NIRB Application for Screening #126432

Assessing oil related contaminants in birds in Nunavut

Application Type: New

Project Type: Scientific Research

Application Date: Friday, March 20, 2026

Period of operation: from 2025-06-01 to 2028-10-01

Project Proponent:

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DETAILS

Non-technical project proposal description

English: Building on previous work, our objective is to assess current levels of oil-related contaminants in species of seabird eggs as part of a large-scale assessment of contaminants in relation to shipping traffic. In the future it is expected that shipping and boat traffic in Baffin Bay/Davis Strait will increase, while in the Hudson Bay region we expect some vessel traffic to decrease. While we have learned much about how ecosystems can be affected by oil spills in some regions, there is little data on oil exposure and the potential effects of oil-related contaminants in northern ecosystems. We aim to start collecting a wider range of species eggs in regions that are experiencing different levels of shipping to examine how the current levels of oil exposure, and archive samples in the case of a future oil spill. This will occur alongside our legacy contaminants monitoring so that we can better understand global and local patterns.Studies of seabirds, including thick-billed murres (Uria lomvia), northern fulmars (Fulmarus glacialis), common eiders (Somateria mollissima), black-legged kittiwakes (Rissa tridactyla), and black guillemots (Cepphus grylle) have shown that seabirds are affected by a number of contaminants in the Arctic region. To date most work on contaminants in seabirds has focused on legacy contaminants, including pesticides and flame retardants, but there are a suite of chemicals of emerging concern in the Arctic that have only been addressed in a limited number of species or at a few colonies in the Arctic region. Preliminary studies of seabirds at near Qikiqtarjuaq and Nunatsiavut has shown that seabirds are also exposed to plastic pollution and oil-related contaminants as well. Currently in the Canadian Arctic, there are low levels of shipping and oil exploration related activities as compared to many other regions. As offshore oil and gas activities might proceed in Baffin Bay and Davis Strait, there is a need to assess the current levels of oil-related contaminants exposure in marine species, and the potential effects. A Strategic Environmental Assessment in the Baffin Bay-Davis Strait recently highlighted the need to assess how activities relating to oil and gas, and current levels of activities, are affecting local biota. This will include the collection of eggs with partners at various sites in Nunavut, including Arviat, Iqaluit, Qikiqtarjuaq, Resolute, Nasurvalik (Tern Island), and Pond Inlet. We will collect eggs from the following species, based on their presence at each of the locations:-common eider-black guillemot-thick-billed murre-glaucous gull-black-legged kittiwake-northern fulmar-Sabine's gull-Arctic tern-Herring gull-Snow goose-Cackling goose-King eider-Iceland gull

French: S'appuyant sur des travaux antérieurs, notre objectif est d'évaluer les niveaux actuels de contaminants pétroliers dans les œufs d'oiseaux marins, dans le cadre d'une évaluation à grande échelle des contaminants liés au trafic maritime. À l'avenir, on prévoit une augmentation du trafic maritime dans la baie de Baffin et le détroit de Davis, tandis que dans la baie d'Hudson, on anticipe une diminution de ce trafic. Bien que nous ayons beaucoup appris sur l'impact des marées noires sur les écosystèmes de certaines régions, les données sur l'exposition au pétrole et les effets potentiels des contaminants pétroliers dans les écosystèmes nordiques restent rares. Nous prévoyons de collecter des œufs d'un plus large éventail d'espèces dans des régions connaissant différents niveaux de trafic maritime afin d'examiner les niveaux actuels d'exposition au pétrole et de constituer des archives d'échantillons en cas de future marée noire. Ce travail sera mené en parallèle de notre surveillance des contaminants historiques, ce qui nous permettra de mieux comprendre les tendances mondiales et locales.Des études sur les oiseaux marins, notamment le guillemot de Brünnich (Uria lomvia), le fulmar boréal (Fulmarus glacialis), l'eider à duvet (Somateria mollissima), la mouette tridactyle (Rissa tridactyla) et le guillemot noir (Cepphus grylle), ont démontré que ces oiseaux sont affectés par de nombreux contaminants dans la région arctique. À ce jour, la plupart des travaux sur les contaminants chez les oiseaux marins se sont concentrés sur les polluants persistants, tels que les pesticides et les retardateurs de flamme. Cependant, toute une série de substances chimiques émergentes préoccupantes dans l'Arctique n'ont été étudiées que chez un nombre limité d'espèces ou dans quelques colonies de la région. Des études préliminaires menées sur les oiseaux marins près de Qikiqtarjuaq et au Nunatsiavut ont montré qu'ils sont également exposés à la pollution plastique et aux contaminants d'origine pétrolière.Actuellement, dans l'Arctique canadien, les activités de navigation et d'exploration pétrolière sont faibles comparativement à de nombreuses autres régions. Alors que les activités pétrolières et gazières en mer pourraient se poursuivre dans la baie de Baffin et le détroit de Davis, il est nécessaire d'évaluer les niveaux actuels d'exposition des espèces marines aux contaminants d'origine pétrolière, ainsi que leurs effets potentiels. Une évaluation environnementale stratégique menée récemment dans

la baie de Baffin et le détroit de Davis a souligné la nécessité d'évaluer l'impact des activités pétrolières et gazières, et leur niveau actuel, sur la faune et la flore locales.Ces activités comprendront la collecte d'œufs en collaboration avec des partenaires sur différents sites du Nunavut, notamment à Arviat, Iqaluit, Qikiqtarjuaq, Resolute, Nasurvalik (île Tern) et Pond Inlet. Nous collecterons les œufs des espèces suivantes, en fonction de leur présence sur chaque site :- eider à duvet- guillemot noir- guillemot de Brünnich- goéland bourgmestre- mouette tridactyle- fulmar boréal- mouette de Sabine- sterne arctique- goéland argenté- oie des neiges- bernache du Canada- eider à tête grise- goéland islandais

Inuktitut: ᐊᖏᕆᔨᐃᓂᓪᓕᐊᒃ ᑭᖓᔪᓂᕐᓂᓄᑦ ᐱᓕᕆᐊᕆᓚᐅᖅᑕᑎᓂᓄᑦ, ᑐᑭᓕᐅᑭᑎᕆᓇᔨᐊᖅᑕᕐᔾ ᖃᐅᔨᓇᔨᓂᑎᐊᖅᓯᑐᓂ ᖃᓄᐅᑎᒫᖓᑦ ᐅᖅᑭᔨᓕᕆᔨᖅ ᔨᑕᖅᔨᔨᓕᕆᔨᖅ ᑕᓚᐅᖅ ᑎᖅᓪᓕᐊᖅᑎᑕ ᒪᓂᓂᕆᓂᓄᑦ ᐃᓕᑎᓪᓗᒍ ᐊᖅᑭᓯᖓ-ᑕᒪᐃᓂᓄᑦ ᖃᐅᓕᓇᔨᖅᑕᐅᔨᑦ ᔨᑕᖅᔨᓕᔨᑦ ᐱᔭᐸᑎᓪᓗᑎᑦ ᐅᒥᐊᖅᑦᑕᖅᑐᑦ. ᔨᐳᓂᔭᕆᓂᓂᓄᑦ ᓂᓚᐅᑎᕐᐃᔨᖅ ᐅᒥᐊᖅᑦᑕᖅᑐᑦ ᐊᔭᐸᑎᓪᓗᑎᑦ ᐱᔭᐸᑎᓪᓗᑎᑦ. ᐅᓄᖅᔨᐳᓪᓂᔨᐊᖅᑐᑦ ᐅᒥᐊᖅᑦ ᐃᓄᐅᓇᐳᓂᑦ ᐅᒥᐊᖅᑦᑕᖅᑐᑦ. ᑕᐃᒪᓕ ᑕᓭᓂᕆᓕᔨᔪᑦ ᖃᓚᐅᓇᒪᔭᓚᖅᑐᑦ ᐊᓕᖅᑐᓂᓕᔨᓂᓄᑦ ᐃᓕᓴᐅᓂᓕᔨᓂᓄᑦ ᐊᐃᓕᖅᑐᑦ ᐊᐃᑐᖅᑕᖅᑐᑦ ᐊᐃᓕᖅᑐᑦ ᐊᐃᑐᖅᑕᖅᑐᑦ ᖃᐅᔨᓇᓚᖅᑐᑦ ᐅᖅᔨᔨᓕᓚᖅᑐᑦ ᐊᐃᑐᖅᑕᖅᑐᑦ ᐊᐃᑐᖅᑕᖅᑐᑦ ᖃᐅᔨᓇᓚᖅᑐᑦ ᐅᖅᔨᔨᓕᓚᖅᑐᑦ ᐊᐃᑐᖅᑕᖅᑐᑦ ᖃᐅᔨᓇᓚᖅᑐᑦ ᐅᖅᔨᔨᓕᓚᖅᑐᑦ ᐊᐃᑐᖅᑕᖅᑐᑦ ᖃᐅᔨᓇᓚᖅᑐᑦ ᐊᐃᑐᖅᑕᖅᑐᑦ ᐊᐃᑐᖅᑕᖅᑐᑦ ᐊᐃᑐᖅᑕ

qauhitimayut taimaa huratjat aktuqhihimaliqtut qipliqtut iqqakuqnik uqhuqyuanullu-ilauyunut halumailruqnik.Tajja Kanatam Ukiuqtaqtuanit, ikitpaktut umiaqtuqtut uqhuqyuaniklu nalvaaqhiuqtut havaangit ihumagiplugit amihuuyut aviktuqhimaniit. Taryumi uqhuqyuanik kaassiliiniklu havaangit aullaqtiqniaqhimayut Qikiqtaaluk Kangiqhuanit Tallurutim Imanganilu, qauyihaqtagharialgit tajja aktiniit uqhuqyuanut-ilauyut halumailruqnut aktuqhiyut taryumiutat anngutighat, ikpingnautaulaaqtuniklu. Ihuaqnighakkut Avatinik Qauyihaiyut Qikiqtaaluk Kangiqhuani-Tallurutim Imanganit qangahaaq ilittuqhitihimayut iharianaqniinik qauyihaiyughat havaanguyunik ilauyut uqhuqyuanut kaassiliinullu, tajjalu havaariyauyut, ikpigiyauyut nunallaarnit uumayunit. Ilauvangniat katitiriyut manningnik ikayuqtiitalu qaffinit nayugaqnit Nunavunmi, talvanilu Arvianit, Iqaluit, Qikiqtaryuaq, Qauyuittuq, Nasurvalik (Tern Qikiqtaat), Mittimatalingmilu. Katitiriniaqtugut manningnik hapkunannga huratjanit, itpakkumik tamangnit nayugaqnit:-mitik-pittiulait-akpait-nauyait-tiratirait-qaqulluit-iqilgagiat-Imitqutailait-Nauyait-Kanguit-Nirliqniit-Qingaliit-Nauyavait

Personnel

Personnel on site: 2

Days on site: 3

Total Person days: 6

Operations Phase: from 2025-06-01 to 2028-10-01

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Arviat	Sampling sites	Marine	near town site	No known sites	Will be determined by local harvesters
Iqaluit	Sampling sites	Marine	near town site	No known sites	Will be determined by local harvesters
Qikiqtarjuaq	Sampling sites	Marine	near town site	No known sites	Will be determined by local harvesters
Pond Inlet	Sampling sites	Marine	near town site	No known sites	Will be determined by local harvesters
Resolute	Sampling sites	Marine	near town site	No known sites	Will be determined by local harvesters
Nasurvalik	Sampling sites	Marine	near town site	No known sites	Will be determined by local harvesters
Cambridge Bay	Sampling sites	Marine	near town site	No known sites	Will be determined by local harvesters

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Cambridge Bay	Beverly Maksagak	HTO	2024-06-01
Qikiqtarjuaq	Danika Hogan	Sululiit ACMC	2025-03-01
Arviat	Kukik Baker	Aqqiumavvik	2024-12-01
Iqaluit	Julia Baak	ECCC	2024-12-01
Pond Inlet	Michael Milton	Ikaarvik	2024-12-01
Resolute Bay	Clement Chevalier	Sulukvaut ACMC	2025-03-09

Authorizations

Indicate the areas in which the project is located:

Kitikmeot
Kivalliq
North Baffin
South Baffin

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Canadian Wildlife Service	Research permit	Active		
Government of Nunavut, Department of Environment	Research permit	Active		
Environment Canada	Animal care permit	Active		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Water		

Project accomodation types

Other,

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Twin Otter	1	large	Twin Otter or boat will be used to access the sites, depending on the needs of the site.
Boat	1	small	Local small craft will be used to access sites.

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Information is not available						

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0		

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Marine Based Activities	Combustible wastes	Day trips worth	All waste will be disposed in the community.	NA

Environmental Impacts:

Eggs will be collected by harvesters, the collection size and species selected with partners will take conservation concerns into consideration, and will aim to minimize any impacts

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

Description of Existing Environment: Physical Environment

Description of Existing Environment: Biological Environment

Description of Existing Environment: Socio-economic Environment

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

Cumulative Effects

Impacts

Identification of Environmental Impacts

	PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
Construction																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Operation																									
Sampling sites		-	-	-	-	-	-	-	-	-	-	-	-		-	-	N	-	-		-	-	-	-	-
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location

List of Project Geometries

1	polygon	Arviat
2	polygon	Iqaluit
3	polygon	Qikiqtarjuaq
4	polygon	Pond Inlet
5	polygon	Resolute
6	polygon	Nasurvalik
7	polygon	Cambridge Bay