

April 7, 2021

Karen Costello
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU
X0B 0C0

Re: Preliminary Summary of 2020 Narwhal Monitoring Programs

Dear Ms. Costello,

Please find attached a report entitled "Preliminary Summary of 2020 Narwhal Monitoring Programs" (the 'Preliminary Summary') prepared by our third party experts, Golder Associates Ltd. (Golder), which summarizes results from on-going monitoring of the approved Mary River Project.

As in previous years, the full results of the 2020 marine monitoring programs will be reported on in extensive detail in draft reports that will be submitted to the Marine Environment Working Group (MEWG) and subsequently to the Nunavut Impact Review Board (NIRB) as part of the annual reporting cycle. Baffinland is submitting the Preliminary Summary at this time to provide relevant parties with early information regarding the most recent scientific monitoring data and to commence discussions regarding adaptive management measures to be implemented by Baffinland during the 2021 shipping season. Baffinland also acknowledges the Preliminary Summary is likely of interest to parties in relation to the ongoing Phase 2 reconsideration process.

Summary of Results

In 2020, the following marine mammal monitoring programs were undertaken by Baffinland between July and September:

- Marine Mammal Aerial Survey Program (MMASP)
- Bruce Head Shore-based Monitoring Program
- Passive Acoustic Monitoring (PAM) Program

The above programs collected an extensive amount of information related to marine mammals during the 2020 shipping season. Baffinland has been informed by Golder that the second leg of the MMASP, run in the open water period to obtain abundance estimates of the Eclipse Sound and Admiralty Inlet summer narwhal stocks, identified that narwhal abundance in Eclipse Sound was statistically lower in 2020 than in comparison to previous years where aerial survey results were available. These results are consistent with what was observed through the Bruce Head Shore-based Monitoring Program, as well as general feedback received from Inuit from Pond Inlet. Given the known mixing between stocks and the consistency between the 2019 and 2020 combined abundance estimate for the Admiralty and Eclipse Sound stocks, it is possible that the Eclipse Sound narwhal were displaced to Admiralty Inlet in 2020.

In addition to providing advance notice of the 2020 MMASP findings, the Preliminary Summary also includes the results of Golder's initial considerations regarding potential causation, and a summary of potential adaptive management response options.

Potential Contributing Factors to 2020 Findings

Golder has considered Baffinland's 2020 shipping activities, as well as other relevant factors within the Marine Regional Study Area (Marine RSA), including annual ice conditions, the construction of the Small Craft Harbour in Pond Inlet, and the increased presence of killer whales. Golder's preliminary findings are that Project icebreaking and killer whale presence are possible contributing factors, and that the construction of the Small Craft Harbour, specifically an intensive pile driving program that used impact driving rather than vibratory methods, is an additional and new anthropogenic source of high-energy noise in the RSA that also could be a contributing cause of displacement.

Adaptive Management Response

Recognizing the value of the Eclipse Sound narwhal stock to the residents of Pond Inlet, and that there are unknown and/or unmitigated cumulative activities occurring in the Marine RSA that are likely to continue in 2021, Baffinland is committed to taking a precautionary approach and modifying its shipping activities on an interim basis. Baffinland will also increase project level monitoring during 2021 respecting narwhal abundance in Eclipse Sound and to evaluate the additional modifications to project shipping that are planned for 2021. The upcoming season will also present an opportunity to consider cumulative effects of anthropogenic noise sources such as the ongoing Small Craft Harbour construction and whether there are opportunities to work together to reduce or mitigate these effects.

As part of the Preliminary Summary, Golder has presented five (5) project level mitigation options to consider for potential implementation in 2021. Each of these proposed mitigations include rationale as to why they are considered biologically relevant, and how they might address uncertainty related to the 2020 MMASP monitoring results.

Baffinland is planning to implement additional mitigation measures in the 2021 shipping season which align with the options presented by Golder. Baffinland will delay shipping in 2021 until there is a continuous path between the entrance of Eclipse Sound and Milne Port of less than 9/10ths ice concentrations. This requirement will avoid impacting narwhal that concentrate in leads, as the leads are unlikely to exist in less than 9/10 ice concentrations. This will also minimize icebreaking noise, as it eliminates breaking of the thickest ice over a continuous period. Based on historical ice conditions, the average date less than 9/10ths ice has been continuous along the entire shipping route is July 27th, which is 8 days later than the average date landfast is completely broken (July 19th) and shipping would regularly be able to commence. The exact date the 2021 shipping season will commence will continue to be subject to variability in ice conditions.

Before commencing shipping, Baffinland will continue to request written confirmation from the Mittimatalik Hunters and Trappers Organization (MHTO) that the floe edge is no longer being used by community members. No transits to Milne Port will be permitted until confirmation is received.

Once the 2021 shipping season does commence, Baffinland will also continue to implement the transit restriction system that has been in place since 2019, which includes:

- A maximum of one icebreaker transit (with escorted vessels) will occur per day (24-h period) where ice concentrations of $> 6/10$ (but under $9/10$) cannot be avoided along the shipping route.
- A maximum of two icebreaker transits (with escorted vessels) will occur per day (24-h period) where ice concentrations $6/10$ or less, but greater than $3/10$ cannot be avoided along the shipping route.
- When a continuous sailing route of uninterrupted ice concentrations of $3/10$ or less is available between the entrance of Pond Inlet and Milne Port, then icebreaker transits in the RSA will proceed according to the normal shipping schedule.

Engagement with Relevant Parties

Baffinland plans to engage relevant parties, including the Fisheries and Oceans Canada, the Government of Nunavut, the MHTO, the Qikiqtani Inuit Association (QIA) and the MEWG in its development of a formal adaptive management response plan to the 2020 narwhal monitoring results. Baffinland will also be engaging with the Hamlet of Pond Inlet in order to determine how they would like to be consulted or participate in the development of the plan.

The plan will include 1) details respecting additional desktop studies to support the investigation into causation of the 2020 monitoring results, 2) details respecting increased monitoring during the 2021 shipping season (project level, regional and/or community-based) and 3) further details regarding the interim mitigation measures to be applied to project shipping in 2021.

Baffinland is currently planning to implement mitigation measures during the 2021 shipping season as proposed above, but expects that there may be further refinement of these mitigations following engagement with relevant parties. Given the imminent commencement of the 2021 shipping season Baffinland will be scheduling a MEWG meeting to discuss the Preliminary Summary and proposed 2021 mitigations as soon as practicably possible following the completion of the Phase 2 Hearing on April 21, 2021.

Baffinland is applying its Environmental Management System to the 2020 monitoring results to ensure that the project continues to operate in a protective, precautionary and adaptive manner. Baffinland wishes to thank all parties in advance for participating and sharing their knowledge to help support the implementation of an adaptive management approach for the 2021 shipping season.

Regards,



Lou Kamermans
Senior Director, Sustainable Development

Cc: Tara Arko, NIRB
Guillaume Daoust, NIRB
Cory Barker, NIRB
Thomas Hoggarth, DFO
Natalie O'Grady, GN
Eric Ootoovak, MHTO
David Lee, NTI
Jared Ottenhof, QIA
Megan Lord-Hoyle, BIM



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