

NEWS

(17 September 2012) **(LOOKNorth funds Nunavik Geomatics to monitor Beluga whales: project to evaluate remote sensing technologies for the monitoring and management of marine mammals.**

Supported by \$24,925 in funding from LOOKNorth's Technology Validation Program, Nunavik Geomatics will conduct a review of existing and emerging remote sensing technologies for marine mammal monitoring. The purpose of the study is to determine whether remote sensing technologies can meet the information needs of industry for monitoring and managing sensitive marine ecosystems in the context of increasing potential resource development and expanded marine transport. Specifically, the review is interested in remote sensing technologies that can determine and map environmental parameters that are important to beluga whale ecology and management, including oceanographic parameters and ice characteristics. The review, to be conducted over the coming 5 months, will also cover direct observations of mammal populations using different sensors and approaches.

About the Project:

The beluga (*Delphinapterus leucas*) is a medium-sized toothed whale widely distributed throughout Arctic waters. Within the waters surrounding northern Quebec (Nunavik), seasonal aggregations of at least three populations of beluga whales that appear to be genetically identifiable have been defined by their summer distribution. Concern over apparent low numbers of the whales in the waters adjoining Nunavik led to harvesting limits (quotas, and seasonal and regional closures) imposed in 1988 to allow the population to recover. In spite of harvest restrictions, aerial surveys continue to indicate that beluga whale numbers in eastern Hudson Bay and Ungava Bay are low, and the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has designated the Eastern Hudson Bay and the Ungava Bay beluga whale populations as “endangered”.

Information and management of marine mammal populations is an important issue. It is typically an expensive undertaking and as marine transport is expected to increase to support resource development, marine mammal monitoring requirements will also increase. This review will help inform more efficient ways for industry and government to manage sensitive marine ecosystems while maintaining opportunities for resource development and expanded marine transport. Traditional Ecological Knowledge and scientific understanding of beluga will be combined to guide assessments of various remote sensing technologies in their applicability towards monitoring beluga distribution. Existing and new remote sensing technologies will be evaluated and ranked for their ability to meet information, co-management, Aboriginal groups, industry and government needs.

This project’s specific interest and focus is the beluga whale, *Delphinapterus leucas*, but the issues covered are more broadly applicable to other marine mammals.

Leveraging advanced technology for safe, sustainable development of Canada’s Northern resources



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About the LOOKNorth:

LOOKNorth (Leading Operational Observations and Knowledge for the North) is a national Centre of Excellence for Commercialization and Research hosted by C-CORE. In collaboration with a broad network of industry, northern, business and research partners, LOOKNorth validates and drives commercialization of monitoring technologies to support safe and sustainable development of Canada's northern natural resources. It promotes the use of remote sensing (RS) technologies in environmental monitoring for northern stakeholder groups.

About Nunavik Geomatics:

Nunavik Geomatics is a wholly owned subsidiary of Makivik Corporation, the Inuit birthright organization resulting from the James Bay and Northern Quebec Agreement. Nunavik Geomatics is a consulting firm that focuses on geomatics products and services ranging from decision support, project management, GIS services, and collection of Traditional Ecological Knowledge (TEK).

- 30 -

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