NUNAVUT
RESEARCH INSTITUTE

2011 COMPENDIUM OF RESEARCH

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2011 Environmental Technology Students in Iqaluit

Welcome to the Nunavut Research Institute

The Nunavut Research Institute is a gateway to the many exciting research and technology development initiatives underway in the territory.

A part of Nunavut Arctic College, it is a leader in developing and promoting traditional knowledge, science and technology as key local resources. As the central body mandated to license research, it serves as a touchstone for broad-scale scientific activity in the territory.

NRI also acts on behalf of Nunavut residents, sharing information on research projects, providing advice on research funding programs and assisting in the development of proposals to research funding agencies.

Mandate and Objectives

The Nunavut Research Institute's mandate is to develop, facilitate, and promote scientific research as a resource for the well being of people in Nunavut. The core objectives of the Institute are to:

- Coordinate the research licensing process under the Nunavut Scientists Act;
- Support the meaningful involvement of Nunavut residents in scientific research, including advancing the incorporation of Inuit Qaujimajatuqangit in research design;
- Promote the development and application of new technology to improve the quality of life of Nunavummiut;
- Help broker research projects and partnerships that meet the needs of Nunavut residents
- Provide a clearing house of information on scientific research conducted in Nunavut;
- Organize, facilitate, and promote research training and outreach programs designed to enhance awareness and build local research capacity in Nunavut.

A Message from the Senior Science Officer

As the Institute wraps of another year of activity, we can see a slight decrease in the number of research projects.

Many new projects are being initiated by Nunavummiut with a desire to generate more data relevant to lives in Nunavut. We will continue to monitor the types, numbers and locations of these projects going forward in order to measure possible impacts and outcomes.

We see new opportunities for research in Nunavut since the new lab in Iqaluit has gained certification. The Institute is continually working to seek out and develop new relationships to strengthen the range and type of research that is being carried out to improve knowledge of Nunavut and to improve the well being of our residents.

We also seek out relationships that will offer ever increasing opportunities for Arctic College students to gain experience in research, heading to careers in science and technology.

Mary Ellen Thomas
Senior Science Officer
Nunavut Research Institute

2011 RESEARCH HIGHLIGHTS

October

Nunavut Research Institute officially opens in Iqaluit

The Honourable Leona Aglukkaq, Minister of Health and Minister of the Canadian Northern Economic Development Agency attended the Grand Opening of the Nunavut Research Institute, on behalf of the Honourable John Duncan, Minister of Aboriginal Affairs and Northern Development.

August

Governor General of Canada visits Nunavut Research Institute in Iqaluit

Nunavut Arctic College Environmental Technology Program senior instructor Jason Carpenter and Nunavut Research Institute Senior Science Officer Mary Ellen Thomas present the Governor General of Canada, His Excellency David Johnston, with a copy of the book The Arctic Sky during his official visit.

July

Iqaluit residents explore the world of insects and spiders in Canada's North

Dr. Chris Buddle gave a presentation on insects and spiders in Canada's North at the Nunavut Research Institute in Iqaluit on July 11, 2011.

Canada's north is home to many species of insects and spiders, and these animals play key roles in ecosystems, including the Arctic.

May

Inuit youth researchers travel from Arviat to Ottawa in search of their history

Four Inuit youth researchers and an Elder from Arviat, Nunavut are traveling to the nation's capital to discover and re-tell the history of the Eastern Arctic from an Inuit perspective. Although May in Arviat is prime caribou hunting season, this group of Inuit has opted to hunt for something equally important in Ottawa: the truth of what really happened to Inuit when forced from their traditional way of life to modern western-style communities.

March

In this photo (front): Susan Sammons, Cindy Cowan, Pelagie Owlijoot, Peesee Stephens; (back) Kim Crockatt, Leah Otak, Mary Ellen Thomas, Neil Christopher and Jamie Bell (missing from photo).

Success for three-year Arctic College International Polar Year publishing project

Members of the Arctic College Learning Materials Centre met in Iqaluit in March.

As the highly successful three-year International Polar Year publishing initiative comes to a close, committee members are celebrating the publication of more than 20 bilingual education and children's books.

Nunavut Research Institute officially opens Arctic Research Support Facility in Arviat

Residents of Arviat celebrated the official opening of the Arviat Research Support Facility this Friday. In addition to providing support for visiting researchers, the new facility will foster stronger relationships between the scientific community, the community of Arviat and the people of Nunavut.

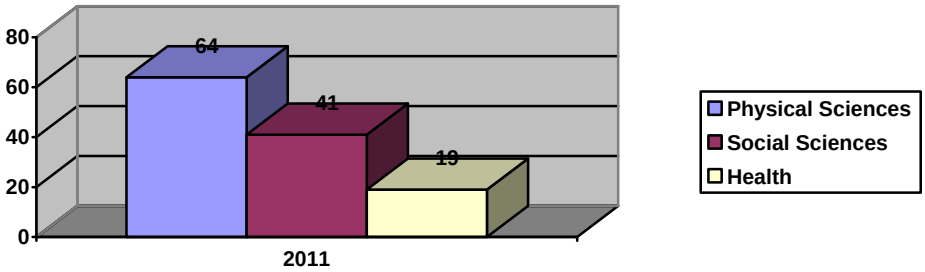
In this photo, the Hon. Daniel Shewchuk, Minister Responsible for Nunavut Arctic College cuts the ribbon with Arviat Inuit Elder Mary Anowtalik.

SERVICES AND SUPPORT FOR LICENSED SCIENTIFIC RESEARCH

The Nunavut Research Institute provides a range of research and advisory services supporting research across the territory. Support services include:

- Research regulatory advice (e.g. identification of permit requirements for field projects);
- Identification of research field support services (referrals for interpreters, field assistants, accommodation, etc);
- Organization of research presentations and outreach activities in Iqaluit;
- Advice on communication, training, and community engagement initiatives;
- Support for research development, including proposal review, brokering partnerships, and identification of project funding sources

SUMMARY OF 2011 RESEARCH PROJECTS IN NUNAVUT



NUNAVUT RESEARCH INSTITUTE FACILITIES

Nunavut Research Centre and Iqaluit Science Campus

The Nunavut Research Institute provides logistical support services and resources to licensed researchers at their headquarters and Science Campus facilities in Iqaluit:

NRI also maintains a supply of field gear and safety equipment (ice augers, -40C rated sleeping bags, winter boots and coats, tent, camp stoves, immersion suits, SPOT personal locator devices, GPS devices, satellite phones, etc.)

Services and Equipment include:

- Physical, Social Sciences and Health Research
- Wet laboratory with chemical fume hoods*
- Accommodation and meals at Nunatta residence*
- Shower and laundry facilities
- Telephone, fax, printing, copying*
- Wireless internet access and research work stations
- Meeting rooms with presentation screens
- Whisper interpretation kits
- NRI Circumpolar Research library
- Warehouse storage (unheated) - short and long term*
- ATV and snowmobile rentals

Rankin Inlet Research Laboratory

The Cambridge Bay Research Laboratory is customized to support physical sciences and health research through the provision of clinical and laboratory facilities.

Cambridge Bay Research Laboratory

The Cambridge Bay Research Laboratory is customized to support physical sciences and health research through the provision of clinical and laboratory facilities.

Arviat Traditional Knowledge Research Centre

The Arviat Research Support Centre provides support for social sciences and traditional knowledge research with an emphasis on new media production and publishing.

- Social Sciences and Traditional Knowledge Research
- New media video production and editing suites
- Accommodation for up to six residents *
- Shower and laundry facilities
- Telephone, fax, printing, copying *
- Wireless internet access and research workstations
- Meeting rooms with presentation screens
- Whisper interpretation kits
- Translation and Interpretation services *
- Teleconferencing and video conferencing services *
- Warehouse storage - short and long term *

Igloolik Research Residence

The Igloolik Research residence is designed to support up to six visiting researchers. On-site kitchen, shower, laundry and storage facilities.

Nunavut Arctic College Community Learning Centres

Nunavut Research Institute facilities and services are compimented through the support of Nunavut Arctic College's network of Community Learning Centres and regional Campuses in Iqaluit, Rankin Inlet, Arviat and Cambridge Bay.

For more information …

For more information on research support services, facility bookings and fees contact:

Manager, Scientific Support Services
Nunavut Research Institute
Box 1720 Iqaluit, NU XOA OHO
Phone: 867-979-7280 Fax: 867-979-7109
Rick.armstrong@arcticcollege.ca

** denotes services that may be subject to user fees. Please consult the user fee table below for our current rates*

2011
HEALTH SCIENCES
RESEARCH IN NUNAVUT

A Review of Nunavut Oncology Patients Treated at the OttawaHospital Cancer Centre

License Number: 01 095 11Registry
Principal Investigator: Asmis, Timothy
Affiliation: Ottawa Hospital Cancer Centre
Ottawa, Ontario K1H 8L6
tasmis@ottawahospital.on.ca

Number in Party: 2
Research Area: South Baffin
Communities: Iqaluit

Summary:

The Ottawa Hospital Cancer Centre serves as the referral center for the eastern region of Canada's territory, Nunavut. The treatment of malignancy is usually not performed in the territory, rather patients travel great distances to Cancer Centers in Ottawa, Winnipeg or Edmonton.

A review of all patients referred to the Ottawa Hospital Cancer Center between January 2002 and December 2010 was completed in April 2011.

Through the collection of information regarding demographics, disease site, stage, treatment, barriers to treatment, distance from home, and use of translation services we were able to describe the unique challenges of the residents of Nunavut in dealing with cancer in order to improve their access to quality care.

However, incomplete data within our system has prevented us from fully understanding the data collected.

An evaluation of the potential effectiveness of tobacco-related health messages among Inuit in Nunavut, Canada

License Number: 01 019 12Registry
Principal Investigator: Costello, Mary Jean
Affiliation: University of Waterloo
School of Public Health & Health Systems
Waterloo, Ontario N2L 3G1
mjecoste@uwaterloo.ca

Number in Party: 4
Research Area: South Baffin & Kivalliq
Communities: Iqaluit, Rankin Inlet

Summary:

The main purpose of this research project is to examine how Inuit respond to tobacco-related health messages and examine the types of message characteristics that might work best. About 150 participants will take part in a face to face interview where they will be asked questions about their tobacco use. They will then be shown a series of tobacco-related health messages and asked to rate how they make them feel.An experimental design will be used to test four message characteristics.

An exploration of the perspectives of youth and parents on ways of knowing and learning about sexual health and relationships in Nunavut

License Number: 01 097 11N-M
Principal Investigator: Healey, Gwen
Affiliation: University of Toronto
School of Public Health
Iqaluit, NU X0A 1H0
healey@qhrc.ca

Number in Party: 1
Research Area: Nunavut Wide
Communities: Iqaluit, Arviat

Summary:

The research questions include: Where does the STI burden lie in Nunavut (gender and age group)? What are types of knowledge and beliefs about sexual health and relationships are valued by youth and parents of

youth in Nunavut? And what do youth and parents identify as their preferred ways to learn about and share knowledge about sexual health and relationships? I hypothesize that the rapid cultural change experienced by Inuit in this region over the last several decades has led to a displacement of responsibility for the education and guidance of young people with regards to negotiating sexual relationships and partnerships.

The specific aims of this project are to:

1) To analyze the data available from Nunavut H&SS regarding reportable sexually transmitted infections Gonorrhea and Chlamydia.

2) To collect and analyze the perspectives of youth and parents of youth on the current and preferred sources of knowledge and guidance about sexual health and relationships. I will use the Grounded Theory Research method.

Arviat Healthy Homes and Public Health Youth and Elders Community Survey

License Number: 03 061 11N-A REGISTRY
Principal Investigator: Healey, Gwen
Affiliation: Qaujigiartiit Health Research Network
Iqaluit, Nunavut X0A 0H0
gwen.healey@qhrc.ca
Number in Party: 4
Research Area: Kivalliq
Communities: Arviat

Summary:

Arviat has long been a community proactively working for improvements and increased owner-ship in programs which impact their lives. Since the creation of Nunavut, the Arviat Health Committee has had a community wellness plan that targets specific community-identified health issues and is based on community-initiated research findings and locally developed programs.

The community Health Committee works closely with the Arviat Hamlet Council and other community agencies to ensure that efforts to address health and wellness issues are collabora-tive and well supported across the community.

In September 2008, during the Arviat Health Summit, the idea for the Healthy Homes initiative was developed in response to the devastating outbreak of CA-MRSA.

During the summit discussions, the message was adopted that it is up to each family to ensure its own health, to provide a healthy home for children and to be aware of how to prevent illness.

With no formal access to public health education in the community, the decision was made to launch a program directed at examining the existing conditions which lead to high rates of communicable disease in the community and at providing information that will promote prevention and changes in personal health habits.

Burden of Self-reported Acute Gastrointestinal Illness in Iqaluit

License Number: 01 098 11N-M
Principal Investigator: Harper, Sherilee
Affiliation: University of Guelph
Department of Population Medicine, Ontario Veterinary College
Guelph, Ontario N1G 2W1
harpers@uoguelph.ca
Number in Party: 5
Research Area: South Baffin
Communities: Iqaluit

Summary:

We are conducting a survey to estimate the prevalence of acute gastrointestinal illness (e.g. diarrhoea and vomiting) in your community.

In this study, community members will be asked a number of questions, including questions about health information, food and water consumption habits, animal ownership, leisure activities, and demographic information.

We would like to investigate what might cause gastrointestinal illnesses in your community in order to reduce this illness in your community.

CanMEDS Portfolio Project

License Number: 01 012 13Registry-Amended
Principal Investigator: Cooke, Robert
Affiliation: Centre for Addiction & Mental Health
Ontario Psychiatric Outreach Program
Toronto, Ontario M5T 1R8
Canada
robert_cooke@camh.net

Number in Party: 4
Research Area: Baffin Island
Communities:
Arctic Bay, Cape Dorset, Clyde River, Hall Beach, Iqaluit, Kimmirut, Nanisivik, Pangnirtung, Qikiqtarjuaq, Resolute Bay, Grise Fiord

Summary:

The Projects ultimate goal is to ensure that residents derive maximum benefit from unique educational opportunities in the northern setting of Baffin Island using the CanMEDSA roles, and through that means, to improve the quality of care offered to the residents of Baffin Island.

Climate change, key traditional food species and community health in Nunavut

License Number: 0401205N-M
Principal Investigator: Chan, Laurie
Affiliation: McGill University
MacDonald Campus
Ste. Anne de Bellevue, Quebec
H9X 3V9
laurie.chan@mcgill.ca

Number in Party: 4
Research Area: Kitikmeot, Kivalliq
Communities: Kugaaruk, Repulse Bay

Summary:

The proposed research is to identify changes in availability and access of key food species in two Nunavut communitities, Kugaaruk, and Naujaat and to project nutrient intake and health impacts.

We will also help the communities to create an adaptation plan. Our study aims to understand how changes in key species abundance and access, is related to health (focused on nutrient intake, but also concerning social, mental, spiritual, and aspects of health).

Are the hunting seasons longer of shorter? How does this change the number of animals harvested in each community? How does this affect community distribution of food and thus nutrient intake and overall health?

These are some of the key questions guiding our study. The study will involve several days of interviews, use of maps, and focus groups with informed individuals from the communities in the spring of 2005.

This project will be carried out in collaboration with the communities at all stages of the project to ensure correct representation and appropriateness of knowledge shared.

A preliminary workshop to be organized by the Inuit Tapiriit Kanatami in winter of 2005 will be the basis for what environmental change is currently affecting the community. This preliminary visit will allow us to identify community concerns and focus our hypotheses and our research tools in this direction.

The results of our study will be vital in developing an adaptation plan to achieve required nutrient levels that promote optimum health in the face of climate change. Furthermore, it will bring to light the link between overall health and traditional key food species in each community.

Development and Evaluation of a Rapid Multiple Target Nanolitre Real Time PCR Panel to detect food and water borne infections in residents of Nunavut

License Number: 01 072 11R-M
Principal Investigator: Goldfarb, David
Affiliation: McMaster University Medical Centre
Hamilton, Ontario L8N 3Z5
dgoldfarb@cheo.on.ca

Number in Party: 5
Research Area: South Baffin
Communities: Iqaluit

Summary:

There are widespread concerns about the risk of bacterial, viral and parasitic infections due to unsafe food and water in Canada, which have been demonstrated by the recent outbreak of Listeria

through contaminated foods. The problem of potentially unsafe food and water is particularly critical in Northern Aboriginal communities, due to issues such as potentially contaminated water supplies, and overcrowding in homes, where a food or water borne infection may spread from the sick person to other family members.

These infections can cause diarrhea, vomiting, stomach pain and fever. In some cases, severe complications such as kidney failure, anemia (low blood), arthritis, and paralysis can result from these infections. We believe that in order to prevent these infections, we first need to know which infectious agents are responsible. The ability of labs to diagnose many of these infections is currently believed to be very poor.

This is because labs presently look for only a small number of germs known to be common in the south and the harsh weather conditions and long transit times may reduce detection rates for sought after pathogens in Northern communities.

Follow-up of Universal Vaccination Against Hepatitis B Virus in the Canadian North

License Number: 01 034 12Registry
Principal Investigator: Uhanova, Julia
Affiliation: University of Manitoba
Department of Internal Medicine
Winnipeg, Manitoba R3E 3P5
julia.uhanova@med.umanitoba.ca
Number in Party: 3
Research Area: Kivalliq,South Baffin
Communities: Rankin Inlet,Iqaluit

Summary:

This study will document and/or provide estimates of::

1) the coverage of residents of Nunavut who were candidates for universal HBV vaccination programs since they were instituted in 1992,

2) the percent of the population who did not acquire protection against HBV (either as a result of not participating or inadequate response to the vaccine) and funding permitting, more current estimates of:

3) the prevalence of HBV and 4) HCV infection in Nunavut.

Gathering Community Perspectives on Infant Sleeping Practices in Nunavut

License Number: 05 060 11N-M
Principal Investigator: Arbour, Laura
Affiliation: University of Victoria
UBC Dept. of Medical Genetics
Victoria, BC V8W 2Y2
larbour@uvic.ca
Number in Party: 5
Research Area: South Baffin, Kivalliq, Kitikmeot
Communities: Arviat, Cambridge Bay, Iqaluit

Summary:

Nunavut has the highest rate of infant deaths (deaths until 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 chance of SIDS. Sleeping practices that can make a difference include the position the baby is put to sleep in and other aspects such as sleep surfaces, other people in the same bed as the baby, etc. In partnership with Nunavut Tunngavik Inc (NTI) and the Arctic Health Research Network (AHRN), 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.

Healing the social body: A community-based approach to mental health policy.

License Number: 0400106R-M
Principal Investigator: Donaldson, Shawn
Affiliation: Carleton University
Department of Geography and Environmental Studies
Ottawa, ON K1S 5B6
sdonald2@connect.carleton.ca
Number in Party: 1
Research Area: South Baffin
Communities: Cape Dorset

Summary:

I would like to gain a better understanding of community perspectives on how to understand and promote mental health and prevent mental illness. Particularily, I would like to better understand the role that cultural concepts of mental health, connections to nature, identity and traditional values play in mental health and the prevention of mental illness. This can be used to examine the governments approach to address mental health issues to see if it reflects Inuit views and knowledge. This research will use qualitative methodology in conjunction with official statistical data. I hope to do interviews with community members, public health officials, nurses, doctors, psychologists and psychiatrists.

Improving tuberculosis diagnosis in vulnerable populations:impact and cost-effectiveness of a novel, rapid molecular assay

License Number: 01 017 12Registry
Principal Investigator: Alvarez, Gonzalo
Affiliation: Ottawa Hospital Research Institute
Ottawa, Ontario K1Y 4E9
galvarez@ohri.ca
Number in Party: 3
Research Area: South Baffin
Communities: Iqaluit

Summary:

Tuberculosis is an important public health problem in Canada among immigrants and Aboriginal populations.

Currently, Nunavut is facing the largest TB outbreak in the territory's 10 year history. One of the biggest challenges for TB control is early diagnosis. Many TB cases are detected late and this results in the spread of the infection in the community.

Currently used TB tests are either inaccurate or not rapid enough. Better diagnostic options are urgently required, so that the spread of TB can be contained.

Recently, the World Health Organization announced its endorsement of a novel molecular test for TB - the Xpert MTB/RIF test, a cartridge -based, completely automated test, which can accurately detect TB and drug resistance in less than 2 hours, and can be performed without laboratory expertise.

Improving tuberculosis diagnosis in vulnerable populations:impact and cost-effectiveness of a novel, rapid molecular assay

License Number: 01 100 11N-Mregistry
Principal Investigator: Alvarez, Gonzalo
Affiliation: Ottawa Hospital Research Institute
Ottawa, Ontario K1Y 4E9
galvarez@ohri.ca
Number in Party: 3
Research Area: South Baffin
Communities: Iqaluit

Summary:

Tuberculosis is an important public health problem in Canada among immigrants and Aboriginal populations.

Currently, Nunavut is facing the largest TB outbreak in the territory's 10 year history. One of the biggest challenges for TB control is early diagnosis.

Many TB cases are detected late and this results in the spread of the infection in the community. Currently used TB tests are either inaccurate or not rapid enough.

Better diagnostic options are urgently required, so that the spread of TB can be contained. Recently, the World Health Organization announced its endorsement of a novel molecular test for TB - the Xpert MTB/RIF test, a cartridge -based, completely automated test, which can accurately detect TB and drug resistance in less than 2 hours, and can be performed without laboratory expertise.

Palliative Care and the Kivalliq Region of Nunavut: Determinants of Programme Development and Implementation

License Number: 0301003N-A
Principal Investigator: Martin, Bruce
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Number in Party: 0
Research Area: North Baffin:

Summary:

The ultimate objective of this study is to identify the broad determinants of palliative care programme development and implementation in the Kivalliq Region of Nunavu.

This objective will be achieved in the following dimentsions:

1. Conduct a survey of the literature regarding specific emphasis on cross-cultural and remote settings;
2. Identify the broad determinants for current and sustained palliative care programming;
3. Identify the requisite supports for palliative care by conducting an environmental scan of the current health and social services system with a Nunavut-specific focus;
4. Identify Canadaian Inuit beleifs on death and dying by reviewing existing literature, and aupplementing this with information from key informants;
5. Conduct focused interviews of patients and family "units of care" regarding end of life care from both a cultural and needs-based perspective; and
6. Conduct surveys and interviews of health and social service providers to gain their perspective on palliative care programme development and implementation.

Taima TB

License Number: 01 018 12Registry
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Number in Party: 2
Research Area: South Baffin
Communities: Iqaluit

Summary:

The TAIMA TB project was developed to expand and increase awareness of TB in Iqaluit.

It also set out to test a novel approach to latent TB infection screening and treatment through a door-to-door education, screening and treatment campaign in residential areas at high risk for TB.

Latent TB infection can develop into active TB disease. Treatment of latent TB infection can significantly diminish the number of people who go on to have active TB disease. TAIMA TB implemented and evaluated this project in Iqaluit with a view to enhance the existing preventative efforts in the fight against tuberculosis (TB) in Nunavut.

TAIMA TB is the translation of Stop TB in the local dialect of Inuktitut.

The Viral Hepatitis Northern Network: A Platform for Adressing Viral Hepatitis in the Canadian North

License Number: 05 066 11R-M
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Number in Party: 0
Research Area: Nunavut wide
Communities: All Nunavut communities

Summary:

Viral hepatitis is a common health problem in the Canadian north. This study consists of three parts.

In part 1, the investigators will develop and distribute computer-based medical software programs that will enable health care providers throughout the North to identify and manage subjects with chronic viral hepatitis.

The same programs will serve as the basis for a National Northern Database from which trends in viral hepatitis will be identified and monitored.

Part 2 consists of analyzing the most common form of the hepatitis B virus in the Canadian North and comparing the results with analysis of the virus present in Alaska. This work will help to determine why cirrhosis and liver cancer are more common in hepatitis B infected individuals from Alaska compared to Northern Canada.

In the final part, the investigators will contact and assess individuals who were found infected with the hepatitis B virus in the late 1970s and early 1980s to determine whether their infection is still present and whether it has resulted in any health problems and specifically, liver disease over the intervening 25-30 years.

In order to accomplish this, subjects will undergo a complete history and physical examination (including an ultrasound of the liver) and blood testing for signs of advanced liver disease and liver cancer.

Overall, this project will improve the quality of care provided to subjects with chronic hepatitis B and offer important insights into our understandings of this common health problem. The only field work required will be investigator visits to 2-3 northern communities to perform patient assessments. Although the project will continue from 2007 to 2011, the field work and training of northern health care providers will be accomplished within one year(April 1/08 to April 1/09).

Utilization of Prenatal Genetic Screening, Ultrasound and Diagnostic Testing in Nunavut, Canada

License Number: 05 069 11N-A
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Number in Party: 2
Research Area: Nunavut Wide
Communities: All Communities

Summary:

The Nunavut Maternal and Newborn Health Care Strategy seeks to build healthy families and communities with a focus on improving health through prevention. The proposed strategy states that there is a need to improve maternal and newborn health care service capacity in Nunavut. Unique challenges in Nunavut include the highest teenage pregnancy rate in the country, an increased incidence of tobacco and alcohol exposure during pregnancy, and prominent family and emotional problems. The strategy also emphasizes the need to improve perinatal and child health surveillance and monitoring. It is recognized that it is essential for a range of providers involved in maternal and newborn care to be recognized and supported and work as a team.

What are the current practices, attitudes and support systems related to breastfeeding among mothers of infants less than two years of age living in Repulse Bay?

License Number: 03 057 11N-A-Registry
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Number in Party: 6
Research Area: Kivalliq
Communities: Repulse Bay

Summary:

Our research aims to gain a better understanding of the current breastfeeding practices and attitudes as well as the support systems for breastfeeding in Repulse Bay. Researchers will conduct individual face-to-face interviews and medical chart reviews to collect data.

Participants will be recruited via 1) collaboration with health centre staff in distributing information to mothers during postnatal visits 2) radio announcements and poster advertising throughout the community 3) information booths at the health centre, church and school.

Recruitment announcements and posters will be in both English and Inuktitut languages. Participants will be informed of the purpose and procedures of the study and asked to sign the consent form acknowledging confidentiality and agreeing to participate. Parental consent will be obtained for adolescents under the age of 18. A translator will be available to assist during interviews if needed.

Youth Driven Development in Aboriginal Communities – Impact Evaluation of the Active Circle Initiative.

License Number: 01 027 12Registry
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Number in Party: 9
Research Area: Qikiqtani
Communities: Iqaluit

Summary:

The goal of this part of the project is to gather information from youth participants on how they perceive the idea of youth development. This information will be used to develop a survey tool aimed at getting more specific information about youth development from an Aboriginal perspective. The hope is that the new survey tool can then be used to help measure the impact of programs like Active Circle.

2011
PHYSICAL SCIENCES
RESEARCH IN NUNAVUT

2011 Hackett River Baseline Program

License Number: 04 040 11R-M
Principal Investigator: Muggli, Deborah
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Number in Party: 24
Research Area: Kitikmeot
Communities: Cambridge Bay

Summary:

Sabina Silver Corporation is exploring a significant metal deposit located near the Hackett River in Nunavut. The majority of the sampling will be restricted to the mine footprint, although samples will be taken along a proposed access route, along a alternative access route, and from reference areas removed from the mine site.

Additional baseline studies will be conducted near the BIPR port site, along portions of the BIPR road and possibly within Bathurst Inlet.

The proposed research includes characterizing the aquatic biology and water quality of the site; characterizing terrestrial vegetation and soils; collecting baseline information on wildlife in the area; determining water drainage patterns; monitoring the permafrost in the area; characterizing the local climate; and assessing the ptential for metal leaching or acid rock drainage.

This work is being done to provide baseline characterization in the area to support future Environmental Impact Assessment. Data collected in 2007 will also be used to help plan future project infrastructure.

2011 Hope Bay Belt Enviro. Baseline Program

License Number: 04 039 11R-M
Principal Investigator: Muggli, Deborah
Affiliation: Rescan Enviro. Services
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Number in Party: 19
Research Area: Kitikmeot
Communities: Hope Bay Belt

Summary:

Newmont Mining Corporation is exploring significant metal deposits near Hope Bay, Melville Sound, Nunavut. The area includes three main deposits; Doris, Madrid, and Boston. The Doris deposit has been previously permitted to become a mine, but Newmont would like to continue baseline studies in the area in case of further development and to meet fisheries data collection commitments.

A map of the sampling area is included with this proposal. The majority of the sampling will be restricted to potential deposit areas and access corridors, and from reference areas.Sampling will also be conducted in the marine environment for potential future marine access.

The proposed baseline research program is to be conducted between April 15, 2009 and April 15, 2010, but the same baseline studies may continue in subsequent years and we area therefore asking for a 3 year multi year permit. Baseline studies will include the following environmental components:

- local climate and air quality conditions
- marine and freshwater water and sediment quality
- marine and freshwater aquatic biology
- marine and freshwater fish communities
- water quantity and flow patterns
- terrestrial vegetation and soils
- wildlife

AEI - Roche Bay Magnetite Project - Fresh Water Monitoring

License Number: 02 103 11R-M
Principal Investigator: Moore, Steve
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Number in Party: 6
Research Area: North Baffin
Communities: Roche Bay (Hall Beach)

Summary:

Sampling will be conducted according to standardized water quality guidelines, which includes a QA/QC program. Water samples will be collected at Roche Bay in June, July and August. The locations of water sampling stations will predetermined and a Global Positioning System (GPS) will be used to locate all stations.

Water quality samples will be collected for standard analytical parameters including ultra-low dissolved metals, ultra-low total metals, major ions, low-level nutrients and inorganics.

ALS Environmental (ALS) of Edmonton will prepare the water sampling bottles for all water sampling events. All samples will be transported in portable coolers with ice packs.

In the field, powder-less latex gloves will be worn during handling of bottles and equipment to minimize contamination. All bottles will be rinsed three times with the source water (i.e. the same water the bottle will be filled with) prior to water collection. To minimize trace metals contamination from the filters, filters were rinsed three times with source water prior to filtering the sample water.

As part of a Quality Assurance/Quality Control (QA/QC) program, travel blanks will be used; field blanks and duplicates will be collected and filter blanks submitted. Duplicates will be collected to test the validity of sampling procedures and laboratory methodology.

An Integrated Assessment of Contamination and Biological Response in Airport Creek, Iqaluit Nunavut

License Number: 01 078 11N-M
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Number in Party: 6
Research Area: South Baffin
Communities: Iqaluit

Summary:

Recent residential, commercial and industrial development in the catchments of several Arctic streams has heightened the need to accurately assess these freshwater systems.

Several streams in Iqaluit, Nunavut are known to be exposed to several potential sources of contamination, including; run-off and leaching from municipal landfill sites and sewage containment areas, hydrocarbon and chemical spills (waste oil, fuel, lubricants, de-icing liquids), industrial activity, residential waste, stream channel diversion (that often accompanies road construction), and increased sedimentation from gravel haul operations.

The residents of many Arctic communities drink water from local streams and rivers, as well as harvest sea-run and land-locked char that utilize these freshwater streams for food and spawning.

As the health of community residents depends on ecosystem condition much more directly than is typical of North American settlement areas, these systems are fundamentally important for community well-being.

An investigation of the sensitivity of high Arctic permafrost to climate change

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Number in Party: 10
Research Area: North Baffin
Communities: Ellesmere Island,Axel Heiberg Island

Summary:

This project looks at the impact of climate change on high arctic permafrost conditions and high arctic landscapes. The aims of this project are:

1. to monitor climate conditions for different types of landscape (eg tundra, mountains, coasts, wetlands ...) and assess how much the climate is changing,
2. to determine the amount and rate of landscape change caused by warming and melting permafrost, and
3. to map these changes from for the period 2007-2011. The information collected in this study will improve our general understanding about climate and permafrost as well as help to predict how the land will respond as climates warm.

This study also contributes new information about high Arctic permafrost and ground ice conditions, the sensitivity of high arctic permafrost to climate change and background data upon which landscape changes can be documented.

Another component of this project looks at long-term changes in high Arctic landscapes by looking at how rock surfaces are being weathered and eroded. This research will help northern understand how landscapes are changing and will change in the future.

Architecture, evolution and metallogeny of Mesoproterozoic sedimentary basins of the eastern Canadian Arctic Islands

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Research Area: North Baffin
Communities: Adams Sound, Society Cliffs, Fleming Inlet, Paquet Bay

Summary:

The project will focus on limestone/ dolostone (known to contain Zn-Pb±Cu±Ag deposits on northern Baffin Island) and sandstone/ conglomerate (potential U hosts) in three Mesoproterozoic (1.6 to 1.0 billion years ago) sedimentary basins of northern Nunavut.

This project will make major contributions in two areas:

1. defining the economic prospectivity of the Mesoproterozoic basins of northeastern Nunavut by identifying features that may have contributed to concentrating metals;
2. contributing to the international literature on the nature of early Earth's oceans and biotas, prior to the advent of multicellular life or life on land; and reconstructing the structural, stratigraphic and sedimentological configuration of three basins that are presumed to have been parts of a low-latitude continental margin about 1.2 billion years ago.

Arctic Carbonates

License Number: 02 099 11R-M-Amended
Principal Investigator: Beauchamp, Benoit
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Number in Party: 5
Research Area: North Baffin
Communities: Ellesmere Island

Summary:

We will investigate the role played by ocean acidification in the global transformation of carbonate rocks across the late Paleozoic-early Mesozoic transition, some 251 million years ago, when pCO2 levels rose from modern-like value to 5x to 10x modern values.

We will focus on an area of the Sverdrup Basin centered on Raanes Peninsula, SW Ellesmere Island, where this phenomenon is well displayed in outcrops.

Goals and objectives

The project will address two issues of importance to understand the phenomenon of oceans acidification in the distant past in the Sverdrup Basin:

1. Ancient reefs. The focus of this project is to examine outcrops of large ancient reefs west of Blind Fiord, on Raanes Peninsula, SW Ellesmere Island.
2. Sandstone-carbonate units. The focus of this project is to examine outcrops of carbonates and sandstones east of Blind Fiord, on Raanes Peninsula, SW Ellesmere Island.

Method of transportation:

Twin Otter transportation from Resolute Bay to Eureka or strips designated by PCSP

Helicopter transportation to study area.

Walk from camp site to outcrops

Structures to be erected:

Only four temporary personal tents will be erected at the different camp sites.

Restoration/abandonment plans:

Each camp site will be restored to its original conditions. All garbage will be gathered and shipped back to Resolute.

Methodology:

Collection protocol and mechanism

About 50 small rock samples (less than 0.5 kg each) will be collected for geochemical analysis. Samples will be collected with a geological hammer and will be catalogued and preserved in Calgary by the Geological Survey of Canada. No fossils will be collected.

Data:

Use of data:

In the short term, the data will be used in support of the work of the researchers and the graduate students. The data will then be published in peer-reviewed journals, after which it will be made publicly available through the GSC to anyone who wishes to use it.

Reporting

Three to five peer-reviewed papers will result from this project. The results that are relevant to Arctic Institute of North America's outreach initiative.

Arctic marine Ice-associated ecosystem in a Changing Environment (Arctic-ICE)

License Number: 02 096 11R-M
Principal Investigator: Gosselin, Michel
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Number in Party: 9
Research Area: North Baffin
Communities: Resolute Passage`

Summary:

Climate warming has induced rapid change on the ice-covered marine ecosystem of the high Arctic. In this project we will investigate physical and biological processes controlling the timing of marine primary production, which has been hypothesized as an indicator of potential change in the ecosystem.

We plan to conduct scientific research near Resolute Bay, Nunavut, this spring (2010) and next spring (2011). We are a group of researchers who are specialized to study the sea ice ecosystem.

As part of this larger study, we will collect data to study the response of the sea ice to weather and oceanographic forcing. We hope to undertake this research in Resolute Passage west of Allen Bay (see below), for a period of about two months (May and June). During this time, we hope to set-up two heated tents on the ice for our equipment. Our sampling will involve installing automated electronic sensors on the ice that will monitor the weather and ocean properties and currents.

Regular sampling will involve the use of ice corers, augers and ocean samplers. While at the camp, we will operate 2 generators for power supply and drip diesel furnaces for heating.

We plan to live at the Polar Continental Shelf Project base near the Resolute Bay airport and travel by snowmobile to our sampling site every day, dependent on weather.

Arctic Ocean Climate Change Project

License Number: 02 135 11R-M
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Number in Party: 6
Research Area: North Baffin
Communities: Barrow Strait

Summary:

An oceanographic study in the eastern end of Barrow Strait has provided continuous measurements of water current, temperature and salinity from August 1998 to present, under successive NRI Research Licenses, the most recent being 0204508R-M.

The objective of the work is to quantify and understand the variability of the heat and fresh water movement between the Arctic Ocean and the Northwest Atlantic to better understand global warming impacts.

Measurements, combined with modeling studies, are being used to determine how the interactions between these oceans affect the local, regional and global climate systems.

The data collected also provide information for improving on the safety and efficiency of sea transportation and resources development in the high Arctic.

In recent years, the program has expanded to include biological measurements (phytoplankton and zooplankton) to examine how changes in the physical environment may impact on the ecosystem. This physical and biological oceanographic monitoring program continues in 2009 to provide an extended continuous time series of data that can be examined for trends linked to climate change.

ArcticNet 2011 Expedition: Integrated Regional Impact Study of the Canadian High Arctic

License Number: 05 065 11R-M
Principal Investigator: Levesque, Keith
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ArcticNet
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Number in Party: 43
Research Area: Nunavut Wide
Communities: North & South Baffin , Kivalliq and Kitikmeot

Summary:

The main objective of the proposed research project is to assess the changes occurring in the Eastern 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 planned to take place from 15 October to 10 November.

Shipboard sampling will be carried out along the ship track and at designated sampling stations in the Northwest Passage, Lancaster Sound, northern Baffin Bay and Hudson Strait (see Figure 1-2).

Shipboard operations will include mapping the ocean floor with sounding technologies, meteorological measurements and the sampling of seawater, sediment, sea ice, plankton and juvenile fish.

The quantity of organisms sampled will be ecologically insignificant and will have no impact on the resource. A small launch vessel (< 10 m) will also be used to measure the physical characteristics of the water column such as mixing occurring in the surface layer.

The vessel will conduct short term day-time (under 4 hours) sampling operations and return to the Amundsen daily. Samples taken during the 2009 expedition will cover almost all natural science fields, including geology, chemistry (e.g., contaminants), biology, oceanography and meteorology.

AREVA Kiggavik-Sissons Project Aquatic Baseline Program

License Number: 03 058 11R-M
Principal Investigator: Hamilton, David
Affiliation: Golder Associates Ltd.
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Number in Party: 9
Research Area: Kivalliq
Communities: Baker Lake

Summary:

AREVA Resources Canada Inc. (AREVA) proposes to construct and operate a uranium mine located in the Kivalliq region of Nunavut, southeast of the Thelon River.

The Kiggavik-Sissons Project is at the surface exploration phase. The project is made of two large groups of mining leases and mineral claims subdivided into Kiggavik to the north and Sissons to the south.

Field personnel will be transported to camp by helicopter. Lakes and streams will be accessed by boat and helicopter.

Astronomical Site Testing on Ellesemere Island

License Number: 02 122 11R-M
Principal Investigator: Steinbring, Eric
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Victoria, BC V9E 2E7
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Number in Party: 4
Research Area: North Baffin
Communities: Ellesmere Island

Summary:

Astronomy requires clear, dry, cold skies. So, not surprosingly, telescopes have been built on some of the most remote mountains on Earth, to get above the clouds and away from the pollution of cities. It is thought that the best views of the cosmos may come from mountaintops in the Canadian high Arctic.

Four in the Yelverton Bay area seem to be particularly good. Satellite images confirm this. But that needs to be verified by measurements from the mountain peaks themselves.

We propose placing a small fobotic weather station on three of these. The station also has a camera which would make pictures available on the internet via satellite.

Everything is wind powered. Each station is about the size of a person, and in some sense is like an inukshuk. It acts as a path-finder, pointing to a good place to see the stars. To minimize environmental impact, we would place the stations by helicopter, setting up camp on the Bay for 10 days or less.

We would fly in and out by Twin Otter: one scientist, one technician, and two students, one of whom would also be a local guide.

Over the winter the students would use the pictures to decide if the skies are clear enough. If they are not, the stations would be removed, possibly as soon as next summer. If conditions are good we would hope to continue for at least another season, to see if it makes sense to place a telescope on one of the mountains. At the moment there are no plans for this.

And any plan for a large research telescope would take many years to develop, allowing for ongoing consultation with local communities.

But if realized, it could bring forefront technology to Nunavut, enhance educational opportunities, and provide construction activity, all within a project that wants to preserve the pristine and unique environment of the region.

Baffin Island Weather Monitoring Project

License Number: 01 083 11N-M
Principal Investigator: Pfister, Shirley Standafer
Affiliation: Peregrin Diamonds Ltd.
Vancouver, British Columbia
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shirley@pdiam.com
Number in Party: 3
Research Area: South Baffin
Communities: Hall Peninsula

Summary:

Due to unpredictable variables, exploration, mining and other operations in Canada's Far North must not only deal with extreme weather but a climate influx because of global processes.

Weather monitoring is especially important for day-to-day operations at a remote exploration camp, for seasonal planning and for evaluating weather-related risks.

However, in such an extreme and remote environment, collecting environmental data is a daunting task. Automated sensors are an ideal solution, as they can survive and operate under extreme conditions, even when staff is not present to download information.

In order to research climate change in the Far North, meteorological stations are essential. During this research project,

Symboticware Incorporated of Sudbury, ON, will collect weather data for Peregrine Diamonds Ltd. at its Chidliak Project in its centrallylocated Discovery Camp on the Hall Peninsula, approximately 120km north of Iqaluit, NU.

The data collected will be used by Dr. Charles Ramcharan of Laurentian University in Sudbury, ON, for climate change research.

Canadian Arctic Buoy Program

License Number: 02 104 11R-M
Principal Investigator: Tremblay, Bruno
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bruno.tremblay@mcgill.ca
Number in Party: 3
Research Area: North Baffin
Communities: Byam Martin Channel

Summary:

We will deploy 3 ice buoys south of the Byam Channel and north of the M'Clintock Channel at the entrance of the Viscount Melville Sound on a multi-year sea ice floe.

The goal of the project is to collect data to calibrate a sea ice model of the Canadian Arctic Archipelago (CAA) to study the future sea ice conditions in the Canadian Arctic.

The buoys will be transported to the field using a Twin Otter operated by the Polar Continental Shelf Program. The buoy will be installed on the ice and have a life expectancy of 2 years. Next year, we will deploy 3 additional buoys and replace the battery in the buoys deployed this year.

The buoy may also be lost in a sea ice ridge or drift in a location where maintenance is not possible. One the three buoys is a drifting buoy which tends to wash ashore and be picked-up by passing vessels.

The deployment program is funded for 5 years – which means that we will perform such deployment for the next 5 years.

CANDAC – Canadian Network for the Detection of Atmospheric Change

License Number: 02 098 11N-M
Principal Investigator: Drummond, James
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Number in Party: 25
Research Area: North Baffin
Communities: 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.

CASE 12 Vednom Fiord

License Number: 02 115 11N-A
Principal Investigator: Piepjohn, Karsten
Affiliation: Federal Institute for Geosciences & Natural Resources
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Number in Party: 14
Research Area: North Baffin
Communities: Ellesmere Island

Summary:

In the field season in summer 2011, the German Federal Institute for Geosciences and Natural Resources (BGR) is planning the geoscientific expedition "CASE 12-Vendom Fiord" to the area between Strathcona Fiord and Vendom Fiord on southern Ellesmere Island. The field work will start by the beginning of August and will be terminated by the end of August 2011. The field work will be divided in (a) airborne aeromagnetic survey and (b) helicopter-supported geological field work. The field party will probably consist of 15 people including scientists, logistic staff and Inuit Polar bear monitors.

CATLIN ARCTIC SURVEY 2010 – Ice Base

License Number: 02 097 11R-M
Principal Investigator: Cunliffe, Chip
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UK
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Number in Party: 15
Research Area: North Baffin
Communities: Ellesmere Island

Summary:

The result of an increase in man-made CO entering the atmosphere is that 30% is being absorbed into

the seawater resulting in an increase in its acidity. 'Ocean Acidification' is a major concern as the hard shells of sea-life are starting to be dissolved, and in many cases shells are not developing at all.

Such acid conditions cause a loss of shell-fish, corals and plankton. This could have serious negative impacts on community and commercial fisheries, shoreline and tourism.

Goals and objectives –

1. Science: The Arctic is considered a crucial 'Early Warning System' for global ocean acidification.

However, research has been held up by the extreme conditions. We provide polar experts allowing international scientists (from Canada, USA, and Europe) to perform crucial biology and chemistry experiments on the progress of ocean acidification, sampling seawater below the sea-ice and on the northernmost edge of Ellesmere Island.

CATLIN ARCTIC SURVEY 2011 – Ice Base

License Number: 02 097 11R-M
Principal Investigator: Cunliffe, Chip
Affiliation: Geo Mission LTD
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Number in Party: 10
Research Area: North Baffin
Communities: Ellesmere Island

Summary:

The result of an increase in man-made CO entering the atmosphere is that 30% is being absorbed into the seawater resulting in an increase in its acidity. '

Ocean Acidification' is a major concern as the hard shells of sea-life are starting to be dissolved, and in many cases shells are not developing at all.

Such acid conditions cause a loss of shell-fish, corals and plankton. This could have serious negative impacts on community and commercial fisheries, shoreline and tourism.

Goals and objectives –

Science: The Arctic is considered a crucial 'Early Warning System' for global ocean acidification.

However, research has been held up by the extreme conditions. We provide polar experts allowing international scientists (from Canada, USA, and Europe) to perform crucial biology and chemistry experiments on the progress of ocean acidification, sampling seawater below the sea-ice and on the northernmost edge of Ellesmere Island.

Churchill Diamond Corridor Activity

License Number: 03 052 11R-M
Principal Investigator: Campbell, Janet
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Number in Party: 6
Research Area: Kivalliq
Communities: Wager Bay,Repulse bay

Summary:

The principal objectives of this project are to provide geoscience information on the surficial materials and the deep bedrock in the Repulse Bay - Wager Bay area (attached figure), in the form of geological maps and reports in support of economically effective and environmentally sound use of the terrain and materials.

These activities are part of a five year (2010-2014) multi-disciplinary and collaborative effort between geoscientists of Nunavut, Parks Canada and the Geological Survey of Canada to improve the regional geoscience knowledge base for the Wager Bay area.

he main outcomes of this project are to promote sustainable development of natural resources and increase economic self-sufficiency and work opportunities for northerners.

Climate change effects of a changing cryoshpere on Northern lakes

License Number: 05 061 11N-A
Principal Investigator: Prowse, Terry
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Water & Climate Impacts
Research Centre/Environment
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Number in Party: 6
Research Area: North Baffin
Communities:
Cornwallis Island, Axel Heiberg Island,Victoria Island, Ellesmere Island, Queen Maude Gulf

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 will be obtained by sampling of lake ice thickness during spring 2011. Sampling will be completed by contracted local staff/individuals at the lake site.

Field Reconnaissance for favorable lake locations around Cambridge Bay will be completed in May 2011. Deployment of the Arctic Lake Monitoring System buoy and mooring near Cambridge Bay is scheduled for late August, 2011.

Climate Change Hazard Mapping in Nunavut Communities

License Number: 01 092 11R-M
Principal Investigator: Mate, David
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Number in Party: 4
Research Area: South Baffin
Communities: Iqaluit,Pangnirtung

Summary:

This work is part of the Nunavut Climate Change Partnership lead by the Government of Nunavut, Department of Environment. To conduct this work a collaborative team has been created that consists of CNGO, GN, NRCan, Memorial University and Université Laval.

The purpose of this project is to evaluate existing and potential landscape hazards and the impacts climate change may have on infrastructure and resource development in communities across Nunavut. An intensive study will be conducted in Pangnirtung while reconnaissance studies will be conducted by this Project in several communities in 2009-10 (Arviat, Whale Cove, Cambridge Bay, Kugluktuk and Iqaluit)..

Fieldwork in support of this research includes community-scale surficial geology mapping, natural hazard assessment, and permafrost characterization in order to identify infrastructure at risk and landscape constraints on future development. Datasets that will be produced include surface sediment characteristics, permafrost and ground-ice content, geotechnical properties, thermal condition of the ground, hydrology and surface processes.

The goal is to integrate the above datasets to create a landscape hazard map for communities. This map will be a useful tool for planners and engineers in Nunavut.

Coastal hazards in an Expanding Urban Centre: Iqaluit, Nunavut

License Number: 01 094 11N-M
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Number in Party: 5
Research Area: South Baffin
Communities: Iqaluit

Summary:

The main purpose of this research is to understand the main components of coastal hazards in Iqaluit, Nunavut, so that the city has a detailed baseline of how the occurrence and severity of floods in the city will change under predicted climate shifts.

Community based seawater monitoring for legacy and current use organic contaminants in the Canadian, high Arctic Archipelago

License Number: 02 117 11N-A
Principal Investigator: Muir, Derek
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Number in Party: 6
Research Area: North Baffin
Communities: Resolute Bay

Summary:

In June 2007, 2008 and 2010 we analyzed seawater samples for important contaminants from the Barrow Strait region of the Canadian Arctic.

Samples were collected using portable pumps through holes in the sea ice. The sea ice conditions have been different every year, and we found lower concentrations of the contaminants during the year when there was no melt during sampling. This might mean

that the ice cover has an important effect on these contaminants.

Sampling in 2011 would also allow us to compare trends of these contaminants over several years, so we can see how they are behaving over time.

Dating the roots beneath northern Canada – Victoria Island

License Number: 04 047 11N-A
Principal Investigator: Pearson, Graham
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Number in Party: 5
Research Area: Kitikmeot
Communities: Tahoe Lake

Summary:

Our main goal is to collect geological samples, available at the surface, either as solid outcrop or loose weathered material, that will enable us to determine the age of the rocks underlying Victoria Island. This will enable us to determine whether Victoria Island was part of the same geological province (called the Slave craton) on the mainland, to the South.

Studying these rocks will tell us how the entire continent of northern Canada formed through geological time. This information will provide a framework that will clarify the resource potential on Victoria Island, that should be valuable to the community.

The project will form part of Pearson's research program under his Canada Excellence Research Chair:- Arctic Resources which has the broader goal of mapping the age and structure of the deep roots beneath Arctic Canada

Dynamics and Change of the Devon Ice Cap

License Number: 02 102 11R-M
Principal Investigator: Sharp, Martin
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Number in Party: 4
Research Area: North Baffin
Communities: Devon Island

Summary:

Project Description: The project goal is to describe and explain ongoing changes in the area, mass and flow of the Devon Island ice cap so that we can estimate its recent current and future contribution to changes in global sea level.

We are interested in how climate warming may cause faster flow of glaciers that end in the ocean, and how faster flow may lead to more mass loss by iceberg calving. Our work combines field studies with satellite and airborne remote sensing, and with modeling of ice cap flow and interactions with the atmosphere.

Our fieldwork involves calibrating and validating measurements made by remote sensing, and measuring changes in ice thickness, snow properties, glacier flow, meltwater production and runoff, and rates of iceberg calving. It provides us with data that we can use in our models.

We access the ice cap from Resolute Bay by PCSP Twin Otter or helicopter, and travel on the ice by snowmobile or helicopter. Each year we establish a base camp on the ice cap summit where we store food, equipment and fuel. Most work is carried out from mobile 2-person camps.

We install some instruments on or adjacent to the ice, but all will be removed at the end of the project so that the ice cap is left as we found it.

Ellesmere Island Teleseismic Experiment

License Number: 02 114 11R-M
Principal Investigator: Oakey, Gordon
Affiliation: Geological Survey of Canada(Atlantic)
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Number in Party: 3
Research Area: North Baffin
Communities: Ellesmere Island

Summary:

Purpose: The Geological Survey of Canada (GSC) has initiated a new Geomapping for Energy and Minerals (GEM) Program to identify new resources and stimulate economic growth in the Canadian Arctic.

Goals and Objectives: The GSC is planning to establish an array of passive observatories to measure seismic activity from naturally occurring earthquakes to map the regional variability of the earth's crust to better understand the development of the present-day topography and the formation of the Sverdrup Basin and polar continental margin.

Method of Transportation: The scientists plan to operate out of the Eureka Weather Station and make daily Twin Otter flights to the seismic station locations. Logistical support is being coordinated with the Polar Continental Shelf Program (PSCP).

Structures/Restoration/Abandonment: The seismic station units will be set up as temporary installations for the duration of the project. The stations will be revisited annually to refurbish the equipment. All equipment will be removed from the field at the end of the experiment.

Environment Canada Arctic Municipal Wastewater Research

License Number: 05 062 11N-M
Principal Investigator: Urbanic, Jane Challen
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Number in Party: 6
Research Area: Nunavut Wide
Communities: Gjoa Haven, Kugluktuk, Kugaaruk, Qikiqtarjuaq, Pond Inlet,Kimmirut, Clyde River, Rankin Inlet, Coral Harbour, Arctic Bay, Hall Beach, Sanikiluaq, Repulse Bay, Kimmirut, Iqaluit, Alert

Summary:

Environment Canada is conducting a study on wastewater treatment in communities of Canada's Arctic including sites in the Northwest Territories, Nunavut, Northern Quebec and Northern Labrador.

The purpose of this research is to assess the performance of sewage lagoons and wetlands in the treatment of municipal wastewater. In 2011 Environment Canada hopes to conduct extensive sampling at five municipal wastewater systems and less intensive sampling at other treatment systems in Nunavut if funding permits.

Researchers will travel to sampling sites via commercial flights. No permanent or temporary structures will be erected as a result of this research program. Due to the minimal impact of this research there are no plans for restoration or abandonment.

Environmental Baseline Data Collection, Meliadine Gold Project

License Number: 03 056 11N-A
Principal Investigator: Witteman, John
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Number in Party: 6
Research Area: Kivalliq
Communities: Rankin Inlet,Meliadine Site

Summary:

The purpose of the project is to collect baseline data in support of an Environmental Impact Statement being prepared for the Meliadine Gold Project. The goal is to collect sufficient information to characterize the "before development" of areas likely to be impacted by the development of the mine.

Local roads will be used in Rankin Inlet to access the Itivia barge landing area with a boat and driver rented in town. An Inuit assistant will be hired to participate in sample collection.

The Meliadine site is 25 km northwest of Rankin Inlet. A helicopter contracted for exploration activities and located at the Meliadine site will be used to access areas to be sampled in the vicinity of the mine development.

An Inuit Assistant will provide support in taking samples and at the same time learn various sampling techniques.

The existing Meliadine exploration camp will be used for accommodation as will a hotel in Rankin Inlet. A reclamation plan has been filed for the Meliadine camp with the Nunavut Water Board.

Field based study of the Paleoproterozoic Bravo Lake Formation on Central Baffin Island

License Number: 01 087 11N-M
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Number in Party: 2
Research Area: North Baffin
Communities: Dewline Station

Summary:

A 4 year field based study of a group of rocks, Paleoproterozoic in age (geological time scale), that are part of the Bravo Lake formation, which contains multiple gold prospects and is continuous over a distance of about 140 km.

The purpose of my doctoral studies is to obtain a better understanding of the geological complexities and the results will help to improve gold exploration methods and an improved understanding of the economic gold potential of the region.

The results of my study will aid future exploration decisions by Commander Resources Ltd and their Baffin Island project partner AngloGold Ashanti.

Field Missionto the Nastapoka arc in Hudson Bay:A record of prolific paleoproterzoic microbial communitites in a Archean Crater.

License Number: 01 084 11N-A
Principal Investigator: Papineau, Dominic
Affiliation: Boston College
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Number in Party: 8
Research Area: South Baffin
Communities: Belcher Islands,Nastapoka Islands

Summary:

During the early evolution of life, microorganisms began producing oxygen that eventually, over many millions of years, accumulated to form Earth's current atmosphere, which is roughly 20% oxygen.

Throughout this time before oxygen was present in the atmosphere, small bursts of oxygen were injected into the air by photosynthetic microbes.

The earliest and most significant oxygen input into the atmosphere is called the "Great Oxidation Event - GOE" and happened between about 2,500 and 2,000 million years ago. The consequences of this event on the evolution of early microbial communities were dramatic, although they are still poorly characterized.

The bedrock of the Belcher Islands span the time period immediately after the GOE.

Flashline Mars Arctic Research Station

License Number: 02 121 11R-M
Principal Investigator: Zubrin, Robert
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USA
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Number in Party: 7
Research Area: North Baffin
Communities: Haughton Crater, Devon Island

Summary:

The Mars Society is a private international society dedicated to furthering the human exploration and settlement of the planet Mars. In July 2000, the Mars Society established a research facility at the Mars-like Haughton impact crater site on Devon Island, called the Flashline Mars Arctic Research Station (FMARS). Designed to simulate a landed spacecraft on

The Mars Society is a private international society dedicated to furthering the human exploration and settlement of the planet Mars. In July 2000, the Mars Society established a research facility at the Mars-like Haughton impact crater site on Devon Island, Nunavut, called the Flashline Mars Arctic Research Station (FMARS). Designed to simulate a landed spacecraft on Mars, the FMARS project serves three goals:

1) To provide a testbed for studying the many aspects of field exploration operations on a human mission to Mars.

2) To provide a capable field research laboratory to help further our understanding of the Arctic, the Earth, Mars, and the possibilities and limits of life on our planet and beyond.

3) To inform and inspire people around the world to greater interest in space and science by bringing before them in a tangible form the vision of human exploration of Mars.

The research program carried out at the FMARS is unique.

For four to five weeks, a six person crew of scientists and engineers attempts to conduct a sustained program of field exploration in Devon Island's polar desert, while working under the same operational constraints as a human expedition exploring Mars.

The crew lives in a combination habitat/laboratory module that is an architectural duplicate of a Mars mission unit. Anyone leaving the station to do field research needs to wear a simulated spacesuit, that limits the mobility, agility, dexterity, and sensory abilities of the wearer much as a real spacesuit would, and communication between EVA team members separated by more than a few feet has to be done by suit radio.

While in the station, crewmembers also perform laboratory analysis of samples brought in from the field, repair equipment, write reports (which are exchanged with Mars Society's Mission Support group via a satellite link that imposes a Mars-like delay on communications), and engage in the chores of daily life living together as a team.

The purpose of conducting such simulated operations is to gain essential knowledge of Mars exploration tactics, human factors issues, and engineering requirements – in short, to start learning how to explore Mars.

Geoscientific project to study gold mineralization at the Meadowbank mine and Meliadine

License Number: 03 067 11N-M
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Number in Party: 7
Research Area: Kivalliq
Communities: Meadow Bank Mine, Meliadine Deposit

Summary:

This study will help improve our ability to predict the locations of mineralization and thus reduce the economic risks of exploration in Canada's North.

We will also try to determine why some formations are barren while others are fertile (gold bearing). Nunavut deposits give us the opportunity to study this important scientific question by looking simultaneously at various gold deposits in an integrated study.

Glacier Mass Balance and Pollution Studies in the Canadian high Arctic

License Number: 02 100 11R-M
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Number in Party: 3
Research Area: North Baffin
Communities: Devon Island, Ellesmere

Summary:

This is an ongoing study aimed at monitoring the mass balance and pollution levels of the Melville, Meighen, Agassiz, Devon ice caps, and the Grise Fiord Glacier (Figure 1). An additional component to this work will be to measure variations in flow rates of 3 glaciers

on the Devon ice cap in order to understand how these glaciers will respond to future climate warming.

Transportation at each site will be by snowmobile or helicopter where requested.

I. Glacier mass balance

Meteorological data will also be collected from the 11 automatic weather stations deployed as part of this network. Mass balance measurements provide an indication as to whether the ice caps under investigation are shrinking or growing in any particular year. This work will be performed out of permanent huts that exist on the Meighen and Melville ice caps, and tents on the Agassiz and Devon ice caps.

II. Snow sampling for monitoring pollution levels

Snow samples collected from each mass balance monitoring site will be returned to the GSC glaciology laboratory in Ottawa for analysis of the major pollutant ions (eg. Sulphates – acid snow) and pollen.

Knowledge of the annual variability of pollen and pollutant concentrations at the monitoring locations improve provide important information towards quantifying current trends in levels of atmospheric pollution, understanding atmospheric circulation patterns, and interpreting long-term pollution trends from ice cores.

III. Variability in flow rates of major outlet glaciers on the Devon Ice cap

In-situ global positioning systems (GPS) will be deployed on 3 major outlet glaciers that drain the Devon ice cap. The in-situ GPS's will track the glacier's velocity on a daily basis over the course of a 2 year period of time.

These data will a) provide ground validation to measurements of glacier velocity fields derived from satellite-based methods and b) quantify seasonal variations in rates of glacier flow.

These data are crucial to understanding the effects of climate warming on the dynamics and mass balance of high Arctic ice caps.

Greenhouse Gasses in Arctic Soils During Freeze In

License Number: 02 111 11N-A
Principal Investigator: Brummel, Martin
Affiliation: University of Saskatchewan
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Number in Party: 3
Research Area: North Baffin
Communities: Resolute Bay

Summary:

High Arctic soils differ from other ecosystems in several important ways, including the presence of permafrost under a relatively shallow layer of soil that thaws each summer, and the complete freezing of nearly all soil water each winter.

High Arctic soils also vary across a very broad range of soil moisture levels, from the very dry polar deserts to the water-saturated wetlands, which may occur next to each other in the mosaic landscapes common to much of the Arctic. Recent studies in Greenland and other parts of the Arctic suggest a large fraction, perhaps as high as one-half, of the annual total of greenhouse gas emissions from some Arctic soils occurs during fall and early winter, as soil temperatures decline and ice forms in the soil.

These physical changes that High Arctic soils experience at the end of the growing season may act to force greenhouse gases such as carbon dioxide, methane, and nitrous oxide out of the soil that might otherwise be consumed by micro-organisms or plants under warmer conditions.

Ground ice dynamics and influence on vegetation microtopography of a polar desert ecosystem in the Canadian High Arctic

License Number: 02 126 11N-M
Principal Investigator: Becker, Michael
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Number in Party: 2
Research Area: North Baffin
Communities: Axel Heiberg Island, Ellesmere Island

Summary:

The focus of my Ph.D. research is the effect of climate change on ground ice systems with an emphasis on thaw processes and its influence on ecosystems.

The qestion is to what extent does the ecosystem control its own development and nvironment by mediating the effects of changing ground ice. I will describe why a iven vegetation abundance and diversity is found due to ground ice dynamics.

I will xamine two geocryogenic processes: active layer dynamics of permafrost and the formation/degradation of ice wedges. Ice wedges are likely an early indicator for changing permafrost.

Since ice wedge tops are usually in equilibrium with current active layer dynamics, any change in active layer depth should cause a measurable cange at the ground surface along the ice wedge trough. In turn, this should change everal aspects of the surface hydrologic systems (e.g. trapping snow, pooling surface water…) and available moisture for tundra vegetation and soil microorganisms.

Hall Peninsula Geoscience Project

License Number: 0109111N-A
Principal Investigator: Mate, David
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Number in Party: 4
Research Area: South Baffin
Communities: Hall Peninsula

Summary:

The purpose of the project is to collect new bedrock, surficial and geophysical data from the Hall Peninsula. Reconnaissance data collected in 2010 will form the background data for a regional (1:250,000 scale) geo-mapping project to start in 2011 or 2012.

The results of the mapping will form a new geologic map and database for the region, and provide a modern interpretation and understanding of the geology of the Hall Peninsula. The new data and ideas to come from the project will help resource exploration companies make more efficient exploration decisions intended to lead to economic development.

The Hall Peninsula Project forms part of a long-term mapping and geoscience research initiative in southern Baffin Island carried out by the Geological Survey of Canada and the Canada – Nunavut Geoscience Office, including work in southwest Baffin in 2006, and the Cumberland Peninsula (2009-10).

Haughton-Mars Project (HMP)

License Number: 02 127 11R-M
Principal Investigator: Lee, Pascal
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Number in Party: 12
Research Area: North Baffin
Communities: Haughton Crater,Devon Island

Summary:

Haughton Crater and surrounding terrain on Devon Island are of great scientific value for Earth, Space and Life Sciences Research.

The site presents many exceptional attributes not found elsewhere on Earth, in particular the presence of a large, well-preserved meteorite impact crater and other unique terrain features similar to the Moon or Mars.

Devon Island has been used by the Haughton-Mars Project (HMP) for this type of research since the project began in 1997. The base camp for this project is called the Haughton-Mars Project Research Station or HMP RS. Current plans of government space agencies around the world include the possibility of sending humans to the Moon by 2017-2025 and on to Mars in 2025-2035.

The Haughton-Mars Project plans to continue conducting research to help achieve these goals and also possibly the next steps beyond. It is anticipated that the HMP RS will continue to be operated in support of these endeavors until at least 2017 and possibly beyond.

Activities on the HMP include: a) the scientific study of Haughton Crater and surrounding terrain (the history of water and the adaptations of microbial life to extreme environments); b) the testing and validation of new technologies and approaches for space exploration, including rovers, habitats, tools and instruments; c) education and public outreach activities.

Helicopter electromagnetic measurements of the sea ice mass balance

License Number: 02 108 11R-M
Principal Investigator: Haas, Christian
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Number in Party: 3
Research Area: North Baffin
Communities: 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.

Hydrology and Resilience of High Arctic Wetlands: Submerging vs. Emerging Ecosystems

License Number: 02 134 11N-M
Principal Investigator: Young, Kathy
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Number in Party: 7
Research Area: North Baffin
Communities: Ellesmere Island, Somerset Island, Bathurst Island

Summary:

The overall purpose of this study is to improve understanding of the seasonal hydrology of "sinking" or submerging coastal wetlands located on Melville Island and to understand how they are responding to rising sea level, wave action (both tidal and storm surges) and erosion from thick multi-year ice which moves through the Melville-Bathurst Island corridor.

Ongoing wetland studies have been ongoing at Polar Bear Pass, Bathurst Island since about 2007. I would like to compare the hydrology of these wetlands to the wetland ecosystem at Polar Bear Pass (an emerging site-rising), where snowcover, pond storage and runoff studies will continue for the same interval.

The new site at Alison Inlet (studying snowcover & runoff) is another example of an emerging extensive wetland site on Bathurst Island.

Hydrology of Extensive Low Gradient High Arctic Wetlands: An Examination of Sustainability

License Number: 02 048 10R-M-Amended
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Number in Party: 5
Research Area: North Baffin
Communities: Ellesmere Island, Somerset Island, Bathurst Island

Summary:

Project Objectives: 1) examine the hydrology and sustainability of isolated, linked, dying and desiccated wetland types (e.g. ponds, wet meadows) within extensive low-gradient wetlands located in two diverse regional climate settings 1)polar oasis (Eastwind Lake, Ellesmere Island); and polar desert (Creswell Bay, Somerset Island); 2) assess the role and importance of geomorphological settings (i.e. glacial moraine ground, bedrock, coastal zones (i.e. Creswell Bay), marine ice rich sediments (i.e. Eastwind Lake) in the hydrologic functioning of these wetland types; 3) utilizing a water balance framework at the plot, catchment and landscape scale assess the mechanisms for water inputs/losses and storage of these wetland systems over space and time; and 4) employing hydrologic information and understanding garnered at Eastwind and Creswell, examine the hydrology of a low-gradient wetland at the regional scale (i.e. Polar Bear Pass, Bathurst Island) so its temporal and spatial response to water inputs (meltwater, rainfall) and losses (evaporation and drainage) can be determined.

This will then permit an evaluation of the future sustainability of this critical ecological site in context of varying climatic conditions and perhaps future climatic changes.

Lancaster Sound 2011: Arctic Whale Survey

License Number: 02 123 11N-A
Principal Investigator: Westdal, Kristin
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Number in Party: 7
Research Area: North Baffin
Communities: Lancaster Sound

Summary:

Oceans North Canada will be heading to the North Water Polynya and Lancaster Sound in June 2011 on a small ice-reinforced boat. The purpose of this trip is to highlight the connection between Greenlandic and Canadian waters and one of the greatest whale migrations in the world.

Approximately seven people, including crew, scientists, and one Pond Inlet community member, will be part of this project.

Scientific research conducted over the course of the expedition will include:

- Marine mammal surveys
- Marine mammal acoustic monitoring
- Water sampling

Late Proterozoic Escape Rapids Formation:Coppermine River, Nunavut

License Number: 04 044 11N-M
Principal Investigator: Turner, Elizabeth
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Number in Party: 3
Research Area: Kitikmeot
Communities: Coppermine River

Summary:

The project aims to understand why the continental crust in the Kugluktuk – Victoria Island area began to sag below sea-level and accumulate marine sediment around 1 billion years ago.

The earliest part of the multi-kilometre-thick sedimentary succession that resulted is called the Escape Rapids Formation and is exposed along the banks of the lower Coppermine River. We propose to descend the Coppermine River starting about 35 km from Kugluktuk in a small zodiac, stopping regularly to collect data.

There will be no permanent developments. Our temporary (one-night) camps will consist of 3 two-person tents and all sites will be left as they were found.

Lower Paleozoic Stratigraphy and Petroleum Potential on Southern Baffin Island

License Number: 01 081 11N-A
Principal Investigator: Zhang, Shunxin
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Number in Party: 3
Research Area: South Baffin
Communities: Cape Dorset, Iqaluit, Kimmirut

Summary:

The Canada-Nunavut Geoscience office (CNGO) and the GEM energy program propose to conduct studies of the lower paleozoic stratigraphy and petroleum potential on southern baffin island in the 2011 season.

This project forms the larger GEM Hudson Bay-Foxe Basin project and Nunavut Energy project that CNGO has conducted since 2007.

Its primary objective is to extend thegeological understanding we have anout Hudson Bay and Foxe Basin to the southern part of Baffin Island and to better understand the paleozoic stratigraphy and the hydrocarbon potential of the region.

This work provide new knowledge about the geology in this part of Nunavut

Mapping Mantle Diamond Potential/Churchill Diamonds

License Number: 05 064 11R-M
Principal Investigator: Snyder, David
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dsnyder@nrcan.gc.ca

Number in Party: 5
Research Area: Nunavut Wide
Communities: Igloolik, Rankin Inlet,Arviat, Baker Lake, Coral Harbour, Kimmirut, Cape Dorset, Pangnirtung

Summary:

The objective of this study, begun in the NWT in the late 1990's, is to investigate the structure and composition of the Earth's crust and mantle to depths of 0-300 km with a view to characterizing diamond reservoirs to make diamond exploration more efficient and low impact.

The research will lead to improved mineral exploration strategies, improved estimates of damaging large earthquakes, and a superior framework for handling Canada's natural resource potential over the next decade.

Recordings of the arrival of earthquake waves provide the highest resolution and lowest impact way of imaging structures deep in the Earth.

Seismic stations will be installed via helicopter or chartered plane at various sites in the survey area - a corridor along the western coast of Hudson Bay between Churchill and Pond Inlet.

Many stations will be located near existing mines or exploration camps such as those near Rankin Inlet and Igloolik. The stations, each of which will be deployed for between three and five years consist of a geophysical sensor, satellite dish, solar panels and battery/electronics bixes deployed on sand or flat bedrock.

Seismic waves from earthquakes around the globe will be recorded by the sensor and

transmitted to the University of Western Ontario using satellite telemetry link (same as television signals). From there, the data will be distributed to researchers by way of the internet at the site www.polarisnet.com.

Magnetotelluric stations measure Earth conductivity over several days and consist of an electronics box and five sensors. Sites are located in gravel as sensors must be buried to form a cross 100m in length.

Marine Sediment Collection for Microbe Bioprospecting

License Number: 01 093 11R-M
Principal Investigator: Kerr, Russell
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Number in Party: 2
Research Area: South Baffin
Communities: Iqaluit

Summary:

The general aim of the project is to collect marine sediment samples for the purpose of isolating and culturing novel microbes. The microbes will be brought back to the University of Prince Edward Island to be purified and identified.

This will lead to an understanding of the microbial community in the unexplored habitats of Baffin Island. This knowledge will provide a baseline for comparison as changes occur due to climate change.

In addition, the isolated microbes will be fermented and used in a natural products discovery program where the goal is to identify new natural products.

Melville Peninsula Geo-Mapping (GEM) Project

License Number: 05 063 11R-M
Principal Investigator: Chakungal, Joyia
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Number in Party: 25
Research Area: Nunavut Wide
Communities: Melville Peninsula

Summary:

In 2009, as part of the Federal Government's Geo-mapping for Energy and Minerals program, the Canada – Nunavut Geoscience Office (CNGO) and Geological Survey of Canada (GSC) will conduct a geoscience project on Melville Peninsula, Nunavut. The primary objective of the project is to update and advance geological knowledge of the region.

The project will provide up-to-date information for exploration companies working in the area, and is intended to increase the level of mineral exploration and provide benefits to Igloolik, Hall Beach and Repulse Bay.

Geological mapping will be carried out over three summers (2009 – 2011). In 2009, the field crew will operate out of a helicopter supported, tent camp at the Sarcpa Lake DEW Line Station

(Figure 1) and possibly, two man fly-camp(s) located approximately 150 km south of the main camp. Mapping will occur in July and August.

The project will include hiring 8 to 10 field assistants from Hall Beach. The jobs will provide training in the areas of camp support, mineral prospecting and exploration.

The mapping will focus on two belts of rocks called the Prince Albert and Penrhyn groups. Both are thought to have high potential for

mineral deposits. The Prince Albert Group hosts volcanic rocks that have the potential for gold, base metals (copper, zinc, and nickel) and Platinum Group Element (PGEs) deposits.

The Penrhyn Group has potential for gold and gemstone deposits. Recent exploration in the Igloolik, Hall Beach and Repulse Bay region has also demonstrated the occurrences of diamonds. In addition to mapping the bedrock, the surficial materials (glacial deposits) will also be mapped. The glacial deposits, called till, carry clues that can lead prospectors to a deposit.

Thus, an understanding of the ice flow history is critical to mineral exploration in the region. In support of the ground-based mapping, a 45,000-line kilometre aeromagnetic survey will be flown over the central part of the peninsula in the spring (April – May) of 2009. All data will be published in the form of maps and reports through the Geological Survey of Canada and will be made available to the public as soon as they become available.

Metamorphic geology and tectonics of Cumberland Peninsula, Baffin Island, Nunavut

License Number: 01 082 11N-A
Principal Investigator: Hamilton, Brett
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Number in Party: 4
Research Area: South Baffin
Communities: Clephane Bay,Michief Glacier

Summary:

A controversy exists about how tectonic plates amalgamated to form Baffin Island. Cumberland Peninsula (CP) is situated in a key location to solve this fundamental geological problem. Until

2009, this problem could not be addressed because there existed almost no published data on CP bedrock geology. Due to research by myself, as a part of my PhD, and collaborative research through the Geological Survey of Canada's (GSC) Cumberland Peninsula Integrated Geoscience Project, it is now possible to approach this question.

I propose further detailed mapping in 2011 to answer unresolved questions about the relationships between deformation and metamorphism, which have implications for understanding CP geology as a whole.

The overall objectives for the thesis are to 1) use metamorphic petrologic techniques to determine the path rocks took through the crust during tectonic events, and 2) combine these results with other concurrent regional geological studies to understand the tectonic history of CP.

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

License Number: 02 113 11R-M
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Number in Party: 5
Research Area: North Baffin
Communities: Axel Heiberg

Summary:

Relitively few reports are found describing the ecology and biodiversity of microbial communities in the Canadian high Arctic where unique habitats exist including cold perennial salt springs, glacial ice and sub

glacial soil, permafrost and ground ice, and cryptoedoliths (mocrobial communities within rocks). Little is knows about the traits that enable such microorganisms to survive and thrive in these extreme habitats. Therefor, I am presently developing and expanding a research program focused on Arctic mocrobial biodiversity and ecology studies in these habitats to expand our basic knowledge of Arctic microbial communities, to determine the utility of these unique environments as analogs to those which may exist or existed on Mars, and, in the longer term, the potential biotechnological applications of cold adapted microorganisms (examples: antifreeze protiens, polyunsaturated fatty acids.)

In 2003, small representative samples (~2 kg of soil/ permafrost or 2-4 L of water) of the mocrobial populations will be obtained from the Eureka and Axel heiberg sites. Microbial biodiverstiy research will be conducted in my lab at McGill University on the collected samples.

This data will provide information on the mocrobial populations associated with these sites, the physiological types that are involved in biogeochemical processes and hopefully establish which organisms become fossilized or preserved in the system.

NEIGE (Northern Ellesmere Island in the Global Environment)

License Number: 02 125 11N-M
Principal Investigator: Vincent, Warwick
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Canada
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Number in Party: 6
Research Area: North Baffin
Communities: Quttinirpaaq National Park,Resolute Bay Lakes,Markham Ice Shelf

Summary:

There is no significant change in this project from our work in previous years.

-We will determine the diversity of microbial life in ice shelf and other shallow pond communities using state of the art molecular techniques.

We will characterize the physical characteristics and processes within northern Ellesmere Island's meromictic lakes.

We will inventory the diversity of bacteria, eubacteria, Archaea, and viruses in the lakes of Quttinirpaaq National Park using DNA analysis.

We will define the structure and function of food webs within Lake A using stable isotope, photosynthetic pigment and flow cytometry analyses.

We will identify aquatic ecosystem indicators in Quttinirpaaq National Park and to evaluate their utility as sentinels of long- and short-term global environmental change.

Our climate stations will provide long-term air and soil monitoring data for this globally important site.

We will develop archives of remote sensing and satellite data.

We will continue our research on the landforms and their origins at Ward Hunt Island and vicinity.

Northeast Thelon Geophysical Framework Maps

License Number: 04 045 11R-M
Principal Investigator: Jefferson, Charles
Affiliation: Natural Resources Canada
Geological Survey of Canada
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Number in Party: 7
Research Area: Kivalliq
Communities: Baker Lake, Rankin Inlet

Summary:

Compile existing legacy information;acquire new geophysicas and satellite data,synthesize

and predict new geology;field test and refine models;produce new high-resolution geophysical,satellite and geological maps and images.

Northern Ellesmere Ice Shelves, Ecosystems and Climate Impacts

License Number: 02 106 11R-M
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Number in Party: 4
Research Area: North Baffin
Communities: Milne Ice Shelf - Peterson Ice Shelf/Yelverton Bay - Ayles Fiord - Serson Ice Shelf & floating ice islands

Summary:

Since 2002, there have been dramatic changes in the ice shelves along the northern coast of Ellesmere Island. Ice shelves that have been attached to the shore for thousands of years have been breaking-up, leading to the drainage of massive bodies of freshwater and the creation of new ice islands.

The entire Ayles Ice Shelf broke away in summer 2005, and in summer 2008 the entire Markham Ice Shelf and large pieces from several other ice shelves were lost. Thousands of square kilometres of 50 to 70 year old landfast sea ice has also broken away from the coast, suggesting that the ice shelves which used to occupy this coastline will not regenerate in the foreseeable future. These physical changes are also causing major transformations incommunities of micro-organisms that are associated with the ice.

The aim of this research program is to provide a comprehensive survey of the current characteristics and stability of the northern Ellesmere Island ice shelves and multiyear landfast sea ice. This will focus on measurements of ice thickness and internal structure using ice penetrating radar and shallow ice cores.

Surface melt rates and patterns of surface motion will be determined from stakes drilled into the ice shelf surface and measurements with GPS systems. We will also take salinity profiles in the fiords and bays along the coast to measure how the water is changing. We plan to install a semi-permanent automated weather station that will provide temperature data in the vicinity of Milne Ice Shelf. This data will be uploaded daily via a satellite connection, and made publicly available on the internet.

Samples will be taken for water quality and DNA analysis to examine the micro-organisms and their habitats n and under the ice shelves.

The proposed project will contribute to Canadian IPY projects “Variability and Change in the Canadian Cryosphere” and “Microbiological and Ecological Responses to Global Environmental Change in the Polar Regions (MERGE-Canada)”. It will also continue measurements that we began on the Ranger’s Op Nunalivut patrol in spring 2008.

We will visit Qarmartalik School in Resolute Bay immediately after our fieldwork to explain our work and its significance to community members and to address any questions they may have. This will continue visits that we made to Qarmartalik School in both 2007 and 2008.

Optimization of In Situ Bioremediation Conditions at CFS-Alert

License Number: 02 131 11R-M
Principal Investigator: Bell, Terrence
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Number in Party: 4
Research Area: North Baffin
Communities: CFS-Alert

Summary:

Many soils in the Arctic have been contaminated by petroleum hydrocarbons, most commonly due to fuel line breaks, and poor gas transfers to transport vehicles and other heavy machinery.

The native bacterial communities in these soils are capable of degrading petroleum hydrocarbons for use as carbon and energy sources reducing the contamination. These bacteria are only active during the limited summer of the Arctic, so optimizing their activity is critical.

Adding nutrients to soil has often been shown to increase the rate of contaminant breakdown, but the dynamics of how these nutrients are use within the soil are widely unknown. There are thousands of bacterial species in every gram of soil, and only a fraction of these are capable of contaminant degradation. We are going to examine which bacterial species are incorporating our added nutrients, so that we can optimize nutrient availability for the contaminant-degrading species within the soil.

On-site work will be relatively simple, and will involve the addition of fertilizers to small areas of soil as well as various soil aeration techniques to increase oxygen in the sub-surface bacterial communities. Treatments will be set-up on a single day in July and incubated for approximately 1 month, followed by a soil sample collection trip in August. Samples will be analyzed in the lab to determine which bacterial species are incorporating the nutrients that we have added to the soil.

Collected data will support the completion of my doctoral thesis work, and any discoveries will be applied to future Arctic bioremediation efforts. Results from this study will be submitted for publication in refereed journals focused on applied environmental microbiology.

The results from this study as well as other bioremediation work performed by the Biotechnology Research Institute at CFS-Alert will be presented orally to members of the CFS-Alert base camp, and is open to be presented to officials from the Nunavut Research Institute, Environment Canada and any other interested parties. The optimization of current techniques to reduce soil contamination in the Arctic will ensure the prolonged preservation of the unique environment in the Canadian North.

Pan-Arctic Measurements and Arctic Regional Climate Model Simulations (PAMARCMIP) 2011

License Number: 02 110 11N-A
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Number in Party: 15
Research Area: North Baffin
Communities: Resolute Bay,Alert,Eureka

Summary:

An airborne research project called PAMARCMIP 2011 will study the meteorology, air quality, and sea ice thickness in the Arctic. A subproject (instrumentation on board for flights out of Eureka and Alert only)

will focus on passive microwave measurements for sea ice and terrestrial snow cover applications.

The German research aircraft POLAR-5 will travel between-Barrow, Inuvik, Resolute, Alert, Eureka, Station Nord and Longyearbyen, with research flights over sea ice planned from each of these locations. The flight routes and stations for activities within Nunavut are shown in the attached map and ArcGIS shapefile.

At Alert, another subproject will performed coincident flights with the POLAR-5 using two Twin Otter aircraft over the sea ice north of Ellesmere Island.

Past modes of climate variability from varved sediments

License Number: 02 124 11N-A
Principal Investigator: Francus, Pierre
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Number in Party: 5
Research Area: North Baffin
Communities: Ellesmere Island

Summary:

This project seeks to reconstruct the Canadian High Arctic climate of the past by analysis annual laminations (or varves) from lake sediments.

The goal of this field season is to retrieve 15 m long sediment cores from 2 sites at South Sawtooth Lake that contains a record of the last 8000 years

Peregrine Diamonds Ltd. Chidliak Property 2011 Baseline Environmental Studies

License Number: 01 080 11R-M
Principal Investigator: Moore, Steve
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Number in Party: 3
Research Area: South Baffin
Communities: Peregrine Diamonds Chidliak Camp, Iqaluit, Pangnirtung

Summary:

Peregrine Diamonds Ltd. retained EBA Engineering Consultants Ltd. (EBA) to conduct environmental baseline studies at their proposed Chidliak project site, approximately 100 km northeast of Iqaluit, Nunavut.

The proposed project will involve

the following field studies: preliminary hydrology measurements, a preliminary habitat study, and wildlife surveys.

The 2009 field studies will be conducted over two short events in July and September.

Each sampling event will be less than a week in duration. A small team of one biologist and one local research assistant will conduct these field studies in July and September; one research assistant per field event. A local research assistant from the two nearest communities, Iqaluit and Pangnirtung, are currently being sought.

Polar North

License Number: 04 038 11R-M
Principal Investigator: Rondeau, Rob
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Number in Party: 5
Research Area: Kitikmeot
Communities: Larsen Sound

Summary:

Project Polar Reach aims to develop solutions relating to offshore surveying through the use of autonomous underwater vehicles (AUVs).

Essentially robots, AUVs can provide greater "precision of position" in surveying under ice and also reduce the risk to personnel doing such work in the remote Arctic environment.

The conventional way of bathymetric mapping in the Arctic is to equip an icebreaker with a multibeam echo sounder. In heavy ice, mapping with large icebreakers is time consuming and potentially dangerous. And, it's challenging to run straight lines.

Operating independent of its surface support vessel, an AUV can map at greater speed, accurately following planned survey lines. AUVs are also capable of simultaneous recording using a full geophysical sensor suite – including bathymetry, sub bottom profiling (shallow seismic), acoustic and optical imaging and other oceanographic data recording, such as mapping the ice floor from underneath.

Production and Loss of Methylmercury, and it's Uptake in Lake Food Webs of the High Arctic

License Number: 02 109 11R-M-Amended
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Number in Party: 4
Research Area: North Baffin
Communities: Resolute Bay

Summary:

Project Description: Mercury is a priority contaminant of the Northern Contaminants Program (NCP) due to its prevalence in the Arctic and high levels found in some traditional foods. Most mercury in the environment is in an inorganic form whereas organic methylmercury is the much more toxic species that biomagnifies through food webs.

Processes regulating the amount of methylmercury present are therefore critical in controlling how much enters aquatic food webs. In July and August of 2010 and 2011, we propose to measure key production and loss processes for methylmercury which have not previously been studied in High Arctic fresh waters.

Rates of production and breakdown of methylmercury will be measured in sediment of lakes and wetlands on Cornwallis Island. The bacterial community responsible for methylmercury formation will be studied. Sunlight-induced breakdown of methylmercury will be measured in the water column.

Mercury levels in chironomids, the main food of lake-dwelling char, will be measured to link methylmercury production and loss processes with food web uptake. This project will

provide critical information on the mercury cycle to support monitoring of landlocked Arctic char currently conducted under the NCP.

Scientific Investigations supporting the Resolution Island cleanup project

License Number: 01 090 11R-M
Principal Investigator: Rutter, Allison
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Number in Party: 9
Research Area: South Baffin
Communities: Cape Warwick, Resolution Island

Summary:

The Analytical Services Unit, Queen's University will have a team on site at Resolution Island again this year. Our work is currently focused on monitoring now that the major cleanup undertaken by the Qikiqtaaluk Corporation for Indian and Northern Affairs Canada is complete.

The majority of the work will involve sampling and analysis of plants, soils and water from monitoring wells.

The three permanent barriers will be monitored, repaired, tested and if necessary modified. Further monitoring will be conducted with respect to hydrocarbon contamination remediation. The experimental in situ landfarm established in 2005 and the large landfarm established in 2004 will be monitored and maintained.

Stratigraphy of Mesozoic rocks, Sverdrup Basin

License Number: 02 128 11N-M
Principal Investigator: Dewing, Keith
Affiliation: Geological Survey of Canada
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Number in Party: 5
Research Area: North Baffin
Communities: Sverdrup Basin

Summary:

This project aims to look at the contacts between rock types on where they are exposed on the surface.

This allows geologists to get a much more accurate picture of the contact, the ancient environments that were present, and in some cases, fossils above and below the contact to establish the age of the rock.

Thomas Hadlari and Ashton Embry, both from the Geological Survey of Canada would lead the activity. Field work is proposed between 2 July and 25 July, with a total of 9 people spending 10 days each in the field at various times during that period.

The Ecology of Nunavut Aquatic Systems

License Number: 03 049 11R-M
Principal Investigator: Quinlan, Dr. Roberto
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Number in Party: 4
Research Area: Kivalliq,South Baffin
Communities: Arviat,Iqaluit

Summary:

The Canadian Arctic contains a vast multitude of lakes and ponds which have served as important sources of food and freshwater for indigenous peoples and which continue to

yield valuable scientific information about environmental conditions.

Ecosystem structure and functioning in Arctic aquatic systems is expected to change under the influence of human-induced climate change and other human impacts.

However, much remains unknown about the current composition of these communities. Researchers have increasingly examined the spatial structuring of freshwater systems. The majority of this research has focused on temperate rivers and lakes, leaving Arctic regions under-researched. In the Canadian Arctic landscape, aquatic ecosystems feature prominently.

As interest in Arctic resources and recognition of the Arctic's sensitivity to climate change increase, it is essential to assess our northern freshwater resources.

For the 2009 field season, our research will focus on research in several Nunavut communities (Repulse Bay, Rankin Inlet, Arviat, and Iqaluit). Data from lakes along a landscape gradient (using the metric of 'lake order' for lake landscape position) will be collected. Each lake will be sampled for water chemistry, zooplankton, benthic invertebrates, and aquatic algae.

During my 6 weeks in Iqaluit, our research team will collect field samples for the Arctic Benthic Biomonitoring Network, a community-based invertebrate stream sampling project that is an ongoing collaboration between York University and the Nunavut Research Institute. While this research attempts to create appropriate lake sampling methods, this joint project develops stream sampling protocols that can be used by local community groups in the future.

Employing the kick-and-sweep method, invertebrates will be collected in a 500um mesh Dip Net and preserved in 95% ethanol. In addition, a variety of water chemistry and sediment quality variables will be measured. The organisms collected will be identified to the genus level where possible statistics will be employed to determine which variables are responsible for controlling species distributions. Lakes and ponds will be traversed by inflatable zodiac, and temperature monitors (deployed in 2007) will be collected from study lakes in the Baker Lake region.

Three Bluffs Project 2011 Environmental Program

License Number: 03 062 11N-M
Principal Investigator: Bryant, Deborah
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Number in Party: 11
Research Area: Kitikmeot
Communities: Hayes Camp

Summary:

In the short term some of the data,for example water quality,is useful to ensure that project activities are not having an adverse effect on the environment. In the long term,the data enables that baseline conditions to be defined which gives a benchmark to assess future project impacts which can be used when compiling an environmental impact statement for the NIRB approval process.

Tuktu Magnetite Project

License Number: 01 079 11N-M
Principal Investigator: Moore, Steven
Affiliation: EBA Engineering Consultants
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Number in Party: 6
Research Area: South Baffin
Communities:

Summary:

To collect baseline data to set precedent for water quality in the area of the Tuktu Magnetite Project.Fly in to the site and collect water samples from specified sites using

established sampling protocols and submit them to a certified for analysis.Samples will be collected,when possible in June,July and August. The locations of water sampling will be predetermined and a global positioning system will be used to locate all stations.

Variability and Forcing of Fluxes through Nares Strait & Jones Sound

License Number: 02 130 11R-M
Principal Investigator: Melling, Humfrey
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Number in Party: 13
Research Area: North Baffin
Communities: Nares Strait, Jones Sound

Summary:

Our project was initiated in 2003 and continued through the IPY and beyond. Its purpose is to measure the strength and properties of ocean currents flowing through the Canadian Arctic to Baffin Bay.

The amount of fresh water mixed with the seawater is of special interest. The Arctic currents are important sources of nutrients for marine life in Nunavut and important pathways for fresh-water movement in the climate system. About half the outflow from the Arctic Ocean passes through Nunavut.

The water that comes south was originally delivered to the Arctic by currents from the Pacific Ocean and by snow, rain and rivers. Our project's short name is CATs, for Canadian Arctic Through-flow study.

Water quality and environmental change at Cape Herschel and Stygge Nunatak Pond, Ellesmere Island.

License Number: 02 120 11R-M
Principal Investigator: Smol, John
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Number in Party: 7
Research Area: North Baffin
Communities: Ellesmere Island

Summary:

Lakes and ponds are sensitive repositories of environmental information. We (J.P. Smol, and M.S.V. Douglas) have been monitoring 45 lakes and ponds at Cape Herschel, Ellesmere Island, approximately every 3 years since 1983. This area has become a critical reference site for limnological data.

Although we normally only return every 3 years to Cape Herschel, in 2006 we recorded remarkable changes in the ponds. Several had dried up, which we believe is linked to climate warming. Therefore, we propose to return to Cape Herschel in 2009 and determine if the shallow ponds are still dry.

If they are no longer dry, we plan on determining what changes have occurred in the ecology of these sites with the drying in 2006. We will also determine what changes are happening in the deeper ponds that are not dry, but have reduced water levels.

We will collect present-day water quality data (perhaps now in only the deeper sites if the shallow ones are dry again) and mud samples during approximately 10 days in July from lakes and ponds within walking distance of Cape Herschel.

We will remove a small sample of water (~ 2 L) from each pond, as well as a small amount of mud (a few cm3) for analysis of indicators

of environmental change. We do not sample or disturb any wildlife or fish.

Pending the availability of PCSP chartered helicopters and weather, we would also like to sample a few sites on nearby Pim Island, Bache Peninsula, Knud Peninsula, Alexandra Fiord and Stygge Nunatak region. This increases our range of sites in which to assess past environmental changes. In addition, while based at PCSP (Resolute), we sample about 10 ponds and lakes as part of our long-term water quality assessments.

As we have done in the past, we will continue to communicate our results using published literature, which we distribute to the Arctic and local hamlet offices, as well as talks and seminars in the Arctic, as well as media interview on the radio and newspapers.

2011
SOCIAL SCIENCES
RESEARCH IN NUNAVUT

Adaptation, Industrial Development and Arctic Communities: Experiences of environmental and social change

License Number: 03 054 11R-M-Amended
Principal Investigator: Keeling, Arn
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Number in Party: 6
Research Area: Kitikmeot,Kivalliq
Communities:
Kugluktuk, Baker Lake, Rankin Inlet, Arviat

Summary:

The key objective of this project is to engage in community-based and historical research into Arctic mineral development.

The projected outcomes of this study will inform contemporary efforts by regulators and policy-makers to engage communities in economic development and to incorporate traditional knowledge into research and policy surrounding the rapid development of Arctic regions. By connecting archival research with community perspectives, our project aims to understand the long-term consequences of and adaptations to resource extractive activities (even long after closure or abandonment).

Akitsiraq Foreclosure Research Project

License Number: 01 088 11Registry
Principal Investigator: Rajan, Shanel
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Number in Party: 2
Research Area: South Baffin
Communities: Iqaluit

Summary:

This project is sponsored by the Akitsiraq Law School Society. The research and writing will take place over a 3-month period from May 15 to August 15 2011 at Iqaluit Nunavut and by telephone to other communities in Nunavut.

The research will use civil procedure data bases at the Nunavut Court of Justice and the Land Titles Registry to identify residential foreclosures in communities across Nunavut and to examine the timing, process and financial impacts.

An Ethnological Study of the socio-political and economic funtion of IQ(Inuit Qaujimajatuqangit) in the Contemporary Inuit Community.

License Number: 04 041 11R-M
Principal Investigator: Omura, Keiichi
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Japan
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Number in Party: 5
Research Area: Kitikmeot
Communities: Kugaaruk

Summary:

Since the establishment of Nunavut, IQ (Inuit Qaujimajatuqangit: Inuit Knowledge or Inuit way of doing things) has attracted worldwide public and academic attention.

How should IQ be applied to the management of Nunavut government to establish the governance system compatible with the Inuit societal value? How should the governance system of Nunavut, sill based on the modern Qaplunaat (Euro-Canadian) way of governance, be modified according to the IQ principles?

These issues are important to the contemporary people of the world as well as Nunavut Territory and Canada, because their challenge to modify the Qaplunaat way of governance according to the IQ principles should contribute to the establishment of an alternative governance system more sensitive to and empowering the indigenous peoples.The purpose of this research project is to investigate how IQ functions in contemporary Inuit communities to modify and adapt the governance system of Nunavut to the Inuit way of life. Based on this investigation, we consider the role of IQ in maintenance and reinforcement of family and

community ties, problem solving and integration of modernity with traditional way of life.

We will carry out the research in Kugaaruk where we have conducted ethnological research since 1988. Our research is composed of the following 4 parts.

1. Research on language (Inuktun) and traditional knowledge: Omura will continue study on Inuktun and traditional ecological knowledge of animal, plan, geographical features, climate etc. by formal interviews.
2. Research on story telling: Omura will collect life history, legend and myth by formal interviews to consider the role of story telling in transmission of IQ.
3. Research on subsistence activities: Stewart, Omura, Kishigami, Kuzuno and Kubota will make a series of participant observation and interviews on subsistence activities and food sharing practices to understand how IQ functions as a bridge of traditional way and modern mechanized way of subsistence.
4. Research on societal values: Stewart, Omura, Kishigami, Kuzuno and Kubota will make a series of participant observation and interviews on social relations to understand how IQ functions as an integral part of maintenance and reinforcement of family and community ties, problem solving and integration of modernity with traditional way of life.

Cambridge Bay (Ikaluktutiak): A Community-Based History

License Number: 04 042 11N-M
Principal Investigator: Lackenbauer, P.Whitney
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Dept of History
Waterloo, Ontario N2L 3G1
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Number in Party: 5
Research Area: Kitikmeot
Communities: Cambridge Bay

Summary:

This collaboration between a university-based historian and student researchers, the Kitikmeot Heritage Society, and other community organizations will explore local experiences and community history in Cambridge Bay and surrounding areas of the Kitikmeot region in the twentieth century.

Drawing upon the oral histories of Inuit elders and archival materials, we hope to develop innovative ways to write/record/share the history of Cambridge Bay.

After preliminary discussions with local Elders, we anticipate that this study will focus on issues related to Inuit settlement life, including socio-economic development, culture and language, health, harvesting activities, the DEW Line, and the trans-generational transfer of knowledge.

Elders' knowledge is pivotal to this dialogue. By facilitating the sharing of community histories in Inuinnaqtun, we also hope that this project will also promote Aboriginal language retention and literacy.

Canadian Arctic Sovereignty & Inuit Relocation: An examination of Canada

License Number: 05 068 11N-A
Principal Investigator: Russel, Gail
Affiliation: University of Toronto
Toronto, Ontario M5S 2K6
Canada
gail.russel@hotmail.com
Number in Party: 1
Research Area: North & South Baffin
Kivalliq, Kitikmeot
Communities: Arctic Bay, Cambridge Bay, Iqaluit, Pond Inlet, Resolute Bay

Summary:

The purpose of my research is to examine the impacts of various projects on Nunavut that have come from Canada's Northern Strategy.

I will focus on three specific projects:

The planned Marine Conservation Area (between Baffin Island and Devon Island), the planned implementation of the army training base in Resolute Bay and the deep-water port in Nanisivik Bay, and the planned implementation of the High Arctic research station in Cambridge Bay.

I will be exploring four key questions within each of these projects:

1. what was the purpose for the project?
2. What has been the process of the project in terms of how it has unfolded?
3. What different benefits and limitations have come up as the project has unfolded?
4. What similarities and differences exist between the projects?

The goal of this research is to outline the ways in which these projects have benefited Nunavut, in addition to the various limitations that have come up, so to inform future projects that take place in Nunavut connected to Canada's Northern Strategy.

Climate change and tourism change:a vulnerability and resilience assessment

License Number: 01 075 11R-M
Principal Investigator: Johnston, Margaret
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Thunder Bay, Ontario P7L 0A9
Canada
mejohnst@lakeheadu.ca

Number in Party: 6
Research Area: North & South Baffin
Communities: Pond Inlet, Gjoa Haven, Iqaluit

Summary:

This research examines approaches to managing tourism change and its interaction with climate change in several northern communities. Climate change is one of many changes affecting communities and having an influence on economic activities such as tourism.

Communities and individuals who rely on tourism may be affected through negative outcomes and through opportunities for development. This research addresses the need to understand climate change adaptations in the tourism industry and their implications for northern residents and communities based on local strengths, experiences and visions.

Using case studies, the research will explore changes for communities especially related to expedition cruising and terrestrial wildlife tourism. The study uses a framework that includes climate change, tourism change, community resilience and community adaptation.

The goal of the study is to work with communities and individuals to identify community-level adaptation strategies that could be used by local stakeholders and decision-makers.

Adaptation will be unique to each community, but likely will focus on changes in visitor numbers, expectations, experiences and impacts, and will require a variety of strategies that can take advantage of the opportunities and minimize negative outcomes.

Climate change impacts on berry ecology in Canadian arctic tundra: linking traditional and local ecological knowledge with science.

License Number: 05 070 11R-M
Principal Investigator: Levesque, Esther
Affiliation: University du Quebec a Trois-Rivieres
Trois Rivieres, Quebec G9A 5H7
Canada
esther.levesque@uqtr.ca

Number in Party: 4
Research Area: North & South Baffin, Kivalliq, Kitikmeot
Communities: Baker Lake, Iqaluit, Kimmirut, Kugluktuk, Pangnirtung, Pond Inlet

Summary:

The main goal of this project is to improve our knowledge of the ecology of berry producing species and to monitor berry productivity related to environmental change, including increased shrub growth.

Another important objective of this project is to link local and traditional ecological knowledge (Qaujimajatuqangit) with scientific data on variations in annual productivity of commonly used berries: Kimminaq (Cranberry, Vaccinium vitis-idaea), Paurngaq (Crowberry, Empetrum nigrum), Kegotangenak (Blueberry, Vaccinium uliginosum) and Aqpiq (Cloudberry, Rubus chamaemorus).

A major contribution will be to leave a legacy of well-studied permanent sites in Nunavut, Nunavik and Nunatsiavut that can serve as a baseline for future assessments of vegetation change.

In addition, the berry productivity monitoring protocol as well as the environmental calendar have been developed to help capacity building for science projects amongst Inuit youngsters.

Community Experience of Mining in Baker Lake, NU

License Number: 03 063 11N-A
Principal Investigator: Peterson, Kelsey
Affiliation: University of Guelph
Department of Geography
Guelph, Ontario N1E 2L4
Canada
kpeter01@uoguelph.ca

Number in Party: 2
Research Area: Kivaliq
Communities: Baker Lake

Summary:

With increasing mineral prices making the Arctic a viable place to mine, exploration and mining companies are pushing into the Canadian Arctic with unprecedented investment.

Small, remote communities in Nunavut are beginning to feel the pressure of this new mining boom with the opening of Agnico-Eagle's Meadowbank gold mine outside of Baker Lake, and continued progress in many exploration programs.

This research seeks to gain insight into the individual and community experiences that Baker Lake, NU has had with mining development with Meadowbank, Nunavut's first gold mine.

Knowing how mining has impacted different community groups differently will be useful for Baker Lake community members trying to inform decisions regarding community programs, mining company negotiations and informed consent to new mining. Working as a partner in this research will determine that the research answers questions that the people of Baker Lake want answered.

Community Led Reduction of Domestic Violence In Aboriginal Communities:Rebuilding From Resilience: Pilot Study

License Number: 01 074 10Registry
Principal Investigator: Jacob, Suny
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Iqaluit, Nunavut X0A 0H0
Canada
sunjaco@yahoo.ca

Number in Party: 3
Research Area: South Baffin
Communities: Iqaluit

Summary:

To learn more about how personal and community resilience can help reduce domestic violence in aboriginal communities.Resilience is a persons ability ,in using their skills and strengths,to cope and recover from problems and challenges that are facing them.

Comparisons of Inuit tracking techniques and estimates of polar bear characteristics from tracks

License Number: 04 043 11N-M
Principal Investigator: Wong, Pamela
Affiliation: University of Toronto
Toronto, Ontario M4W 3G9
Canada
pamela.wong@utoronto.ca

Number in Party: 5
Research Area: Kitikmeot
Communities: Gjoa Haven

Summary:

This project contributes to a developing noninvasive polar bear survey by evaluating the potential inclusion of Inuit estimates of polar bear characteristics from tracks.

This work builds on previous reliability assessments 9 Inuit estimating polar bear sex, age, size, and age of track, revealing high agreement, potential accuracy, and shared techniques in diagnosing tracks (see 0402509N-M).

The objectives of this research are:

a) confirming reliability in Inuit estimates of polar bear sex, age, size, and age-of-track;

b) comparing Inuit estimates with genetic estimates (sex and age) and track measurements or photographs (size);

c) describing effects of track substrate on estimates; and

d) characterizing background, experience, and tracking techniques of participating hunters, as well as other community members (i.e. youth, women, elders).

Deliberative Democracy in Context: Canadian Case Studies

License Number: 01 076 11N-A
Principal Investigator: Johnson, Genevieve Fuji
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Burnaby, British Columbia
V5A 1S6
Canada
genevieve_johnson@sfu.ca

Number in Party: 1
Research Area: South Baffin
Communities: Iqaluit

Summary:

The purpose of this research is to advance understanding of approaches to public policy decision making ostensibly based on principles of inclusion, equality, reciprocity and mutuality, and agreement—in other words, on principles of deliberative democracy.

Determinants of food insecurity among Inuit women in Arviat, Nunavut: the role of climate change and multiple socio-economic stresses

License Number: 03 050 11R-M
Principal Investigator: Beaumier, Maude
Affiliation: Department of Geography
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Montreal, Quebec H3A 2K6
Canada
maude.beaumier@mail.mcgill.ca

Number in Party: 3
Research Area: Kivalliq
Communities: Arviat

Summary:

This community-run project aims to identify and characterize the key factors determining the vulnerability of Inuit women to food insecurity within the context of significant socio-economic transformation as well as climatic and environmental changes, in the Inuit community of Arviat, Nunavut.

Geographic range and harvest of sea-run lake trout in the Canadian Arctic

License Number: 04 048 11N-M Amended
Principal Investigator: Swanson, Heidi
Affiliation: University of Alberta
Department of Biological Sciences
Edmonton, Alberta T6G 2E9
Canada
hswanson@ualberta.ca

Number in Party: 2
Research Area: Kitikmeot
Communities: Kugluktuk, Cambridge Bay, Gjoa Haven, Kugaaruk

Summary:

Lake trout are usually described as a fish that lives in freshwater lakes and rivers. During a recent (2006-2010) research project that took place near Hope Bay, Nunavut, I and other researchers found that similar to

Arctic char, lake trout can make trips each year to sea. We found that some lake trout migrate to sea each year for 20 years or more.

We also found that sea-run lake trout grew faster and had lower levels of mercury (Hg) than freshwater lake trout. Since sea-run lake trout were only confirmed in 4 lakes, we need more information before these earlier results can be applied to management and policy questions.

First, we have to determine the geographic range of sea-run lake trout across the mainland Arctic coast.

We also have to determine if northerners harvest sea-run lake trout. In conjunction with a western science project, we are proposing to collect Inuit Quajimajatuqangit (IQ) regarding the geographic extent and subsistence harvest (if any) of sea-run lake trout.

Our gathering of IQ will be limited at this time to the Kitikmeot region, with expansion to other regions in future years.

Geographic range and harvest of sea-run lake trout in the Canadian Arctic

License Number: 04 048 11N-M
Principal Investigator: Swanson, Heidi
Affiliation: University of Alberta
Department of Biological Sciences
Edmonton, Alberta T6G 2E9
Canada
hswanson@ualberta.ca

Number in Party: 2
Research Area: Kitikmeot
Communities: Kugluktuk, Cambridge Bay, Gjoa Haven, Kugaaruk

Summary:

Lake trout are usually described as a fish that lives in freshwater lakes and rivers.

During a recent (2006-2010) research project that took place near Hope Bay, Nunavut, I and other researchers found that similar to Arctic char, lake trout can make trips each year to sea. We found that some lake trout migrate to sea each year for 20 years or more. We also found that sea-run lake trout grew faster and had lower levels of mercury (Hg) than freshwater lake trout.

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Hope Bay Belt:Socio-Economic and Land use Studies

License Number: 02 029 10N-M
Principal Investigator: Gustavson, Kent
Affiliation: Rescan Environmental Services
Social and Economic Studies Department
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Canada
kgustavson@rescan.com

Number in Party: 5
Research Area: Kitikmeot, South Baffin
Communities: Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, Kugaruuk, Bathurst Inlet, Omingmaktok, Iqaluit

Summary:

The primary goal of the research is to gathre and update on the socio-ecconomic,cultural, education, governance and land use characteristics at community,regional and territorial levels.

This will include socio-economic profiles and characteristics of the study communities,and th eidentification and description of land uses/users.research methods include a desk-based review of existing literature and statistics,including quantative and qualitive inbformation.Issues scoping will draw from this initial research,as well as the findings and outcomes of past and ongoing developments in the area.

The field study program will build upon this research through meetings,interviews,focus groups and workshops in th ecommunities

Hope Bay Belt:Socio-Economic and Land use Studies

License Number: 05 059 11R-M
Principal Investigator: Gustavson, Kent
Affiliation: Rescan Environmental Services Ltd.
Social and Economic Studies Department
Vancouver, BC V6E 2J3
Canada
kgustavson@rescan.com

Number in Party: 5
Research Area: Kitikmeot,South Baffin
Communities: Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, Kugaruuk, Bathurst Inlet, Omingmaktok, Iqaluit

Summary:

The primary goal of the research is to gathre and update on the socio-economic, cultural, education, governance and land use characteristics at community,regional and territorial levels.

This will include socio-economic profiles and characteristics of the study communities,and th eidentification and description of land uses/users.research methods include a desk-based review of existing literature and statistics,including quantative and qualitive inbformation.

Issues scoping will draw from this initial research,as well as the findings and outcomes of past and ongoing developments in the area.

The field study program will build upon this research through meetings,interviews,focus groups and workshops in th ecommunities

How to be people together? People, place and Inuit governance regeneration.

License Number: 05 058 11R-M
Principal Investigator: Price, Jackie
Affiliation: University of Cambridge
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Canada
jep49@cam.ac.uk

Number in Party: 1
Research Area: South Baffin,Kitikmeot
Communities: Cambridge Bay, Gjoa Haven, Kugluktuk, Iqaluit

Summary:

The purpose of my research is to learn about Inuit perceptions of contemporary Inuit governance. For this research, governance is understood as a system that emerges from, and supports, the relationship between people and place, and does not refer to Inuit participation in political institutions (i.e., Government of Nunavut, Nunavut Tunngavik, etc.).

The interviews for this research will ask people how they think good relationship can support a strong sense of community, or to put it another way, how Inuit feel people "should be people together".

These discussions will inform the articulation of possible strategies to encourage the development of community engagement to support Inuit engagement in various Arctic debates at the local, regional, territorial, national and international level.

These interviews will be understood in relation to Inuit experiences on wayfinding, story telling and food sharing. These practices express how Inuit are to be people together, and they mutually support individual and collective experience, expectation, responsibility and opportunity.

These practices provide important insights into how can Inuit support sustainable and interactive relationships with the land, but also among people. As these discussions will occur in the settlement, the interviews will provide an opportunity to learn how settlement life has influenced Inuit understandings of these land based practices.

Hunting or Mining: Contemporary Issues on the Baker Lake Territory, Nunavut

License Number: 03 060 11N-A
Principal Investigator: Laneuville, Pascale
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Quebec City, Quebec G1V 0A6
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pascale.laneuville.1@ulaval.ca

Number in Party: 2
Research Area: Kivalliq
Communities: Baker Lake

Summary:

This research is being done for the master's program with thesis of Pascale Laneuville, under Frédéric Laugrand's supervision, who is studying in the anthropology department of Université Laval's Faculty of Social Sciences. As conflicts mount between local practices for resource harvesting and industrial development in Northern Canada, this project aims to analyze the impacts of mining on the current relationship of the Inuit communities with their territory. By using notions of mobility, territoriality, and collective appropriation, this project will fulfil two goals: understanding how a traditionally nomadic society has brought its relationship with the territory into line with today's context; and assessing current issues that derive from the exploitation of natural resources in a Northern community.

Inuit Art In Pangnirtung:Community Perspectives

License Number: 01 096 11N-A
Principal Investigator: Rosen, Alena
Affiliation: University of Manitoba
Department of Native Studies
Winnipeg, Manitoba R3T 2N2
Canada
alenaerosen@gmail.com
Number in Party: 2
Research Area: South Baffin
Communities: Pangnirtung

Summary:

This project is different from most research and writing about Inuit art because the purpose is to learn about and discuss Inuit perspectives on art and art-making, instead of discussing Qallunaat perspectives.

I hope to provide a chance for the community to share stories about art-making, and to document them for the future. I also hope to talk about ways that we can show Inuit prints, carvings and tapestries in the South that better reflect Inuit ideas about them and ways to involve Inuit in the way these objects are shown.

Inuit Identity,Political Participation and education in Nunavut

License Number: 03 053 11N-M
Principal Investigator: Leigh, Darcy
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Centre for Canadian Studies
Edinburgh, EH9 9LD
UK
d.m.leigh@sms.ed.ac.uk

Number in Party: 2
Research Area: South Baffin,Kivalliq
Communities: Baker Lake, Clyde River, Igloolik, Iqaluit

Summary:

To explore Inuit identity and political participation in Nunavut through discussion with participants in three educational cases:Akitsiraq,Nunavut Sivuniksavut and Piqqusilirivvik.

Inuit Knowledge of Foxe Basin Polar Bear Habitat and Movements

License Number: 01 073 11R-M
Principal Investigator: Sahanatien, Vicki Ann Marie
Affiliation: University of Alberta
Department of Biological Sciences
Edmonton, AB T6G 2E9
CA
vicki.sahanatien@ualberta.ca

Number in Party: 2
Research Area: South Baffin
Communities: Igloolik, Hall Beach, Cape Dorset, Kimmirut

Summary:

The polar bears of the Foxe Basin region are not well known to researchers and wildlife managers. The most recent polar bear studies occurred in the 1980s.

The only biological data collected since that time are harvest and defense kill information. This gap in information is an important opportunity to tap into and explore approaches for incorporating traditional ecological knowledge into scientific research.

My study area includes the coastline and ocean of northern Hudson Bay, Hudson Strait and Foxe Basin. This is also known as the Foxe Basin polar bear population area. The focus of my research is polar bear habitat, the effects on climate change on available polar bear habitat (sea ice), polar bear movements, and behavior.

The existing oral history collections, reports and published literature of Inuit knowledge of polar bears were reviewed. New information will be collected using interviews and focus groups with knowledgeable Inuit and non-Inuit from communities in the study area. All sources of information will be combined into a database that can be used for research, management and public education.

Inuit Knowledge of the "Kiggavik" Area: Preliminary Study

License Number: 03 065 11N-A
Principal Investigator: Bernauer, Warren
Affiliation: York University
Department of Geography
Toronto, Ontario M6G 2L1
Canada
bernauer@yorku.ca

Number in Party: 2
Research Area: Kivalliq
Communities: Baker Lake

Summary:

This research is a preliminary study for my PhD in Human Geography at York University. I am interested in doing research about land use and mining in Baker Lake, Nunavut. I hope that the interviews I conduct now will help me understand issues around mining and land use, so I can develop more specific questions to ask in the future.

Inuit Language in early childhood development study

License Number: 01 077 11-Registry
Principal Investigator: Beveridge, Navarana
Affiliation: Iqaluit, Nunavut X0A 0H0
Canada
dirsp@qia.ca

Number in Party: 1
Research Area: North Baffin,South Baffin, Kivalliq
Communities: Clyde River, Igloolik, Iqaluit, Rankin Inlet

Summary:

The objective if this research will be to investigate ways to strengthen the wa Inuit language is delivered in the early childhood education system in a more systemic and strategic manner.

The purpose of this research is to draw upon people's experiences to seek information on the current status of early childhood development delivery using the Inuit language.

The expected results will be to make recommendations to decision makers regarding Inuit language in early childhood development as wellas to work with early childhood deliverers to ensure the Inuit language within institutional facilities are delivered in a way that is efficient and sustainable for future generations of Inuit.

Inuit perception and understanding of workplace safety education

License Number: 01 036 11N-A
Principal Investigator: Jackson, Suzanne
Affiliation: Lund University
Iqaluit, Nunavut X0A 0H0
Canada
suzanne@humanfactorwest.com

Number in Party: 2
Research Area: South Baffin
Communities: Iqaluit

Summary:

The research will be conducted in Iqaluit, Nunavut. The planned qualitative research method is to interview 10-15 Inuit workers who are taking a free, government-sponsored WHMIS three-hour education session. I will be participating and observing in the WHMIS education session(s).

I am interested in understanding how Inuit workers perceive and understand workplace safety risk communication (using WHMIS as an example) and how this information could be used to make workplace safety education more culturally appropriate and therefore better for Inuit Nunavummiut.

Inuit Qaujimajatuqanigit and Harvest Studies Supporting the Mary River Project

License Number: 02 107 11R-M
Principal Investigator: Cook, Richard
Affiliation: Knight Piesold Ltd.
North Bay, Ontario P1B 8G5
Canada
rcook@knightpiesold.com

Number in Party: 6
Research Area: North & South Baffin
Communities: Arctic Bay, Cape Dorset, Clyde River, Hall Beach, Igloolik, Pond Inlet

Summary:

Baffinland Iron Mines Corporation (Baffinland) is looking to build a mine at Nuluujaak (Mary River). Inuit Qaujimajatuqangit (IQ) studies were initiated in 2006 to document the existing condition of the land and wildlife in the region and obtain feedback on the potential effects of mine development.

The studies proposed here include supplementing the IQ studies already initiated, as well as collection of current wildlife harvest information from local hunters. The IQ studies will help Baffinland plan a project that considers and respects local knowledge, including how the people use the land and which areas are most important.

The information will be very important to support an environmental assessment, including identifying potential negative and positive impacts of the project on the communities and wildlife, and identifying mitigation opportunities.

These studies will be conducted and coordinated by Baffinland, with the assistance of Knight Piesold Ltd., with the participation of local researchers and Hunter and Trapper Organizations.

Inusiqasiarniq: Healthy Choices for Children & Youth

License Number: 03 070 11Registry
Principal Investigator: Tagalik, Shirley
Affiliation: Hamlet of Arviat
Arviat Health Committee
Arviat, Nunavut X0C 0E0
Canada
tagaliktwo@hotmail.com

Number in Party: 7
Research Area: Kivalliq
Communities: Arviat

Summary:

The Arviat Inusiqasiarniq project is a community-driven initiative funded through the PHAC Innovation Strategy. The aim of the project is to improve health outcomes for our very large child and youth population and their families.

LANGAGES D'ARTCIRQ

License Number: 02 136 11N-M
Principal Investigator: Van eeckhout, Antoine
Affiliation:
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Paris, France
antoine.vaneeckhout@gmail.com

Number in Party: 1
Research Area: North Baffin
Communities: Igloolik

Summary:

By studying the daily Artcirq, I will try to understand how happens the circulation of speech in Artcirq. I will keep details of instruction in the various disciplines offered and I will conduct interviews with young artists, teachers and their families. I will also share my own artistic skills in acrobatics, balance, hand to hand, wire and in juggling.

This field work in Igloolik added to the theoretical work done over the past two years will enable me to write a thesis to validate my Master in social anthropology. This thesis will be sent to Artcirq.

Local Discourses of Arctic Sovereignty in Iqaluit

License Number: 01 089 11R-M
Principal Investigator: Weber, Barret
Affiliation: University of Alberta
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barretw@ualberta.ca

Number in Party: 2
Research Area: South Baffin
Communities: Iqaluit

Summary:

The investigators will conduct interviews in Iqaluit, Nunavut from September 29 through October 12, 2009. In this research project we attempt to relate local discourses to the wider questions about sovereignty in the Arctic.

We attempt to understand the various ways in which residents of Iqaluit, Nunavut interpret and enjoy life in their town, region, and broader contexts in everyday terms.

We will gather data for this project by conducing open-ended interviews with local stakeholders and to document the interviews using electronic recorders. This research is focused primarily on issues having to do with diverse conceptions of land and water, or what we will attempt to articulate as new ‘geographies of sovereignty’.

Therefore, the research will highlight interviews with local stakeholders or Arctic residents. We investigate local social processes that challenge not only the traditional concept of sovereignty, but also the manner in which local perspectives are both supporting and challenging the validity of scientific claims about the region.

By examining the relationship between geopolitics, science, and everyday life, we show that the Arctic is a place of knowledge-generation and -exchange amongst indigenous peoples, scientists, citizens, researchers, media, policy makers, and others.

Perspectives on the Risks, Benefits and Long Term Impacts of Diamond Mining in Kugluktuk, Nunavut

License Number: 04 046 11N-A
Principal Investigator: Schlosser, Kolson
Affiliation: Clarkson University
Department of Humanities & Social Sciences
Potsdam, New York 13699
USA
kschloss@clarksonu.edu
Number in Party: 1
Research Area: Kitikmeot
Communities: Kugluktuk

Summary:

This research is part of a broader project to trace the geography of the global diamond industry as it has evolved over time. In order to do this, it is necessary to understand how diamond mining impacts the people of Kugluktuk. The research will involve focus groups asking participants to discuss what they feel are the greatest risks and benefits of diamond mining, what they think the long term impact of mining is on Kugluktuk, and how, in general, they react to the way Inuit land and society is depicted in advertisements for Canadian diamonds.

Picturing Responsibility on the Thelon River,Nunavut

License Number: 03 066 11R-M-Amended
Principal Investigator: Grimwood, Bryan
Affiliation: Carleton University
Department of Geography & Environmental Studies
Ottawa, Ontario K1S 5B6
Canada
bgrimwood@connect.carleton.ca

Number in Party: 4
Research Area: Kivalliq
Communities: Baker lake

Summary:

The Thelon River is a source of natural and cultural value for Inuit residents of Baker Lake and nature-based tourists from the south. It is also a place with changing social-ecological relationships, complex knowledge systems, and diverse political structures.

The purpose of this PhD research is to explore how personal and group responsibility functions within this complexity, and to use this information to cultivate enhanced social and environmental responsibility along the Thelon River.

The central objectives of this research are to:

1. describe how nature and culture are bound together along the Thelon;
2. illustrate the interconnected layers of values associated with the Thelon; and
3. consider the extent to which knowledge-sharing encounters facilitate expressions of responsibility along the Thelon.

Of central concern is that the research engages Thelon River canoe travelers and residents, particularly the Inuit living in Qamani'tuaq, through knowledge-sharing workshops about land-based practices, environmental and social responsibility, and meaningful places.

Reporting From Afar or Far From Reporting? How the Canadian core covers the periphery.

License Number: 01 101 11N-A
Principal Investigator: Copeland, Jeremy
Affiliation: Carleton University
Ottawa, Ontario K1S 5B6
Canada
jcopla4@uwo.ca

Number in Party: 2
Research Area: South Baffin
Communities: Iqaluit

Summary:

My thesis will try to answer the question what can we learn about how to cover the periphery by using coverage of Nunavut by southern Canadian newspapers as a case study to explore domestic core coverage of the periphery.

Through a content analysis, I expect to show that the vast majority of the stories about the Canadian North

that appear in Canada's biggest newspapers are written by reporters based in the South.

In other words, journalists who live and work in big cities are covering the periphery from the core.

Why is this happening? How are they doing it? What lessons can be learned from how they are finding, generating and covering their stories about the periphery?

What is working well and what is being lost in the process?

How can media in the south make sure that more Northern voices are heard in their stories?

Self-determination and postsecondary education: The Inuit and the Circumpolar North

License Number: 0506711N-M
Principal Investigator: Gaviria, Patricia
Affiliation: University of Toronto
Tonronto, Ontario M5V 2V5
Canada
patricia.gaviria@utoronto.ca

Number in Party: 2
Research Area: Kitikmeot, Kivalliq, South Baffin
Communities: Iqaluit, Rankin Inlet, Cambridge Bay

Summary:

Discuss with college administrators and faculty how their everyday work relates to the social and economic needs of Nunavut and Greenland, and specifically of the Inuit people.

Experience how Inuit ways are integrated into education practices at Nunavut Arctic College

Compare Inuit approaches to postsecondary education against the political history of Greenland and Nunavut.

Silalirijiit Project: Linking Inuit Knowledge and Local-Scale Environmental Modeling to Evaluate the Impacts of Changing Weather on Human Activities at Clyde River, Nunavut

License Number: 02 1321 11R-M
Principal Investigator: Gearheard, Shari
Affiliation: University of Colorado
Clyde River, NU XOA-0E0
Canada
sharig@qiniq.com

Number in Party: 10
Research Area: North Baffin
Communities: Clyde River

Summary:

This project brings together Inuit and scientists to study weather patterns at Clyde River. The objective is to better understand local weather and improve weather forecasting for the community.

The project will install 2-3 new weather stations in the region at locations chosen in consultation with local experts. The project will hire local people to maintain the stations and form a working group of 5 local experts who have knowledge about weather patterns. The project will include an exchange program where project scientists will visit the community, and the 5 local experts (and interpreter) will travel to Colorado to see how the scientists work. If this project is successful, the methods and tools used will be useful for other communities who want to study their own weather and make better weather forecasts in their area.

Socio-Economic & Traditional Knowledge Studies for the Agnico-Eagle Mines, Meliadine Gold Project Environmental Impact Assessment

License Number: 03 064 11R-M
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Number in Party: 5
Research Area: Kivalliq
Communities: Rankin Inlet, Whale Cove, Chesterfield Inlet

Summary:

The socio-economic and traditional knowledge studies may include, in addition to reviews of secondary data sources, key informant interviews and focus group discussion in Rankin Inlet, Whale Cove and Chesterfield Inlet. Key informant interviews and focus groups discussions complement official socio-economic data from secondary sources, providing qualitative information on socio-economic dynamics and trends, as well as on community/sub population strengths, weaknesses, opportunities and constraints and on people's concerns and interests with regard to the Meliadine Project development. Interviews with people who are knowledgeable about the land and its resources provide information that can be integrated into the environmental impact assessment, in combination with scientific knowledge, such that the quality of the assessment is enhanced.

Socio-economic and Traditional Knowledge Studies in Relation to the Kiggavik Project Environmental Impact Assessment, Kivalliq Region

License Number: 03 055 11R-M
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Number in Party: 4
Research Area: Kivalliq
Communities: Arviat, Baker Lake, Chesterfield Inlet, Coral Harbour, Rankin Inlet, Repulse Bay, Whale Cove

Summary:

The purpose of the research project is to collect socio-economic and traditional knowledge information sufficient to understand community interests in the Kiggavik Project, as input to an environmental impact assessment for Kiggavik Project permitting.

The Kiggavik Project is a uranium project in the Kivalliq region.

A summary Kiggavik Project description is attached as Appendix B, in English and Inuktitut.The objective of the socio-economic and traditional knowledge studies is to collect baseline data to enhance AREVA's understanding of conditions in communities potentially affected by the Kiggavik Project.

The information will be used to assess potential and residual impacts of the Kiggavik Project on socio-economic conditions and resource use and to frame impact mitigation and benefit enhancement measures to be implemented by AREVA as conditions for Kiggavik Project approvals.

The Ethnoarchaeology of Inuit Sea-Mammal Hunting, Northwest Foxe Basin, NU

License Number: 02 133 11N-A
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Number in Party: 2
Research Area: North Baffin
Communities: Igloolik

Summary:

The economic and ideological importance of sea-mammal hunting by Inuit has been largely neglected by both archaeologists and anthropologists. My research seeks to address how dramatically the sea-mammal hunting economy has changed in the Arctic since AD 1200.

Recent archaeological surveys of ancestral Inuit sites around Igloolik and Hall Beach, Nunavut, have proven the existence of a widespread and long-lasting walrus hunting tradition. In mid-July 2011,

I hope to travel to Igloolik, where I will use archaeological data collected in the region and oral-histories of Igloolik elders, to build a dialogue with local elders and hunters on the regional change over time of seal and walrus hunting practices and beliefs.

The fieldwork is scheduled to coincide with the annual summer walrus hunt in Igloolik, and will last from approximately July 10 to August 1, 2011.

The Northwest Passage and the construction of Inuit pan-Arctic identities

License Number: 0212911N-M
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Number in Party: 7
Research Area: North Baffin
Communities: Pond Inlet

Summary:

The Northwest Passage is an integral part of Canada's territory and identity. At the same time, these waters and adjacent shores are largely known to Inuit, who see vast parts of this territory as their homeland. Inuit have occupied the land, sea and sea ice seasonally, the different elements of the territory constituting a vast network of routes and areas.

This project will look at Inuit use and understanding of the Northwest Passage, through a study and documentation of Inuit traditional trails and place names, which have interconnected Inuit groups across the Arctic since time immemorial.

Tracking local research messages on climate change and health in Nunavut

License Number: 01 099 11N-A
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Number in Party: 4
Research Area: South Baffin
Communities: Iqaluit

Summary:

There are Canadian policy-makers who are taking community perspectives on environment and health issues, such as changing harvesting practices, seriously.

For example, Health Canada funded Northern First Nations and Inuit communities to conduct community-based research on climate change and health adaptation from 2008-2011.

It is, however, unclear how these studies are being used to act on local messages about the needs, values and experiences of real people with real health concerns.

The goal of this project is to understand how research is (or could better be) moved into action by working with the Qaujigiartiit Health Research Centre (QHRC) to track a key message from their photovoice project on climate change and health conducted in 2009.

Traditional Knowledge and Socio-Economic Study: Hall Beach, Repulse Bay, and Igloolik

License Number: 02 116 11N-M
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Number in Party: 4
Research Area: North Baffin,Kivalliq
Communities: Hall Beach, Igloolik, Repulse Bay

Summary:

The purpose of this study is to obtain traditional knowledge from the residents of Hall Beach,Repulse bay and Igloolik for incorporation into project planning and regulatory requirements.

The purpose of the study is also to engage stakeholders by informing them of plans for project advancement and hearing their views on relevant socio-economic issues.

This will ensure relationship building,project design contributions,interactions between the project and local values and preparing for community planning.

Traditional Knowledge of Northwestern Hudson Bay Polar Bears: Distribution, Habitats, Food and Behavior

License Number: 03 048 11R-M
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Number in Party: 5
Research Area: Kivalliq
Communities: Repulse Bay, Coral Harbour, Chesterfield Inlet, Rankin Inlet, Baker Lake

Summary:

The polar bears of Northwestern Hudson Bay and the Foxe Basin region are not well known to researchers and wildlife managers.

The most recent polar bear studies occurred in the 1980s. The only biological data collected since that time are harvest and defense kill information.

This gap in information is an important opportunity to tap into and explore approaches for incorporating traditional ecological knowledge into scientific research. My study area is in Northwestern Hudson Bay.

This is also referred to as the Foxe Basin polar bear population.

The focus of my research is polar bear habitat selection (small and large scale), the effects on climate change on available polar bear habitat (sea ice), polar bear movements, and behavior.

The existing oral history collections, reports and published literature of Inuit knowledge of polar bears were reviewed. New information will be collected using interviews and focus groups with knowledgeable Inuit and non-Inuit from communities in the study area.

All sources of information will be combined into a database that can be used for research, management and public education.

Typological aspects of Inuit Sign Language

License Number: 03 051 11R-M
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Number in Party: 2
Research Area: Kivalliq, Kitikmeot
Communities:
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Summary:

The goal of this project is to describe some linguistic aspects of Inuit Sign Language (ISL), which – apart from some aspects of its vocabulary – is as yet undescribed. ISL has recently been recognized by the government of Nunavut (see attached Minister's statement). The Nunavut government has clearly indicated that they would like to develop ISL. A prerequisite for the development of ISL is a linguistic description of the language.

From a linguistic point of view, it is interesting to describe ISL because of its unique setting: it is a language used in a wide area by few people. Moreover, the extreme weather conditions of Nunavut are expected to have influenced the structure of the language.

Furthermore, ISL is expected to be highly influenced by the surrounding spoken language Inuktitut, a fact which may have lead to unique linguistic structures that are not found in other signed languages around the world.

The study will focus on selected semantic fields (colour, kinship and time terms) as well as on some grammatical aspects (noun-verb patterns, verb agreement) of ISL. Furthermore, an inventory of the handshapes used in the sign language will be compiled. All patterns found will be compared to those of other signed languages as well as to Inuktitut.

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