community Capacity Building for Violence Prevention

License Number: 01 005 18R-M

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Number in Party: 3

Research Area: Kivalliq, South Baffin

Fieldwork Locations: Arviat, Cape Dorset

SUMMARY

Our research purpose is to conduct community based research on the Canadian and Australian Red Cross Societies' Walking the Prevention Circle (WTPC)-a program for building community capacity for promoting healing and preventing violence in Aborginal Communities. This research will help us understand how communities implement WTPC and will also help us learn about ways in which WTPC is effective in enabling communities to build capacity and bring about positive changes.

Housing in Canadian Arctic: Assessing the Impacts of Rehousing for Inuit Health

License Number: 03 016 18R-M

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Number in Party: 16

Research Area: North & South Baffin, Kivalliq, Kitikmeot

Fieldwork Locations: Arviat,Clyde River,Iqaluit, Repulse Bay, Kugluktuk, Baker Lake

SUMMARY

In the Canadian Arctic, 60% of the population of Nunvaut live in social housing. In 2006, 39% of the population reported living in overcrowded houses, vs. 3% of non-indigeneous Canadians. These poor housing conditions are compromising population health and communities capacity for social and economic development. Studies have shown that "rehousing", that is moving to a new house, may improve health directly or indirectly through psychosocial pathways. This project aims to examine whether moving to a new house - by reducing exposure to overcrowding and improving housing quality - is associated with better health directly and indirectly through psychosocial pathways.

INDEX OF PRINCIPAL INVESTIGATORS

INDEX OF HOST INSTITUTIONS