2020 Compendium of Nunavut Research

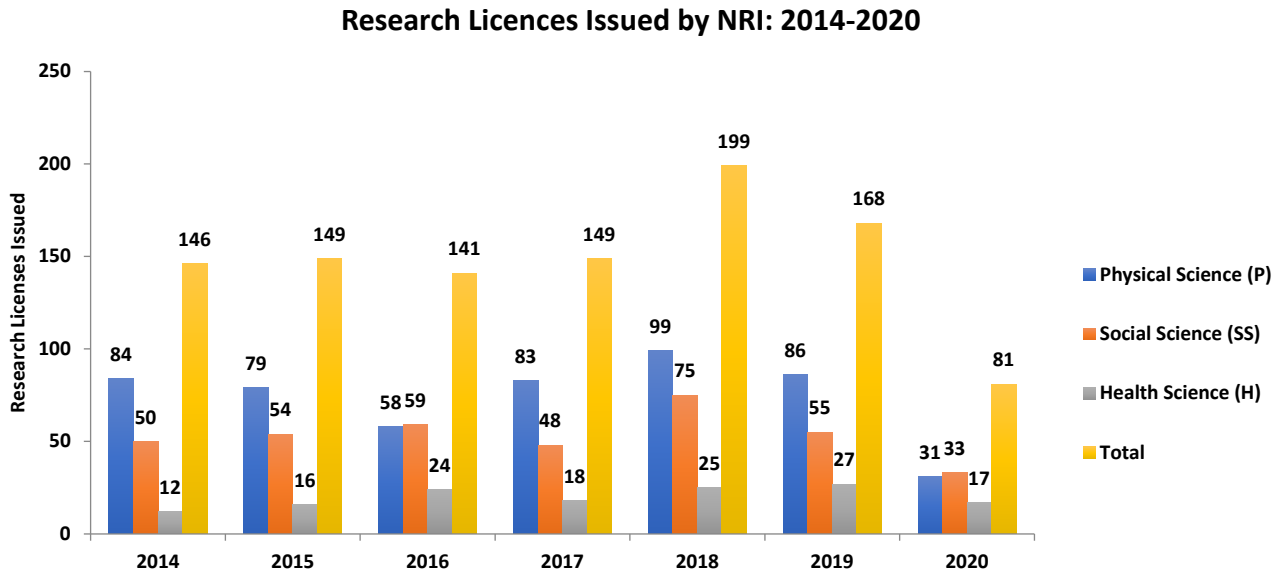
2020 ᓄᓇᕗᑦᑐᓴᖅᓯᒪᔪᓂᒃ ᓄᓇᕗᒻᒥᓂᒃ ᖃᐅᔨᓴᕐᓂᖅᓯᒪᓕᖅᓂᒃ

Message from the Senior Research Officer

After much delay, I am pleased to present our compendium of research projects licensed under Nunavut's *Scientists Act* in 2020. I encourage you to reach out directly to the research license holders to learn more about their projects. 2020 was a year unlike any other in our territory's recent history. The onset of the COVID-19 pandemic resulted in many unprecedented challenges and disruptions to all aspects of our lives. Research activities across the Arctic were heavily impacted, particularly in Nunavut. The NRI issued just 81 research licenses in 2020; fewer than in any year prior to the start of the pandemic.

Based on a COVID-19 impacts survey circulated by the NRI to the 2020 license holders, approximately 62% of projects had to cancel or defer fieldwork for the entire season. Some non-resident researchers, however, were able to conduct research activities remotely (e.g. using internet and phone surveys instead of in-person visits). Nunavummiut played a crucial role in helping to plan, organize, and carry out essential research activities (e.g. collecting and processing samples, deploying and servicing field instruments, etc.).

Of the 81 licenses issued in 2020, 33 were for social sciences research projects, 31 for physical/natural sciences, and 17 were issued to health research.



I applaud the many research leaders and champions in our communities. Nunavut Arctic College is committed to building research capacity in Nunavut and to fostering opportunities for Nunavummiut to participate in, learn from, and most importantly, to lead and direct science that addresses the needs of our communities. Science in our territory can only be resilient, equitable, and sustainable if Nunavummiut are directly and meaningfully involved throughout all stages of research.

We are especially thankful to the many individuals and organizations throughout Nunavut who participate in NRI's research licensing process and who help us ensure high ethical standards for research in the territory. I also want to acknowledge the many Nunavummiut who provided critical support such as interpretation, translation, outfitting, guiding, data collection, and other services and expertise to ensure the safety and success of research in 2020.

If you have any concerns that a research project may be causing harm or disruption in your community or in the environment, please do not hesitate to contact our office.

For more information about the NRI and our programs and services, please visit our website at www.NRI.nu.ca.

Jamal Shirley
Director of Innovation and Research
Nunavut Research Institute
Nunavut Arctic College

ᑐᓴᕋᔅᓴᖅ ᐊᖏᔪᖅᑳᖓᓐᓂ ᖃᐅᔨᓴᖅᑎ

ᑭᖑᕚᖅᓯᒪᓪᓚᕇᑦᑐᒍ, ᖁᕕᐊᓱᑦᑐᖓ ᑐᓂᓯᓗᖓ ᑲᑎᖅᑐᖅᓯᒪᔪᓂᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ ᐱᓕᕆᐊᓂᑦ ᓚᐃᓴᓐᓯᒥ ᐊᑖᓂ ᓄᓇᕗᒻᒥ *ᖃᐅᔨᓴᖅᑎᓄᑦ ᐱᖁᔭᖅ* 2020ᒥᑦ. ᐃᓕᓐᓂᑦ ᖃᐅᔨᒋᐊᖁᔨᔪᖓ ᖃᐅᔨᓴᓂᕐᒧᑦ ᓚᐃᓴᓐᓯᓂᑦ ᑎᒍᒥᐊᖅᑎᓂᑦ ᖃᐅᔨᒋᐊᒃᑲᓐᓂᕈᒪᒍᕕᑦ ᐱᓕᕆᐊᖏᓐᓂ. 2020 ᐊᕐᕌᒍᓚᐅᖅᑐᖅ ᐊᔾᔨᐅᓚᐅᖏᑦᑐᖅ ᐊᓯᕆᓯᒪᔭᖏᓐᓂ ᓄᓇᕗᒥ ᒫᓐᓇᐅᕋᑖᖅᓯᒪᔪᓂᑦ ᐱᒋᐊᕐᓂᖓ ᓄᕙᒡᔪᐊᕐᓇᖅ-19 ᐋᓐᓂᐊᕐᓇᖅ ᓴᖅᑭᑦᑎᓚᐅᖅᑐᑦ ᓂᕆᐅᒋᔭᐅᖏᑦᑐᓂ ᐊᔅᓱᕈᑕᐅᔪᓂᑦ ᐊᒻᒪ ᓄᖅᑲᖅᑎᑕᐅᓂᖏᓐᓄᑦ ᐃᓅᓯᕆᔭᑦᑎᓐᓂᑦ. ᖃᐅᔨᓴᓂᕐᒧᑦ ᐱᓕᕆᔭᐅᔪᑦ ᐅᑭᐅᑕᖅᑐᒥ ᐊᖏᔪᒥᑦ ᐊᑦᑐᖅᑕᐅᓚᐅᖅᑐᑦ, ᐱᓗᐊᖅᑐᒥ ᓄᓇᕗᒥ. ᓄᓇᕗᒥ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ ᑐᓂᓯᓚᐅᖅᑐᑦ 81 ᖃᐅᔨᓴᓂᕐᒧᑦ ᓚᐃᓴᓐᓯᓂᑦ 2020–ᒥᑦ, ᖃᑦᑏᓐᓇᐅᓂᖅᓴᐃᑦ ᐊᕐᕌᒍᖃᑦᑕᖅᓯᒪᔪᓂᑦ ᐱᒋᐊᓚᐅᖅᑎᓐᓇᒍ ᐋᓐᓂᐊᕐᓇᖅ.

ᑐᓐᖓᕕᒋᑦᓕᒋᑦ ᓄᕙᒡᔪᐊᕐᓇᖅ–19 ᐊᑦᑐᖅᑕᐅᔪᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ ᑐᓂᐅᖅᑲᖅᑕᐅᔪᑦ ᓄᓇᕗᒥ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᓐᓄᑦ 2020 ᓚᐃᓴᓐᓯᓂ ᑎᒍᒥᐊᖅᑎᓄᑦ, ᖃᓂᒋᔭᐸᓗᖏᓐᓂ 62% ᐱᓕᕆᐊᑦ ᓄᖅᑲᖅᑎᑕᐅᔭᕆᐊᖃᓚᐅᖅᑐᑦ ᐅᕝᕙᓘᓐᓃᑦ ᓄᖅᑲᑎᑦᑐᒍ ᐊᓯᐊᓄ ᖃᐅᔨᓴᓂᕐᒧᑦ ᐊᕐᕋᒍᒧᑦ. ᐃᓚᖏᑦ ᖃᐅᔨᓴᖅᑏᑦ, ᑭᓯᐊᓂᓕ, ᖃᐅᔨᓴᕈᓐᓇᕐᓂᖃᓚᐅᖅᑐᑦ ᐅᖓᓯᑦᑐᒃᑯᑦ (ᓲᕐᓗ ᐊᑐᖅᑐᑎᑎ ᐃᕐᖕᒋᓐᓃᕈᑎᒃᑯᑦ ᐊᒻᒪ ᐅᖄᓚᐅᑎᒃᑯᑦ ᖃᐅᔨᓴᕐᓂᐅᔪᑦ ᐃᓄᑦᑎᑑᖏᖕᒑᖅᑐᖅ). ᐊᓯᖏᑦ ᑐᓐᖓᕕᖃᓚᐅᖅᑐᑦ ᓄᓇᕗᒥᐅᓂᑦ ᐸᕐᓇᐃᓂᕐᒧᑦ, ᐋᖅᑭᔅᓯᐃᓂᕐᒧᑦ, ᐊᒻᒪ ᖃᐅᔨᓴᓂᕐᒧᑦ ᐱᓕᕆᐊᖃᓂᕐᒧᑦ ᑭᒡᒐᑐᖅᑕᐅᑦᑐᑎ (ᓲᕐᓗ, ᓄᐊᑦᑎᔪᑦ ᐊᒻᒪ ᖃᐅᔨᓴᕋᔅᓴᓕᕆᔪᑦ, ᐋᖅᑭᔅᓯᓂᕐᒧᑦ ᐊᒻᒪ ᐱᔾᑎᓂᕐᒧᑦ ᖃᐅᔨᓴᐅᑎᓂᑦ, ᐊᓯᖏᑦᑐ.).

ᐅᑯᓇᓂ 81 ᓚᐃᓴᓐᓯᓂᑦ ᑐᓂᔭᐅᔪᓂᑦ 2020–ᒥᑦ, 33 ᐃᓄᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᐅᔪᑦ ᐱᓕᕆᐊᑦ, 31 ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ/ᓄᓇᖓᓄ ᖃᐅᔨᓴᕐᓂᐅᔪᓄᑦ, ᐊᒻᒪ 17 ᑐᓂᔭᐅᓚᐅᖅᑐᑦ ᐋᓐᓂᐊᖅᑐᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ.

ᖃᐅᔨᓴᓂᕐᒧᑦ ᓚᐃᓴᓐᓰᑦ ᑐᓂᔭᐅᔪᑦ ᓄᓇᕗᒥ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᓐᓄᑦ: 2014-2020

ᐅᐱᒋᔭᒃᑲ ᐊᒥᓱᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ ᓯᕗᓕᖅᑏᑦ ᐊᒻᒪ ᐱᓕᕆᓯᕐᑎᐊᕙᐅᓛᑦ ᓄᓇᓕᑦᑎᓐᓂᑦ. ᓄᓇᕗᒥ ᓯᓚᑦᑐᓴᕐᕕᒃ ᑲᔪᖏᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᕈᓐᓇᕐᓂᖃᕈᓐᓇᕐᓗᑎ ᓄᓇᕗᒥ ᐊᒥᓱᕈᕆᐊᖅᑐᒥᑦ ᐱᕙᓪᓕᐊᑎᑦᑎᕕᔅᓴᐅᔪᓐᓇᖅᑐᑦ ᓄᓇᕗᒥᐅᓄᑦ ᐃᓚᒋᔭᐅᖃᑕᐅᕕᒋᔪᒥᑦ, ᐃᓕᕝᕕᒋᔪᒥᑦ, ᐊᒻᒪ ᐱᓪᓚᕆᐅᓛᖕᒍᐊᒥᑦᓕ, ᓯᕗᓕᖅᑎᐅᓗᑎ ᐊᒻᒪ ᑐᕌᑦᑕᐅᑎᒋᔪᓂᑦ ᖃᐅᔨᓴᕐᓂᐅᔪᓂᑦ ᐱᓕᕆᐊᖃᖅᑐᑦ ᐱᔭᐅᔭᕆᐊᖃᖅᑐᓂ ᓄᓇᓕᑦᑎᓐᓄᑦ. ᖃᐅᔨᓴᕐᓂᖅ ᓄᓇᕗᒥ ᓴᓐᖏᔫᒍᓐᓇᖅᑐᖅ, ᐊᔾᔨᒌᓐᓂᖃᕐᓗᓂ, ᐊᒻᒪ ᒪᑭᒪᑎᑕᔅᓴᐅᓗᓂ ᓄᓇᕗᒥᐅᑕᐃᑦ ᑕᕝᕗᖓᑦᑕᐅᑎᒥ ᐊᒻᒪ ᑐᑭᖃᑦᑎᐊᖅᑐᒥᑦ ᐃᓚᒋᔭᐅᓗᑎ ᐊᑕᖏᖅᑐᒥᑦ ᖃᐅᔨᓴᕐᓂᓕᒫᖓᔪᓂᑦ ᐊᑐᖅᑕᐅᔪᓂᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ.

ᖃᓄᖅᓯᐊᖅᑕᕐᓂᑦ ᐊᒥᓱᑦ ᐃᓄᐃᑦ ᐊᓪᓚ ᑲᑐᔪᖅᑎᑎᑦ ᓄᓇᕐᓂᒪᒥ ᐃᓕᑎᑎᔭᖅᑕᐅᓕᕐᖅᑐᑦ ᓄᓴᕐᓗᒃ ᖃᐅᔨᓴᖅᑐᑕᓕᕆᓂᖅᓴᓂᑦ ᖃᐅᔨᓴᓂᖏᓐᓂᑦ ᓕᐃᓴᓐᓇᓱᖅᖢᑎᖅᑎᓂᑦ ᐊᓪᓚ ᐅᐊᑎᑐᓐᓂ ᐃᑲᔪᓕᐅᖅᑐᑦ ᖃᓄᖅᓯᐊᖅᑕᕐᓂᑦ ᐱᐅᓪᓕᐊᓂᖅ ᐊᑎᓐᓄᑦ ᐃᑲᔪᓕᐅᖅᑐᑦ ᓄᓇᕐᓂᒃ. ᐃᓕᓴᖅᓯᑲᓂᕐᒪᔪᓐᓇ ᐊᒥᓱᓂᑦ ᓄᓇᕐᓂᐅᓂᑦ ᐱᓚᒪᐅᔪᓂᑦ ᐃᑲᔪᓕᐅᖅᑐᑦ ᓱᐅᓗ ᑐᐃᓚᐅᓂᕐᓂᑦ, ᑐᑭᓯᓇᖅᓯᑎᓂᕐᓂᑦ, ᐊᐅᑦᓕᓕᐳᓂᐅᓂᕐᓂᑦ, ᐊᐅᑦᓕᓕᐳᓂᕐᓂᑦ, ᑐᑭᓯᓕᕐᕆᑎᑦ ᓄᐊᑎᑦᓕᕐᓂᓐᓄᑦ ᐊᑦᑕᓇᖅᑎᑦᑐᒥ ᐊᓪᓚ ᑲᑎᒪᔨᓂᖅ ᐱᓚᑎᖅᑕᐅᔪᓄᑦ ᐊᓪᓚ ᖃᐅᔨᓴᖅᑕᐅᓕᕐᖅᑐᑦ 2020ᒥᑦ.

ᐃᓱᒪᓕᑎᖅᑭᖏᑦ ᖃᐅᔨᓴᓂᕐᓂᑦ ᐱᓕᕆᐊᖅ ᐊᑦᑕᓇᖅᑎᑎᒍᓂ ᐅᖅᓯᓕᓐᓂᑦ ᕿᖏᓴᐃᓕᓐᓂ ᐃᖅᖏᓐᓂ ᐅᖅᓯᓕᓐᓂᑦ ᐊᖅᑎᓖᑦ, ᖃᐅᔨᐅᑎᐊᖏᓂᐊᕐᕕᖅᑕ ᐊᑦᑕᓇᖅᑐᑦ.

ᑐᑭᓱᑎᐊᖅᑲᓂᕐᒪᔪᖏᑦ ᓄᓇᕐᓂᒥ ᖃᐅᔨᓴᖅᑐᑕᕆᓚᐅᖅᓯᑦ ᒥᔅᓴᓄᑦ ᐊᓪᓚ ᐱᓕᕆᐊᑎᑎᓂᑦ ᐊᓪᓚ ᐱᓴᑎᖅᑕᒥᓂᑦ, ᖃᐅᔨᐅᑎᐊᖏᓚᐅᔪᒃ ᖃᐅᔨᓴᐳᖅᓯᑦ ᐅᖅᓯᒃ www.NRI.nu.ca.

ᓴᒥᐅᑦ ᓱᔅᓕ
ᑐᑭᔪᐊᖅᑎᑎᓚᓄ ᐃᓱᒪᒋᓴᖃᓗᐅᓂᑦ ᐊᓪᓚ ᖃᐅᔨᓴᓂᑦ
ᓄᓇᕐᓂᒥ ᖃᐅᔨᓴᖅᑐᑕᕆᓚᐅᖅᓯᑦ
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Ajurnaqtut Aniguinnasuut (everything difficult always passes): Turning Grief into Empowerment

License Number: 03 001 20N-M

Principal Investigator: Snow, Kathy

Affiliation: Faculty of Education
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Number in Party: 3

Research Area: Kivalliq

Fieldwork Locations: Baker Lake

SUMMARY

The goal of this Participatory Action Research (PAR) project is to work with the community of Qamanittuaq (Baker Lake), to support the mental health and education of all young people by reorienting school as a place of healing in the community. This will be done through community collaboration and an Inuit youth-driven participatory action research project that supports Inuit traditional knowledge and identity development in the context of formal school learning.

Characterizing the medical and social complexity of Inuit children, youth, and their families from Nunavut who access care at the Children's Hospital of Eastern Ontario (CHEO) – A retrospective chart review of an Inuit Child Health Clinic

License Number: 05 009 20N-A

Principal Investigator: Ge, Yipeng

Affiliation: Children's Hospital of Eastern Ontario
University of Ottawa
Ottawa, Ontario, Canada
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Number in Party: 4

Research Area: North Baffin and South Baffin

Fieldwork Locations: Ottawa (remote research)

SUMMARY

The purpose of this research is to study and characterize the complexities that families cared for by the Inuit Child Health Clinic experience in navigating the health and community environments to identify gaps that exist within their care and understand how we can better support their unique needs. Through this retrospective chart review study we intend to: (1) describe the demographics of the Inuit children and youth being cared for by the Inuit Child Health Clinic; (2) characterize their medical complexity; and (3) characterize their social complexity.

Adult Occupational Therapy (OT) and Physiotherapy (PT) Service in the Kivalliq Region of Nunavut: Mapping the Client Journey

License Number: 03 012 20R-M

Principal Investigator: Achtemichuk, Monica

Affiliation: Indigenous Institute of Health and Healing
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Winnipeg, MB, Canada
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Number in Party: 4

Research Area: Kivalliq

Fieldwork Locations: Rankin Inlet

SUMMARY

The purpose of this study is to provide an overview of the utilization of adult OT and PT services and explore use of a client journey mapping tool for Inuit OT and PT clients in the Kivalliq Region of Nunavut. This study will utilize the term “client journey” to characterize the patients’ journey across OT and PT services. This research will review program utilization of adult OT and PT services, and explore use of a tool that captures the experience of care from the point of view of the client in Rankin Inlet.

Fostering Food Security and Sustainable Marine Harvests in Qikiqtarjuaq, NU

License Number: 01 006 20N-M

Principal Investigator: Kenney, Tiff Annie

Affiliation: Centre de recherche du CHU de Quebec
Université Laval
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Number in Party: 4

Research Area: North Baffin

Fieldwork Locations: Qikiqtarjuaq

SUMMARY

The harvest and consumption of country food has important health and wellness benefits for Inuit. In recent decades, however, country food consumption has declined significantly due to changing socioeconomic and environmental conditions, including climate change. Climate change can affect human health in many ways, including impacts on country food access, availability, and quality - all pillars of food security. Food security is a major public health issue for Inuit in Nunavut, which may be exacerbated by climate change. There is a need to assess current and future human health risks of climate change through inclusive methodologies that include both scientific and traditional knowledge. In addition, there is a need to facilitate the transfer and mobilization of this knowledge to develop adaptation plans and policy solutions to promote food security in the context of Arctic environmental changes. This project engages the community of Qikiqtarjuaq (Nunavut) in a knowledge co-production process to develop innovative methodologies and adaptation strategies to support dietary quality and food security under changing environmental and socioeconomic conditions.

Integrating and measuring the effect of sex, gender and gender transformative (GT) approaches to substance use treatment, prevention and harm reduction in Canada

License Number: 01 007 20R-M

Principal Investigator: Greaves, Dr. Lorraine

Affiliation: Centre of Excellence for Women's Health
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lgreaves@cw.bc.ca

Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The goal of this research is to measure and compare the before and after impacts of integrating sex, gender and GT elements in health promotion/prevention, harm reduction and treatment responses to four substance use issues on three sites on the knowledge, attitudes and practice behaviours of providers and managers.

Prevalence and Severity of Complicated Diverticulitis Among a Canadian Arctic Population

License Number: 0500920N-M-Amended

Principal Investigator: MacDonald, Blair

Affiliation: Department of Medical Imaging
The Ottawa Hospital
Ottawa, Ontario, Canada
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Number in Party: 3

Research Area: South Baffin (Iqaluit)

Fieldwork Locations: Ottawa (remote research)

SUMMARY

Diverticular disease is one of the most frequent bowel emergencies presenting with an acute abdomen. Patients from northern populations are deemed to be at high risk for developing unusual severe diverticulitis. Diverticulitis in this population occurs at a younger age with more complications and more morbidity. The research team will retrospectively review the CT reports of all adult patients (at and/or above 18 years) presented to Qikiqtani General Hospital (Iqaluit, Nunavut) and who had CT abdominal with and without IV contrast from January 1, 2014 to December 31, 2019.

Using natural language processing to determine prevalence of pre- or asymptomatic COVID-19 in patients undergoing chest CT for non COVID indications within Eastern Ontario and Nunavut - a collaborative multicenter observational study

License Number: 05 008 20N-M

Principal Investigator: Aviv, Richard

Affiliation: Department of Medical Imaging
The Ottawa Hospital
Ottawa, Ontario, Canada
raviv@toh.ca

Number in Party: 3

Research Area: Ontario

Fieldwork Locations: Ottawa

SUMMARY

This is a multi-center observational study, which comprises both a retrospective (January 1 - April 30, 2020) and a prospective (May 1, 2020 - January 1, 2021) component. The current proposal draws upon a collaboration of Eastern Ontario (Queensway Carleton, Cornwall, Montfort, Pembroke, Winchester, Renfrew, and CHEO) and Qikiqtani, Nunavut to critically evaluate CT chest studies being performed for clinical indications other than suspected COVID-19 and determine the frequency of CT findings that could be attributable to COVID-19. The proposal builds a collaborative network of community and academic radiologists and represents an opportunity to promote a regional approach to innovation in healthcare solutions. Identifying the prevalence of key CT chest report phrases could offer an essentially free technique for monitoring the prevalence of pre- and asymptomatic COVID cases in real time as they evolve in response to changes in policy, screening, and treatment.

Unpacking Rehabilitation for Children: Learning from Inuit Perspectives

License Number: 02 059 20R-M

Principal Investigator: MacLachlan, Janna

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Number in Party: 4

Research Area: North & South Baffin

Fieldwork Locations: Iqaluit, Clyde River, Igloolik, Kinngait, Pangnirtung, Qikiqtarjuaq, Pond Inlet

SUMMARY

In mainstream Canada, there is a belief that children who are not able to perform certain skills should be seen by rehabilitation services (occupational therapy, physiotherapy and speech-language pathology) in order to help them catch up with other children their age. There is very little written information about Inuit Qaujimajatuqangit perspectives on rehabilitation for children with differing abilities. Knowing more about this would help rehabilitation professionals to improve their services for Inuit children and families and support Inuit access to self-determination (rights to Inuit knowledge and choice) in their participation with rehabilitation services.

The Prevalence of Anaphylaxis in Iqaluit

License Number: 01 007 20R-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 getting information about 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, so 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, was EpiPen, steroids or antihistamine used at the emergency department and what was the outcome.

Building on Strengths in Naujaat - A Youth Initiative

License Number: 03 005 20R-M

Principal Investigator: Anang, Polina

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Number in Party: 6

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.

Making SPARX Fly in Nunavut

License Number: 05 003 20R-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 Nunavummiut communities. The proposed, expanded intervention will build on feedback from 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, and (c) SPARX should be adapted to provide a repertoire of culturally valid, constructive cognitive strategies for problem-solving for optimal effectiveness.

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

License Number: 01 005 20R-M

Principal Investigator: Brubacher, Laura Jane

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Number in Party: 6

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

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. Goals & Objectives: The goal of this research is for participants to celebrate Inuit culture and traditional knowledge of pregnancy and childbirth. The objectives are to: (1) explore Inuit experiences of birth in Iqaluit, historically and currently; and to (2) identify specific recommendations for how the health system and health policy can more fully support Inuit in childbirth, and reflect Inuit culture, priorities, and ways of knowing.

Implementation Research: Community Intervention to Prevent Repeated Suicide Attempts in Nunavut, Canada-Phase 1

License Number: 05 001 20N-M

Principal Investigator: Mishara, Brian

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Number in Party: 4

Research Area: Nunavut-wide

Fieldwork Locations: Various

SUMMARY

The main objective of this project is to determine if a previously validated approach to prevent repeated suicide attempts and deaths by suicide in people who have made a non-lethal suicide attempt can be adapted and successfully implemented in Nunavut communities. This program will be a Nunavut adaptation and implementation of the SUPRE-MISS follow-up protocol for persons who have been seen in hospital for a suicide attempt. SUPRE-MISS was developed by the World Health Organization and tested using randomized controlled trials (RCT) in five countries, and is proven to have reduced the incidence of repeated suicide attempts. We want to determine if it is possible to effectively use a similar approach in Nunavut communities, in order to prevent repeat suicide attempts and deaths by suicide.

Stopping Syphilis Transmission in Arctic communities with Rapid Tests (STAR Study)

License Number: 03 005 20N-M

Principal Investigator: Singh, Ameeta

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Number in Party: 6

Research Area: Kivalliq

Fieldwork Locations: Arviat

SUMMARY

To evaluate the clinical and epidemiological impact of deploying a syphilis RDT, the Chembio DPP® Syphilis Screen & Confirm Assay (Chembio Diagnostic Systems Inc., Medford, NY), in the context of ongoing transmission in Nunavut and in a current syphilis outbreak in Nunavik. This will be accomplished by quantifying the added clinical value (i.e., screening coverage, case detection rates, delays between testing and appropriate treatment, and number of cases averted) of deploying this rapid test as compared to traditional laboratory-based diagnostic testing. The impact of both diagnostic approaches on disease transmission dynamics will also be modeled. Furthermore, the diagnostic accuracy of the rapid test will be validated under real-world conditions in a remote Northern setting that is outside of a specialized laboratory. Together this will inform policy for syphilis disease control in remote Arctic settings.

Surveillance for Antimicrobial Resistance (AMR) in Gonorrhea (GC) in Nunavut

License Number: 05 007 20N-M

Principal Investigator: Singh, Ameeta

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Number in Party: 6

Research Area: Nunavut

Fieldwork Locations: Edmonton (remote research)

SUMMARY

Gonorrhea is the second most commonly reported sexually transmitted infection in Canada. The highest rates of infection in Canada are in the territory of Nunavut. The bacterium has developed resistance to all antibiotics used to treat it since the 1940s and so it is important to check which antibiotics will work to treat the infection in any given area of the world. The treatment for gonorrhea is usually based on further testing done after growing the organism (culture) in the laboratory. It is not possible to grow the organism from specimens collected in remote areas such as in Nunavut as the long delays in transportation of the specimens results in the death of the organism. This poses unique challenges as this means that other methods are needed to see if the organism is resistant to the antibiotics that would be used.

Access to Justice for Family Violence in Nunavut: A Research Project Awareness Campaign

License Number: 02 004 20R-M

Principal Investigator: Vaddapalli, Nalini

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Number in Party: 4

Research Area: Kivalliq, Kitikmeot, South Baffin

Fieldwork Locations: Kinngait, Pangnirtung, Iqaluit, Kugluktuk, Cambridge Bay, Arviat, Rankin Inlet, Baker Lake

SUMMARY

This project aims to raise awareness about family violence, especially intimate partner violence (IPV), and legal options to address it in Nunavut, so as to advance access to justice and to keep women and children safe. The project is comprised of two components: (1) A research component that will assess public awareness, knowledge, experience and perception of the Family Abuse Intervention Act (FAIA), and access to justice issues. Based on results of the collected data, the researchers will provide recommendations to affect law reform, to help bolster the Act and improve the functioning of the legislation, and its ability to improve the wellbeing and safety of those who interact with it; and (2) A public awareness campaign aimed at strengthening the public's capacity to recognize abusive situations, with key messages informed and developed by the research component to increase the public's level of understanding about the FAIA legislation, as well as other legal options that are available.

Unintended outcomes of the public health measures associated with the COVID-19 pandemic in Nunavut: Public Health Learnings

License Number: 05 010 20N-Mregistry

Principal Investigator: Healey-Akearok, Gwen

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Number in Party: 3

Research Area: Nunavut-wide

Fieldwork Locations: Multiple Communities

SUMMARY

The goal of this project is to implement an ecological mixed methods study using primary and secondary data to develop an understanding of both the positive and negative societal outcomes that are a result of the public health measures associated with the COVID-19 pandemic in Nunavut. Primary data analysis involves a researcher using information that they have collected through their own efforts. Secondary data analysis involves a researcher using the information that someone else has gathered for his or her own purposes or that which is collected for surveillance purposes.

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

License Number: 02 010 20R-M

Principal Investigator: Mahy, Maryse

Affiliation: Parks Canada
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Number in Party: 7

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.

Inunnguqsajait - Becoming Able in Inuit Language, Culture, Identity-Centered, Bilingual Schools

License Number: 01 004 20N-M

Principal Investigator: Lee, Cathy

Affiliation: Ontario Institute of Studies in Education
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Number in Party: 4

Research Area: South Baffin

Fieldwork Locations: Pangnirtung, Qikiqtarjuaq

SUMMARY

This study will determine how the Inuit language, culture and identity-centered bilingual school program grounded in an Inuit worldview in Qikiqtarjuaq and Panniqtuuq that supported students in becoming able human beings (inunnguqsajait), was developed and came to be. This study will share the narratives of some community members.

Governance Options for Low Impact Shipping Corridors

License Number: 01 005 20N-M

Principal Investigator: Carter, Natalie

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Number in Party: 2

Research Area: Kivalliq, Kitikmeot, South Baffin

Fieldwork Locations: Arviat, Cambridge Bay, Iqaluit, Rankin Inlet

SUMMARY

Over the past four years, the Arctic Corridors and Northern Voices (ACNV) project has focused on identifying local concerns with Arctic shipping increases and in identifying geographic areas of concern. We have completed this work in 7 Nunavut communities. One of our findings was the need to further examine governance and policy strategies that respond to the concerns about shipping. To achieve our project objectives (i.e. examine governance options for low impact shipping corridors that respond directly to the local concerns about increases in shipping) we will use a policy Delphi method that involves three questionnaires - each one building on the one before it. The purpose of this research is to (1) identify potential strategies for Inuit and Northern involvement in Low Impact Shipping Corridors governance, and (2) evaluate those potential strategies.

Silalirijiit Project

License Number: 02 066 20R-M

Principal Investigator: Fox, Shari

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Number in Party: 5

Research Area: North Baffin

Fieldwork Locations: Clyde River

SUMMARY

The Silalirijiit Project has been running in Clyde River since 2009. It builds on previous research and collaboration to gain a better understanding of weather patterns and weather information needs for the community and provide improved weather information. The project runs a small weather station network, with information available to the public. The project also supports a hunter apprenticeship program, where experienced hunters take youth on the land with a focus on learning weather-related knowledge and safe travel and hunting skills. Inuit knowledge about weather and the environment is documented through the apprenticeship program and helps to link Inuit knowledge and visiting science about local and regional weather patterns.

Kivalliq Labour Market Analysis (2020)

License Number: 03 011 20N-A

Principal Investigator: Dornez, Louis

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Number in Party: 7

Research Area: Kivalliq

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

SUMMARY

Agnico Eagle Mines Ltd (AEM) and the Kivalliq Inuit Association (KIA) have agreed to Inuit and Impact Benefit Agreements for three mining projects in the Kivalliq Region: Meadowbank, Meliadine and Whale Tail. These Agreements are designed, in part, to ensure that a maximum number of Inuit have access to training and employment opportunities in a work environment that is respectful of Inuit culture, language, and traditions. The Employment and Culture Committee (ECC), which is jointly managed by AEM and the KIA, is mandated to monitor these elements of the Agreements and has commissioned Aglu Consulting, Impact Economics and Stratos Inc. to conduct an annual Kivalliq Labour Market Analysis (KLMA). The KLMA is intended to build and maintain an understanding of Inuit interests, availability, and preparedness to work in available jobs at AEM's Kivalliq Projects over the next few years. This community engagement is an important element of the research process, and the participation of Kivallirmiut is critical to ensuring a strong analysis and recommendations to enhance Inuit employment at AEM's mining projects in the Kivalliq region.

Inuit Trails of Nunavut

License Number: 04 019 20N-M

Principal Investigator: Aporta, Claudio

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Number in Party: 6

Research Area: Kitikmeot, Kivalliq

Fieldwork Locations: Taloyoak, Kugaaruk, Naujaat

SUMMARY
The purpose of this project is to document and map Inuit traditional routes. It is part of a larger initiative led by Dr. Aporta since 2001. The project has mapped routes in 23 communities across Inuit Nunangat. The goal is to understand Inuit use of the Canadian Arctic, past and present, by documenting Inuit routes in Nunavut and linking them to broader networks throughout the Inuit world. This phase of the project will fill important gaps by documenting routes in communities where the project has not yet taken place.

An Organizational and Performance Assessment of Territorial Municipalities Safety Management System

License Number: 01 001 19N-M-Amended

Principal Investigator: Carolan, Paul

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Number in Party: 2

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

To assess the perceptions of senior management on the organizational performance in relation to workplace health, safety and wellness. The research cohort is restricted to the Chief / Senior Administrative Officers in the Territorial Municipalities / Hamlets / Communities (MHC) to self-assess their performance against peer-reviewed instruments (online survey) previously used in other Canadian Municipalities and provide additional feedback via one-on-one interviews. This new research will provide a baseline for individual MHC's to consider steps to improve their performance. It will also provide the opportunity for territorial representative bodies (Local Government Administrators Association in Nunavut – LGAAN) to prepare funding submissions to improve their workplace health, safety and wellness programs within an approved safety management system.

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

License Number: 04 038 20R-M

Principal Investigator: Hanke, Andrea

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Number in Party: 3

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 co-produced 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".

Strengthening Community-Based SAR and Emergency Response in the Kitikmeot

License Number: 04 009 20R-M

Principal Investigator: Kikkert, Peter

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Number in Party: 5

Research Area: Kitikmeot

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

SUMMARY

In the North, community-based groups such as the Canadian Coast Guard Auxiliary, Ground Search and Rescue, Marine SAR Societies, CASARA, and the Canadian Rangers play an essential role in SAR and emergency response (ER). Our goal is to bring the groups and individuals involved in SAR and emergency response in a community together to identify the skills, knowledge, equipment, and strengths they possess. Often, this information is not tracked and/or shared by the municipal, territorial, and federal agencies involved in SAR and ER, which can affect operations and coordination/cooperation. Next, we will work with community groups to determine if a community has the capabilities it requires to respond to the potential SAR and emergency tasks it might face. Together, these activities will help to identify areas for capacity building. Ultimately, we anticipate that improvements to local capability will heighten the effectiveness and efficiency of SAR and emergency response practices in these communities, contributing to community well-being and the safety of those travelling, hunting, trapping, and fishing on the land, water, and ice.

Inuit Knowledge on the Health of Auyuittuq National Park's Ecosystems/Environment: Climate Change Vulnerability Assessment and Pilot Project for Ongoing Monitoring

License Number: 02 009 20R-M

Principal Investigator: Mahy, Maryse

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Number in Party: 3

Research Area: North Baffin

Fieldwork Locations: Pangnirtung, Qikiqtarjuaq

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 objectives of the project are as follows: To collect Inuit knowledge for a climate change vulnerability assessment project for the park, and to test a method for monitoring/studying the health of the park's ecosystems/environment through Inuit knowledge in the long term.

Community-Based Determination of the Stessors Affecting Muskoxen

License Number: 04 002 20R-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 wellbeing, 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 muskoxen. For this, scientific data gathered by measuring stress levels in hair samples collected from regional hunter-harvested muskoxen will be analyzed with the participants.

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

License Number: 01 003 20Registry

Principal Investigator: Henri, Dominique

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Number in Party: 3

Research Area: North & 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.

COMPASS: Cohort study evaluating how changes in school programs, policies, and resources impact youth health behaviours

License Number: 01 004 20R-M

Principal Investigator: Leatherdale, Scott

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Number in Party: 3

Research Area: South Baffin, Kivalliq

Fieldwork Locations: Kinngait, 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 Inuit Community Uses and Needs for Weather, Water, Ice and Climate Information and Services

License Number: 05 005 20R-M

Principal Investigator: Ljubicic, Gita

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Number in Party: 17

Research Area: Kivalliq, Kitikmeot, North & South Baffin

Fieldwork Locations: Arviat, Cambridge Bay, Clyde River, Coral Harbour, Igloolik, Iqaluit, Gjoa Haven, Pond Inlet, Sanikiluaq

SUMMARY

The goal of our project is to learn from Nunavummiut about what kinds of environmental information or services they rely on to decide when and where to travel on the land. We want to learn what kinds of weather, water, and ice information is used in different communities to assess travel safety. We also want to know what Nunavummiut think is missing, and what could be improved. To do this, we have developed a survey to get feedback from community members. Input from across Nunavut will provide valuable guidance for service providers and decision-makers who are trying to make services more relevant to arctic travel.

Ukkusiksalik National Park Marine Baseline Data Collection

License Number: 03 002 20R-M

Principal Investigator: Mahy, Maryse

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Number in Party: 4

Research Area: Kivalliq, North Baffin

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

SUMMARY

The primary goal of the project is to reflect Inuit knowledge in 3 sub projects. The results of the pilot project will contribute to best practices for the Nunavut Field Unit of Parks Canada to be able to best engage Inuit Knowledge in its monitoring program for Ukkusiksalik National Park in the future. It will also assist in continuing to protect and present the park to the public.

Get Them Talking: Investigating How Nunavut Students Respond to Number Talks in the Math Classroom

License Number: 01 002 20R-M

Principal Investigator: Pope, Emily

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Number in Party: 3

Research Area: South Baffin

Fieldwork Locations: Iqaluit

SUMMARY

The purpose of this study is to explore how Nunavut students' experience and respond to learning mathematics through the use of daily number talks. The main goal is to learn what degree, if any, do daily number talks inform Nunavut students' learning experiences in mathematics. The objectives of the study are to understand: (1) the impact of daily number talks on Nunavut elementary students' computational fluency in the classroom; (2) the steps required to establish daily number talk routines in a classroom; and (3) if number talks contribute to Nunavut students' feelings of efficacy about mathematics.

Ahiarmiut Relocation Society – Engaged Leadership Project Proposal

License Number: 03 008 20N-A

Principal Investigator: Prusky, Elaine

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Number in Party: 3

Research Area: Kivalliq

Fieldwork Locations: Arviat

SUMMARY

The Ahiarmiut were forcibly relocated multiple times to unfamiliar land and without consultation and consent by the Government of Canada. On January 22, 2019, seventy years after the first forced relocation occurred, the Government of Canada made an official statement of apology to the Ahiarmiut. Along with an apology comes compensation, which has zero value compared to what my ancestors went through but can be made into something beautiful and positive to move on from the cultural and physical genocide and genocide by attrition suffered by the Ahiarmiut. Since the majority of the Ahiarmiut descendants currently live in Arviat, Nunavut, I will conduct my research in Arviat. The Society has a new board executive and currently has funding resources with no current plan on what to do with the funding. My goal is to collect data from members and find out what type of educational and healing programming the members are most interested in.

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

License Number: 05 004 20R-Mregistry

Principal Investigator: Healey-Akearok, Gwen

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Number in Party: 3

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 5 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.

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 Perseverance

License Number: 05 002 20R-M

Principal Investigator: Rahm, Jrene

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Number in Party: 6

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 communuties in Nunavut to pursue our goal of describing life-long learning and a holistic model of Inuit education.

Multiscale remote sensing of sea ice in the Kitikmeot Sea: Utilizing new Earth Observation constellation missions for monitoring and predicting sea ice conditions

License Number: 04 005 20N-M

Principal Investigator: Scharien, Randall

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Number in Party: 4

Research Area: Kitikmeot

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

SUMMARY

The project purpose is to help inform safe travel on sea ice by conducting locally-guided research that leads to the development of better remote sensing-based maps and data. Our first objective is to understand the main sea ice features that people experience, where and when they experience them, and what are considered hazards. The second objective is to understand traditional and current practices used to navigate or avoid sea ice features, and find out what new information may be desired. The third objective is to evaluate satellite remote sensing-based maps for their ability to provide desired information about sea ice conditions, with a focus on available new technologies like satellite radar.

Towards a Sustainable Fishery for Nunavummiut

License Number: 04 006 20R-M

Principal Investigator: Schott, Stephan

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Number in Party: 16

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.

Decolonizing Architecture: Stories from the Canadian North

License Number: 03 010 20Registry

Principal Investigator: Semple, William

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Number in Party: 1

Research Area: Nunavut

Fieldwork Locations: Remote research

SUMMARY

This is the story of nearly thirty years of my work as an architect where I aimed to support the creation of culturally-appropriate architecture and the promotion of sustainable building practices. Much of this work was directed towards the development of energy-efficient housing in the Canadian north, carried out in collaboration and direct consultation with Indigenous communities including community members and Elders who live in these communities. My story is entangled with the stories of five northern communities in Canada, one northern community in the USA, and a Tibetan refugee community in India. This story is written as a self-reflection that is deeply personal and I intend it to lead towards better understandings of the processes of creating housing with communities through something I call the 'decolonizing of architecture'. My story is a kind of auto-ethnography, written from the perspectives of white privilege, human ecology, and architectural design. This work takes a practice-based approach where I reflect upon my own practices as a son within an immigrant family, an advocate, a builder, an architect, and a person who lives within Canadian society.

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

License Number: 01 001 20R-M

Principal Investigator: Sheremata, Megan

Affiliation: Department of Physical & Environmental Sciences
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Number in Party: 4

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 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.

Uqshuqtuuq/Gjoa Haven: Gathering Stories from Our Elders and Community

License Number: 04 018 20N-M

Principal Investigator: Stoller, Mark

Affiliation: Trent University
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Number in Party: 2

Research Area: Kitikmeot

Fieldwork Locations: Gjoa Haven

SUMMARY

This research is an oral history and film project designed to facilitate engagement between Inuit Elders and youth, aged 18-29. The research addresses challenges experienced by Inuit youth in sharing local history and stories. The purpose of this research is to connect youth participants with their Elders in ways that celebrate traditional practices and history. The project collects history, stories and legends from Uqshuqtuuq/Gjoa Haven, and documents these with film and audio recording equipment. The interviews and research are then prepared into a digital exhibit that is to be shared with the local Nattilik Heritage Centre. This research is done in partnership with the Heritage Centre.

Climate Communication and Adaptation: Engaging Maritime Publics in Resource Management

License Number: 04 012 20R-M

Principal Investigator: Tam, Chui-Ling

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Number in Party: 2

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Kugluktuk

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.

Environment, Climate, and Human-Animal Relationships: An anthropology of working dogs in the Circumpolar Arctic

License Number: 04 013 20N-M

Principal Investigator: van den Berg, Stenette

Affiliation: Department of Anthropology
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Number in Party: 2

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay

SUMMARY

This project is an anthropological study of the historic and contemporary ways people use and relate to working dogs in the Circumpolar Arctic, with an applied focus on northern Canada and Greenland. The research investigates Arctic dogs' changing cultural and economic importance for Indigenous communities, the effects climate change will have on dogs' future, how local Indigenous knowledge of working dogs is being transformed and lost, and how this all will influence people's livelihoods.

Tourism Development in Inuit Nunangat: Examining The Franklin Wrecks as a Tourism Destination

License Number: 04 017 20N-M

Principal Investigator: Weber, Melissa

Affiliation: Department of Geography
University of Ottawa
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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: Gjoa Haven

SUMMARY

Tourism is a growing industry and an important part of Nunavut's economy. The public unveiling of the Franklin Wrecks is anticipated to generate tourism demand and related tourism development opportunities. However, what is unclear is what the potential visitor experience could look like or the feasibility of developing a visitor experience. The purpose of this research project is to document community knowledge and perspectives on tourism development to assist in tourism planning, management and development at the Franklin Wrecks site.

The role of project-based environmental assessment in considering the impacts of resource development-related Arctic shipping

License Number: 03 013 20N-M

Principal Investigator: Dueck, Simon

Affiliation: Natural Resources Institute
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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Rankin Inlet

SUMMARY

This research project will consider the potential impacts that increases in Arctic shipping may have, and how these impacts have been, or could be addressed through environmental assessment (EA) of resource development projects.The purpose of this research is to explore the potential of Nunavut's EA framework to meaningfully identify and address issues associated with project-related shipping, including the increased risk of spills.

Inuit Qaujimaningit and Socioeconomic Baseline Studies for the Chidliak Project

License Number: 01 003 20R-M

Principal Investigator: Willis, David

Affiliation: Peregrine Diamonds Ltd.
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Number in Party: 8

Research Area: South Baffin

Fieldwork Locations: Iqaluit, Pangnirtung

SUMMARY

De Beers is proposing to undertake Inuit Qaujimaningit and socioeconomic baseline studies in Iqaluit and Pangnirtung in support of its Chidliak Project. The objective of this Inuit Qaujimaningit study is to incorporate traditional and contemporary knowledge and Inuit values, perspectives, and ways of knowing on a variety of topics that will inform an Environmental Impact Statement. Desktop and community-based socioeconomic research will also be undertaken concurrent with the Inuit Qaujimaningit study. This will be conducted to collect socioeconomic information and perspectives of interest from community members.

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

License Number: 02 013 20R-M

Principal Investigator: Wilson, Katherine

Affiliation: Memorial University of Newfoundland
Waterdown, Ontario, Canada
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Number in Party: 3

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 qaujimajatuqangit (IQ) of M’Clintock Channel and Gulf of Boothia polar bear populations

License Number: 05 006 20Registry

Principal Investigator: Wong, Pamela

Affiliation: Trailmark Systems Inc.
Victoria, BC, Canada
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Number in Party: 1

Research Area: North Baffin, Kivalliq, Kitikmeot

Fieldwork Locations: Sanirajak, Igloolik, Naujaat, Gjoa Haven, Taloyoak, Kugaaruk, Cambridge Bay, Taloyoak

SUMMARY

The Government of Nunavut Department of Environment (GN DOE) contracted Trailmark Systems Inc. to document and report on Inuit qaujimajatuqangit (IQ) of M’Clintock Channel and Gulf of Boothia polar bear populations. This work requires engagement with the seven Inuit communities who have harvested and managed these populations for millenia. This work will support knowledge co-production and integration with ecological and biological survey data. These efforts will also improve co-management decisions and approaches for M’Clintock Channel and Gulf of Boothia polar bears.

Qatiktalik: Nexus of Colonial Encounters

License Number: 03 006 20R-M

Principal Investigator: Zawadski, Krista

Affiliation: Carleton University
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Number in Party: 2

Research Area: Kivalliq

Fieldwork Locations: Chesterfield Inlet, Rankin Inlet, Igloolik, Sanirajak, Naujaat

SUMMARY

My project will focus on Qatiktalik and reinterpret known history through Inuit eyes. Research publications and museum collections are out of reach for most Inuit who are directly connected to this history. It is my main goal to bring this history to modern descendants of people who were once at Qatiktalik during the time it was in operation as a whaling site and NWMP post and to engage with Inuit oral history surrounding Qatiktalik. I will do this through group discussions and documentation with Elders and community members at Igluligaarjuk, Rankin Inlet, Naujaat, Iglulik and Sanirajak.

Limited Choices, Lasting Traditions: How Colonialism and Climate Change Have Impacted Traditional Inuit Life

License Number: 02 002 20R-M

Principal Investigator: Desjardins, Sean

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University of Groningen
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Number in Party: 5

Research Area: North Baffin

Fieldwork Locations: Igloolik (surrounding area)

SUMMARY

I am requesting a renewal of my license in order to make two planned trips back to Igloolik in the winter and summer of next year to collect additional ethnographic and archaeological data (with an archaeological permit from the Nunavut Department of Culture and Heritage). The first trip will take place in mid-February 2020. I will travel to Igloolik to formally interview a small number of Elders who have traditional knowledge (Inuit qaujimajatuqangit) largely specific to Uglit. In August, I will return to the region with the field crew members named above to carry out further mapping and select excavation at a site in northern Foxe Basin to be determined.

Physical / Natural Sciences Research

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Movement and habitat use of anadromous Arctic char (*Salvelinus alpinus*) and Dolly Varden (*Salvelinus malma malma*) near Kugluktuk, Nunavut

License Number: 04 015 20N-M

Principal Investigator: Weinstein, Spencer

Affiliation: Department of Biology
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Number in Party: 2

Research Area: Kitikmeot

Fieldwork Locations: Kugluktuk

SUMMARY

Purpose: To gather Traditional Knowledge relating to the diversity of char in the Coppermine River and recently witnessed changes in char in the system. The Coppermine River, bordering the Hamlet of Kugluktuk, has historically supported a subsistence fishery for Arctic char. Since 2015, community members have reported a decrease in the number of char returning to the river following summer migration, and changes in fish appearance. Given these observed changes and the concerns of community members, a partnership was established in 2017 between the Kugluktuk Hunters and Trappers Organization (HTO), the University of Waterloo, and Fisheries and Oceans Canada (DFO) to study char in the Coppermine River. As part of this project, researchers will evaluate the degree to which local descriptors correspond with variation measured using western scientific analyses.

Nunavut Water Resource Management

License Number: 02 005 20R-M-Amended

Principal Investigator: Wesche, Sonia

Affiliation: Department of Geography, Environment & Geomatics
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Number in Party: 3

Research Area: North Baffin, Kivalliq

Fieldwork Locations: Sanirajak, Igloolik, Coral Harbour

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 Sanirajak were identified as having limited capacity for future growth in their municipal water supply. This project involves water resource assessments in Igloolik and Sanirajak 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.

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

License Number: 02 060 20R-M

Principal Investigator: Coutts, Victoria Burdett

Affiliation: Advisian
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Number in Party: 6

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 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 in the waters surrounding the proposed small craft harbour.

Geotechnical and Environmental Baseline Studies – Iqaluit Port Development

License Number: 01 002 20R-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 deepwater 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 deepwater port.

Greenland to Nunavut Fibre Optic Cable Project - Nunavut Landing Locations Field Study

License Number: 01 008 20R-M

Principal Investigator: Woodbury, Grant

Affiliation: Community & Government Services, Capital Projects
Government of Nunavut
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Number in Party: 4

Research Area: South Baffin

Fieldwork Locations: Iqaluit, Kimmirut

SUMMARY

Advisian has been retained by the Government of Nunavut – Community and Government Services (CGS) to conduct a field study on the Nunavut landing locations for a fibre optic cable that is proposed to be installed from Nuuk, Greenland to Nunavut (the Project). The two landing locations that have been proposed for the Project are Iqaluit and Kimmirut. These landings are both located on Commissioner's Land.

Fisheries and Oceans Canada – Small Craft Harbours – Four Harbour Feasibility Study Field Program

License Number: 02 061 20R-M

Principal Investigator: McEwan, Eleanor

Affiliation: Small Craft Harbours
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Winnipeg, Manitoba, Canada
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Number in Party: 10

Research Area: North Baffin

Fieldwork Locations: Arctic Bay, Clyde River, Resolute Bay, Grise Fiord

SUMMARY

Advisian has been retained by Fisheries and Oceans Canada – Small Craft Harbours Program (DFO-SCH) to conduct an engineering feasibility study for the construction of a small craft harbour (SCH) for four communities in Nunavut: Arctic Bay, Grise Fiord, Resolute Bay, and Clyde River. To inform the feasibility study, a field program will be undertaken during the 2019 open-water season to conduct environmental, geoscience, geophysics and archaeological baseline studies in each location.

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

License Number: 02 013 20R-M

Principal Investigator: Burgess, David

Affiliation: Geological Survey of Canada
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Number in Party: 2

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).

SuperDARN Radar Sites

License Number: 02 003 20R-M

Principal Investigator: McWilliams, Kathryn

Affiliation: Department of Physics & Engineering Physics
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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 its 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.

Mary River Project

License Number: 02 065 20R-M

Principal Investigator: Lord-Hoyle, Megan

Affiliation: Baffinland Iron Mines Corporation
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Number in Party: 66

Research Area: North Baffin

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

SUMMARY

Data collection and analysis for environmental monitoring and management of the Mary River project to assess Project impacts in relation to the approved environmental impact assessment; compliance to NIRB Certificate No. 005, Amended Type "A" Water License 2AM-MRY1325; and further baseline and operating conditions analysis for future permitting.

Green Edge - Legacy Project

License Number: 02 011 20R-M

Principal Investigator: Babin, Marcel

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Number in Party: 9

Research Area: North Baffin

Fieldwork Locations: Qikiqtarjuaq

SUMMARY

This research aims to improve our knowledge about the dynamics of the phytoplankton spring bloom and indentify its role in the Arctic Ocean of the future, including its impact on human populations. The culture, health and economic capacity of northern communities are closely linked to marine resources supported by the phytoplankton spring bloom (PSB). This project aims to improve our understanding of the processes that control the Arctic PSB as it expands northward and to determine its fate in the food web. As follow-up activities, we will go back to Qikiqtarjuaq to test updated equipment to measure light through the snow and sea ice and under the ice pack. Water samples will also be collected to measure nutrients and phytoplankton in the water column before, during and after the PSB.

Impacts of Melting Tidewater Glaciers on Marine Biogeochemical Cycles

License Number: 02 008 20R-M

Principal Investigator: Bhatia, Maya

Affiliation: Department of Earth & Atmospheric Sciences
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Number in Party: 7

Research Area: North Baffin

Fieldwork Locations: Devon Island, Ellesmere Island

SUMMARY

We propose to characterize the biogeochemical impact of glacial runoff and meltwater plumes on a regionally productive marine ecosystem that is central to the health of Indigenous communities. Our proposed field work program for 2019-2024 will be completed on the Sverdrup Glacier (Devon Island), Belcher Glacier (Devon Island), Sydkcap Glacier and Jakeman Glacier (S. Ellesmere Island) and their downstream marine environments (Jones Sound). This project is designed to thoroughly characterize and quantify the material exports from the glaciers, define their environmental controls, and assess their impacts in downstream marine environments. We have assembled a team of new and established Canadian researchers capable of characterizing the physical, biological and chemical properties of subglacial water, from its meltwater origin, through its transport along the glacier bed, and finally to its discharge into and dispersion within the ocean.

Long-term changes in bird populations near Cambridge Bay based on lake sediment records

License Number: 04 016 20N-M

Principal Investigator: Blais, Jules

Affiliation: Department of Biology
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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay & Region

SUMMARY

Our short-term objective is to show how bird populations around Cambridge Bay and the Ahiak Migratory Bird Sanctuary have changed over time using lake sediments as a natural archive. Long-term, we will integrate bird population histories with recent research and Indigenous knowledge to investigate the stability of migratory bird populations and their reliability as a food source in the North. Rationale: Sediment is a natural archive because it slowly accumulates at the bottom of lakes and it contains animal and plant material from the time it was deposited. Thus sediment is a record of environmental changes. When birds colonize the area, they fertilize the water, and these changes are recorded in the chemical and biological composition of the lake sediment layers, which can be used to show the history of bird populations.

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

License Number: 04 007 20R-M

Principal Investigator: Brown, Kristina

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Institute of Ocean Sciences
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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.

Monitoring Seasonal Environmental Change in Rivers of the Kitikmeot Region

License Number: 04 008 20R-M

Principal Investigator: Brown, Kristina

Affiliation: Department of Fisheries and Oceans 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.

Ice Dynamics and Cryospheric Changes in Northern Canada

License Number: 02 007 20R-M

Principal Investigator: Copland, Luke

Affiliation: Department of Geography, Environment & Geomatics
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Number in Party: 9

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.

Climate Change Effects of a Changing Cryosphere on Northern Lakes

License Number: 02 001 20R-M

Principal Investigator: Dibike, Yonas

Affiliation: Hydrologic Modelling & Hydro-Climate Analysis and Impact Studies
Environment and Climate Change Canada
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Number in Party: 2

Research Area: North Baffin/Kitikmeot

Fieldwork Locations: Lake Hazen, Lower Dumbell Lake

SUMMARY

Climate change is projected to cause significant change to arctic aquatic ecosystems. Changes in the thickness and composition of arctic lake ice covers will produce second order impacts on lake biological productivity and ecology. The most important effects are likely to result from changes in temperature (ice growth) and precipitation (ice cover composition). While a number of models have been developed to model these changes, their validation has been stalled by lack of relevant field data. Relevant field data has been gathered annually since 2009. For 2020, ice-composition surveys may be repeated, depending on time and resource availability, at the above noted lakes with the assistance of local contractors or agencies. If undertaken, the proposed completion dates for the surveys at the lake sites will be between January 1 and June 30, 2020. Specific dates will be determined based on agency/contractor availability.

CANDAC - The Canadian Network for the Detection of Atmospheric Change

License Number: 02 012 20R-M

Principal Investigator: Drummond, James

Affiliation: Department of Physics & Atmospheric Science
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Number in Party: 3

Research Area: North Baffin

Fieldwork Locations: Eureka

SUMMARY

Our research program continues to be highly relevant to international partnerships and our collaborators in various global efforts such as the Total Carbon Column Observing Network (TCCON), the Network for the Detection of Atmospheric Composition Change (NDACC) and the Scientific Committee on Solar-Terrestrial Physics (SCOSTEP), all of which are continuing their interest in our data and science products. PEARL continues to be an important site for satellite validation, and the Canadian Space Agency (CSA) continues to support our operations by contributing to the infrastructure costs and has committed to continued support for 0PAL and SAFIRE power, as well as two more years of support (2020-2021) for the springtime Canadian Arctic ACE/OSIRIS Validation campaigns. We continue to invest in our infrastructure through the upgrading of the local network that links the various sites.

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

License Number: 03 007 20R-M

Principal Investigator: Ellenor, Jared

Affiliation: University of Waterloo
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Number in Party: 4

Research Area: Kivalliq

Fieldwork Locations: Baker Lake

SUMMARY

Stream occupancy of young-of-year arctic grayling *Thymallus arcticus* and the associated impact from the wastewater treatment facility in Baker Laker, Nunavut. Currently, the Hamlet of Baker Lake uses a passive wastewater treatment system, where wastewater is released through a series of tundra ponds and lakes 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.

Weather, Ice, Ocean, and Freshwater Measurements to Understand Greenhouse Gas Cycles and Aquatic Ecosystems

License Number: 04 003 20R-M

Principal Investigator: Else, Brent

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Number in Party: 10

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay and Surrounding Area

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 CO_2 exchange. But they also have practical objectives to provide real-time weather information along important travel routes for 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.

Diversity of pelagic primary producers in coastal habitats and the potential for harmful blooms in Eastern Canadian Arctic, with a focus near Iqaluit, Nunavut

License Number: 01 010 20R-M

Principal Investigator: Gosselin, Michel

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Number in Party: 5

Research Area: South Baffin

Fieldwork Locations: Iqaluit (Koojesse Inlet, Tarr Inlet, Peterhead Inlet)

SUMMARY

We are a scientist team from Université du Québec à Rimouski (UQAR) led by Professors Michel Gosselin and André Rochon. The team also comprises Fatma Dhifallah (research assistant); a postdoctoral researcher and a Masters student researcher will complete the team at the end of summer 2020. As part of the Coastal Environmental Baseline Program of Fisheries and Oceans Canada, we propose to study the microscopic algae in the waters of Frobisher Bay, Nunavut, in August/September 2020. The objective of our scientific project would be to identify and describe the microscopic algae species present in Frobisher Bay, near Iqaluit. This project would help us to complete an algae species database that would be used to detect the introduction of new or toxic algae species in the Frobisher Bay region and in other ports in the Canadian Arctic.

2020 Back River Project - Ongoing Baseline Data Collection & Monitoring

License Number: 04 014 20R-M

Principal Investigator: Keefe, Merle

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Number in Party: 9

Research Area: Kitikmeot

Fieldwork Locations: Back River-Goose Camp, George Camp, MLA Camp

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. 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 July 1, 2020 and could continue until December 31, 2020. However, the same baseline and scientific studies may continue in subsequent years.

Defence Research and Development Canada (DRDC) Gascoyne Inlet

License Number: 02 064020R-M

Principal Investigator: MacNeil, Erin

Affiliation: Defense Research & Development Canada
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Number in Party: 1

Research Area: North Baffin

Fieldwork Locations: Gascoyne Inlet, Devon Island

SUMMARY

The DRDC Northern Watch Technology Demonstration Project (TDP) – Canadian Arctic Underwater Sentinel Experimentation (CAUSE) will demonstrate an Arctic maritime surveillance capability to the Department of National Defence and other concerned federal departments. Commencing in 2008, this multi-year undertaking is based at Gascoyne Inlet. The surveillance demonstration system is unmanned, semi-autonomous, and remotely controlled through a satellite system connection from one of the DRDC centres.

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

License Number: 04 010 20R-M

Principal Investigator: McLennan, Donald

Affiliation: Polar Knowledge Canada
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Number in Party: 3

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay, Greiner Lake

SUMMARY

In the winter months of early 2020, the two structures of the POLAR camp will serve as emergency shelters for both POLAR staff, and Cambridge Bay community members. Starting in May 2020, the POLAR camp will be prepared for the start of the summer field season by checking and fixing the possible damage to the existing structures that may have occurred during the winter. In June 2020, the summer field season activity will start in the camp. All-season individual tents will be installed in the camp. POLAR will continue a range of field research activities, and a number of visiting research scientists, their graduate students, as well as northern students will come to Cambridge Bay to conduct this research. Most of these research activities, as well as the deployed scientific instrumentation are on the northern shore of Greiner Lake in the IMA.

MAP (Multidisciplinary Arctic Program) - Last Ice

License Number: 02 006 20R-M

Principal Investigator: Michel, Christine

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Number in Party: 9

Research Area: North Baffin

Fieldwork Locations: Offshore 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.

Cambridge Bay Ocean Observatory

License Number: 04 013 20R-M

Principal Investigator: Moran, Kate

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Number in Party: 7

Research Area: Kitikmeot

Fieldwork Locations: Cambridge Bay

SUMMARY

Underwater sensors and a camera provide continuous 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 Government of Nunavut 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.

Arctic Coastal and Drifting Ice Processes and Dynamics

License Number: 02 063 20R-M

Principal Investigator: Mueller, Derek

Affiliation: Department of Geography & Environmental Studies
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Number in Party: 13

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.

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

License Number: 03 009 20R-M

Principal Investigator: Mundy, CJ

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Number in Party: 2

Research Area: Kivalliq

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

SUMMARY

Our plans for this upcoming field season are to retrieve the four oceanographic moorings currently deployed in Hudson Bay. We will also include retrieval of mooring CH01. Our Plan will be to use the Canadian Coast Guard ship (CCGS) Henry Larsen to retrieve the four CMO moorings this field season. The CCGS Henry Larsen will have a technician from the University of Manitoba, Vladislav Petrusevich, onboard the ship to coordinate mooring retrieval with the assistance of CCGS crew. Mr. Petrusevich would board the CCGS Henry Larsen in the south and disembark in Churchill, Manitoba. Retrieval will basically take a few hours at each mooring location. In summary, the oceanographic data collected as part of the sea ice camp, SIMEP and CMO-EO projects will provide invaluable insight into the base of the marine ecosystem in Hudson Bay.

Western Hudson Bay Geoscience for Infrastructure

License Number: 03 004 20R-M

Principal Investigator: Oldenborger, Greg

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Number in Party: 3

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.

NEIGE (Northern Ellesmere Island in the Global Environment)

License Number: 02 025 20R-M

Principal Investigator: Vincent, Warwick

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Number in Party: 8

Research Area: North Baffin

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

SUMMARY

This is a follow-on of our work in the program NEIGE, to continue monitoring and 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.

Kitikmeot Region Marine Science Study

License Number: 04 004 20R-M

Principal Investigator: Williams, Bill

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Number in Party: 15

Research Area: Kikitmeot

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

SUMMARY

We aim to focus our sampling aboard the R/V Martin Bergmann in the Finlayson Islands, Coronation Gulf, Bathurst Inlet and, if time and weather allow, into Queen Maud Gulf and Icebreaker Channel. While conducting oceanographic work in these regions, we also plan to sample the Tree River, Hood River, Burnside River, and Western River using the small aluminum support boat on the R/V Martin Bergmann to sample from the river mouth and into the tidal estuary. The Coppermine River and estuary will also be sampled with the support of local platforms in Kugluktuk. We plan to conduct focused studies of tidal straits at the Finlayson Islands and within Bathurst Inlet. For work carried out within the Finlayson Islands and within the vicinity of Cambridge Bay, we also plan to use the R/V Jennie Pierre as a support vessel, aiding with mooring deployments and oceanographic sampling as needed. Our focus for 2019 will be the continuation of work carried out in 2017 & 2018, and as such, our planned sampling, instruments, and techniques are the same as in our original permit.

Chidliak Project Environmental Baseline Program

License Number: 01 006 20R-M

Principal Investigator: Willis, David

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Number in Party: 6

Research Area: South Baffin

Fieldwork Locations: Hall Peninsula

SUMMARY

The Chidliak Project is located on the Hall Peninsula of Baffin Island in the Qikiqtani Region of Nunavut. The centre of the project is 120 kilometers northeast of Iqaluit and 200 kilometers south of the Hamlet of Pangnirtung. Peregrine Diamonds commenced the project in 2008 and in the 10 subsequent years a total of 71 kimberlite volcanos were discovered. Kimberlites are known to contain diamonds. In July of 2018 De Beers Canada Inc. ("De Beers") made an offer to purchase Peregrine. The offer was accepted by Peregrine shareholders in August of 2018 and the purchase completed in September 2018. De Beers is now the sole owner of Peregrine; however, Peregrine continues as a corporation. Environmental baseline studies are required for the preparation of an environmental impact statement ("EIS"). In 2020 environmental baseline work will continue on the Chidliak Project.