NUNAVUT IMPACT REVIEW BOARD
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Demande de la CNER faisant l'objet d'un examen préalable #125154

Kitikmeot Region Marine Science Study

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DÉTAILS

Description non technique de la proposition de projet

Anglais: Project Description: Kitikmeot Region Marine Science Study. The Kitikmeot Region Marine Science Study (KRMSS) is a Fisheries and Oceans Canada led project to gather baseline oceanographic data and evaluate marine ecosystem structure in the Kitikmeot Region between Dolphin and Union Strait in the west and Larsen Sound in the north and east. Scientific collaborators on the project include scientists from Canada, USA and Norway under DFO leadership. Logistically the project is supported by DFO, Polar Knowledge Canada and the Arctic Research Foundation. To collect oceanographic samples and data, and to recover/deploy subsurface oceanographic moorings we use the Arctic Research Foundation's, Transport Canada certified, 62ft long, RV Martin Bergmann during the months of August and September from its home port of Cambridge Bay. The maximum number of people involved at any one time is 12-13 – the maximum capacity of the RV Martin Bergmann and comprises 6 crew and up to 7 scientists. Occasionally a float plane will meet the ship to change crew and scientists, but resupply and crew/scientist change of the RV Martin Bergmann is typically in Cambridge Bay. Travel to and from Cambridge Bay is via Canadian North or First Air and accommodation is with local hotels and the Canadian High Arctic Research Station. To make our measurements we use: • Electronic sensors (for temperature, salinity, dissolved oxygen, chlorophyll fluorescence, turbidity, underwater light, underwater video, and dissolved carbon dioxide) • Very low power acoustics (for water velocity and backscatter from zooplankton and fish). These acoustics are similar in power to the depth sounders normally used on boats and ships. • Hydrophones (to listen for marine mammals and ship noise) • Water samples for ocean geochemistry, primary production, dissolved nutrients, salinity, dissolved inorganic carbon, dissolved organic matter and stable isotopes. • Small Bottom grab and box core to collect samples of benthic organisms and seafloor mud. • Fine mesh net to collect zooplankton samples. • Small GPS surface drifters to measure surface currents. • A 16ft skiff, usually launched from the RV Martin Bergmann, to obtain water samples from various river mouths for geochemical analysis of the river flowing into the ocean. (We have obtained a permit from the CWS for access to the Ellis River in the Queen Maud Gulf Migratory Bird Sanctuary.) • Moorings: Some of the electronic sensors and acoustics are mounted on temporary subsurface moorings that reach from the seafloor to 15m below the surface. For 2017, we plan to be working aboard the RV Martin Bergmann from 10 August to 20 September to investigate the broad-scale oceanography of the region and evaluate the importance of tidal mixing in narrow straits to the biological productivity of the region. Broad scale oceanography will be investigated in: Dease Strait, Bathurst Inlet, Queen Maud Gulf and Chantry Inlet/Rasmussen Basin/St Roche Basin. Tidal straits to be investigated are: around Finlayson Islands (including deployment of temporary oceanographic subsurface moorings), narrows in Bathurst Inlet, Simpson Strait, Rae Strait, James Ross Strait and Victoria Strait. In addition we plan to sample the flow of rivers into the Kitikmeot Sea including the large rivers: Hood River, Burnside River, Western River, Ellice River, Back River. Our planned route, proposed sampling locations and mooring locations are shown below. Because our project covers

the entire Kitikmeot Region it will work close to all communities (Cambridge Bay, Gjoa Haven, Bathurst Inlet, Umingmaktok, Taloyoak, Kugluktuk) and aims to develop marine monitoring plans in collaboration with communities and the ongoing wintertime Canadian Rangers Ocean Watch. The oceanographic sampling and data collection of KRMSS is very typical of oceanography programs and similar to that conducted by C.J. Mundy (U. Manitoba; Arctic-ICE project) that also uses the RV Martin Bergmann; the Canadian Rangers Ocean Watch project (CROW; J. Eert, B Williams, DFO), and ArcticNet (which conducts its research from the CCGS Amundsen). KMRSS was conducted under CJ Mundy's NRI license in 2016 (NRI license number 04 018 16R-M-Amended), but we feel that the board geographic scope and long-term aims of KRMSS warrant obtaining a separate license. KRMSS is currently funded for the 2017 and 2018 field seasons, though we aim to continue and ultimately develop an oceanographic monitoring plan for the region to assess the implications of climate change to the marine ecosystem in the Kitikmeot.

Français: I think the project description is not required in French for the Kitikmeot Region. Please let me know if this is not the case.

Inuktitut: ᐱᓕᕆᐊᕐᓱᒍᑦ ᓱᓇᐅᓂᖏᑦ: ᕿᑎᕐᒥᐅᑦ ᓄᓇᖓᓂ ᑕᕆᐅᒥ ᓱᓇᒃᑯᑖᓂᒃ ᖃᐅᔨᓴᕐᓂᖅ. ᕿᑎᕐᒥᐅᑦ ᓄᓇᖓᓂ ᑕᕆᐅᑉ ᓱᓇᒃᑯᑖᓂᒃ ᖃᐅᔨᓴᕐᓂᖅ (KRMSS) ᐃᒪᓕᕆᔩᒃᑯᑦ ᑲᓇᑕᒥ ᐊᐅᓚᑦᑕᖓ ᐱᓕᕆᐊᕐᓯᖅ ᑲᑎᖅᓱᐃᓗᑎᒃ ᑕᕆᐅᒥ-ᖃᓄᐃᓐᓂᖓᓐᓂᒃ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ ᐊᒻᒪᓗ ᖃᐅᔨᓴᕐᓗᓂ ᑕᕆᐅᑉ ᐆᒪᔪᖏᑦ ᖃᓄᐃᓐᓂᖓᓐᓂᒃ ᕿᑎᕐᒥᐅᑦ ᓄᓇᖓᓂ ᑖᐱᓐ ᐊᒻᒪᓗ ᔪᓂᐊᓐ ᐃᑭᖅᑲᖅᓯᒪᓂ ᐱᖅᑳᓇᖅᓯᒪᓂ ᐊᒻᒪᓗ ᓛᓴᓐ ᓴᐅᓐ ᑐᓄᐱᐊᓂ ᐊᒻᒪᓗ ᑲᖏᐊᓂ. ᖃᐅᔨᓴᖅᑏᑦ ᐃᑲᔪᖅᑏᑦ ᐱᓕᕆᐊᕐᓱᒍᑦ ᐃᓚᖃᖅᑐᑦ ᖃᐅᔨᓴᖅᑎᓂᑦ ᑲᓇᑕᒥ, ᐊᒥᐊᓕᑲᓂᑦ ᐊᒻᒪᓗ ᓄᐊᕚᒥᑦ DFO ᐊᐅᓚᑦᑕᖅᑐᖓᓂᑦ. ᐃᓱᒪᒥᓗᒍ ᐱᓕᕆᐊᕐᓱᖅ ᐃᑲᔪᖅᑕᐅᓯᒪᔪᑦ DFO-ᑯᓐᓂᑦ, ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᔨᒪᔩᖅᑦ ᑲᓇᑕᒥ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᓐᓂᑦ. ᑲᑎᖅᓱᐃᓗᓂ ᑕᕆᐅᑉ ᖃᓄᐃᓐᓂᖓᓐᓂᒃ ᖃᐅᔨᓴᕈᑎᒃᓴᓂᒃ ᐊᒻᒪᓗ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ, ᐊᒻᒪᓗ ᓇᓂᓯᓂᖅ/ ᐊᑐᕐᓂᖅ ᑕᕆᐅᑉ ᕿᒃᑲᓂ ᖃᓄᐃᓐᓂᖓᓐᓂᒃ ᐊᒃᑐᓈᒃᑯᑦ ᐊᑐᕆᓐᖑᔭᕗᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᔨᓴᖅᑎᖅᑦ ᑑᒪᓰ ᐱᒃᑯᓂᑦ, ᐃᖅᑭᓕᕆᔩᒃᑯᑦ ᑲᓇᑕᒥ ᐊᖅᑭᖅᑕᐅᓯᒪᔪᒃᑯᑦ 62 ft ᑕᑭᑎᒋᔪᖅ, ᑎᓴᒪᓕᒃ ᒫᕐᑎᓐ ᐹᒪᓐ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᐅᒡᒍᓯᕐᒥ ᐊᒻᒪᓗ ᓯᑎᐱᕆᒥ ᐃᖃᓗᒃᑑᑎᐊᒥᑦ. ᐊᒥᓲᓂᖅᐹᖅᒍᓂᐊᖅᑐᑦ ᐃᓄᐃᑦ ᐃᓕᓴᐅᓂᐊᖅᑐᑦ 12-13 ᐊᒥᓲᓂᖅᐹᑦ ᐃᓂᖃᕐᓇᖅᓯᒪᓄᑦ ᒫᕐᑎᓐ ᐹᒪᓐ ᐊᒻᒪᓗ ᐊᕐᐱᓂᓕᓐᓂᒃ ᐃᖅᑲᐃᔭᖅᑎᖃᕐᓗᑎᒃ ᐊᒻᒪᓗ ᐊᕐᐱᓂᓖᑦ ᒪᕐᕉᓐᓂᒃ ᖃᐅᔨᓴᖅᑎᓂᒃ. ᐃᓛᓐᓂᒃᑯᑦ ᑎᒥᕐᔫᖅᑲᖅᑕᕐᐊᖅᑐᖅ ᐃᒪᕐᒥᐅᑕᒥᒃ ᑲᑎᖅᑲᖅᑕᕐᓗᓂ ᐅᒥᐊᕐᔪᐊᒧᑦ ᑭᐳᕆᐊᕐᓗᒥᑦ ᐃᖅᑲᐃᔭᖅᑎᐅᔪᓂᒃ ᐊᒻᒪᓗ ᖃᐅᔨᓴᖅᑎᓂᒃ ᑭᓯᐊᓂ ᐱᕐᑯᑎᓂᒃ ᐊᒻᒪᓗ ᐃᖅᑲᐃᔭᖅᑏᑦ/ ᖃᐅᔨᓴᖅᑏᑦ ᑭᐳᖅᑲᖅᑐᑦ ᒫᕐᑎᓐ ᐹᒪᓐ ᐅᒥᐊᖅᑯᓂ ᐃᖅᑲᐃᔪᑦᑐᓐᑎᐊᕆᑦᑐᖅ. ᐊᐅᓪᓛᕐᓂᖅ ᐊᒻᒪᓗ ᐅᑎᖅᑕᕐᓂᖅ ᐃᖅᑲᐅᒃᑑᑎᐊᒍᑦ ᑲᓂᑎᐊᓐ ᓄᐊᑦ ᐅᕙᑦᓘᓐᓃᑦ ᔫᓯ ᐃᐊᒃᑯᑦ ᑎᒥᕐᔫᖓᒍᑦ ᐊᒻᒪᓗ ᓯᓂᒃᑕᕝᕕᑦ ᐃᖃᓗᒃᑑᑦᑎᐊᒥ ᐊᒻᒪᓗ ᑲᓇᑕᒥ ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᔨᓴᕝᕕᓕᕆᕝᕕᒃ. ᖃᐅᔨᓴᖅᑕᐅᕙᒃᓂᕐᒧᑦ ᐊᑐᕐᓗᑎᒃ ᐅᑯᐊ: • ᓴᕕᒐᐅᔭᖅᑐᑦ ᖃᐅᔨᓴᕈᑏᑦ (ᐆᓇᕐᓂᖓ, ᑕᕆᐅᖅᑯᕐᓂᖓ, ᐊᓂᖅᓵᕈᑕᐅᓂᖓ, ᖁᐊᔭᕐᓇᖅᑐᑦ ᐃᑯᒪᓂᖓ, ᐃᓱᖅᑐᑦ, ᐃᒪᐅᑉ ᐊᑖᓂ ᐃᑯᒪᓂᖓ, ᐃᒪᐅᑉ ᐊᑖᓂ ᐊᔾᔨᓕᐅᕈᑎ, ᐊᒻᒪᓗ ᐳᔪᕐᓗᖅᑦ) • ᓴᖅᑭᓗᐊᖅᑦᑐᒃᑯᑦ ᑐᓵᕈᑎᒃᑯᑦ (ᐃᒪᐅᑉ ᐊᐅᓚᓂᖓ ᐊᒻᒪᓗ ᐅᑎᖅᑕᕐᓂᖓ ᐃᖃᓗᐃᑦ ᓂᕿᖅᑭᓐᓂᒃ ᐊᒻᒪᓗ ᐃᖃᓗᓐᓂᑦ). ᑕᒪᒃᑯᐊ ᑐᓴᒍᑏᑦ ᐊᔾᔨᖃᓪᓚᒃᑐᑦ ᐃᑯᒪᓕᕆᓂᑦ ᐃᑎᓂᖓᓄᑦ ᑐᓵᒍᑎᓂᒃ ᐊᑐᖅᑕᐅᓲᖑᔪᑦ ᐅᒥᐊᒧᑦ ᐊᒻᒪᓗ ᐅᒥᐊᖅᔭᐊᓄᑦ. • ᐃᒪᒧᑦ ᐅᖄᓚᐅᑎ (ᑐᓵᒍᑕᐅᓂ ᑕᓇᖅᑎᒥᑕᓄᑦ ᐆᒪᔪᓂᒃ ᐊᒻᒪᓗ ᐅᒥᐊᖅᔭᐊᓂᒃ ᑐᓴᓇᖅᑐᓂᒃ) • ᐃᒪᒧᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖅᑐᓂᒃ ᑕᓇᐅᒧᑦ ᐃᓚᒃᓴᐅᔪᓂᒃ, ᐆᒪᒍᑕᐅᕙᓪᓕᐊᔪᓂᒃ, ᐆᒪᒍᑕᐅᕙᒃᑐᑦ, ᑕᓇᐅᖅᑯᕐᓂᖓ, ᐸᐅᖅ, ᐱᕿᖅᓯᐊᖅᒍᔪᑦ ᐊᒻᒪᓗ ᓈᒪᒃᑐᓂᒃ ᓈᓴᐅᑎᖅᑲᖅᑐᓂᒃ ᐃᓚᒃᓴᐅᔪᓂᒃ. • ᒥᑭᔪᓂᒃ ᓇᑎᐊᓂᓪᓚᖅᑐᓂᒃ ᐊᒻᒪᓗ ᕿᔪᖅᑎᒥᒃ ᑲᑎᖅᓯᒪᓗᑎᒃ ᖃᐅᔨᓴᖅᑎᒃᓴᓂᒃ ᓇᑎᒥᓪᓚᖅᑐᓂᒃ ᐅᒪᔪᐊᕿᓯᓂᒃ ᐊᒻᒪᓗ ᑕᓇᐅᑉ ᓇᑎᐊᑕ ᒪᕐᕿᓂᒃ. • ᒪᑦᑎᑕᐅᑎᓂᒃ ᑲᑎᖅᓯᒪᓗᓂ ᐃᖃᓗᓐᓄᑦ ᓂᕿᕆᔭᐅᕙᒃᑐᓂᒃ ᖃᐅᔨᓴᖅᑎᒃᓴᓂᒃ. • ᑭᐱᔪᒥᒃ ᓇᓗᓇᐃᒃᑯᑕᒥ ᖁᕝᕙᓗᒍᑦ ᐃᒪᐅᑉ ᖃᐅᔨᓴᖅᓱᕆᑦ ᒪᓕᖅᓂᖅᑦ ᐃᒪᐅᑉ. • ᑭᐱᔪᖅ 16 ft ᐅᒥᐊᖅ, ᐲᖅᑕᐅᓲᖅ ᒪᑎᓐ ᐹᒪᓐ ᐅᒥᐊᖅᒐᓂᑦ, ᑲᑎᖅᓱᐃᓗᑎᒃ ᐃᒪᓂᒃ ᖃᐅᔨᓴᖅᑎᒃᓴᓂᒃ ᐊᔾᔨᒌᙱᑦᑐᓂᒃ ᑯᖅᓂᙱᖅᑐᓂᒃ ᐃᓚᒃᓴᓄᑦ ᖃᐅᔨᓴᖅᑕᐅᓗᑎᒃ ᑰᒃᑲᓪᓚᐅᔭᓄᑦ ᑕᓇᐅᒧᑦ. (ᐱᔾᔪᑎᖃᕐᓇᐅᑎᒥᒃ ᐊᖅᑭᖅᑕᐅᓯᒪᔪᒧᑦ CWS-ᑯᓐᓂᑦ ᐃᑳᕐᓇᖅᓗᒍ ᐃᓕᑦ ᑰᖓ ᑯᐃᓐ ᒪᐅᑦ ᑎᖅᒥᐊᓂᑦ ᒪᓐᓂᖅᒥᓐᓂᓪᓗ ᐱᕕᐅᑦᑕᐃᓕᒪᕕᐊᓂ). • ᐊᒃᑐᓈᑦ: ᐃᓕᖅᑭᑦ ᓴᕕᒐᐅᔭᖅᑐᒃᑯᑦ ᖃᐅᔨᓴᕈᑏᑦ ᐊᒻᒪᓗ ᑐᓴᒍᑏᑦ ᐃᓕᑕᐅᓯᒪᔪᑦ ᐊᑯᓂᐅᙱᖅᑐᒃᑯᑦ ᖁᖓᒍᑦ ᐊᒃᑐᓈᓂᒃ 15 ᒥᑖᓂᒃ ᖁᖓᓂᑦ ᐃᒪᐅᑉ ᐊᑖᓄᑦ. 2017-ᒥ, ᐸᕐᓇᒃᓯᒪᔪᒍᑦ ᐱᓕᕆᓗᑕ ᐅᒥᐊᒥ ᒫᕐᑎᓐ ᐹᕐᒪᓐ 10 ᐅᒡᒍᓯᕐᒥᑦ 20 ᑎᓯᐱᕆᒧᑦ ᖃᐅᔨᓴᕐᓗᑕ ᖃᓄᐃᓐᓂᖓᓐᓄᑦ ᑕᕆᐅᑉ ᓄᓇᒥᔭᐅᔪᒥ ᐊᒻᒪᓗ ᖃᐅᔨᓴᕐᓗᑕ ᐱᓪᒪᕆᐅᓂᖅᑦ ᐅᓕᖅᑲᖅᓯᓂᖅᑦ ᑲᑎᖅᑲᑎᖅᑲᖅᑐᓂᒃ ᐃᑭᖅᑲᖅᓄᑦ ᐱᕙᓪᓕᐊᓂᖅᓴᓂᙳᖅᑐᒥᑦ ᓄᓇᒥ. ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖅᑐᑦ ᑕᕆᐅᑉ ᖃᓄᐃᓐᓂᖓᓐᓄᑦ: ᑏᔅ ᐃᑭᖅᑲᖅ, ᑐᒃᑐᕐᔨᐅᕐᕕᒃ, ᑯᐃᓐ ᒦᑦ ᐊᒻᒪᓗ ᐅᒃᑯᓯᒃᓴᓕᖓ ᐃᓐᓇᖅᓴᖁᔭᖅ/ᕿᔅᒍᓯᓐ ᓴᓂᖃᔭᕐᓚ/ᓲᓐᑦ ᐹᔅ ᐃᑭᖅᑲᖅ. ᐅᓕᖅᑲᖅᑐᑦ ᐃᑭᖅᑲᐃᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖅᑐᑦ: ᕕᓐᓚᐃᓴᓐ ᕿᑭᖅᑕᖅᑦ (ᐃᓕᕆᓗᒍ ᐃᓕᓯᓂᖅ ᐊᑯᓂᐅᙱᖅᑐᒃᑯᑦ ᖃᐅᔨᓴᖅᑎᒃᓴᓂᒃ ᐊᒃᑐᓈᓂᒃ) ᐃᑭᖅᑲᐃᑦ ᑐᒃᑐᕐᔨᐅᕐᕕᒃ, ᓯᒻᓴᓐ ᐃᑭᖅᑲᖅ, ᓇᐃ ᐃᑭᖅᑲᖅ, ᔦᒥᔅ ᓂᐅᔅ ᐃᑭᖅᑲᖅ ᐊᒻᒪᓗ ᕕᒃᑐᐊᓇᔾ ᐃᑭᖅᑲᖅᓚᔾ. ᐃᓕᕆᐊᓗᒍ ᐸᕐᓇᒃᓯᒪᔪᒍᑦ ᖃᐅᔨᓴᖅᑎᒃᓴᓂᒃ ᑲᑎᖅᓱᐃᓗᑕ ᑰᒥᙳᖅᑐᓂᒃ ᕿᑎᕐᒥᐅᑦ ᑕᓄᖅᓗᑦ ᐃᓕᕆᓗᒍ ᐊᖅᑭᖅ ᑰᑦ: ᓇᓴᖅ ᑰᖅᓗ, ᐹᓐᓴᐃᑦ ᑰᖅᓗ, ᐱᖅᑳᓇᖅ ᑰᖅᓗ, ᐃᓕᑦ ᑰᖅᓗ, ᓴᓐᓂᖅᓚᕉ ᑰᖅᓗ. ᐸᕐᓇᐅᑎᔾ ᐊᖅᑯᑎᖅᑦ, ᑐᒃᓯᖅᑕᐅᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖅᑐᑦ ᑲᑎᖅᓯᖅᑕᐅᓯᒪᔪᓂᑦ ᓇᔪᕐᕕᖅᑦ ᐊᒻᒪᓗ ᐊᒃᑐᓈᖅᑐᑦ ᓇᔪᕐᕕᖅᑦ ᑕᒃᓴᐅᔪᑦ ᐊᒃᑐᓈᖅᑐᑦ. ᐱᔾᔪᑎᒥᒍᑦ ᐱᓕᕆᐊᒃᓴᖅᑯᕐᓂᖅᓴᑦ ᑭᑎᕐᒥᐅᓕᒫᑦ ᓄᓇᖅᓗᒃ ᐃᖅᑲᐃᔭᖅᑎᖃᖅᑲᖅᑐᓂᐊᖅᑐᑦ ᖃᓂᒋᔭᐅᔪᓂᒃ ᓄᓇᒋᔭᐅᔪᓂᒃ (ᐃᖃᓗᒃᑑᑎᐊᖅ, ᐅᖅᓱᖅᑑᖅ, ᑐᒃᑐᔭᐅᕐᕕᒃ, ᐅᒥᖓᒃᑑᖅ, ᑕᓗᕐᔪᐊᖅ, ᖁᕐᓗᖅᑐᖅ) ᐊᒻᒪᓗ ᑐᕌᖅᓯᒪᔪᑦ ᐱᕙᓪᓕᐊᓗᓂ ᑕᓄᒥ ᖃᐅᔨᓴᖅᓯᒪᔪᑦ ᐸᕐᓇᐅᑎᓂᒃ ᐃᑲᔪᖅᑎᕆᓗᓂ ᓄᓇᕆᔭᐅᔪᓂᒃ ᐊᒻᒪᓗ ᑲᔪᓯᔪᒃᑯᑦ ᐅᑭᐅᒃᑯᑦ ᑲᓇᑕᒥ ᐅᓇᑕᖅᑐᒃᓴᒃᑯᑦ ᑕᓄᒥ ᖃᐅᔨᓴᖅᑎᖅᑦ. ᑕᓄᒥ ᖃᓄᐃᓐᓂᖅᑲᖅᑐᓂᒃ ᖃᐅᔨᓴᖅᑎᒃᓴᓂᒃ ᐊᒻᒪᓗ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ ᑲᑎᖅᓱᐃᓂᖅ KRMSS ᐊᔾᔨᖃᓪᓚᒃᑐᑦ ᑕᓄᒥᒃ ᖃᐅᔨᓴᖅᓂᖅᑕᖅ ᐱᓕᕆᐊᖅᓴᐅᔪᑦ ᐊᒻᒪᓗ ᐊᔾᔨᖃᓪᓚᒃᑐᖅ ᐱᓕᕆᐊᓇᔭᐅᓚᐅᖅᑐᒧᑦ C.J. ᒪᓐᑎ (ᓯᓚᑦᑐᖅᓴᕐᕕᒃ ᒫᓂᑐᐸ; ᐅᑭᐅᖅᑕᖅᑐᒥ-ICE ᐱᓕᕆᐊᒃᓴᖅᑕᐅᓂᒃ) ᐊᑐᕐᖑᒪᒥᖅ ᒫᕐᑎᓐ ᐹᒪᓐ ᐅᒥᐊᖅᑕᐅᓂᒃ, ᑲᓇᑕᒥ ᐅᓇᑕᖅᑐᒃᓴᐃᑦ ᑕᓄᒥ ᖃᐅᔨᓴᖅᑏᑦ (CROW; J. ᐆᑦ, B ᕕᓕᐊᒻᔅ DFO) ᐊᒻᒪᓗ ArticNet (ᐱᓕᕆᐊᒃᓴᖅᒥᖅ ᖃᐅᔨᓴᕐᓂᖅ CCGS ᐊᒪᓐᓴᓐᑯᓐᓂᑦ). KMRSS-ᑯᑦ ᐱᓕᕆᐊᒃᓴᖅ ᐱᓕᕆᐊᓇᔭᐅᓚᐅᖅᑐᒧᑦ CJ ᒪᓐᑎᒃᑯᓐᓂᑦ ᓄᓇᕗᒻᒥ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᓐᓂᑦ ᓚᐃᓴᓐᓯᖓᓄᑦ 2016-ᖑᑎᓪᓗᒍ (ᓚᐃᓴ 04 018 16R-M-Amended), ᑭᓯᐊᓂ ᐊᖅᑭᓂᖅᑕᓄᑦ ᓄᓇᓕᓐᓂᕐᒧᑦ ᐊᑯᓂᐅᓂᖅᑕᓄᑦ ᑐᕌᖅᓯᒪᔪᑦ KRMSS ᐱᔭᕇᕐᑎᖅᑕᓄᑦ ᐊᓪᓚᒥᒃ ᓚᐃᓴᒃᓯᓂᕐᒧᑦ. KRMSS-ᑯᑦ ᐃᑲᔪᖅᑕᐅᓯᒪᔪᑦ ᒫᓐᓇᐅᔪᒃᑯᑦ ᑮᓇᐅᔭᓄᑦ 2017 ᐊᒻᒪᓗ 2018-ᒧᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐅᑭᐅᒧᑦ, ᑭᓯᐊᓂ ᑐᕌᖅᓯᒪᔪᒍᑦ ᑲᔪᓯᓗᑕ ᐊᒻᒪᓗ ᐊᖅᑭᔪᒃᑯᑦ ᐱᕙᓪᓕᐊᓗᑕ ᑕᓄᒥ ᖃᓄᐃᓐᓂᖅᑕᓄᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᓂᒃ ᓄᓇᒥᔭᐅᔪᒧᑦ ᐱᔭᕇᕐᓗᒥᑦ ᐱᔾᔪᑕᐅᓂᖅᑦ ᐊᓯᙳᖅᐸᓪᓕᐊᓂᖅᑕᓄᑦ ᓯᓚᐅᑉ ᑕᓄᒧᑦ ᐆᒪᔪᖅᑕᓄᑦ ᕿᑎᕐᒥᐅᓂ.

Inuinnaqtun: Havaariyangit Tukiliutaa: Qitirmiut Avikturnia Taryurmiuttat Qauyihaqtuqtut Ilittuqhiiyut. Uvani Qitirmiut Avikturnia Taryurmiuttat Qauyihaqtuqtut Ilittuqhiiyut (KRMSS) hamna Iqalungnut Taryurmiuttanut Kanata amiriyauvluni havaanut kitiqhimavlutik kiglikhaanit taryurmiuttait naunaiqhiiyut unalu qimilruqhugit taryurmiuttait avataita ilitquhiita iluani Qitirmiut Avikturnianut uvani Dolphin unalu Union Ikirahak iluani uataani unalu Larsen Kangiqhuani iluani qulvahiktumi kivataanit. Qauyihaqatigiiktut hamanngat Kanata, Amialika nunangani, Ungahiktumillu amiriyauvlutik DFO hivuliqtiita. Amiriyauvlutik havaanut ikayuqtauhimayut uumani DFO, Polar Knowledge Kanata unalu Ukiuqtaqtumi Qauyihaqarvik Tunngavingat. Kititiriangani taryurmiuttait iluaniittut ihivriurningit naunaiqhiivlutik, utiqtinnahuarlugit/aulapkainahuarlugillu qulaaniittut taryurmiuttait iluaniittut tulagvingit parnautigivaktavut Ukiuqtaqtumi Qauyiharvik Tunngaviata'p, Agyqtuiniq Kanata ilitariyauningit, 62ft takiyaaqtuq, RV Martin Bergmann tatqiqhiutaanit Niqiliqivik Apitilirvingmilu hamanngat aimaviannit tulagvianit Iqaluktuuttiamit. Una hivituyumik qaffiuningit inungnit ilaliutauhimayut atauttimut 12-13 – hivituyumik inilingnit haffumani RV Martin Bergmann unalu ilaliutiqaqhuni 6 havaktut unalu 7 nit qauyihaqtit. Ilaani tingmivangniaqtut puptalik tingmiaq katilviuniaqtangit umiaryuaq aallannguqtiqattariami havaktiit qauyihaqtiillu, kihimi parnautikhainillu unalu havaktiit/qauyihaqtit aallannguqtiqattaqtut haffumani RV Martin Bergmann unalu Iqaluktuuttiamiinniaqhutik. Tingmilutik uvanngat Iqaluktuuttiamut uumani Kaniitiakkut First Airkkulluuniit hiniktaqpaglutik hiniktarviit unalu Kaniitina Qulvahiktumi Ukiuqtaqtumi Qauyiharvik. Uuktuutigiyavut aturniaqtavut: • Alruyaqtuqtut mihingnautit (niklaumagiakhaat, taryuqpaallagiakhaat, nungulaaqtut anirnigut, taryup iluaniittut nauhimayut, atungauyait, ilaurutiqaqtut, imaq ataaniittuni qullinga, imaup iluaniittunilu qunniarvikhaq, unalu ungaqhimayuq ilaurutiingillu) • Hakuittut tuharnaqtut (imaup kayumingnia unalu mallirnut piksaliurutit kumaruinit iqalungnilu). Tahapkuat tuharnaqtut aadjigiiktut hakugingnianit hitunianut tuharnaqtut atuqhimavagaat qayait umiuyaillu. • Imarmi ataani nipiliutaat (naalagiangani taryurmiuttainit amaammaktittiyuktut niryuutit umiap kuinginningillu) • Imaup ilitturvikhait taryumi nunamilu naunaiyaiyut, hivunngani nauhimaningiit, unguvaqtauhimayut ilaurutit, taryulingnit, uguvaqhimayauyut uumanngittut ilulgit, ungavaqtauhimayut uumayuligit aahiillu ilaurutiit. • Mikiyunnuit Ataaniittut tigulaaqtut qiyuqutinnuaq ilulikhaat kititiriangani ilitturningiit uumani taryum iluani natia uumayuit unalu taryum marlungit. • Naitpiaqtut kuvyiqtut kititiriangani kumaruit ilitturningit. • Mikiyunnuaq naunaiyainiq GPS qulaanit ingilralaaqtut uuktuutikhait qaanganit tagyuat. • Una 16ft qayannuaq, iluaniitpaktut uvanngat RV Martin Bergmann, ihivriuqattariangani imat ilitturnikhait aallatqiinit kukkanit nuvuani nunam naunaiyariangani qauyihaqhimayut kuukkanit qurluaqtunit taryurnit. (pihimayavut laisikhaanit hamanngat CWS nit ihivriuriangani Kuunayungmi iluani Ahiak Iluilliq Utiqtaqtut Tingmidjait Angunahuirviuttailinikhanut.) • Kihait: Ilangit haffumani qaritauyatigut mihingnautit nivyaalaaqtut nuvuaniittuni qaanganiittuni kiharnit aktulaaqtangit hamanngat taryum natianit 15 m ataanit qaanganiittuni. Haffumani 2017, upalungaiyarumayavut havaqatigilugit umiaqtuqtut uvani RV Martin Bergmann hamanngat 10 Niqiliqivik uvanngat 20 Apitilirvik qanilruani ihivriurlugit hivituyumik-uuktuutingit taryuatigut avikturniani qimilrurlugillu aturnaqtumik taryum hinaanit amiakkungit naittumik ikirahait uumani inuuhimayut nauhivangningit avikturniani. Hivituyumik uuktuutingit taryunikkut ihivriuqtauniaqtuq iluani: Dease Ikirahak, Qingauk, Ahiak unalu Utkuhikhalingmi/ Rasmussen Kaliit/St Roche Kali. Taryum hinaa ikirahat ihivriuqtauniaqtut uumani: Finlayson Qikiqtangit (ilaliutilugillu ininganit uumani taryuugaluit qaangani kalit kihangillu), naitturaliit iluani Qingauk, Simpson Ikirahak, Rae Ikirahak, James Ross Ikirahak unalu Victoria Ikirahak. Ilagivluniuk upalungaiyarumayavut ihivriurlugit kuukkat iluani Qitirmiut Taryua ilagilugit angiyaaqtut kuukkait: Hood Kuugaq, Burnside Kuugaq, Western Kuugaq, Kuunayuk, Utkuhikhalik Kuugaa. Parnaiyaqhimayavut ikaarvikhavut, tukhiutiyavut ihivriuqtakhait nayugaat kihangillu

nayugaat takukhauyut ataaniittut. Hamna havaarihimayavut pulahimayut tamainnut Qitirmiut Avikturnia havaqatiginiaqtangit qanilrukkut nunaliit (Iqaluktuuttiaq, Uqhuqtuuq, Qingauk, Umingmaktuuq, Talurjuaq, Qurluqtuq) hivunikhaqhiurlugillu pivalliayakhaat taryurmiuttanit amiqhainikhainut upalungaiyarningit ilaliuqattautihimalugit nunaliit havaarinahuaqtangit ukiumilu uumani Kaniitian Anguyaqtiit Taryurmik Amiqhaiyut. Una taryuliqinirnut ihivriuqtangit naunaiyaqhimayangillu kititiqhutik uumani KRMSS ilitturnaqpiaqtuq taryuliqinirnut piliriakhait aadjikkutaanillu taimaa havaariyauyuq uumani C.J. Mundy (U. Manitoba; Ikiuqtaqtuq-HIKUA havaangit) atuqhimayangillu uumani RV Martin Bergmann; una Kaniitian Anguyaktiit Taryumik Amiqhaiyut havaangit (CROW; J. Eert, B Williams, DFO), unalu ArcticNet (aulapkaihimayangit qauyihaqhimayut uuminngat CCGS Amundsen). KMRSS aulapkaihimayauyut malikhugu CJ Mundy'p NRI laisia uvani 2016 (NRI laisia nampanga 04 018 16R-M-Ilaliutiffaaqtangit), kihimi ihumagiyavut katimayiit nunauyaliqinirnut hivunikhautikhangit aturaaqtakhangillu hivunikhautikhait uumani KRMSS amiriyakhait pinahuaqtakhait ahiqanngittunik laisikhaat. KRMSS tadja amiriyauyut manngiutigut haffumani 2017 mi 2018 milu manirarmiunut havaariyakhaat, kihimi hivunikhaliurumayavut huli pivalliayakhavut taryurnikkut amiqhaivikhangit upalungaiyaut avikturnianut ihivriuriangani kiudjuhiit uumani hilaup uunnakpallianingit uumani taryurmiunut avataita iluani Qitirmiunmi.

Personnel

Personnel on site: 14
Days on site: 29
Total Person days: 406
Period of operation: from 2017-08-10 to 2021-10-01
Proposed term of operation: from 2017-08-10 to 2021-10-01

Activités

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
Kitikmeot Region Marine Science Study	Marine Based Activities	Marine	Oceanographic exploration and monitoring of the marine areas of the Kitikmeot Region.	None.	Kuglukguk, Bathurst Inlet, Umingmaktok, Cambridge Bay, Gjoa Haven, Taloyoak

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Information is not available			

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
Service canadien de la faune	Permission to take samples of water from the Ellice River in the Queen Maud Gulf Migratory Bird Sanctuary.	Active	2017-05-03	2019-10-31

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
Boat	1	62ft	RV Martin Bergmann used for oceanographic research.
Boat	1	16ft	Aluminum skiff on RV Martin Bergmann, used to go ashore and sample in river mouths.

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
Diesel	fuel	1	8	8	Cubic Meters	RV Martin Bergman fuel tank
Aviation fuel	fuel	1	50	50	Gallons	Refuel a float plane bringing scientists to the Bergmann.
Formaldehyde 38%	hazardous	1	4	4	Liters	Preservation of zooplankton and benthic samples
Mercuric Chloride	hazardous	1	0.2	0.2	Liters	Preservation of water samples.
Gluteraldehyde	hazardous	1	0.1	0.1	Liters	Preservation of phytoplanton samples.
Lugols	hazardous	1	0.1	0.1	Liters	Preservation of phytoplankton samples

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	20 litres/year	Used engine oil is offloaded in pails at the Cambridge Bay dock and disposed of by Kitnuna Corporation at their fuel and oil treatment plant for consumed fuel and oil.	None
Marine Based Activities	Eaux grises	1000 litres/year	Greywater is cleaned and disposed overboard while at sea, not at port, not at Cambridge bay dock.	RV Martin Bergmann's greywater system (Managerm) is compliant with Government of Canada regulations.
Marine Based Activities	Déchets non combustibles	50 large garbage bags/year	Garbage is bagged and offloaded at Cambridge Bay dock and disposed of at Cambridge Bay landfill.	None
Marine Based Activities	Eaux usées (matières de vidange)	500 litres/year	Pumped out using Cambridge Bay waste services at the dock at the end of the season.	RV Bergmann's sewage system (Managerm) is compliant with Transport Canada regulations.

Répercussions environnementales :

No predicted impact of oceanogaphic sampling and data collection. Samples are minimal. Oceanographic acoustics very low power. Environmental impact is limited to the operation of the Arctic research foundation's RV Martin Bergmann which is Transport Canada Certified and complies with Nunavut and Government of Canada regulations and guidelines.

Détails Partie 2

Informations générales du projet

1. Scientific exploration and monitoring of the Kitikmeot Marine Region is needed to complement Traditional Knowledge during current increases in shipping and mining activity in the region. 2. We use the RV Martin Bergmann which is the only cost-effective way to carry out this project. 3. In 2017 we plan to begin on 10 August and finish on 14 September. Between the 10 August and 1 September we plan to work between Cambridge Bay and the southern end of Bathurst Inlet, including the Finlayson Islands (near Cambridge Bay) and Dease Strait. From the 2 September to 14 September we plan to work in Queen Maud Gulf and Chantrey Inlet. 4. 5. NPC, NIRB, CWS.

Conformité de l'énoncé opérationnel de Pêches et Océans Canada

None.

Transport

1. Marine sites will be accessed using the 62ft RV Martin Bergmann. Please see the map in the project description. 2. We will not be using an airstrip. 3. We will not be using an airstrip. 4. We will not be using an airstrip.

Site du camp

1. No camps. 2. No camps. 3. The maximum number of people aboard the RV Martin Bergmann is 13.

Équipement

1. See attached document for a list of the equipment. 2.

Eau

1. The RV Martin Bergmann makes freshwater from seawater. See Section H: Marine Based Activities: Vessel Use. 2. Freshwater is not used. 3. Please see the 'Waste' section of this application and Section H: Marine Based Activities: Vessel Use. 4. Not applicable.

Eaux d'égout (eaux grises, eaux usées, autre)

1. Please see the 'Waste' section of this application and Section H: Marine Based Activities: Vessel Use. 2. Not applicable.

Carburant

1. Please see the 'Material Use' section of this application. 2. The RV Martin Bergmann complies with Transport Canada regulation for containment of fuel. 3. Refuelling is conducted via fuel truck at the dock in Cambridge Bay.

Produits chimiques et marchandises dangereuses

1. Please see the 'Material Use' section of this application. 2. Hazardous materials and chemicals are contained in the laboratory area of the RV Martin Bergmann. 3. Chemicals are shipped to Cambridge Bay using Dangerous Goods shipment proceedures and then secured in the laboratory of the RV Martin Bergmann. 4. We keep laboratory spill kits on the RV Martin Bergmann that are specific to the chemicals onboard.

Répercussions sur la main-d'œuvre et les ressources humaines et socioéconomiques

1. In collaboration with our Canadian Rangers Ocean Watch (CROW) and Ocean Networks Canada (ONC) the Kitikmeot Region Marine Science study aims to develop a long-term marine monitoring program in the Kitikmeot that will be conducted by local people through training and employment. Also the Arctic Research Foundation invites local artists and guides aboard the RV Martin Bergmann as limited space on a small vessel allows. 2. Scientists and ship's crew board and disembark in Cambridge Bay and stay in local hotels and at CHARS accomodation. This year a float plane is planned to bring 3 additional scientists to the ship in southern Bathurst Inlet. 3. No specific hiring policies.

Participation du public/savoir traditionnel

1. Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, Umingmaktok and Bathurst Inlet. 2. The summertime Kitikmeot Marine Region Science Study grew out of the wintertime Canadian Rangers Ocean Watch (CROW) which is developed collaboratively with Rangers in the Kitikmeot. 3. Summary of public involvement measures: Our research in the Kitikmeot Region has been communitcated via consutlation with Rangers, Hunters and Trappers Organisations/Committees, presentations at schools and to the community. No concerns expressed, only interest. 4.Traditional Knowledge is obtained through conversations with rangers, HTO members and artists in communties in the Kitikmeot and through the collaborative Canadian Rangers Ocean Watch. It is a strong guide and influence for our sampling plan and scientific perspective. 5. We aim to continue to consult annually during our wintertime visits to communities as part of the Canadian Rangers Ocean Watch. Visits include consultations with Hunters and Trappers Organisations/Committees and the Rangers and presentations in schools and to the communties.

SECTION H : Activités marines : Élimination dans la mer

1. The purpose of the vessel (Research Vessel Martin Bergmann) is to act as a science platform, carrying equipment and scientists to relevant and important locations throughout the Kitikmeot Marine region. The vessel enables science activities, such as underway water sampling in transit, various scientific study when the ship is stopped at a marine station such as vertical rosette water sampling and CTD (conductivity, temperature and depth), Box core samples, underwater video, and deploy of oceanographic moorings. 2. The Research Vessel Martin Bergmann is a Canadian ship, Transport Canada class Workboat, Special Purpose Research. It is a 64' length ship, approx. 100GT with a 9ft draft. The ship has a small 16' aluminum skiff aboard, as a support and safety boat, that periodically is used for work in very shallow areas or accessing shore when needed. 3. The Transport Canada minimum manning is 4 crew and a cook make up a compliment of 5 core crew. Up to 7 scientists can work on board the ship, the maximum capacity of the ship is 12 persons. 4. The ship operates in the open water season which currently spans approximately August 1 to September 20 in the Kitikmeot Region, supporting various programs. 5. A route map has been provided in other sections of this application. 6. The vessel's home station is Cambridge Bay, Nunavut, where all resupply, ship repair, fueling, and docking takes place. The ship has used Cambridge Bay dock as home base since 2011 and has operated in the same way annually since then. The ship may stop at Gjoa Haven or in Bathurst Inlet as required for personnel exchanges, usually science crew changes of up to 7 people. The crew typically remain aboard the ship, but may purchase some (minimal) provisions from the community stores if required. 7. Waste management is as follows: the ship does not use ballast, bilge water is treated with a biodegrader and pumped overboard while underway as per Transport Canada regulation and crew are very careful with ship oil product which is not dispensed into the bilge, scuppers drain any water from the deck off the ship and there are no contaminants on board the deck, grey water is macerated and treated with a biodegrader before being released while in transit and black water is stored and pumped off the ship, solid garbage waste is bagged and disposed at the Cambridge Bay landfill, waste oil is stored and disposed in Cambridge Bay at the used oil waste facility, there are no hazardous or toxic wastes aboard. Quantities are provided in section 1 of this application. 8. The Research Ship Martin Bergmann complies with applicable Transport Canada regulations within its size and class range, including Regulations for the Prevention of Pollution by Garbage from Ships, Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals (Oil Pollution Prevention Regulations), Air Pollution Regulations, Pollutant Discharge Reporting Regulations and the Arctic Waters Pollution Prevention Act. 9. Spill Response Plan, Emergency Response Plans and Waste

Management Plans are attached. 10. An Arctic Pollution Prevention Certificate is not applicable for the size and class of this vessel. However, the crew of the Research Vessel Martin Bergmann have considered this and adhere to a high standard when considering pollution prevention in their plans. 11. Fresh and Potable Water is made on board, converted from seawater by a Reverse Osmosis system. Water is also obtained from the Cambridge Bay water services, loaded at the dock via truck, occasionally during the season when required, approximately 5 loads per year. 12. Icebreaking is not required. The vessel operates in open water only. 13. The vessel operates in the Kitikmeot region only. 14. Fisheries and Ocean scientists are on board as science clients and responsible for all scientific activities. Their activities include a marine mammal observing checklist which they have provided to the crew. Wildlife observations are provided to DFO who provide reports to the local Land Claim organizations. 15. The research will help better understand the significance of the region's physical environment to biological richness, to help understand the future consequences of climate change. The Research Ship Martin Bergmann is small relative to larger science icebreakers, with a single engine as opposed to 4-5 engines on larger science icebreakers, and therefore more quietly operates scientific activities. The ship operates only in open water season when risk to hunting and subsistence activities is low. 16. None of the activities are outside of the Nunavut Settlement Area.

Description de l'environnement existant : Environnement physique

The Kitikmeot Region physical marine environment is less salty than the neighbouring ocean due to the enormous inflow of river water from the southern mainland and restriction of deep salty water at Dolphin and Union Strait, Victoria Strait and James Ross Strait. The restriction of salty water from outside the region also results in restriction of dissolved nutrient which leads to low overall biological productivity in the region. Tidal flows are generally weak but are significantly enhanced in narrow straits between islands, where tidal mixing may lead to a greater input of dissolved nutrients to the surface of the ocean and greater, localised, biological production. The Kitikmeot Region Marine Science Study aims to better describe the both the large scale oceanography and the local importance of tidal straits. Proximity to protected areas: i. We have permission from the Canadian Wildlife Service to sample in the Queen Maud Gulf Migratory Bird Sanctuary at the Ellice River. ii. Marine heritage sites of the HMS Erebus and Terror are excluded from this study.

Description de l'environnement existant : Environnement biologique

The overall very low biological productivity of the marine area of the Kitikmeot Region, appears to lead to an ecosystem dominated by char with fewer polar bears and seals than the marine areas to the north (Larsen Sound) or west (Amundsen Gulf). Our study, aims to evaluate the narrow and shallow straits within the region as biological hotspots for marine life due to increased tidal mixing increasing the availability of dissovled nutrients in these locations.

Description de l'environnement existant : Environnement socio-économique

Proximity to communities: We currently sample close to Cambridge Bay, Kugluktuk, Gjoa Haven, Umingmaktok and Bathurst Inlet. Archeological and significant cultural sites: There are many of these sites in the Kitikmeot. The marine archeological sites of the HMS Erebus and Terror are current no-go zones. Paleontological value: Not applicable. Land and resource use: The summertime marine is used for travel, tourism and subsistence harvesting of char fish. Local and regional traffic patterns: The marine of the Kitikmeot Region contains the southern/western portion of the Northwest Passage and so is used as a shipping corridor.

Identification des répercussions et mesures d'atténuation proposées

1. See impacts tab 2. Impacts: Negative impacts are expected to be very small, limited to the normal operation of the RV Martin Bergmann and collection of small oceanographic samples of seawater, marine sediment and zooplankton, and deployment of small anchors for oceanographic moorings. 3. Socio-ecomonic impacts: Postive, see 'Workforce and Human Resources/Socio-Economic Impacts' section. 4. Transboundary effects: None. 5. SARA: None 6. Mitigation: Not applicable.

Répercussions cumulatives

1. Cumulative environmental effects are also anticipated to be very small, limited to the annual operation of the RV Martin Bergmann in the Kitikmeot Region during August and September, its annual oceanographic sampling for small volumes of sediment, zooplankton and seawater, and deployment/recovery of subsurface oceanographic moorings.

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																									
Marine Based Activities		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Exploitation																									
Marine Based Activities		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		P	-	-	-	-
Désaffectation																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

Project Map