

Halliday WD, Têtu P-L, Dawson J, Insley SJ, Hilliard RC (2018) Tourist vessel traffic in important whale areas in the western Canadian Arctic: risks and possible management solutions. Marine Policy 97: 72-81.

What is the research about?

- Tourist vessels, especially pleasure craft, are one of the fastest growing sectors of vessel traffic within the Arctic. However, they are problematic in terms of marine mammal conservation.
- Currently, these vessels have far fewer regulations governing them compared to large commercial vessels.
- Also, tourists tend to actively seek out marine mammals, posing a greater risk to marine mammal populations through harassment and strikes.
- Finally, pleasure vessels are not required to carry Automatic Identification System (AIS) transponders, making their movements and impacts difficult to monitor.

What we did:

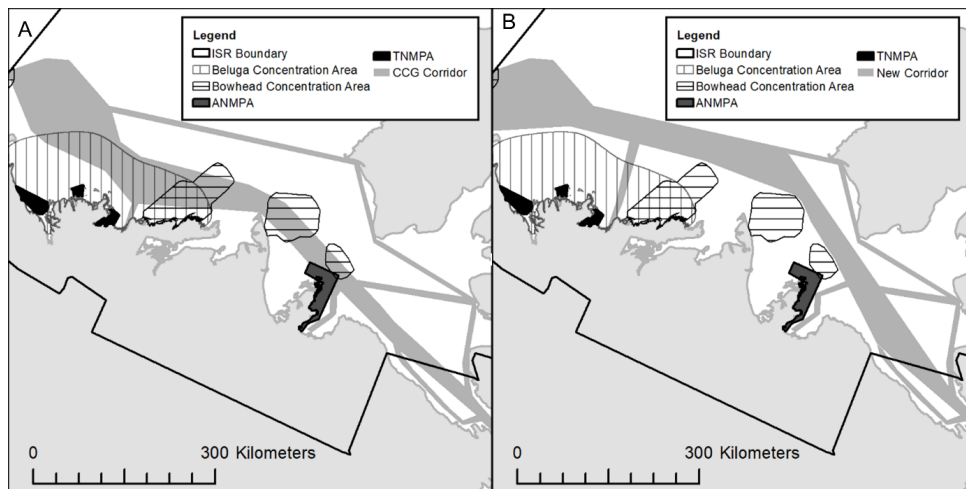
- We assessed the extent to which tourist vessels (both pleasure craft and passenger vessels) traveled within important areas for bowhead whales and belugas within the ISR between 1990 and 2015.
- We also assessed the speed at which those vessels traveled, and their overlap with the vessel corridor and marine protected areas (MPAs).
- We investigated different management tools that could be used to reduce the impact of tourist vessels on whales in this region.

What we found:

- Passenger vessels had a constant, but low presence within the region throughout the study period, whereas pleasure craft showed a dramatic increase in the past 10 years
- All tourist vessels had a large overlap with both bowhead and beluga areas, especially in the last 10 years for pleasure craft
- Passenger vessels typically travel much faster than pleasure craft and may therefore have a higher risk of colliding with whales
- Restricting tourist vessels to a vessel corridor could reduce risk to whales in important whale areas because the vessels would be restricted to just one part of the area – the travel corridor through the whale areas
- A revised corridor that travels farther to the north through the centre of the Amundsen Gulf could avoid whale areas and marine protected areas and greatly reduce the risk to whales posed by vessels
- For vessels unable to travel far from shore, a speed restriction should be put in place to reduce acoustic impacts and lower the risk of ship strikes, along with specific rules about interacting with whales

Key Result:

This figure shows the location of the original and current Canadian Coast Guard corridor (A) and the new proposed corridor (B) that avoids whale concentration areas.



Our recommendations:

- Include spatial and speed restrictions for tourist vessels in existing (e.g., TN MPA) and emerging protected area (e.g., AN MPA) management plans.
- Careful monitoring of pleasure craft, many of which do not carry Automatic Identification System transponders. This could be done by requiring all vessels to carry AIS, requiring vessels to check in with communities, a community observation network, and/or increasing enforcement vessels on the water.
- Outreach and education to tourist vessels (e.g., WWF Canada’s Mariner’s Guide⁵), especially pleasure craft owners.

Why is this research relevant to the Inuvialuit people?

- Marine mammals such as bowhead whales, beluga whales, bearded seals and ringed seals live in the region and use sound to communicate, find food, mates, and avoid predators. They are also a critical part of Inuvialuit food sovereignty and have been managed by Indigenous communities for millennia.
- Any increase in marine vessel traffic has implications not only for the conservation of marine mammals, but all the Inuvialuit communities that depend on these mammals for nutrition, cultural, and spiritual values.
- It is important to understand the impacts of tourist vessels and design appropriate mitigation for MPAs and other areas of importance. The combination of scientific research could be complementary to Inuvialuit long-term observations and experiences of marine mammal behaviour to co-create “rules” and educational materials for tourist vessels.

How was the community involved?

Not involved in this study.

Where can I get more information about this project?

- William Halliday and Stephen Insley are scientists with Wildlife Conservation Society (WCS) Canada (wcscanada.org). You can reach them at sinsley@wcs.org and whalliday@wcs.org.
- Other information:
 - <http://data.nwtresearch.com/Scientific/16330>
 - www.arcticnoise.ca

5 <http://assets.wwf.ca/downloads/Marine-Mammals-2018may.pdf>