



ANNUAL REPORT

2023

| Anguniaqvia niqiqyuam
| Marine Protected Area



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At-a-glance

Date of designation:

October 28, 2016

Size:

2358 km²

Contribution towards the marine conservation targets:

0.04%

Location:

This MPA is located in Darnley Bay, Northwest Territories, near the community of Paulatuk, in the Inuvialuit Settlement Region (ISR). It is within the Western Arctic Bioregion; Arctic Ocean.

Co-managed by:

The MPA is co-managed by:

- Paulatuk Hunters and Trappers Committee (PHTC)
- Fisheries Joint Management Committee (FJMC)
- Inuvialuit Game Council
- Inuvialuit Regional Corporation (IRC)
- Fisheries and Oceans (DFO)

See more details on the structure in the [Management and Governance](#) section of this report.

Acknowledgement:

The MPA is within the ISR, and is co-managed and co-governed by the Inuvialuit and DFO.

Zones:

There are 2 zones in the MPA, including:

- Zone 1 - in Darnley Bay and Amundsen Gulf in the Beaufort Sea.
- Zone 2 - in Kendall Inlet in Amundsen Gulf in the Beaufort Sea.



Key highlights

In 2023, there were several notable achievements in the Anguniaqvia niqiqyuam (AN) MPA, including:

- The Western Arctic MPA Steering Committee (WAMPA) approved their Terms of Reference, which confirms the co-management and co-governance structure for the 2 Western Arctic MPAs (Tarium Niryutait MPA and AN MPA). These MPAs were collaboratively developed by Inuvialuit organizations and DFO over the past several years.
- In collaboration with the FJMC and others, several ongoing monitoring projects collected another continuous year of data, including the Beluga health and knowledge program that has been ongoing in the ISR since 1989 and expanded to Darnley Bay in 2012.





In the spotlight: benefits

Ecological	Socio-cultural	Economic
<p>The AN MPA safeguards critical habitats, species and ecological processes in Canada's Western Arctic. It is an ecologically important area and critical habitat for:</p> <ul style="list-style-type: none"> • Arctic char • cod • beluga whales • ringed and bearded seals • polar bears • sea birds <p>It is home to the only thick billed murre colony in the Western Canadian Arctic. As the MPA is near the community of Paulatuk, it supports the resilience of the local Inuvialuit community. The flexible and adaptive co-management approach, and the many research and monitoring projects within the MPA, allow it to evolve in response to changing environmental conditions and risks, including those posed by human impacts and climate change.</p>	<p>The AN MPA provides important socio-cultural benefits for the local Inuvialuit community. It was established in part to support the subsistence harvesting of key marine species, like Arctic Char, Beluga Whales and migratory birds, which are culturally and economically important to the Inuvialuit people.</p> <p>Established co-management and co-governance processes recognize and help maintain the Inuvialuit's traditional harvesting practices and relationship with the marine environment.</p> <p>The AN MPA also encompasses other critical areas that are culturally and historically significant to the Inuvialuit, including the Cape Parry Migratory Bird Sanctuary.</p>	<p>The AN MPA is governed through a true co-management collaborative approach. This collaboration fosters community partnerships and promotes the sharing of knowledge and resources while also providing employment opportunities for Paulatuk community members.</p> <p>Community-based monitoring programs create employment opportunities for local residents. For example, in 2023, there were 23 short-term employment opportunities through MPA research and monitoring projects.</p> <p>Lastly, the AN MPA Working Group reviews all research and monitoring project proposals to ensure that budgets account for increasing costs of living and working in Paulatuk and the region.</p>



Education and outreach

- The Contribution Agreement that supports the operation of the AN MPA allocates funds for stewardship and outreach for the PHTC, up to a maximum of \$50,000 per year. In 2023, this committee used the funds to purchase building materials to construct a cabin to support future monitoring projects.



Photo credit: Laurissa Christie

- In 2023, community members and AN MPA Working Group members of Paulatuk presented at various conferences including the International Marine Protected Areas Conference ([IMPAC5](#)) in Vancouver. They presented the co-management framework of the 2 Western Arctic MPAs in the ISR.
- The Working Group includes a Future Leader (Inuvialuit youth), appointed by the PHTC, who takes part in all management discussions and decisions. Many research projects hire local technicians and involve Future Leaders, to support training in scientific research methods. The Working Group also advocates for increased training opportunities and technical capacity in Paulatuk.



Photo credit: Laurissa Christie



Photo credit: Laurissa Christie



Photo credit: Laurissa Christie

Research and monitoring

The AN MPA Working Group is developing the first monitoring plan for the MPA. A Canadian Science Advisory Secretariat (CSAS) peer-review meeting reviewed ecological indicator data, and the Working Group is working with DFO Science to ensure that their advice informs the monitoring plan. WAMPA has established an additional working group with representatives from management and governance partners to develop recommended governance indicators. The Inuvialuit Regional Corporation is undertaking work to develop recommended socio-cultural indicators.

Both the Working Group and the Steering Committee review, provide feedback and approve projects that have applied for AN MPA monitoring funding each year. Other projects happening in the MPA are also reviewed by the AN MPA Working Group, and all projects must have PHTC support to be able to proceed in the MPA, as it is within the ISR. The research project development and review process ensures that projects address new concerns, such as the impacts of climate change (for example, increased erosion, changing weather patterns and longer open water seasons).

Activity	Lead	Outputs	Outcomes
<p>Arctic Coast – AN MPA</p> <p>An annual community-based coastal monitoring program</p>	DFO, PHTC	<p>Six community-based monitors hired at 3 different sampling locations in summer/fall.</p> <p>Six community-based monitors hired for winter fieldwork.</p> <p>Additional year of data for long-term dataset.</p>	<p>Continuous monitoring dataset. The eighth consecutive summer and second consecutive fall of fieldwork monitoring at Argo Bay.</p> <p>Fieldwork at Bennett Point and Brown's Harbour.</p> <p>Winter coastal research monitoring was completed at 26 stations.</p>
<p>Fish Movement and Technology Workshop</p>	DFO, PHTC	<p>Workshop to discuss the potential for a fish acoustic telemetry movement study</p>	<p>The proposal was supported by the PHTC and will move ahead into a planning phase with the program to use the acoustics telemetry approach to study fish movement. A proposal with a 5-year plan would support seeking funds.</p> <p>The workshop was then followed by an evening event with H. Pettitt-Wade sharing photos and videos from the Ulukhaktok field program that was very well received.</p>
<p>Paulatuk Beluga Health Knowledge</p>	DFO, PHTC	<p>Three community hired positions.</p> <p>19 harvested whales were sampled in the summer of 2023, 17 of those were sampled by the beluga monitors and 2 were sampled by hunters at Egg Island.</p> <p>DFO staff and a veterinarian were present to collect additional samples from the first 3 whales harvested. Additional sampling was done to address observations of whales with minimal blubber thickness and skin markings in 2022.</p>	<p>Beluga health data are used in numerous papers, conference presentations, to inform management, etc.</p>

Activity	Lead	Outputs	Outcomes
<p>Bathymetry Projects in the AN MPA</p> <p>The bathymetry project links to these AN MPA priorities:</p> <p>A) A complete bathymetric chart of Darnley Bay and AN MPA is needed. This is necessary for navigation, for interpretation of biological data and to understand patterns of circulation in Darnley Bay</p> <p>B) Explore/request update of bathymetric chart for Darnley bay with data for nearshore areas obtained via a Community Hydrography Program with Canadian Hydrographic Service</p>	<p>DFO, PHTC, Natural Resources Canada, Crown-Indigenous Relations and Northern Affairs Canada, Canadian Hydrographic Society, FJMC</p>	<p>The PHTC hired 4 technicians and a project coordinator for the community boat bathymetry project.</p> <p>The survey for the offshore project used multi-beam sonars mounted on the FV Frosti and its skiff.</p>	<p>This year there were many successes for the Community Boat Bathymetry project:</p> <ul style="list-style-type: none"> • priority areas were finalized for the next 2 years of the project • sonars were installed on community boats • community boats completed the mapping in Argo Bay <p>The survey for the offshore project was also successful, with coverage of the main travel corridors and safe shelters between Bennett Point and Browns Harbour.</p> <ul style="list-style-type: none"> • Letty Harbour, Kamakark Bay and Johnny Green Bay were also partially mapped. • Satellite-derived bathymetry data has been used to complete the multibeam coverage of shallow areas (<10m depth) to create a community map for the area.
<p>Seal Diet and Health Monitoring</p> <p>Maintain a long-term, locally based, ringed seal and bearded seal diet and condition monitoring program in the AN MPA.</p>	<p>Stephen Insley (Wildlife Conservation Society)</p>	<p>A colouring book was created to share seal diet results.</p> <p>Two community assistants were hired: Joe Illasiak and Ryan Green</p>	<p>Stomach contents have been analyzed for diet and microplastics. Further diet analysis using blubber and whisker samples are planned, as well as pathogen analysis using blood samples.</p>

Activity	Lead	Outputs	Outcomes
<p>Acoustics and Shipping Impacts</p> <p>Monitoring marine mammals; measuring ship noise and its impact on bowhead whales and ringed seals. There are 13 year-round recorders in the ISR and 1 short-term one in the AN MPA.</p>	<p>Stephen Insley (Wildlife Conservation Society)</p>	<p>A report on the results was shared with the AN MPA Working Group and WAMPA.</p>	<p>We examined trends in vessel traffic in the ISR between 2015 and 2022 to assess whether vessels were conforming to the guidelines in the Notices to Mariners.</p>
<p>Core-use Areas of Cape Parry Thick-billed Murres</p> <p>Core-use areas during the breeding (summer) and the non-breeding (winter) seasons, as well as migration, diet, and trophic levels.</p>	<p>Stephen Insley (Wildlife Conservation Society)</p>	<p>Two community assistants were hired: Joe Ruben Sr and Waylon Green</p>	<p>Data trackers were collected and a map showcasing the migration routes was produced.</p>
<p>Arctic char monitoring in the AN MPA</p> <p>An annual community-based monitoring program for the Arctic Char in the AN MPA at Tippitiuyak (Tippi) was established in 2012.</p>	<p>DFO, PHTC</p>	<p>Harvest, catch-effort, biological data and tissue samples are collected by Tony Green and assistants.</p>	<p>This information supports one of the conservation objectives of the MPA (to maintain the habitat to support populations of Arctic Char) and the implementation of the Paulatuk Char Management Plan.</p>
<p>Paulatuk Beluga Drone Project</p> <p>The main goal is to enhance our understanding of beluga whales by augmenting harvester observations with field data collection and analysis. The project focuses on documenting beluga behaviors such as rubbing and foraging in key areas identified by community knowledge holders from Paulatuk.</p>	<p>DFO, PHTC, Natural Resources Canada, University of Manitoba</p>	<p>Drone fieldwork occurred from June 24 - July 29, 2023. The field team surveyed beluga and mapped sites, and hydrophones were used to characterize soundscape and record marine mammal vocalizations.</p>	<p>In July, 2023, aerial footage from the field season was presented during a community night in Paulatuk.</p> <p>The footage and project updates were shared at the Inupiat-Inuvialuit Beluga Whale Committee meeting in Anchorage, Alaska, in August 2023.</p>



Collaborations and partnerships

All research that takes place in the AN MPA is collaborative with the Inuvialuit. The MPA is within the ISR and is subject to the established co-management processes for the MPA and the region. Most projects within the AN MPA are co-developed by research leads and the PHTC, and all projects in the ISR must follow established processes and have the support of local and regional Inuvialuit organizations. These include various co-management committees such as the: Environmental Impact Screening Committee and community Hunters and Trappers Committees.

The MPA-funded research is reviewed by the AN MPA Working Group, WAMPA, and all partners (some information on membership is the [Management and governance](#) section).

There are also academic institutions that partner with DFO and Inuvialuit organizations on Research in the AN MPA. Collaborations can be seen in more detail in the above table in the [Research and Monitoring](#) section of this report.



Surveillance and enforcement

DFO's Conservation and Protection Officers are responsible for monitoring and ensuring compliance with the AN MPA regulations. In 2023, they did not detect or receive any reports



of violations of the AN MPA regulations. They conducted the following activities in the AN MPA:

- Remotely monitoring large vessel traffic by Automatic Identification System (AIS) data
- Two dedicated air surveillance patrols of the MPA during the summer

Conservation and Protection Officers are currently exploring the use of satellite based dark vessel technology to remotely monitor vessels that do not report on AIS within the MPA.



Management and governance

The management and governance of this MPA is led by the AN MPA Working Group and WAMPA:

Anguniaqvia niqiqyuam MPA Working Group:

- Paulatuk Hunters and Trappers Committee (PHTC)
- DFO Marine Planning and Conservation
- Fisheries Joint Management Committee

Western Arctic MPA Steering Committee (WAMPA):

- DFO Marine Planning and Conservation
- DFO Fisheries Management
- DFO Science
- Inuvialuit Game Council
- Inuvialuit Regional Corporation
- Fisheries Joint Management Committee
- TN MPA Working Group Chair
- AN MPA Working Group Chair

The AN MPA Working Group and the WAMPA each met in January, June, and during the fall of 2023. Numerous meetings occurred throughout the year among researchers and the PHTC to develop and implement approved research and monitoring projects within the MPA.

The AN MPA management and monitoring plan is being developed through collaborative processes involving all MPA partners.

In June 2023, WAMPA approved their Terms of Reference, which sets out the membership and operation of the Steering Committee, as well as

the working groups of the 2 Western Arctic MPAs (Tarium Niryutait [TN MPA] and AN MPA). There is equal representation between Inuvialuit and DFO at all levels of governance for the 2 MPAs.

This year (2023-24) was the third year in a 5-year Contribution Agreement with the Inuvialuit Joint Secretariat. This agreement provides funding for the governance and administration, research and monitoring, stewardship and

outreach, and database development of the 2 Western Arctic MPAs (Tarium Niryutait and Anguniaqvia niqiqyuam).

All research, monitoring, educational and commercial marine tourism activities must apply for an Activity Plan under the ANMPA Regulations. There were 10 Activity Plans submitted for research activities in the AN MPA in 2023.

Looking to the year ahead

Looking ahead, there are 8 research and monitoring projects that have been approved to receive MPA funding, and they will be implemented in the AN MPA. DFO will continue to work with the Joint Secretariat and the PHTC to support stewardship and outreach programs designed and implemented by the community.

In 2024, the AN MPA Working Group will continue to develop the first management and monitoring plans. They will continue to work with feedback from community members and DFO Science to develop ecological indicators for the monitoring plan. Governance indicators will be developed by the working group that has been established by the Western Arctic MPA Steering Committee. The Inuvialuit Regional Corporation will be developing socio-cultural indicators. Lastly, access to long-term monitoring data will improve as a working group will be developing a regional database for all MPA indicator data.





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