Project Dashboard

The Arctic Observing Network: Capturing and Understanding Arctic Change with Renewed Observations at the Davis Strait Gateway (149408)

Proposal Status: Conformity Determination Issued

Project Overview

Type of application: **New**

Proponent name:	Jason Gobat
Company:	University of Washington

Schedule:

Start Date:	2021-08-01
End Date:	2024-10-31
Operation Type:	Annual

Project Description:

The overall project implements an integrated observational program of oceanographic measurements across Davis Strait, from the Baffin Island slope to the West Greeenland shelf, matching on-going collections at Bering Strait, Utqiagvik, Alaska, and Fram Strait to extend the time series of concurrent measurements across the major Arctic Gateways. The extended timeseries will be combined with numerical modeling to analyze several important science questions. The system relies on a combination of subsurface ocean moorings and biennial ship-based sampling. The full suite of observations represents an integrated approach that will provide context for the measurements and enable us to understand the dynamics driving observed variability in climate and ecosystems. Principal investigators and collaborators include scientists from University of Washington (Seattle, USA), Bedford Institute of Oceanography (Halifax, Canada), University of Colorado (Boulder, USA), University of Alberta (Alberta, Canada), Greenland Institute for Natural Resources (Nuuk, Greenland) and Danish Technical University (Copenhagen, Denmark). The program will involve field operations (ship visits) in the fall (September or October) every two years, beginning in 2020. The component in Nunavut consists of two moorings deployed offshore Cape Dyer on the Baffin slope, at 100m and 150m depths. These moorings will collect data for two years, be serviced in 2022 and then collect data for another two years. During each service visit, a CTD station will be conducted to collect high resolution profiles of salinity and temperature and water samples for later chemical analysis. In addition to the main section across the strait, CTD stations are organized into lines north and south to observe variability and transformation along the strait. Along the line to the north, eight stations are in Nunavut. To the south, one station is in Nunavut. No landings or port calls will be made in Nunavut. Any emergency services will be routed via Greenland.

Personnel:

Persons:	25
Days:	2

Project Map

List of all project geometries:

ID	Geometry	Location Name
6738	point	BI2 mooring location and CTD station
6740	point	SML01 CTD station
6743	point	NL01 CTD station
6744	point	NL02 CTD station
6745	point	NL03 CTD station
6746	point	NL04 CTD station

6747	point	NL05 CTD station
6748	point	NL06 CTD station
6749	point	NL07 CTD station
6750	point	NL08 CTD station
6754	point	BI4 mooring location and CTD station

Planning Regions:
Qikiqtani
Affected Areas and Land Types
Settlement Area

Project Land Use and Authorizations

Project Land Use
Marine-Based Activities
Scientific Research
Licensing Agencies
NRI: Scientific Research Licence
Other Licensing Requirements
No data found.

Material Use

Equipment

Type	Quantity	Size	Use
mooring	2	50-100m	oceanographic moorings will be deployed at two locations off Cape Dyer, measuring salinity, temperature and ocean currents.
research ship	1	15 m to 90 m	Project will involve visits to these marine sites by a scientific research vessel in 2021, 2022, and 2024. In 2021, the vessel with be R/V Sanna, from Greenland. The vessels for 2022 and 2024 have not yet been determined.

Fuel Use

Type	Container(s)	Capacity	UOM	Use
No records found.				

Hazardous Material and Chemical Use

Type	Container(s)	Capacity	UOM	Use
No records found.				

Water Consumption

Daily Amount (m^3)	Retrieval Method	Retrieval Location
0		

Waste and Impacts

Environmental Impacts
No waste will be discharged or disposed in Nunavut waters.
Waste Management

Waste Type	Quantity Generated	Treatement Method	Disposal Method
No data found.			