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27 February 2020

Sharon Ehaloak  
Executive Director  
Nunavut Planning Commission  
PO Box 1797  
Iqaluit, NU, X0A 0H0

**RE: February 27, 2020 Government of Canada Submission to NPC**

Dear Sharon:

On behalf of the Government of Canada please find attached the following submissions:

- Crown-Indigenous Relations and Northern Affairs Canada - February 2020
- Fisheries and Oceans Canada - February 2020
- Environment and Climate Change Canada - February 2020
- Transport Canada - February 2020
- Parks Canada - February 2020

This joint federal submission consolidates new and updated information from these federal departments. The documents provide updated and supplementary information to the January 2017 Government of Canada submission.

The Government of Canada thanks you for the opportunity to make these submissions and remains available to discuss any issues to better understand the concerns and work together to identify solutions.

Should you or your staff have any questions regarding the submissions, please do not hesitate to contact me at (867) 975-4546.

Sincerely,

*[Handwritten signature of Spencer Dewar]*  
Spencer Dewar  
A/Regional Director General  
Nunavut Region





## **Information from Crown-Indigenous Relations and Northern Affairs Canada**

### **Government of Canada Submission to the Nunavut Planning Commission, February 2020**

#### **Oil and Gas**

On December 20, 2016, as part of the U.S.-Canada Joint Statement on Climate, Energy, and Arctic Leadership, Prime Minister Justin Trudeau declared Canadian Arctic waters as being indefinitely off limits to new offshore oil and gas licences, to be assessed every 5 years by a science-based review.

On June 21, 2019, a bill amending the *Canada Petroleum Resources Act* was passed, permitting the Governor in Council to prohibit an interest owner or any other person from commencing or continuing any work or activity authorized under the *Canada Oil and Gas Operations Act* if the Governor in Council considers that it is in the national interest. The Government of Canada issued an order prohibiting certain activities in Arctic offshore waters, freezing the terms of existing licences in the Arctic offshore and suspending all other oil and gas activities.

The rights granted by existing Significant Discovery Licenses (SDL), included in the 2016 Draft Nunavut Land Use Plan as Valued Socio-Economic Components, remain in place but oil and gas activity is halted for the duration of the moratorium. It should be noted that SDL077 (located on Ellesmere Island, east of Eureka) appears to be missing from Schedule B of the 2016 Draft Nunavut Land Use Plan. For maps and shapefile data of current titles please see: <https://www.aadnc-aandc.gc.ca/eng/1100100036125/1100100036129>."

#### **Baffin Bay and Davis Strait Strategic Environmental Assessment**

The Nunavut Impact Review Board coordinated the Strategic Environmental Assessment of potential oil and gas activity in Baffin Bay and Davis Strait and submitted a final report and recommendations to the Minister of Northern Affairs on July 31, 2019. The Strategic Environmental Assessment examined the risks and benefits of oil and gas activities and considered the potential impacts on the unique natural and social environment in the region.

A working group comprised of the Qikiqtani Inuit Association, Nunavut Tunngavik Incorporated, Government of Nunavut and Crown-Indigenous Relations and Northern Affairs Canada participated and supported the Nunavut Impact Review Board at all stages. Many others participated throughout the process by providing information to the Board, including other federal departments, the territorial government, community members and organizations, land claim organizations, fisheries organizations, non-governmental organizations, industry, and the Canadian public. The Board considered all this available scientific information, Inuit Qaujimajatuqangit (Inuit Knowledge) and public input from ten communities in the Qikiqtani region. These views and evidence were used to develop the final report and recommendations.

CIRNAC is working with the organizations in the working group and other federal departments to review the Board's recommendations.

The findings of the Strategic Environmental Assessment will inform the five-year review of the moratorium on oil and gas activities in Canada's Arctic offshore waters.

All documents related to the Strategic Environmental Assessment in Baffin Bay and Davis Strait, including the final report (3 volumes), can be found on the Nunavut Impact Review Board's online registry at: <https://www.nirb.ca/project/125087>.

### **Climate Change Funding in Nunavut**

The Climate Change and Clean Energy Directorate of Crown-Indigenous Relations and Northern Affairs Canada works with Indigenous and northern communities to address both short-term and long-term climate change adaptation and energy related issues. In Nunavut funding has been provided through the Northern Responsible Energy Approach for Community Heat and Electricity (REACHE) Program, the Climate Change Preparedness in the North (CCPN) Program and the Indigenous Community-Based Climate Monitoring (ICBCM) Program. A summary of funding provided through these programs since 2016 is provided in Annex A. More information on these programs can be found at : <https://www.aadnc-aandc.gc.ca/eng/1100100034249/1100100034253>

**ANNEX A: CLIMATE CHANGE AND CLEAN ENERGY DIRECTORATE  
NORTHERN CLIMATE CHANGE PROGRAM FUNDING IN NUNAVUT  
AS OF DECEMBER 31ST, 2019**

**Northern Responsible Energy Approach for Community Heat and Electricity (REACHE) Program**  
*16 projects, Total investment of \$4,003,237*

Community	Recipient	Project Name	Description	Total Project Costs	REACHE Funding
Qikiqtaaluk Corporation	Qikiqtaaluk Business Development Corporation	20/20 Catalyst Program	Funding to support 1 Qitiqtaaluk Business Development Corporation member to participate in the 20/20 Catalyst Program; a 3-month mentorship program to support Indigenous communities embarking on clean energy projects.	\$25,000	2016-17 \$15,000 2017-18 - 2018-19 - 2019-20 - <b>Total \$15,000</b>
Rankin Inlet, Whale Cove	GN - Community and Government Services	Rankin Inlet Solar-Domestic Hot Water and Air Heating Systems Study and Solar Photovoltaic (PV) Design for Whale Cove School	Funding for an assessment of energy capacity required for a hot water and air heating system. This project includes design work for a solar photovoltaic system at a school in Whale Cove.	\$260,000	2016-17 \$60,000 2017-18 - 2018-19 - 2019-20 - <b>Total \$60,000</b>

<b>Community</b>	<b>Recipient</b>	<b>Project Name</b>	<b>Description</b>	<b>Total Project Costs</b>	<b>REACHE Funding</b>
Iqaluit	World Wildlife Fund (WWF)	Arctic Renewable Energy Summit	Funding for a summit to bring together experts, communities, and governments to discuss renewable technology, policy, and barriers and enablers to deploying renewable energy projects in Nunavut.	Unknown	2016-17 \$74,270 2017-18 - 2018-19 - 2019-20 - <b>Total \$74,270</b>
Iqaluit, Rankin Inlet, Arviat	Quilliq Energy Corporation	Heat Recovery of Diesel Power Plants - Optimization Assessment	Funding for an optimization assessment of heat recovery systems at diesel power plants.	\$90,000	2016-17 \$80,000 2017-18 - 2018-19 - 2019-20 - <b>Total \$80,000</b>
North Baffin	GN - Community and Government Services	North Baffin Energy Building Retrofit Project - Investment Grade Feasibility Study	Funding for a feasibility study to improve energy and water efficiency in Government of Nunavut-owned buildings in the North Baffin region.	\$340,000	2016-17 \$100,000 2017-18 - 2018-19 - 2019-20 - <b>Total \$100,000</b>
Iqaluit	Qikiqtaaluk Business Development Corporation	Iqaluit Wind Energy - Business and Technical Case Study	Funding to develop a business case to deploy a high-penetration wind and diesel-storage hybrid energy system in the city of Iqaluit.	TBD	2016-17 \$150,000 2017-18 - 2018-19 - 2019-20 - <b>Total \$150,000</b>
Rankin Inlet, Cambridge Bay, Kugluktuk and Iqaluit	Quilliq Energy Corporation	LED Street Lighting	Funding to replace street lights with energy-efficient LEDs.	\$498,348	2016-17 \$280,000 2017-18 - 2018-19 - 2019-20 - <b>Total \$280,000</b>

Community	Recipient	Project Name	Description	Total Project Costs	REACHE Funding
Nunavut	Government of Nunavut	Nunavut Climate Change Mitigation Specialist	Funding for the Government of Nunavut to hire a climate change mitigation specialist to support and build capacity for climate change adaptation.	\$300,000	2016-17 - 2017-18 \$150,000 2018-19 \$150,000 2019-20 \$150,000 <b>Total \$450,000</b>
Iqaluit	Qulliq Energy Corporation	Iqaluit Aquatic Centre District Heating System Project	Funding to support the expansion of the Iqaluit district heating system to the Aquatic Centre. The project is expected to provide 70% to 85% of the heating requirements of the Aquatic Centre.	\$1,953,000	2016-17 \$300,000 2017-18 \$1,000,000 2018-19 \$700,000 2019-20 - <b>Total \$2,000,000</b>
Nunavut	Government of Nunavut	Nunavut Climate Change Centre Website Redesign	Funding to update and redesign the Government of Nunavut's climate change website and on-line resources.	\$95,000	2016-17 - 2017-18 \$45,000 2018-19 - 2019-20 - <b>Total \$45,000</b>
Nunavut	Hamlet of Kugluktuk	Kugluktuk Wind Generation Feasibility Study	Funding to support a wind-resource feasibility study in Kugluktuk.	\$22,220	2016-17 - 2017-18 \$22,220 2018-19 \$103,725 2019-20 \$13,200 <b>Total \$139,145</b>
Nunavut	Kivalliq Inuit Association	Manitoba-Nunavut Hydroelectric Transmission Line Scoping Study	Funding for a scoping study to assess the scope of work and funding required for a transmission line feasibility study.	\$55,000	2016-17 - 2017-18 \$55,000 2018-19 - 2019-20 - <b>Total \$55,000</b>

Community	Recipient	Project Name	Description	Total Project Costs	REACHE Funding
Nunavut	Hamlet of Arviat	Arviat Community Clean Energy Project Development	Funding for a feasibility study for a high penetration solar, wind, and battery energy storage project.	\$137,000	2016-17 - 2017-18 \$125,000 2018-19 - 2019-20 - <b>Total \$125,000</b>
Iqaluit	City of Iqaluit	Municipal Buildings Lighting Retrofit	Funding for the installation of lighting retrofits in seven City of Iqaluit owned buildings. The buildings were chosen due to their high energy requirements. The city of Iqaluit funded the remaining costs.	\$239,450	2016-17 - 2017-18 - 2018-19 \$150,000 2019-20 - <b>Total \$150,000</b>
Rankin Inlet	Government of Nunavut	Rankin Inlet Solar Domestic Hot Water Systems	Funding to support the construction of a solar domestic hot water system at the Rankin Inlet Health Centre and Healing Facility.	\$186,428	2016-17 - 2017-18 - 2018-19 \$56,606 2019-20 \$83,216 <b>Total \$139,822</b>
Gjoa Haven	Hamlet of Gjoa Haven	Gjoa Haven 10kW Solar Photovoltaic on Arena	Funding to support the installation of a 10kW solar photovoltaic system with smart meter technology.	\$190,000	2016-17 - 2017-18 - 2018-19 \$25,000 2019-20 \$115,000 <b>Total \$140,000</b>



## Climate Change Preparedness in the North (CCPN) Program

25 projects, Total investment of \$6,176,436.85

Recipient	Project Name	Description	Year funding
Government of Nunavut – Department of Environment	Networking and Capacity Building –Staff Position	Funding to staff a position in the Government of Nunavut Climate Change Secretariat to review past climate change adaptation initiatives, develop new adaptation project ideas and assist Nunavut Tunngavik Inc. with planning and executing the Nunavut Climate Change Workshop.	<div>2016-17 \$150,000.00</div> <div><b>Total \$150,000.00</b></div>
Nunavut Tunngavik Incorporated	Local Environmental Observer	Funding to support the travel of Indigenous and northern organizations from Nunavut to the Northwest Territories Local Environmental Observer training workshop held in Yellowknife. The workshop trains community members to identify climate change impacts as part of a citizen science program.	<div>2016-17 \$20,000.00</div> <div><b>Total \$20,000.00</b></div>
Nunavut Tunngavik Incorporated	Nunavut Climate Change Regional Engagement Workshop	Funding to support an engagement session held in Iqaluit, Nunavut. The purpose is to engage Indigenous peoples and northerners from Nunavut to ensure that the Climate Change Preparedness in the North Program reflects the needs and priorities of local peoples.	<div>2016-17 \$740,500.00</div> <div><b>Total \$740,500.00</b></div>
Government of Nunavut – Department of Environment	Networking and Capacity Building – Staff Position	Funding to staff an outreach and administrative coordinator in the Government of Nunavut to help the territorial government build capacity related to climate change adaptation in the territory.	<div>Territorial Funding per Fiscal Year</div> <div>2017-18 \$500,000.00</div> <div>2018-19 \$450,000.00</div> <div>2019-20 \$400,000.00</div> <div>2020-21 \$350,000.00</div> <div><b>Total \$1,700,000.00</b></div>
	Minimizing Climate Change Risks for the Sea Ice-Based Tourism Industry in Nunavut	Funding to support SmartICE technology in collecting sea-ice data and analyzing it along with additional information, such as data from land-based weather stations, to allow safe travel for Inuit Qaujimaqtuqangit. This project establishes SmartICE Tourism in Arctic Bay to help outfitters be proactive by identifying and implementing adaptive actions to help mitigate the effects of climate change.	

Recipient	Project Name	Description	Year funding
	Identifying and Implementing Adaptation Measures for River Erosion in Kugluk Territorial Park	Funding to assess the land movement, anticipated rates of erosion and ground failure in the Park. It allows to plan better in terms of alternate routes for all-terrain vehicles and boardwalk sections of the trail.	
	Developing a Nunavut-Wide Youth Advisory Committee on Climate Change to Increase Adaptive Capacity and Climate Resilience	Funding to build youth capacity and resilience to climate change impacts, create opportunities for youth-elder knowledge exchange, and create a committee of youth available to advise on the Government of Nunavut's Climate Change Secretariat programs, projects, and policies, ensuring youth input on products.	
Nunavut Housing Corporation	Geotechnical Investigations (Arviat and Cambridge Bay)	Funding to conduct ground and soil evaluations prior to the construction of infrastructure, and provide appropriate recommendations for detailed foundation design based on the soil evaluation.	2017-18 \$100,650.06 2018-19 \$11,182.94 <b>Total \$111,833.00</b>
Nunavut Housing Corporation	Additional Geotechnical Investigations (Sanikiluaq, Coral Harbour, Chesterfield Inlet, Kimmirut, Whale Cove, Iqaluit)	Funding to conduct ground and soil evaluations prior to the construction of infrastructure, and provides appropriate recommendations for detailed foundation design based on the soil evaluation and permafrost conditions.	2017-18 \$397,394.95 2018-19 \$56,841.76 <b>Total \$454,191.71</b>
Qaujigiartiit Health Research Centre	Climate Change Community Research Coordinator	Funding to staff a climate change community research coordinator (i.e. climate change community liaison) position to help communities in the region identify and put forward proposals that respond to the impacts of climate change by using adaptation measures.	2017-18 \$73,217.00 2018-19 \$180,550.00 2019-20 \$180,550.00 2020-21 \$180,550.00 <b>Total \$614,867.00</b>

Recipient	Project Name	Description	Year funding
City of Iqaluit	Drinking Water Management Strategy	Funding to develop a water loss strategy, make amendments to city standards that leads to lower water use, identify water system operating methods that can be optimized, and result in the documentation, rationalization, and control of intended water losses under municipal control.	2017-18 \$80,834.45 2018-19 \$10,000.00 <b>Total \$90,834.45</b>
City of Iqaluit	Master Drainage Plan	Funding to assess climate change impacts on the existing drainage system and future upgrades; identified new drainage measures, programs, repairs, and future upgrades that improve conveyance of storm water throughout the city. The plan helps provide an asset management model framework with a recommended multi-year implementation plan.	2017-18 \$149,344.08 2018-19 \$10,000.00 <b>Total \$159,344.08</b>
City of Iqaluit	Reservoir Response to Water Crisis	Funding to implement measures based on historical and projected water use data that ensure sufficient water supply in the City of Iqaluit's Lake Geraldine reservoir to satisfy the City's water intake during the nine months winter.	2018-19 \$474,734.50 2019-20 \$5,000.00 <b>Total \$479,734.50</b>
Nunavut Research Institute	Nunavut Water Resources Assessment	Funding to determine current and projected use of freshwater, including both municipal and non-municipal components. The project examines Inuit values and relationships with water, including how these are impacted by environmental change and identifies risk and vulnerability regarding water-related health and well-being issues.	2017-18 \$149,868.00 2018-19 \$16,652.00 <b>Total \$166,520.00</b>
Hamlet of Arviat	Community Drainage Plan	Funding to develop a community drainage plan in the Hamlet of Arviat in response to increasing flooding and drainage issues as the result of climate change.	2018-19 \$140,000.00 2019-20 \$10,000.00 <b>Total \$150,000.00</b>

Recipient	Project Name	Description	Year funding (CCPN and Climate Change and Health Adaptation Program (CCHAP) Funding)
Aqiumawik Society	Arviat Young Hunters Program	Funding to expand on the current Young Hunters Program to train youth and develop their skills and expertise in building strong evidence around climate indicators, engaging the community, using social media and information sharing techniques to promote consensus around a sustainable plan.	<u>2018-19</u> CCPN \$87,004.00 CCHAP \$131,923.00 <u>2019-20</u> CCPN \$161,279.00 CCHAP \$102,677.00 <u>2020-21</u> CCPN \$163,779.00 CCHAP \$102,677.00 <u>2020-21</u> CCHAP \$102,677.00 <b>Total \$412,062.00</b>
Aqiumawik Society	Understanding Nunavut Inuit Community Uses and Needs for Weather, Water, Ice and Climate Information for Adaptation Services	Funding to better understand the relevance, areas of improvement and role that information and services can play in supporting climate change adaptation, emergency response, and travel safety decisions in Nunavut communities.	2018-19 \$77,657.93 2019-20 \$110,125.00 2020-21 \$25,000.00 <b>Total \$212,782.93</b>

Recipient	Project Name	Description	Year funding
SmartICE Sea Ice Monitoring and Information Incorporated	Building Sustainable Winter Fisheries for Nunavut Communities under a Changing Climate	Funding to help preserve the health and safety of fishers as they travel and work on the landfast ice in the winter. The Hamlets of Pangnirtung and Qikiqtarjuaq in partnership with SmartICE and Nunavut Fisheries Association are building a climate-adapted ice-based inshore fishery by providing important information on landfast sea-ice thickness, local ice conditions, and travel hazards in near real-time.	2018-19 \$250,000.00 2019-20 \$22,350.00 2020-21 \$38,236.00 <b>Total \$310,586.00</b>
Inuinnaït/Kitikmeot Heritage Society	Combining Community Based Monitoring and Remote Sensing for Adaptation Planning in Bathurst Inlet, Nunavut: A Vulnerability and Risk Assessment	Funding to assess vulnerabilities and risks based on a combination of remote sensing and Inuit knowledge. From there develop an archaeology module that will form part of the Inuinnaït Knowledge Bank and use the resulting analysis for adaptation planning. By recording Inuinnaït knowledge on climate change and terrain instability impacts, it provides an opportunity for Inuinnaït youth to be employed in the field and benefit from the knowledge transfer from being engaged with Elders and professional archaeologists.	2018-19 \$150,000.00 2019-20 \$145,000.00 2020-21 \$5,000.00 <b>Total \$300,000.00</b>
Hamlet of Hall Beach	Installation of Culverts	Funding to install culverts that will prevent further flooding due to climate change.	2018-19 \$21,498.11 2019-20 \$2,500.00 <b>Total \$23,998.11</b>
Dalhousie University	Water Security for Northern Peoples	Funding to determine the current and projected use of freshwater as well as to examine Inuit values and relationships with water. It also identifies water-related health vulnerabilities and risks as well as well-being issues with respect to environmental changes in order to generate collaboratively adaptation options for communities.	2018-19 \$283,901.00 2019-20 \$83,050.00 2020-21 \$83,049.00 <b>Total \$450,000.00</b>

Recipient	Project Name	Description	Year funding
Hamlet of Cape Dorset	Hamlet of Cape Dorset Drainage Study	Funding to support Cape Dorset update their Community Plan and Zoning By-Laws by creating and putting a drainage plan in place prior to final adaption so that the review can utilize drainage data and implement drainage planning in a coordinated way for both the existing town site and planned future subdivisions identified in the Community Plan.	2019-20 \$115,000.00 2020-21 \$35,000.00 <b>Total \$150,000.00</b>
Hamlet of Pangnirtung	Pangnirtung Youth Tackle Climate Change: On-the-land knowledge exchange, monitoring, and filmmaking promoting adaptation and well-being	Funding to set up an on-the-land program for youth which aims to learn from Inuit Qaujimatuaqangit and scientific monitoring to better understand changes to the environment and wildlife related to climate change. Knowledge will be shared through scientific data and short films while mobilizing data and knowledge to different audiences.	(CCPN and CCHAP funding) 2018-19 CCHAP \$97,403.00 2019-20 CCPN \$46,260.00 CCHAP \$29,450.00 2020-21 CCPN \$80,237.00 <b>Total \$126,497.00</b>
Inuit Heritage Trust	Saving Morin Point Thule Site Phase 1: Climate Change Risk Assessment and Archaeological Salvage	Funding will survey, map, and test excavate the Morin Point Thule site to assess its risk of destruction due to severe coastal erosion and to initiative emergency salvage excavation of parts of it in order to rescue, identify and analyze artifacts in danger of loss.	2019-20 \$70,000.00 <b>Total \$70,000.00</b>

Recipient	Project Name	Description	Year funding
Hamlet of Pond Inlet	Understanding Changing Sea Ice For Community Decision-Making In Pond Inlet	<p>Funding to:</p> <ol style="list-style-type: none"> <li>1. Secure, sort and analyze the Steltner data archive on Pond Inlet sea ice;</li> <li>2. Establish the spatial and temporal variability in sea-ice dynamics around Pond Inlet over the past 40-50 years;</li> <li>3. Co-design and execute a multi-year sea-ice mapping survey around Pond Inlet to capture information on ice stability, dynamics, trafficability, and travel hazard using SmartICE technology;</li> <li>4. Engage sea-ice users in the interpretation of both past sea-ice records and current sea-ice mapping to understand future change and share results with the community to inform decision-making and adaptation actions; and</li> <li>5. Have trained Pond Inlet youth fully participate in the tasks and community engagement required to successfully execute the project.</li> </ol>	<p>2018-19 \$160,195.00  2019-20 \$86,940.00  <b>Total \$247,135.00</b></p>
Aqqiumavvik Society	Understanding Nunavut Inuit Community Uses and Needs for Weather, Water, Ice and Climate Information for Adaptation Services	<p>Funding to better understand the relevance, areas of improvement and role that information and services can play in supporting climate change adaptation, emergency response, and travel safety decisions in Nunavut communities.</p>	<p>2019-2020 \$83,342.07  <b>Total \$83,342.07</b></p>

**Indigenous Community-Based Climate Monitoring (ICBCM) Program**  
*20 projects, total investment of \$1,659,012.12*

Community	Recipient	Project Name	Description	Total Project Costs	ICBCM Funding
Pond Inlet	ARCTICConn -exion	Contaminants concentrations in traditional country food from the Eclipse Sound and dietary exposure in Pond Inlet, Nunavut: Science and local knowledge assessing a local baseline of the risks to human health	Funding to combine contaminants science with local traditional knowledge in order to conduct a baseline study that will help to identify the risk to human health by quantifying the concentration of long-range contaminants in country food and by assessing the exposure levels associated with dietary choices.	\$57,717.00	2017-18 \$28,858.50 2018-19 - 2019-20 - <b>Total \$28,858.50</b>
Sanikiluaq	The Arctic Eider Society	Mobilizing Inuit Knowledge and Land Use Observations to Assess Ecosystem Trends and Processes Affecting Contaminants	Funding to document ringed seals and polar bear diet on the Belcher Islands; as well as body condition, animal ecology, local environmental/sea ice conditions and other relevant observations during subsistence hunting activities.	\$62,158.00	2017-18 \$34,688.38 2018-19 - 2019-20 - <b>Total \$34,688.38</b>



Community	Recipient	Project Name	Description	Total Project Costs	ICBCM Funding
Kivalliq Region	Gamberg Consulting	Mercury in Seaweed and Lichens from the Home Range of the Qamanirjuaq Caribou	Funding to collect additional mushroom samples for analysis. Analysis of samples and information on mercury in caribou and caribou diet.	\$10,780.00	2017-18 \$5,390.00 2018-19 - 2019-20 - <u>Total</u> <b>\$5,390.00</b>
Iqaluit	Nunavut Research Institute	Wildlife Contaminants Workshop – Building contaminants research capacity in Nunavut	The Wildlife Contaminants Workshop is an experiential training model that employs a variety of tailored hands-on, interactive methods to build awareness, competency, knowledge and skills within this core group of frontline environmental practitioners. In 2017, the WCW will combine lectures, interactive lab activities, and group discussions around wildlife contaminants monitoring, risk communication and human health.	\$53,305.00	2017-18 \$26,652.50 2018-19 - 2019-20 - <u>Total</u> <b>\$26,652.50</b>

Community	Recipient	Project Name	Description	Total Project Costs	ICBCM Funding
Igloodik	Government of Nunavut	Detecting and monitoring the effects of climate change on Arctic fishes	Funding to revisit the Nunavut Coastal Resource Inventory (NCRI) communities on a 10-year basis and document Inuit traditional knowledge on the ecology, abundance and distribution of aquatic species. Once collected, the NCRI data will then inform the Nunavut Community Aquatic Monitoring Program (N-CAMP) and will be used to develop training on fisheries data collection for Nunavummiut.	\$64,000.00	2017-18 \$64,000.00 2018-19 - 2019-20 - <b>Total \$64,000.00</b>
All 25 Communities in Nunavut	Qaujigiartiit Health Research Centre	Designing a platform for Community-Based Climate Change Monitoring in Nunavut	Funding to host a dialogue between project leaders, Nunavut stakeholders and community members to discuss the creation of a community-based climate monitoring data platform for all 25 Nunavut communities.	\$188,969.44	2017-18 \$188,969.44 2018-19 - 2019-20 - <b>Total \$188,969.44</b>
Baker Lake	ARCTICConnexion	Environmental changes, water quality and wealth: Inuit youth advancing monitoring capacity in Baker Lake, Nunavut	Funding to develop a community-based water and climate change monitoring program in Qamani'tuaq (Baker Lake), which will include a youth community-based research team.	\$126,595.00	2017-18 \$86,595.00 2018-19 - 2019-20 - <b>Total \$86,595.00</b>

Community	Recipient	Project Name	Description	Total Project Costs	ICBCM Funding
Pond Inlet	ARCTIConn -exion	From climate change to water quality and wealth: Inuit researchers advancing monitoring capacity for Arctic water systems in Nunavut	Funding to develop a community-based water quality, quantity and climate change monitoring program in Pond Inlet; build youth capacity within the community; and disseminate program information through a video documentary.	\$74,991.00	2017-18 \$36,913.10 2018-19 - 2019-20 - <b>Total \$36,913.10</b>
Nunavut Arctic College - Iqaluit Campus	Trent University	Climate change science and adaptation for Nunavut: Action-based learning course development for the Environmental Technology Program of the Nunavut Arctic College	Funding to develop a climate change science and adaptation course offering for the Environmental Technology Program at Nunavut Arctic College.	\$69,050.95	2017-18 \$69,050.95 2018-19 - 2019-20 - <b>Total \$69,050.95</b>
N/A	Nunavut Tunngavik Incorporated (Andrew Dunford), CIRNAC (Jean Allen)	Nunavut Environmental Contaminants Committee (NECC)	Co-funding with the Northern Contaminants Program to support the social-cultural review of Nunavut-based Northern Contaminants Program proposals and to provide information to Nunavummiut on long-range contaminants.	\$73,875.00	2017-18 - 2018-19 \$36,500.00 2019-20 - <b>Total \$36,500.00</b>

Community	Recipient	Project Name	Description	Total Project Costs	ICBCM Funding
Pond Inlet	James Simonee	Expanding community-based monitoring of contaminants concentrations in marine country food used by Mittimatalingmiut: Science and local knowledge assessing the risks to human health in Pond Inlet	Co-funding with the Northern Contaminants Program to support working with local hunters to research contaminant levels in Arctic char, ringed seals, and narwhals as well as researching Mittimatalingmiut food choices and exposure to contaminants.	\$67,833.00	2017-18 - 2018-19 \$33,475.00 2019-20 - <u>Total</u> <b>\$33,475.00</b>
Arviat	Environment and Climate Change Canada - Dominique Henri, Magali Houde, Jennifer Provencher	Learning about ringed seal health from contaminants science and Inuit Qaujimaqatugangit: an educational workshop in Arviat, Nunavut	Co-funding with the Northern Contaminants Program to host a regional workshop to enhance communications and community capacity building related to contaminants research on ringed seals from both Inuit Qaujimaqatugangit and scientific perspectives.	\$28,600.00	2017-18 - 2018-19 \$16,200.00 2019-20 - <u>Total</u> <b>\$16,200.00</b>

Community	Recipient	Project Name	Description	Total Project Costs	ICBCM Funding
Arviat	Environment and Climate Change Canada - Amie Black, Jennifer Provencher	Regional NCP Workshop in Arviat	Co-funding with the Northern Contaminants Program to hold a regional workshop that will help deliver coordinated and synthesized messaging about contaminant research in Arviat related to polar bear, ringed seal, and caribou monitoring.	\$28,265.00	2017-18 - 2018-19 \$12,658.00 2019-20 - <u>Total</u> <b>\$12,658.00</b>
Pond Inlet	Qikiqtani Inuit Association	Community-based monitoring of marine mammal health and distribution within Tasiujaq	Funding to establish a long-term community-based monitoring program in Pond Inlet and the marine regions of Tasiujaq (Eclipse Sound) with a focus on ecosystem and marine mammal health.	\$486,640.00	2017-18 - 2018-19 \$162,900.00 2019-20 \$161,870.00 <u>Total</u> <b>\$324,770.00</b>
Cambridge Bay	Kitikmeot Heritage Society	Combining Community Based Monitoring and Remote Sensing to Analyse Permafrost Degradation in Bathurst Inlet, Nunavut: Setting Priorities for Salvage Archaeology Efforts	Funding for a collaborative project with several partners to assess terrain stability at selected archeological sites in the Bathurst region affected by permafrost degradation and associated slumping and coastal erosion.	\$450,000.00	2017-18 - 2018-19 \$150,000.00 2019-20 - <u>Total</u> <b>\$150,000.00</b>

Community	Recipient	Project Name	Description	Total Project Costs	ICBCM Funding
Arviat	Aqiumavvik Society	Sustainable Climate Monitoring & Management Planning for Arviat	Funding to monitor the impacts of climate change on the health of caribou and seal populations using scientific methods and Inuit knowledge in order to build community capacity around safe and sustainable harvesting.	\$440,368.80	2017-18 - 2018-19 \$125,000.00 2019-20 \$125,000.00 <b>Total \$250,000.00</b>
NA	Nunavut Tunngavik Incorporated	Travel Support for North American Caribou Workshop	Funding to support Inuit participation in the North American Caribou Workshop to provide individuals with an opportunity to learn, share stories, and participate in collaborative discussions around caribou monitoring and management.	\$25,000.00	2017-18 - 2018-19 \$25,000.00 2019-20 - <b>Total \$25,000.00</b>
Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, Kugaaruk and Ulukhaktok	Kitikmeot Regional Wildlife Board	Kitikmeot Caribou Inuit Qaujijamajatuqangit (IQ) Monitoring and Wildlife Research Management Strategy	Funding to host a one-day training workshop in Yellowknife with staff from each Kitikmeot Hunter and Trapper Organization and the Kitikmeot Regional Wildlife Board.	\$18,917.50	2017-18 - 2018-19 \$18,917.50 2019-20 - <b>Total \$18,917.50</b>
Kugluktuk, Cambridge Bay, Gjoa Haven, Taloyoak and Kugaaruk	Kitikmeot Regional Wildlife Board	Kitikmeot caribou Inuit qaujijamajatuqangit: developing an Inuit-led monitoring program	Funding to develop a regional Inuit-led monitoring program that will track the impacts of climate change on caribou in the Kitikmeot.	\$449,903.00	2017-18 - 2018-19 - 2019-20 \$149,960.00 <b>Total \$149,960.00</b>

Community	Recipient	Project Name	Description	Total Project Costs	ICBCM Funding
Rankin Inlet	Kivalliq Wildlife Board	Climate, Wildlife and People: Terrestrial and Marine Monitoring Promoting Adaptation and Food Security in Kangigliniq	<p>This terrestrial and marine community-based monitoring project will study the connection between climate, vegetation and caribou, as well as climate, water conditions and the marine food chain. It will address priorities and community concerns across the whole Kivalliq region regarding access to traditional country food. The monitoring activities will be conducted by local youth with the guidance of hunters, women and Elders promoting intergenerational knowledge exchange and culture-based capacity building. The overarching goal of the project is to develop local monitoring capacity in order to keep track of and become adaptive to impacts of climate change.</p>	\$459,614.75	2019-20 \$100,413.75 2020-21 \$171,785.50 2021-22 \$187,415.50 <b>Total \$459,614.75</b>





## **Environment and Climate Change Canada Technical Update for Information on Migratory Birds in Key Habitat Sites in Nunavut**

**Government of Canada Submission to the Nunavut Planning Commission, February 2020**

### **Introduction**

The Government of Canada's 2017 submission to the Nunavut Planning Commission (NPC) for informing the development of the Nunavut Land Use Plan (NLUP) included ECCC's Key Habitat Sites (KHS) for Migratory Birds in the Nunavut Settlement Area (also referred to as the 2016 Map Book).

The 2016 Map Book identifies the location and sizes of KHS in Nunavut, in addition to proposed setbacks for reducing impacts from human disturbance on migratory bird colonies. Setbacks proposed (aerial, marine, and terrestrial), were developed according to types of migratory birds and their level of intolerance to human-based activities. One the key references for these recommendations was the CWS publication: *Key marine habitat sites for migratory birds in Nunavut and the Northwest Territories* (Mallory & Fontaine 2004).

Recent publications provide new information on migratory birds in Key Habitat Sites in Nunavut (Mallory et al. 2018), highlighting changes from previous estimates in the size of some of the bird colonies, and in the mean foraging distances (distances birds travel from colony to feed), for some species.

This technical update does not change the recommendations included in the 2016 Map Book already provided to NPC. The ECCC February 2020 technical update has three main objectives:

1. To share changes observed in migratory bird populations in Nunavut with key stakeholders and communities in the territory;
2. To highlight the importance of collaboration with stakeholders to monitor KHS and the migratory bird colonies, as part of increasing the collective understanding of migratory bird population changes in the Canadian Arctic;
3. To promote application of the precautionary principle with regard to land use in or near KHS as NPC and other decisions-makers work toward finalizing the NLUP.

## Update of Population Estimates of Migratory Birds

Population estimates help establish the percentage of the national population of a migratory bird species, which in part feeds into the qualifying criterion for the identification of KHS and their conservation value ranking (2016 Map Book, pg.2).

Following the recent work by Mallory et al. 2018, we are able to revise and refine the proportion of the national populations for specific migratory bird species in KHS in Nunavut. This technical update provides revisions only where population percentages have changed and are outside the estimated range provided in the initial 2016 Map Book submission (Table 1).

All of the KHS identified below indicate a decrease in population size for species listed. However, changes in the population estimate may represent actual declines in the bird populations or they may be the result of more accurate surveys.

**Table 1. Updates to population estimates for Key Habitat Sites in Nunavut**

KHS	Relevant 2016 Map Book page	Species	Population estimate from 2016 Map Book	Revised population estimate (2018)
Lambert Channel	pg. 32	Pacific Common Eider	More than 10% of the national population	7%
Akpait NWA	pg. 48	Thick-billed Murre	More than 10% of the national population	8%
Buchan Gulf	Pg. 56	Northern Fulmar	More than 10% of the national population	6%
Cape Graham Moore (outside Bylot MBS)	Pg. 60	Black-legged Kittiwake	Between 5-10% of the national population	1%
Cape Graham Moore (outside Bylot MBS)	Pg. 60	Thick-billed Murre	Between 5-10% of the national population	4%
Hobhouse Inlet	Pg. 94	Northern Fulmar	More than 10% of the national population	9%
Prince Leopold Island MBS	Pg. 114	Northern Fulmar	More than 10% of the national population	9%

## Update of Foraging Distances of Migratory Birds

Foraging distances are a key element used to delineate KHS boundaries.

More than 100 species of migratory birds nest in the Canadian Arctic. Many of these are colonial, which refers to bird species nesting and breeding in close proximity, and occur in high densities at geographically distinct sites in the Arctic. The high concentration of birds at one site, combined with the high-energy demands during the reproduction cycle, and sensitivity to disturbance during nesting and chick rearing, means that conservation of Arctic key migratory bird habitat has significant implications for the long-term survival of a number of species (2016 Map Book, pg.1).

In ECCC's previous submission to NPC, the delineation of boundaries for KHSs were largely based on mean foraging ranges identified for colonial nesting bird species present at the KHS (Mallory and Fontaine, 2004). Newly published information by Mallory et al. 2018, demonstrates that previous estimates of mean foraging ranges have generally underestimated the distance certain colonial nesting birds travel for feeding (Table 2 and 3). In particular, Thick-billed Murre (the most dominant marine bird in the Canadian Arctic), Northern Fulmar, Black-legged Kittiwake and Ivory Gull foraging ranges were drastically underestimated, with new foraging estimates being over four times larger than previously reported in some cases (Table 2). However, foraging distance slightly decreased for one colonial bird, Black Guillemots, as these birds are found closely concentrated around colonies, with non-breeders probably going the furthest away for feeding (Table 2). The updates to foraging ranges presented are based on more accurate scientific tracking-telemetry data and advances in statistical analyses from studies in the Canadian Arctic and elsewhere.

Mallory et al. 2018, further highlights certain characteristics for specific species, such as evidence that Thick-billed Murre foraging range varies with colony size, which results in different estimates of foraging range for each KHS in which they breed (Table 3). The publication also highlights that pelagic foragers like Northern Fulmars travel extensive distances and often more than 200km away from their colonies for feeding. Such distances are too great to inform the delineation of KHS. A more practical approach would be to revise the size of the KHS to 10 km for protecting fulmars in high densities on the water area around colonies, but noting that this would not protect their foraging sites.

**Table 2. Change in recommended feeding buffers based on revised mean foraging ranges for colonial nesting species.**

Bird Species	Feeding buffers used to delineate KHS boundaries in 2016 Map Book	Revised estimated mean foraging range (km) from Mallory et al. 2018
Thick-billed Murre	30	38-140 (varies with colony size)
Black-legged Kittiwake	30	120
Northern Fulmar	15	200+
Black Guillemot	15	10
Ivory Gull	2	120

Some KHS in Nunavut are located within the boundaries of existing protected areas. For these sites, human-based activities are managed according to the protected area conservation goals

and its associated regulations. However, for species listed with updated foraging ranges (see Table 2), mitigation measures such as those recommended in the 2016 Map Book are important for reducing potential impacts from anthropogenic activities that could occur within non-protected KHS delineations and beyond current KHS size more broadly.

**Table 3. Thick-billed Murre estimated mean foraging range from KHS based on colony size (table from Mallory et al. 2018).**

KHS with Thick-billed Murre breeding population	Revised estimated mean foraging range (km)
Nirjutiqarvik NWA	80
Prince Leopold Island MBS	66
Cape Hay	62
Cape Graham Moore	48
Akpait NWA	75
Coats Island	38

## Next Steps

For many of the migratory bird colonies found in the Canadian Arctic, population estimates date back to surveys conducted more than 40 years ago, which justifies the urgent need for further research (Mallory et al. 2018). Based on recent work mentioned and the need for better understanding environmental and anthropogenic factors that may be affecting migratory birds, ECCC has begun working on a more comprehensive project to expand and review existing information for KHS across all three territories in Canada's northern region. Such work may result in an updated version of ECCC's Map Book for KHS in Nunavut in the future.

The next version of the Map Book may include a revision of current KHS sizes, current setbacks, as well as additional mitigation measures, particularly for species with updated population estimates or larger foraging ranges as KHS delineations may only cover a small part of the habitat used by these migratory birds during the sensitive breeding seasons. Until such time, this technical update serves as an opportunity to share new information about changes in migratory bird populations in Nunavut. The recent findings provided through this technical update highlight the need for precaution in protection and management measures as research continues to improve our understanding of migratory bird species. This document further serves as an opportunity to promote collaborative work for supporting needed and ongoing research and monitoring efforts on migratory bird colonies in Nunavut, which can support the delivery of Goal 2 of the NLUP: "protection and sustaining the environment".

## References

- Environment and Climate Change Canada's input to the Nunavut planning Commission regarding Key Habitat Sites for Migratory Birds in the Nunavut Settlement Area (May 2016) – also referred to as the 2016 Map Book Project.
- Mallory, M.L. and Fontaine, A.J. 2004. Key marine habitat sites for migratory birds in Nunavut and the Northwest Territories. Canadian Wildlife Service Occasional Paper No. 109.
- Mallory, M. L., Gaston, A.J., Provencher, J.F., Wong, S.N, Anderson, C., Elliot, K.H, Gilchrist, G., Janssen, M., Lazarus, T., Patterson, A., Pirie-Dominix, L., N.C. Spencer. 2018. Identifying key marine habitat sites for seabirds and sea ducks in the Canadian Arctic. *Environ Rev.* **27**: 1–26.



**Information from Fisheries and Oceans Canada (DFO)  
GOC submission to the Nunavut Planning Commission (February 2020)**

**The Tuvaijuittuq Marine Protected Area**

The Tuvaijuittuq Marine Protected Area (MPA) was designated by a ministerial order under the *Oceans Act* on July 29th, 2019. The MPA was designated to protect and conserve the important biological diversity, unique structural habitat, and ecosystem function in the area while additional information is collected to inform decisions regarding long-term protection of the area. Part of the MPA is in the Nunavut Settlement Area (NSA). A map of the MPA is located at the following link: <http://clss.nrcan.gc.ca/clss/plan/image/id/751952>

The Tuvaijuittuq MPA is consistent with the Nunavut Agreement and provides interim protection to the area while the Qikiqtani Inuit Association and the Governments of Nunavut and Government of Canada work with Inuit and northern partners to explore the feasibility of longer term protection. Designation by ministerial order freezes the footprint of human activities in the area for a period of up to five years, meaning that no new or additional human activities are allowed to occur in the area, with some exceptions. Prior to its designation, the Tuvaijuittuq MPA proposal was submitted to the Nunavut Planning Commission for a conformity check with the North Baffin Regional Land Use Plan. The ministerial order and other information on designation is located at the following link: <http://www.gazette.gc.ca/rp-pr/p2/2019/2019-08-21/html/sor-dors282-eng.html>

**Southampton Island Area of Interest**

The marine area around Southampton Island was announced as an Area of Interest (AOI) in August, 2019. The AOI spans the nearshore waters around Southampton Island and Chesterfield Inlet both outside of and within the Kivalliq Region of the NSA. A map is at this link: <https://dfo-mpo.gc.ca/oceans/aoi-si/southampton-eng.html>.

The AOI has important habitat and haul-out sites for walrus, important migration pathways for bowhead and beluga whales, and important foraging areas for marine mammals and nesting seabirds. Most of the Southampton Island Ecologically and Biologically Significant Area (EBSA) lies within the AOI, along with a southern portion of the Repulse Bay/Frozen Strait EBSA, and the northern portion of the Western Hudson Bay Coastline EBSA.

An AOI selection is the beginning of the *Oceans Act* Marine Protected Area establishment process, led by DFO. The process includes the collection and consideration of ecological and socio-economic information, including Indigenous knowledge. The information gathered through consultation, data collection and analysis will inform the conservation objectives and final boundaries and zones of a potential future Marine Protected Area.

**Accelerated Charting of Primary and Secondary Low-Impact Shipping Corridors**

DFO's Canadian Hydrographic Service (CHS) measures and describes the physical features of Canada's navigable waters and their marginal land areas and provides this information to navigators to facilitate safe and efficient navigation.

Since 2017, with funding under the Oceans Protection Plan (OPP), CHS has accelerated its surveying and charting activities for key areas in the Canadian Arctic. For Nunavut waters, this has resulted in 15 new Electronic Navigational Charts (ENCs), 28 New Edition ENCs, 2 new Paper Charts and 17 New Edition Paper Charts (as of April 1, 2019).

The percentage of combined modern and adequate hydrographic coverage in the Arctic's draft Primary and Secondary Low Impact Shipping Corridors (LISCs) as of April 2019 was 30.6%. It is anticipated that with the data from the 2019 survey season, this coverage will increase to approximately 35%, which would be an increase of about 10% over the April 2017 coverage of 24.8%.

The large volumes of data from hydrographic surveys can take several years to process and represent on navigational publications. While the goal is to update those publications with the modern hydrography, all critical depths found from surveys are also communicated to mariners as quickly as possible during or shortly after the survey.



**Information from Parks Canada Agency on the Area Boundary Description for Tallurutiup Imanga National Marine Conservation Area and Wrecks of HMS Erebus and HMS Terror National Historic Site of Canada**

**Government of Canada Submission to the Nunavut Planning Commission, February 2020**

**Tallurutiup Imanga National Marine Conservation Area**

First, Lancaster Sound National Marine Conservation Area should be changed to Tallurutiup Imanga National Marine Conservation Area throughout the Nunavut Land Use Plan.

Secondly, Article 4 of the *Inuit Impact and Benefit Agreement for Tallurutiup Imanga National Marine Conservation Area between the Qikiqtani Inuit Association and the Government of Canada* describes the area boundary for the National Marine Conservation Area. The description included in this article is updated from the information previously submitted to the Nunavut Planning Commission during the drafting of the 2016 draft Nunavut Land Use Plan. This article is attached as part of this Government of Canada submission; please note, as identified in Section 4.6.1, this boundary description is subject to legal description by the Surveyor General of Canada, and final description in Schedule 1 of the *Canada National Marine Conservation Areas Act*.

This new information is simply to update the boundary of the proposed National Marine Conservation Area; in no way is it intended to change the current land use designations described in the current draft Nunavut Land Use Plan.

**Wrecks of HMS Erebus and HMS Terror National Historic Site of Canada**

Included is the legal description of the *Wrecks of HMS Erebus and HMS Terror National Historic Site of Canada* boundaries, as described in the National Historic Sites of Canada Order.

## **Tallurutiup Imanga National Marine Conservation Area**

### **Article 4 - Tallurutiup Imanga National Marine Conservation Area Establishment**

#### **4.1 Objectives**

- 4.1.1 To create and establish a national marine conservation area pursuant to the *Canada National Marine Conservation Areas Act* in accordance with the *Nunavut Agreement*.

#### **4.2 Establishment**

- 4.2.1 The national marine conservation area shall be known as Tallurutiup Imanga National Marine Conservation Area.
- 4.2.2 The Minister responsible for the Parks Canada Agency shall take such steps as are necessary to add Tallurutiup Imanga NMCA to Schedule 1 of the *Canada National Marine Conservation Areas Act*.
- 4.2.3 Subject to this Agreement and the *Nunavut Agreement*, Tallurutiup Imanga NMCA shall be maintained and administered for the purposes set out in, and according to, the *Canada National Marine Conservation Areas Act*, the Interim Management Plan and any future Management Plans and national marine conservation area policy in effect from time to time.

#### **4.3 Tallurutiup Imanga NMCA Boundary**

- 4.3.1 The boundary of Tallurutiup Imanga NMCA shall be as described in section 4.6 and set out in Appendix 1.

#### **4.4 Boundary Amendment**

- 4.4.1 If, at any time, Canada intends to redraw the boundary of Tallurutiup Imanga NMCA, it shall refer the proposal to the Aulattiqatigiit Board.
- 4.4.2 Any amendment to the boundary of Tallurutiup Imanga NMCA shall follow the process and meet the requirements outlined in Article 8 of the *Nunavut Agreement*.
- 4.4.3 Consistent with section 8.4.17 of the *Nunavut Agreement*, amendments to this Agreement shall address any matter connected with the expansion of Tallurutiup Imanga NMCA.

#### **4.5 Inuit Owned Lands**

- 4.5.1 The boundary of Tallurutiup Imanga NMCA shall not include Inuit Owned Lands and management of Tallurutiup Imanga NMCA must not impede access to Inuit Owned Lands.

#### **4.6 Tallurutiup Imanga National Marine Conservation Area Boundary Description**

- 4.6.1 Subject to legal description by the Surveyor General of Canada, and final description in Schedule 1 of the *Canada National Marine Conservation Areas Act*, the boundary of Tallurutiup Imanga NMCA is described as:

- 1) COMMENCING at a point where longitude 72°33'00" West meets the ordinary high water mark at approximate latitude 71°39'36" North on Cape Hunter, on Baffin Island;
- 2) THENCE generally westerly, northerly, westerly and southwesterly along the sinuosity of the ordinary high water mark of Baffin Island to a point where the western boundary of Sirmilik National Park of Canada meets the same near point 177PI, as shown on Administrative Plan of Sirmilik National Park of Canada in the Canada Lands Surveys Records at Ottawa as 104419 and filed in the Land Titles Office for Nunavut as 4575, at approximate latitude 72°24'08" North and approximate longitude 78°27'18" West;
- 3) THENCE southwesterly along the northwestern boundary of said Sirmilik National Park of Canada to the ordinary high water mark of the northerly extremity of the promontory known as Oorbignaluk Headland at approximate latitude 72°22'02" North and approximate longitude 78°36'12" West;
- 4) THENCE generally southwesterly along the sinuosity of the ordinary high water mark of Baffin Island to a point on the eastern side of Milne Inlet where latitude 72°00'00" North meets the same at approximate longitude 80°38'59" West;
- 5) THENCE westerly in a straight line across said Milne Inlet to the western side thereof where latitude 72°00'00" North meets the same at approximate longitude 80°48'17" West;
- 6) THENCE generally northwesterly, southeasterly, and northwesterly along the sinuosity of the ordinary high water mark of Baffin Island to a point on Brodeur Peninsula where latitude 73°49'59" North meets the same at approximate longitude 86°48'05" West;

- 7) THENCE westerly in a straight line to a point on the ordinary high water mark of Somerset Island, near Cape Clarence, where latitude 73°53'49" North meets the same at approximate longitude 90°09'53" West;
- 8) THENCE generally westerly along the sinuosity of the ordinary high water mark of Somerset Island to a point where latitude 73°56'56" North meets the same at approximate longitude 95°19'13" West;
- 9) THENCE westerly in a straight line to a point at latitude 73°55'52" North and longitude 95°58'10" West within Peel Sound;
- 10) THENCE northerly in a straight line to a point at latitude 74°53'57" North and longitude 96°06'56" West within Resolute Passage;
- 11) THENCE easterly in a straight line to a point on the ordinary high water mark of Cornwallis Island where latitude 74°53'56" North meets the same at approximate longitude 96°01'29" West;
- 12) THENCE generally southeasterly and northeasterly along the sinuosity of the ordinary high water mark of Cornwallis Island to a point where latitude 75°02'05" North meets the same at approximate longitude 93°30'19" West;
- 13) THENCE in a straight line to a point at latitude 75°03'54" North and longitude 92°49'18" West within Wellington Channel;
- 14) THENCE southeasterly in a straight line to a point on the ordinary high water mark of Devon Island where latitude 75°02'24" North meets the same at approximate longitude 92°13'54" West near Bowden Point;
- 15) THENCE generally southeasterly along the sinuosity of the ordinary high water mark of Devon Island to a point where latitude 74°38'40" North meets the same at approximate longitude 91°22'44" West at the entrance to Gascoyne Inlet;
- 16) THENCE southeasterly in a straight line to a point on the ordinary high water mark of Devon Island where latitude 74°37'43" North meets the same at approximate longitude 91°18'05" West near Cape Ricketts;
- 17) THENCE generally easterly, northerly and northwesterly along the sinuosity of the ordinary high water mark of Devon Island to a point where longitude 81°40'40" West meets the same at approximate latitude 75°48'32" North;
- 18) THENCE northeasterly in a straight line to a point on the ordinary high water mark of Ellesmere Island where longitude 81°03'56" West meets the same at approximate latitude 76°08'00" North; at King Edward Point;

- 19) THENCE generally northeasterly along the sinuosity of the ordinary high water mark of Ellesmere Island to a point where latitude 76°35'16" North meets the same at approximate longitude 78°07'21" West;
- 20) THENCE southeasterly in a straight line to a point at latitude 76°30'12" North and longitude 77°53'42" West in Baffin Bay;
- 21) THENCE southeasterly in a straight line to a point at latitude 76°24'13" North and longitude 77°50'20" West in Baffin Bay;
- 22) THENCE southeasterly in a straight line to a point at latitude 75°25'54" North and longitude 78°06'41" West in Baffin Bay;
- 23) THENCE southeasterly in a straight line to a point at latitude 74°56'17" North and longitude 77°03'02" West in Baffin Bay;
- 24) THENCE southeasterly in a straight line to a point at latitude 74°33'47" North and longitude 75°35'49" West in Baffin Bay;
- 25) THENCE southeasterly in a straight line to a point at latitude 74°05'26" North and longitude 74°26'29" West in Baffin Bay;
- 26) THENCE southeasterly in a straight line to the PLACE OF COMMENCEMENT.

INCLUDING three terrestrial coastal areas of bird cliffs including Cape Liddon, an area adjacent to Hobhouse Inlet, and Buchan Gulf;

SAVE AND EXCEPT all islands, rocks and shoals that are 400 hectares in area or larger as measured from the ordinary high water mark;

SAVE AND EXCEPT the Nirjutiqavvik National Wildlife Area as defined in Wildlife Area Regulations pursuant to the Canada Wildlife Act;

SAVE AND EXCEPT the Prince Leopold Island Bird Sanctuary as defined the Migratory Bird Sanctuary Regulations pursuant to the Migratory Birds Convention Act, 1994;

SAVE AND EXCEPT all Inuit Owned Lands that are wholly or partially with the hereinbefore described Tallurutiup Imanga Marine Conservation Area;

SAVE AND EXCEPT an area adjacent to Pond Inlet - 100 m along the shore of the community block land transfer and an area centred on the port extending 2 km each direction along the shore and 2 km to the seaward;

SAVE AND EXCEPT an area adjacent to Arctic Bay - 100 m along the shore of the community block land transfer, on both shores of the hamlet, and an area in each of Victor Bay and Arctic Bay; extending about 3 km from the shoreline;

SAVE AND EXCEPT an area adjacent to Resolute - 100 m along the shore of the community block land transfer, an area centred on the loading area near the airport extending 2 km each direction along the shore and 2 km to the seaward and the entirety of Resolute Bay; and

SAVE AND EXCEPT an area adjacent to the Nanisivik Naval Facility in Strathcona Sound - centred on the dock at Nanisivik at approximately, an area extending offshore by 2 km and in each direction along the shore by 2 km.

References to straight lines means points joined directly on the NAD83 ellipsoid by geodesics. Coordinates referenced hereon are geodetic and referenced to the North American Datum of 1983 (NAD83), Canadian Spatial Reference System (CSRS).

4.6.2 Total included terrestrial components in Tallurutiup Imanga NMCA are approximately 80 square kilometres plus the area of the intertidal zone. The terrestrial area includes approximately 61 square kilometres of small islands and 18.4 square kilometres of bird colony areas. The intertidal zone is approximately 25 square kilometres.

4.6.3 The overall area of the Tallurutiup Imanga NMCA will be approximately 108,000 square kilometres as measured on the Albers Equal Area Projection.

## Wrecks of HMS Erebus and HMS Terror National Historic Site of Canada

*Wrecks of HMS Erebus and HMS Terror National Historic Site of Canada comprising the following described areas:*

Firstly,

In the Arctic Ocean; in Wilnot and Crampton Bay; the area, consisting of the seabed and water column above the seabed, that is described as follows:

COMMENCING at a point at latitude 68°14'44.8" N and longitude 98°52'22.3" W;

THENCE northeasterly in a straight line to a point at latitude 68°17'44.2" N and longitude 98°40'17.9" W;

THENCE southeasterly in a straight line to a point at latitude 68°13'15.4" N and longitude 98°32'16.2" W;

THENCE southwesterly in a straight line to a point at latitude 68°10'16.5" N and longitude 98°44'19.3" W;

THENCE northwesterly in a straight line back to the point of commencement;

EXCEPTING all islands and foreshore lying above the ordinary low-water mark within the described area and all mines and minerals, whether solid, liquid or gaseous, that may be found within the described area.

That area containing approximately 83.6 km<sup>2</sup>.

Secondly,

In the Arctic Ocean; in Terror Bay; the area, consisting of the seabed and water column above the seabed, that is described as follows:

COMMENCING at a point at latitude 68°54'25.45" N and longitude 98°59'42.07" W;

THENCE easterly in a straight line to a point at latitude 68°54'25.24" N and longitude 98°51'29.08" W;

THENCE southerly in a straight line to a point at latitude 68°48'46.23" N and longitude 98°51'31.25" W;

THENCE westerly in a straight line to a point at latitude 68°48'46.44" N and longitude 98°59'42.15" W;

THENCE northerly in a straight line back to the point of commencement;

EXCEPTING all islands and foreshore lying above the ordinary low-water mark within the described area and all mines and minerals, whether solid, liquid or gaseous, that may be found within the described area.

That area containing approximately 57.8 km<sup>2</sup>.

All coordinates referred to are according to the 1983 North American Datum, Canadian Spatial Reference System (NAD83 CSRS), and any references to straight lines mean points joined directly on the NAD83 Universal Transverse Mercator (UTM) projection plan surface.







Transport  
Canada

Transports  
Canada

Prairie and Northern  
Region

Région des Prairies et  
du Nord

## **Information from Transport Canada Government of Canada Submission to the Nunavut Planning Commission, February 2020**

In the January 2017 Government of Canada submission on the 2016 draft Nunavut Land Use Plan (NLUP) provided to the Nunavut Planning Commission (the Commission), it was noted that many of the concerns of the Commission over the effects of marine transportation on culturally and environmentally sensitive areas could be addressed in alternate fora as well as under the Government of Canada Oceans Protection Plan (OPP). The following is intended to provide the Commission with an update on activities that Transport Canada has engaged in under the OPP that may be relevant in the context of the ongoing development of the NLUP.

### **Proactive Vessel Management**

Proactive Vessel Management (PVM) is an innovative approach to address marine vessel traffic issues in Canada's waterways. PVM aims to promote maritime safety and protect the marine environment by bringing together Indigenous partners and marine stakeholders to collaboratively address shipping concerns.

To assist with the implementation of the initiative, Indigenous and coastal communities along with other marine stakeholders co-developed a national draft PVM Framework that provides guidance on how to implement a PVM approach. The Framework is designed to be evergreen, complement existing regulations and rights and authorities. Additionally, it describes how to identify potential voluntary solutions such as enhanced communications, speed limits, areas to be avoided, and seasonal and temporal restrictions to address marine and environmental issues of concern rather than changing formal laws and regulations. Appendix A provides an example on how a PVM approach was implemented in Cambridge Bay, Nunavut.

The PVM Framework is currently being "tested" via one year pilot projects in Cambridge Bay, Nunavut and the Inuvialuit Settlement Region and the North Coast of British Columbia. Upon conclusion of the pilot projects in 2021, recommendations for future national implementation of PVM will be provided for consideration.

Transport Canada, the Canadian Coast Guard, the Government of Nunavut, Nunavut Tunngavik Incorporated and the Nunavut Marine Council worked together to select Cambridge Bay as host location for PVM.

To support the PVM pilot project in Cambridge Bay, the Victoria Island Waterway Safety Committee was established. This Committee was formed under the authority of the Ekaluktutiak Hunters and Trappers Organization (EHTO) in partnership with Oceans North and Transport Canada and identified three priorities to be addressed using a PVM approach, including:

- 1) Increasing communication with the Canadian Coast Guard regarding ice breaking activities;
- 2) Mitigating the potential negative impacts of ice breaking on the migration of the caribou, hunters and community members travelling across the sea ice and local food security; and
- 3) Identifying safe harbours (via mapping) for hunters and community members to access along the waterway.

The Victoria Island Waterways Safety Committee is also being leveraged to also address the Cumulative Effects of Marine Shipping and the Enhanced Maritime Situational Awareness initiatives.

### **Cumulative Effects of Marine Shipping**

The Cumulative Effects (CE) of Marine Shipping is a national initiative with pilot locations on all three coasts including in Cambridge Bay, Nunavut. The objectives of this initiative are to create a National Cumulative Effects Assessment Framework (the Framework) for marine shipping; undertake regional cumulative effects assessments in pilot sites; compile existing data to inform the assessments; and identify regional and/or national tools that can be applied to mitigate the cumulative effects of existing vessel movements or future project developments.

The key activities can be broken down into 4 phases:

Phase 1 – Understand national context and initiate development of the national CE Framework

Phase 2 – Understand the regional context of the pilot sites

Phase 3 – Conduct the regional CE assessments and develop the National Cumulative Effects Assessment Framework

Phase 4 – Identify management strategies or mitigation needed

The Victoria Island Waterways Safety Committee has prioritized four types of vessel activities and their potential impacts to be included in the regional CE Assessment:

- 1) Ice breaking activities and impacts on caribou migration, food security and hunter safety;
- 2) Vessel movements causing impacts on local marine mammals from underwater noise;
- 3) Vessel movements causing impacts on coastal environments from vessel wake; and
- 4) Vessel discharges of oil causing impacts on marine mammals and coastal cultural sites.

Each set of pathways and their assessment is currently being worked on under the direction of the Committee, with a projected end date of 2022. The results of this regional assessment will include the identification of regional mitigation or management measures that respond to the impacts found, and that can be applied to existing vessel movements or future project developments.

### **Enhanced Maritime Situational Awareness**

Enhanced Maritime Situational Awareness (EMSA) is a user-friendly web-based system that increases access to local maritime data, including vessel traffic, for Indigenous peoples, coastal communities and other stakeholders. EMSA may contain information including weather, sea and ice conditions, tidal and underwater current information; vessel information from terrestrial Automatic Identification Systems (AIS) and space-based AIS (satellites) data, information on ecologically sensitive areas, and traditional and cultural knowledge. EMSA is being piloted in 13 communities across Canada, including Cambridge Bay, Nunavut.

EMSA supports community level-decision making and collaboration related to marine safety and the environment, as well as collaboration between the Government of Canada and Indigenous and coastal communities. Feedback provided by the pilot project partners will inform regular system upgrades and ensure it meets community needs and priorities.

The Victoria Island Waterways Safety Committee uses the information generated from EMSA to help inform discussions related to PVM and CEMS. For example, as previously noted under the priorities for PVM, a mapping exercise was undertaken to identify safe harbors. Once the mapping was complete, the information was transcribed and uploaded into the EMSA so that community members could have access to the locations of the safe harbors if they ran into inclement weather or other situations where they felt their safety might be at risk while at sea.

Transport Canada is committed to the continuation of initiatives under the Ocean's Protection Plan in order to improve marine safety and responsible shipping and strengthen our partnerships with Indigenous and coastal communities. Should the NPC wish to discuss the work that Transport Canada is undertaking please do not hesitate to contact the undersigned.

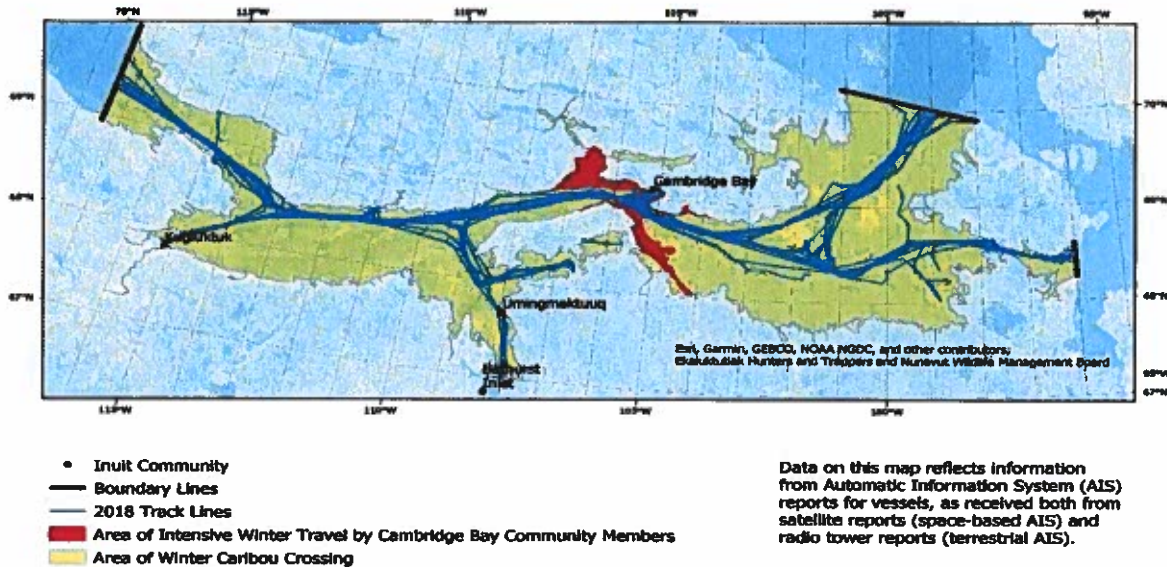
**Sincerely,**  
**Anita Gudmundson**  
**Regional Manager, Environmental Programs**  
**Transport Canada**

## Appendix A

As part of the PVM pilot project in Cambridge Bay, on October 8 and 9, 2019, the Ekaluktutiak Hunters and Trappers Organization (EHTO) hosted an “ice breaking” workshop. Participants included members from local and surrounding communities of the Kitikmeot region, federal and territorial governments, non-government organizations, academia, marine stakeholders and industry. The purpose of this workshop was to proactively address local concerns around the potential impacts of ice breaking on migrating caribou, local food security, and the safety of Inuit hunters and travelers on the sea ice. As an outcome of the workshop, a Notice to Mariners (NOTMAR) was drafted to provide information to vessel operators operating vessels with ice breaking capabilities in order to proactively avoid migrating caribou or Inuit travelling on the sea ice. The NOTMAR can be shared directly with mariners, but the content can also be communicated via a Ship Safety Bulletin. The NOTMAR can be viewed below.

As part of the development of the NOTMAR, a communication protocol was developed. In addition to contacting relevant community contacts during voyage planning, the communication protocol includes ongoing engagement between the Government of Canada and industry in an effort to increase awareness of the impacts of ice breaking on migrating caribou, local food security and the safety of Inuit hunters and travelers on the sea ice.

## Notice to Mariner



### NAVIGATION IN KITIKMEOT REGION

Dolphin and Union Caribou migrate from Victoria Island to the Mainland. The open ice created by vessels jeopardizes the migration of the caribou in the fall and spring and the safety of people crossing between the mainland and the island.

### VOLUNTARY AVOIDANCE

Voluntary measures apply to any vessel transiting within the protection zone outlined in this notice (see yellow and red areas in map above) and should only be taken when they will not jeopardize the safety of navigation. These include:

1. Slowdown to minimum safe speed from December 1<sup>st</sup> to June 30<sup>th</sup> (Red Area);
2. Slowdown to minimum safe speed if caribou or people are encountered;
3. Use local information to avoid passing in front of caribou or people traveling on sea ice;
4. Avoid opening multiple leads.

### REPORTING

Notice required a week prior and follow up call/emails before transiting the areas as follows. October 15<sup>th</sup> to November 30<sup>th</sup> and April 15<sup>th</sup> to June 30<sup>th</sup> to minimize risks to migrating caribou (Yellow Area), and December 1<sup>st</sup> to June 30<sup>th</sup> (Red Area) to minimize risks to people traveling across sea ice.

Calls should be made, in order, to:

1. Hamlet Main Office: 867-983-4600
2. Hamlet After Hours of Arctic Senior Administrative Officer: 867-9835203
3. Ekaluktutiak Hunters and Trappers Organization (EHTO) Main Office: 867-983-2426
4. Ekaluktutiak Hunters and Trappers Organization (EHTO) After Hours: 867-445-3614

Western Boundary 69° 58' N 117° 22' W; 68° 56' N 117° 22' W

NorthEastern Boundary 69° 58' N 101° 04' W; 69° 54' N 097° 57' W

SouthEastern Boundary 68° 14' N 096° 00' W; 68° 36' N 096° 00' W

