All Projects

Inuit Health, Education, Adaption

1) Microplastics and Associated Chemicals: Transport to and within the Canadian Arctic (MPACs)

Project Leader : *Liisa Jantunen, University of Toronto*
Funding: *$100,00.00*

Microplastics are found in every environment throughout the globe, including the Arctic. Evidence is mounting that exposure to microplastics and associated chemicals are harmful to biota including humans. In response to this evidence, Canada initiated the Oceans Plastic Charters under the G7; the Canadian Council of Ministers of the Environment (CCME) are also developing a national strategy on "zero plastic waste". This project aims to characterize and benchmark levels of microplastics, tracking all associated chemicals in the Canadian Arctic. Characterizations that specifically determine microplastics sources are integral for developing effective mitigation strategies, while benchmarking levels are needed to gauge the effectiveness of these strategies. This essential information supports investigations into the impacts of microplastics on the Northern environment. Both the Northern Contaminants Program (NCP) and the Arctic Council's Arctic Monitoring and Assessment Programme (AMAP) identify microplastics as an emerging Arctic Concern. AMAP's recently released guidance document on the collection, processing and reporting of plastics in the Arctic environment ensures reliable assessment of spatial and temporal trends; the PI and a team member serve this AMAP expert group in official capacities. The Stockholm Convention on Persistent Organic Pollutant (SC-POPs) recently adopted the risk profile for UV-328 (plastic associated chemical), noting it is likely to undergo long-range environmental transport, which leads to adverse ecological effects. In addition to addressing many gaps in plastics research, we propose to continue training students from both the South and North, and continue to solicit and address the concerns of northern communities in regards to microplastics.

Marine Sciences

2) Camera community-based Arctic marine mammal studies (CCAMMS)

Project Leader : *Marianne Marcoux, University of Manitoba*

Funding: *$150,000.00*

Marine mammals in the Arctic are facing increasing presence of human activities including shipping and marine construction. For example, marine mammals in the northern Baffin Island area have been exposed to increased shipping and ice breaking related to the Baffinland Mary River mine as well as noise from construction of mine ports and small craft harbours. In addition, other changes in the environment such as climate change and prey availability or presence of predators may impact marine mammal fitness and ultimately their population size. While hunters

are reporting negative changes in relative number and opportunities of the species they hunt, it has been challenging to consistently document and relate changes to a specific stressor.

This project will co-develop monitoring methods with communities that can be implemented from small vessels or shore, and will be led by locally trained team members in communities across Nunavut and Inuvialuit. Monitoring methods will take advantage of advances in non-invasive technologies including aerial imagery (e.g., drones) and stationary camera technologies as well as automated processing of multiple images to document marine mammal behavior, health, and demographics. This project will contribute to building science and research capacity in the North by providing workshops and training opportunities, and creating guidelines to support ethical marine mammal monitoring based on local interests. In addition, we will gather baseline data on the status of marine mammal populations across seasons and years and at various locations to document spatial and temporal variability and tease apart the cumulative impacts of multiple stressors.

3) An ecosystem approach to quantifying behavioural and energetic impacts of anthropogenic disturbance to Arctic whales

Project Leader : *Sarah Fortune, Dalhousie University*

Funding: *$150,000.00*

Arctic marine mammals are living in a rapidly changing environment. However, the impacts of increasing human activity on northern whale species and populations is poorly understood. Specifically, the loss of pristine conditions from anthropogenic sources of noise is anticipated to lead to varying levels of impact ranging from acoustic masking and behavioural disturbance to extreme cases of hearing loss and death. Furthermore, risk of serious injury or mortality from increased vessel traffic in the Canadian Arctic is of growing concern for whale species. We are seeking to employ a multi-faceted research approach using an experimental control study to quantify acoustic impacts of vessel noise and sonar exposure on Arctic whales and assess ship strike risk. Combining aerial behavioural observations (drones) with underwater biologging technology (long-term and coarse scale satellite telemetry tags with time depth recorders logging 2D movement over horizontal and vertical planes and short-term high-resolution biologgers recording 3D dive behaviour and received sound), prey field mapping (oceanographic sampling) and vessel location and noise data (AIS), we will determine how: 1) anthropogenic noise impacts Arctic whale behaviour and vocalizations (call and echolocation rates)?; 2) diving behaviour affects vessel strike risk; 3) we can mitigate impacts to reduce risk of disturbance, injury and mortality. The outcomes of our research will directly support risk mitigation actions by the Department of National Defense regarding using sonar in the Arctic and will contribute to Fisheries and Oceans Canada adaptive responses to marine shipping and environmental impacts on Arctic whales. Our project will create stronger Indigenous partnerships and engage coastal communities by assessing cumulative effects of marine shipping and fishery activities on Arctic whales.

4) Rapidly changing ecosystem dynamics in the Arctic Ocean's Last Ice Area (RED-AO)

Project Leaders: *Audrey Limoges, University of New Brunswick*

Mathieu Ardyna, Université Laval

Funding: *$350,000.00*

The Arctic Ocean (AO) is a key component of Earth's climate, acting as a coolant by contributing ~10% to the global oceanic carbon pump. Its capacity to remove carbon dioxide (CO2) from the atmosphere comes from its cold waters that favour CO2 dissolution and its highly productive continental shelves that help sequester this carbon. Yet, the AO is warming at an unprecedented rate and the local and global consequences of its rapid evolution remain uncertain. The Last Ice Area (LIA), north of Canada and Greenland, is the last sanctuary of multiyear sea ice in the AO. The LIA includes the Lincoln Sea, which hosts unique endemic sea ice-dependent ecosystems. However, the physical, chemical, and biological properties of the Lincoln Sea remain nearly undocumented. RED-AO aims at improving understanding of how global change influences ecosystem functioning and biogeochemical cycling in northern Baffin Bay and the Lincoln Sea – an emblematic refuge of climate change. This project proposes a pioneer oceanographic expedition during which, 4 for the first time, sea ice, hydrography, biogeochemical cycling of nutrients and contaminants, and marine ecosystems will be observed simultaneously. It will provide a comprehensive baseline for conservation efforts and allow us to study key processes related to past, present, and future climate-induced changes. This project will strengthen both the conservation and sustainable resource harvesting of this fragile region by helping to i) create and manage permanent marine protected areas supported by indigenous governments, and ii) support ecosystem-based management of commercial fisheries led by indigenous groups in the eastern Canadian Arctic.

5) Weather and aajurait (lead) Monitoring for sea ice safety during the break-up season

Project Leader : *Derek Mueller, Carleton University*

Funding: *$194,680.00*

The sinaa (floe edge) and aajurait (leads) are important spring hunting and tourism destinations for the communities of Ikpiarjuk (Arctic Bay) and Mittimtalik (Pond Inlet), Nunavut. However, these areas are also dangerous and prone to break-off events with a combination of wind, current, and temperature changes, or unexpected weather events. Break-off events are not well-understood or modelled using scientific methods, and changes in the Arctic climate are making assessment of travel safety on sea ice using Inuit Qaujimajatuqangit more challenging. Our project builds on existing SmartICE monitoring underway in each community, but is specifically targeted to address community concerns around predicting break-off events. We will bring together Inuit Elders, hunters, and youth, along with natural and social scientists, to learn from both Inuit

Qaujimajatuqangit and instrumental monitoring. Together, we aim to improve the predictive ability of landfast ice models, and support travel safety and decision-making. By establishing new observational systems for weather, current, and sinaa monitoring in each community, as well as workshops to interpret and assess model products, our project will evaluate the feasibility of this approach to support real-time decision-making for safe spring ice travel. Furthermore, project partner SmartICE will explore how such observational systems and landfast ice models may be relevant to other communities across its extensive monitoring network.

Northern Policy & Development

6) Future Arctic Mobilities: Informing transportation adaptation through climate observations and model projections of changing snow and ice

Project Leader : *Sapna Sharma, York University*

Funding: *$256,500.00*

The coastal and inland communities distributed across the Canadian Arctic depend on safe, accessible, and affordable transportation routes to support regional economic development, and to underpin sustainable livelihoods, culture, and food security. In the winter, transportation requires sea ice, freshwater ice, and snow to be thick enough to sustain the weight of snowmobiles and trucks. In the summer, navigational routes and harbours in the ocean need to be sufficiently free of sea ice to permit safe shipping activity. Climate change has decreased the duration, extent, and thickness of the cryosphere in the Arctic, including sea ice, freshwater ice on lakes and rivers, and snow cover. This loss of reliable, and safe transportation conditions has direct implications for mobility in the Arctic, both marine and overland. In this project, we aim to forecast the availability of suitable marine shipping routes and overland winter trails and ice roads under global warming scenarios of 1-4ºC above pre-industrial (1850-1900) times. We have assembled a strong transdisciplinary team to develop climate mobility projections for local communities, in order to better inform local adaptation efforts. Ultimately, our goal is to provide climate model projections of key cryosphere variables (snow, freshwater ice, sea ice) and their drivers (temperature, precipitation) at the regional and community-level scales across the Canadian Arctic that can be used to better understand the impacts, risks, and adaptation options available to support safe local and regional marine and overland mobilities.

Terrestrial Sciences

7) Thermokarst Lakes: Dramatic increases in the removal of thermokarst lakes from the Canadian Arctic Landscape (TLRemoval)

Project Leader : *Philip Marsh, Wilfrid Laurier University*

Funding: *$349,600.00*

Many areas of the Arctic are dominated by immense numbers of lakes covering up to 50% of the land area. These lakes provide important habitat for fish, waterfowl and mammals and influence cultural well being through travel, fishing, and hunting. Most of these lakes formed from melt of massive ground ice over past millennia and are termed thermokarst lakes. These thermokarst lakes are susceptible to a process termed catastrophic thermokarst lake drainage, where melting of massive ground ice near the lake outlet results in the development of a drainage channel that allows emptying of the lake in a few days , and often in less than a day. These drainage events result in: the creation of drained thermokarst lake basins; extreme floods that are a risk to people and infrastructure; new terrestrial habitat; and destruction of fish habitat. Our research has shown that lake drainage declined over the period 1950 to 2000 but tripled over the last 15 years. While the cause of these changes could be attributed to climate warming, permafrost thaw, and/or increased beaver damming, the details and controlling processes are poorly understood. The recent rapid increase in drainage suggests that a threshold has been crossed and raises key questions about the long-term viability of thermokarst lakes and the impacts on ecosystem services they provide. Our proposed study will build on our studies of beaver and climate impacts in this region and answer key questions about past and future causes of lake drainage in the western Canadian Arctic.

8) Trying to make fetch happen: including tall shrubs in the atmospheric carbon budget of western Inuit Nunangat

Project Leader : *Oliver Sonnentag, Université de Montréal*

Funding: *$199,750.00*

Climate warming leads to changes in Arctic ecosystem function and disturbance regimes. These changes affect biodiversity and local, regional, and global ecosystem services with implications at all levels of governance. Western Inuit Nunangat is among the most rapidly warming regions of the Earth. One consequence of climate warming witnessed across the Inuvialuit Settlement Region (IRS) is the presence of more and taller shrubs. Such changes in vegetation composition, structure, and diversity will have impacts on the atmosphere, the underlying permanently frozen ground, and on ecosystem services including access to travel routes across the land and traditional livelihoods. Our project engages community members in studying the ecosystem consequences of vegetation changes using geospatial technologies, and field observations on the ground and in the atmosphere in combination with artificial intelligence. Building local capacity is a prerequisite for continued vegetation monitoring to support the people of the ISR to adapt to climate change impacts occurring on their territory.

9) Understanding Arctic grizzly bear range expansion: a community-oriented approach

Project Leader : *Douglas Clark, University of Saskatchewan*

Funding: *$350,000.00*

Grizzly bears are expanding their range in northern Canada, particularly on Victoria Island, NWT/ Nunavut; coastal portions of the Kivalliq region, Nunavut; and the Hudson Bay coast of Manitoba. The reasons for this expansion are not known but could be related to climate change. Our project seeks to understand why grizzlies are establishing in these areas and determine what this means for people and for the land and ocean environments these bears use. We will answer these questions using a community-led combination of:
1. traditional and local knowledge as well as ongoing observations to provide cultural, historic, and geographic context,

2. camera trapping to better understand the distribution of grizzlies on the land, and

3. collection of hair and scat samples for diet and DNA analyses to understand what these grizzlies eat and whether their numbers are growing along with their range.

Local organizations and community members in each site will play key roles in collecting and interpreting data as these communities continue to assess these situations for themselves and determine whether grizzlies pose threats, nuisances, or opportunities, as well as potential effects on other wildlife.

10) Snow changes Impacts on Kangiqsualujjuamiut (SCIK)

Project Leader : *Alexandre Roy, Université du Québec à Trois-Rivières*

Funding: *$203,120.00*

Modification of snow and ice conditions as a result of climate change is a significant concern of northern communities. Reduced snow season and change in snow and ice conditions will affect winter transportation as well as the cycling of contaminants that may accumulate in country food. A large part of Northern communities' activities is closely tied to the snow and lake/river ice conditions, where travels are done in the winter season when the snow and lake ice allows safe and efficient transport by snowmobile across the tundra. Snow can also be an important reservoir of chemical components, such as mercury, that can be eventually released towards lakes and rivers at snowmelt. This reservoir can be affected by transport and community activity. However, the accumulation processes in the snow and the potential release of these components in the atmosphere throughout the winter season under a changing climate is not well known.

This collaborative project aims to improve the understanding of the impact of two important snow components for Kangiqsualujjuamiut: 1) winter transport and 2) snow chemical composition. It would include Inuit Knowledge to build more realistic snow model simulations, through semi-structured interviews, focus groups and field trips. The project includes the training of two community members to take snow measurements and gather snow samples in forest and non-forest environments that will be used for chemical composition analysis in the laboratory. The analysis will allow to quantify the evolution of chemicals in the snow in contrasting environments. We build on strong ties and mutual trust with the community of Kangiqsualujjuaq. This project will

allow our team to engage further in local training, and improve science knowledge with Inuit Knowledge related to snow.

11) Indigenous Knowledge of Berries in the Northwest Territories

Project Leader : *Erin Cameron, Saint Mary's University*

Funding: *$209,825.00*

In the Northwest Territories berries hold ecological, cultural, and economic importance. However, knowledge holders across the territory have reported declines in berries and have identified a need to better understand berry status and trends. The goal of the Indigenous Knowledge of Berries in the Northwest Territories project is to complete a territory-wide Indigenous knowledge study. The project will seek to describe any changes to berries, identify potential causes of these changes, and outline what further information needs to be collected. This project will also be used as the basis for applying Indigenous protocols for community engagement and developing guidance or best practices to steer community-based research linked to specific programming, including biodiversity (wildlife and species at risk) and on-the-land research. Berries and berry plants will be the focus of this project and will be used as a proxy for wider application of community-directed research and protocols.
A working group and expert advisory committee were established to work together and with communities in the Northwest Territories to document Indigenous knowledge of berries/plants, in order to better understand their health and productivity. Information requirements within the Species at Risk (NWT) Act will also be considered to assist in preparing for a potential future assessment, if required, while establishing clear protocols for research focusing on Indigenous and community knowledges. This work will also provide a model for completing community-led research related to the Species at Risk (NWT) Act or related information-dependent processes.

2022 IQP Project Descriptions

1) Kitikmeot Inuit Qaujimajatuqangit framework for polar bear monitoring and management

Project leaders: Wong, Pamela & Qaggutaq, Ema
Support Organization: Kitikmeot Regional Wildlife Board
Locations: Cambridge Bay, Umingmaktok, Gjoa Haven, Taloyoak, Kugaaruk
Funding: $284,862.50

This two-year project will develop a Kitikmeot Inuit Qaujimajatuqangit (IQ) framework for polar bear management that has three components: 1) Inuit values and management goals; 2) monitoring tools that provide IQ and scientific data for Inuit to use; and 3) data sharing and consultation protocols established by Kitikmeot Inuit to support information sharing. This IQ-based framework will prioritize leadership by the Kitikmeot Regional Wildlife Board (KRWB) and the Hunters and Trappers Organizations (HTOs), and the engagement of knowledge holders and community members in polar bear management. This framework will also guide processes requiring KRWB or HTO feedback and consultation with co-management partners. This

framework will be adaptable for changing community priorities and capacities, as well as other IQ-based species assessments and corresponding management responses.

2) Ujjiqsurniq Avatiptini (Ability to Observe our Surroundings): A knowledge exchange between Mittimatalingmiut and Arviarmiut
Project leaders: Simonee, Natasha & Baker, Kukik
Support organization: Aqqiumavvik Society
Locations: Mittimatalik (Pond Inlet), Arviat
Funding: $197,950.00

In our communities of Mittimatalik and Arviat, Inuit youth are eager to learn weather prediction skills to hunt and travel safely that are based in Inuit Qaujimajatuqangit. Inexperienced hunters tend to rely more on environmental services (weather and marine forecasts, Windy.com) and take more risks. With our rapidly changing climate, we feel that both ujjiqsurniq avatiptini (ability to observe our surroundings) and modern weather forecasts used together are most beneficial for our community members. We want and need inexperienced hunters to gain skills in using both types of observations to make safe travel decisions. In this project, we create opportunities for knowledge exchange between our two very different communities. We have different landscapes, languages, and cultures. While on the land together in different seasons we will document how ujjiqsurniq avatiptini and modern forecasts are used together. We will film everything involved in trip planning and assessing environmental conditions. Watching people planning and putting their knowledge into practice out on the land is very different from reading about it in a report. We will create a series of short safety videos, a documentary film, and posters to share our experiences. Our goal is to develop informative resources to get people talking and thinking about how to plan for safe travel.

3) Inuit knowledge and molecular biology addressing industrial impacts in the Kivalliq
Project Leader: Tartak, Clayton
Support organization: Kivalliq Wildlife Board
Locations: Kangiqliniq (Rankin Inlet), Qamani'tuaq (Baker Lake)
Funding: $225,450.50

Industrial development has long been present in the Canadian Arctic but has undergone rapid development in Nunavut in the last 20 years. In the Kivalliq region, local Elders and hunters have associated gold mining and related activities with environmental impacts. One of the main impacts is causing stress for fish and wildlife that Inuit rely on for food. These negative impacts can affect Inuit culture, health, and well-being. The Kivalliq Wildlife Board, in partnership with ArctiConnexion and academic researchers, will develop in Kangiqliniq (Rankin Inlet) a new approach to monitor the impacts of the Agnico Eagle Mine's (AEM) Meliadine project on freshwater and marine ecosystems. This approach will combine Inuit knowledge and molecular biology to develop indicators of environmental, ecological, and biological stress that will help the community of Rankin Inlet and other communities to research mining impacts. Our project will be community-driven, employ local people, involve our youth and Elders, and build capacity and expertise locally for new procedures and approaches. People from our community of

Kangiqliniq will be the leader of this new project. We will also present our approach to the community of Qamani'tuaq in year two and pilot a project.

4) The effects of coastal storms on beaches in and around Cabin/Camping areas, Ausuittuq, Nunavut / Sijjavu Qanutigi Mallingnu Nungutauvalianinga Qauyisaqniq Illuralaaravitinni Ammalu Sinittaraiqvitinni, Asuittuq, Nunavut
Project Leaders: Noah, Terry, Didier, David & Bhatia, Maya
Support organization: Ausuittuq Adventures
Location: Grise Fiord
Funding: $204,727.51

The beach is vital to the way of life in Grise Fjord. The beach is where we store the boats, snowmobiles, kamutiks, and shacks full of equipment (for convenient access to the sea and ice to be able to go hunt our food or help anyone in need). The community butcher stores their meat at the beach (so polar bears don't come into town). Sled dogs or guard dogs are usually at the beach to protect the community from bears. The beach is where kids play and learn about the environment and dangers of both sea and land. The beach ensures food security, safety, and a safe place to learn. Cabins and shelters are also located along the beach, near Jones Sound, between Narqsa and Arqsarvik (Lee Point). This area is affected by declining, and even sometimes unstable, sea ice coverage, and therefore strong storm impacts in the fall. In this project, we want to gain more knowledge on cabin and campsite exposure to increasing storm intensity and waves in order to better adapt to climate change.

5) Visualizing Rigolet Perspectives on the Muskrat Falls Project
Project Leader: Penney, Jessica
Support organization: Nunatsiavut Government
Location: Rigolet
Funding: $28,755.00

This project aims to assess the strengths and challenges of participant photography as a research method and strategy for disseminating results in Inuit communities. It will do so by producing a photo book about Rigolet community members' perspectives, concerns, and observations relating to the Muskrat Falls hydroelectric project. The photo book will be distributed to participants, community organizations, schools, and relevant governmental organizations., Using mixed research methods, we will evaluate the use of photography as a method and research dissemination tool. Rigolet community members have been at the forefront of raising concerns about the potential environmental, social, and cultural impacts of the Muskrat Falls project. The outputs from the project will provide another avenue for drawing attention to the important perspectives of participant photographers. Their knowledge will be transferred to the wider community and policymakers in a creative way, all while collecting data to inform and improve future projects.

7) Investigating Water Quality in Fish-bearing Lakes in Imaryuk

Project Leaders: Williams, Shanay & Parrott, Jenn
Support organization: Inuvialuit Regional Corporation
Locations: Tuktoyaktuk, Inuvik
Funding: $254,925.49

This project is designed to generate a water quality database for long-term water health monitoring on Imaryuk, working closely with the Inuvialuit communities living in the area. Imaryuk is important to Inuvialuit because of traditional activities like fishing, harvesting, travelling, and recreation. This project will have three components that integrate traditional and academic knowledge to drive environmental and sustainability action plans. Firstly, the Inuvialuit Regional Corporation (IRC) researchers and local Inuvialuit will conduct structured surveys of community members living in Imaryuk camps. This will be done to gather first-hand knowledge detailing the economic and cultural value of the lakes, including consumption, harvesting, and fishing associated. Secondly, IRC researchers and local youth will conduct research to collect and analyze lake water to determine water quality, building on previous research from the Tuktoyaktuk Community Committee, Aurora College, and the Department of Fisheries and Oceans to include a wider suite of organic and inorganic parameters. Lastly, this research will incorporate an educational component that features scheduled activities that are predetermined and approved by the local school district principals to cater to K through 12 school students in Inuvik and Tuktoyaktuk.

8) Using Traditional and Local Knowledge to Better Understand the State of the Beaufort Sea
Project Leaders: Forbes, Tess & Parrott, Jenn
Support organization: Inuvialuit Regional Corporation
Locations: Aklavik, Inuvik, Paulatuk, Sachs Harbour, Tuktoyaktuk, Ulukhaktok
Funding: $123,650.00

This study will be conducted in three phases using a full-time traditional knowledge (TK) expert to guide the project. The first component compiles the existing information to identify gaps to be addressed in the second phase. The second phase fills in the identified gaps through multi-day community workshops that have both an outdoor and indoor component. Participants will include knowledge holders, youth, and Elders. The final phase will compile the collected information into an interactive website that includes stories, photos, and discussion summaries. Educational material for K-12 to promote Inuvialuit culture will be developed as well.

9) Youth research training program with the Foxe Basin Kivalliq North Sapujiyiit/Guardians of the Sea Society
Project Leaders: Newell, Sarah & Aggark, Barnie
Support organization: Foxe Basin Kivalliq North Sapujiyiit/Guardians of the Sea
Locations: Chesterfield Inlet, Coral Harbour, Naujaat
Funding: $60,000.00

The goal of this project is to build the research capacity of community youth as part of the larger work being done by the Foxe Basin Kivalliq North Sapujiyiit/Guardians of the Sea. Youth will learn qualitative and quantitative methods of research from different fields (such as environmental sciences, social sciences, health sciences, etc.) that they can use to identify and understand how climate change and technology have changed the way that people use Inuit Traditional Knowledge. Youth in each community will identify a specific research question of interest that can use modern technology to capture how climate change impacts current hunters' use of Inuit Traditional Knowledge. This project will provide youth with the training necessary through hands-on learning to conduct their own research project in the future. They will be mentored by elders, current hunters, and university-trained researchers to gain the research training that they need to complete their project.

10) Inuit Makkuktuit Tariurmik Katujjiqatigiingniq Umiarjuani Ukiuqtaqtumi: A North-to-North Approach to Knowledge Sharing for Understanding Culturally Important Marine Areas in Inuit Nunangat
Project Leader: Milton, Justin
Support organization: Ikaarvik
Locations: Pond Inlet, Gjoa Haven
Funding: $60,000.00

Inuit communities must be enabled to drive research and conversations around the potential impacts of increased shipping in the Arctic and be empowered to help decision-makers understand the connection between environmental impacts of shipping and threats to food security, mental and physical health, language, and culture. Our project will create North-to-North bridges across communities, and generational boundaries to advance Inuit self-determination in research and decision-making on the issues of shipping and ocean governance. Shipping traffic and other activities are rapidly increasing due to the loss of sea ice and, while this brings opportunities, it also brings risks for Inuit livelihoods, culture, and. This project will bring together Inuit youth from Inuit Nunangat to co-create and lead an initial workshop to advance Inuit-determined approaches for ongoing research and sharing of knowledge for the identification of culturally significant marine areas. With the support of Inuit and non-Inuit mentors, Ikaarvik youth In Nunavut will strengthen their capacity to bridge across geographic and cultural boundaries, develop and conduct research and knowledge sharing activities, evaluate the information/data, and communicate results. This will support the need to ensure Inuit knowledge and voices are heard, understood, and applied in ocean governance and decision-making in the Arctic. Ultimately, this project is intending to lay the groundwork for a youth-oriented north-to-north network of community-driven research.

11) Qikiqtani inshore fisheries surveys: studying coastal marine species in Kinngait, Sanikiluaq, Sanirajak and Igloolik
Project Leader: Jawanda, Jesslene & Grant, Scott
Support organization: Qikiqtaaluk Corporation
Location: Kinngait (Cape Dorset), Sanikiluaq, Sanirajak (Hall Beach), Igloolik
Funding: $250,000.00

Qikiqtaaluk Corporation is using the newly built R.V Ludy Pudluk research platform to conduct sea bottom mapping and inshore fisheries surveys in Kinngait, Sanikiluaq, Igloolik and Sanirajak. Qikiqtaaluk Corporation is partnering with the Hunters and Trappers Associations (HTAs) in each community to staff the RV Ludy Pudluk and community support vessels with Inuit from each community to complete the surveys. In addition, Qikiqtaaluk Corporation will meet with each Hunter and Trapper Association in each survey community to explain the type of equipment and training available and look for guidance from the HTAs to determine which areas to survey and which species are of interest to the community. The community HTAs will guide the direction of the surveys. In the first years of surveys (i.e., summer-autumn 2021), Qikiqtaaluk Corporation and the Marine Institute hired and began training 13 Inuit in the two survey communities of Kinngait and Sanikiluaq to conduct these surveys, working toward a model where communities may continue certain aspects of the research independently. These surveys include underwater video obtained from drop camera and towed camera systems, a multibeam echosounder (to map the seafloor), and small dredges and potting to determine the location, preferred habitat and the relative population size of edible invertebrates that are found on the seabed including scallops, sea cucumber, whelks, and clams, shrimp, and sea cucumber.