Demande de la CNER faisant l'objet d'un examen préalable #126164

Movement and chemical ecology of fishes in Hudson Bay

Type de demande :	New
Type de projet:	Scientific Research
Date de la demande :	Saturday, April 12, 2025
Period of operation:	from 2025-05-26 to 2035-03-22
Promoteur du projet:	Connor Faulkner Fisheries and Oceans Canada 501 University Crescent Winnipeg MB R3T 2N6 Canada Téléphone :: 2049148147, Télécopieur ::

DÉTAILS

Description non technique de la proposition de projet

Anglais: Arctic char, a culturally and economically vital species, is the most harvested species of wildlife in Nunavut, serving both subsistence and commercial needs for Inuit. Despite this importance, many knowledge gaps remain with respect to Arctic char biology and ecology, especially regarding movements and habitat use in both freshwater and marine environments. To address these knowledge gaps, we are continuing a 2023 project using acoustic telemetry to study the migratory ecology of sea-run Arctic char in Rankin Inlet, Kivalliq region, Nunavut. Specifically, we will continue acoustically tagging and subsequently tracking Arctic char from two river systems (Diana and Meliadine) using a fixed-acoustic array in Rankin Inlet to address key questions regarding the migration, dispersal, home ranges, and habitat use of this species. These results will provide critical insights into key marine habitats and migration timing, all of which will provide important baselines for future monitoring as habitats in the area continue to be influenced by climate change. Further, we will continue to study the migratory ecology of biologically important marine fish species, including Greenland cod, marine sculpins, lumpfish, and capelin within the area to examine critical marine habitats and movement patterns within Rankin Inlet and along western Hudson Bay more generally to assess how these species may be influenced by climate change. All told, these results may have important implications for informing management strategies pertaining to assessing the mixing of Arctic char populations harvested at discrete locations in the region, and furthering our understanding of marine and freshwater movements and habitat use by these species, including areas critical for feeding, spawning and overwintering. Additionally, microplastic pollution is a contaminant of emerging Arctic concern. These small particles (<5 mm) have been identified in environmental compartments ranging from glacier ice to the stomachs of Arctic fishes. While it is clear microplastics are present in the Arctic, it is unclear which organisms are most susceptible, and whether ingested microplastics can expose organisms to toxic plastic additives. This is of concern for Northern communities given their reliance on traditional country food sources and the environment. Therefore, our team has worked closely with the Kivalliq Wildlife Board and the communities of Rankin Inlet and Sanikiluaq to better understand the burden of microplastics and plastic additives in the Hudson Bay marine food webs. Here, we build on existing work in the area to better understand the prevalence of microplastics and their additives as co-contaminants in Arctic marine fishes in Rankin Inlet (northwestern Hudson Bay) and Sanikiluaq (southeastern Hudson Bay). We propose to conduct field sampling of Arctic char, Greenland cod, marine sculpins, capelin, and zooplankton in collaboration with northern partners to help address these questions.

Français: N/A.

Inuktitut: ᐃᖃᓗᒃᐲᑦ, ᐱᖅᑯᓯᕆᔭᐅᔪᒃᑯᑦ ᐊᒻᒪᓗ ᐱᕈᖅᐸᓪᓕᐊᓂᕐᒧᑦ ᐊᑑᑎᖃᖅᑐᑦ, ᐃᖃᓗᒃᑕᐅᓚᔪᓛᖑᔪᑦ ᓄᓇᕗᒻᒥᑦ, ᓂᕆᔭᐅᖃᑦᑕᖅᓱᑎᒃ ᐊᒻᒪᓗ ᓂᐅᕕᐊᒃᓴᕆᔭᐅᓂᐊᕐᓗᑎᒃ ᐃᓄᖕᓄᑦ. ᑕᒪᑐᒧᖓ ᐱᒻᒪᕆᐅᒐᓗᐊᖅᑎᓪᓗᒍ, ᐊᒥᓱᓂᒃ ᖃᐅᔨᒪᓂᖃᙱᑦᑐᑦ ᐃᖃᓗᒃᐲᑦ ᐆᒪᓂᖃᕐᓂᕆᔭᖏᓐᓄᑦ ᐊᒻᒪᓗ ᐱᕈᖅᐸᓪᓕᐊᔾᔪᑎᖏᓐᓄᑦ, ᐱᓗᐊᖅᑐᒥᑦ ᐊᐅᓚᓂᕆᖃᑦᑕᖅᑕᖏᓐᓂᑦ ᐊᒻᒪᓗ ᐃᓂᐅᔪᓂᑦ ᐊᑐᖃᑦᑕᖅᑕᖏᓐᓂᑦ ᐃᒪᑦᑎᐊᕙᖕᒥᑦ ᐊᒻᒪᓗ ᑕᕆᐅᕐᒥᑦ. ᐱᓕᕆᐊᕆᓂᐊᕐᓗᒋᑦ ᖃᐅᔨᒪᓂᕐᒥᑦ ᐱᑕᖃᙱᓐᓂᐅᔪᑦ, ᑲᔪᓯᓂᐊᖅᑕᕗᑦ 2023-ᒥᑦ ᐱᓕᕆᐊᖑᓚᐅᖅᑐᖅ ᐊᑐᕐᓗᑕ ᐃᓯᔭᐅᓯᒪᔪᓂᒃ ᖃᐅᔾᔪᑎᓂᒃ ᓇᒧᖓᐅᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᕐᓂᐊᕐᓗᒋᑦ ᑕᕆᐅᕐᒧᐊᖃᑦᑕᖅᑐᑦ ᐃᖃᓗᒃᐲᑦ ᑲᖏᖅᖠᓂᕐᒥᑦ, ᑭᕙᓪᓕᕐᒥᑦ, ᓄᓇᕗᒻᒥᑦ. ᐃᒪᓐᓇᐃᓕᐅᓗᐊᕐᓂᐊᖅᑐᒍᑦ, ᖃᐅᔨᓴᐃᔾᔪᑎᓂᒃ ᑖᓪᓕᖅᑐᕐᓗᒋᑦ ᐊᒻᒪᓗ ᑭᖑᓂᐊᒍᑦ ᖃᐅᔨᓴᕐᓗᒋᑦ ᐃᖃᓗᒃᐲᑦ ᒪᕐᕉᖕᓂᑦ ᑰᖕᓂᑦ (ᐃᖃᓗᐃᑦ ᐊᒻᒪᓗ ᑕᓯᕐᔪᐊᖅ) ᐊᑐᕐᓗᑕ ᐃᓯᔭᐅᓯᒪᔪᓂᒃ ᖃᐅᔨᓴᐃᔾᔪᑎᓂᒃ ᑲᖏᖅᖠᓂᕐᒥᑦ ᖃᐅᔨᓂᐊᕐᓗᒋᑦ ᐊᐱᖅᑯᑕᐅᓗᐊᖅᑐᑦ ᓅᖃᑦᑕᕐᓂᖏᓐᓄᑦ, ᓇᒧᖓᐅᖃᑦᑕᕐᓂᖏᓐᓄᑦ, ᐊᖏᕐᕋᕆᔭᖏᓐᓄᑦ ᑎᑭᐅᒪᓂᖏᓐᓂᑦ, ᐊᒻᒪᓗ ᐃᓂᐅᔪᒥᒃ ᐊᑐᖃᑦᑕᖅᑕᖏᓐᓂᑦ ᐃᖃᓗᒃᐲᑦ. ᖃᓄᐃᖓᓂᐅᔪᑦ ᑐᓂᓯᓂᐊᖅᑐᑦ ᐱᒻᒪᕆᐅᔪᒥᒃ ᖃᐅᔨᑎᑦᑎᓂᕐᒧᑦ ᑕᕆᐅᕐᒥᐅᑕᓄᑦ ᐃᓂᒋᔭᐅᔪᓂᑦ ᐊᒻᒪᓗ ᖃᖓᒃᑯᑦ ᓅᖃᑦᑕᕐᓂᖏᓐᓄᑦ, ᑕᒪᕐᒥᓗᒃᑖᖅ ᑐᓂᓯᓂᐊᖅᑐᑦ ᐱᒻᒪᕆᐅᔪᓂᒃ ᐱᒋᐊᕐᕕᐅᔪᓂᑦ ᓯᕗᓂᒃᓴᒥᑦ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐃᓂᒋᔭᐅᔪᑦ ᑕᒦᓂᑦ ᐱᑎᑦᑎᓂᖃᐃᓐᓇᕐᒪᑕ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓂᑦ. ᐊᒻᒪᓗ, ᖃᐅᔨᓴᐃᓇᕐᓂᐊᖅᑕᕗᑦ ᓅᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐆᒪᓂᖃᕐᓂᖏᓐᓄᑦ ᐱᒻᒪᕆᐅᔪᑦ ᐊᔾᔨᒌᙱᑦᑐᓄᑦ ᐃᖃᓗᖕᓄᑦ, ᐃᓚᐅᑉᓗᑎᒃ ᐆᒐᐃᑦ, ᑲᓇᔪᐃᑦ, ᐳᕕᖅᓯᒪᔪᑦ ᐃᖃᓗᐃᑦ, ᐊᒻᒪᓗ ᐃᖃᓗᐊᓛᑦ ᐃᓂᐅᔪᒥᑦ ᕿᒥᕐᕈᓂᐊᕐᓗᒋᑦ ᐊᑐᖅᑕᐅᓗᐊᖅᑐᑦ ᑕᕆᐅᕐᒥᑦ ᐃᓂᐅᔪᑦ ᐊᒻᒪᓗ ᐊᐅᓚᓂᖏᑦᑕ ᖃᓄᐃᓕᐅᕐᓂᖏᑦ ᑲᖏᖅᖠᓂᕐᒥᑦ ᐊᒻᒪᓗ ᐱᖓᓐᓇᖅᐸᓯᖓᓂᑦ ᑕᓯᐅᔭᕐᔪᐊᑉ ᐱᓗᐊᖅᑐᒥᑦ ᖃᐅᔨᓴᕐᓂᐊᕐᓗᒋᑦ ᖃᓄᖅ ᐃᖃᓗᐃᑦ ᐱᑎᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓄᑦ. ᐅᖃᐅᑎᔭᐅᓯᒪᓗᒃᑖᖅᑐᑦ, ᖃᓄᐃᖓᓂᐅᔪᑦ ᐱᒻᒪᕆᐅᔪᒥᒃ ᖃᐅᔨᑎᑦᑎᔪᓐᓇᖅᑐᑦ ᐃᑲᔪᕐᓂᐊᕐᓗᑎᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᖃᓄᖅᑑᕈᑎᓂᑦ ᐱᔾᔪᑎᖃᖅᑐᓂᒃ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐊᑯᑉᓕᖅᓯᒪᔪᓂᒃ ᐃᖃᓗᒃᐱᒃᑕᐅᔪᓂᑦ ᐃᖕᒥᒃᑰᖓᔪᓂᑦ ᐃᓂᐅᔪᓂᑦ ᑕᒦᓂ, ᐊᒻᒪᓗ ᑐᑭᓯᐊᓕᖅᑎᑦᑎᒃᑲᓐᓂᕐᓗᑎᒃ ᑕᕆᐅᕐᒥᑦ ᐊᒻᒪᓗ ᐃᒪᑦᑎᐊᕙᖕᒥᑦ ᐊᐅᓚᓂᕆᔭᖏᓐᓂᑦ ᐊᒻᒪᓗ ᐃᓂᐅᔪᓂᒃ ᐊᑐᖃᑦᑕᖅᑕᖏᓐᓂᑦ ᐃᖃᓗᐃᑦ, ᐃᓚᐅᑉᓗᑎᒃ ᐱᒻᒪᕆᐅᒋᔭᐅᔪᑦ ᓂᕆᕝᕕᒋᖃᑦᑕᖅᑕᖏᑦ, ᒪᓐᓂᓕᐅᕐᕕᒋᖃᑦᑕᖅᑕᖏᑦ ᐊᒻᒪᓗ ᐅᑭᐅᒃᑯᑦ ᐅᕐᓂᒃᓯᒪᖃᑦᑕᖅᑕᖏᑦ. ᐃᓚᒋᓴᐅᔪᖅ, ᒥᑭᔪᑦ ᐊᐅᒃᑕᔫᓂᑦ ᐱᑦᑕᐅᖏᑦᑐᓂᒃ ᓴᖅᑭᑉᐸᓪᓕᐊᑐᐃᓐᓇᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᐃᓱᒫᓘᑕᐅᔪᑦ.

ᒥᑭᔨᑎᑦ (< 5 ᒥᓕᒋᑕᐃᑦ ᐊᖏᑎᑎᓂᐅᓕᐳᐸ ᑐᖓᓀᓂᑐᑐᑦ) ᖃᐅᔨᔪᐅᓕᓗᔪᑦ ᐊᐸᑎᐅᐳᐸ ᐃᓕᖏᓂᓂᑦ ᑎᐱᐅᑎᓗᔪᑦ ᓴᖅᑭᑦ ᓗᑯᓂᑦ ᐃᑭᑭᑐᖏᓂᓄᓕᒃ ᐅᑭᐅᖃᑕᖃᑐᑦ ᐃᖃᓗᐃᑦ. ᓄᓇᓇᖏᑎᓪᓗᒍ ᒥᑭᔨᑦ ᐊᐅᓂᑕᔨᑦ ᑕᐃᒪᐅᓚᒪᑕ ᐅᑭᐅᖃᑕᖃᑐᑦ, ᓄᓇᓇᖃᑐᖃᖅ ᐅᒪᔪᕆᓕᑦ ᐊᓂᑐᑕᐅᔪᖏᓕᓕᖅᓚᒻᒪᓗᑕ, ᐊᓚᒪᓗ ᓂᓗᔨᐅᓂᐸᑕ ᒥᑭᔨᑦ ᐊᐅᓂᑕᔨᑦ ᐊᓂᑐᓂᓕᕆᓂᖅ ᐅᒪᔪᕆᓕᓂᓂᖅ ᐊᐅᓂᑕᔨᑦ ᐱᑦᑕᐅᑭᑦᑐᓂᑦ ᐃᓕᔨᐅᓂᐳᒪᔪᓄᑦ. ᐃᓂᒪᓗᑕᐅᔪᖅ ᐅᑭᐅᖃᑕᖃᑐᑦ ᓄᓇᓕᓐᓄᑦ ᐱᖃᑦᑯᓂᓕᔪᓗ ᓂᓗᔨᐅᖃᖅᑕᑦᓂᓐᓂᑐᓄ ᐊᓚᒪᓗ ᐊᐸᑎᒍᑦ. ᑕᐃᒪᓕᓐᓄᑦ, ᐱᓕᓂᔨᐅᖅ ᐱᓕᓂᖃᖅᑎᑦᓴᖅᓯᒪᔪᑦ ᑭᓴᓕᓕᒥᑦ ᐅᓪᒪᔪᕆᓂᔨᑦᔪᐊᑲᑯᓂᑦ ᐊᓚᒪᓗ ᓄᓇᓕᓐᓄᑦ ᑲᖏᑦᓀᓂᑦ ᓴᓂᑭᔨᓂᑦ ᐊᓚᒪᓗ ᔪᓂᑭᔨᓂᑦ ᐅᓪᒪᔪᕆᓂᔨᑦ ᑕᓂᐅᑎᑦᓴᐅᓂᑦ ᑐᓂᑭᑦᑐᑕᖃᖅᑐᓂᑦ. ᑕᒡᓴᓂ, ᐱᓴᓪᓕᐊᕐᓇᒥᖃᓕᑕᖅᑕᑦᓂᓐᓂᑦ ᐱᓕᓂᐊᖅᓯᒪᔪᓂᑦ ᐃᓂᓐᓂᑦ ᑐᓂᑭᑦᑐᑕᖃᖅᑐᓂᑦ ᐱᑦᑕᐅᑭᑦᑐᑕᖃᖅᑐᓂᑦ ᑐᓂᑭᑦᑐᑕᖃᖅᑐᓂᑦ ᐱᑦᑕᐅᑭᑦᑐᑕᖃᖅᑐᓂᑦ ᐅᑭᐅᖃᑕᖃᑐᑦ ᑕᓂᐅᑎᑦᓴᐅᓂᑦ ᐃᓕᓴᐅᑎᑦᓴᐅᓂᑦ ᐅᑭᐅᖃᑕᖃᑐᑦ ᑕᓂᐅᑎᑦᓴᐅᓂᑦ ᐃᓕᓴᐅᑎᑦᓴᐅᓂᑦ ᐅᑭᐅᖃᑕᖃᑐᑦ ᐃᓕᓴ

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
Location where sampling with occur in the large lake in the Sanikiluaq area.	Sampling sites	Marine	N/A.	N/A.	Approximately 20 km from the community of Sanikiluaq.
Location where sampling with occur in the southern extent of the Sanikiluaq area.	Sampling sites	Marine	N/A.	N/A.	Approximately 90 km from the community of Sanikiluaq.
Location where sampling with occur in the northern extent of the Sanikiluaq area.	Sampling sites	Marine	N/A.	N/A.	Approximately 40 km from the community of Sanikiluaq.
Location where sampling with occur in the northern extent of the Belcher Islands.	Sampling sites	Marine	N/A.	N/A.	Approximately 10 km from the community of Sanikiluaq.
Location where sampling with occur in the Rankin Inlet area.	Sampling sites	Marine	N/A.	N/A.	Furthest point approximately 67 km from the community of Rankin Inlet.

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Rankin Inlet	Andre Aokaot	Kangiqliniq Hunters and Trappers Organization	2025-01-23
Rankin Inlet	Kivalliq Wildlife Board	Stanley Adjuk/Amy Kaludjak	2024-11-16
Sanikiluaq	Luccasie Arragutainaq	Sanikiluaq Hunters and Trappers Association	2024-11-26

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
Hunters and Trappers Associations/Organizations	The Kangiqliniq Hunters and Trappers Organization supported our proposed research in Rankin Inlet.	Active	2025-01-23	2026-04-01
Hunters and Trappers Associations/Organizations	The Kivalliq Wildlife Board supported our proposed research in Rankin Inlet.	Active	2024-11-16	2026-04-01
Hunters and Trappers Associations/Organizations	The Sanikiluaq Hunters and Trappers Association supported our proposed research in Sanikiluaq.	Active	2024-11-26	2026-04-01
Pêches et Océans Canada	Applied to the DFO Arctic animal care committee for an approved animal use protocol for all sampling and work that will be conducted within our research project. Committee has reviewed our application and will provide a decision in April 2025.	Applied, Decision Pending	2025-02-18	2026-04-01
Pêches et Océans Canada	Applied to the DFO Arctic licensing group for an approved license to fish for scientific purposes for all sampling and work that will be conducted within our research project. Committee has reviewed our application and will provide a decision upon	Applied, Decision Pending	2025-02-18	2026-04-01

	approval of our projects by the NPC and NIRB.			
Autre	Nunavut Planning Commission screening decision.	Active	2025-04-05	2035-04-01

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Water	We will be travelling via boat to multiple sampling sites within Rankin Inlet and around the Belcher Islands (Sanikiluaq).	
Land	We will be travelling via ATV to multiple sampling sites within Rankin Inlet and around the Belcher Islands (Sanikiluaq).	

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
ATV	4	83 in. (L) x 48 in. (H) x 47 in. (W)	ATV's will be used to transport the research team from town to the location of field work within Rankin Inlet and/or Sanikiluaq.
Boat and motor	1	22 feet (L) x 10 feet (W)	Boat and motor will be used to transport the research team from town to the location of field work within Rankin Inlet and/or Sanikiluaq.

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	10	5	50	Gallons	Gasoline will be carried on the boat while completing field work within Rankin Inlet and/or Sanikiluaq as backup fuel reserves due to long distances travelled between field work study sites.
Ethanol	hazardous	1	1	1	Liters	Ethanol vials will be carried to store and preserve fish fin clips for genetic analysis.

Consommation d'eau

Quantité quotidienne (m3)	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
Sampling sites	Déchets non combustibles	10 lb	Food/beverage and miscellaneous waste generated throughout the duration of our field work will be brought back to town and disposed of in municipal landfills.	N/A.

Répercussions environnementales :

The predicted environmental impacts of undertaking our scientific research in either Rankin Inlet or Sanikiluaq are all positive. All of our proposed scientific research assists in the management, conservation, and understanding of marine species such as fish and invertebrates.

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

In both Rankin Inlet and Sanikiluaq, there are trails from the community to our locations of sampling in each respective community. These trails are maintained by the local municipalities for use to access subsistence harvesting locations near the communities.

Description de l'environnement existant : Environnement biologique

Typical Arctic species (caribou, polar bears, seals, whales, fish, birds, small mammals, medium mammals, mosses, lichens, flowers) can be found in proximity to all of our sampling sites in Rankin Inlet and Sanikiluaq.

Description de l'environnement existant : Environnement socio-économique

Our locations of sampling in each community are areas of local importance for subsistence and economic harvesting of fish species (majority being for Arctic char). These locations have been selected by the respective community HTO/HTA's to learn more about the wildlife species they harvest and consume through the examination of movement patterns, diet, and contaminant loads. Given unemployment rates in both Rankin Inlet and Sanikiluaq are moderate, our research project will hire up to three local individuals from the respective communities to assist with all field-related work.

Miscellaneous Project Information

Our scientific research is developed and guided alongside co-management partners (HTO/HTA/RWOs). We DO NOT conduct any research that these bodies have not been in support of, nor at locations that they have not been supportive of. We are in constant communication with the respective local bodies throughout the year, providing dates research will occur, research plans (that have already been approved), providing updates on work completed to date and results when available in the form of plain language summaries and reports shared to local HTO/HTA/RWOs and the communities as a whole.

Identification des répercussions et mesures d'atténuation proposées

There are no foreseeable impacts of this research that are negative - all impacts of our scientific research are positive as they assist in the conservation, management, and understanding of marine species such as fish and invertebrates.

Répercussions cumulatives

There are no foreseeable cumulative effects of this research that are negative - all effects of our scientific research are positive as they assist in the conservation, management, and understanding of marine species such as fish and invertebrates.

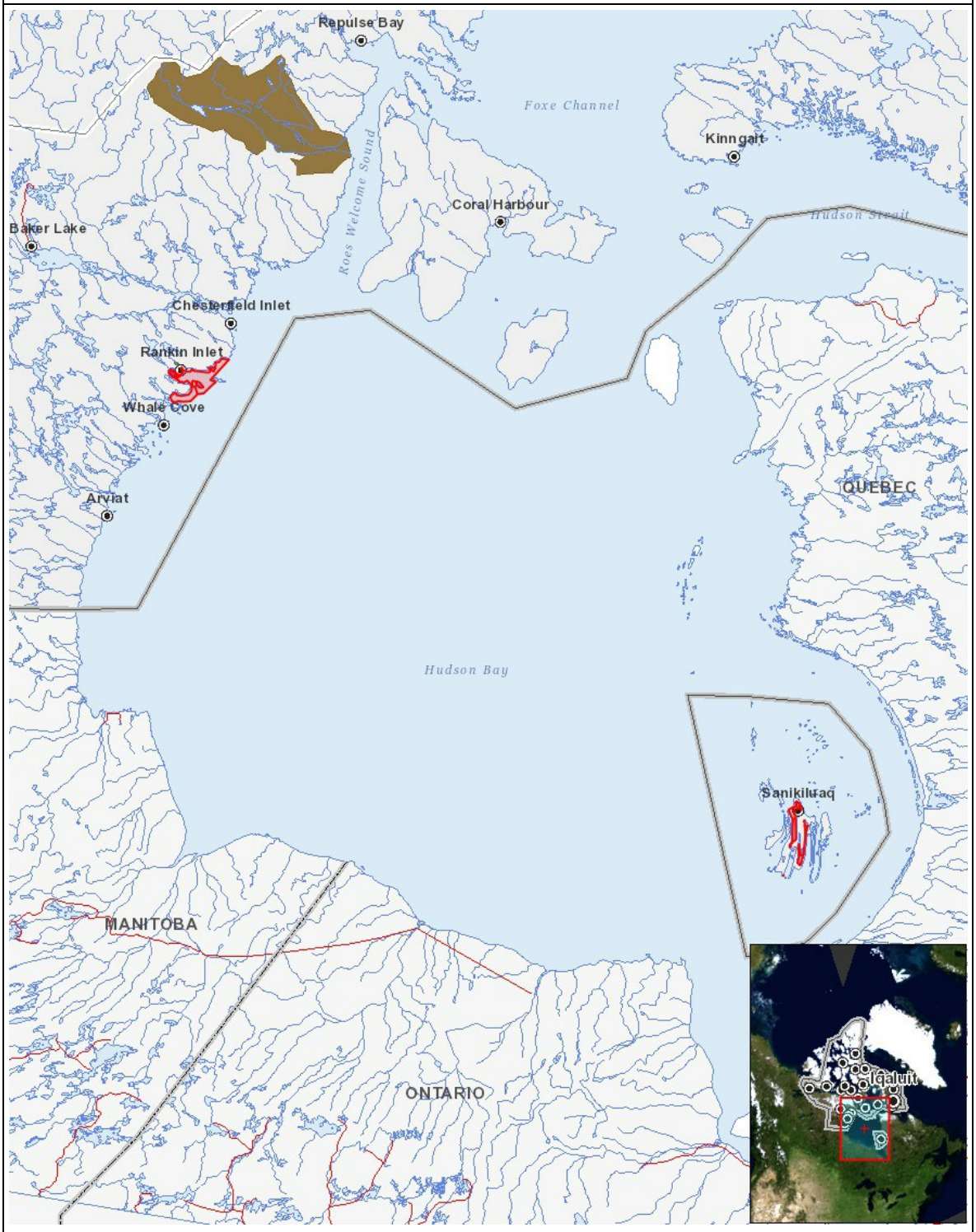
Impacts

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	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																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Exploitation																									
Sampling sites		P	U	U	-	P	P	U	U	U	P	U	P		U	P	U	P	P		U	P	P	U	P
Désaffectation																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

Site du projet



Liste des géométries de projet

1 polygon Location where sampling with occur in the large lake in the Sanikiluaq area.

2 polygon Location where sampling with occur in the southern extent of the Sanikiluaq area.

3 polygon Location where sampling with occur in the northern extent of the Sanikiluaq area.

4 polygon Location where sampling with occur in the northern extent of the Belcher Islands.

5 polygon Location where sampling with occur in the Rankin Inlet area.