

Barrow Strait Ocean Observation Program
Annual Summary Report for 2023 to the Nunavut Research Institute
License # 02 044 23R-M

Licensee: Bedford Institute of Oceanography

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Fisheries and Oceans Canada has been conducting a science-based field program in Barrow Strait since 1998. The focus for the last few field seasons has been to:

- 1) recover and re-deploy a moored monitoring array across Barrow Strait;
- 2) recover and re-deploy a real-time ocean observatory at Gascoyne Inlet; and
- 3) perform over-the-side measurements of water properties across Barrow Strait.

*Indicates those who were part of the science team in the field.

During the 2022 mission, a team of scientists from Fisheries and Oceans Canada at the Bedford Institute of Oceanography and Dalhousie University completed a ship-based field program in Barrow Strait (Tallurutiup Imanga NMCA) aboard the CCGS Pierre Radisson, deploying a total of 9 moorings, with a planned recovery in August 2024. One of those mooring contained specialized instrumentation to measure the bio-geochemical properties in the water column and was designed to last just one year, so two DFO scientists returned in 2023 to recover that mooring.

We also performed general maintenance of our “shore station” that is located at DRDC’s Camp in Gascoyne Inlet. This shore station is an essential component of DFO’s Barrow Strait Real-Time Observatory which sends some of the oceanographic data back to the Bedford Institute of Oceanography in near real-time (nominally every 2-hours). Unfortunately this system failed in October of 2022 so part of the 2023 mission was to assess the cause of failure and attempt to fix it.

Although the 2023 mission was minor relative to other years, it was a successful mission in that we accomplished our goals. We are looking forward to another successful full field program in August 2024, including recovery and re-deployment the rest of the mooring array, recovery and re-deployment of the BSRTTO, and if time permits, a complete CTD survey -- measurements of conductivity (salinity), temperature and depth -- and water sampling at 17 station across Barrow Strait.