

Real-time detection for endangered species

Objectives

Transport Canada is responsible for management of the dynamic shipping zones to protect the critically endangered species of North Atlantic right whales (NARW) in the Gulf of Saint Lawrence and Gaspé region.

Transport Canada sought to test different Canadian technologies for dynamic marine mammal monitoring to quickly and accurately process large amounts of aerial imagery to:

- Verify the presence of NARW and other species of interest
- Increase precision and efficiency of detections of marine mammal monitoring in dynamic shipping zones
- Gain insight into exact location of a whale's position for notification of nearby ships, reducing the risk of vessel strikes

Solution

Aerial images were collected by Transport Canada's partners to allow detection of marine mammals in the areas of interest. Then we performed our automated detection. The main steps are:

- On-site support for data collection
- Georeferenced detection of all marine mammals of interest
- Reporting and submission of detections to Transport Canada


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Transport Canada is pleased to be working with ISED and Whale Seeker to advance marine mammal detection technology in Canada, reducing the risk to NARW and ensuring the safe and efficient transportation of goods.

Transport Canada

Möbius Observer


- **Automated detection:** advanced AI algorithms for real-time detection of NARW and other cetaceans, pinnipeds and sharks
- **Versatile tool:** immediate corrective action to avoid ship & marine mammal interactions or by an observer during seismic testing, construction, cable work and other offshore projects
- **Transparency:** expert-verified data for reporting under Environmental Impact Assessments and for public project acceptance




NARW detection:

MORE INDIVIDUALS THAN COMPETITOR


Flight hours to date

 **90**


Flight height

 **610m**


Processing times:

 **24 FPS**

Species insights:

 **small to large cetaceans; pinnipeds and sharks**

Project adaptability:

 **Drone based or fixed installation**

About Whale Seeker

We are the global innovation leader that ethically leverages AI to deliver better, simpler, and faster marine mammal and bird detection data when it matters most. Founded in 2018 by expert biologists and AI specialists, we collaborate with academia, industry and governments to promote healthy oceans and sustainable business decisions.

