Object: Marine Bird Aerial Survey by the Canadian Wildlife Service (CWS) – August 2023

Context: In 2022, the second phase of the Ocean Protection Plan (OPP) was launched by the federal government. One of the main objectives of the OPP on which CWS is focusing is to acquire and enhance knowledge of migratory birds in order to better understand their vulnerability in time and space. This knowledge will allow us to, amongst other things, assess risk and act rapidly and appropriately in incidents affecting the marine environment, oil spills in particular. Therefore, CWS in Quebec Region undertook a prioritization exercise to determine where we had knowledge gaps in Quebec marine birds' environment. We concluded that we had major information gaps in the Nunavik Marine Region. Consequently, we decided to deploy substantial efforts towards filling these gaps.

Another important objective of the OPP is to implement sustainable partnerships with First Nations and Inuit people to share our respective knowledge of migratory birds.

Given these ambitious and valuable objectives, we intend to implement a large-scale monitoring program to improve our knowledge of the Nunavik marine migratory birds. For the first year of this project, we are planning on doing two major activities:

1. Perform a helicopter survey of the coastal area of Nunavik during the sea ducks' molting period (see below for details).
2. Do consultations with Inuit and Cree communities from Nunavik to share knowledge and to understand what issues about marine migratory birds are the biggest concerns for Northerners.

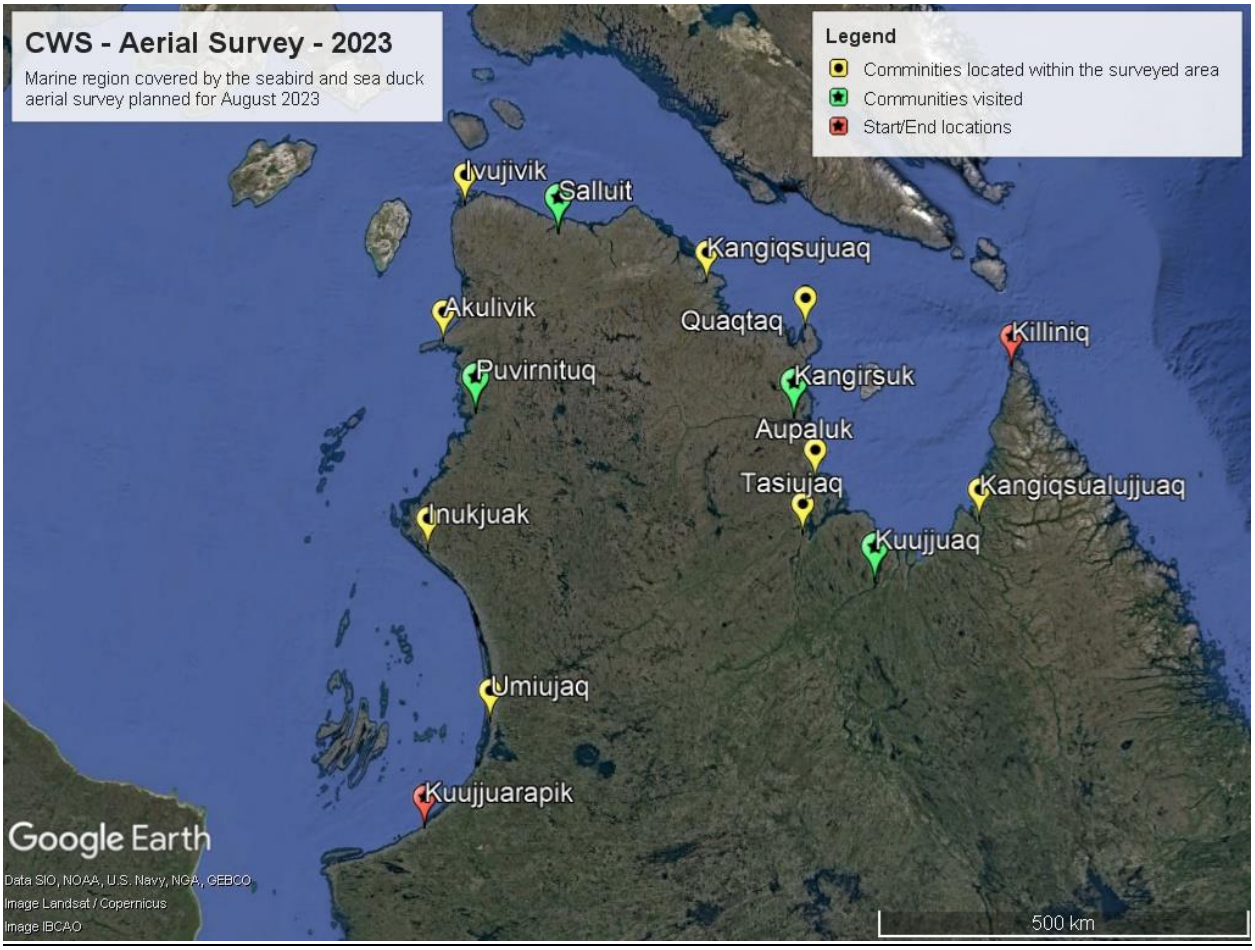
Details of the project

New project or Amendment/Renewal: New project beginning in summer 2023

Project name: Marine bird aerial survey in Nunavik

Start/End dates: August 14 to September 3 (seasonal work)

Geographical location of the project (Surveyed area): This project will take place in the Nunavik Marine Region and in the Eeyou Marine Region between Killiniq and Kuujjuarapik (see map below). Yet, the exact covered area is to be determined as our capability to cover this whole area will highly depend on weather conditions. In the best case scenario, this is the targeted area. Work will take place at an altitude of 75 meters over the sea and within 1.5 km of the coast.



Number of people involved: 3 biologists + helicopter pilot

1) Yannick Seyer, Wildlife biologist at CWS – Project leader (yannick.seyer@ec.gc.ca // 873-354-0524)
2) Francis St-Pierre, Field technician at CWS
3) Benoit Audet, Wildlife biologist at CWS
4) Helicopter pilot, Nunavik Rotors – ID to be confirmed

CWS crew will be in the Nunavik region for this proposed aerial survey between August 14 and September 3. The helicopter pilot may change after 1 or 2 weeks of work.

The team will be based in 5 different communities depending on the progression of the survey. Daily, the helicopter will explore different areas leaving from the base communities. So far, our planning goes as follows:

- Kuujjuaq: August 14 to 19 (August 14: Arrival in Nunavik)
- Kangirsuk: August 20 to 22
- Salluit: August 23 to 25
- Puvirnituq: August 26 to 28
- Kuujjuarapik: August 29 to September 1
- Kuujjuaq: September 2 to 3 (September 3: Departure from Nunavik)

Description of the project: This helicopter survey aims at identifying three different parameters of the avian fauna in the Nunavik marine region: 1) the diversity, 2) the abundance, and 3) the distribution of marine birds (seabirds, sea ducks, shorebirds) during a crucial period of their annual cycle, the molting period. During this period, many species are flightless and become highly vulnerable to accident in the marine environment (ex. oil spill). Our survey will help identifying potentially important molting hotspots where large numbers of marine birds aggregate when they are flightless. By identifying these we thus will improve our understanding of their annual cycle, but above all, we will improve our ability to react promptly and properly in case of needed.

To gain this knowledge, we estimate we will need 72 hours of flight (~12 days at 6 hours per day). Our work involves 5 days of flight in Ungava Bay, 2 days in Hudson Strait, and 5 days in Hudson Bay. During our flights, we will fly at ~75 meters, but will be higher during the long-distance displacements (displacements to reach survey areas or to move between communities). All the surveys will be conducted above the sea and long-distance displacements may sometimes be above land to shorten the travel distance only if they do not disturb Inuit and Cree activities.

On some days, we may not be able to fly due to weather conditions. During these days, we are planning on doing various outreach activities in the communities to meet the Inuit and Cree and explain the survey and its purpose. The discussions we are expecting to have with Inuit and Cree during these activities will help us to improve our planning of upcoming consultation and survey activities.

Next steps: Unfortunately, most of our data in this large marine region is old and existing surveys are more than 10 to 20 years old. This survey will update our knowledge of this area and allow us to, hopefully, confirm the presence of important marine bird aggregation sites. Also, based on the data we will collect during this survey and during the consultations, we will define the objectives for the coming years of this new monitoring program in Nunavik. We have a great opportunity to set up collaborative projects with Inuit and Cree for the upcoming years in the context of this new OPP monitoring program.

Moreover, the maps we will develop following our survey will support further consultations in northern communities. We believe they will serve as a starting point for our discussion with Inuit and Cree to define priorities. While CWS might already have some priorities in mind, we want to involve Inuit and Cree in the next steps of the project and ensure that their priorities are considered as well.

Finally, these new data will help us to reach the Canada's objective to considerably improve the number and the size of marine protected areas across the country. Using this aerial survey, in addition to the consultations we would like to set up, may help the Canadian government to continue its efforts in this direction.

Method of transportation: All the survey and the long-distance displacement between communities will be done with a helicopter. Displacement within the communities (not for survey purpose) will be done using a rented car or an ATV.

Type of equipment to be used: The aerial survey will be done from a A-Star helicopter (AS350-B2/SD2 – Nunavik Rotors). Otherwise, data acquisition won't require any specific equipment other than binoculars and digital camera (used onboard) to validate observations made from the helicopter.

Permanent/Temporary structures: No structures will be erected in for this project.

Local resources to be used: In Kuujjuaq, we will be accommodated at the Auberge Kuujjuaq Inn and at the FCNQ hotels in other communities. In Kuujjuaq, we plan to rent a car from a local provider and food will be purchased at local stores.

Location to the nearest community: Refer to map above. With this project, we will try to cover the largest area possible in the Nunavik Marine Region. We will stay in different communities and will also pass in the vicinity of others. As our survey will stay in the marine environment, we should stay about 100-1500 meters offshore to avoid disturbance in the communities and in Inuit and Cree used areas.

Location of the project to sensitive areas: This project will be entirely conducted above the marine area and won't overlap with any bird sanctuaries, national parks or other known to be sensitive areas. If we ever had to fly above land (example for long-distance displacement), we would avoid Inuit camp sites or any other cultural or archaeological areas.

Alternatives considered: To collect the kind of data we are expecting, conducting an aerial survey is the best alternative. Flying at a reasonable height to limit disturbance on birds will allow us to cover a large marine area and to conduct accurate surveys. Otherwise, surveys conducted from a boat will highly limit the data acquisition as we won't be able to cover a very large area, and it will still cause disturbances on birds if we need to make approaches to confirm numbers and IDs.

Environmental impacts anticipated: We have no reason to believe this survey will have environmental impacts. We won't land to perform inland surveys, thus reducing the disturbance on local environments and animals. Then, aerial survey will only involve quick flight over flocks of sea ducks and seabirds at sea and we will maintain reasonable distance to minimize disturbance. Concerning the seabird colonies we may encounter during our survey, we will observe them from a distance only to identify the species and take photos to try to count the breeding pairs. We are not planning to fly nearby seabird colonies to avoid unnecessary disturbances and to avoid risking hitting birds with the helicopter.

Impact on local communities: We have no reason to believe this project will have impact on local communities, Inuit and Cree rights and their use of the lands, waters, and natural resources. Our ultimate objective is to acquire knowledge to fulfill knowledge gaps we have on seabird and sea ducks to help preserve them. We definitely don't want to impact Inuit and Cree rights and life and we will do all that we can to avoid this kind of impact. For example, during our survey, we will get as far as possible from Inuit and Cree communities, camp sites, and hunting and fishing sites.