



2023 Marine Monitoring and Marine Mitigation Workshop Report for Baffinland Iron Mines

Corporation's

Mary River Project

NIRB File No. 08MN053

Project Certificate No. 005



June 2023

Report Title:	2023 Marine Monitoring and Marine Mitigation Workshop Report for Baffinland Iron Mines Corporation's Mary River Project (NIRB File No. 08MN053; Project Certificate No. 005)
Project:	Mary River Project
Project Location:	Qikiqtani (North Baffin) Region, Nunavut
Land Tenure:	Inuit Owned Land
Project Owner:	Baffinland Iron Mines Corporation 2275 Upper Middle Road East, Suite 300 Oakville, ON L6H 0C3
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Photo credit:	NIRB staff
Cover photo:	Milne Port, August 2022
Date of Issue:	June 29, 2023

NIRB Public Registry Links for Mary River

Completed Assessments	
Associated Assessments (Applicable Years)	Project Dashboard
Mary River Project (2013 ongoing)	www.nirb.ca/project/123910
Early Revenue Phase (2014-2018)	www.nirb.ca/project/124700
Production Increase Proposal (2018-2020)	www.nirb.ca/project/124702
Extension Request to the Production Increase Proposal (2020-2021)	www.nirb.ca/project/124703
Production Increase Renewal (2022)	www.nirb.ca/project/125710
The Phase 2 Development	www.nirb.ca/project/124701
Ongoing Assessment	
Sustained Operations Proposal	www.nirb.ca/project/125767

ACKNOWLEDGEMENTS

The Nunavut Impact Review Board (NIRB or Board) would like to thank all those who participated in the May 24 and 25, 2023, Marine Monitoring and Marine Mitigation Workshop (the Workshop) hosted in person in Pond Inlet as part of the Board's ongoing monitoring program for Baffinland Iron Mines Corporation's Mary River Project (NIRB File No.: 08MN053; Project Certificate No. 005 Amendment 4).

The objective of the Workshop was to provide Pond Inlet, the most affected community, an opportunity to the NIRB and other Regulatory Authorities speak about their concerns, ask their questions, and provide their comments related to effects of concern from shipping related to the Mary River project. Further, community members were able to hear updates on monitoring activities, discuss the results of ongoing monitoring programs and mitigation measures. The Workshop allowed open dialogue between parties, and resulted in feedback being collected by the Board which will form the Board's recommendations expected to be implemented in Baffinland's upcoming shipping season.

The NIRB would like to acknowledge the Elders and community members who participated in the Workshop by sharing their experiences, Inuit Qaujimajatuqangit, and comments on the Project's monitoring with the NIRB staff and other Workshop participants. The NIRB thanks the representatives from Baffinland Iron Mines Corporation for making the best efforts to provide background information on Project activities, monitoring results, listening carefully to questions and comments from Workshop participants, and providing responses to feedback.

Finally, the NIRB thanks the community of Pond Inlet for the warm hospitality offered to the NIRB staff and other Workshop participants during their visit.

Sincerely,

A handwritten signature in black ink, appearing to read 'MI 95', is positioned above the typed name and title.

Mark Ings
Acting Executive Director
Nunavut Impact Review Board

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BACKGROUND

The Marine Monitoring and Marine Mitigation Workshop (the Workshop) was first held in 2018 after the Responsible Ministers¹ decision to allow Baffinland Iron Mine Corporation's (Baffinland) Production Increase Proposal to proceed. As part of the Ministers' decision, it was noted that impacts from Project-related shipping and marine-based activities were a source of concern for the Qikiqtani Inuit Association (QIA) and the community of Pond Inlet, therefore the Ministers also required the Nunavut Impact Review Board (NIRB or Board) hold a workshop to specifically discuss these issues.²

- On May 1-2, 2019, the NIRB hosted the first workshop and subsequently released recommendations about the use of Inuit Qaujimaningit; ballast water exchange program and invasive species; vessel management; and fish mortality events and community reporting.³
- NIRB held its second Workshop on August 25, 2020 and provided its recommendations about ballast water exchange and invasive species; the population and health status of fish and marine mammals; and dust.⁴

Due to the Board's ongoing assessment for the Phase 2 Development proposal and overlapping issues discussed in the proceedings, it was not appropriate to host the Workshop in 2021 and 2022.

As part of the Board's recommendations also made to the Responsible Ministers in 2022 for the concurrent assessment of the Production Increase Proposal Renewal, clarification was sought on the ongoing fit for the Workshop.

Based on references in the Board's decision on the Phase 2 Development proposal acknowledging that it heard ongoing community concerns about marine impacts, the Responsible Ministers directed in their November 16, 2022 decision that an annual Marine Monitoring and Marine Mitigation Workshop be held in Pond Inlet.

- As such, the NIRB held the third Marine Monitoring and Marine Mitigation Workshop in Pond Inlet on May 23 and 24, 2023.

This report and recommendations are directed to the updated purpose of the Workshop as being held in the community of Pond Inlet to allow discussion on community-related concerns for project impacts to the marine environment and monitoring activities with in-person support from agencies with regulatory responsibilities for the Project.

¹ The Ministers of Transport, Environment and Climate Change, Natural Resources, Fisheries Oceans and the Canadian Coast Guard and Intergovernmental and Northern Affairs Canada.

² Doc ID No.: 320546.

³ Doc ID No.: 325283.

⁴ Doc ID No.: 332007.

OVERVIEW

The two-day workshop included presentations by Baffinland to inform participants of Project-specific marine monitoring activities, highlight community-level monitoring, and how community concerns were being heard and addressed. The workshop also provide interested individuals and parties time to ask questions of Baffinland and other regulators. The key themes of the discussion were:



Photo 1: NIRB Staff Delivering Opening Remarks at the Workshop

- Clarification on shipping activities and marine-related impacts being experienced;
- Effectiveness of current monitoring and mitigation measures;
- Review results of ongoing Project specific and community-based monitoring programs relevant to the marine environment;
- Follow-up on issues discussed at the previous two workshops; and
- Encourage information sharing of more illustrative graphics to demonstrate monitoring activities.



Photo 2: Baffinland Presenting at Workshop

1.1 Advertisements

Beginning May 8, 2023, the NIRB advertised the Workshop through Facebook and on the Radio in Pond Inlet both in English⁵ and Inuktitut⁶ along with the notice of the Community Update Session. NIRB staff placed posters on public notice boards around Pond Inlet upon arrival to the community to remind community members about the workshop.

1.2 Setup

The Workshop consisted of in-person sessions in the Atakaalik Community Hall during mornings, afternoons, with one (1) evening session on May 24, 2023. The Workshop sessions were open to members of the community and public, all attendees were asked to sign in. All sessions were held with simultaneous English-Inuktitut translation.



Photo 3: Inuktitut Interpretation During Workshop

⁵ NIRB Document ID No. 345466

⁶ NIRB Document ID No.: 345469

1.3 Workshop Materials

The following materials were provided by the NIRB and or the Proponent, also available on the NIRB's Public Registry at www.nirb.ca/project/125710, under Document ID Nos.:

Document	NIRB ID No.
Final Agenda	345168
The NIRB's PowerPoint presentation (in English and Inuktitut)	345620
Baffinland's PowerPoint presentation-main session (in English and Inuktitut)	345249
Baffinland's PowerPoint presentation-evening session (in English and Inuktitut)	345622
Comment Forms (in English and Inuktitut)	N/A

Both written and verbal comments were considered through the workshop discussion.

1.4 Participation

Community organizations and Responsible Authorities with marine-related mandates or expertise were invited to participate in the Workshop and representatives from the following organizations and government agencies attended either in person:

- Baffinland Iron Mines Corporation;
- Qikiqtani Inuit Association;
- Fisheries and Oceans Canada;
- Northern Projects Management Office;
- Parks Canada; and
- Transport Canada.



Photo 4: Discussion about Bearded Seal Recording (NIRB and QIA)

1.5 Presentations and Agenda

At the opening of the Workshop, NIRB staff delivered a brief presentation which outlined the Mary River Project and the purpose of the Workshop.

The Workshop continued with Baffinland presenting on May 24, 2023 summarizing their marine monitoring programs. Baffinland also provided an overview presentation in the evening for those who were not able to attend during the day. Both presentations described the following:

- A summary of 2022 marine mitigation measures;

- Updates on the Board Recommendations from the 2020 Marine Monitoring and Marine Mitigation Workshop;
- Updates on Board Recommendations from the 2021/2022 Monitoring report;
- Overview of the 2023 Shipping Season including shipping and monitoring;
- Updates and status of Marine Monitoring programs;
- A summary for 2022 Marine Monitoring Programs;
- Described proposed 2023 Marine Monitoring programs;
- Status of Compliance for Marine Project Certificate Terms and Conditions; and
- Community concerns heard related to shipping.

On May 25, 2023, Baffinland shared videos and sound recordings taken during project-related monitoring activities from Bruce Head (using camera and drone) and from the hydrophones recording the underwater sounds. The sounds and recordings included both audio and visual material further which is further demonstrated in [Appendix A](#) of this report, on several items:

- Recordings of wildlife sounds: Bowhead, Bearded seal, Ringed seal, Sperm whale, Beluga, and Narwhal;
- Drone videos of narwhal pods with distance away from vessel and speed on recording;
- Convoy and small boat sounds with associated video.



Photo 5: Baffinland employees providing information about the Recordings being viewed at the Workshop



Photo 6: Public Discussion about Recordings

SUMMARY OF FEEDBACK

Throughout the Workshop, community members asked questions and shared their comments, Inuit Qaujimajatuqangit and concerns on a variety of topics related to Baffinland's Mary River Project with a specific focus on issues and concerns regarding the marine environment. These discussions included activities occurring as part of previous amendments to the Project Certificate, the approved Project and future plans for the monitoring needs of the Project. The Board will be incorporating the questions, comments, advice and knowledge shared by the community into the NIRB's monitoring program. The following is a tabulated summary of

feedback, concerns and comments received from community members and other participants during the Workshop in relation to currently approved Project:



Photo 7: Community Participants

Topics	Comment/Question
<p>Traditional Land Use and Hunting</p>	<ul style="list-style-type: none"> • Community Members described impacts regarding hunter’s ability to access traditional hunting locations in Milne Inlet and along the entire Northern Transportation Corridor. • It was noted that ore carriers and other vessels can sometimes interfere with hunter’s ability to navigate the water and find animals. • We have been told the whale population increased but have still not been able to find whales. • Do you know of any disturbances to narwhal and have you tried to find out if there are any disturbances to narwhal and sea mammals? We’ve heard there are only 4500 whales in Eclipse sound now and we haven’t been seeing many for several years now. • Baffinland says the narwhal have moved to Admiralty inlet, but how is that supposed to help us if we can’t harvest them there. • We have notice through our use of the area that there are very few whales around compared to before the mine. • Concerns regarding the use of Ragged Island as an anchoring location, requesting it no longer be used because it overlaps with seal hunting areas. • We’ve noticed that whales are harder to find for the last 7 years.

	<ul style="list-style-type: none"> • In our community, we've heard of people hunting the animals just for the tusks, leaving the meat behind. This needs to be looked into by DFO and the GN. • Hunter's have issues accessing hunting grounds in Milne Inlet now due to the Ship activity from the mine.
Shipping and Monitoring Activities	<ul style="list-style-type: none"> • Are you still using old ships that make loud noises? Will old ships be phased out?⁷ • Can the ships' engines be powered off while anchored to reduce noise for marine wildlife?⁸ • How many ships are anchoring at Milne Inlet and Milne Port when they are loading? • Are there underwater noise monitors in the area near Kurluktoo Bay? • Have you heard if the population of narwhal has increased or decreased in Admiralty Inlet and Eclipse Sound? • Can the underwater recording devices be taken out in other parts of the year? In Pangnirtung, there were recorders in the water and they were unable to find seals during that time. Arctic Bay had the same experience with recorders and their whales. • We know as hunters that noise has big impacts on the whales, even a single gunshot can cause them to disperse. These ships are large and make a lot of noise. Sometimes, event the sound of the water on aluminum boats can disturb them. Mitigation measures are important to reduce the noise in the area. • Concerns with regard to increased underwater noise caused by increased shipping and possible disturbance to whales due to the presence of passive acoustic monitoring devices. • Can the shipping monitors you hire give the presentations on what they're seeing? • Our community is being so impacted by this Project and we need to see more monitoring. • Baffinland says the narwhal have moved to Admiralty Inlet, Hunters know not to hunt the leading animals in migration, if these ships disturb the leaders, it could cause them to use another area.

⁷ On, June 1, 2023, Baffinland provided a follow-up response to the Board confirming that the age range of their vessels in 2023 will be from 2010- 2022 with the average age being 7 years old. (NIBR Doc ID No. 345611).

⁸ On, June 1, 2023, Baffinland provided a follow-up response to the Board confirming that vessels generally switch from their main engines to auxiliary engines during anchoring. Baffinland will be adding this as a requirement in their Standing Instructions to Ship master's for 2023 (NIRB Doc ID: 345611).

	<ul style="list-style-type: none"> Narwhal have been harder to find ever since Inuit started hunting with Boats and motors, they were still around but that's when the impacts started.
Monitoring and research efforts	<ul style="list-style-type: none"> Do you know anything about the narwhal population near the floe edge in the spring? Are the monitors employed to spot marine mammals given a chance to give presentations to the public or asked questions about what they have heard from the community? How are the research projects planned? Are they individual research projects or is everything collectively plan out? What research occurs in Eclipse Sound and Milne Inlet? What types of plans do you have in place for research in future years of monitoring? Ever since you started doing research on whales, what results have you found? Have you found that the narwhal population has increased or decreased on the flow edge? What results have been found in the studies on fish species ice halibut, and can QIA and Baffinland help with food storage in the future? There should be more of a focus on individual identification, especially as narwhal are exiting the inlet to ensure animals are not double counted. Is there any difference in results of the Inuit using IQ in the area and the studies Baffinland is doing? General comments were made regarding the need for Baffinland to further incorporate Inuit Qaujimajatuqangit into its marine mammal monitoring program.
Mitigation measures and impacts	<ul style="list-style-type: none"> Can Kugluktuk, Tremblay, and small operators and tourism operators get impact benefits as a direct result of mining? When will this become a reality? How much research has been done by aerial surveys on marine mammals? Are there better mitigation measures that can be put in place? We are seeing fewer ships now because of the convoying, sometimes up to 3 at a time and this is a positive mitigation. Can Baffinland plan their shipping so that ships don't disturb the first migratory animals that lead the others? Some of the impacts could be from hunting but the ships must be changing narwhal behaviour as well because of the number of ships.

	<ul style="list-style-type: none"> • We recently had a fishing derby in Nagulak lake and there were very few fish caught here. • As a resident of Pond Inlet, I have been impacted by this Project, QIA holds meetings with BIM but as the affected individuals, we never seem benefits or compensation.
Workshop participation & Logistics	<ul style="list-style-type: none"> • Why haven't other communities like Resolute and Grise Fiord been invited to the workshop? Is it because they are not impacted? • Why are there so few people in attendance at this workshop? There should be more monitoring and research done for the Project to understand how communities are being impacted. • Why are some parties not present at the workshop? Why are there so many empty chairs? • Its sad that there are not more people here, these are important meetings to have but many hunters and land users are out on the land in the spring months. • Request transparency and clarification on perspective being provided by community members that are also working for Baffinland, to make sure that there is no conflict of interest.
Other concerns	<ul style="list-style-type: none"> • Are cruise ships, private yachts, and sailboats different from ore carriers? Have their impacts been questioned, such as waste disposal and going on the land outside of Pond Inlet? • How has the alternate ballast water exchange been updated since Baffin Bay is now the area? • What is happening to the water being released into the sea water, and are there invasive species in the sea water? • Concerns and confusion regarding where ballast water exchange from Project ships was occurring and what is being dumped from the ships as they have seen the ships pumping something out.



Photo 8:Public in the Afternoon and Watching Recordings

SUMMARY AND CONCLUSION

The NIRB's 2023 Marine Mitigation and Marine Monitoring Workshop was hosted prior to the shipping season with the intent of providing community members the opportunity to understand more information about ongoing monitoring activities and voice concerns directly to the Proponent or regulators. The Board appreciates hearing these comments to develop recommendations for Baffinland prior to the start of its shipping season. The Board is grateful for the opportunity to be in Pond Inlet and is hopeful that the workshop encourages everyone to consider how the Mary River Project could co-exist with ecological and cultural values; and capture the experience, knowledge and data gained over the duration of the Project.

Baffinland, Government, and non-governmental organizations with marine related mandates and expertise contributed to an open and respectful dialogue throughout the Workshop, providing responses when addressed as well as learning from the comments of community members. Community members contributed valuable firsthand knowledge of marine-related issues and observations from their time on the land throughout the operation of the Mary River Project. While the discussions did not resolve topics regarding the wellbeing of marine mammals along shipping routes and Milne Inlet waters and concerns around the shared use of the Milne Inlet area, many community members are concerned that the lifestyles and floe edge they depend on may not be available for future generations to experience due to impacts they've seen in recent years.

The NIRB and Workshop participants recorded community perspectives to assist in the identification of monitoring gaps and where improvements continue and/or need to be made. Discussions with Baffinland highlighted the community's request for involvement of all generations of Mittimatalingmiut in both the discussions, collection of Inuit Qaujimajatuqangit and Project monitoring to ensure that knowledge is available and feedback about the effectiveness of current monitoring and mitigation measures for the approved Project are applied.

The Board makes the following recommendations and to the extent practicable, the Board expects Baffinland to implement these recommendations in the current shipping season while continuing to implement longer term considerations in the subsequent shipping seasons.

Access to traditional Harvesting Areas and Marine Mammal Population Health

Community members expressed concerns regarding the ongoing difficulties they face in accessing and sharing traditional harvesting areas for narwhal and seals. These challenges were often identified through the difficulties in navigating and accessing these areas due to the presence and movement of the large ore carrier vessels. The Board recognizes that for the Project to be able to transport its ore, there will need to be the shared use of some of these areas. The Board further notes that community members have expressed concerns regarding the health of the narwhal population in Milne Inlet as well as the ability to access the narwhal if they have

relocated to other areas. The Board also understands that work on evaluating population health of narwhal in Milne Inlet is ongoing in conjunction with the Department of Fisheries and Oceans Canada in response to the Board's 2022 Monitoring Recommendations.

Recommendation 1: The Board requests that Baffinland work closely with the Mittimatalik Hunters and Trappers Organization or other community organizations to determine priority marine hunting areas for the community members and to provide a memo to the Board by the end of 2023 on approaches to avoiding or coordinating navigation near these areas in such way that reduces interaction between project vessels and Community vessels during peak harvesting periods.

Recommendation 2: The Board encourages Baffinland to continue working with DFO and community members in monitoring Narwhal presence and health in the project area. Visual data from Bruce Head monitoring should be linked to results from underwater recorders as well as information about convoys to demonstrate conclusions made by Baffinland that convoying is mitigating disturbance impacts.

Recommendation 3: The Board requests that Baffinland provide more direct monitoring observations in engaging and plain language formats (i.e. audio and video) to support community members awareness of ongoing monitoring activities, results and findings at next year's workshop. Baffinland is encouraged to also share more directly and with multi-media options, the experiences of Northern hires and monitoring staff as they conduct monitoring activities for the project.

The Board appreciates the efforts of all parties to attend the event and participate, and looks forward to hosting the next workshop in 2024.

Prepared by:
Kelli Gillard
Manager, Project Monitoring



June 29, 2023

Cory Barker, M.Sc.
Technical Advisor III
Signature:



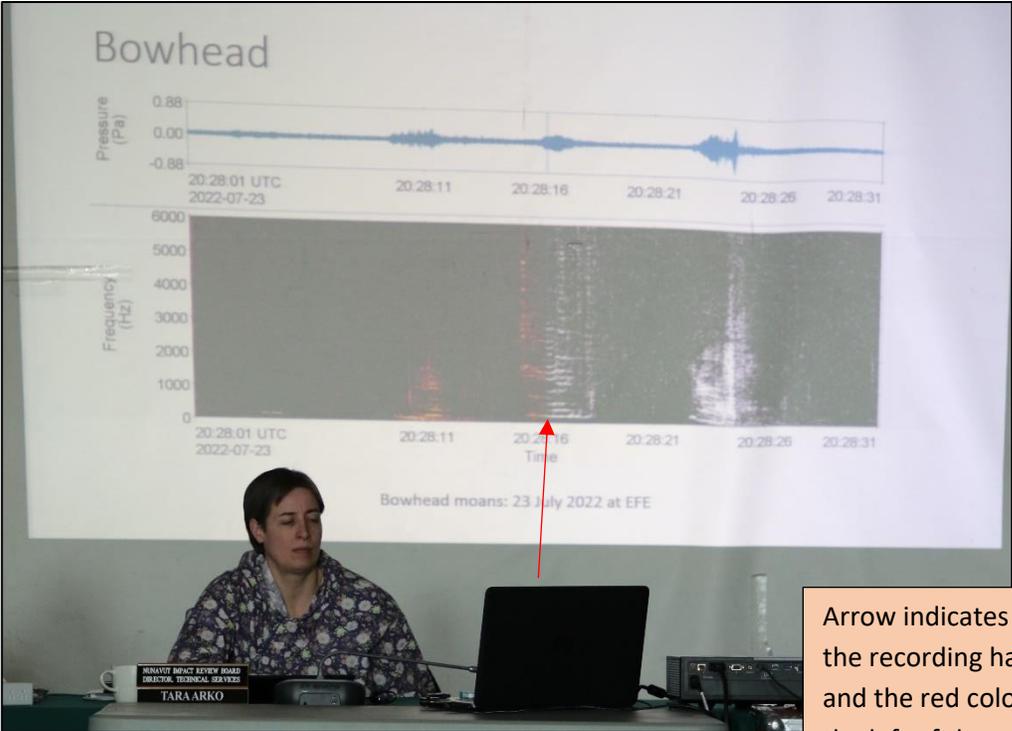
On June 29, 2023

Reviewed by:
Tara Arko
Director, Technical Services
Signature: 

On June 29, 2023

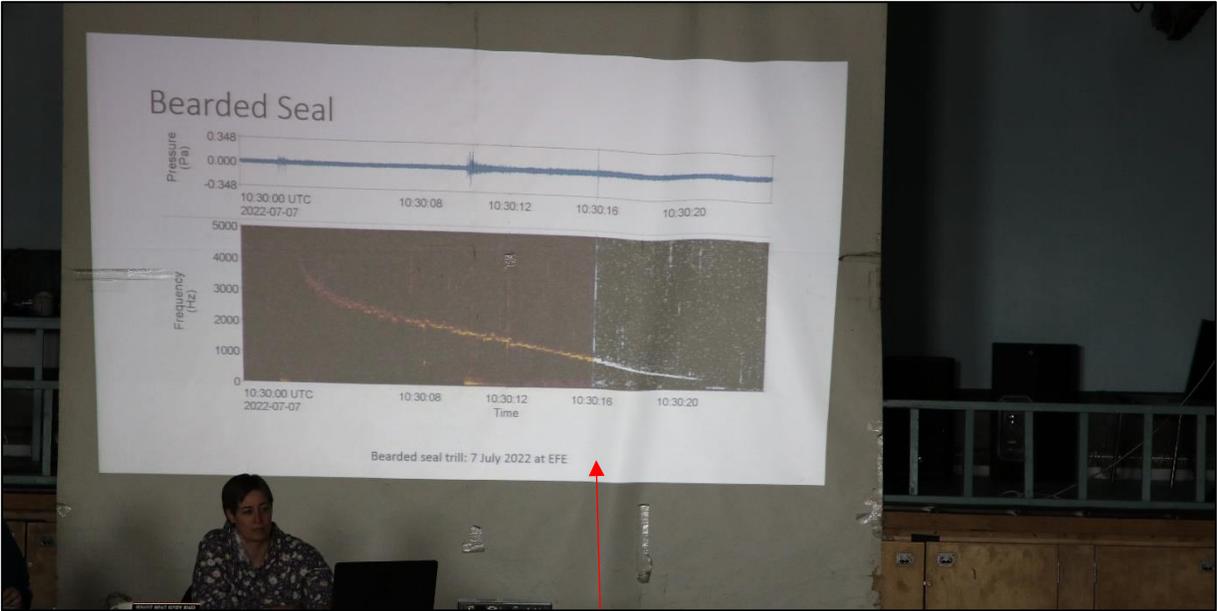
APPENDIX A: AUDIO AND VIDEO PRESENTED

Hydrophone Recordings

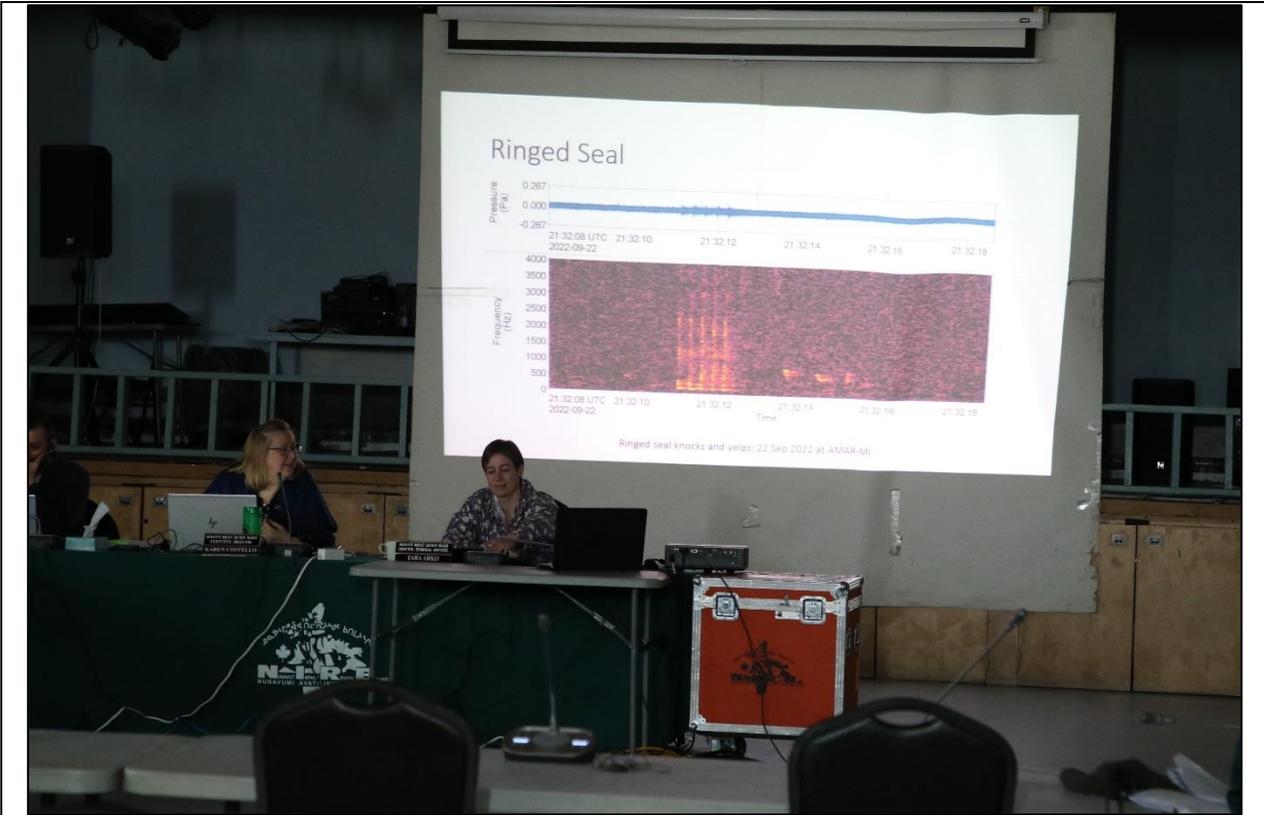


Arrow indicates how far the recording has played and the red colour to the left of the arrow.

Playing Bowhead Recording



Bearded Seal Recording



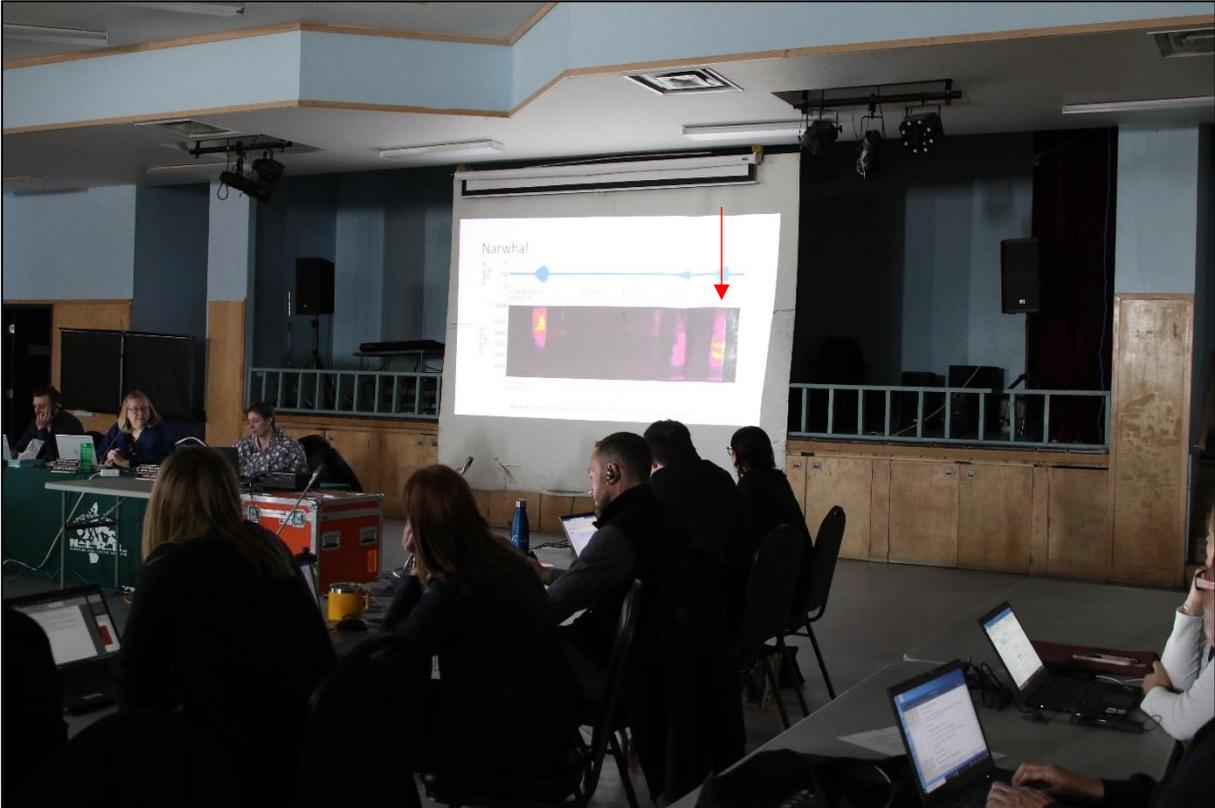
Completed Ringed Seal Recording



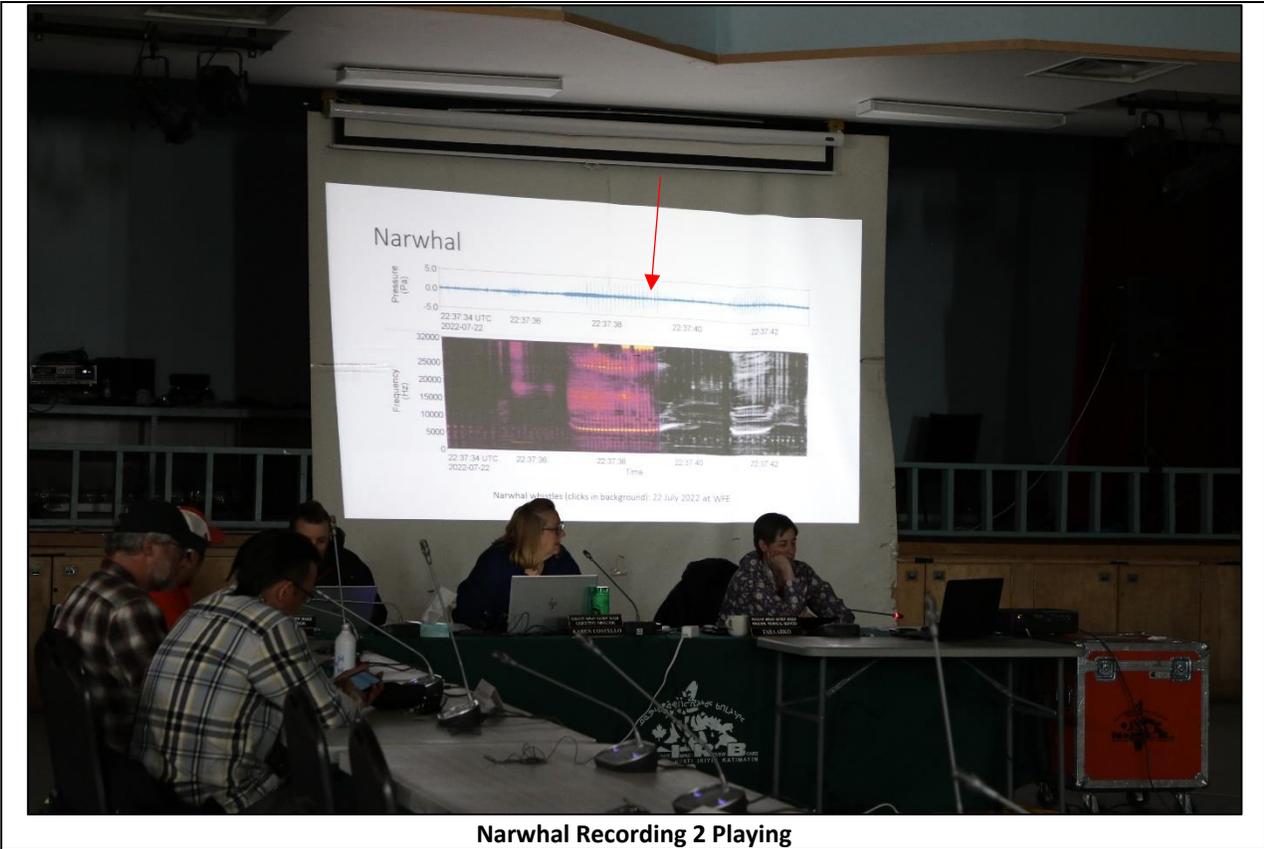
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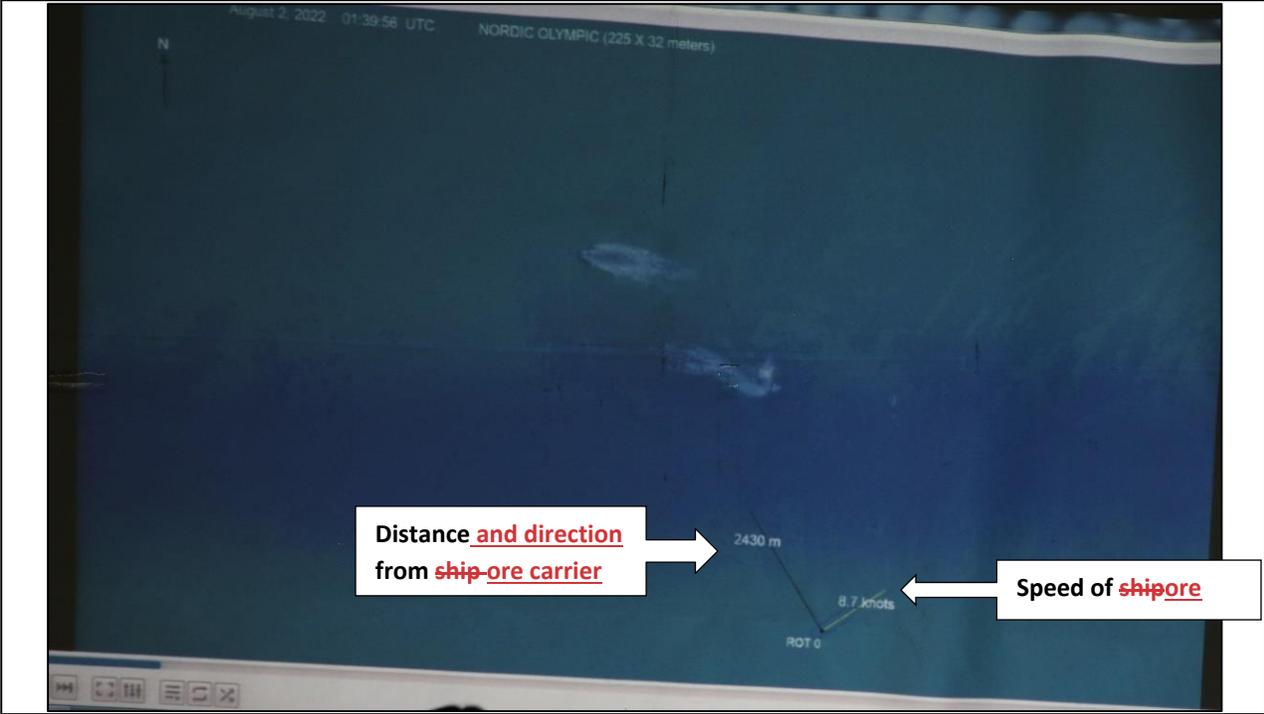
Beluga Whale Recording Playing

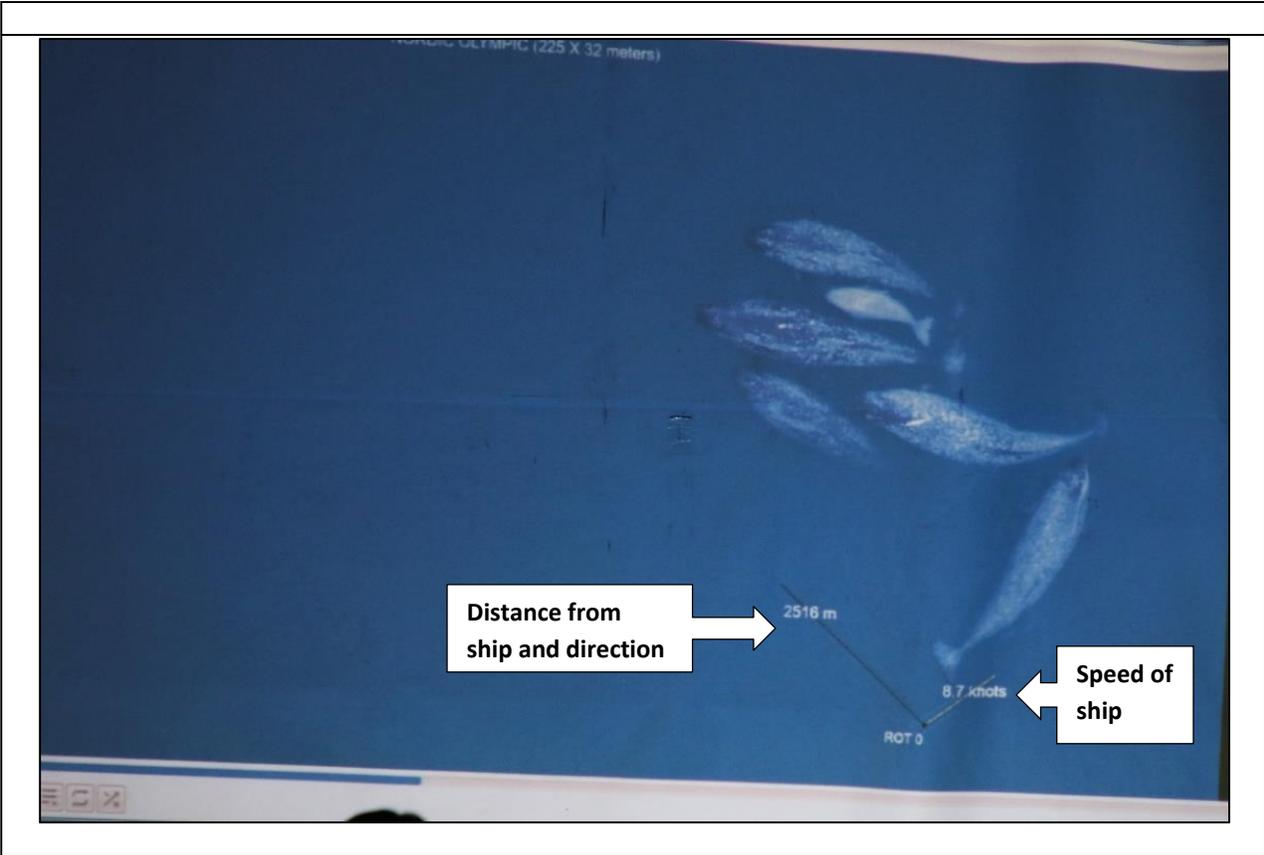


Narwhal Recording 1 Playing

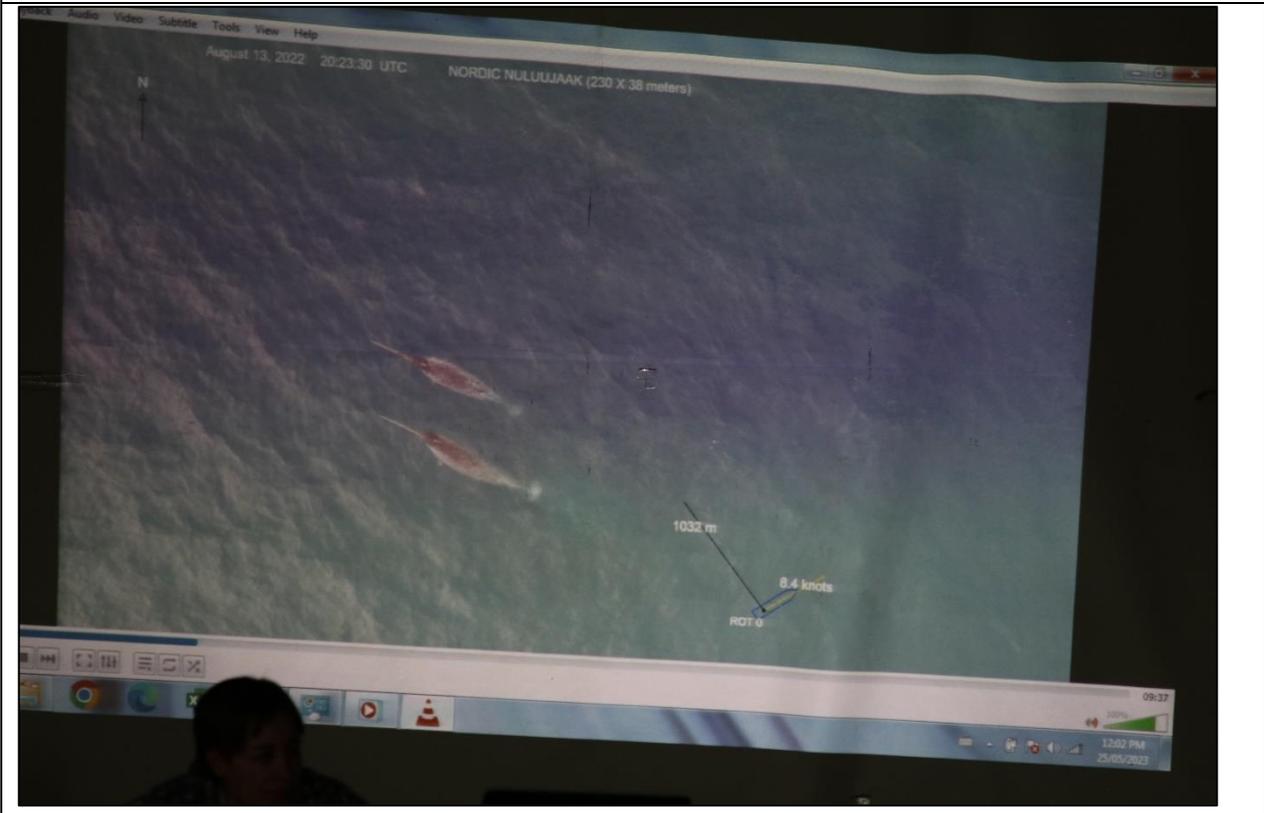
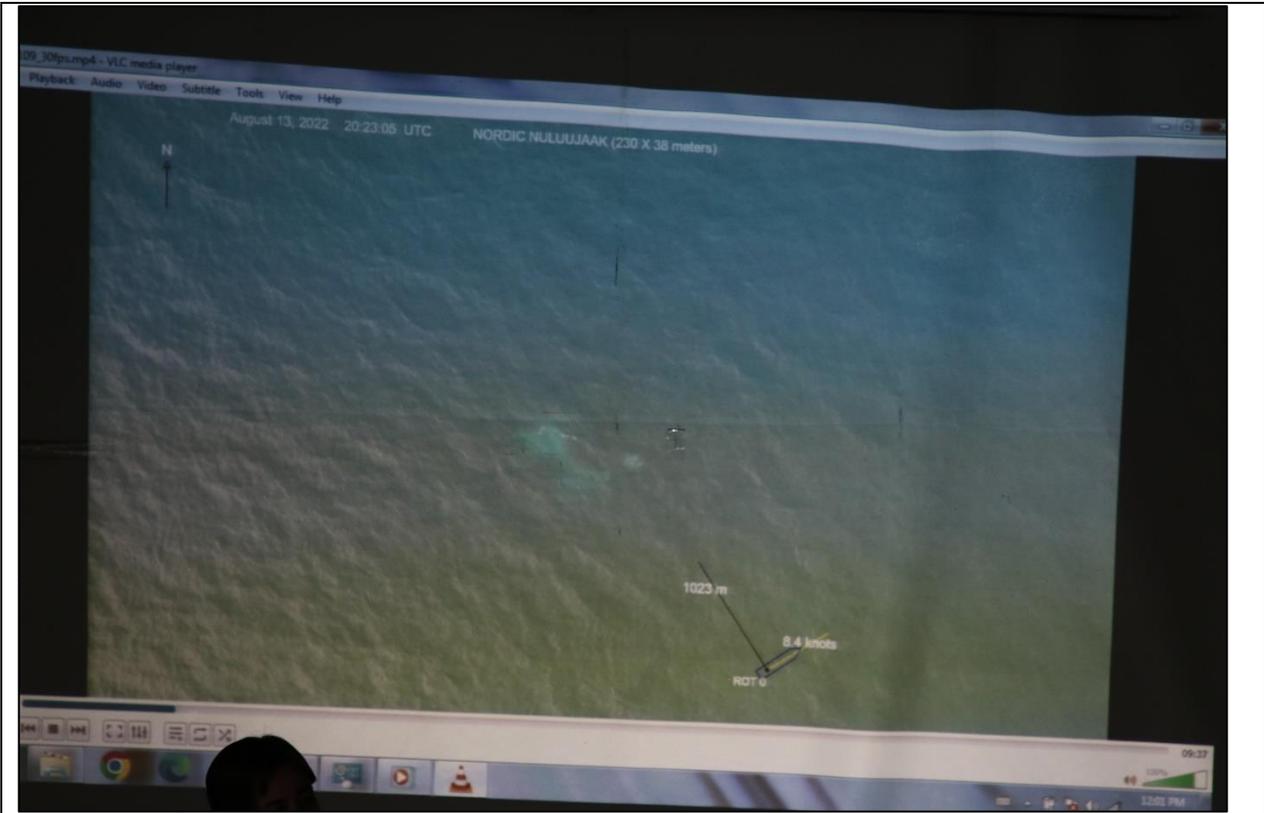


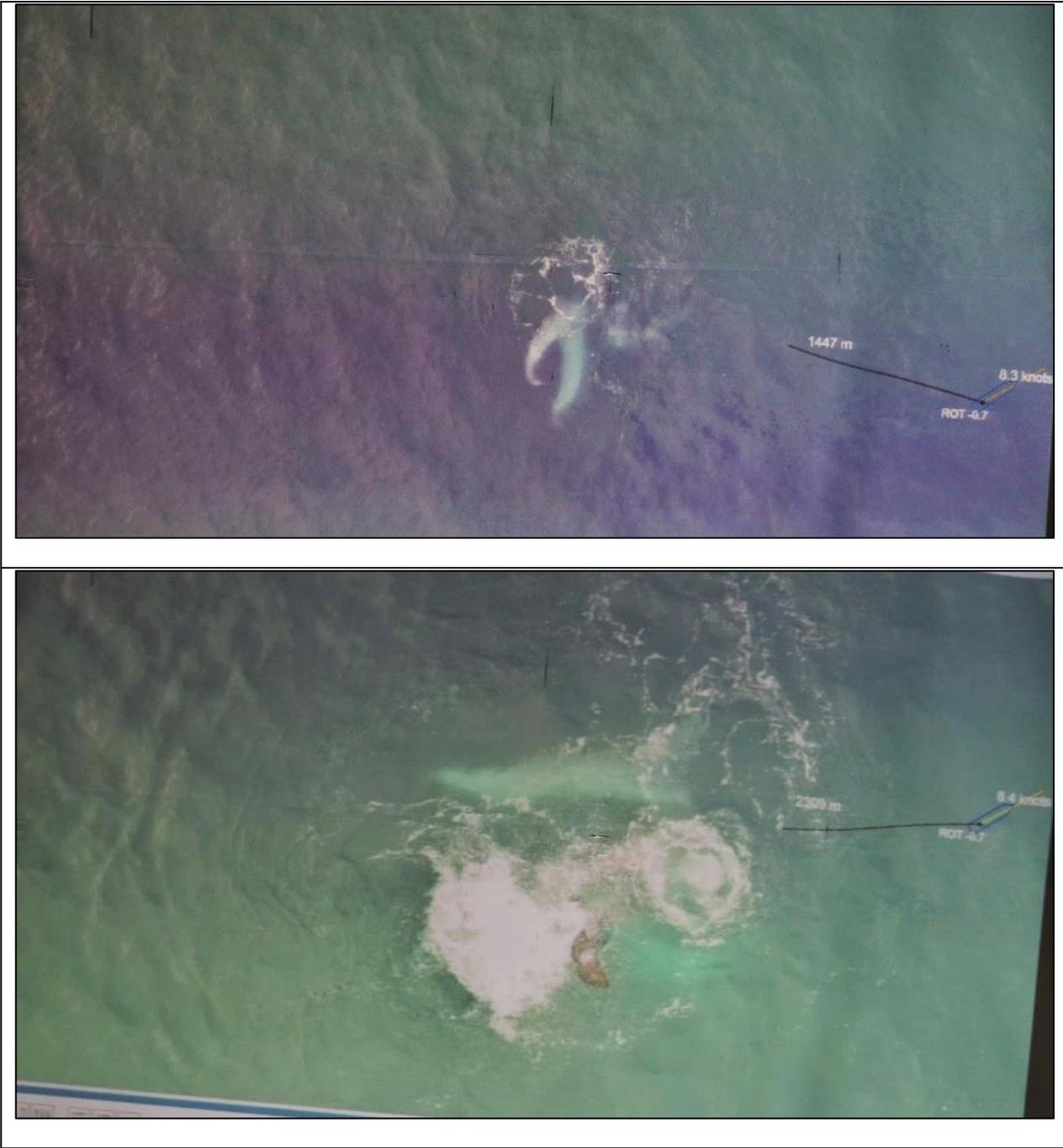
Drone Videos
Video 1



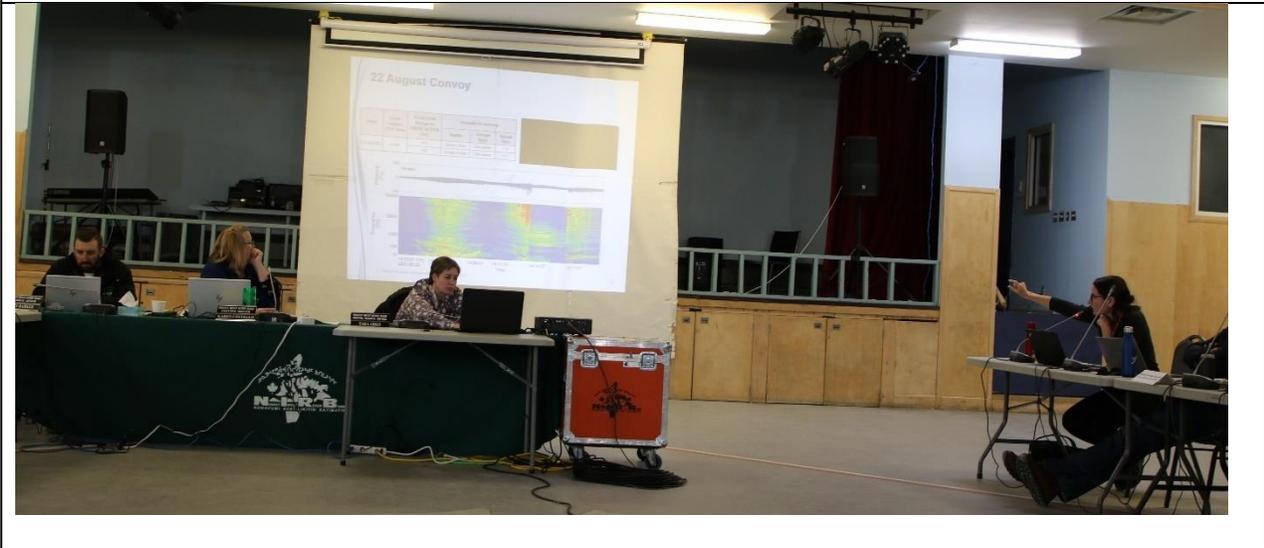
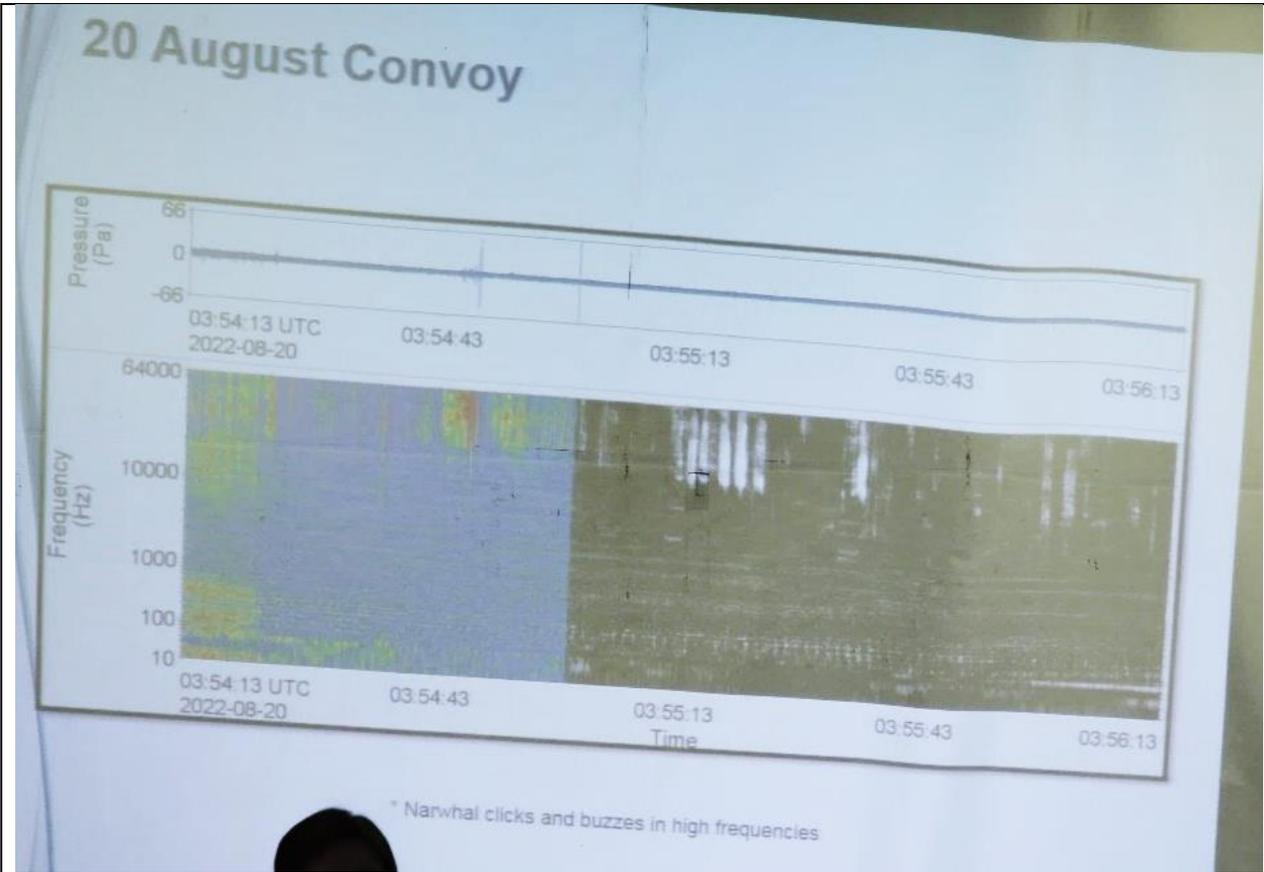


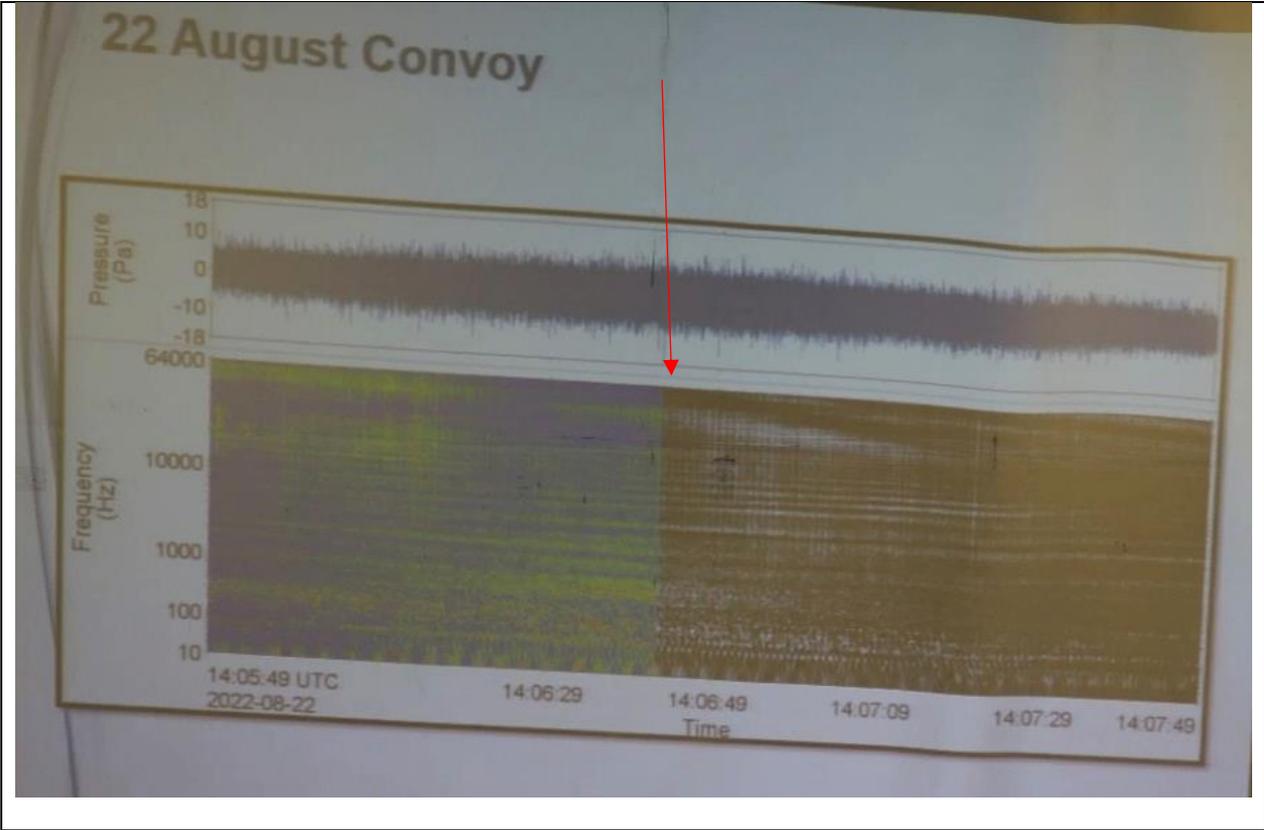
Video 2





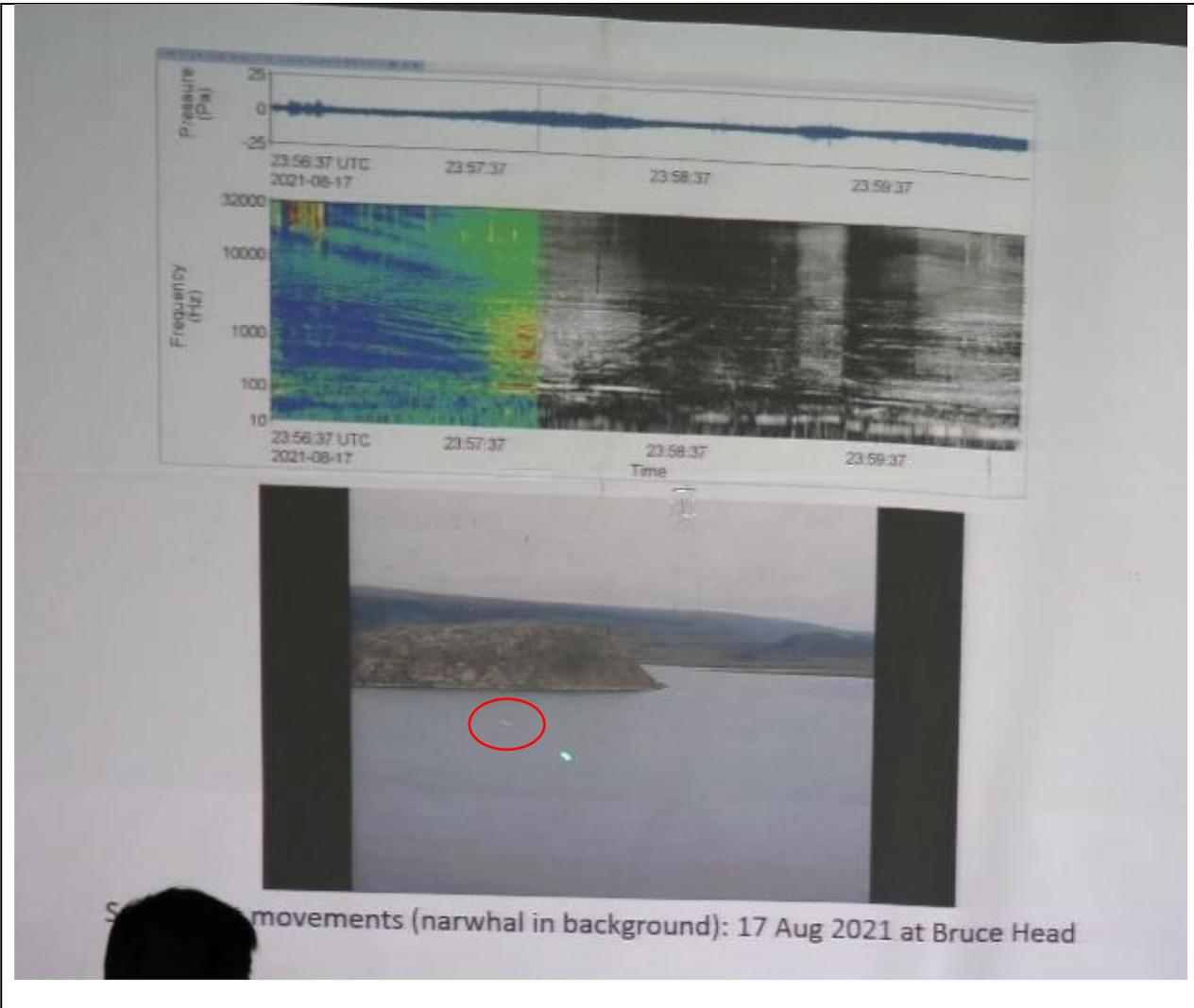
Convoy (sound recording)





Small Vessel Sound Recording and Video





S... movements (narwhal in background): 17 Aug 2021 at Bruce Head