



NIRB Application for Screening #126223

Ocean Tracking Network: Marine fish tracking in Baffin Bay and connected waters onboard the RV Kiviuq 1.

Application Type: New

Project Type: Scientific Research

Application Date: Wednesday, August 27, 2025

Period of operation: from 2025-07-25 to 2028-10-10

Project Proponent: Kevin Hedges
Fisheries and Oceans Canada
501 University Crescent
Winnipeg MB R3T 2N6
Canada
Phone Number:: 2047705814, Fax Number::

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Fish tracking mooring	Scientific/International Polar Year Research	Marine	Ocean Tracking Network moorings located in the area for more than 3 years.	N/A	Inside Hatton Basin Conservation Area
Fish tracking mooring	Scientific/International Polar Year Research	Marine	Ocean Tracking Network moorings located in the area for last two years	N/A	Closest Community is Pangnirtung; inside the Cumberland Sound Turbot Management Area
Fish tracking mooring	Scientific/International Polar Year Research	Marine	Ocean Tracking Network moorings located in the area for more than 3 years.	N/A	Inside Davis Strait Conservation Area
Fish tracking mooring	Scientific/International Polar Year Research	Marine	Ocean Tracking Network moorings located in the area for more than 3 years.	N/A	Inside Hatton Basin Conservation Area

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Pangnirtung	Mark Kilabuk	Pangnirtung Hunters and Trappers Organization	2025-05-21

Authorizations

Indicate the areas in which the project is located:

Transboundary
South Baffin

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Fisheries and Oceans Canada	Licence to Fish for Scientific Purposes	Applied, Decision Pending		
Nunavut Research Institute	NRI license to deploy moorings in Cumberland Sound	Applied, Decision Pending		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	Commercial air travel for field crew from Ontario to Nunavut, and return to Ontario	
Water	Transit of F.V. Kiviuq I from Newfoundland to Nunavut, research cruise in Nunavut for this project, transit of ship back to Newfoundland at end of project.	
Land	Taxi in Iqaluit between airport, hotel, and vessel at start and end of cruise	

Project accommodation types

Community
Other,

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Kiviug 1	1	28.53	The Kiviug 1 is a steel fixed-gear fishing vessel owned by Arctic Fishery Alliance. It is equipped with freezing at sea capabilities. The net tonnage of the vessel is 199.38. The maximal vessel speed is 12 knots. The Kiviug is primarily used for marine research and delivers supplies to Arctic Fishery Alliance's owner communities during the summer months.
Internal electronic tag (V16, Innovasea Inc.)	420	56 mm long	VEMCO acoustic transmitters (V16s: http://www.vemco.com/pdf/v16cont.pdf) will be surgically implanted in the body cavities of captured and healthy Greenland Halibut (n=300), Greenland Sharks (n=60) and Arctic Skate (n=60). Surgical procedures and handling will be <5 mins to minimize stress to the animals. Greenland Sharks will be tagged from a zodiac, with the animals held parallel to the boat and just at the surface of the water.
Fish tracking moorings	70	14 m tall	VEMCO acoustic monitors (VR2Ws: http://www.vemco.com/pdf/vr2w.pdf) that record the time and date of individual tagged animals (within >500 m of an individual monitor) will be deployed in arrays to track animal movements. Individual acoustic monitors will be secured using fixed 200lb weights, sub surface floats and an acoustic release mechanism that can be triggered the following year to retrieve monitors for data download. Instruments will also record water temperature, salinity, and depth.
Longlines	20	1.5 km long	Bottom set longlines will be used to assess the distribution and relative abundance of commercially sized Greenland Halibut in inshore waters near Clyde River and Qikiqtarjuaq, Nunavut; fishing will not occur in Cumberland Sound. Longlines will be set for up to 12 hours; hooks will be baited with squid and the lines will be set on the ocean bottom.

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Oil and lubricant products	hazardous	1	3000	3000	Gallons	2-20 gallons of oil and lubricant products are used on a daily basis for a vessel in the 25 meter size range.

Diesel	fuel	1	130000	130000	Gallons	On average a small research vessel fuel consumption is about 15-30 gallons per hour (this is dependent upon factors such as vessel size, speed and type of work occurring).
Silicone grease	hazardous	1	0.15	0.15	Liters	Waterproof seals on moored instruments (VEMCO monitors, acoustic releases, conductivity-temperature-depth instruments)

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
Scientific/International Polar Year Research	Greywater	246 liters per day per person	Greywater will be released back into the marine environment in designated areas/zones where this is allowed. All marine transport laws will be followed. Greywater will include cleaning and rinsing of the vessel deck after sampling procedures are completed.	No additional treatment procedures are identified.
Scientific/International Polar Year Research	Hazardous	1-2% of heavy fuel oil used ends up as sludge	All oil and lubricant products used will be stored safely in appropriate containers and disposed of when the vessel reaches the home port. Disposal at port will follow provincial and federal guidelines for safe disposal.	No additional treatment procedures are identified.
Scientific/International Polar Year Research	Non-Combustible wastes	1.4-2.3 Kg per person per day	All non-combustible waste will be stored on board the vessel and disposed when the vessel reaches a port. Disposal at the port will follow provincial/territorial and federal guidelines for safe disposal.	No additional treatment procedures are identified.
Scientific/International Polar Year Research	Overburden (organic soil, waste material, tailings)	80-200 kg per long line set	Overburden (organic waste products from longlining) will be released back into the marine environment in designated areas/zones where this is allowed. All marine transport laws will be followed.	No additional treatment procedures are identified.

Scientific/International Polar Year Research	Sewage (human waste)	30 liter per person per day	Sewage will be stored in a holding tank and released into the marine environment in designed areas where this is allowed. All marine transport laws will be followed regarding waste and dumping of waste.	No additional treatment procedures are identified.
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Environmental Impacts:

Environmental impacts are expected to be minor and reversible. Project activities are focused on releasing captured fish alive and in good condition, and minimizing impacts on habitats to minimize effects on fish movement and habitat selection behaviours.

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

Research will occur in marine waters outside any concentrations of sea ice. Marine areas are used by other vessels for transportation, commercial fishing (outside Conservation areas, where longlining will take place) tourism, military purposes.

Description of Existing Environment: Biological Environment

Marine biological community is considered healthy; commercial fisheries for Greenland Halibut and Northern and Striped Shrimp being sustainably managed.

Description of Existing Environment: Socio-economic Environment

Cumberland Sound is a traditional hunting and fishing area for the community of Pangnirtung. Project activities, area and duration were co-developed with the Pangnirtung Hunters and Trappers Organization board.

Miscellaneous Project Information

This application was edited to respond to questions provided by email on 2025-08-27:

- Clarify if the scientific crew will be staying in accommodations in Iqaluit before and after the research activities.
- oI have checked the "community" box under accommodations, checked the "Land" transportation box too and add a note there about taxis between airport, hotel, and ship.
- Provide a list of equipment used for these research activities. Only the research vessel was listed in the equipment list.
- oInternal electronic tags, fish tracking moorings, and longlines were added under "Equipment" on the "Material Use" page.
- Provide a list of chemicals that would be used in the research activities.
- oSilicone grease used to coat o-rings in mooring components was added under "Hazardous Materials and Chemicals Use" un the "Materials Use" page.
- oAs per the approved Animal Use Protocol for this research, anesthetics and analgesics will not be used as the animal handling time will be minimal with external tagging that likely causes only acute, brief discomfort to the animal. Therefore, no additional chemicals added.
- Has the RV Kiviug been included in other research activities in Nunavut? That is, has it been previously assessed by the NIRB?
- oThe FV Kiviug has previously been used for research activities in Nunavut conducted by Arctic Fisheries Alliance and the Marine Institute, but I do not know if the ship was previously assessed by NIRB.

Identification of Impacts and Proposed Mitigation Measures

No significant impacts anticipated; no mitigation measures developed.

Cumulative Effects

Significant cumulative effects with other human activities or climate change are not anticipated. Project is small in scale, occurs away from other human activities, and is focused on releasing caught fish alive and healthy, and minimizing impacts on marine habitats to obtain realistic data on fish movement and habitat use.

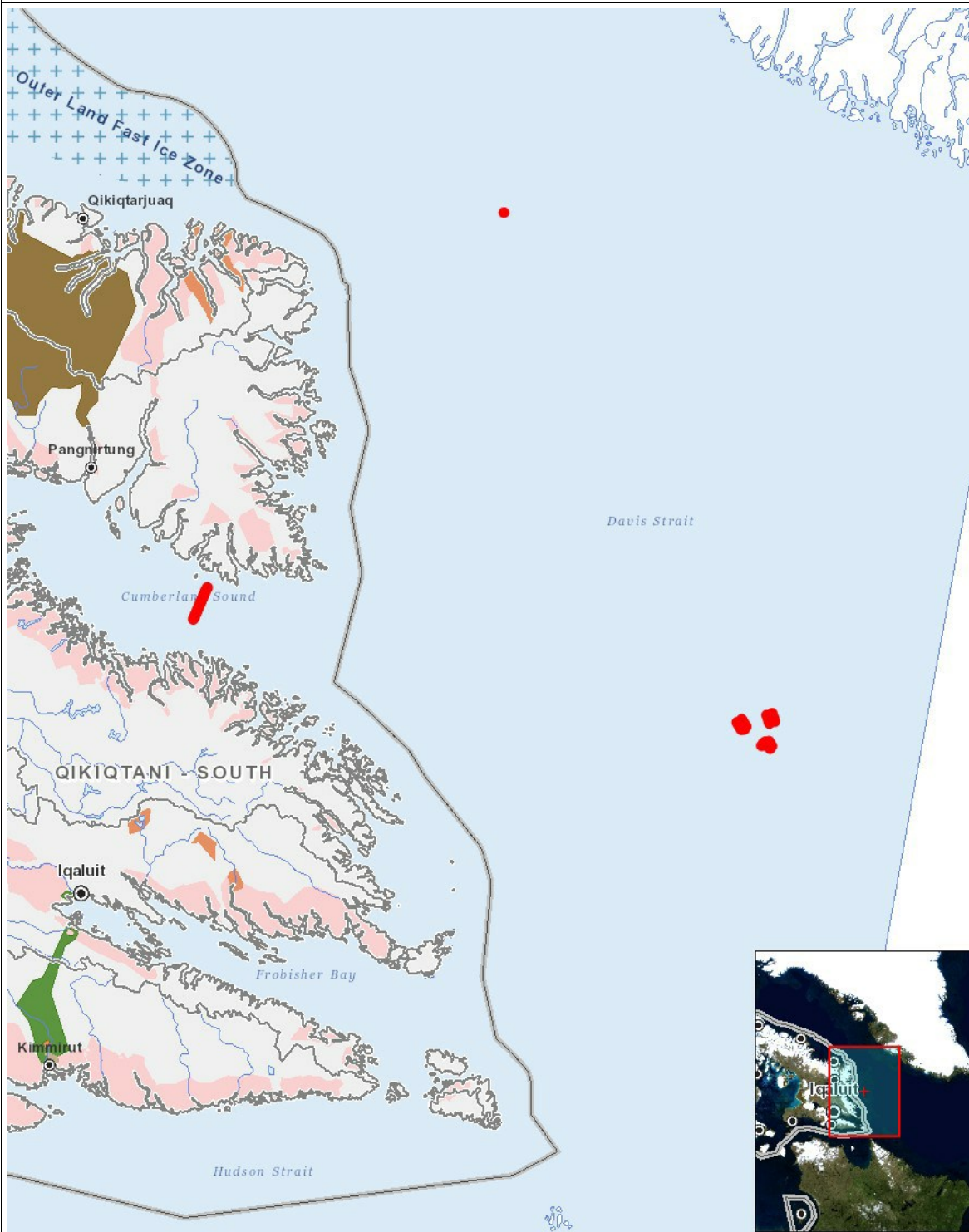
Impacts

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																									
Scientific/International Polar Year Research		-	-	-	-	M	-	-	-	-	-	-	M		-	-	-	M	M		-	P	-	-	-
Decommissioning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Project Location



List of Project Geometries

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