



Demande de la CNER faisant l'objet d'un examen préalable #126194

FISHES: Fostering Indigenous Small-scale fisheries for Health, Economy, and food Security

Type de demande : New

Type de projet: Scientific Research

Date de la demande : Tuesday, June 10, 2025

Period of operation: from 2026-04-01 to 2028-12-31

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DÉTAILS

Description non technique de la proposition de projet

Anglais: Food insecurity is a debilitating problem in Northern Canada. Increased shipping, tourism, and mining exploration and development pose serious risks for northern aquatic biodiversity and the fisheries it supports. Moreover, climate-induced changes in the geographic distribution and abundance of fish threaten the economic livelihoods of northern communities, their traditional harvesting practices as well as their ability to feed themselves and maintain access to healthy food. Consequently, reducing the potentially negative impacts of these threats on northern fisheries is crucial for communities who are tied to fish for their food security and culture. For these fisheries, the identification of regions important for subsistence and commercial harvesting and whether they comprise genetically distinct groups of populations is a key step towards a sustainable harvest. The project FISHES will develop and apply genomic approaches in concert with Traditional Ecological Knowledge (TEK) to address critical challenges and opportunities related to food security and Commercial, Recreational, and Subsistence (CRS) fisheries of northern Indigenous Peoples in Canada (Inuit, Cree and Dené communities). We will develop genomic resources for seven species important to northern communities and use these resources to identify genetically distinct populations, assess their vulnerability to future climatic conditions, quantify their contribution to mixed-population harvests, and measure the contribution of fish from developing hatchery programs to subsistence harvests. Using a novel knowledge co-evolution framework, we will braid and bridge scientific information with TEK in support of sustainable harvests of CRS fisheries.

Français: L'insécurité alimentaire est un grave problème dans le Canada Nordique. L'augmentation du transport, du tourisme, de l'exploration minière et du développement en général pose de sérieux risque pour la biodiversité aquatique nordique ainsi que les pêches qu'elle supporte. De plus, les changements environnementaux et leur influence sur la répartition géographique et l'abondance des communautés de poissons menace la viabilité des communautés nordiques, leurs pratiques de récolte traditionnelles et leur capacité à de se procurer des aliments de qualité. Conséquemment, réduire les impacts négatifs potentiels de ces menaces sur les pêcheries nordiques sera crucial pour les communautés qui ne dépendent. Pour ces pêcheries, l'identification de régions d'importance pour les récoltes de subsistance et commerciale, ainsi que la détermination de la composition génétique des populations qui y sont récoltées, seront cruciaux pour leur gestion durable. Le projet FISHERS vise à développer et appliquer des outils génomiques de concert avec des Connaissances Écologiques Traditionnelles pour répondre à des défis critiques et des opportunités liées à la sécurité alimentaire et les pêcheries commerciales, récréationnelles et de subsistance (CRS) des peuples du Nord du Canada (Communautés Inuit, Cris et Dené). Nous allons développer ces outils génomiques pour sept espèces d'importance pour les communautés nordiques et utiliser ces ressources pour identifier les populations distinctes, évaluer leur vulnérabilité aux conditions climatiques futures, quantifier leur contribution aux pêcheries de stock mixtes et mesurer la contribution de poissons issus d'écloserie dans les pêcheries de subsistance. En utilisant un cadre de travail innovant alliant données scientifiques et connaissances écologiques traditionnelles, nous visons à supporter le développement durable des pêcheries CRS.

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Personnel

Personnel on site: 1

Days on site: 14

Total Person days: 14

Operations Phase: from 2025-04-01 to 2026-03-31

Operations Phase: from 2026-04-01 to 2028-12-31

Post-Closure Phase: from to

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
7 Polygon - South Main Land Murchison, Hayes River, Back River	Sampling sites	Marine	N/A	N/A	N/A
1 Polygon - Boothia North - Potential Commercial Fishing - 200 Samples	Sampling sites	Marine	N/A	N/A	N/A
2 Polygon - Boothia East Coast - 100 Samples	Sampling sites	Marine	N/A	N/A	N/A
4. Polygon - Boothia West Coast - 100 Samples	Sampling sites	Marine	N/A	N/A	N/A
Polygon 6 Gjoa Haven Bay - Murchison Bay 100 Samples	Sampling sites	Marine	N/A	N/A	N/A
5 Polygon King William Island -100 samples	Sampling sites	Marine	N/A	N/A	N/A
3. Polygon Boothia Center-Taloyoak 150 samples	Sampling sites	Marine	N/A	N/A	N/A

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Gjoa Haven	Anthony Anguttitauruq	Gjoa Haven Hunters & Trappers Association	2025-02-11
Taloyoak	Jimmy Ullikatalik	Taloyoak Umarulirigut Association	2025-02-11

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	License to Fish for Scientific Purposes (License # S-25/26-1004-NU) obtained conditional to project approval.	Active	2025-04-30	2026-03-31
Hunters and Trappers Associations/Organizations	Letters of Support - Taloyoak Umarulirigut Association and Gjoa Haven Hunters & Trappers Association	Active	2025-02-11	2028-12-31

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Air	Air transport will be required for Laval University supporting personnel	
Water	Water (boat) transport will be required to reach sampling sites	

Project accomodation types

Temporary Camp

Permanent Camp

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
Fishing net	N/A	N/A	Subsistence fisheries, samples will be taken from the catch
Boat	1	N/A	Transport
ATV	1	N/A	Transport

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	1	50	50	Gallons	Transport

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
Scientific/International Polar Year Research	Other, Fish carcasses	100 fish	The fish caught will be kept by local harvesters for consumption. The carcasses will be disposed of by them.	Non applicable

Répercussions environnementales :

Environmental impacts should be minimal, and the project should have no further influence on the environment than the existent subsistence fisheries already have (e.g. some bycatch of untargeted species, which are often used as dog food).

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

The main goal of this proposal is to provide continued support to the communities of Gjoa Haven and Taloyoak for the ongoing application for a commercial fishing license. There are currently no designated commercial fishing zones in the region.

Description de l'environnement existant : Environnement biologique

This project mainly involves Arctic char fisheries. Arctic char is an anadromous species that migrates from its spawning sites in freshwater to its feeding sites at sea in the spring, and comes back from the sea in the fall to overwinter and/or spawn. Arctic char is an abundant species in Arctic aquatic environments and can be found throughout the Arctic Ocean.

Description de l'environnement existant : Environnement socio-économique

This project will involve the communities' subsistence fisheries for arctic char, which mainly happens in the spring and in the fall, when the fish are running between their feeding and spawning sites. Subsistence fisheries for Arctic char are an important activity both culturally, nutritionally and economically. In the proposed project, we collaborate with subsistence fishers to obtain samples from their catch, which we then use to generate high-quality data to assist the fisheries management and support the communities with their commercial fisheries application.

Miscellaneous Project Information

Identification des répercussions et mesures d'atténuation proposées

The proposed procedure reduces considerably the impact of our sampling activities, since we do not cause any further handling and/or mortality of Arctic char than what the already existing subsistence fisheries already cause. This is a net positive impact for our research activities, as opposed to a scenario where we would need to catch fish solely for sampling purposes. The proposed collaborative approach, involving local fishers in the sampling activities has yielded high success, as they know which spots to go to to catch fish. This is a net positive as it has drastically reduced the time and resources required to obtain the required number of samples.

Répercussions cumulatives

The long term goals of this project involve both communities getting a commercial fishing license, which would create jobs and provide regular income for the communities. In the meantime, the data and

management tools generated by our research activities would provide guidance for the durable management of the fish stocks and related harvesting activities by the communities, reinforcing their stewardship over this important resource.

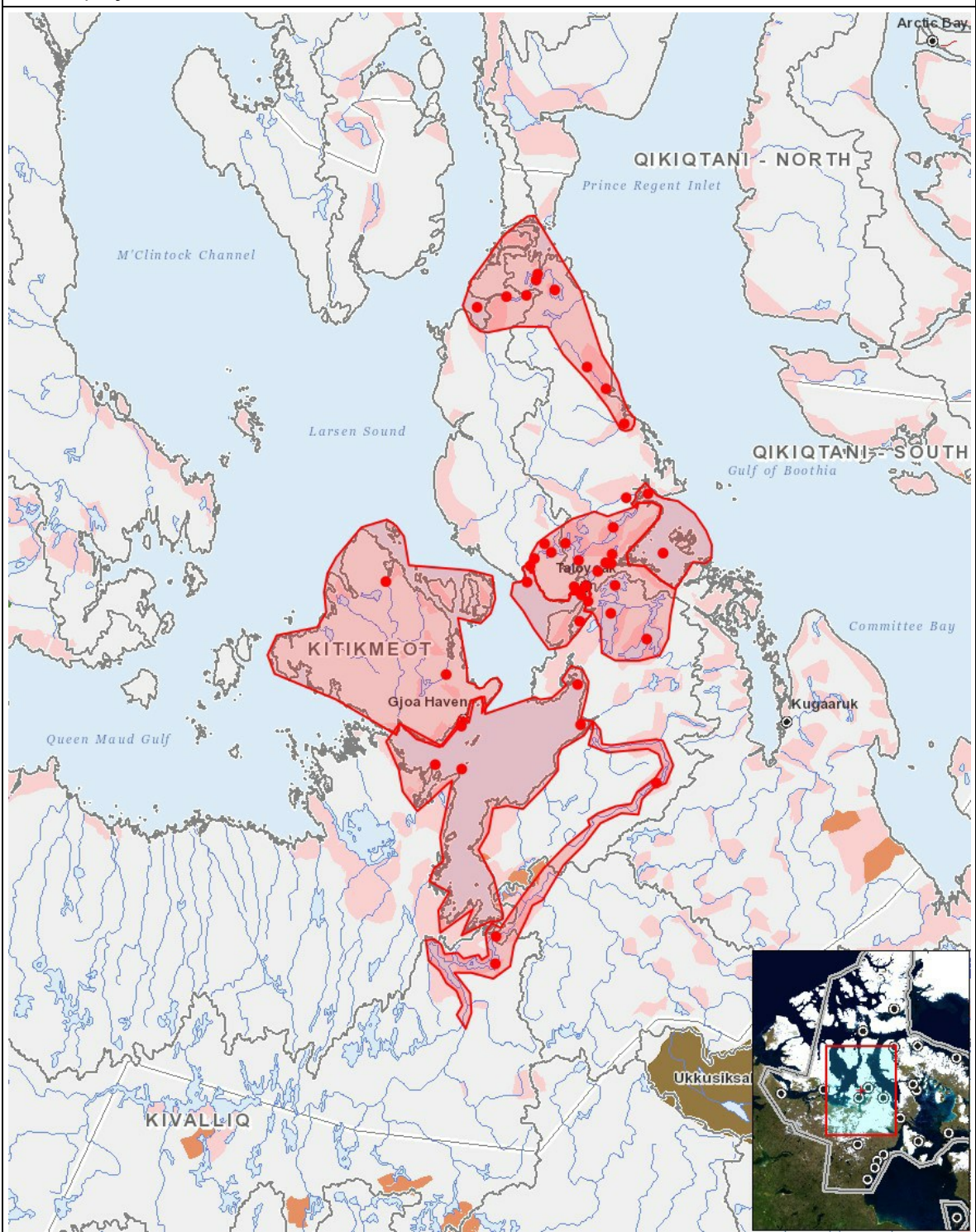
Impacts

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		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	M	-		-	P	P	-	-	
Désaffectation																										
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-

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

Site du projet



Liste des géométries de projet

- [illegible]

11 point	Back River
12 point	Richardson Point
13 point	Ogle point
14 point	Hayes River
15 point	Taloyoak
16 point	Netsilik Lake - ᐃᑦᑎᑦᑲ
17 point	Tariuqnittuq - ᑕᑎᐅᑦᓂᑦᐅᑦ
18 point	Kangalasiuqvikruaq - ᑲᐱᑕᑦᐅᑦᐃᑦᐅᐅᑦ
19 point	Iqalungmiut (Fishing Weir)
20 point	Petersen Bay
21 point	Amittuqruaq - ᐱᑦᑕᐅᑦᐅᐅᑦ
22 point	Tasiqruaq - ᑕᑦᐅᑦᐅᐅᑦ
23 point	Kanngiqlukruaq - ᑲᐱᑕᑦᐅᑦᐅᐅᑦ
24 point	Aksalikkat - ᐱᑦᐱᑦᑲᑦᑕᑦ
25 point	Abernethy Lake - Qamaninajuk - ᑲᑕᓂᐃᑦ
26 point	Abernethy River Mouth - Arviqtutiaq Bay - ᐱᑦᐃᑦᐅᑎᐅᑦ
27 point	Ilau'nalik - ᐃᑕᐅᑦᐃᑦ
28 point	Thom Bay- Itsuaqtuqvik - ᐃᑦᑦᐅᑦᐅᑦᐃᑦ
29 point	Lord Lindsay Lake - Tasiq - ᑕᑦᐅᑦ
30 point	Lord Mayor Bay
31 point	Garry River - Palliq - ᑕᑦᑕᑦ
32 point	Josephine Bay (Garry River Mouth)
33 point	Spence Bay
34 point	Willerstedt Inlet -Tasiuraq Iluliq - ᑕᑦᐅᑦᐅᑦ ᐃᑕᑦ
35 point	Redfish Lake - Ivitaruqtuq - ᐃᐃᑕᑦᐅᑦ
36 point	Ivitaruqtup Panga - ᐃᐃᑕᑦᐅᑦᑕᑦᑕᑦ
37 point	Middle Lake - Tasiqruaq - ᑕᑦᐅᑦᐅᐅᑦ
38 point	Kangalasiuqviaqruk - ᑲᐱᑕᑦᐅᑦᐃᑦᐅᐅᑦ
39 point	Angmalurtuq - ᐱᑦᑕᑦᐅᑦ
40 point	Shepard Bay
41 point	Inglis Bay
42 point	Murchinson Lake - Tahiararŕuaq ᑕᐱᐃᐅᑦᑕᑦᐅᑦ
43 point	Port Parry - Tununiup qamania - ᐅᓂᓂᐅᑦ ᑲᑕᓂᐃᑦ
44 point	Jekyll Lake - Uplasaulikruaq - ᐅᑦᑕᑦᐅᑦᐅᐅᑦ
45 point	Krusenstern Lake - Tigluaqvik - ᑎᑦᐅᑦᐅᑦᐃᑦ
46 point	Lady Melville Lake - Tasinajuk - ᑕᑦᐃᑦ
47 point	Kangikjuke Lake - Kangiqluk - ᑲᐱᑕᑦᐅᑦ
48 point	Hansteen Lake -Tasiqruaq - ᑕᑦᐅᑦᐅᐅᑦ
49 point	Pangnikto Lake - Panngnirtuq - ᑕᑦᓂᑦᐅᑦ
50 point	Amitsuq - ᐱᑦᑕᑦᐅᑦ
51 point	Kangiqqlunajuk - ᑲᐱᑕᑦᐅᑦᐅᐅᑦ