

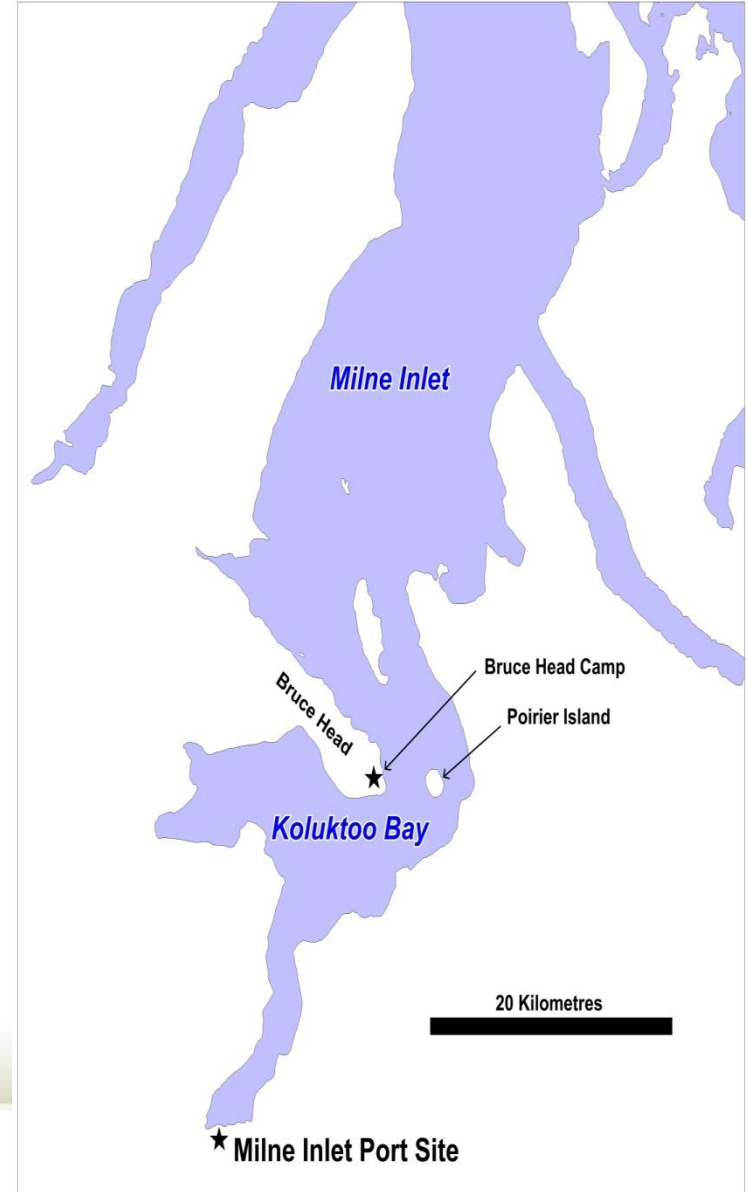


Narwhal Monitoring Study

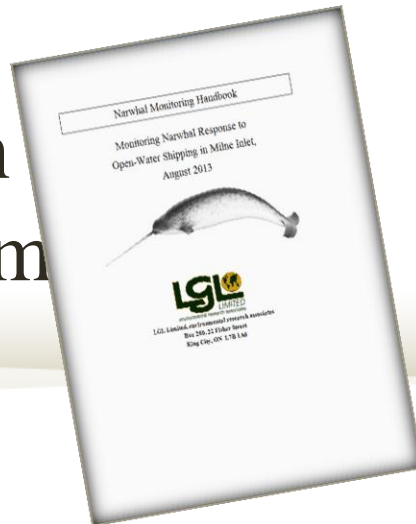


Narwhal Study Objectives

- Determine if narwhal behaviour changes and/or their distribution changes in Koluktoo Bay and Milne Inlet in response to vessel transits
- Train and use residents from Pond Inlet as observers—recognizing that this study is a Pond Inlet community initiative



- 3 & 4 August in Pond Inlet
- 6 Pond Inlet residents, 4 students; QIA marine biologist
- One day in class review of handbook
- One day hands-on training with

LGL Limited 2013 Mine Inlet Monitoring Narwhal Response Study

Participants

Observers:

- 3 residents of Pond Inlet
- 3 marine biologists from LGL

Logistics:

- Camp manager provided by BIM
- Support from Mary River camp and Milne Inlet BIM personnel

Interviewing of Local Observers/IQ Data Form/Input on Study Design:

- QIA



Observers from top left; Patrick Abgrall, Elijah Panipakoocho, Tannis Thomas,
bottom left; Robert Aglak, Jobie Atagootak, and Heather Smith.

Camp

- One cook tent, four sleeping tents
- Water source nearby
- Located at 1200 feet (366 m) asl
- Resupply by helicopter



Observation Post

- Located on Bruce Head across from Poirier Island
- 20-30 minute hike from camp
- Located at 700 ft (213 m) asl
- Equipped with big-eyes, theodolite, binoculars, digital camera, video camera

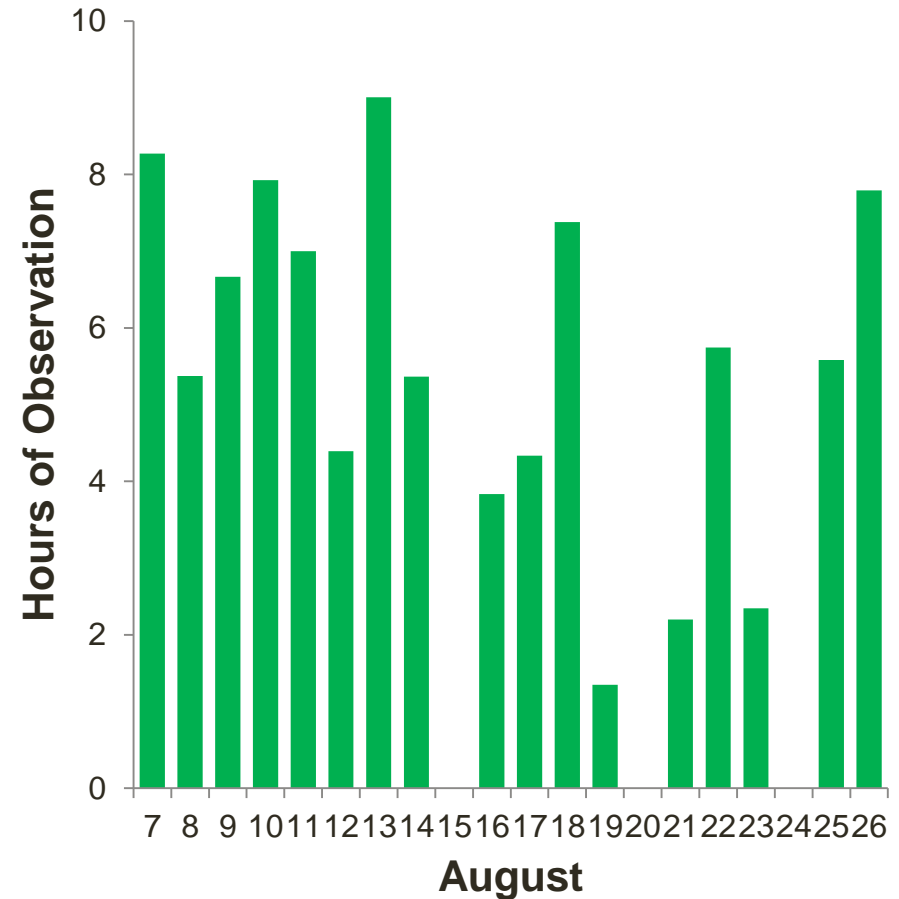


Behavioural Data Collection

- Tracking narwhal focal groups and vessels using a theodolite
- Behavioural data collected on each focal group
 - group size
 - age and sex
 - behaviour
 - formation
 - response behaviour
- Environmental data collected every hour and when conditions changed

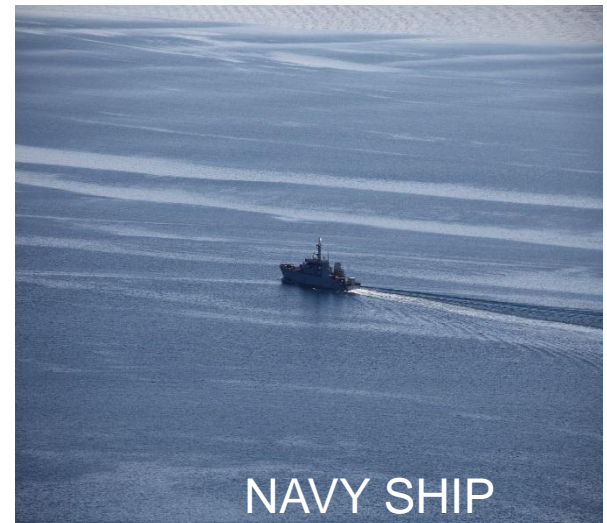
Behavioural Data: Effort

- 94.6 hours of behavioural data effort from 7-26 August
- 3 weather days
- Low effort days due to poor sighting conditions

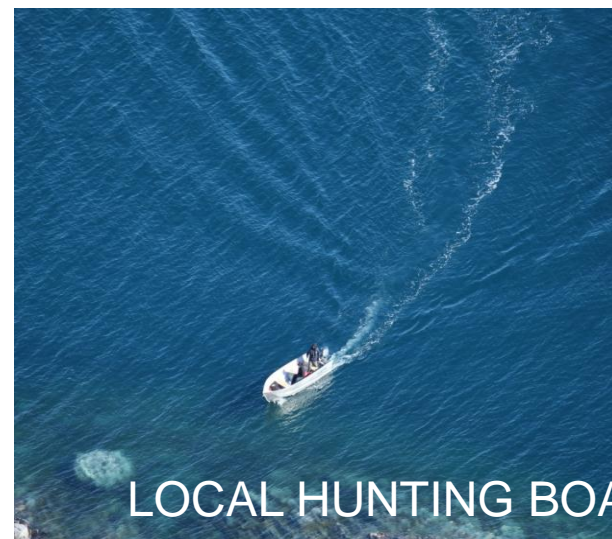
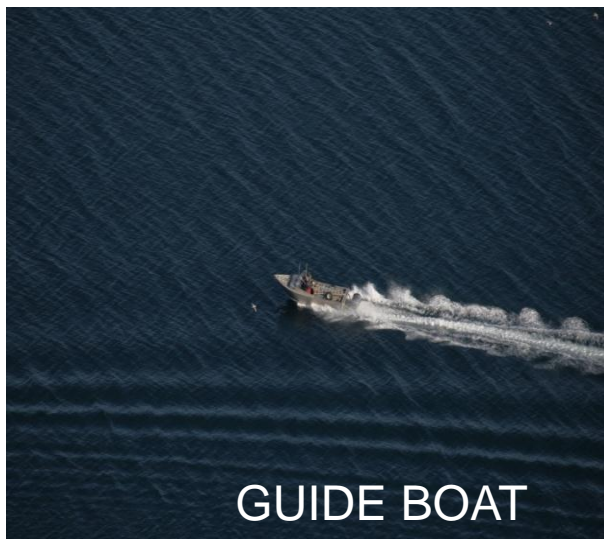
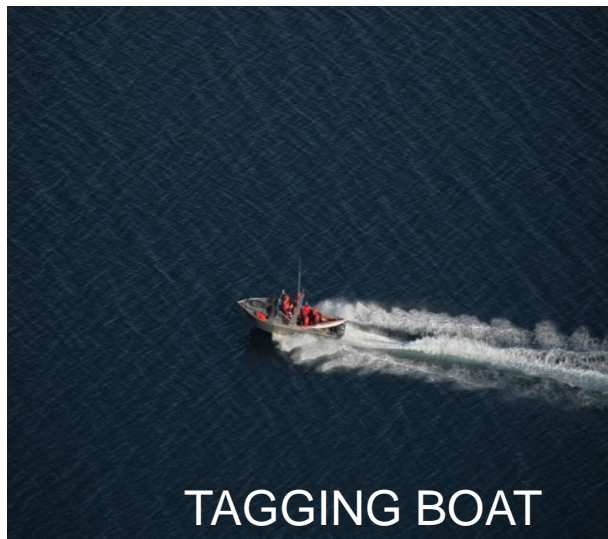


**Data are considered preliminary at this stage*

Large Vessel Sightings



Small Vessel Sightings





Next Steps

- Preparation of a Technical Report (draft completed by early 2014)
- Report will be distributed to MEWG for comment
- Continue Bruce Head study in 2014 and beyond
- Lessons learned during 2013 will be used to improve future studies
- Local observers and support are critical to the success of the study



