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THE OBSERVATORY

SLGO - First Integrated Ocean Observing System in Canada

SPECIAL EDITION

RIGHT WHALES SEASON 2018

SIGHTINGS ACCESS IN A TIMELY MANNER

SLGO.ca
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Mitigation measures for the protection of right whales

The measures intend to reduce de impacts of conflits of uses at sea caused by the change of habitat of the North Atlantic right whales.

The North Atlantic right whale is an endangered species, with approximately 450 individuals migrating each year from the southern United States in the winter, to the Gulf of Maine, the Bay of Fundy, and increasingly in the Gulf of St. Lawrence in the summer, which is relatively new.

Stéphane Plourde, of the Maurice Lamontagne Institute, suspects that the warming of the waters of the Gulf of Maine, for example, is indirectly responsible for the change in the summer habitat of right whales[1]. The warmer waters of the Northwest Atlantic Ocean would cause *Calanus finmarchicus* (a zooplankton species) to migrate further north (16 km per decade for the Northwest Atlantic[2]).

Thus, right whales follow their prey to the north in a new summer habitat, including the Gulf of St. Lawrence, where fishing areas and shipping traffic are now overlaying the new feeding area of right whales.

From June to September 2017, 12 North Atlantic right whales died in the Gulf of St. Lawrence and two main causes of death were identified: entanglements in fishing gear and injuries following a collision with a ship. Faced with this situation, a reduction in the speed of vessels, in specific sectors, was imposed by the Ministry of Transport in 2017, in order to reduce the mortalities caused by collisions with ships.

According to estimates, a marine mammal striking a ship has 31% chance to be killed (or seriously injured) if the vessel has a speed of 10 knots, versus 90% for 17 knots[3].

Dominic Leblanc, the minister of Fisheries and Oceans Canada, announced on January 23rd, that the speed limit will most likely be back in 2018. Unlike last summer, although, it should target more specific areas. Transport Canada minister, Marc Garneau, is expected to make a more detailed announcement on this issue in the near future.

The Government of Canada is working with partners on a number of specific proposals to address the issue of right whale mortality in the Gulf of St. Lawrence. **One of these measures is specifically aimed at improving information on whale watching and detection and communicating this information in a timely manner to the parties involved. SLGO, through the integration of data from its multiple members, is playing a leading role in this part.**

Sources:
1) Interview from: *Radio-Canada. 2017. Les changements climatiques bouleversent la baleine noire. [Online] http://bit.ly/2rJj4cP*

2) Chust, G., Castellani, C., Licandro, P., Ibaibarriaga, L., Sagarminaga, Y., and Irigoien, X. 2014. Are *Calanus* spp. shifting poleward in the North Atlantic? A habitat modelling approach. – ICES Journal of Marine Science, 71: 241–253.

3) Pace, R.M. et G. Silber. 2006. Simple analyses of ship and large whale collisions: Does speed kill? U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), poster, 1 p

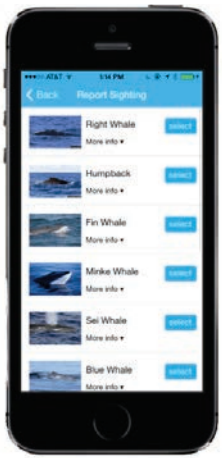
[FEATURE] WHALE ALERT AND MARINE CONDITIONS

The Canadian Whale Institute becomes member of SLGO and gives access to near real-time observations of North Atlantic right whales.

By becoming a member of SLGO, the *Canadian Whale Institute* allows access to data of crowdsourcing sightings of right whales in the **Whale Alert mobile app**.

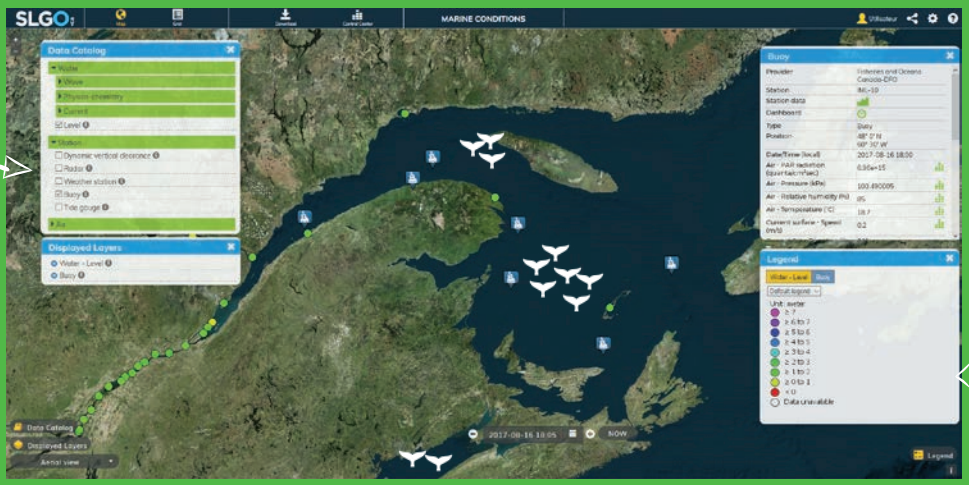
These data are integrated in the Marine Conditions, a web and mobile application by SLGO that is already largely used by pilots and mariners.

As such, on Marine Conditions, the navigation community, which already uses, for example, official water level data from the Canadian Hydrographic Service, will be able to access right whale sightings from the same familiar interface. This integration of multidisciplinary data, which is at the core of the SLGO's mission, will provide efficient access to critical information supporting decision-making in the current issue of high mortality of right whales, which has both social-economic and conservation of biodiversity impacts.



WHALE ALERT MOBILE APPLICATION

ACCESS TO THE WEB APP MARINE CONDITIONS



MARINE CONDITIONS-MAIN INTERFACE

LAYERS OF SCIENTIFIC BUOYS (ECCC AND DFO), WATER LEVER (CHS-DFO), AND RIGHT WHALE SIGHTINGS (WHALE ALERT, PENDING), ARE ACTIVATED.

MARINE CONDITIONS-CUSTOM CONTROL CENTER

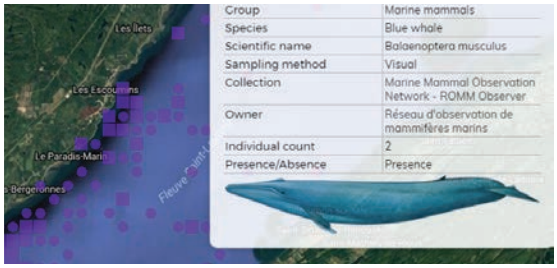
THE CONTROL CENTER ALLOWS TO SAVE DATA MODULES TO KEEP ON WATCH IN REAL TIME, ACCESSIBLE FOR ALL USERS CREATING A FREE ACCOUNT.

[FEATURE] ROMM AND BIODIVERSITY

The application Biodiversity gives access to sightings data from the Marine Mammals Observation Network (ROMM) and Whale Alert.

Since its beginning in 1998, ROMM has maintained a vast database of marine mammal observations through its network of volunteer observing members and data aquisition projects. For the past few years, this database has been published on SLGO's website, in the Biodiversity application and the Data Catalogue.

The crowdsourcing tool has made possible, since 2014, to widen this database by collecting citizen or community sightings as well, for the St. Lawrence and Saguenay rivers area.

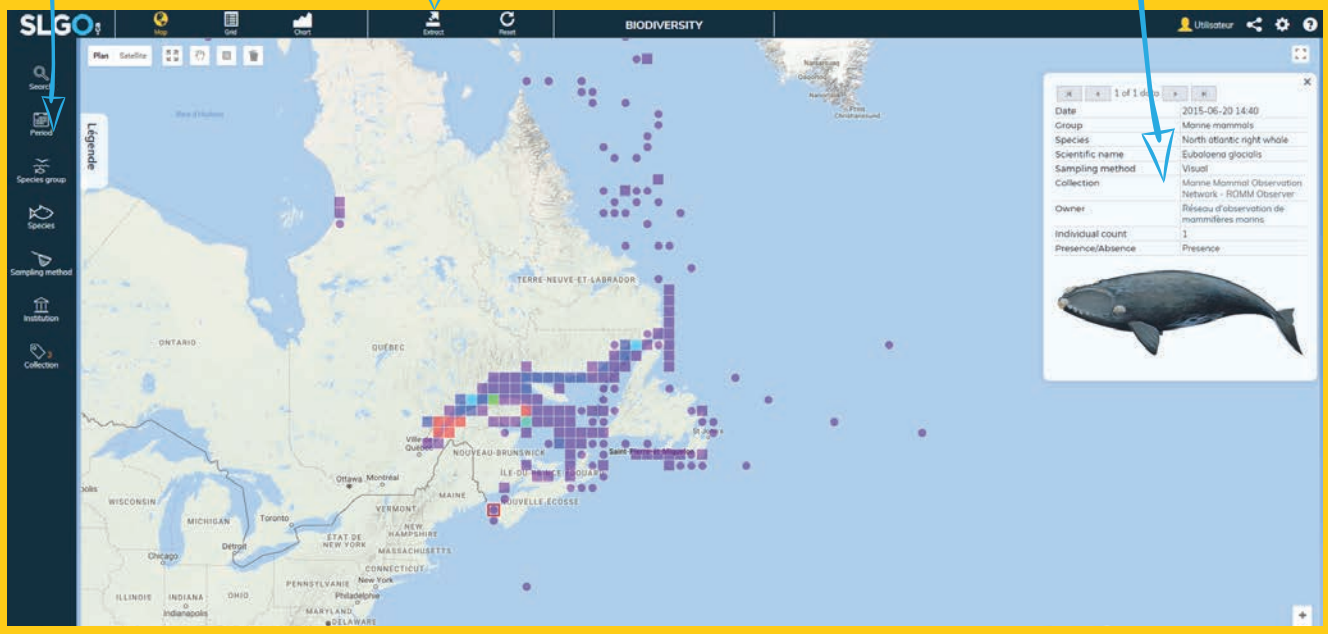


The ROMM observing members are members from various sectors, including tourists, conservation parks, shipping operators, ferries and other institutions directly related to the St. Lawrence River. They form a network of observers who collect data on whales and seals sighted during their offshore activities.

Filters
(period, species, collection, etc.)

Data and bibliographic reference download

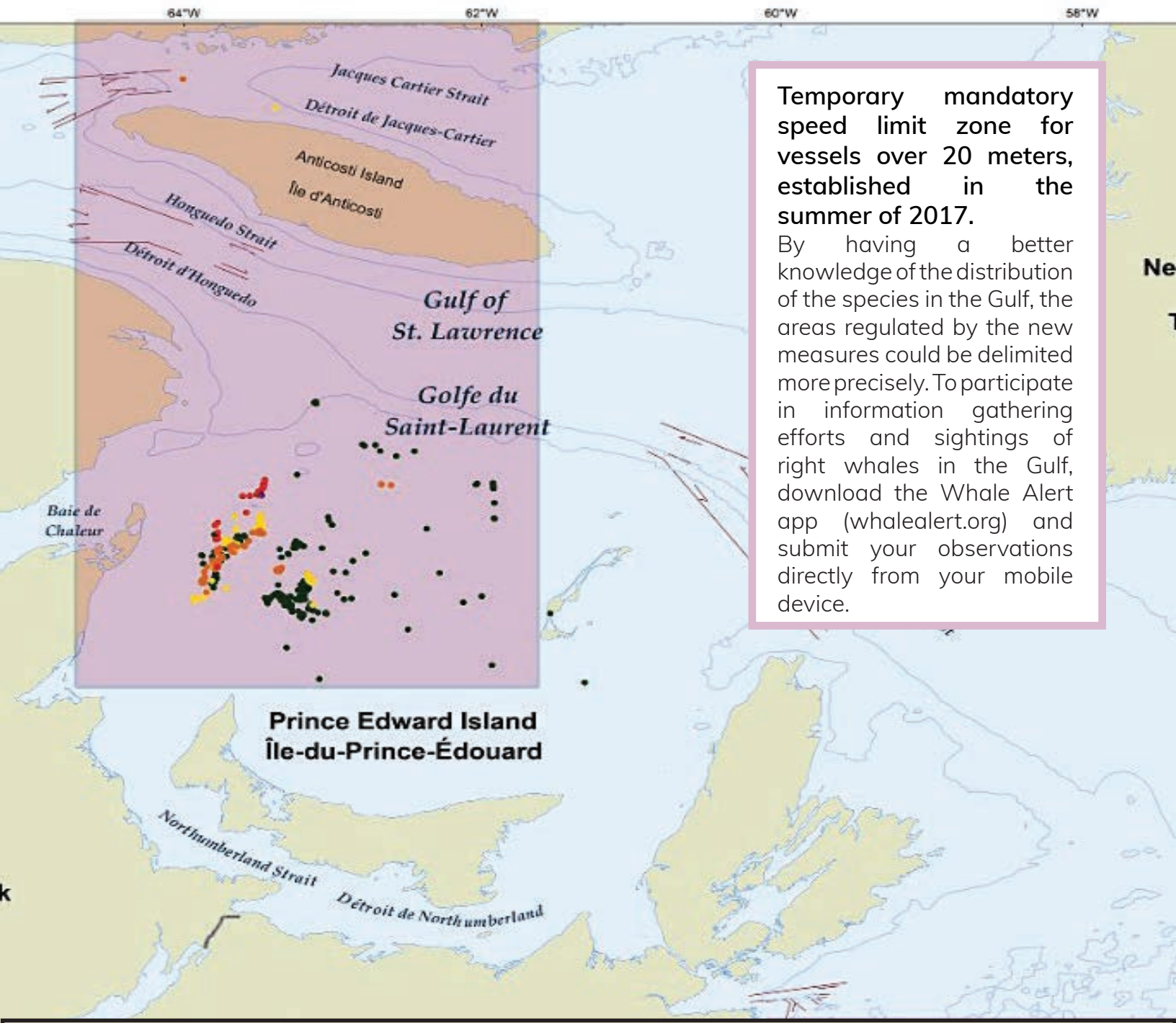
Observation information
(species, individual count, observor, etc.)



BIODIVERSITY APPLICATION-MAIN INTERFACE

THREE COLLECTIONS FROM THE ROMM (SCIENTIFIC MEMBERS, OBSERVER MEMBERS, CROWDSOURCING) ARE ACTIVATED. THE ARCHIVED DATA ARE ACCESSIBLE FROM MAY 1996 TO 2016 (2017 PENDING).

ACCESS TO THE WEB APPLICATION BIODIVERSITY



Temporary mandatory speed limit zone for vessels over 20 meters, established in the summer of 2017.

By having a better knowledge of the distribution of the species in the Gulf, the areas regulated by the new measures could be delimited more precisely. To participate in information gathering efforts and sightings of right whales in the Gulf, download the Whale Alert app (whalealert.org) and submit your observations directly from your mobile device.

NEW MEASURES ANNOUNCED REGULATING CRAB FISHING

New measures to reduce entanglement of North Atlantic right whales in fishing gear were announced on January 23rd. These measures affect the configuration of snow crab fishing gear in the south of the Gulf of St. Lawrence. Other measures should be announced in the coming weeks.

Mobile app: Whale Alert

marine mammal observation sharing

Whale Alert allows the sharing of marine mammal observations.

By activating the geolocation of a smartphone, the application automatically records the location of the observer and proposes a list of reportable species, whether alive, distressed or dead. Species include, among others: North Atlantic right whale, humpback whale, blue whale, beluga whale, etc.

It is also possible to easily attach a photo right on the spot. Scientists can sometimes, on good photos, recognize certain individuals of right whales according to the distribution of callosities on their skin, characteristics of the species, with each individual having a specific pattern.

Whale Alert

Download the app!

ROMM
RÉSEAU D'OBSERVATION DE MAMMIFÈRES MARINS

The Marine Mammal Observation Network (ROMM) is a non-profit organization located in *Rivière-du-Loup* that has been working since 1998 for conservation and enhancement the St. Lawrence and its wildlife inhabiting it. ROMM works for integrated management and collaboration with various stakeholders in the maritime industry, to involve them in a concerted approach for the conservation of marine ecosystems.

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Created in 2005, SLGO's mission is to facilitate the accessibility, dissemination and exchange of official electronic data and information on the St. Lawrence ecosystem through the networking of various organizations, producers and data holders to help decision-making in different areas such as climate change, transportation and marine resource management.

CANADIAN WHALE INSTITUTE

The Canadian Whale Institute was formed in 1997 to increase awareness of the North Atlantic right whale; one of the world's most endangered large whales. It promotes stewardship with mariners to reduce the two human activities that are the major factors affecting the whale's recovery – vessel strikes and entanglement in commercial fishing gear.