



Demande de la CNER faisant l'objet d'un examen préalable #126193

Coastal invertebrates sampling around Belcher Islands, Qikiqtait

Type de demande : New

Type de projet: Scientific Research

Date de la demande : Friday, June 27, 2025

Period of operation: from 2025-05-16 to 2028-11-14

Promoteur du projet: Paloma Calabria Carvalho
Fisheries and Oceans Canada
501 University Crescent
Winnipeg MB R3T 2N6
Canada
Téléphone :: 4312948937, Télécopieur ::

DÉTAILS

Description non technique de la proposition de projet

Anglais: This research supports current community-based and DFO research and conservation initiatives within the Belcher Islands (Qikiqtait Area). Coastal sampling in collaboration with the Sanikiluaq community and partnership with the Arctic Eider Society and Hunters' and Trappers Association will continue around the Belcher Islands through zooplankton tows and community benthic dredge to collect invertebrate. The main species of interest includes Icelandic scallop (*Chlamys islandica*), green sea urchin (*Strongylocentrotus droebachiensis*) and Atlantic sea cucumbers (*Cucumaria frondosa*) that will continue to be collected from spring to fall (see map) providing the opportunity to examine temporal and spatial differences in genetic diversity, carbon source use and trophic position of each species between northern versus southern areas of Qikiqtait. Objectives: 1) Identify sea-ice algae reliance of benthic species, including sea scallops, urchins and sea cucumbers by analyzing highly-branched isoprenoid (HBI). 2) Establish food web baseline using stable isotopes. 3) Compare nearshore-offshore in their foraging ecology using biotracers.

Français: NA

Inuinnaqtun: NA

Personnel

Personnel on site: 3

Days on site: 56

Total Person days: 168

Operations Phase: from 2025-05-16 to 2028-11-14

Activités

Emplacement	Type d'activité	Statut des terres	Historique du site	Site à valeur archéologique ou paléontologique	Proximité des collectivités les plus proches et de toute zone protégée
Sampling stations for benthic invertebrates around Belcher Islands	Dredging	Marine	NA	NA	Sanikiluaq

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Sanikiluaq	Lucassie Arragutainaq	HTA	2025-02-20

Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Pêches et Océans Canada	LICENCE TO FISH FOR SCIENTIFIC PURPOSES	Applied, Decision Pending		
Hunters and Trappers Associations/Organizations	Letter of support from the Sanikiluaq HTA	Active	2025-05-21	

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Water	HTA Boat	

Project accomodation types

Collectivité

Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

Type d'équipement	Quantité	Taille – Dimensions	Utilisation proposée
HTA Boat	1	28ft	HTA community boat (Silver dolphin 28) is used to sample invertebrates from the stations marked in the map.
CTD	1	NA	CTD measures temperature, depth and salinity
Community benthic dredge	1	50x100 cm ²	Collect benthic invertebrates (urchins, scallops, sea cucumbers) that will be frozen and sent back to Winnipeg for lab analysis.
Zooplankton net	1	50cm diameter (500um mesh size)	Collect zooplankton from the water column. Samples will be frozen and shipped to Winnipeg for lab analysis.

Décrivez l'utilisation du carburant et des marchandises dangereuses

Décrivez l'utilisation de carburant :	Type de carburant	Nombre de conteneurs	Capacité du conteneur	Quantité totale	Unités	Utilisation proposée
Gasoline	fuel	50	25	1250	Gallons	Boat fuel
NA	hazardous	0	0	0	Liters	No chemicals will be used to preserve samples, they will be frozen

Consommation d'eau

Quantité quotidienne (m ³)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
0		

Déchets

Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Information is not available				

Répercussions environnementales :

Benthic samples will be collected using a community benthic dredge. Community members use this equipment to sample for scallops in established scallops' bed for consumption. There is no other sampling method possible to collect benthic species in the region. However, due to the small size (50x100cm) of the community benthic dredge and the short time dredging (10-15 min), the impact to the sea floor is negligible. The use of small-scale, community-based dredging ensures that harvesting remains sustainable and minimally disruptive to the benthic environment. Potential impacts on the sea floor due to the benthic dredge scrapping the seabed includes: Sediment disturbance: moving rocks and resuspending sediment Displacement and/or mortality of benthic organisms: some organisms may be displaced, and a few may be killed during the dredging, but most species in contact with the dredge will be collected within it and brought up to the surface. Water: temporary increased turbidity during dredging. Positive impact to the community: This program hires community members to advise on sampling sites and assist with the sample collection.

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 de l'environnement existant : Environnement physique

Sampling sites nearshore range from 20-60m depth. The seabed in these zones consists of a mix of sandy and rocky substrates.

Description de l'environnement existant : Environnement biologique

Sanikiluaq, located in the Belcher Islands of Hudson Bay, has a long-standing tradition of harvesting Icelandic scallops, sea cucumbers and sea urchins for community use. They are typically collected using small boats and a benthic dredge operating in nearshore areas where scallop beds are well established.

Description de l'environnement existant : Environnement socio-économique

Community members in Sanikiluaq rely on the harvesting of scallops, sea cucumbers, and urchins as an important part of their traditional diet. These marine invertebrates, along with other species such as Arctic char and marine mammals (seals, belugas), form the foundation of local subsistence practices, contributing both to food security and the preservation of Inuit cultural heritage.

Miscellaneous Project Information

Identification des répercussions et mesures d'atténuation proposées

Benthic samples will be collected using a community benthic dredge. Community members use this equipment to sample for scallops in established scallops' bed for consumption. There is no other sampling method possible to collect benthic species in the region. The use of small-scale, community-based dredging ensures that harvesting remains sustainable and minimally disruptive to the benthic environment.

Répercussions cumulatives

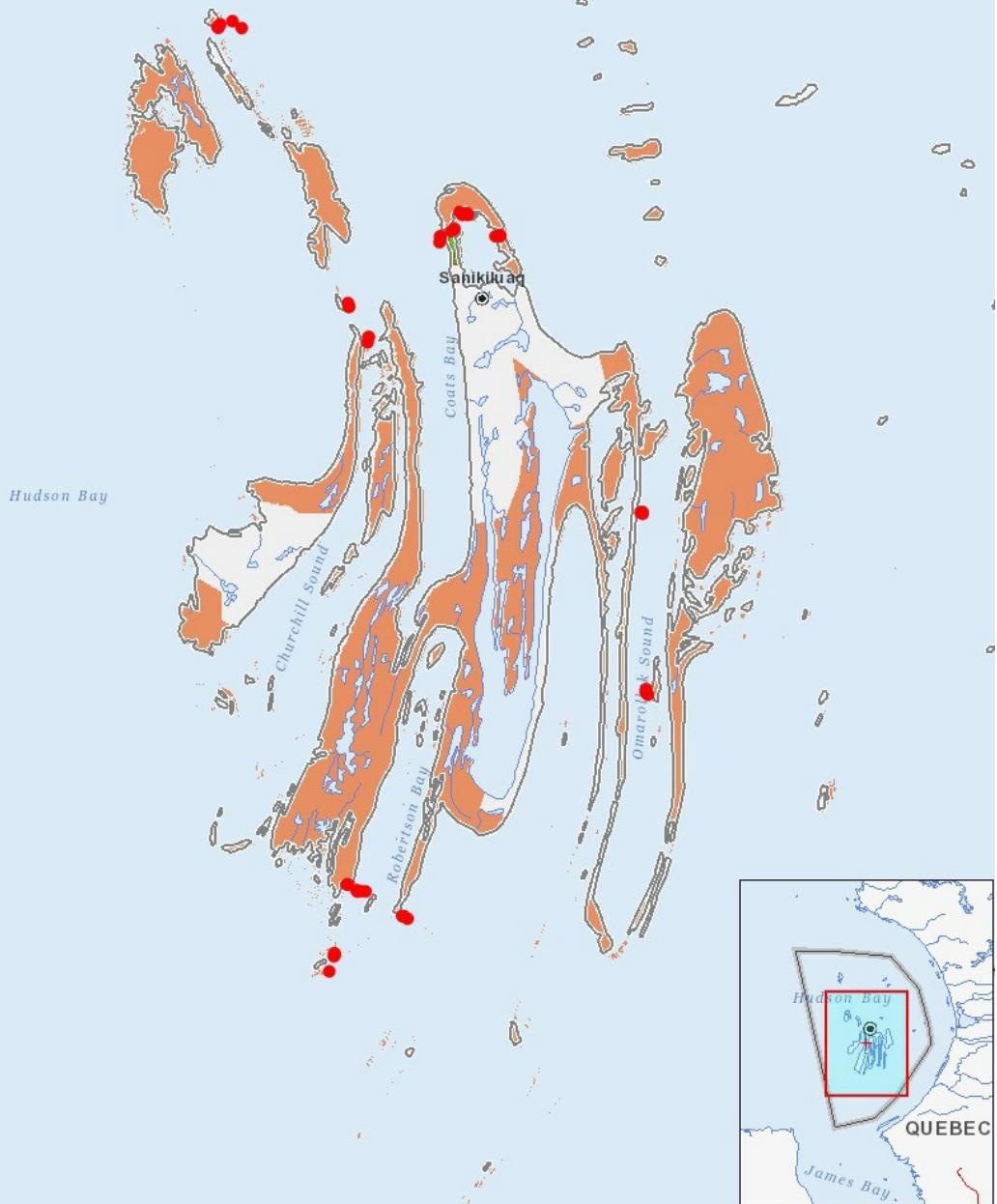
Impacts

Identification des répercussions environnementales

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																	
BIOL OGIC AL																	
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																	

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

Site du projet



Liste des géométries de projet

1 point Sampling stations for benthic invertebrates around Belcher Islands