2024 SEASON ACTIVITY REPORT

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Navigating Whale Habitat

Canadian East Coast Sector

Prepared by :

MMON MARINE MAMMAL OBSERVATION NETWORK

In collaboration with :

Fisheries and Oceans Canada

Pêches et Océans Canada

SAGUENAY-ST. LAWRENCE MARINE PARK Canada Québec

GREEN MARINE

Association of Arctic Expedition Cruise Operators AECO

SLGO St. Lawrence Global Observatory

ABOUT

The North Atlantic Ocean, including the Gulf of St. Lawrence and its Estuary, represents a key migration corridor and critical habitat for several species of whales, some of which are at risk such as the blue whale, the fin whale, the North Atlantic right whale and the St. Lawrence beluga. It is also a major shipping corridor and a region brimming with a wide range of human activities that are essential in many regards, notably for the economic development of certain coastal communities. Inevitably, these activities have impacts on any whales that cross their path.

The Marine Mammal Observation Network (MMON) and its partners are working together with the different user categories in the St. Lawrence to promote a harmonious coexistence with whales. One of the initiatives that has been launched is an educational platform to promote responsible boating and shipping called *Navigating Whale Habitat.* The platform features portals for different user groups in the St. Lawrence that contain tools and references that these groups can use to contribute to whale conservation in the Northwest Atlantic. The voluntary documentation of marine mammal sightings is one of the actions advocated to encourage users of the St. Lawrence to actively participate in whale conservation. MMON oversees a network of volunteer observer members including a number of ship operators, ferries and organizers of marine observation activities that collect observation data on the whales and seals they encounter in the course of their activities. Citizens are also encouraged to participate in the program.

This report presents an overview of activities conducted between April 1, 2024, to March 31, 2025, as part of the Navigating Whale Habitat program, which aims to compile valuable information on the presence of whales in key shipping areas and to train seafarers, fishers, whale-watching companies and the general public in the identification and conservation of whales.

The project is an MMON initiative and is being carried out in collaboration with a large number of partners such as the St. Lawrence Global Observatory; Green Marine; the Association of Arctic Expedition Cruise Operators; M-Expertise Marine; GREMM; Quebec's Ministry of the Environment, the Fight against Climate Change, Wildlife and Parks; Parks Canada; and Fisheries and Oceans Canada. Representatives of the various user categories of the St. Lawrence are also actively participating in working committees created to develop the tools of the program. We are extremely grateful to all our partners and collaborators for their invaluable feedback, which greatly helps us design tools that are properly suited to their respective realities.

The *Navigating Whale Habitat* program is made possible in part thanks to funding received under Fisheries and Oceans Canada's *Habitat Stewardship Program* (HSP) for Aquatic Species at Risk and *Oceans Management Contribution Program.*

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PART 1 • MMON ACTIVITY REPORT

1.1 PROJECT HISTORY

The Marine Mammal Observation Network (MMON) is a non-profit organization that has been working for the conservation and promotion of the St. Lawrence River and its fauna since 1998. With its integrated management approach, the organization collaborates with various users of the St. Lawrence to involve them in a coordinated effort to preserve marine ecosystems.

Ever since it was first founded, MMON has comprised a vast network of observer members that collect whale and seal observation data in the course of their regular activities. In recent years, the network has enjoyed strong growth and has begun welcoming new categories of members. In addition to years of participation by the maritime industry, whose contribution has been documented in this report since 2015, MMON now boasts a broad network of conservation parks, whale-watching companies, expedition cruise operators as well as institutional players and the research community. In 2022, for the first time, all member categories were grouped in the same annual report and their observations were compiled in a single expanded database. In addition to the growing participation of observer members, observations more and more, with a significant increase in 2024 for a second consecutive year. These additional data are helping to expand the program's databases and complement the sightings made by observer members. This also allows the general public to appreciate the contributions of our observer members, as every sighting is identified in the visualization tool. Over the course of the past year, a number of improvements have been made to the data entry application thanks to funding from Fisheries and Oceans Canada and Parks Canada.

Fisheries and Oceans Canada's *Habitat Stewardship Program* (HSP) for Aquatic Species at Risk, which has funded the program's stewardship projects since they were first launched in 2015, will continue to provide support in 2025, 2026 and 2027. This means it will be possible to continue supporting members in an effort to maintain their enthusiasm for documenting the marine mammals that cross their paths. This activity report describes the improvements made to the *Navigating Whale Habitat* program and the involvement of observer members and citizens in collecting marine mammal observation data throughout 2024.

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1.2 GENERAL COORDINATION

The maritime industry is in its 10th year of involvement in the *Navigating Whale Habitat* training and data collection program. The program is now running smoothly, with a dozen or so active members in this user category participating annually. MMON leads meetings of the advisory board established in 2022-2023 to provide a framework for the development of the whale-watching component of the program. In 2024, the board convened virtually on one occasion (June 4, 2024). However, a number of email exchanges followed, notably to validate the various tools included in the whale-watcher's kit. The board was also called upon to review the press release, which was issued in summer 2024. The advisory board for the whale-watching component was composed of representatives of MMON; GREMM; the Saguenay–St. Lawrence Marine Park (Parks Canada and Sépaq); Quebec's Ministry of the Environment, the Fight against Climate Change, Wildlife and Parks; and Fisheries and Oceans Canada. A Whale-watching Committee consisting of representatives of Croisières Baie de Gaspé, Croisière Escoumins and Croisières Essipit helped review the tools contained in the kit.

MMON MARINE MAMMAL OBSERVATION NETWORK

GREMM

SAGUENAY-ST. LAWRENCE MARINE PARK
Canada Québec

Environnement et Lutte contre les changements climatiques
Québec

Fisheries and Oceans Canada | Pêches et Océans Canada

1.3 A COMPREHENSIVE TOOLKIT FOR PROGRAM MEMBERS

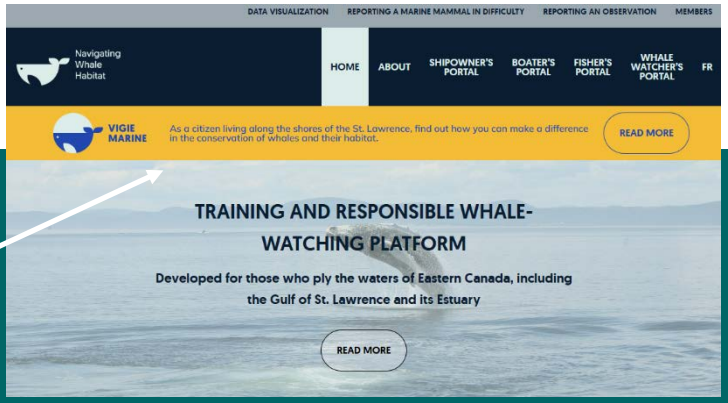
One of the issues raised by the maritime industry early in the project (2015) was where to find and how to consult information on whale conservation as it relates to this sector. Likewise, one of the program's objectives was to create a neutral, web-based platform that would serve as a new reference for issues relating to navigating whale habitat in eastern Canadian waters. The online platform is divided into four portals: the first one for recreational boaters, the second for ship operators, the third for fishers and, lastly, a fourth portal geared toward the whale-watching industry. A new portal was added to the website in March 2025 to educate citizens on various actions they can take to support the recovery of at-risk whales. Users from each category can find on their respective portal key messages from organizations and ministries responsible for whale conservation as well as a number of tools developed under their respective program.

Designed by SLGO, the Navigating Whale Habitat website has been online since spring 2020 at **www.navigationbaleines.ca**. The site – including all training and awareness-raising tools – was officially launched in May 2021 for ship operators, February 2023 for fishers and July 2024 for whale-watching companies. Recreational boaters and members of the general public who consult the online platform are also encouraged to contribute to citizen data collection.

The following sections describe the efforts made throughout the 2024-2025 fiscal year to develop tools for the ***Navigating Whale Habitat*** platform.

Continuous Improvement of Online Platform Portals

Throughout the 2024-2025 fiscal year, a number of improvements and updates were made to optimize the data collection form, promote the ***Vigie Marine*** data entry application, and carry out annual maintenance of the site, notably the addition of new members participating in the data collection program. A new portal designed to promote conservation actions that ordinary citizens can take to support the recovery of at-risk cetacean species was added in March 2025.



Screenshot of online portal home page showing the addition of the yellow banner dedicated to citizen science for the conservation of at-risk whale species

Optimization of Data Entry and Visualization Tools

One of the project's most significant milestones came in 2022 with the creation and launch of a new whale observation **data entry** and **visualization** tool that is available on the online platform. This tool aims to optimize data collection by MMON's observer members and citizens (fishers, boaters and the general public), as well as how these data are subsequently managed.

In 2024-2025, training was provided to several program members on how to use the online data entry tool. The switch to this tool is a gradual one: Some members adopted it quickly while others continue to prefer reporting their sightings on paper. We noted an incremental but constant increase in its use in 2024, however. MMON will continue its training efforts to encourage as many observer members as possible to use this approach while at the same time maintaining the paper reporting option, which is indispensable to ensure the participation of some data collectors. The advisory board chose a new name for the data entry application: *Vigie Marine*.

A promotional campaign was carried out in 2024 to raise awareness of the application and encourage citizen involvement.

VIGIE MARINE

In 2023-2024, with funding received under Fisheries and Oceans Canada's *Oceans Management Contribution Program*, SLGO finalized the configuration of an offline data entry application for seafarers who tend to gather observation data in areas without Internet coverage. After testing this tool in the summer of 2023, whale-watching companies in the Gaspé Peninsula submitted their feedback and recommendations for improvements to MMON. An optimized update was made available in June 2024.

Additionally, all data collected by MMON observer members, notably those of 2024, were added to the visualization portal.

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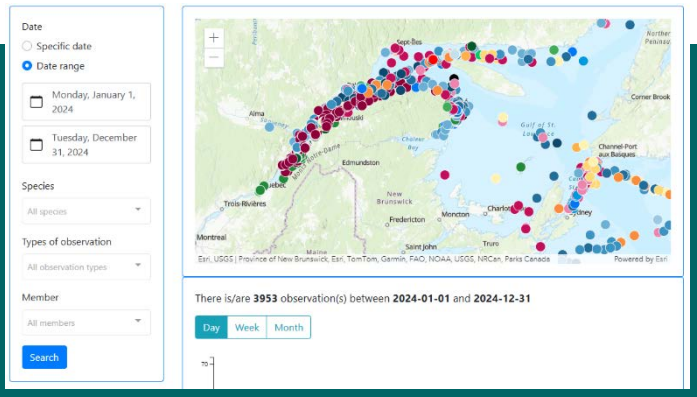


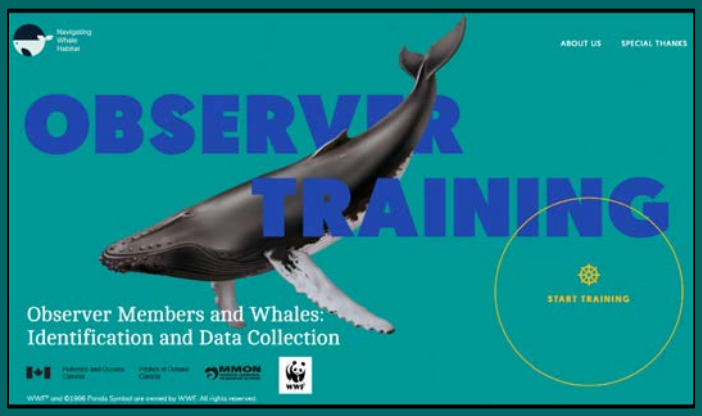
Screenshot of visualization tool

Online Training

When the project was first launched in 2015, MMON's biologists offered only in-person training to the crew members of participating ships (e.g. presentations as part of seminars, on-board or dockside crew training). In light of the growing interest in the project within the maritime and whale-watching industries and in an effort to promote continuous learning within these companies, a bilingual self-training tool on whale identification and data collection was developed. A certificate is issued to participants who successfully complete the training, i.e. those who score at least 70% on the final evaluation. The training is now available in two versions, either online in any of the portals, or offline once it has been downloaded and installed onto a device. The training is also available in a "packaged" format that can be integrated into other learning systems already in use by ship operators directly on board their vessels (e.g. learning management system, LMS). To receive this version, please email MMON at info@romm.ca.

The *Navigating Whale Habitat* platform also features a second training tool dedicated to recreational boaters. This training was developed as part of a collaborative effort between MMON, GREMM, Parks Canada, and Fisheries and Oceans Canada. It is designed to educate the users of different categories of recreational watercraft (kayaks, motorboats, sailboats) on the potential impacts of their activities on whales as well as regulations that apply whenever these animals are present.

Screenshot of homepage for boaters training



Screenshot of homepage for observer members training

Stewardship Guides

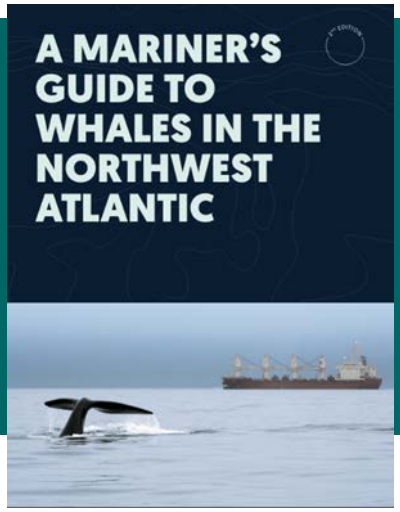
In the context of the *Navigating Whale Habitat* program, MMON has produced a series of three guides over the years that aim to educate the various users of the St. Lawrence on how to responsibly navigate whale habitat along Canada's east coast.

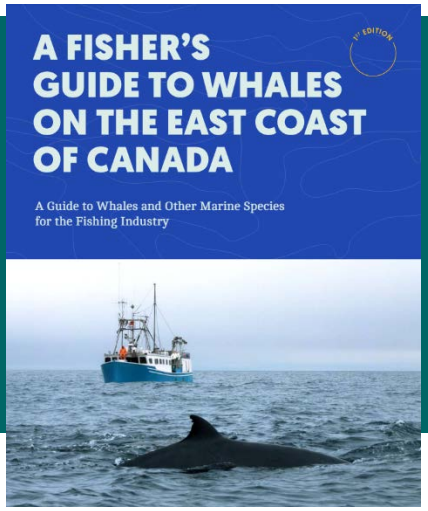
In 2014, MMON and the Shipping Federation of Canada teamed up to produce the first guide, which aimed to provide ship operators with information on the issue of ship strikes and the presence of whales and to educate them on areas where extra caution is warranted. Highly popular, this initial guide inspired the creation of similar works in the Arctic, on the Canadian west coast, and in the Agoa Marine Mammal Sanctuary in the French West Indies. It was updated five years later (2019).

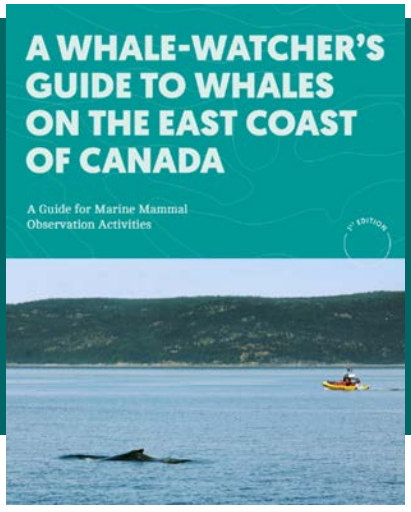
Inspired by the first guide for ship operators, MMON joined forces with World Wildlife Fund Canada (WWF-Canada) and M-Expertise Marine to create a similar reference in 2022, this time adapted to the reality of fishing communities. This tool also presents information on the issue of whale entanglements in fishing gear, risk factors, as well as measures and innovations designed to minimize incidents, a number of which stem from the fishing industry. Additionally, the guide includes identification sheets for whales, sea turtles and sharks.

In the winter of 2024, once again on the basis of the initial guide for ship operators, MMON finalized production of a third guide, this time with a focus on the whale-watching industry. This guide contains information on the potential impacts of marine mammal observation activities, mitigation measures to minimize them, the positive role that whale-watching companies can play in conservation as well as identification sheets for the whales and seals of eastern Canada.

The PDF versions of these three guides can be downloaded from the different portals of the online platform and hard copies are available upon request by emailing info@romm.ca.



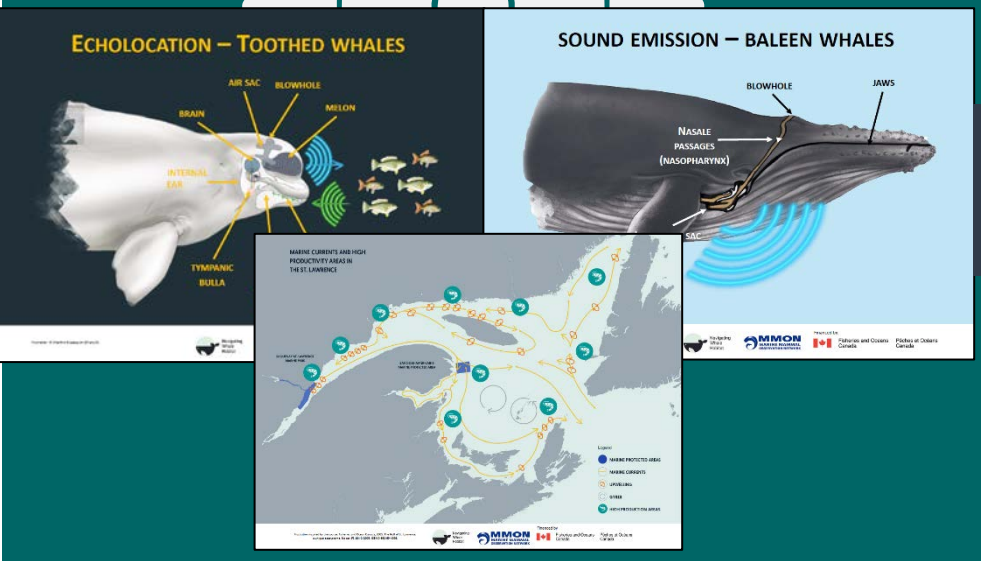




Toolkits

Toolkits are also developed and distributed to participants of the *Navigating Whale Habitat* training and data collection program. Custom tailored to each user category, they consist of pocket folders with the project logo that notably contain data collection protocols; information sheets on whales, sharks and turtles; mitigation measures related to the user category's activities; and other relevant information. The ship operator's and fisher's toolkits are continuously distributed together with the stewardship guides specifically designed for these groups.

In the winter of 2023-2024, MMON, in collaboration with the members of the advisory board, produced more comprehensive educational toolkits that were distributed to whale-watching companies operating in the St. Lawrence Estuary, the Côte-Nord region and the Gaspé Peninsula throughout the 2024 summer season. In addition to the marine mammal observation data collection protocol and other educational tools designed for whale-watching companies, the toolkits contain an interpretation manual, laminated information sheets on different topics as well as items to support interpreter guides by giving them quick access to easy-to-understand visual information.



Example of information sheets included in the toolkit for whale-watching companies

1.4 COMMUNICATION ACTIVITIES

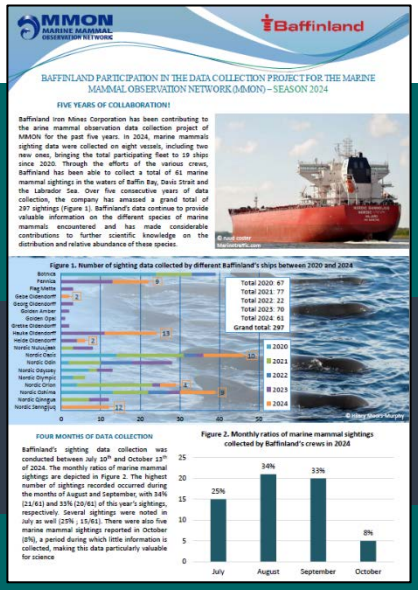
Communications with members

The program's observer members, especially ship operators and whale-watching companies, remained highly active in 2024. The personalized data collection report sent out to these members at the end of the year is a source of motivation for crews to continue logging their data.

Regular contact with these crews is maintained through the bulletin *The Observer* (issued four times in 2024-2025), which highlights their contributions and monitors data collection. Training efforts also continued with certain crews to encourage them to enter their sightings through the application rather than on paper; the gradual transition continues! MMON met with whale-watching companies in summer 2024 to train them in data collection techniques, hand out the brand-new educational kit, and recruit new members.

Communication with this group was direct, i.e. either in person or over the phone. A total of 29 kits were distributed to different whale-watching companies. Subsequently, these companies were sent a survey to learn how they used and appreciated the material they were provided and to identify any improvements that could be made.

At various events, including the annual scientific gathering of Québec-Océan in February 2024, MMON and its collaborators continued to distribute project-related tools that aim to involve and educate ship operators as well as the fishing community. MMON also handed out *A Fisher's Guide to Whales on the East Coast of Canada* at trainings it gave to offshore fishery observers from Biorex and Javitech.


MMON MARINE MAMMAL OBSERVATION NETWORK
Baffinland

BAFFINLAND PARTICIPATION IN THE DATA COLLECTION PROJECT FOR THE MARINE MAMMAL OBSERVATION NETWORK (MMON) – SEASON 2024

FIVE YEARS OF COLLABORATION!

Baffinland Iron Mines Corporation has been contributing to the arine mammal observation data collection project of MMON for the past five years. In 2024, marine mammals sighting data were collected on eight vessels, including two new ones, bringing the total participating fleet to 19 ships since 2020. Through the efforts of the various crews, Baffinland has been able to collect a total of 61 marine mammal sightings in the waters of Baffin Bay, Davis Strait and the Labrador Sea. Over five consecutive years of data collection, the company has amassed a grand total of 297 sightings (Figure 1). Baffinland's data continue to provide valuable information on the different species of marine mammals encountered and has made considerable contributions to further scientific knowledge on the distribution and relative abundance of these species.

Figure 1. Number of sighting data collected by different Baffinland's ships between 2020 and 2024

Total 2020: 67
Total 2021: 77
Total 2022: 22
Total 2023: 70
Total 2024: 61
Grand total: 297

2020
2021
2022
2023
2024

FOUR MONTHS OF DATA COLLECTION

Baffinland's sighting data collection was conducted between July 10th and October 13th of 2024. The monthly ratios of marine mammal sightings are depicted in Figure 2. The highest number of sightings recorded occurred during the months of August and September, with 34% (21/61) and 33% (20/61) of this year's sightings, respectively. Several sightings were noted in July as well (25% ; 15/61). There were also five marine mammal sightings reported in October (8%), a period during which little information is collected, making this data particularly valuable for science.

Figure 2. Monthly ratios of marine mammal sightings collected by Baffinland's crews in 2024

25%
34%
33%
8%
July
August
September
October

Example of an individual report from an observer member


The Observer
Winter 2025

THE SEI WHALE

How well do you know the sei whale? This species is found off the eastern Canadian coast but is rare to observe and it is difficult to distinguish from other large whales. The Atlantic population, which has been greatly reduced by whaling, would likely be under 1,000 mature individuals. So how do you distinguish this species from other whales? The sei whale can reach a size of 12 to 15 metres in length and weigh up to 20 to 30 tonnes. It is thus twice as large as the minke whale, but smaller than the fin whale.

The most important identification criterion is probably its dorsal fin, which is prominent, curved and located slightly further front of the body compared to other species. When the animal surfaces, the blow, 4,5 metres high, can be seen at the same time as the dorsal fin, which helps differentiate the sei whale from other large whales. If in doubt, take photos to facilitate your identification later.

Photo: Anthony Pierce Alamy Stock Photo

MMON MARINE MAMMAL OBSERVATION NETWORK

MMON is a non-profit organization dedicated to the protection of whales and seals of the St. Lawrence.

DATA COMPILATION FOR THE YEAR 2024

The MMON team is actively working to compile all the marine mammal's data collected by its network of observer members to produce the 2024 global activity report. We have noticed a good participation of MMON observer members throughout the year. The following figure, taken from the visualization tool of the application Vigie marine, gives you a preview of the data compiled to this day in the online application.

For those who have not yet done so, we kindly remind you to send us your data for 2024 as soon as possible. An individual report of observations compiled in 2024 by your team members will be sent to you shortly thereafter. The MMON is grateful for your valuable collaboration to the project!

Figure taken from the marine mammal observations visualization tool of the application Vigie marine. Location of opportunistic observations collected by MMON observer members between January 1st and December 31, 2024, compiled to this day. Box A: observations in the Labrador Sea and Ungava Bay; Box B: observations in the Estuary and Gulf of St. Lawrence.

NEWS FROM THE MEMBER SERVICE

The MMON is pleased to introduce Rachel Brien Lavergne, who is the new Member Service manager. Rachel has been part of the MMON team since 2022 as a project manager. In preparation for the upcoming season, we encourage you to consult the tools available online on the website Navigating Whale Habitat. We are also available to train your crews in marine mammal identification and the use of the application for data collection and visualization: Vigie marine.

Please, do not hesitate to contact Rachel for any questions regarding the data collection program and to submit your observation reports at rblavergne@mmon.ca.

This project is funded by Fisheries and Oceans Canada, Fisheries et Océans Canada. Collaboration with SLGO

***The Observer* Newsletter**

Communication with the General Public

In 2024, MMON invested considerable effort to familiarize the general public with the *Navigating Whale Habitat* platform by deploying a new project called "Sentinels of the St. Lawrence," which is also being funded by Fisheries and Oceans Canada's HSP. The objective of this project is to meet with the general public by maintaining booths at various maritime events and organizing citizen science days on board ferries to educate the public on actions they can take to facilitate the recovery of at-risk cetacean species, with activities pertaining specifically to belugas and large rorquals. The collection of citizen data through the *Vigie Marine* application developed under the *Navigating Whale Habitat* program was also promoted.

The *Vigie Marine* promotional poster was reprinted and distributed (50 copies), as were promotional cards (1,000 copies in French and 200 in English) with QR codes to access the boater's training and the *Vigie Marine* data entry application. A banner stand (Parapost) was produced aiming to encourage citizens to submit their data via *Vigie Marine* and stickers (1,000 copies) promoting the *Navigating Whale Habitat* website were reprinted and distributed at activities. All tools were approved by the project's advisory board and copies were given to project partners to distribute during their respective activities.

In 2024, MMON maintained promotional booths at twelve different events across a large swath of Quebec: Quebec City, Kamouraska, Cacouna, Trois-Pistoles, Le Bic, Matane, Gaspé, Percé and Sept-Îles. Each of these events was posted on MMON's Facebook page and those of its partners. Additionally, a total of four observation sessions were carried out in August and September 2024 on the Trois-Pistoles – Les Escoumins, Rivière-du-Loup – Saint-Siméon, and Matane – Baie-Comeau – Godbout ferry crossings.

Lastly, a press release was issued in September 2024 to announce the organization of "Sentinel" activities on board ferries, which was widely covered by the media.

Booth and various promotional tools for the "Sentinels of the St. Lawrence" program © MMON

1.5 OUTLOOK FOR PROGRAM DEVELOPMENT IN 2025-2026

MMON received good news when it was confirmed that financial assistance would be provided under Fisheries and Oceans Canada's *Habitat Stewardship Program* (HSP) for Aquatic Species at Risk for the next three fiscal years (2025-2026, 2026-2027 and 2027-2028). This financial assistance will serve to continue supporting current observer members, recruit new ones, ensure the web platform is properly maintained, and, especially, continue developing the "Sentinels of the St. Lawrence" component of the project. The latter notably aims to encourage greater citizen involvement in collecting marine mammal observation data via the *Vigie Marine* application of the *Navigating Whale Habitat* program. Key actions that will be carried out over the course of the 2025-2026 fiscal year are as follows:

- Increase communication activities to boost awareness of the *Navigating Whale Habitat* program and its application, *Vigie Marine*.
- Develop new promotional tools for the general public, notably to promote whale watching from shore and data collection.
- Organize a dozen or so activities focused on citizen science and whale conservation on board ferries of the St. Lawrence and approximately ten maritime events throughout the summer of 2025.
- Enhance data collection for sightings made from shore by citizens in remote regions.
- Increase the number of observer members collecting data in key sectors such as Côte-Nord (particularly eastern Haute-Côte-Nord and Basse-Côte-Nord), the Gulf of St. Lawrence and the Arctic.
- Promote the application for use in research projects, as will be the case for two projects overseen by M-Expertise Marine.
- Continue distributing tools developed in the framework of three stewardship projects for the maritime, tourism and fishing industries.

Harbour Seal © S. Papias, MMON

PART 2 • RECAP OF DATA COLLECTION PROGRAM DEVELOPMENT IN 2024

© C. Dupasquier, MMON

2.1 CONTINUOUS EFFORTS TO SUPPORT MEMBERS AND RETROSPECTIVE OF YEARLY RESULTS

Throughout 2024, our main focus was on recruiting new members from the whale-watching industry. Only two trainings were offered to program members in 2024, as the marine mammal identification training proved to be less of a concern with this category of observer members, who are generally highly skilled in this regard. The summer 2024 kit distribution tour was an opportunity to liaise with representatives from a number of companies interested in becoming members. We hope to cement the involvement of other members in this user category in 2025.

The production of individual reports continues to be appreciated by members and is a strong source of motivation for the crews. MMON's workload increased dramatically due to the spike in the number of observer members in recent years, notably with the efforts invested to involve organizers of marine observation activities. After producing 12 individual reports in 2021, this figure rose to over 20 in each of the past two years! Once again, analysis of the corresponding data kept part of the team busy for several months this winter and spring.

2.2 A FEW HIGHLIGHTS OF PROGRAM DEVELOPMENT, IN 2024-2025

- One of the main objectives of Phase III of project development – which commenced on April 1, 2022, and will last three years – was to encourage whale-watching companies to get involved in the *Navigating Whale Habitat* program. By 2022-2023, this challenge was already met when five organizers of marine observation activities signed collaboration agreements in which they agreed to actively participate in data collection efforts. This expansion continued in 2023-2024 with the signing or renewal of collaboration agreements with seven additional members in this category. In 2024-2025, one of 2023's newly active members, Excursions de la Providence, ceased operations. Nevertheless, one new member joined the ranks, namely Société Provancher, meaning the number of members in this St. Lawrence user category remained stable at 12, 10 of which participated in data collection in 2024. Additionally, two new collaboration agreements were inked in 2024, namely with Griffon Aventure and Excursions de l'Île-Grande-Basque, both of which will begin collecting data in 2025.
- Another development objective was to continue training members of the maritime industry while encouraging them to get involved. In 2024-2025, discussions were held with Green Marine in order to add the *Vigie Marine* application to the data collection criterion of the organization's environmental certification program. Members include a total of 13 ship operators, 12 of which participated in data collection in 2024. A new agreement was signed with the Corporation des pilotes du Bas Saint-Laurent, which is expected to participate in the program once again in 2025.
- A total of 28 companies are now observer members under the *Navigating Whale Habitat* program, including 14 members from the maritime sector operating a fleet of over 60 ships and 14 organizers of marine observation activities.
- MMON and its partners also continued their promotional efforts to increase citizen participation in the program. These efforts ultimately paid off, with the number of observations reported in 2024 doubling compared to 2023!

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2.3 OVERVIEW OF PARTICIPATING COMPANIES

	LOGO	DESCRIPTION	NUMBER OF PARTICIPATING VESSELS IN 2024	REGION COVERED
OUR VESSEL OPERATOR MEMBERS				
Algoma Central Corporation		Algoma Central Corporation owns and operates a fleet of over 20 dry and liquid bulk carriers.	As of today, 14 vessels have collected data, including 3 in 2024.	St. Lawrence Seaway, US east coast, Canadian and US west coasts
Atlantic Towing		Atlantic Towing specializes in various maritime services including towing, oil and gas exploration, and product support.	1 vessel (*Paul A. Sacuta*)	Newfoundland, Nova Scotia, British Columbia et Trinidad and Tobago
Baffinland		Baffinland Iron Mines Corporation is a Canadian mining company that extracts iron ore at the Mary Rive operation and subcontracts various vessel owners/operators to transport this ore.	8 subcontracted vessels active in 2024.	Eastern Arctic
Canada Steamvessel Lines		CSL operates a fleet of approximately 20 vessels, mainly bulk freighters.	2 vessels (*Nukumi* and *Ferbec*)	St. Lawrence Seaway
Compagnie de navigation des Basques		CNB is a private company that operates the ferry between Trois-Pistoles and Les Escoumins.	1 ferry (L'*Héritage 1*)	St. Lawrence Estuary
CTMA		CTMA offers cruises on the St. Lawrence and a ferry service between the Magdalen Islands and the coast of Prince Edward Island.	No data collected in 2024.	Gulf of St. Lawrence

	LOGO	DESCRIPTION	NUMBER OF PARTICIPATING VESSELS IN 2024	REGION COVERED
OUR VESSEL OPERATOR MEMBERS				
Fednav	FEDNAV	Fednav specializes in the transport of solid and liquid bulk by means of bulk carriers, tankers (including oil tankers) and cement freighters.	2 vessels (*Arvik I* and *Umiak I*)	St. Lawrence Seaway and Arctic
Groupe Desgagnés	DESGAGNÉS	Groupe Desgagnés operates a fleet of approximately 20 vessels (liquid bulk, chemicals and dry bulk).	18 active vessels in 2024.	St. Lawrence Seaway, Maritime Provinces, Arctic and international
Marine Atlantic	Marine Atlantic Marine Atlantique	Marine Atlantic operates a ferry service between Nova Scotia and Newfoundland & Labrador	3 vessels (*Leif Ericson*, *Ala'suinu* and *Blue Puttees*)	Gulf of St. Lawrence between Nova Scotia and Newfoundland & Labrador
NEAS	NEAS	NEAS specializes in the vesselping of products, supplies and foodstuffs to remote regions of the eastern and western Arctic.	5 vessels (*Sivumut*, *Ukpik*, *Nunalik*, *Mitiq* and *Aujaq*)	Eastern Arctic
Oceanex	OCEANEX	Oceanex offers vesselping to Newfoundland and Labrador from the rest of North America.	3 vessels (*Oceanex Sanderling*, *Oceanex Connaigra* and *Oceanex Avalon*)	Gulf of St. Lawrence
Société des traversiers du Québec	Société des traversiers Québec	STQ is a Crown corporation that provides ferry services on the St. Lawrence.	2 vessels (Matane-Baie-Comeau-Godbout ferry) and 2 ferry terminals (Godbout and Isle-aux-Coudres/Saint-Joseph-de-la-Rive).	Estuary and Gulf of St. Lawrence

	LOGO	DESCRIPTION	NUMBER OF PARTICIPATING VESSELS IN 2024	REGION COVERED
OUR VESSEL OPERATOR MEMBERS				
Reformar	REFORMAR	Reformar supports researchers and science organizations into the realization of marine science and technology projects by providing access to scientific instruments and equipment.	1 vessel (*Coriolis II*)	Estuary and Gulf of St. Lawrence and Arctic
OUR ORGANIZER OF MARINE OBSERVATION ACTIVITIES MEMBERS				
NEMO-ISMER	NEMO Océanographie	The Navire Étudiant du Module en Océanographie (NEMO) is the student association of the oceanography program offered by UQAR's Institute of Ocean Sciences.	No data collected in 2024.	Estuary and Gulf St. Lawrence
Écomaris	ÉCO MARIS	ÉcoMaris is an organization that offers educational programs and outings to discover the St. Lawrence on board a sailboat.	1 sailboat (*ÉcoMaris*)	Estuary and Gulf St. Lawrence
Saguenay Aventures	Saguenay aventures	Saguenay Aventures offers whale-watching cruises and sea kayak excursions in the Saguenay Fjord.	No data collected in 2024.	Saguenay Fjord
Parcs Canada	Parcs Canada / Parks Canada	Parks Canada co-manages the Saguenay-St. Lawrence Marine Park, which operates a number of land-based marine mammal observation sites.	2 vessels No data was collected on the terrestrial observation site (Cap de Bon-Désir) in 2024.	Saguenay-St. Lawrence Marine Park

	LOGO	DESCRIPTION	NUMBER OF PARTICIPATING VESSELS IN 2024	REGION COVERED
OUR ORGANIZER OF MARINE OBSERVATION ACTIVITIES MEMBERS				
Croisières Baie de Gaspé		Croisières Baie de Gaspé offers whale-watching trips departing from Grande-Grave in Forillon National Park.	2 vessels (*Narval III* and *Rocher Le Vieux*)	Gaspé Bay
Cap Aventure		Operating out of the Gaspé marina, Cap Aventure offers several types of excursions on the water, whether it be by Zodiac, kayak or paddleboard.	1 Zodiac	Gaspé Bay
Provancher Société		The Provancher Société offers guided tours to the Île-aux-Basques Natural and Historical Park, with a departure from Trois-Pistoles.	1 vessel (*Léon Provancher*)	St. Lawrence Estuary
Association of Arctic Expedition Cruise Operators		AECO is an international association for expedition cruise operators operating in the Arctic and others with interests in this industry.	1 company (Hurtigruten Expeditions)	Arctic Region
Société d'écologie des battures du Kamouraska		SEBKA offers sea kayaking trips in the Kamouraska Islands sector.	Sea kayak	St. Lawrence Estuary

	LOGO	DESCRIPTION	NUMBER OF PARTICIPATING VESSELS IN 2024	REGION COVERED
OUR ORGANIZER OF MARINE OBSERVATION ACTIVITIES MEMBERS				
Croisières Essipit		Croisières Essipit offers Zodiac-based whale-watching trips in the north shore sector of the St. Lawrence Estuary with departures out of Les Bergeronnes.	5 inflatable watercrafts.	St. Lawrence Estuary
Cégep de La Pocatière		In collaboration with SEBKA, the Cégep organizes as part of its bioecology program sea kayak outings to teach students how to document marine mammal observations in the Kamouraska Islands sector.	Sea kayak	St. Lawrence Estuary
Croisière Escoumins		Croisières Escoumins offers whale watching tours in north shore sector of the St. Lawrence Estuary with departures out of Les Escoumins	2 inflatable watercrafts.	St. Lawrence Estuary

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PART 3 • RESULTS OF DATA COLLECTION PROGRAM IN 2024

The efforts made by observers to report their sightings are not in vain. There is growing interest amongst research organizations in the opportunistic databases compiled by MMON's network of observer members. The highly reliable data collected by the network are of great value in terms of their quantity and the size of the territory covered. These data provide valuable insight on the distribution and relative abundance of different species of whales and seals, in addition to complementing existing scientific data.

In this regard, a **Science Advisory Report** published by Fisheries and Oceans Canada in June 2024 references the opportunistic data of the observer member network as part of the recovery potential assessment for the St. Lawrence Estuary Beluga. Since 2012, recurrent scientific surveys carried out throughout the northwestern Gulf of St. Lawrence, combined with opportunistic observations from various sources, including data from MMON's *Navigating Whale Habitat* program, have confirmed the presence of belugas in the northwestern gulf in spring, fall and winter. Due to climate change, scientists have come to expect a certain interannual variability and possible changes in the migratory habits of different beluga populations. This is an excellent example of the importance of data collected throughout the year by our observer members, particularly those logged outside the peak whale-watching season (summer). We are grateful for your contribution!

3.1 WHALE DISTRIBUTION PATTERNS IN THE ST. LAWRENCE IN 2024

The 2024 whale-watching season was marked by an increase in the number of blue whales and fin whales reported and even by the presence of a hybrid (blue/fin) rorqual in the waters of the St. Lawrence. Often mentioned by observers was the diversity of species observed in the St. Lawrence Estuary, a situation that was confirmed by MMON's biologists in their study sectors. There was a decline, however, in the number of observations of large cetaceans in the Gaspé Peninsula region in 2024 compared to previous years, including the humpback whale, which is typically omnipresent in these waters.

The number of data collected by members of the maritime industry in 2024 increased slightly compared to 2023, but remains below the records set between 2018 and 2021. Even if member participation in this category is stable and the corresponding collection effort is robust, it can be seen that the number of marine mammal observations has been lower in recent years in the waters of eastern Canada. Thanks to members and ordinary citizens, sightings were reported in all twelve months of 2024. The following section presents the detailed the results of the efforts made by observer members of the *Navigating Whale Habitat* program.


Bearded Seal © Scenic Cruises

3.2 SUMMARY OF OBSERVATIONS REPORTED BY SHIP OPERATORS IN 2024

Another great year of data collection in 2024!

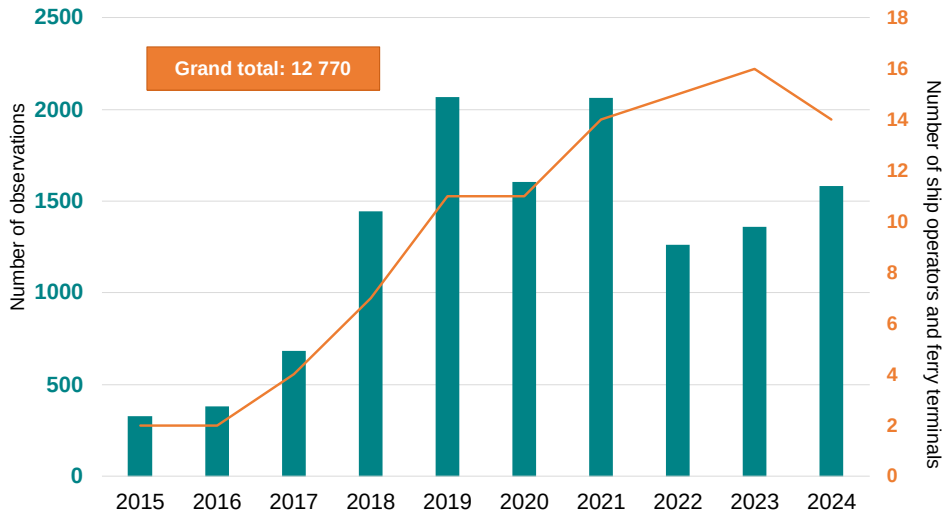


Figure 1. Evolution of observation data logged and number of participating ship operators and ferry terminals, 2015 – 2024

A total of 1,584 data were collected by the 12 active ship operator members of the *Navigating Whale Habitat* program in 2024. As shown in Figure 1, this is an increase over 2023, when a total of 1,328 observations were logged by 13 participating ship operators. Ship operator members include freight hauling services, ferries and ferry terminals, port and maritime services and even services to access scientific equipment used in research projects.

In this regard, the number of participating companies in 2024 declined slightly compared to 2023 but remains on par with the robust figures observed since 2021, i.e. after the pandemic. In fact, several ship operators or ferry terminals did not log any data in 2024, while a few new companies collected data for the first time.

The number of observations entered in 2024 falls short of the record levels of 2019 and 2021 but nevertheless represents the fourth best year in terms of the number of observations documented by observer members from the maritime industry. The 2024 collection even comes close to the number of data registered in 2020, with just twenty or so observations separating these two years.

The various companies that helped collect data from on board a ship in 2024 are presented in Figure 2. Of all the data collected by the maritime industry, ship operators (excluding ferry terminals) logged just over 93%. The largest data sets were provided by Groupe Desgagnés (42.8%) and the Compagnie de navigation des Basques (16.2%). The Matane – Baie-Comeau – Godbout ferry, Oceanex, Marine Atlantique and NEAS each accounted for between 6 and 9% of all data. The other companies combined for 11.3% of the data set, with individual contributions ranging from 0.1% and 4.1%.

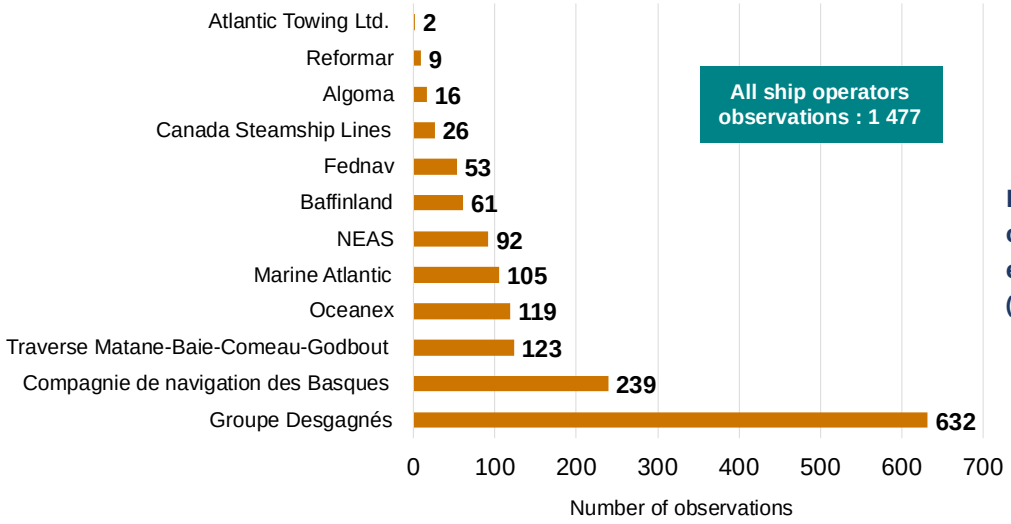


Figure 2. Number of observation data logged by each ship operator in 2024 (ferry terminals not included)

For the third consecutive year, the contribution of ship operators made it possible to collect observation data in all twelve (12) months of the year. Data were mainly gathered between May and October, as was the case in 2023. In fact, it was during this period that over 94% of the observations were logged (1,396 of the 1,477 data points), not counting those collected from the two participating ferry terminals. This is the peak period for marine mammals in both the St. Lawrence and in the Arctic, as many species take advantage of the absence of ice cover to come feed in the nutrient-rich waters of these regions.1 Roughly half of the observations were recorded between July and August, i.e. 332 and 373 data, respectively. As for winter, fewer than ten (10) observations were recorded in January and February, whereas between 14 and 22 data points were logged for the months of March, April, November and December. This shows that observations can indeed be made and documented via the Vigie Marine data entry tool during these times of the year. This provides invaluable data during months during which marine mammal occurrences are rarer and less documented by scientists.

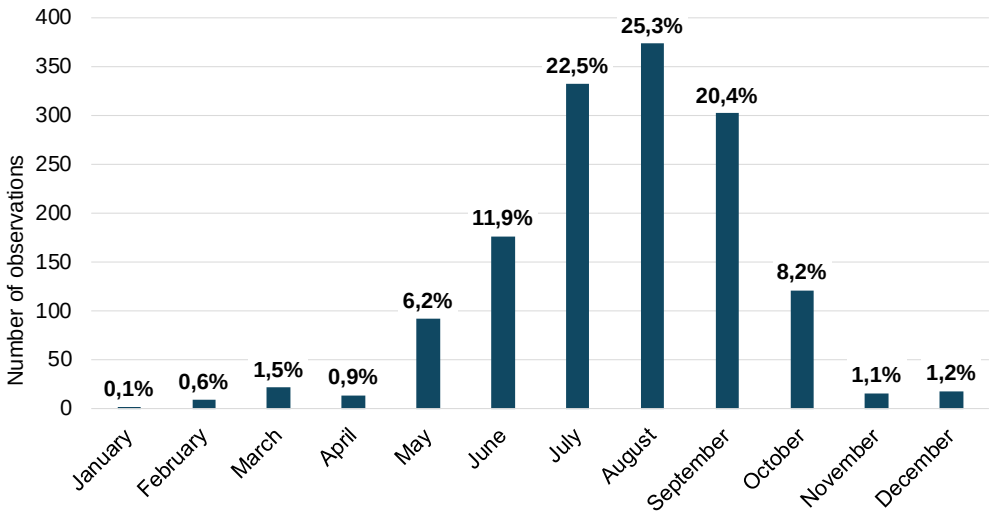
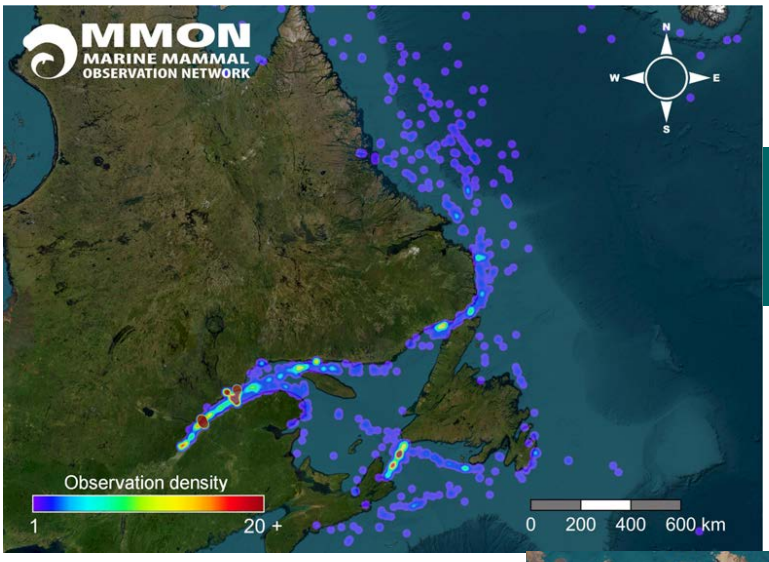
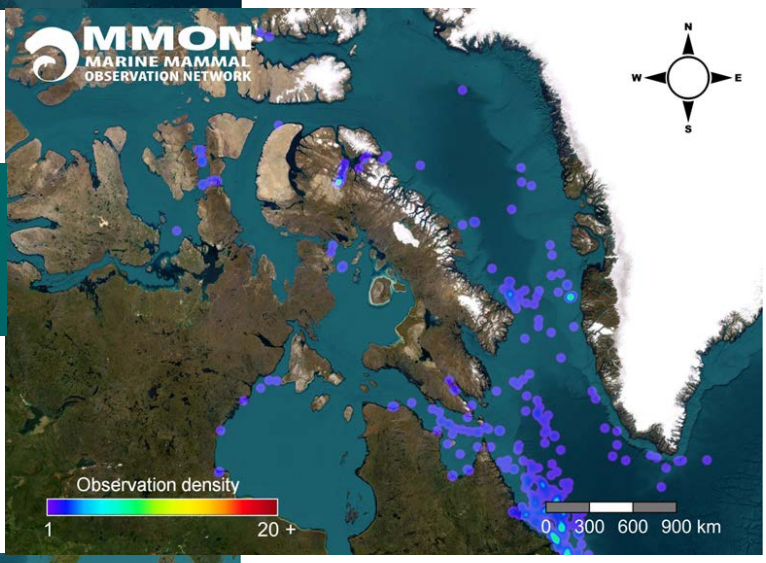


Figure 3. Monthly breakdown (numbers and percentages) of observations data logged by ship operators (ferry terminals excluded) in 2024

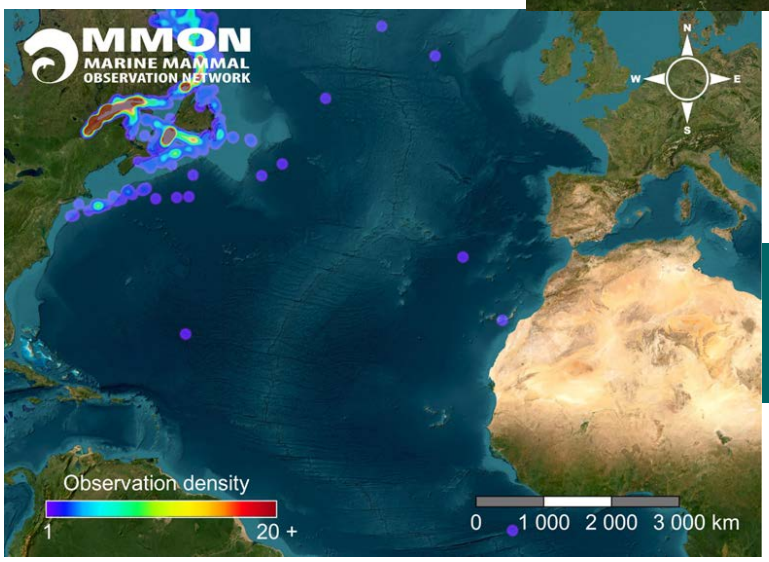
Vast Coverage Area



Map 1. Density of observation data collected by ship operators in 2024 – East Coast of Canada



Map 2. Density of observation data collected by ship operators in 2024 – Northern Quebec and Arctic



Map 3. Density of observation data collected by ship operators in 2024 – North Atlantic

The geographic distribution of observation data collected by ship operators in 2024 stretches from the Arctic to West Africa (Map 3). The majority of data are concentrated in eastern Canada (Map 2), Canada's Arctic regions and Greenland (Map 1). Overall, the distribution is similar to that of 2023. However, no observations were reported from the Gulf of Mexico or along the west coast of the US, while a few sightings were documented off the coasts of Africa and Europe.

- The northernmost observations (Map 1) were made in Jones Strait, Peel Strait and around Bylot Island. A few observations were also made in Hudson Bay and Hudson Strait. Most data are located between Baffin Bay and Davis Strait as well as near the tip of Greenland.
- A little farther south (Map 2), numerous observations are found along the Canadian coast in the Labrador Sea. In the Gulf of St. Lawrence, abundant observations line the main shipping corridors used to reach the Atlantic Ocean or more northerly waters, notably the Belle Isle, Jacques Cartier, Cabot and Honguedo straits. The various ferry crossings in the St. Lawrence Estuary as well as between Newfoundland and Nova Scotia are also well represented. These crossings were data collection hotspots for the maritime industry in 2024.
- Other sightings are found at different locations in the North Atlantic (Map 3). A number of these data points are located along the US and Canadian coasts, as well as in Spanish- and Portuguese-owned archipelagos and off the coasts of Africa. Lastly, a handful of observations made during long-distance journeys are found over 1,000 km from the nearest coast.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Precious Data on Whale Distribution Patterns

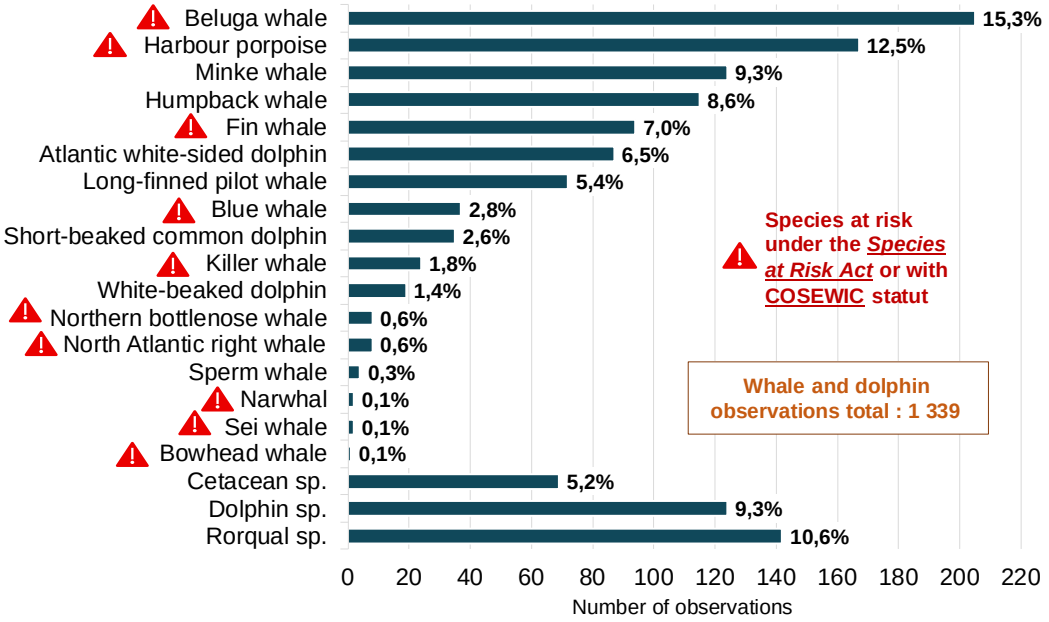

Figure 4. Species breakdown (numbers and percentages) of cetacean observations made by ship operators in 2024 (ferry terminals not included)

Ship operators collected a total of 1,339 cetacean observations in 2024, which is 168 more than in 2023. As can be seen in Figure 4, the most frequently identified species this year was the beluga, with 205 observations (15.3%). Other frequently encountered species include the harbour porpoise, minke whale and humpback whale, with 167, 124 and 115 observations, respectively. The white-sided dolphin and long-finned pilot whale were spotted with fairly equal frequency, i.e. 87 and 72 observations each. As for large cetaceans, fin whales were identified 94 times, blue whales 37 times, North Atlantic right whales 8 times, and sperm whales 4 times, while the rarely observed bowhead whale was spotted on 1 occasion. As for mid-size species, killer whales, northern bottlenose whales, and sei whales were identified 24, 8 and 2 times, respectively. With regard to smaller cetaceans, the different species of dolphins (white-beaked and short-beaked common dolphin) represent approximately 4% of all narwhal was seen just twice. It is interesting to note that in terms of species diversity, a total of 20 taxa (species or group of species) were reported in 2024, which is one more than in 2023 (this year's additional species being the sei whale).

Approximately 25% of all data (5% less than in 2023) corresponds to sightings for which the species could not be identified with certainty. These were marked as "cetacean sp.," "dolphin sp." or "rorqual sp." Indeed, meteorological conditions at sea can quickly complicate the identification process during an observation, as can the distance between the animal and the observer or poor light. With the aim of increasing the level of certainty for such complex identification, Observer Training offers a refresher course on various identification criteria. This training is available directly on the site observers.navigatingwhales.ca or on the Navigating Whale Habitat portals for ship operators and whale-watching companies.

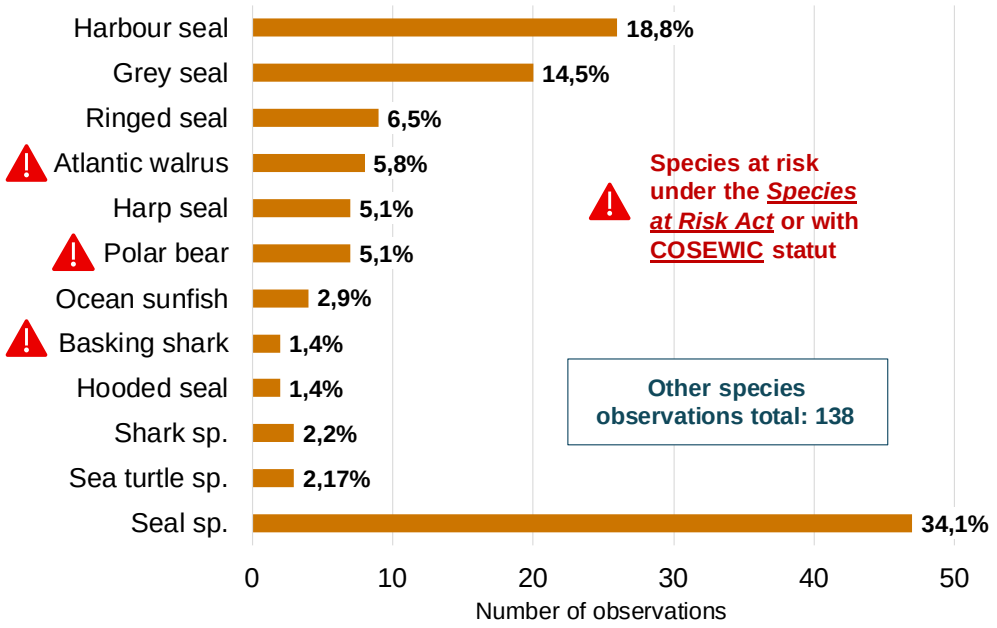

Figure 5. Species breakdown (numbers and percentages) of non-cetacean observations made by ship operators (ferry terminals not included).

Besides cetaceans, other marine species were also identified by ship operators in 2024, yielding a total of 138 data points. With 47 occurrences, observations of unidentified seals account for the majority of these data. Otherwise, the combined total of identified pinnipeds (seals and walruses) accounted for just over 52 % of all observations, notably thanks to 24 occurrences of harbour seals and 20 occurrences of grey seals. Ocean sunfish and basking shark combined for 4.3% of all observations. Lastly, polar bears were sighted on 7 occasions. The number of taxa identified dropped to 9 in 2024, but rises to 12 if we include taxa "sp." Bluefin tuna and leatherback sea turtles did not make the 2024 biodiversity list, though this was offset by the addition of hooded seal and harp seal, which were absent in 2023.

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Participation of Ferry Terminals

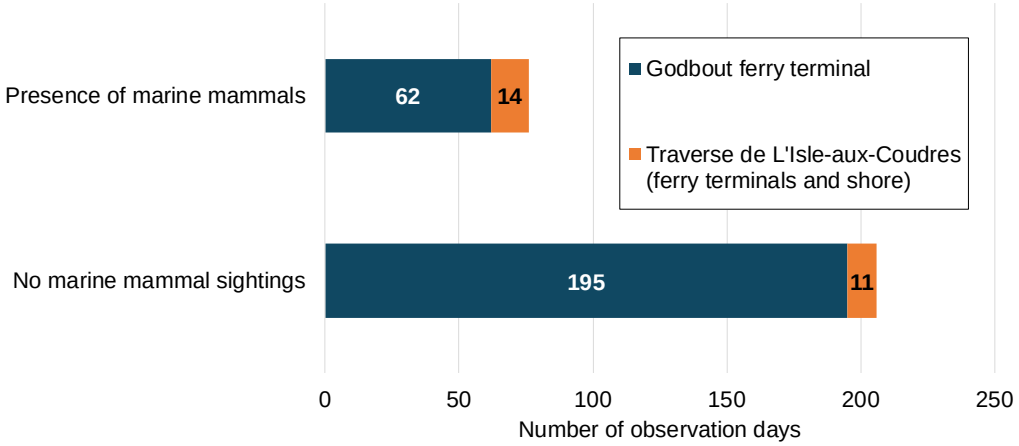
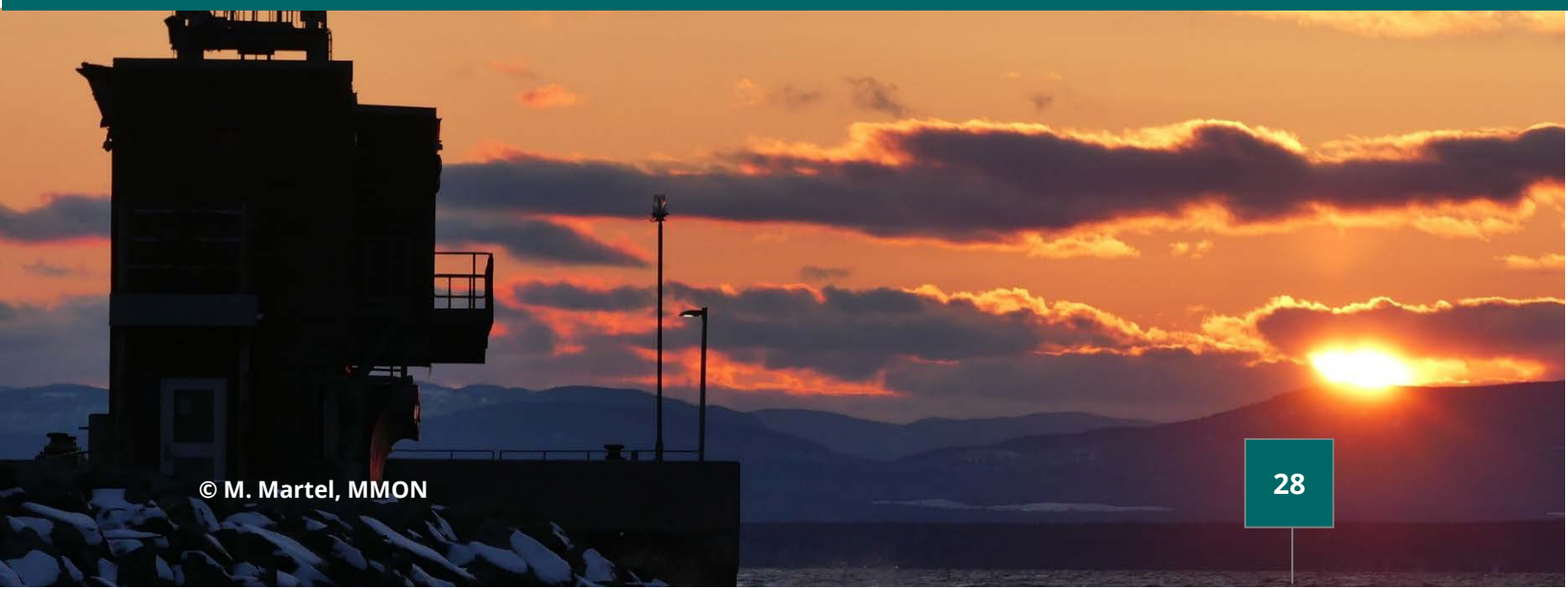


Figure 6. Number of observation days with or without data logged by ferry terminals in 2024

In 2024, the only ferry terminals that contributed to data collection were Godbout and L'Isle-aux-Coudres. Overall, the data collection effort was down 8.7% this year, falling from 308 data points in 2023 to 281 in 2024. When analyzing these data, certain sightings located near the shores of the L'Isle-aux-Coudres ferry terminal were lumped with the ferry terminal data, as they were made by the same observer member.

The L'Isle-aux-Coudres ferry, which connects the island of the same name to the municipality of Saint-Joseph-de-la-Rive, accounted for 8.5% of the data collection effort by ferry terminals in 2024. Given that the Saint-Joseph-de-la-Rive ferry terminal did not participate this year, the data collection effort of this observer member was down 31% compared to 2023. Of these data, the presence of marine mammals (mainly the St. Lawrence Estuary beluga) was noted over 54% of the time by this observer member in 2024.

Once again this year, the majority of the ferry terminal effort comes from the Godbout terminal, which accounted for over 91% of the data. This terminal is located in a more conducive sector for observing a variety of cetacean species than its counterpart in L'Isle-aux-Coudres, which might explain why the amount of data is skewed in favour of Godbout. Not only is the collection effort very different, but so is the rate of marine mammal presence, which stands at just over 24% for this observer member. Additionally, the number of data collected is comparable to the previous year, i.e. 62 observations in 2024 vs. 70 in 2023.



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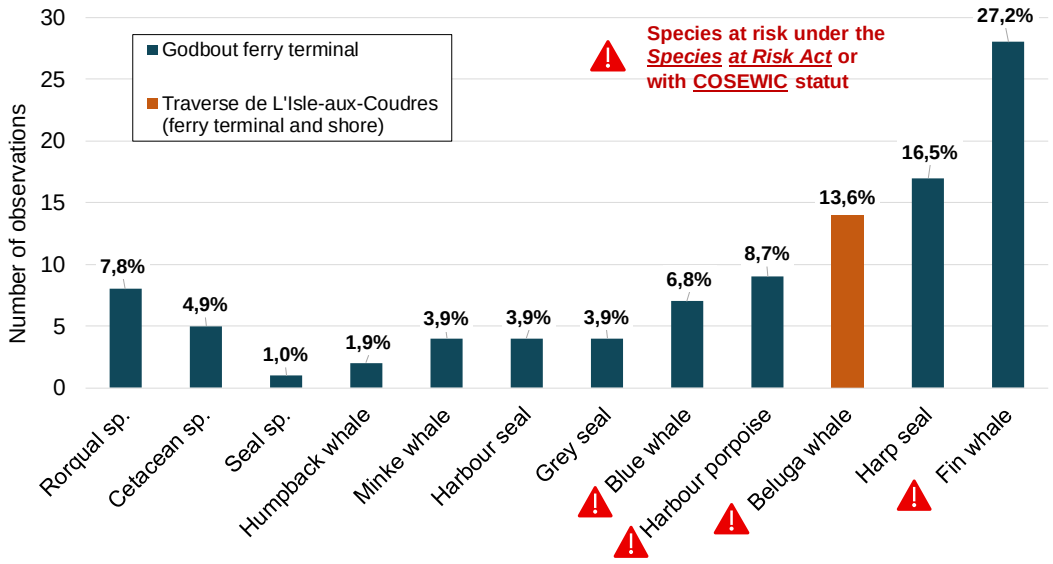

Figure 7. Species breakdown (numbers and percentages) of observation data logged by ferry terminals in 2024

Figure 7 presents the species breakdown of marine mammals identified by ferry terminals in 2024. In terms of biodiversity, nine different species and three other taxa were recorded. Overall, the various rorqual taxa accounted for approximately 39.8% of all observations. With 28 occurrences, the most commonly identified species was the fin whale. An appreciable 24.3% of all observations concerned various species of seals, the most frequently noted species being the harp seal, with 17 observations.

As was the case in 2023, only one marine mammal species was identified by the L'Isle-aux-Coudres ferry terminal: the beluga. Given the terminal's location near a sector heavily used by this population during the summer months and recognized as part of the species' critical habitat 2, beluga sightings at this location are not uncommon.

The Godbout ferry terminal observed 8 different species, fin whale and harp seals being the ones seen most often. Other species identified include the harbour porpoise and blue whale on several occasions, while grey and harbour seals were also spotted a few times. Additionally, a total of 14 data points corresponded to unidentified taxa, including 8 that were recorded as "rorqual sp."

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3.3 SUMMARY OF OBSERVATIONS REPORTED BY ORGANIZERS OF MARINE OBSERVATION ACTIVITIES IN 2024

Third Year of involvement in the Program

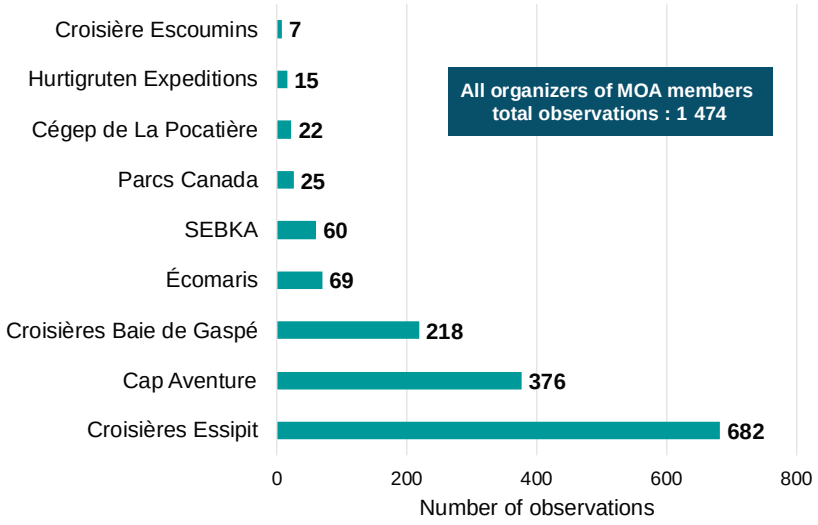


Figure 8. Number of observation data logged by organizers of marine observation activities in 2024

For the second consecutive year, organizers of marine observation activities made a significant contribution to the data collection effort, as illustrated in Figure 8. Firstly, the total number of observations declined compared to 2023, falling from 2,150 to 1,474, i.e. a decrease of 31.4%. The same holds true for the number of companies that collected data, which declined from 13 in 2023 to 9 in 2024. In fact, five participants did not contribute to data collection this year, and there were no new observer members.

Unlike 2023, Hurtigruten Expeditions is the only one of four member companies of the Association of Arctic Expedition Cruise Operators (AECO) that documented observations made during its expeditions as part of this project. Likewise, the number of data reported from this region dropped sharply, from 197 in 2023 to 15 in 2024, which represents a decrease of 92.4%.

Of the other companies, the largest data set was compiled by organizers of activities specifically geared toward marine mammal watching. For a second year, the main contributor in 2024 was Croisières Essipit, which collected nearly half of all data (46.3%), followed by Cap Aventure and Croisières Baie de Gaspé. Croisière Escoumins also provided a significant data set in 2024.

Companies offering offshore excursions dedicated to other attractions than marine mammals also collected data for the project. In this context, Écomaris and SEBKA provided 8.8% of all observations in the course of their activities.

Lastly, the other members, namely Cégep de La Pocatière and Parks Canada, also gathered data in the context of their educational and research activities. In 2024, these members documented 47 marine mammal observations.

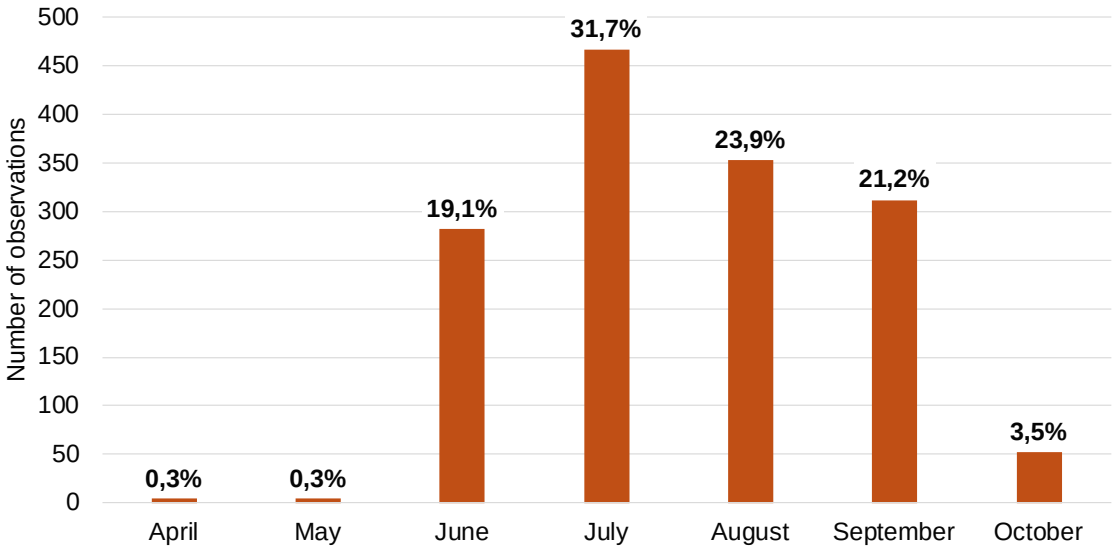


Figure 9. Monthly breakdown (numbers and percentages) of observation data logged by organizers of marine observation activities in 2024

Figure 9 presents the monthly breakdown of observations. For organizers of marine observation activities, the data collection season lasted seven months and approximately 96% of data were gathered during the peak season for marine mammals, i.e. between June and September. The top months for documented sightings were July and August, with 467 and 353 data points, respectively. These figures are lower than those of 2023. However, the months of June and October produced more data than the previous year.

Invaluable Additional Data on Whale Distribution Patterns

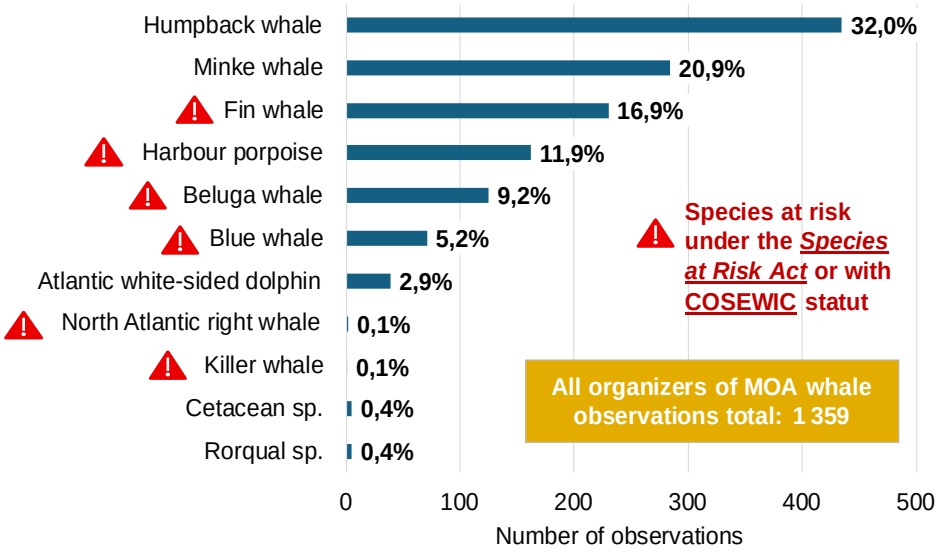


Figure 10. Species breakdown (numbers and percentages) of cetacean observations made by organizers of marine observation activities in 2024

Figure 10 presents the species breakdowns for cetaceans observed in 2024. Overall, 9 species of whales were recorded in 2024, plus 2 taxa that could not be definitively identified. Three species that were identified in 2023 were not observed in 2024, namely the sei whale, grey whale, and narwhal. Indeed, these are species that had been identified in the Arctic, notably by organizers of marine observation activities that did not participate in the data collection project in 2024. As was the case in 2023, the humpback whale generated the largest number of observations, i.e. 435 of the 1,359 data points. The minke whale conserves its second-place position, with more than 20% of all observations. As for species at risk, three-digit figures were registered for fin whale, harbour porpoise and beluga, with 230, 162 and 125 observations, respectively. The other at-risk species – namely blue whale, North Atlantic right whale and killer whale – were seen less frequently, combining for 5.4% of all cetacean observations. The white-sided dolphin was also spotted on 39 occasions.

Figure 11 indicates the other marine species documented by organizers of marine observation activities in 2024. Species diversity and the number of observations are both lower in 2024 than they were in 2023. In fact, with the exception of the polar bear, no Arctic species were identified this year. As for fish, ocean sunfish was added to the 2024 list of observations, a list that already included basking shark and bluefin tuna. Grey seals and harbour seals are the two species reported most often, with a combined total of roughly 77% of all observations. In conclusion, the total number of these observations was down 70.5% in 2024 compared to 2023.

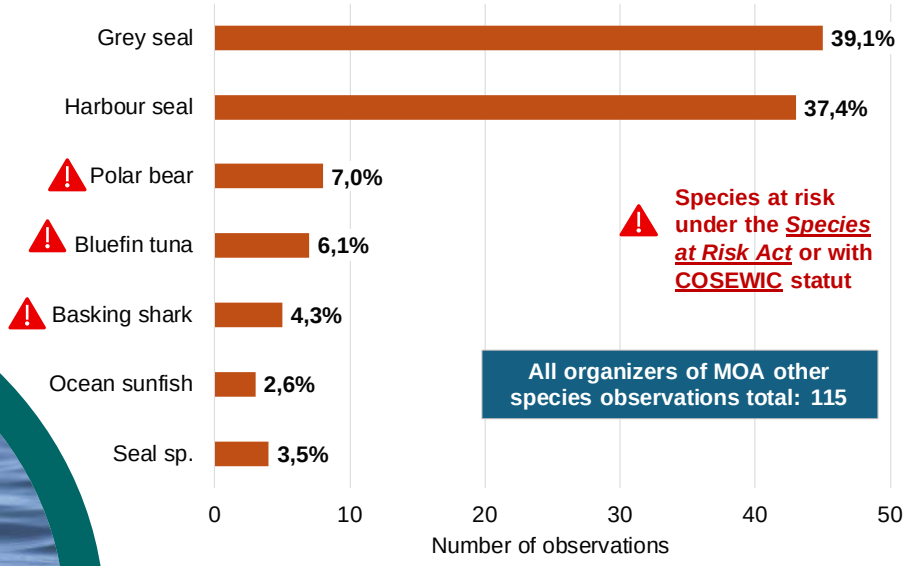
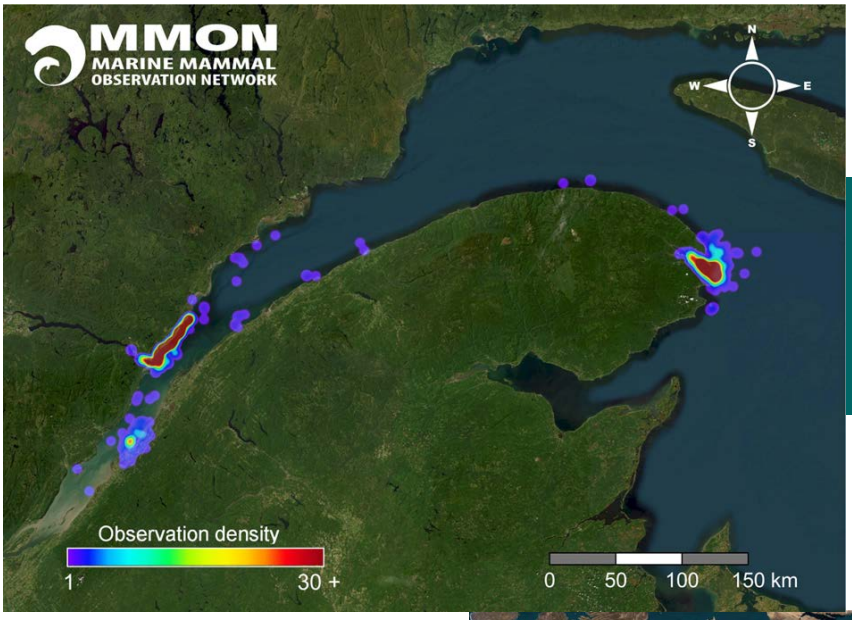


Figure 11. Species breakdown (numbers and percentages) of non-cetacean observations made by organizers of marine observation activities in 2024

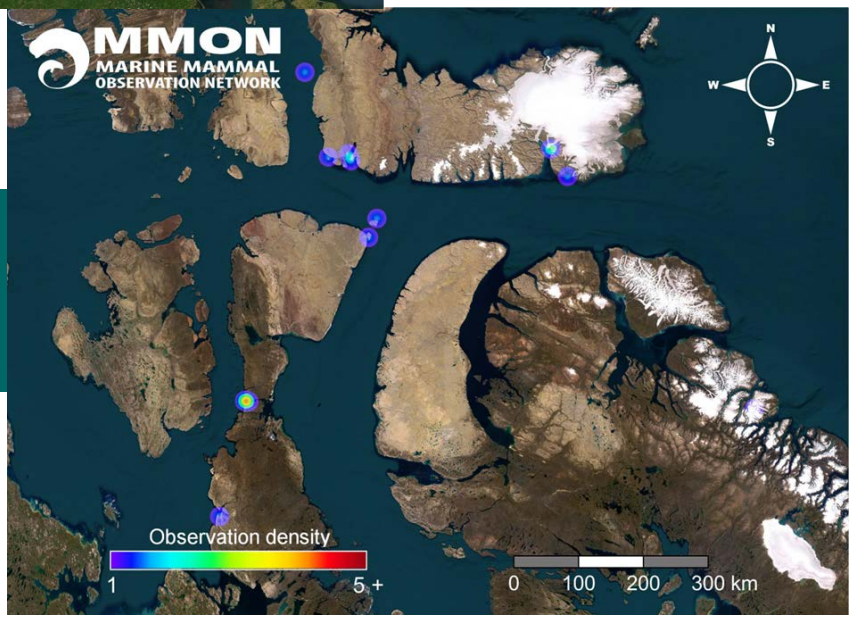
Observations from St. Lawrence to the Arctic

Maps 4 and 5 illustrate the locations of these observations. In the St. Lawrence, numerous observations were made in the Saguenay-St. Lawrence Marine Park as well as in Gaspé Bay and the Banc-des-Américains Marine Protected Area. Other sightings can be found in the estuary between Les Éboulements, Kamouraska, Rimouski and Godbout, along the coasts of the Gaspé Peninsula between Gros-Morne and Percé, as well as in the Gulf of St. Lawrence.

As for the Arctic region, a few observations were reported from the waters of Lancaster Sound and Bellot Strait. Other observations are found around Devon Island and in Pasley Bay.



Map 4. Density of observations reported by organizers of marine observation activities in 2024 – Estuary and Gulf of St. Lawrence



Map 5. Density of observations reported by organizers of marine observation activities in 2024 – Arctic

3.4 SUMMARY OF OBSERVATIONS REPORTED BY CITIZENS IN 2024

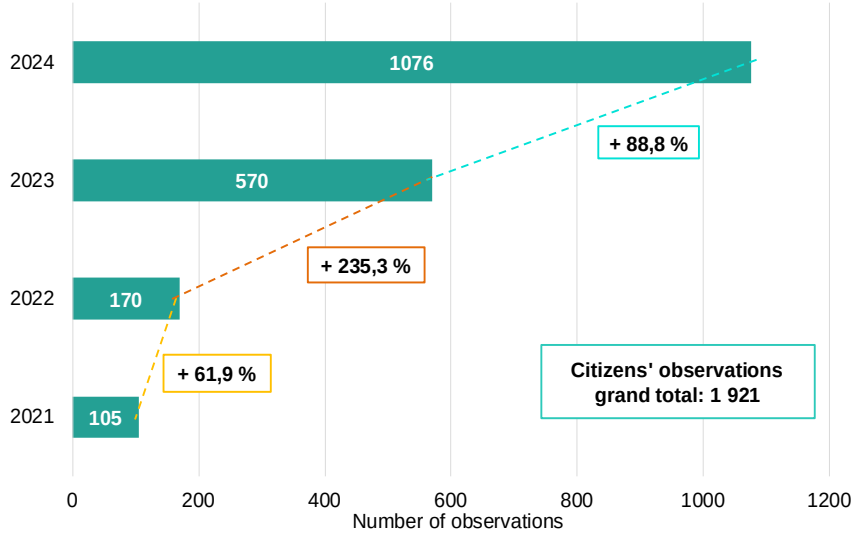


Figure 12. Evolution of the number of observations gathered by citizens from 2021-2024

A Thriving Contribution!

Citizen efforts yielded an impressive number of observation data this year. Figure 12 above presents the evolution of these data over four years of data collection. The explosive growth observed between 2022 and 2023 continued, with 1,076 observations reported by ordinary citizens in 2024. This record figure is far above the levels recorded in 2021 and 2022 and represents an 88.8% surge in the citizen science category compared to 2023. Encouraging public participation from shore not only enhances geographic coverage but also make these citizens more aware of opportunities to watch these animals from a land-based observation site.

Figure 13 presents citizen observations for each month of the year from 2021 to 2024. This year, the data are mainly concentrated between May and September and account for approximately 90% of the 2024 citizen data collection. This "core" period of recorded observations occurs slightly earlier than in 2023, when the bulk of the data set was collected between August and October. In 2024, the months of June and July represent the two peaks of observations, with 326 and 320 data points, respectively, compared to 2022 and 2023, when August accounted for the most data. Observations outside the summer months provide interesting insight for better understanding the distribution patterns of these animals in our waters. In 2024, 96 observations were recorded during the winter months.

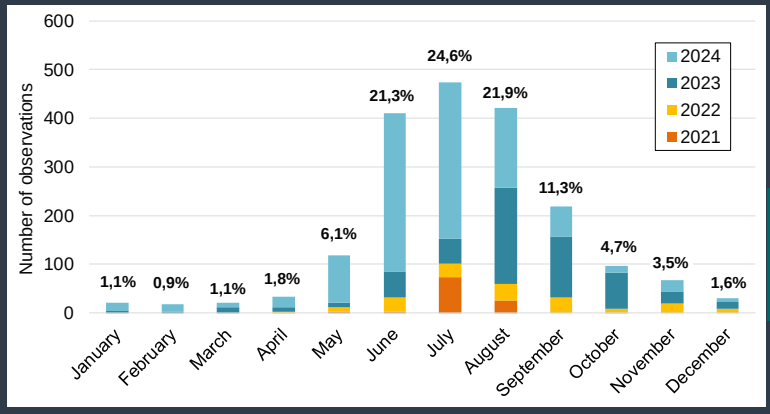


Figure 13. Monthly breakdown (numbers and percentages) of citizen observations, 2021-2024

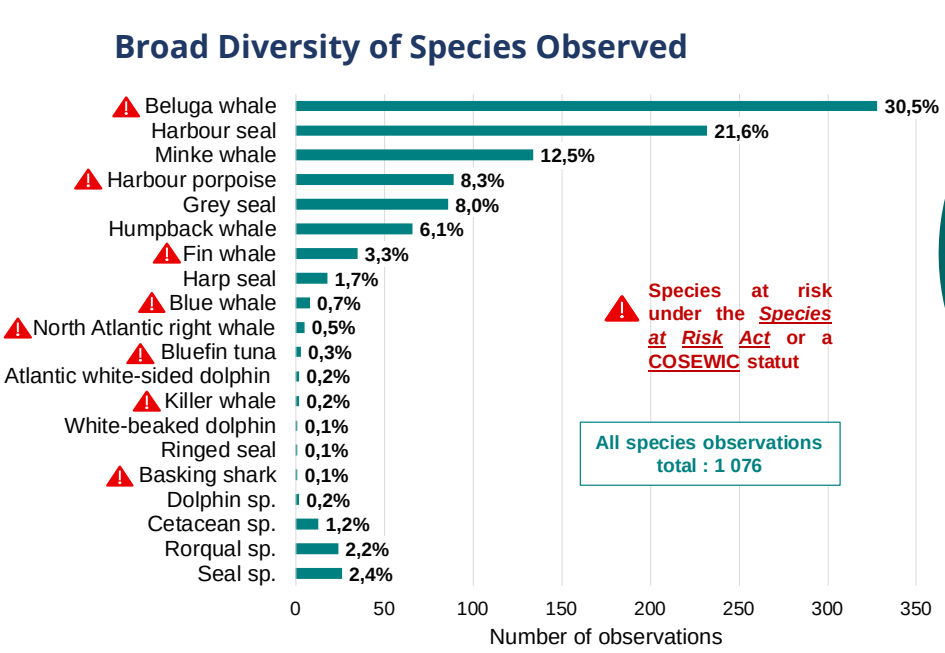
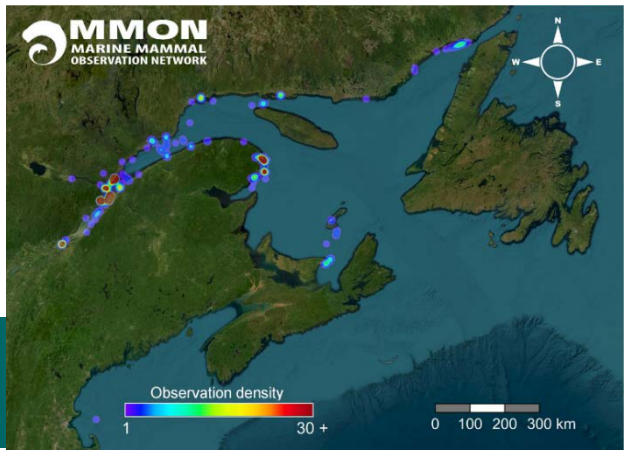


Figure 14. Species breakdown (numbers and percentages) of citizen observations in 2024

Figure 14 presents the different marine species reported by ordinary citizens in 2024. The figure shows ten species of cetaceans as well as four species of seals and two species of fish, in addition to observations where the species could not be identified (sp.). The number of beluga whales and harbour seals observations in 2024 practically doubled compared to 2023, making them once again the two most frequently observed species, and in similar ratios to those seen in 2023. There were also numerous occurrences of minke whales, harbour porpoises, grey seals and humpback whales, with anywhere between 66 and 134 observations, though the distribution was quite different than that of 2023. Fin whales and blue whales were also noted more often by citizens in 2024, as was the harp seal. If we count the aforementioned species, a total of eight species in peril were identified, including North Atlantic right whale (0.5%) and killer whale (0.2%), which were not reported in 2023. Ringed seals represented a new addition to citizen observations in 2024.

Map 6 illustrates the geographic distribution of citizen observations in 2024. A large portion of the observations from the St. Lawrence Estuary lie within the current boundaries of the Saguenay–St. Lawrence Marine Park. Another significant data set came from the Gaspé Peninsula, mainly Gaspé Bay and the Percé region. Other observations are located along the routes of different passenger ferries, i.e. between Matane, Baie-Comeau and Godbout, between Prince Edward Island and the Magdalen Islands, as well as between Rimouski, Anticosti Island and the various villages of Quebec's Basse-Côte-Nord region.



Map 6. Density of observations reported by citizens in 2024 – Estuary and Gulf of St. Lawrence.

3.5 OVERVIEW OF RESULTS OF *NAVIGATING WHALE HABITAT* DATA COLLECTION PROGRAM IN 2024

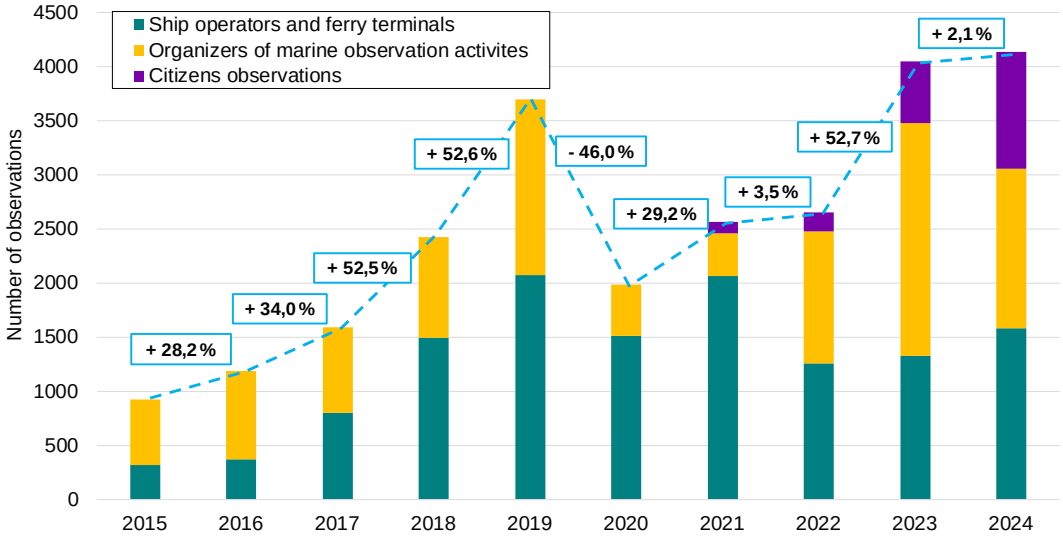


Figure 15. Evolution of data collection for marine mammals and other marine species by observer category, 2015-2024

Figure 15 above illustrates the evolution of data collection since the program's debut and the annual involvement of each category of observer member. During the first few years of data collection, observer members were fewer in number, hence the smaller data sets. Over the years, participants have shown growing interest and diligence in collecting data. In fact, the volume of data collected in 2024 is approximately 13 times the data set collected in the first year of the program (2015). Additionally, contributions by new observer member categories also contribute to the robustness of the collection, notably since 2021 with the addition of citizen observations. The combined total of each year of data collection amounts to 22,678 marine mammal observations.

As illustrated in Figure 16, the number of observations is higher for the ship operator / ferry terminal category, as well as for citizen observations. As for organizers of marine observation activities, the marine mammal data set contracted, notably because certain companies did not log any observations in 2024. Nevertheless, this observer member category contributed roughly 40% of the year's observations, i.e. approximately 14% less than in 2023. Conversely, the contribution from ship operators and ferry terminals was 14% higher than in 2023. The citizen science contribution was proportionally similar to that of 2023. For the three member categories combined, the total number of observations reached 4,134 in 2024, i.e. 79 more than in 2023.

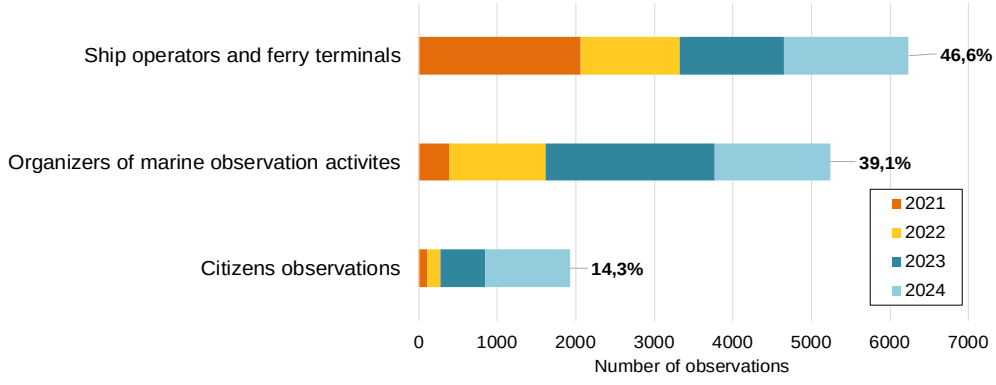


Figure 16. Numbers and proportions of observation data logged by each observer category, 2021 -2024

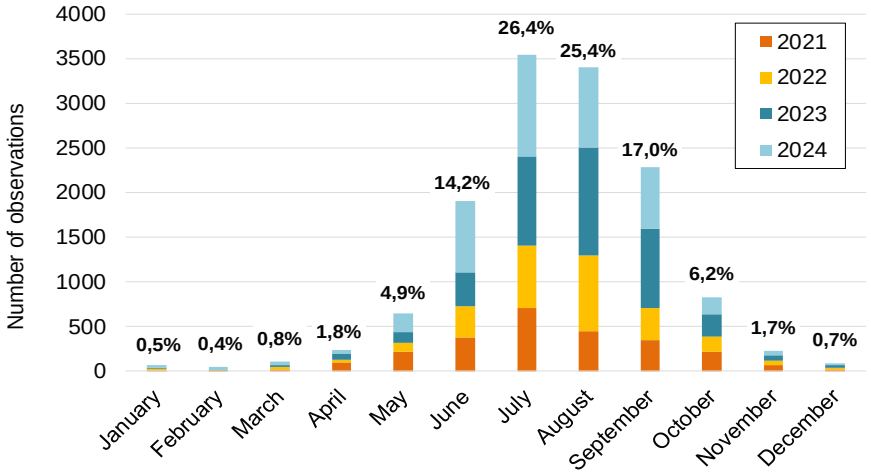


Figure 17. Monthly breakdown (numbers and percentages) of observation data, all observer categories combined, 2021-2024

A monthly breakdown of the data collection effort over the past four years is presented in Figure 17. The percentages of observations made each month are also indicated. The temporal distribution of observations consistently corresponds to those periods when marine mammals are most present, i.e. between the months of June and September. It can also be seen that observations are generally more numerous in September than in May. July and August are always the months with the most data. For the other months of the year, the share of observations is less than 10% and the number of documented observations is relatively stable from one year to the next.

As can be seen in Figure 18, a total of 17 different cetacean species were identified in 2024. The most frequently tallied species is the beluga, followed by the humpback whale and minke whale, which together account for over 52% of all observations. Harbour porpoises and fin whales were also detected on numerous occasions (approximately 400 times each). Blue whales and white-sided dolphins were reported approximately 120 times each. Less frequently sighted in 2024 were the long-finned pilot whale, short-beaked common dolphin, killer whale and white-beaked dolphin. Other species were only seen on a few occasions, notably the North Atlantic right whale, a species at risk.

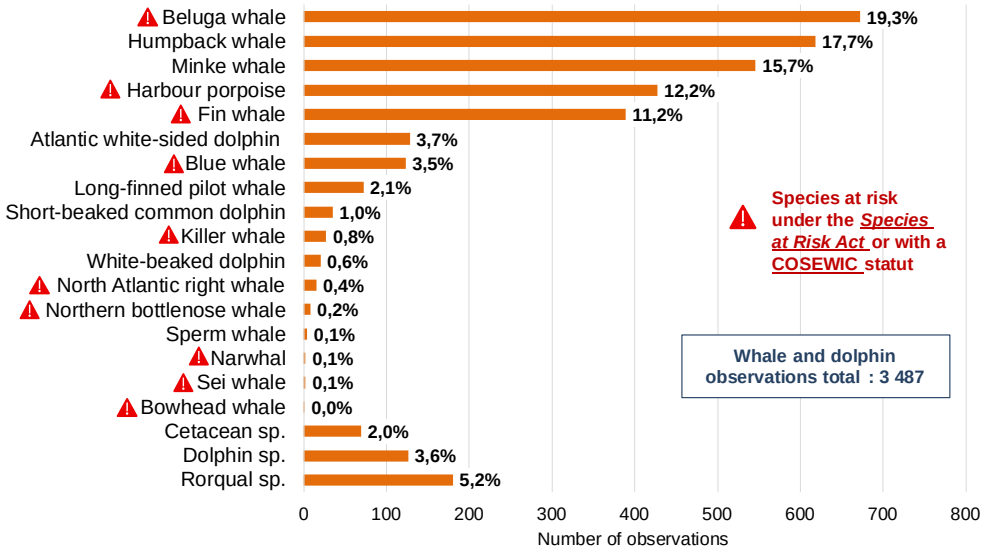


Figure 18. Species breakdown (numbers and percentages) of cetacean observations, all observer categories combined, 2024

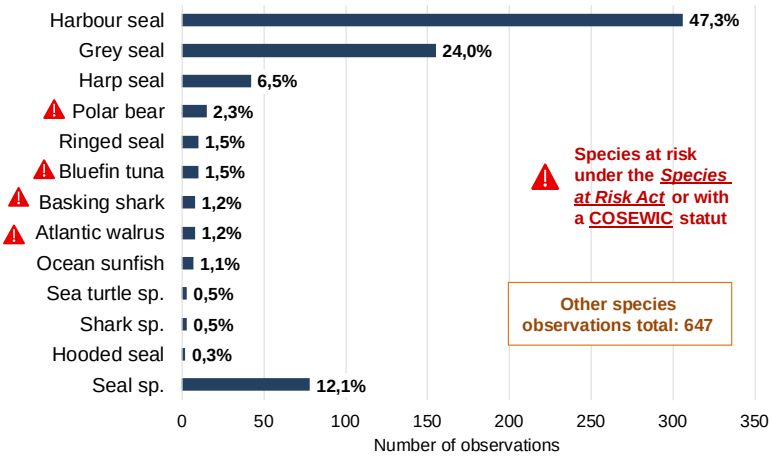


Figure 19. Species breakdown (numbers and percentages) of non-cetacean observation, all observer categories combined, 2024

As can be seen in Figure 19, ten other marine species were detected in 2024. As was the case in 2023, this distribution is largely dominated by the harbour seal, followed by observations of grey seals and harp seals. All other species observed, including polar bear, ringed seal and Atlantic walrus, were only seen 15 times or fewer. Warranting special mention is the hooded seal, which prior to 2024 had yet to be identified by observer members.

Figure 20 illustrates the number of observations of the main cetacean species logged between 2021 and 2024 by MMON's different observer members. Given the annual variation in the number of participating observer members, fluctuations in numbers and species diversity from one year to the next is to be expected. The first thing we notice in 2023 is the spike in the number of humpback whale observations. Another peak, albeit less pronounced, is visible in 2022 for harbour porpoise sightings. Additionally, the four most frequently observed taxa remain the same year after year: beluga, humpback whale, minke whale and harbour porpoise. It can also be seen that the beluga, fin whale and blue whale have been showing a gradual increase in the number of observations since 2022, while long-finned pilot whale sightings have been trending downward since 2021. Lastly, a few species have exhibited rather stable figures every year since 2021, i.e. minke whale, white-sided and white-beaked dolphins, killer whale and North Atlantic right whale.

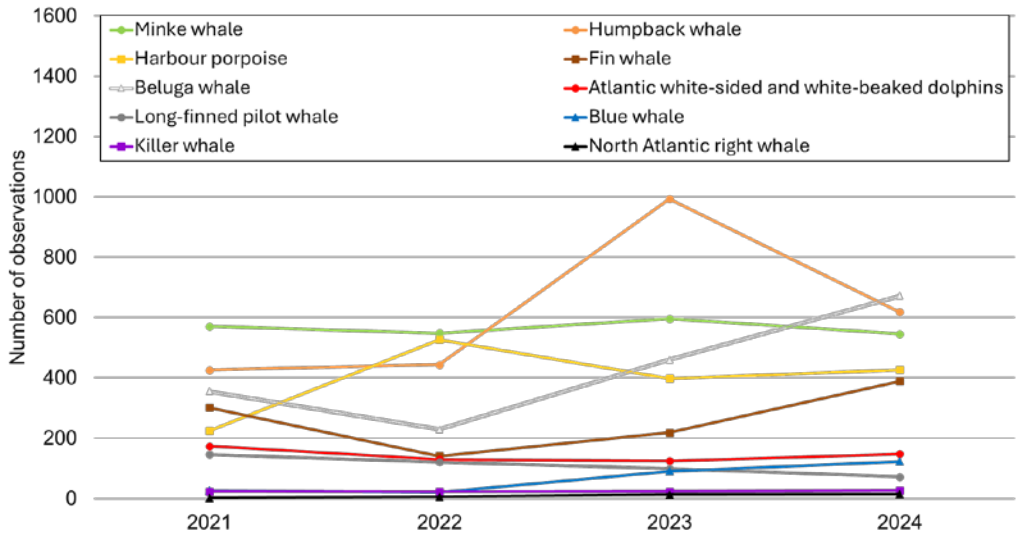


Figure 20. Evolution of the number of observations for main species, all observer categories combined, 2021-2024

Vast Coverage Area

Maps 7 and 8 illustrate the entire set of data logged by all observer categories in 2024. Once again this year, eastern Canada and the Arctic show the greatest concentrations of observations, especially the Gulf of St. Lawrence and its Estuary (where the *Vigie Marine* application is most widely known), as well as the routes most travelled by observer members. It should also be pointed out that the data logged by MMON's observer members spanned the entire North Atlantic this year.

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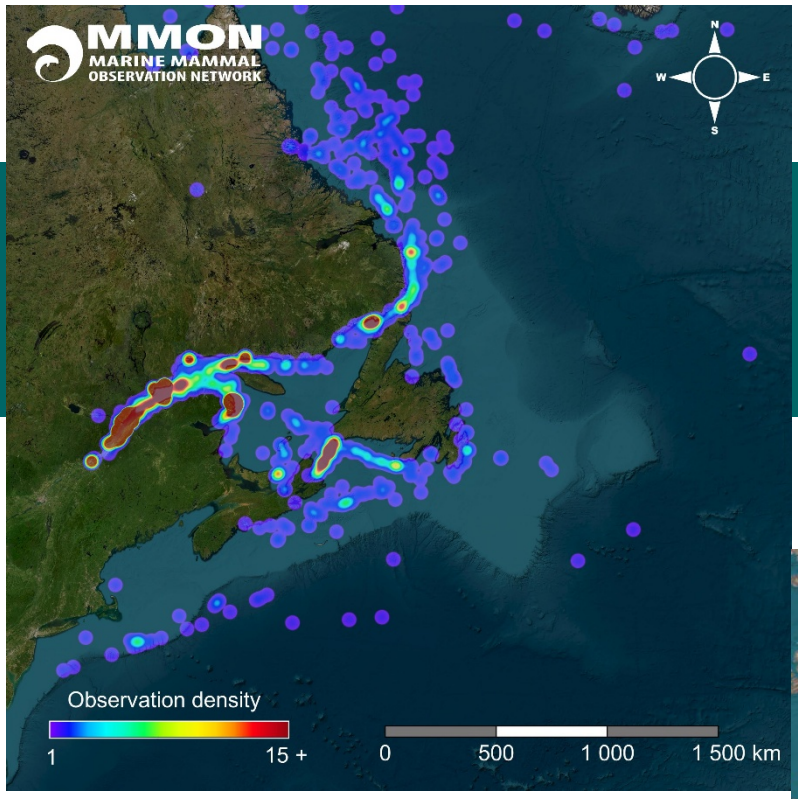
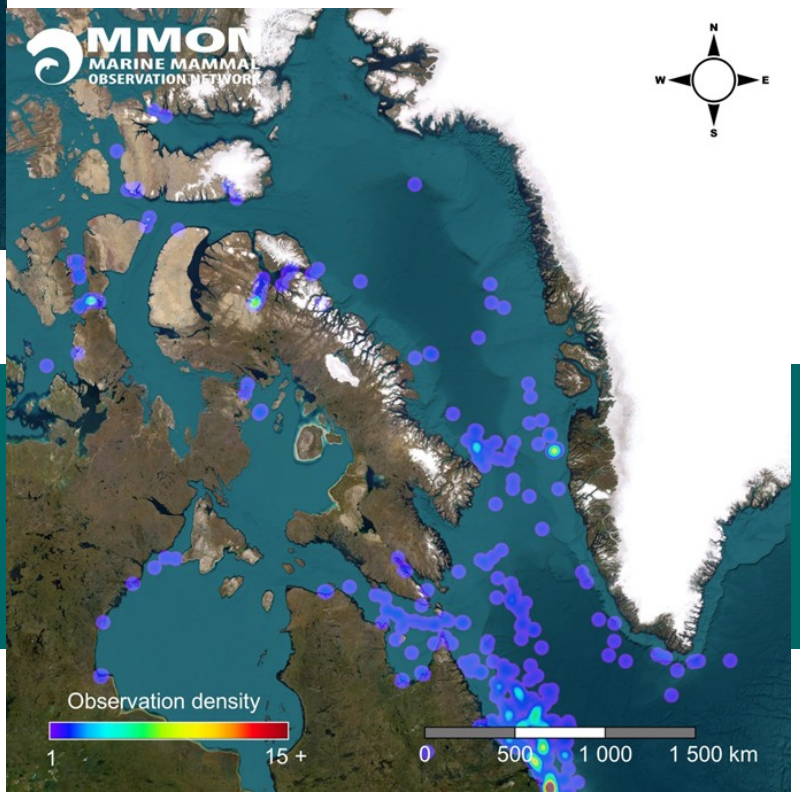


Map 7. Density of observations collected by all observer categories combined in 2024 – Canadian east coast and North Atlantic



Map 8. Density of observations collected by all observer categories combined in 2024 – Arctic

CONCLUSION

The *Navigating Whale Habitat* training and data collection program is increasingly popular, notably with the general public. In 2024, one member dropped out of the program after going out of business, while four new companies signed agreements and will begin collecting data in 2025. This brings the number of observer members participating in the program's data collection efforts to 28, including 14 members from the maritime sector representing a fleet of over 60 ships and 14 organizers of marine observation activities.

Under the program, toolkits tailored to each major user category are developed and distributed to participants. These kits notably contain data collection protocols as well as various training tools, including stewardship guides that provide information on best practices for navigating whale habitat and how to identify marine species. These tools are hosted on the online platform, which is divided into four main portals for each of the user categories targeted by the program, namely ship operators, fishers, boaters and whale-watching companies. In 2024-2025, MMON finalized a number of tools to enhance the whale-watcher's kit, which notably contains the new stewardship guide printed in March 2023 as well as a manual and information sheets to help these companies diversify the content of their interpreting material. The online platform also features tools to allow observer members to enter and visualize their data. MMON continued to enhance these tools, including the new offline data entry application Vigie Marine. These new tools were launched and distributed in summer 2024.

Additionally, efforts to encourage ordinary citizens to collect data also bore fruit in 2024, with the number of observations reported by the general public more than doubling compared to 2023! Tools specifically designed for citizen science were developed and integrated into the platform in 2024 to allow the program to build on its momentum and continue to grow.

In 2024, the motivated members of the *Navigating Whale Habitat* observation network logged 4,134 observations, which is 79 more than in 2023. The respective contributions from ship operators and citizens were up, while that of organizers of marine observation activities decreased, mainly due to the non-participation of certain members in this user category in 2024. Over the past year, the top species reported by all observer categories combined was the beluga, representing just over 19% of all observations, closely followed by the humpback whale and minke whale, which accounted for 18% and 17% of reported sightings, respectively. Also, the size of the geographic territory with year-round data collection continues to expand. Since the program's debut in 2015, a grand total of 19,423 observations have now been documented. In 2025 we will hit a new milestone: 20,000 observations!

We extend our heartfelt thanks to each of the program's members and all of the ordinary citizens who help document the presence of marine mammals in our waters! Your participation represents an invaluable contribution for their conservation.

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