



## **Demande de la CNER faisant l'objet d'un examen préalable #125455 Sea-ice monitoring to support resilient transportation infrastructure, community economic development and youth training in Gjoa Haven and Taloyoak, Nunavut**

**Type de demande :** New

**Type de projet:** Marine Based Activities

**Date de la demande :** 3/21/2019 12:55:22 PM

**Period of operation:** from 0001-01-01 to 0001-01-01

**Autorisations proposées:** from 0001-01-01 to 0001-01-01

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# DÉTAILS

## Description non technique de la proposition de projet

Anglais: This project represents collaboration between Gjoa Haven and Taloyoak and the social enterprise SmartICE to bring sea-ice monitoring services and training to their communities over a period of three ice seasons between 2019 and 2022. Our communities are clearly feeling the impacts of climate change, particularly on the formation and break-up of landfast sea-ice. Travel safety, access to country foods, and the ability to participate in economic, cultural and family activities are particularly affected, with significant repercussions for physical and mental well-being. Providing sea-ice monitoring services to the communities will help mitigate travel risk and support climate change adaptation actions. Sea-ice monitoring services and training will be introduced to Gjoa Haven and Taloyoak through the following sequence of steps: 1. Respectful engagement of the community, including youth and Elders, 2. Creation of a community sea-ice user group to manage local SmartICE operations, consisting of representation from key community organizations and sea-ice users, 3. Procurement and deployment of stationary and mobile sea-ice sensors, 4. Hiring and training of SmartICE operators, 5. Establishment of operational space and community data sharing portal, 6. Training youth to work with Elders to document Inuit Quajimajatuqangit of local sea-ice conditions and use, 7. Co-development with Economic Development Officers of a sustainability plan for community-operated SmartICE services. The monitoring and communication of sea-ice conditions along community travel routes in Gjoa Haven and Taloyoak, using both Inuit knowledge and sensor data, will provide improved understanding of how ice travel routes are being impacted by climate change and how the community can modify ice travel to reduce their risk. They also provide greater opportunities to maintain and develop community-based economic and recreational activities that rely on safe and predictable sea ice around and between the two communities.

Français: Not applicable to the region.

Inuktitut: Characters will not display properly in this field. A summary is provided in the attachments.

Inuinnaqtun: Not applicable to the project area.

## Personnel

Personnel on site: 6

Days on site: 30

Total Person days: 180

Operations Phase: from 2019-03-30 to 2022-03-29

## 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
Sea-Ice Monitoring Area	Marine Based Activities	Marine	N/A, this type of monitoring activity has not taken place on the site previously	N/A, project activities will take place on sea-ice	Monitoring activities will be based out of the communities of Gjoa Haven and Taloyoak and provide sea-ice monitoring services along traditional community trails in the surrounding areas. Monitoring activities will take place on sea-ice and will not take place in protected areas.
Sea-Ice Monitoring Path 1	Marine Based Activities	Crown	N/A, this type of monitoring activity has not taken place on the site previously	N/A, project activities will not impact any known archaeological or paleontological sites.	Monitoring activities will be based out of the communities of Gjoa Haven and Taloyoak and provide sea-ice monitoring services along traditional community trails in the surrounding areas. Monitoring activities will not take place in protected areas.
Sea-Ice Monitoring Path 2	Marine Based Activities	Inuit Owned Surface Lands	N/A, this type of monitoring activity has not taken place on the site previously	N/A, project activities will not impact any known archaeological or paleontological sites.	Monitoring activities will be based out of the communities of Gjoa Haven and Taloyoak and provide sea-ice monitoring services along traditional community trails in the surrounding areas. Monitoring activities will not take place in protected areas.

### Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Gjoa Haven	Joanni Sallerina	Mayor - Hamlet of Gjoa	2019-02-22

		Haven	
Gjoa Haven	Ben Putugaq	Hunters and Trappers Association	2019-02-25
Taloyoak	Simon Qingnaqtuq	Mayor - Hamlet of Taloyoak	2019-02-13
Taloyoak	Jimmy Oleekatalik	Spence Bay Hunters and Trappers Association	2019-02-22

## Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Kitikmeot

### Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Institut de recherche du Nunavut	Through application to the Nunavut General Monitoring Plan, NRI licensing has been recommended for this project.	Not Yet Applied		

### Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Water	Travel across sea-ice using snowmobiles	

### Project accomodation types

Autre,

## 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
Snowmobiles	2	128 in x 47 in x 50 in	A snowmobile will be used in each community to tow a qamutik containing the mobile ice-thickness sensing equipment.
Gas-Powered Drill	2	12 in x 12 in x 4 in	Drills are used to operate ice augers to support ice-thickness measuring activities
SmartBUOY	2-4	120 in x15 in	SmartBUOY stationary sensor deployed in ice to monitor thickness.

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	120	25	3000	Liters	Fueling snowmobiles and gas powered, hand-operated ice augers

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
Marine Based Activities	Déchets combustibles	minimal	Operators will retrieve any waste generated during monitoring activities (food, garbage, wood, etc.) and return material to the communities.	N/A
Marine Based Activities	Déchets non combustibles	None	N/A	Additional trips to the ice have been budgeted and planned in order to ensure retrieval of SmartBUOY equipment.

### Répercussions environnementales :

The project will involve operating both stationary and mobile ice sensing equipment on the existing sea-ice surrounding the communities of Gjoa Haven and Taloyoak. Since activities will take place on sea-ice, potential for environmental impacts is limited. The equipment used has very low energy requirements, similar to a cell-phone. For the SmartBUOY technology, batteries contained within the unit are used, while the SmartQAMUTIK is powered from the snowmobile. All monitoring will be conducted in a non-destructive manner without lasting impacts and all reasonable precautions, as informed by SmartICE's Emergency Management Plan, will be taken by operators to ensure safe operation of the equipment and to avoid any unforeseen impacts. As a general practice, operators will return any waste generated and additional trips at the end of the ice season have been budgeted and planned for in order to ensure retrieval of the SmartBUOY equipment.

# **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**

N/A

**SECTION H2: Disposal At Sea**

N/A

**SECTION I1: Municipal Development**

**Description de l'environnement existant : Environnement physique**

**Description de l'environnement existant : Environnement biologique**

**Description de l'environnement existant : Environnement socio-économique**

**Miscellaneous Project Information**

**Identification des répercussions et mesures d'atténuation proposées**

**Répercussions cumulatives**

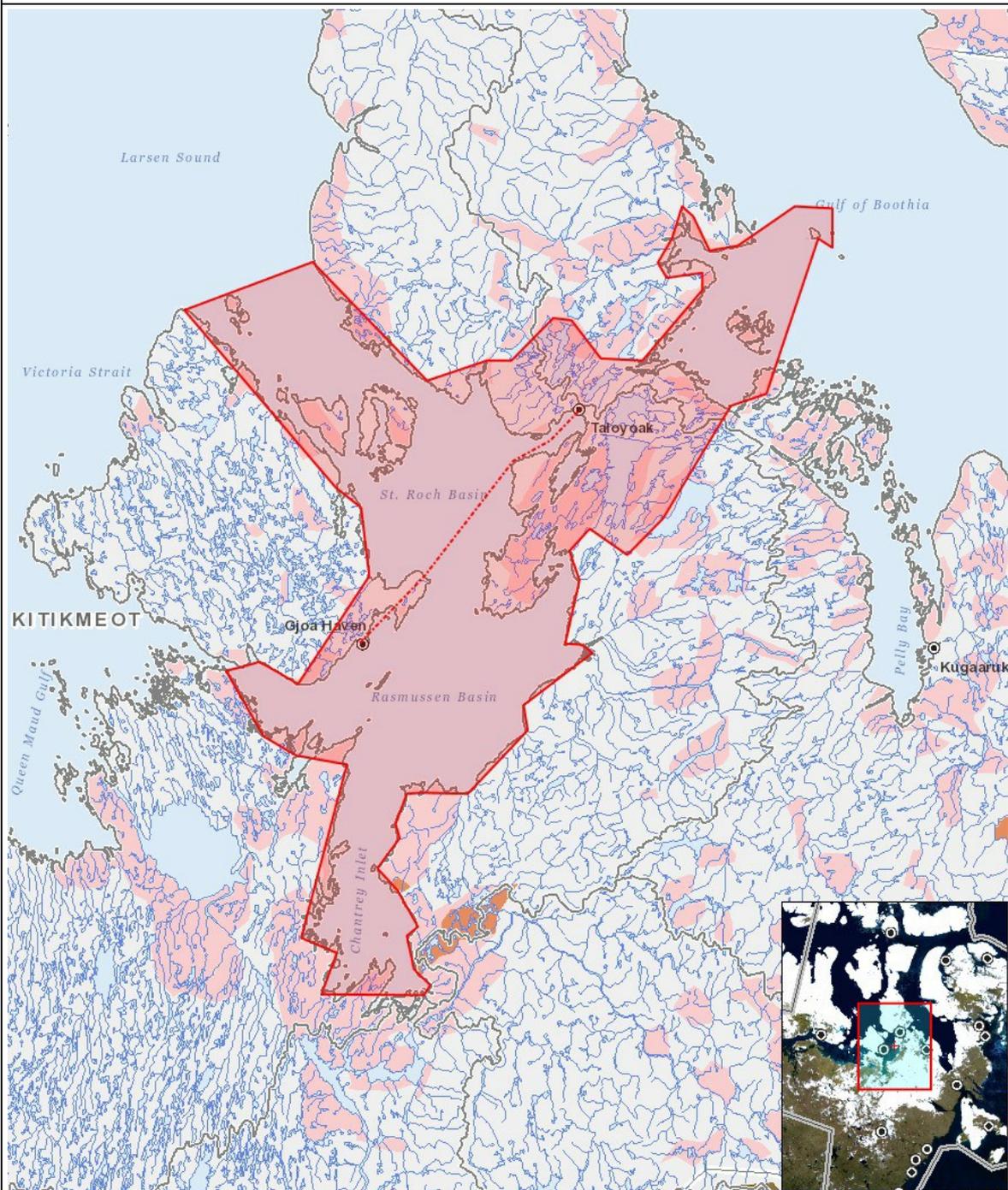
# Impacts

## 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	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
<b>Construction</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Exploitation</b>																									
Marine Based Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	
<b>Désaffectation</b>																									
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(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

## Site du projet



## Liste des géométries de projet

1	polygone	Sea-Ice Monitoring Area
2	polyline	Sea-Ice Monitoring Path 1
3	polyline	Sea-Ice Monitoring Path 2