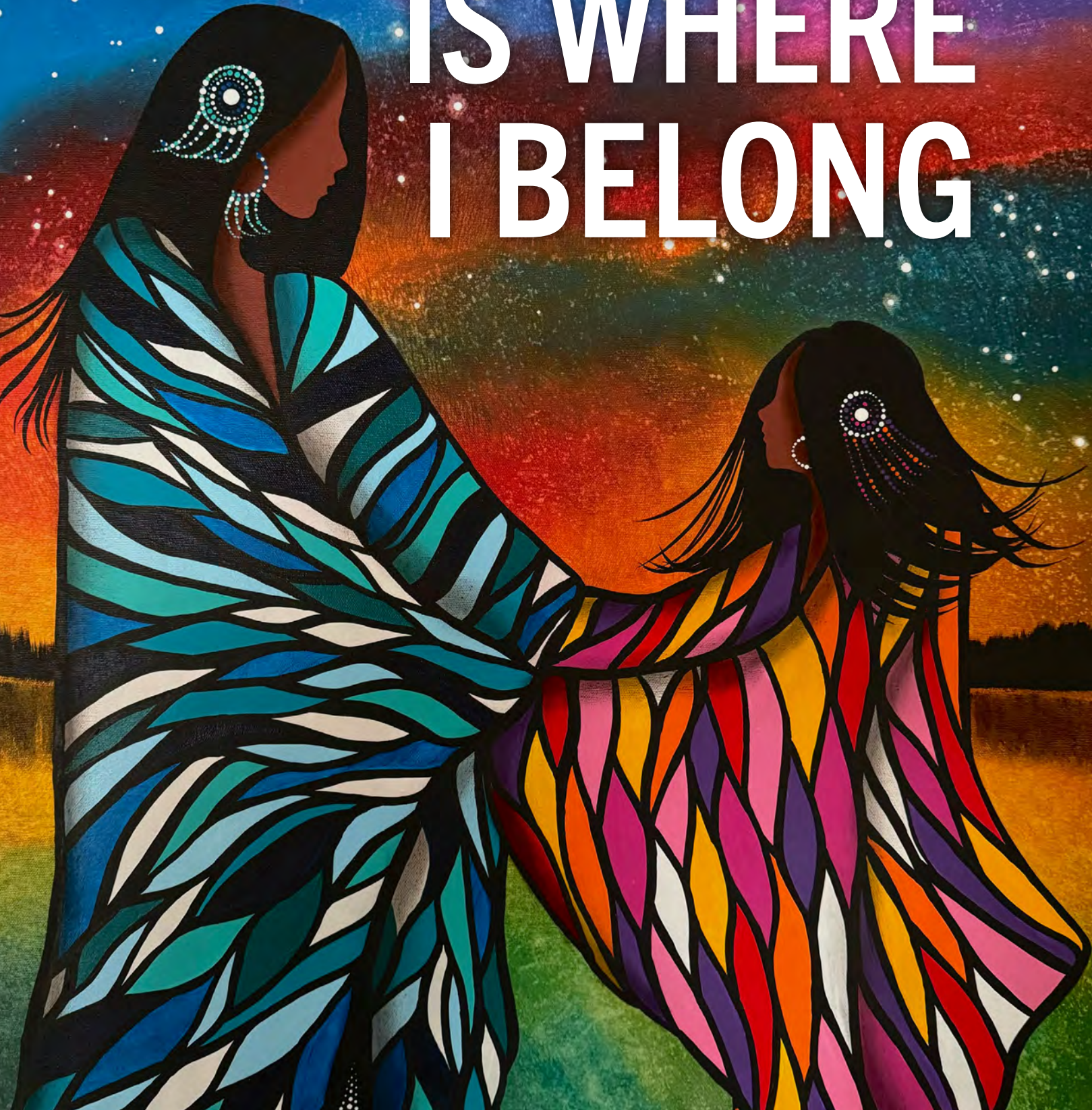


A DRAFT Feasibility Assessment for the
Proposed Mushkegowuk National Marine
Conservation Area in western Weeneebeg
and southwestern Washaybeyoh

DECEMBER 2023

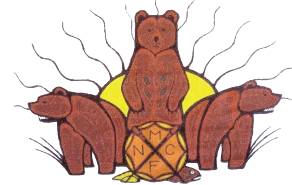
TAWICH IS WHERE I BELONG



The proposed Mushkegowuk National Marine Conservation Area is a project by the seven Nations of the Mushkegowuk Council, in collaboration with Fort Severn First Nation and Weenusk (Peawanuck) First Nation.



Fort Severn First Nation



Missanabie Cree First Nation



Taykwa Tagamou Nation



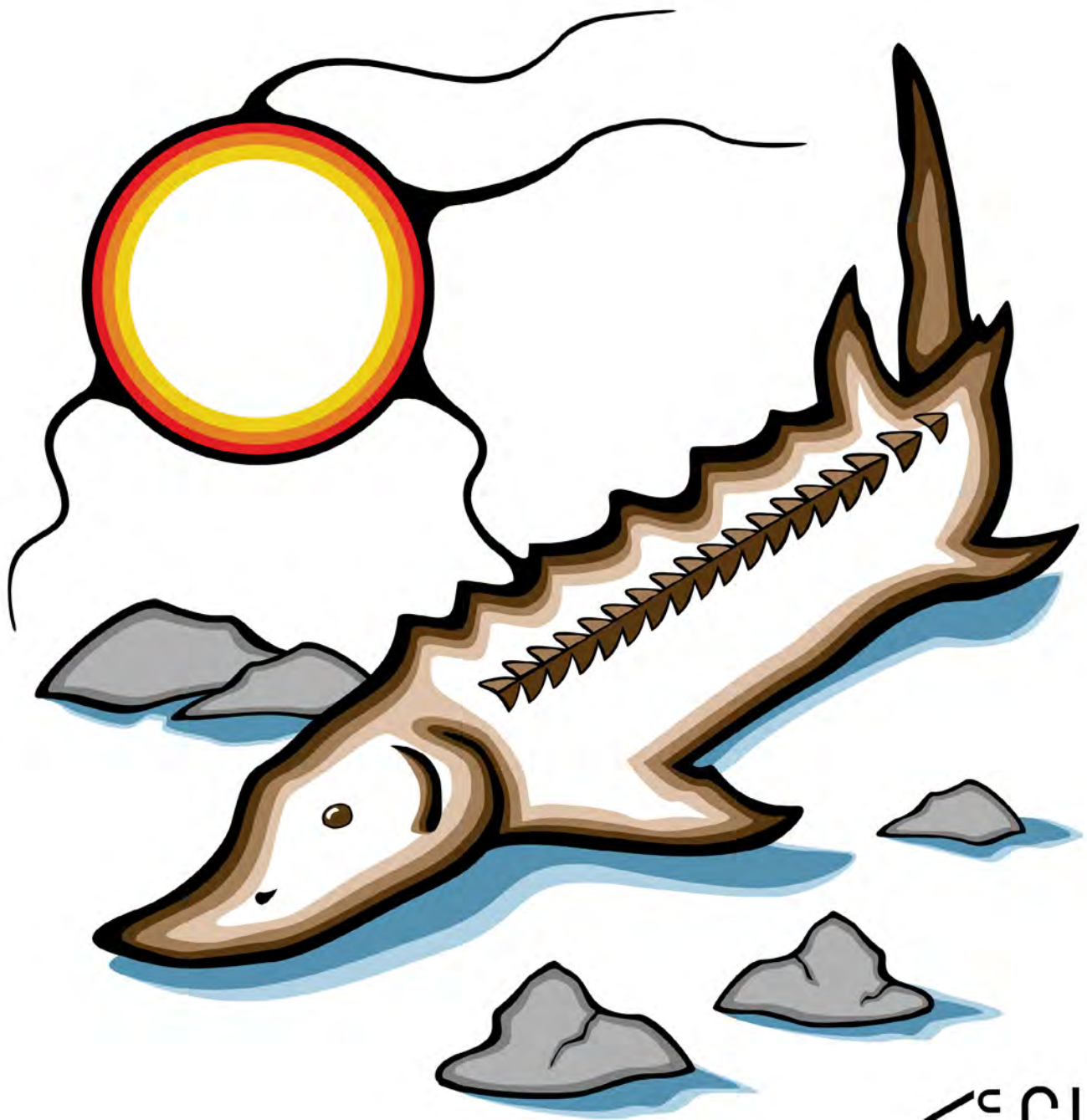
Mushkegowuk
Council



Full Page Art Credits: The art on the cover and on pages 30 and 92 is by Betty Albert. The art on the back cover and on pages 6, 56 and 84 is by John Reuben. Other art work is credited directly on the page it is located.

CONTENTS

I	EXECUTIVE SUMMARY	39	WHY HERE?
III	ACKNOWLEDGEMENTS	45	TAKING CARE OF CANADA'S OCEAN IN PARTNERSHIP WITH INDIGENOUS PEOPLES
IV	PROTECTION THE OMUSHKEGO WAY		
	FOREWORD BY GRAND CHIEF LEO FRIDAY	51	THE FA PROCESS
1	AN OMUSHKEGO VISION	57	CARING FOR THE LANDS AND WATERS
5	AN UPDATE ON THE STUDY AREA BOUNDARY	83	HEALTH, WELL-BEING, COMMUNITY SOCIO-ECONOMICS
9	WHAT WE HEARD SO FAR		
15	THE TAWICH CYCLE OF LIFE	91	OTHER HIGH LEVEL SOCIO-ECONOMIC CONSIDERATIONS
19	PHOTO ESSAY		
31	THE ORIGIN STORY	95	NEXT STEPS



၆၂

EXECUTIVE SUMMARY

The proposed Mushkegowuk National Marine Conservation Area (NMCA) is an Indigenous-led effort to permanently protect Washaybeyoh (Hudson Bay) and Weeneebeg (James Bay), along with a 20-km coastal buffer, known collectively as Aski-Gitchi Bayou (the place where “the land expands out into the waters”). With a study area spanning more than 91,000 sq km, this protected area will help fulfill the long-standing calls from Omushkego communities, as well as Weenusk (Peawanuck) First Nation and Fort Severn First Nation, to safeguard the lands and waters while protecting our Inherent and Treaty rights.

Weeneebeg and Washaybeyoh is a sacred place that is essential for Omushkego well-being, culture, and way of life. This proposed protected area contributes to our efforts to preserve our culture, reclaim our traditional place names, provide opportunities for land-based healing, and pass on language and culture to children and grandchildren, and acknowledges that we are the primary stewards of our traditional territories.

This Mushkegowuk feasibility assessment report weaves intimate Omushkego knowledge and expertise with Western science. Over 124 interviews with 90 Omushkego land users were recently conducted.

Aski-Gitchi Bayou is increasingly recognized as a globally significant seascape and coastal area where incredible biological diversity and rich culture are closely entwined. Weeneebeg and Washaybeyoh are highly productive marine areas where ocean currents, sea ice and open water, along with countless inflowing rivers, create an abundance of nutrients, supporting a diverse food web. As our people have always known, our home is a continentally important hotspot for hundreds of species of breeding and migratory birds; 2 to 3 million migratory snow geese migrate through in the spring and fall, forming a staple of our traditional diet. Our polar bears are ecologically and genetically unique. Our waters and coastal wetlands support 35 species of waterfowl (representing 80 percent of North American waterfowl diversity), two subpopulations of beluga whales including a year-round, genetically distinct resident population in Weeneebeg and shy Atlantic walrus.

The coastal corridor is marked by unique inverted marshes, which occur in few other places in the world, creating especially rich habitat at river mouths. Aski-Gitchi Bayou is a biodiversity hotspot with low impacts for fish and provides a refuge for southern Hudson Bay caribou. Our home also supports life on Earth by absorbing greenhouse gases and storing carbon. It is undeniable that our ecosystems have cooled the planet over thousands of years and continue, to this day, to play a vitally important role in regulating the planet's climate.

NMCA status offers critical protection from outside threats to Tawich¹ such as oil and gas development, mineral exploration and mining, bottom trawling and ocean dumping—while at the same time protecting our Inherent and Treaty rights to harvesting, fishing and trapping. We will also seek assurances from Canada, through discussions with other departments, that destructive colonial schemes like the Great Recycling and Northern Development (GRAND) Canal will never be permitted and oil or diesel tankers related to future mining will not be permitted in Weeneebeg and Washaybeyoh. Where the NMCA process and establishment are subject to Indigenous title and land claims, these would take precedence.

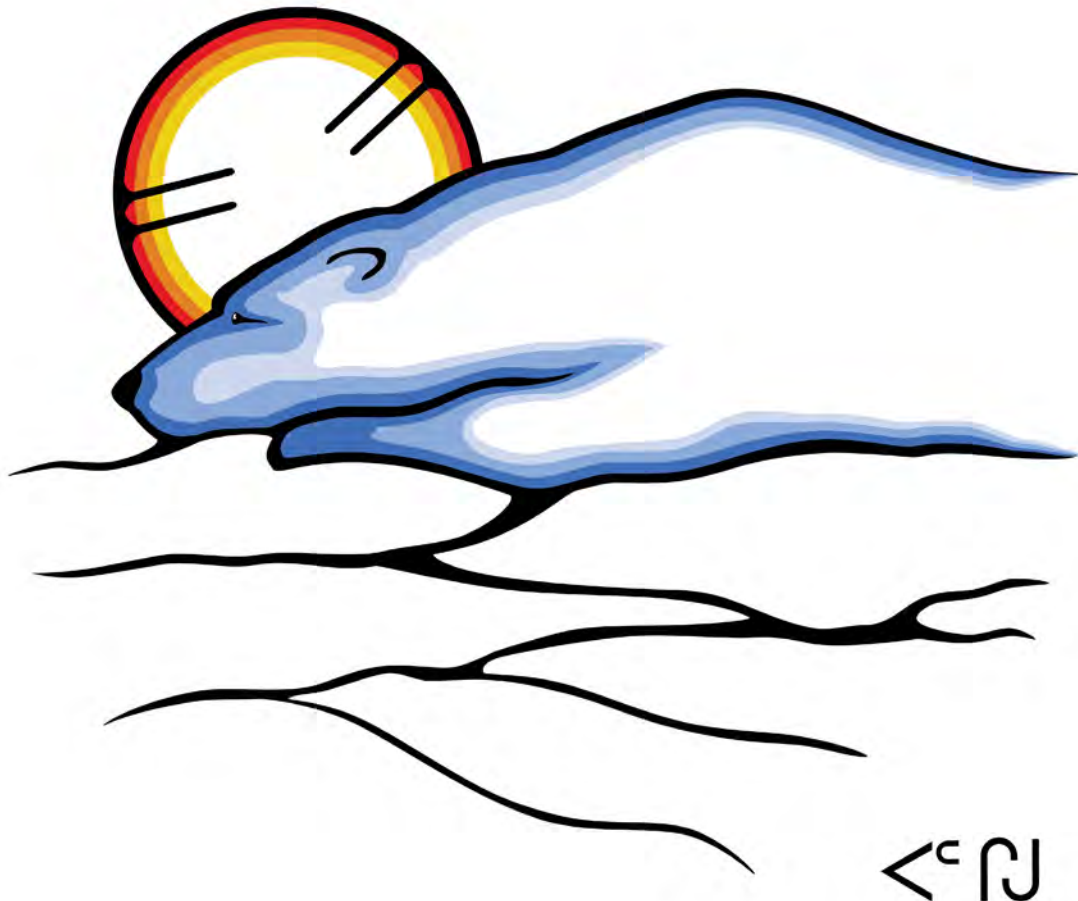
¹ Tawich is an Indigenous term referring to the coastal zone and offshore waters of Washaybeyoh and Weeneebeg, including the rivers and estuaries, coastal wetlands, tidal flats, beach ridges and more.

We are at a critical moment. In order to take the next step, we need communities to confirm this is the direction they want to go. This report is intended to be appended to the official recommendation to the federal environment minister and Grand Chief of Mushkegowuk Council on next steps. Canada has said it is ready to work with the Omushkego on the offshore area first as part of a phased approach. We have invited the Ontario government to come to the table to join the consensus process for the coastal areas and estuaries. It is considering our invitation.

Once communities have approved, together we would begin negotiating an establishment agreement with Canada. We anticipate it could take up to a year to negotiate. This is where we would include important terms and conditions like the protection of our Inherent and Treaty rights to harvest, fish and hunt and travel the lands and waters like we've always done. We are also seeking resources for jobs including Guardians and housing for Guardians, supervisory positions, equipment, multi-use centres and remote monitoring stations. Any agreement would need to be approved by communities before signing and implementation.

Initially, the NMCA will be managed through a consensus process between the Omushkego and Canada. It is our intention to create a governance structure that is Indigenous-led in the near term and that reflects what the people have said for years about getting control back of their lands and waters. This will be a condition to be included in the establishment agreement.

This NMCA initiative, once established, will showcase to Canadians and the world our Omushkego way of life and culture and the globally significant marine and coastal ecosystem that underpins our well-being and identity.



Art Credit: Patrick Cheechoo

ACKNOWLEDGEMENTS

Mushkegowuk Council acknowledges that the Creator has given the Omushkego our lands and our waters. We recognize that the Omushkego are charged by the Creator with a sacred duty to preserve and protect our lands and waters for future generations. We wish to recognize the Elders, knowledge keepers, hunters/harvesters and all the community members (past and present) of all the Nations of the Mushkegowuk Council and Weenusk (Peawanuck) First Nation and Fort Severn First Nation who have provided guidance, expertise and knowledge over the years to preserve Weeneebeg and Washaybeyoh.

Mushkegowuk Council leadership, staff and allies have worked tirelessly to honour their intentions.

The Council acknowledges and is grateful to Vern Cheechoo, Lawrence Martin and Corrina Payne for shepherding the marine initiative as part of a holistic approach to the homelands. The Council also acknowledges and thanks the Marine Research Assistants in carrying out over 124 interviews with 90 participants from across Aski-Gitchi Bayou. They are: Victoria Matthews, Tommy Miles, David Hunter, Ignace Gull, Louis Noah, Brian Wynne, Sandus Lazarus, Chris Metatawabin, Carolyn Charcura, Kyle Corston, Bree Nemeth and George Nakogee. We've only begun to scratch the surface on these interviews. They are an irreplaceable source of knowledge and information. The GIS team is working diligently to digitize data from the interviews and we thank Barb Duffin, Tanya Iljas, Nigel Spence, Evan MacLachlan and Roxanne Metlin for all their support. Angela Sheeshish provided Cree translation and expert explanation of Cree concepts in English. Mushkegowuk Council also acknowledges the following task force members: Adrienne Beaupre, Donald Meekis, Edward Sutherland, John Turner, Mike Metatawabin, Stan Sutherland, Steve Hookimaw and Tess Sullivan.

Mushkegowuk Council tasked Anna Baggio of Wildlands League as the project lead of this feasibility assessment. We thank her for working with us with great care and perseverance on an accelerated timeline to beautifully showcase to Canadians and the world our Omushkego way of life, culture and our globally significant marine and coastal ecosystem. Anna has more than two decades experience working in our region as a dedicated conservationist. We recognize the team Anna put together including writer and researcher Conor Mihell, conservation staff Megan Chen, and Dave Baldwin and Jacob Chila for their mapping and maps. Layout and design by Tanya Sprowl of phivedesign.

The Council also acknowledges and recognizes the broader Mushkegowuk team for their contributions including Edward Sutherland, Norm Wesley, former Grand Chief Jonathan Solomon, former Grand Chief Alison Linklater, former Deputy Grand Chief Rebecca Friday, Sharon Butterly, Job Mullins Koene, Paul Crowley, Stephane Friday, Colleen McLeod, Troy Woodhouse, Calvin Harris, Charles Hookimaw, Amy Cloutier, Vicki Sahanatien, Sam Hunter and the Wakenagun Community Futures Development Corporation.

The Council recognizes and thanks Parks Canada for coming to the table and being a trusted partner as we work together to build an Indigenous-led national marine conservation area in Weeneebeg and Washaybeyoh. Dominique Potvin and Diane Blanchard are highly committed to making this initiative a reality building on Kevin McNamee and Candace Newman's early efforts.

The gorgeous art you see on the cover, back cover and pages in between was provided by artists from the Omushkego Artist Collective: Betty Albert, John Reuben, Patrick Cheechoo and Robin Kioke. These stunning art pieces help us to tell our story in our Omushkego way and help us celebrate who we are and our culture and lands. We thank the artists. Galen Boulanger connected the artists to Anna, the project lead, and we thank him for his work in supporting a thriving network of Omushkego artists. To get in touch about artist collaborations, please contact Galen through the Omushkego Artist Collective at galenboulanger@mushkegowuk.ca.

Many people contributed photographs to this report including: Adrian Sutherland, Judy Sutherland, Wildlands League, Trevor Hesselink, The Water Brothers, Carrie Gray, Zou Zou Kuzyk, Jane McDonald, Barb Duffin and Parks Canada. We are grateful for them.

The following scientists also gave generously of their time and expertise to this report (or aspects of it) including: National Audubon Society's Jeff Wells and Carrie Gray, Wildlife Conservation Society Canada's Constance O'Connor and Lorna Harris, University of Toronto's Sarah Finkelstein, York University's Greg Thiemann, University of Manitoba's Zou Zou Kuzyk, Alessia Guzzi, Jens Ehn, CJ Mundy and Tim Papakyriakou, Canadian Wildlife Service's Christian Friis and Fisheries and Oceans Canada's Anne Provencher St. Pierre.

The philanthropic community and environmental community provided nimble and crucial support for this initiative in getting it off the ground and ensuring it is the success it is today. We recognize and thank The Gordon and Betty Moore Foundation, Environmental Funders Canada, Oceans North and Oceans Collaborative. In addition, Wildlands League and Oceans North provided key strategic and technical support for the marine initiative since the beginning. Oceans North's Maude Durand and Jennie Knopp have been a great support. World Wildlife Fund Canada also provided some data and in-kind support.

We are building an Indigenous-led National Marine Conservation Area the Omushkego way. Join us.

PROTECTION THE OMUSHKEGO WAY

FOREWORD GRAND CHIEF LEO FRIDAY



Over the decades I have been involved in Indigenous leadership and listening to the people, one powerful, heartfelt message has been consistently heard from across Omushkego Aski: we must protect the lands and waters that are essential to our lives, culture, healing and renewal as a people.

Now, we have the opportunity to permanently protect Tawich, including the waters of Weeneebeg and Washaybeyoh and all along the coast, from Moose Factory to Fort Severn. Canada has come to the table at our request to work with us on protection of our traditional marine and coastal territory.

The days of doing something “about us without us” are over. Protection of our Inherent and Treaty Rights, including hunting, fishing, gathering, spiritual practices, as well as travelling on the lands and waters, will be paramount in an Indigenous-led National Marine Conservation Area (NMCA). NMCA status will offer us critical protection from outside threats to Tawich such as oil and gas development, mineral exploration and mining, bottom trawling and ocean dumping—while at the same time protecting our Inherent and Treaty Rights to harvesting, fishing and trapping. We will also seek assurances from Canada through other departments that destructive colonial schemes like the Great Recycling and Northern Development (GRAND) Canal will never be permitted. We will also seek assurances from Canada to prevent oil/diesel tankers as related to any future mining from coming into Weeneebeg.

The NMCA's management and operations will be funded by the Canadian government enabling Omushkego communities to take the lead in managing and operating the protected area, as well as serving as formal guardians of the lands and waters, defining strict data sharing terms, and sharing our Indigenous Knowledge as equal partners in research and monitoring. The NMCA also supports our communities in developing sustainable economies based on local objectives.



Figure 1: “The Jonathans”: Then Mushkegowuk Grand Chief Jonathan Solomon shakes hands with Canada’s Environment Minister Jonathan Wilkinson after signing the MOU, kickstarting the Feasibility Study for the NMCA in Moose Factory in 2021. Credit: Parks Canada.

At the direction of the Chiefs, and since we signed a historic Memorandum of Understanding with Canada in 2021, the Mushkegowuk Marine team has been listening to community members and Elders describe their relationship with Tawich for the purposes of the marine initiative. This Mushkegowuk Feasibility Assessment report highlights the values of Tawich as defined by the knowledge and experience of our local Indigenous people. I invite you to read it and tell us what you think. It braids the Traditional Knowledge of Omushkego people with Western science to paint a unique picture of a globally significant marine and coastal ecosystem.

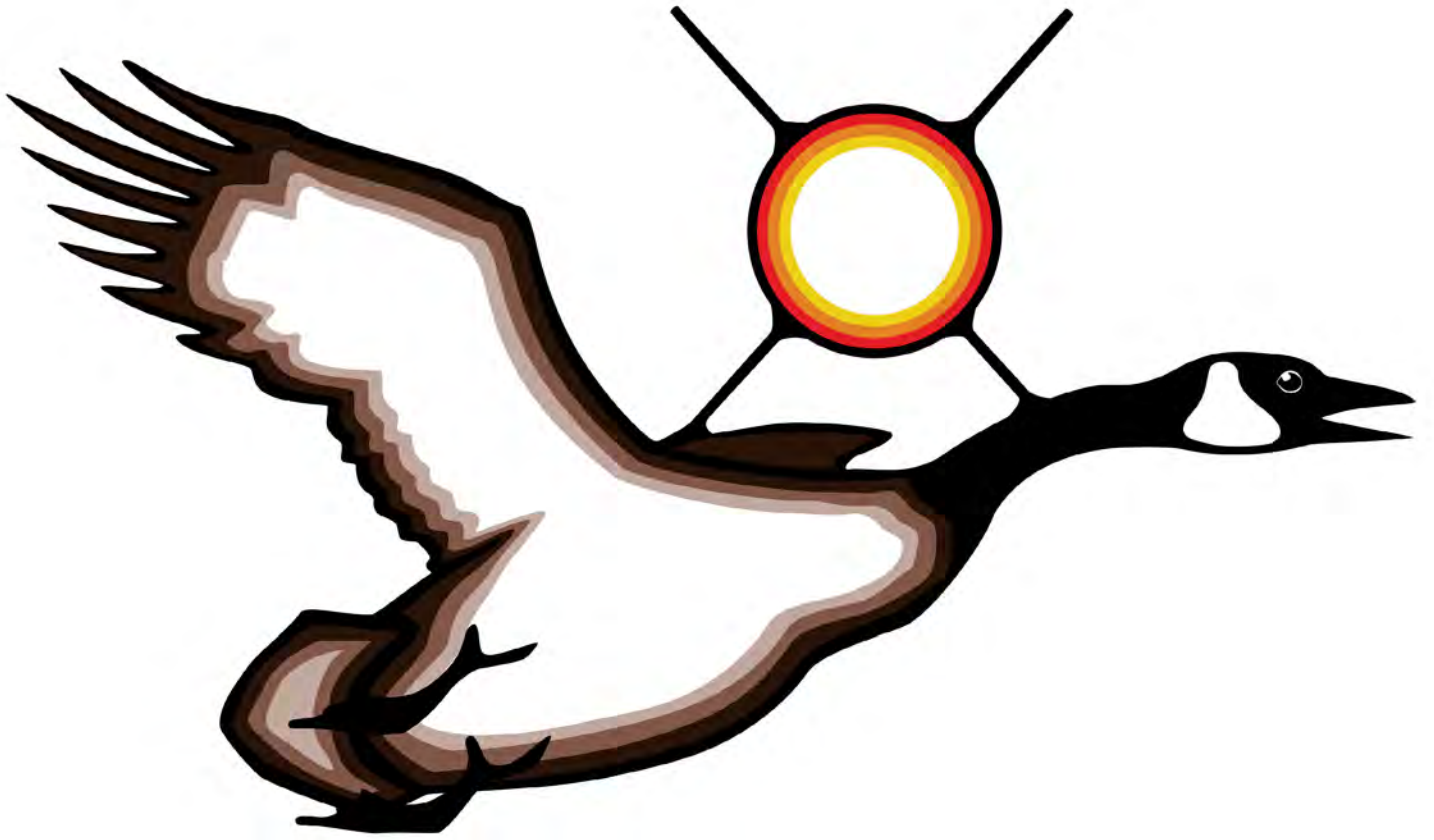
We will only proceed together when the Omushkego communities provide their approval of the feasibility assessment.

Once established (after communities have confirmed their approval), the NMCA will initially be managed through a consensus process between the Omushkego and Canada. In the near term, it is our intention to create a governance structure that is Indigenous-led and that reflects what the people have said for years about getting control back of their lands and waters. This will be a condition to be included in the establishment agreement.

We have invited the Ontario government to come to the table to join the consensus process for the coastal areas and estuaries.



Figure 2: Indigenous and Canadian leaders at the signing of the MOU in Moose Factory. From L>R Leslie Nolan, Mark Butterfly, Tom Kloke, then Chief Mervin Cheechoo (Moose Cree), Minister Jonathan Wilkinson, then Grand Chief Jonathan Solomon, Deputy Chief Earl Cheechoo (Moose Cree) and then Chief Robert Nakogee (Fort Albany). Credit: Parks Canada.



Through our planning process, Omushkego communities are already sharing their incredible expertise and knowledge in defining the proposed Mushkegowuk NMCA. This protected area must be different from legacy provincial parks and migratory bird sanctuaries in the region that initially disregarded our knowledge and interfered with our Inherent rights to get sustenance from the lands and waters.

A marine protected area is only the beginning. We recognize Omushkego territory faces environmental threats beyond Tawich, including mining, hydroelectric development and climate change. The NMCA allows Omushkego communities the power to monitor for environmental impacts. More importantly, marine protection is the prelude to broader protection of the surrounding terrestrial environment, including the waterways, peatlands and forests of Omushkego Aski, through a separate initiative that was recently awarded Project Finance for Permanence by the Canadian government.

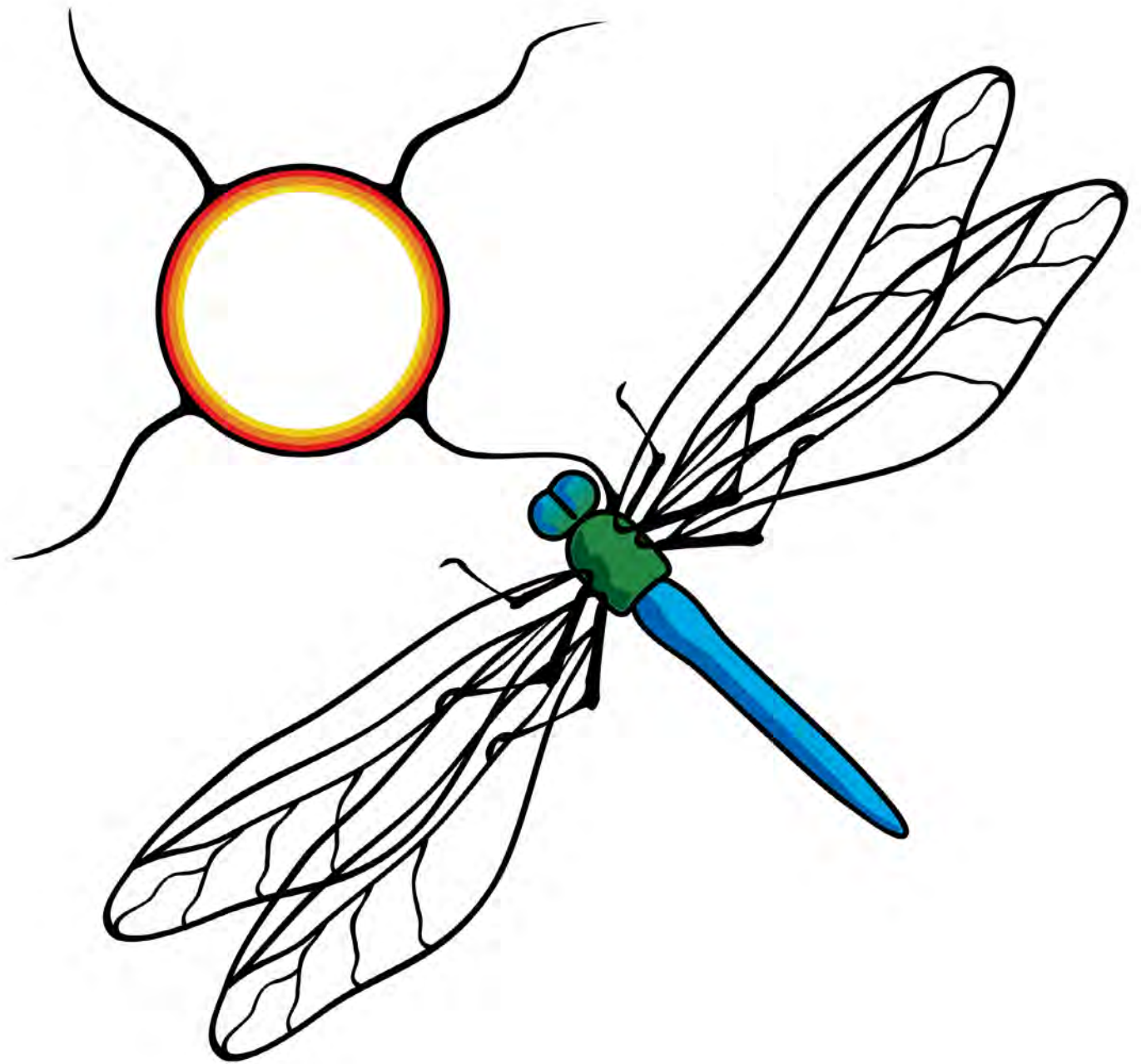


Figure 3: Former Deputy Grand Chief of Mushkegowuk Council, Rebecca Friday addresses dignitaries at the signing of the MOU. Credit: Parks Canada.

Ultimately, we will work together to safeguard the Omushkego way of life. The moment is ours. This is protection, the Omushkego way.

Meegwetch,

Grand Chief Leo Friday
Mushkegowuk Council





AN OMUSHKEGO VISION



^c PJ

Weeneebeg and Washaybeyoh (James Bay & Hudson Bay) is a sacred place that is essential for Omushkego well-being, culture, and way of life since the time of first light. This interconnected ecosystem is globally significant for wildlife, including polar bears, caribou, beluga whales, and a continentally important nesting place for many migratory shorebirds and waterfowl. Establishing an Indigenous-led National Marine Conservation Area here will help to protect our Inherent rights to the lands and waters and respect the Omushkego as primary stewards in our marine and coastal territory.



Figure 4: To this day, the Omushkego walk and boat every nook and cranny of their homelands

Photo: Judy Sutherland (Attawapiskat, Ontario)

It is only recently that the world has started to recognize how Weeneebeg and Washaybeyoh, and all the lands and waters of the Omushkego homelands, make huge contributions to supporting life on earth. But the Omushkego have known this all along. A duty to care for the environment has always been central to the Omushkego world view; the relationship between humans and all of the components of the lands and waters reveals timeless Indigenous connections to nature, as well as potential solutions to modern-day threats of climate change and species extinction. As Weeneebeg and Washaybeyoh become known as one of the world's ecological

and cultural treasures, the proposed Mushkegowuk National Marine Conservation Area is a powerful statement of local communities' ongoing stewardship of the lands and waters, a recognition of Indigenous sovereignty of traditional territories, and an important step forward in reconciliation.

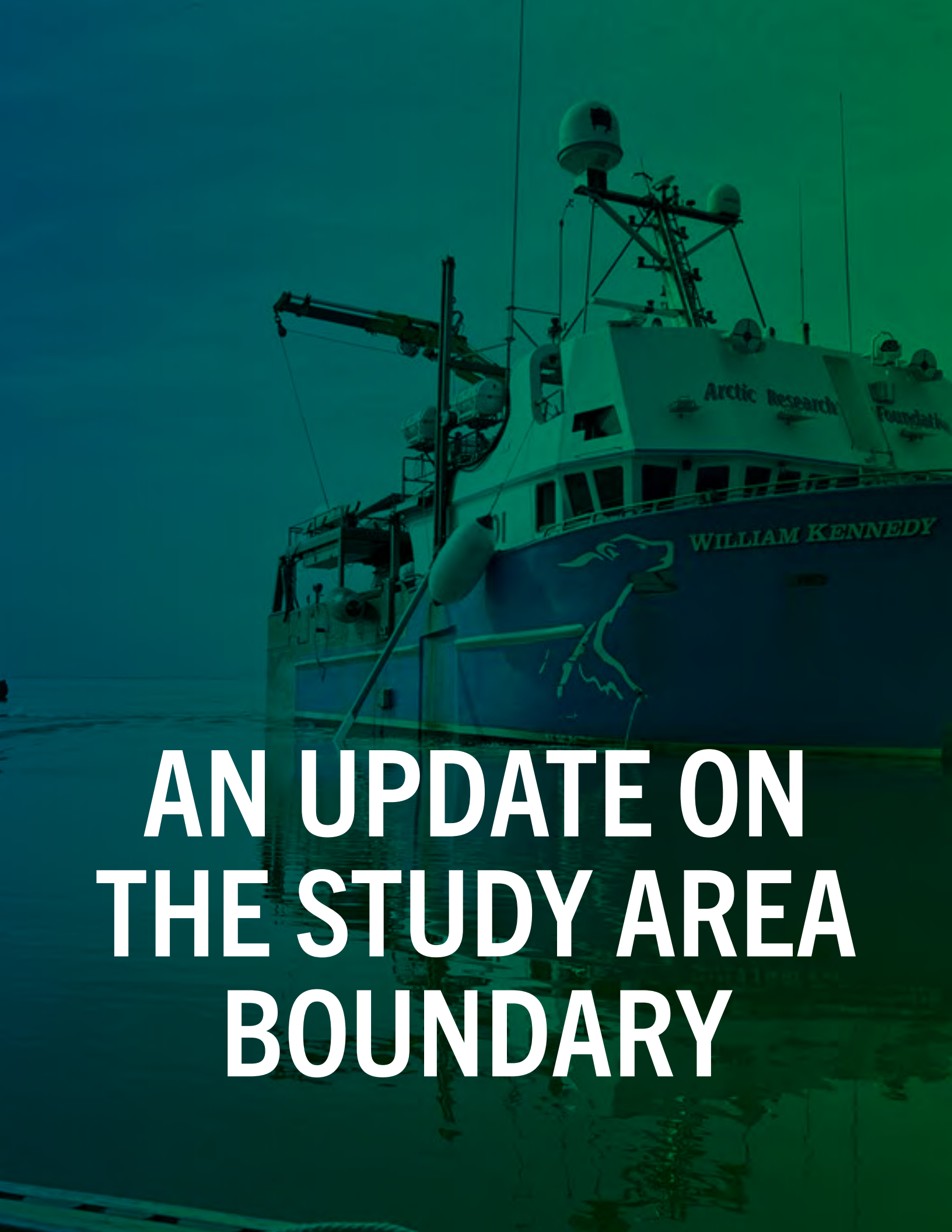
A newly established Indigenous-led marine protected area will:

- Preserve and allow for Inherent and Treaty Rights of our people, including hunting, fishing, trapping and gathering and prevent large-scale industrial uses, such as oil and gas development, drilling, mineral exploration, bottom trawling and ocean dumping
- Prioritize Free, Prior and Informed Consent, ensuring data-sharing and supporting research that braids Indigenous Knowledge with Western science
- Ensure governance models respect the O mushkego as primary stewards in our marine and coastal territory
- Protect biodiversity, including polar bears, beluga whales, caribou, wolves, geese and all the plants and animals that sustain traditional Indigenous diets and culture to support local food security, culture and livelihoods and healthy ecosystems



Figure 5: Belugas in southern Washaybeyoh. Credit: The Water Brothers/Wildlands League

- Protect blue carbon sinks of Weeneebeg and Washaybeyoh and recognize the land-to-sea carbon cycle
- Support our Indigenous communities in creating local economies around sustainable uses, including protected areas management and enforcement, harvesting, gathering and trapping, tourism, research and monitoring
- Contribute to Indigenous efforts to preserve culture, including reclaiming traditional place names, providing opportunities for land-based healing, and passing on our language and culture to our children and grandchildren
- Provide critical baseline information to monitor the impacts of development (such as mineral exploration and hydroelectric projects) occurring outside of the protected area boundaries, as well as broader environmental threats (like climate change)
- Showcase to Canadians and the world our O mushkego way of life and culture and the globally significant marine and coastal ecosystem that underpins our well-being and identity
- Help us implement our holistic outlook on our environment: emphasizing a 'one ecosystem' approach to our homelands where all our rivers flow into the Bays. We look upstream and downstream



AN UPDATE ON THE STUDY AREA BOUNDARY



Refining the inland 20 km buffer and scenarios for timing of implementation

The marine team examined land uses and other development areas within the 20 km buffer that wouldn't be appropriate for inclusion in the NMCA boundary. For example, reserves, municipalities (ie., the Town of Moosonee), winter road, transmission line, mining claims and others were identified, mapped and are proposed for exclusion from the boundary of the NMCA see figure below. The land portion of the NMCA would be 11,651 km².

This will be part of our discussions with communities going forward.

The **PREFERRED OPTION** of the Mushkegowuk Council is to proceed with the marine area, coastal areas and 20km buffer all at the same time.

If Ontario is not yet ready to join in, Mushkegowuk proposes a phased approach to securing waters and lands:

PHASE ONE – go with marine areas only as soon as possible

PHASE TWO – add in coastal areas and 20 km buffer when Ontario joins. Getting the islands back from Nunavut would be part of phase 2 as well as having overlapping agreement with the Eeyou Istchee on shared waters and islands in Weeneebeg



Figure 6: A closer look at existing land uses within the proposed 20 km buffer.



WHAT WE HEARD SO FAR

Indigenous engagement will inform what terms and conditions are included in a legally binding establishment agreement in the future

Table 1: Summary of key themes of what we heard so far, from community meetings, meetings with Chiefs and Councils, in the Wakenagun study and in communications directly with staff and partners either through in person dialogue or digital communications. Some of these themes have been heard since day one, such as Treaty rights and harvesting rights, no GRAND Canal scheme, consent, trust and overwhelming desire to protect the environment and build a better future for their kids and grandkids.

Key Theme	Context	Proposed Action in Response
PROTECTION OF INHERENT AND TREATY RIGHTS	<p>Apprehensions included possible restrictions on traditional land usage and hunting, legacy of migratory bird sanctuaries and provincial parks being established without them</p> <p>Expressed wish for the initiative to respect these rights, particularly when it pertains to traditional practices like hunting, fishing and harvesting from the land ensuring community members can continue these practices unhindered</p>	<ul style="list-style-type: none"> -include a condition in the establishment agreement -develop an overlapping agreement with Eeyou Istchee based on usage of Weeneebeg (over and above NMCA boundary) - where the NMCA process and establishment are subject to Indigenous title and land claims, these would take precedence
FREE, PRIOR AND INFORMED CONSENT	<p>More than one leader brought up and acknowledged that the authority for the lands is with the people and the importance of having a final say in land-related, water matters</p> <p>Community approval needed before moving forward</p>	<ul style="list-style-type: none"> -secure written expressions of support from communities for the feasibility assessment -include a condition in the establishment agreement
NO GRAND CANAL SCHEME	<p>This scheme to dam James Bay and turn it into a freshwater lake and then build a canal to the Great Lakes and divert water to US locations is very upsetting to communities</p> <p>It would destroy the Omushkego way of life in the bay, forcibly remove them, destroy all marine life, and violate agreements not to divert the Great Lakes</p>	<ul style="list-style-type: none"> -initiate a discussion with the relevant Canadian departments to put an end to this destructive idea once and for all

Key Theme	Context	Proposed Action in Response
TRUST	Skepticism due to past experiences, alluding to empty and broken promises related to similar initiatives	<ul style="list-style-type: none"> -follow through on promises -be transparent -hear concerns and then address them -use Cree language not just English -rename place names in Cree -create maps in Cree -initiate discussions with Canadian Wildlife Service and Ministry of Natural Resources and Forestry on shared enforcement of migratory bird sanctuaries -bring jobs and resources to communities
GOVERNANCE	<p>Need for transparent dialogue, increased self-governance in choices, and a more prominent voice in matters concerning their land and daily lives</p> <p>Community emphasizes their need for self-determination and influence over decisions that affect them</p> <p>Significance of unity in their feedback, pointing to the desire for collaborative efforts to ensure that the initiative's goals are realized in a manner beneficial to all</p> <p>The overarching aim is to work collectively to protect the region's resources</p> <p>Overarching sentiment is a call for respect, understanding, and genuine collaboration in decision-making processes</p>	<ul style="list-style-type: none"> -include a condition in the establishment agreement to develop and enable Indigenous-led governance models -have a direct link to communities from consensus board model (Canada and Mushkegowuk)
PROTECTION OF LAND, FOOD SECURITY, HEALING PURPOSES, MAINTAINING SPIRITUAL CONNECTION, RENEWING CULTURE AND BUILDING HEALTHY COMMUNITIES	<p>The communities all voiced a strong call for the protection of land, animals, and water resources</p> <p>Effective protection, restoration, and preservation of their environment. The feedback emphasizes both the risks of poor conservation and the gradual negative impacts it can bring, along with the hope that the initiative will effectively counter these risks</p> <p>Recognition that southern rivers feed into the bay</p>	<ul style="list-style-type: none"> -make this a priority in all aspects of managing the NMCA

Key Theme	Context	Proposed Action in Response
IMPORTANCE OF LANGUAGE, PLACE NAMES, CULTURE, TAKING CARE OF CHILDREN AND GRANDCHILDREN AND ALL FUTURE GENERATIONS	<p>Preservation of the Cree language, spiritualism, and the land's intrinsic value featured prominently</p> <p>Cultural preservation and collective healing, emphasizing the need for larger healing gatherings, traditional dances, and songs</p> <p>Nurturing of younger generations. Guiding them about the essence of conservation, imparting knowledge of the community's rich customs, and cultivating respect for their environment are paramount</p>	<ul style="list-style-type: none"> -prioritize the Cree language and culture in signs, programs, youth projects, ensure opportunities to hire young people in the summer -prioritize the creation of the Omushkego Cree Institute
GRAVESITES AND OTHER SACRED SITES	<p>There are gravesites and burial sites all over</p> <p>Not all are visible</p>	<ul style="list-style-type: none"> -Communities need to complete the confidential identification of all gravesites and then determine themselves how they will be honoured and whether or not they'll be marked by crosses or remain confidential
MINING UPSTREAM IN THE TERRITORY AFFECTING COMMUNITIES DOWNSTREAM	<p>Upstream mining projects such as the Ring of Fire are contentious and members voice a lot of concerns including the lack of consent for those projects to go ahead</p> <p>Because all the water in the territory flows into the bays, the potential for pollution and contaminants as well as other concerns remains high on peoples' minds including lack of trust with Ontario</p>	<ul style="list-style-type: none"> -initiate discussions with Transport Canada on ocean tankers related to servicing future mining projects are not permitted -communicate concerns through environmental assessments and including the regional assessment related to the Ring of Fire -bring concerns up with decision-makers in Ontario and Ottawa
JOBS	<p>Economic opportunities, coupled with respecting Treaty Rights and ensuring sound governance structures, were flagged</p> <p>Optimism about potential job opportunities stemming from the initiative</p> <p>The resource's potential for future development along the coastline, which, if done sustainably, could provide a further economic boost</p> <p>Worries about jobs not being equitably distributed in NMCA process</p>	<ul style="list-style-type: none"> -clearly articulate jobs related to NMCA and infrastructure ahead of time including jobs associated with the research economy (i.e., undertaking and supporting research) -ensure equity among communities for hiring and infrastructure -support the development of tourism in partnership with the Town of Moosonee and potentially the Polar Bear express and local hotels

Key Theme	Context	Proposed Action in Response
INTERNAL DEMOCRACY CONCERNS. ACCOUNTABILITY CONCERNS EITHER WITHIN COMMUNITIES OR BETWEEN COMMUNITIES OR BETWEEN COMMUNITIES AND MUSHKEGOWUK COUNCIL	<p>These were referenced with respect to how decisions were being made, how jobs were being given out, who got jobs, how would decisions be made that affected more than one community's territory</p>	<p>-governance mechanisms that oversee administration will be created and agreed to by Nations</p>
	<p>Wary of potential conflicts arising, especially between the Cree & Ojibway</p>	<p>-requirements for transparency to be built in from the beginning</p>
	<p>Significant emphasis on the importance of strong and effective leadership to navigate their growth and challenges</p>	
TIME TO GET THIS DONE	<p>We heard that people didn't want to work according to government timelines. We also heard people ask why things were taking so long and why can't things move faster?</p>	<p>-Council has been tasked with seeking to support Omushkego-led conservation since the 1970s. The Council has seized the opportunity of a federal government willing to work towards Indigenous-led conservation. In the end, Nations will decide if they wish to participate in the NMCA establishment</p>
INFRASTRUCTURE NEEDS	<p>Multiuse facilities, tourism development. A strong interest in the development of sustainable tourism, with a particular focus on goose hunting, tapping into the region's rich wildlife and traditions combined with desires for a multi-use center serving as a hub for various activities, fostering community engagement and promoting physical well-being</p>	<p>-include in establishment agreement</p> <p>-make sure budget reflects infrastructure priorities</p>
PRESENCE ON THE LAND, MONITORING		<p>-develop and support the Guardians</p> <p>-establish remote monitoring stations</p>



Art Credit: Robin Kioko



THE TAWICH CYCLE OF LIFE

A Year-Round Relationship

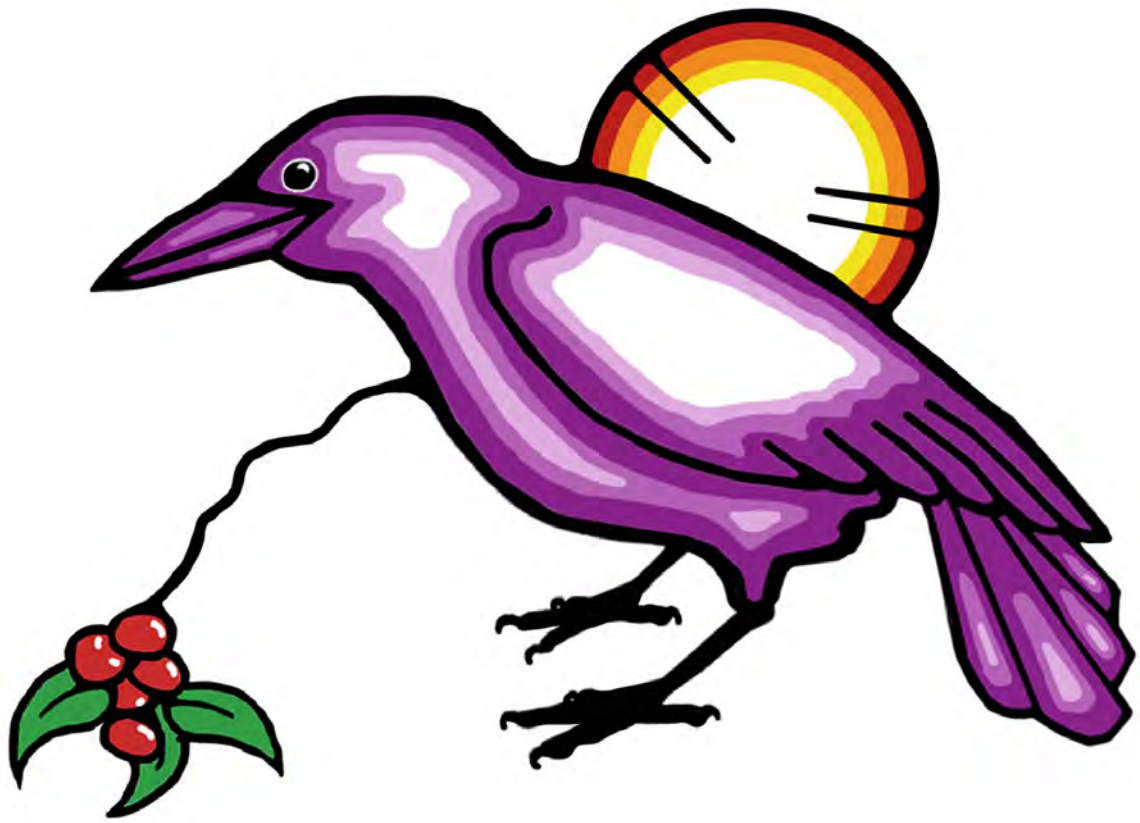
The traditional Omushkego calendar starts in spring and identifies six distinct seasons defined by the lunar cycle and key milestones occurring on the land and in the air and waters. Detailed accounts of the Omushkego's timeless connection to the lands, waters and coastlines of their traditional home were offered in the Tawich Study. Tawich is an Indigenous term referring to the coastal zone and offshore waters of Washaybeyoh and Weeneebeg, including the rivers and estuaries, coastal wetlands, tidal flats, beach ridges and more. This Mushkegowuk marine and coastal Traditional Knowledge project informs the proposed NMCA with detailed accounts of Omushkego relationships with Tawich, including travel routes, current and ancestral campsites and cabins, fishing, hunting and gathering areas, gravesites, spiritual sites and features.

The project, which includes 124 interviews from 90 people so far, also prioritizes traditional Omushkego place names and identifies key values and priorities in caring for the area. Interviews, transcription and translation are ongoing.

- **Siikwan (Spring)** - Eagle Moon, Goose Moon: Canada Geese and Snow Geese arrive on Tawich; Omushkego communities bustle with excitement in anticipation of Goose Camp
- **Minoskamin (Blooming Earth)** - Frog Moon, Budding Moon: Songbirds and shorebirds arrive to the peatlands and coast; ice recedes on Washaybeyoh and Weeneebeg, forcing polar bears to come ashore
- **Niipin (Summer)** - Moulting Moon, Flying Up Moon: Geese, waterfowl and ducks find safe, food rich havens to shed their feathers; migratory caribou gather on the tidflats to give birth and escape the bugs
- **Taakwakin (Fall)** - Blue Goose Moon, Migrating Moon: Berries, sage and other foods and medicines flourish in traditional gathering areas up and down the coast; southbound Canada Geese, Snow Geese and shorebirds land to rest and refuel on Tawich
- **Kashkatinisiw (Freezing Up)** - Freeze Up Moon, Shedding Needles Moon: Polar bears finally end a four-month fast, venturing offshore on the season's first ice; Omushkego hunters seek caribou and moose for winter feasts
- **Pipon (Winter)** - Great Shedding Needles Moon, The Great Moon: Omushkego follow traditional trails across the frozen peatlands and coastline to ice-fishing hotspots, including Hawley and Sutton lakes



Figure 7: The traditional Cree calendar follows six seasons starting in spring and marking the natural cycle of flora and fauna on the land, water and sea.

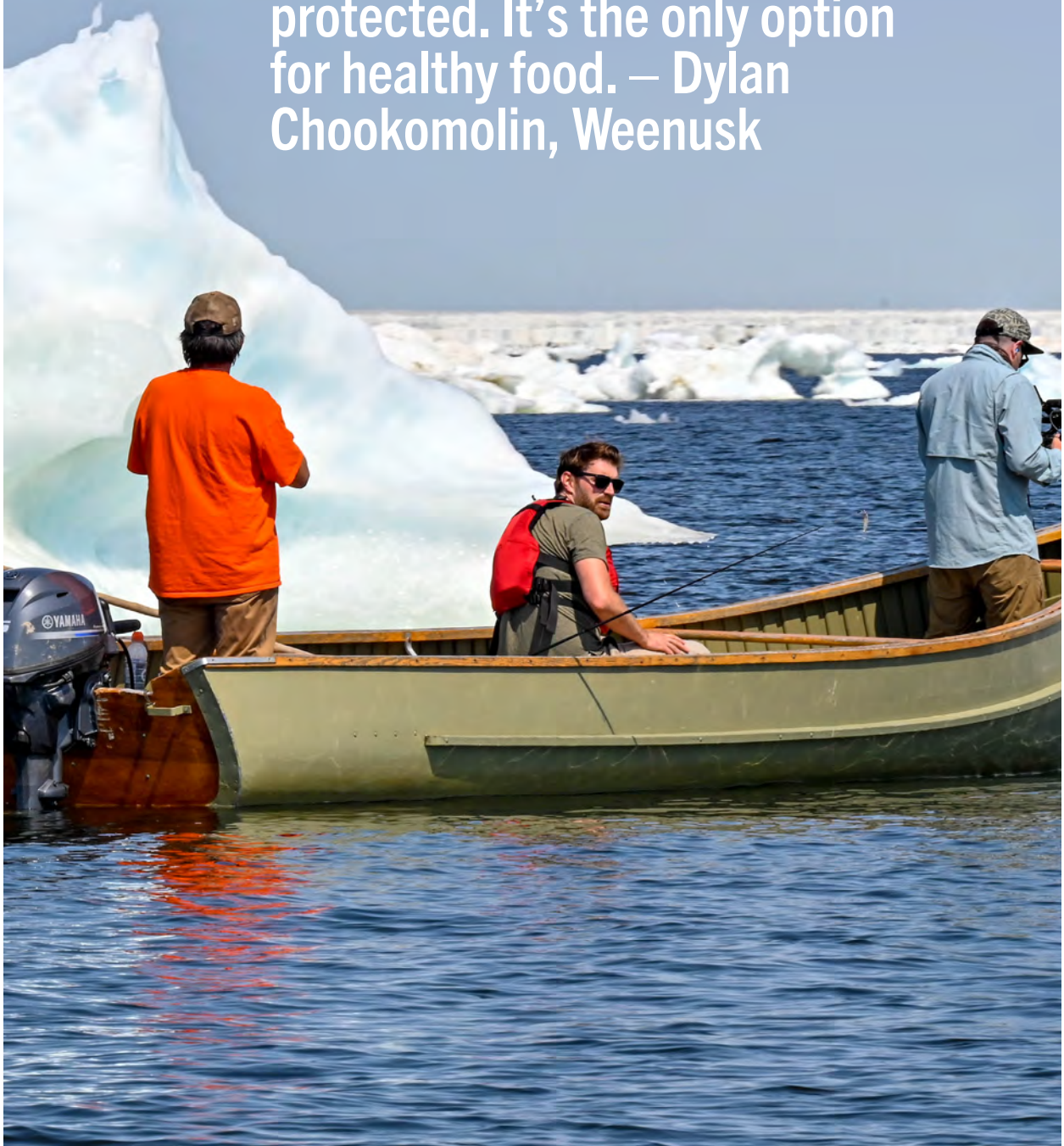


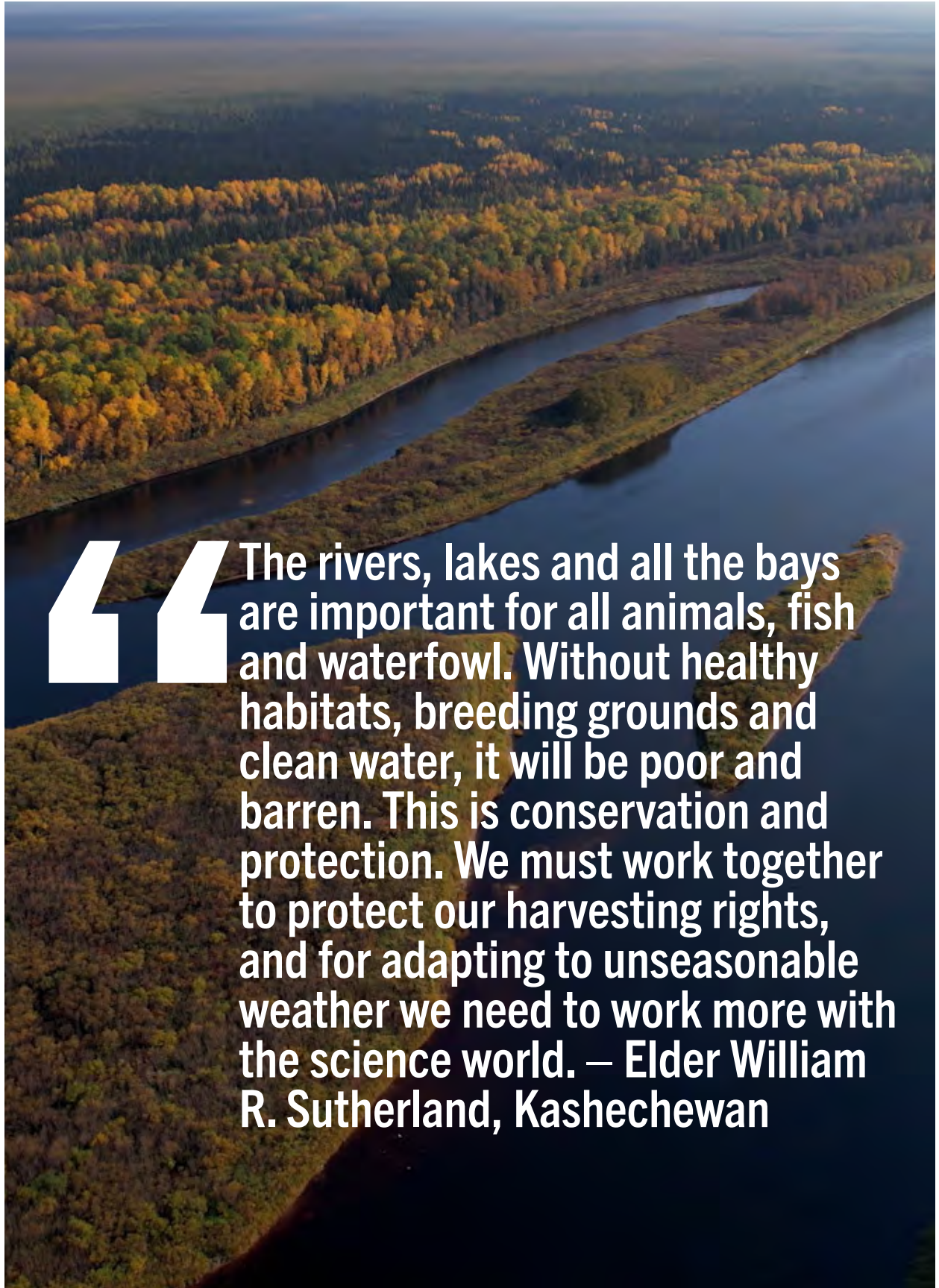
<° ∩

A photograph of a person wearing a heavy winter jacket and a beanie, smiling while holding a large, downy bird chick. The person is standing on a wooden boat deck. In the background, there is a wooden structure with a sink and a blue bag hanging on it. A chainsaw is visible on the deck to the right. The entire image has a green color overlay.

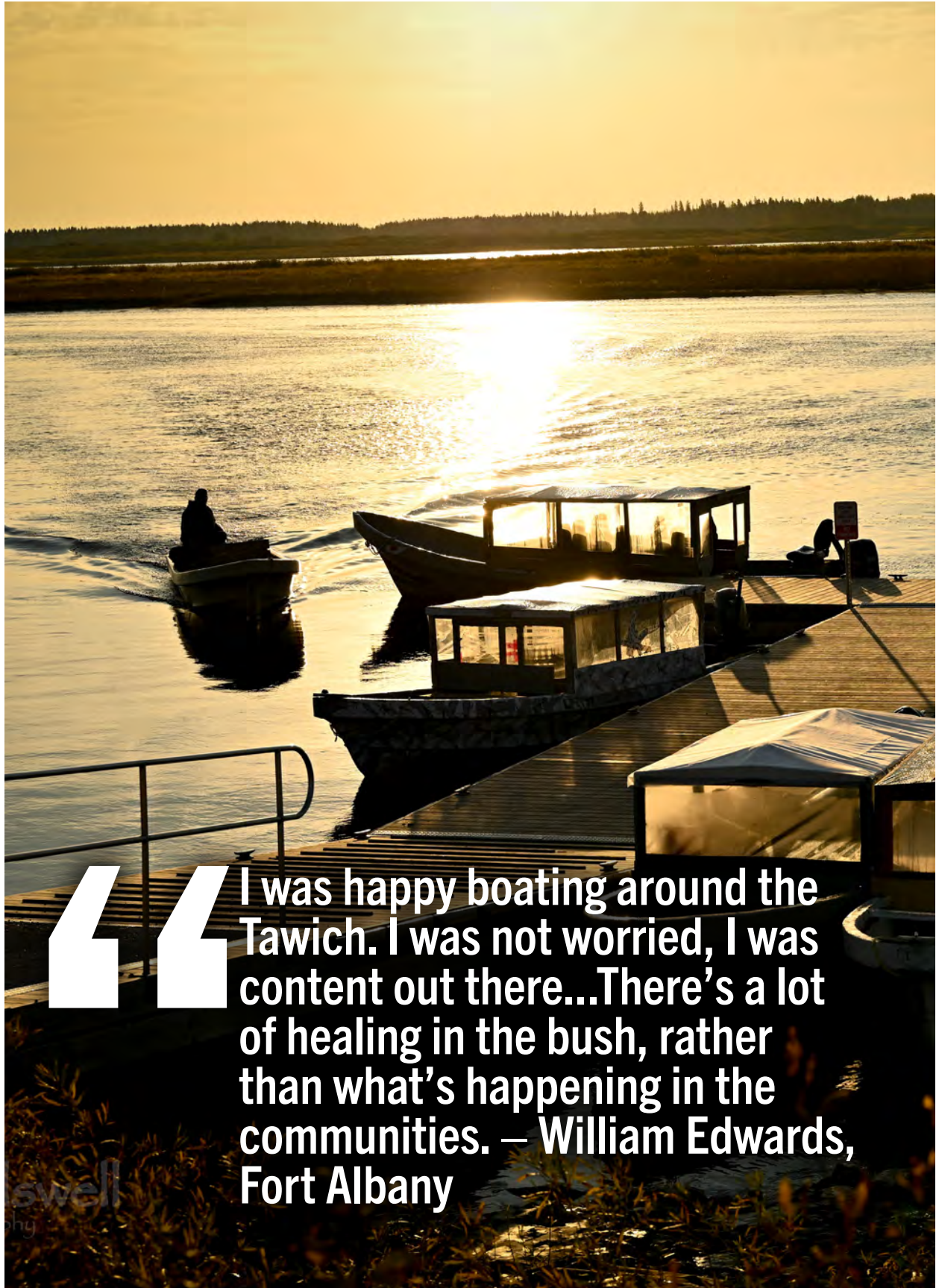
PHOTO ESSAY

“ The marine environment is necessary for food security. It provides everything you need as long as it’s protected. It’s the only option for healthy food. – Dylan Chookomolin, Weenusk





“ The rivers, lakes and all the bays are important for all animals, fish and waterfowl. Without healthy habitats, breeding grounds and clean water, it will be poor and barren. This is conservation and protection. We must work together to protect our harvesting rights, and for adapting to unseasonable weather we need to work more with the science world. – Elder William R. Sutherland, Kashechewan



“ I was happy boating around the Tawich. I was not worried, I was content out there...There’s a lot of healing in the bush, rather than what’s happening in the communities. – William Edwards, Fort Albany

Photo Credit: Trevor Hesselink, supplied by Wildlands League

**“ I think it’s good. It’ll help. Any time we can protect the land and water... We hear once and while about these rumours, people want to dam James Bay and turn it into a freshwater lake. People get stressed out about hearing things like that. It scares them... This [NMCA initiative] will give people some comfort knowing that the area will be protected and conserved.
— John Turner, Moose Cree**



Photo Credit: Judy Sutherland (Attawapiskat, Ontario)

**“ The authority for the lands
is with the people. – Chief
Elizabeth Kataquapit,
Fort Albany**



Photo Credit: Judy Sutherland (Attawapiskat, Ontario)

“ We need to preserve our language, our culture and going out on the land, because we are losing our language. But I firmly believe we can still get it back. – Jessie Sutherland, Fort Albany



Photo Credit: Judy Sutherland (Attawapiskat, Ontario)



“ People need to work together up and down the coast. That’s fundamental. It’s got to be a collected effort. From what I can gather, the government seems pretty much on track in terms of creating this conservation area. I think what we need to do is take on the challenge of having it implemented as an Indigenous-led protected area. — Norm Wesley, Moose Cree

Photo Credit: Trevor Hesselink, supplied by Wildlands League

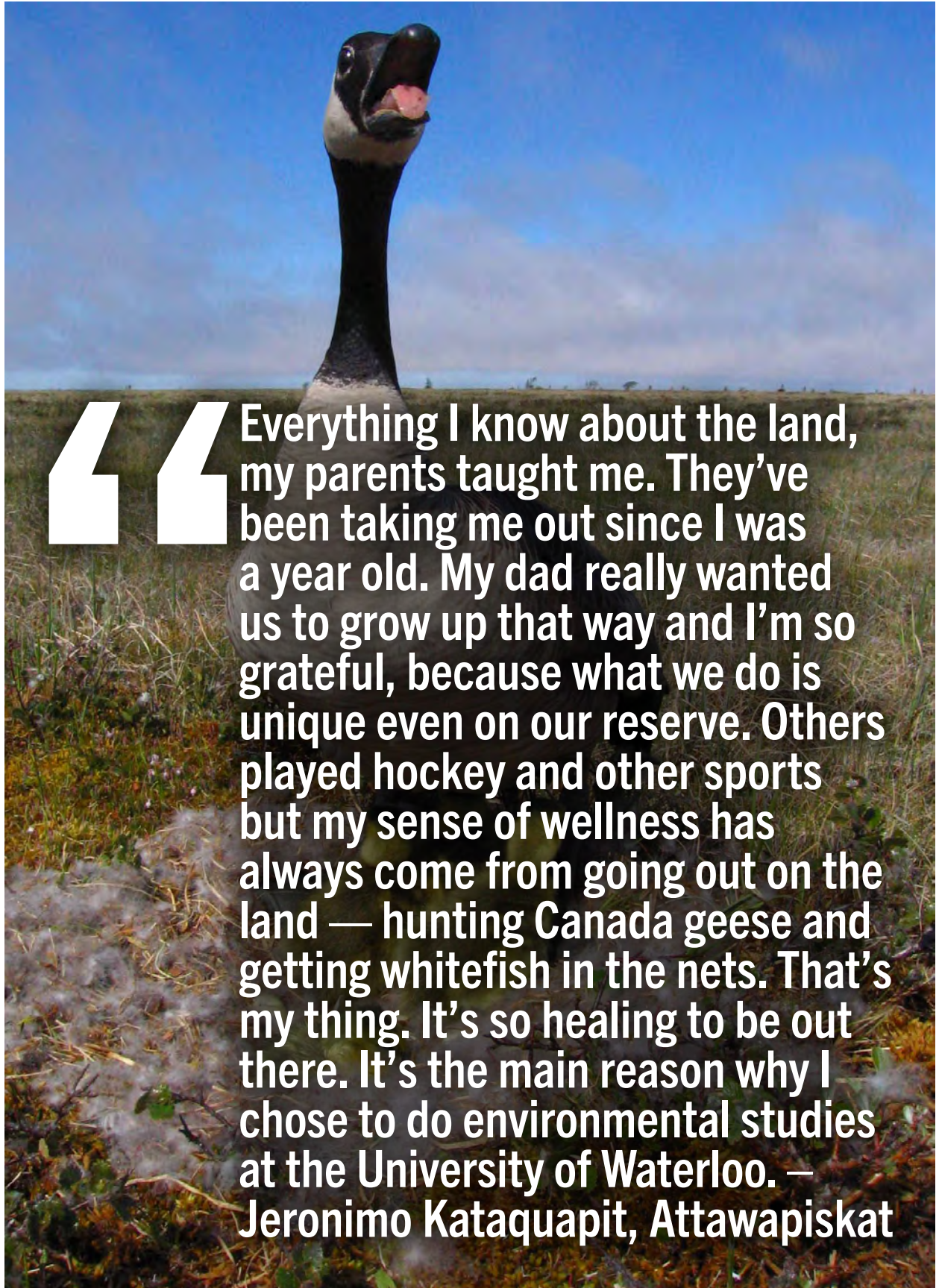
The background of the page is a photograph showing the silhouettes of two people standing in a field. They are positioned on the left side of the frame, looking towards the right. The person on the left is wearing a hat and a jacket, and the person on the right is also wearing a hat and a jacket, and appears to be holding a rifle. The background is a bright, hazy sunset or sunrise, with the sun low on the horizon, creating a warm, golden glow. The sky is a mix of orange and yellow, and the ground is dark. The overall mood is contemplative and serene.

**“ Conservation of our homelands and wee-nee-ba-koo (bays) is of vital importance to our culture as First Peoples, for hunting and harvesting for food sovereignty. Also, for its lowlands and vast wetlands, which is rich habitat for many mammals, birds and fish. All these areas must be protected from resource development on special land and water and breeding areas.
– Elder Willie Friday Jr., Kashechewan**

Photo Credit: Judy Sutherland (Attawapiskat, Ontario)



Healing is on the land.
Our detox is on the land.
– Margaret Keesic,
Fort Albany



“ Everything I know about the land, my parents taught me. They’ve been taking me out since I was a year old. My dad really wanted us to grow up that way and I’m so grateful, because what we do is unique even on our reserve. Others played hockey and other sports but my sense of wellness has always come from going out on the land — hunting Canada geese and getting whitefish in the nets. That’s my thing. It’s so healing to be out there. It’s the main reason why I chose to do environmental studies at the University of Waterloo. — Jeronimo Kataquapit, Attawapiskat

Photo Credit: Mark Peck



A photograph of two people walking on a snowy path, overlaid with a green tint. The person on the left is wearing a plaid jacket and a beanie. The person on the right is wearing a white hooded jacket and dark pants. The background shows a snowy landscape with some dark vegetation. The text 'THE ORIGIN STORY' is centered over the image in a large, white, sans-serif font.

THE ORIGIN STORY

Photo Credit: Judy Sutherland (Attawapiskat, Ontario)

“Conservation” is not a word we use in Cree



In the beginning, the traditional territory of the Omushkego Cree was only occupied by animals and plants. “The Creator came to meet the animals, to speak to them and to say, ‘Do you know that the human is going to be on the land? He’s going to be here,’” recounts Dr. Louis Bird, an Elder in Peawanuck, in his book *Telling Our Stories* (2005). “He [the human] is going to be dependent on many things. He’s going to be totally different from you, the birds and animals. He’s not going to fly, he’s not going to have feathers or fur. He’s going to walk on two legs and he’s going to have arms and no clothes—no covering, just skin. And therefore the question that is put to you [the animals] is that the seasons have to be established. There has to be a winter and there has to be a summer and a season in between.”

“The animals were cooperating with Creator,” Dr. Bird intones. From the moment humans finally arrived—in one version, a pair of young lovers were dangled on E-hep’s (spider) web from the firmament to the treetops—a sacred relationship was established between humans, animals and the environment. To break the “rules of righteous living,” Bird explains, was to commit a “sin against nature.” The Omushkego’s relationship with the tapestry of wetlands, rivers and lakes, which spill across boreal forests and coastal estuaries and impart a unique richness to James Bay and Hudson Bay, goes back to time immemorial. The fundamental desire to live in harmony with the air, water and land, each other, oneself, and all other life forms has been central to the Omushkego worldview since long before their traditional territories were defined by European settlers as Northern Ontario.

To this day, Omushkego walk and boat every nook and cranny of their homelands—including sphagnum bogs, gravel beach ridges, broad rivers and beyond the muddy coastlines of Weeneebeg and Washaybeyoh, the Cree names for the James and Hudson bays. Aski-Gitchi Bayou, the place where “the land expands out into the waters”, aptly captures traditional territory that spans watersheds and the political boundaries of provincial and federal governments—and defines Indigenous culture and lifestyle. Aski-Gitchi Bayou is a vast, interconnected ecosystem, stretching from headwaters of some of the world’s last-remaining wild rivers to tidal flats. It remains vital because of Indigenous stewardship and values.

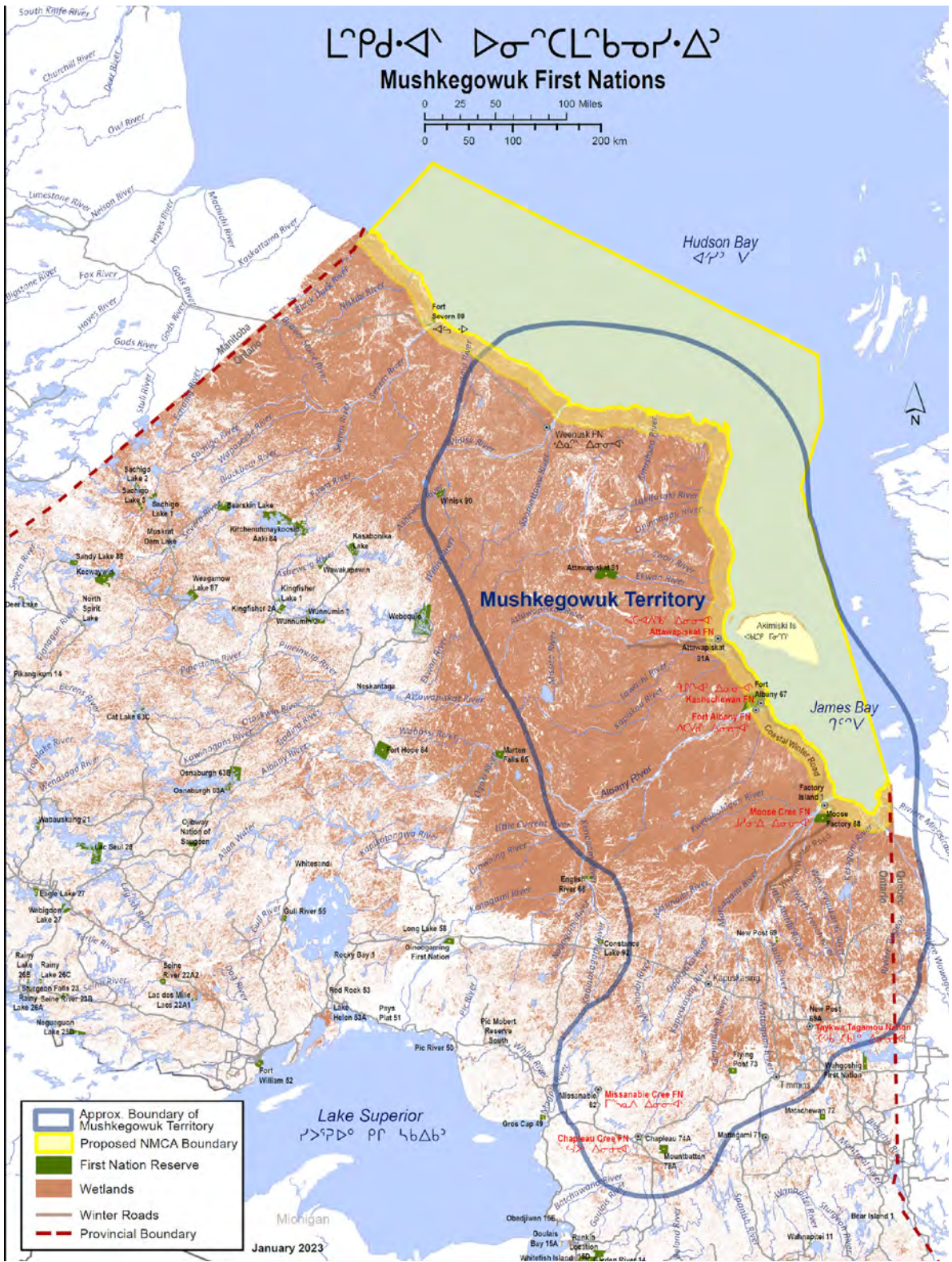


Figure 8: Aski-Gitchi Bayou or the Mushkegowuk Traditional Territory, includes a vast, interconnected network of lands and rivers, as well over 1,200 km of coastline. Mushkegowuk Council communities are working with neighbours in Weenusk First Nation and Fort Severn First Nation on the NMCA project.

The intimate knowledge of local people about the lands and waters is further reflected in the names they have given to the places so integral to their cultural identity and survival: From the climate-regulating “Breathing Lands” of the planet’s third-largest wetlands to the immense biological diversity of arctic coastline and seascape known as the “Birthing Place”, the Omushkego are proud of their role as the guardians of gifts to the world.



“We are the environment, we are the animals, we are the water and water is life,” says Vern Cheechoo, the interim executive director of Mushkegowuk Council. “Whatever we do to Mother Earth, we do to ourselves. We have always taken responsibility for the lands and waters because they are gifts from the Creator, and they cannot speak for themselves.”

“For me, it’s home. That’s my first thought,” says Jeronimo Kataquapit of Attawapiskat. “Whenever I think of James Bay I think of home. That’s where I come from. I grew up on-reserve but I spent most of my time on the land, on the bay, on the islands, up and down the coast and on the rivers. Attawapiskat was my second home, considering how much time I spent out on the land. The Tawich is where I belong.”



Figure 9: Rivers like the Moose are a lifeline for the people, acting as watery highways in all seasons.
Credit: Trevor Hesselink, supplied by Wildlands League

The Origin Story of the proposed Mushkegowuk National Marine Conservation Area begins with Indigenous Peoples’ intimate relationship with their traditional territories of Aski-Gitchei Bayou; it journeys through the pain, broken promises and overwhelming tragedies of colonization; and it ultimately arrives at present-day opportunities where permanent protection of the lands and waters and new relationships present a hopeful vision of reconciliation and nature-based solutions to humanity’s dual crises of climate change and mass extinction of species.

The Memorandum of Understanding signed in 2021 between Mushkegowuk Council and the federal government, supports Indigenous sovereignty and braids Indigenous knowledge with Western science. The MOU guides the development of a new NMCA with a

study area spanning 1,287 km of coastline and 91,000 sq km of offshore waters in Weeneebeg and Washaybeyoh. This Feasibility Assessment report, will be part of a recommendation to both Canada and the Grand Chief of Mushkegowuk Council for a new addition to Canada's NMCA system, showcasing the common vision of the Omushkego Cree and Parks Canada for the preservation of nature and culture.

"We have been the stewards of these lands and waters for millennia," said Jonathan Solomon, the former Grand Chief of the Mushkegowuk Council, standing alongside federal government counterparts at the MOU signing ceremony in Moose Factory. "Now we want to protect the coastal and marine ecosystems that underpin the Omushkego way of life for future generations."

Along with their sacred relationship with the natural world, the Omushkego live by Treaty 9, the 1905 agreement that enshrined Indigenous people's right to share the land with the Crown. The memories of Elders describe promises of co-jurisdiction, which are upheld by the written journals of the Treaty officials representing the Crown. "We never gave up the land," says Cheechoo.

Yet time and again the provincial and federal governments have asserted one-sided dominance over Indigenous peoples, often attempting to sever their connection with the natural world and their culture. The atrocities of residential schools and the government's negligence of its responsibilities to support healthy living conditions on First Nations reserves have left lasting impacts, putting unimaginable strain on the social fabric of Omushkego communities. At the same time, governments eliminated traditional traplines, handed traditional lands to industry, and made it illegal to access hunting areas on James Bay.

"People died because of regulations we weren't invited to negotiate," says Lawrence Martin, who served two terms as Grand Chief of the Mushkegowuk Council and is now the interim director of Lands and Resources department of the Council. "So many Treaty promises have been broken. It's no wonder many of our people have a low level of trust for governments."

The Mushkegowuk Council formed after the dissolution of the Indigenous Affairs office managed by the federal government in Moose Factory. The council took on the role of coordinating and distributing federal services and has a mandate to provide overarching leadership across the traditional territories, including Attawapiskat First Nation, Chapleau Cree First Nation, Fort Albany First Nation, Kashechewan First Nation, Missanabie Cree First Nation, Moose Cree First Nation and Taykwa Tagamou Nation (Weenusk First Nation is a former member with strong ties to Mushkegowuk Council, and Fort Severn First Nation is a neighbour and collaborator in the marine conservation project). Protection has been a central pillar since the beginning, Martin says, stemming from an initial declaration of the Omushkego's commitment to protect the Breathing Lands and the Birthing Place in 1974 as part of a consortium of Treaty 9 communities.

A resolution in 1989 created the Omushkego Tribal Conservation Authority, "directing us to protect the land and waters," explains Martin. Mushkegowuk's Annual General Assemblies, which bring together six representatives from each community, chiefs and councils included, have repeatedly issued resolutions reaffirming Cheechoo and Martin's "marching orders".

The Omushkego's holistic outlook on the environment means they look both upstream and downstream. "We live in a landscape that's connected by water," says Martin. There is great concern about proposed mining developments that may impact downstream Omushkego communities across the entire region. In a unique geography where, "the land expands out into waters," Martin says. Indigenous communities are constantly aware of the fact that Weeneebeg and Washaybeyoh receive the outflow of countless rivers and circulate waters along the shoreline. This natural process, reflected in the swaying motion of eelgrass beds in coastal shallows, described by many Omushkego Elders, injects life to the area—but also alludes to how contaminants and toxins released inland could spread insidiously.

In the 1980s, Parks Canada started to shift away from its historically unilateral approach to establishing new protected areas that forcibly removed, ignored or treated Indigenous communities as just another stakeholder. A more collaborative approach evolved, exemplified by the creation of Ivvavik National Park in northern Yukon in 1984 as part of the Inuvialuit Land Claim Agreement, and the 1993 Canada-Haida agreement for Gwaii Haanas National Park Reserve and Haida Heritage Site, which set aside the question of title and brought a consensus-based approach to decision making.

This consensus-based approach is now a standard practice in establishment agreements negotiated with Indigenous organizations, as exemplified in the partnerships with Labrador Inuit and Nunavik Inuit in creating a national park in the Torngat Mountains in the early 2000s, and with the Lutsel K'e Dene First Nation and Northwest Territory Métis Nation in establishing Thaidene Nene National Park Reserve in 2019. Most recently, Parks Canada partnered with the Qikiqtani Inuit Association to create Tallurutiup Imanga National Marine Conservation Area through a landmark Impact and Benefit Agreement in 2019. A key element of this framework is that decisions are not taken unless both the Crown Minister and Indigenous leaders agree on a course of action.

“During the late 1960s and early 1970s, Parks Canada was the one that identified sites for protection, did the science, and brought its proposal to Indigenous communities seeking their comments and hopefully support,” says Kevin McNamee, the former Director of Protected Areas Establishment with Parks Canada. That approach shifted to greater collaboration in the late 1990s, McNamee adds. Now, no proposal will proceed without Indigenous support, and more recently, virtually all proposals are Indigenous led, with some, such as the Mushkegowuk proposal, being first proposed by Indigenous leaders and communities. Parks Canada’s attitude has evolved, and Indigenous communities have finally come to be recognized as rights holders, levelling the playing field.

The paradigm shift gained momentum in 2016 as the federal government prioritized reconciliation with Indigenous peoples and committed to leaving a “nature legacy” with targets to conserve 25 percent of lands and waters by 2025 and 30 percent by 2030. McNamee explains that Parks Canada has also expanded its focus beyond just pursuing new national parks and NMCAs in unrepresented natural and marine regions that comprise its system plan, opening the door for more proposals from Indigenous communities. “We have developed a more holistic approach to how we view a natural area, embracing both its value as a functioning ecosystem and its essential role in sustaining Indigenous cultures and communities,” McNamee says. “Our goal is much broader than protecting a percentage of land, it is about ensuring a legacy of conservation and reconciliation that supports community leadership.”

Martin admits to feeling “squeezed out” when the Eeyou Istchee Cree signed their own MOU with the federal government to explore a new NMCA for the east side of Weeneebeg in Quebec in 2019, with a study area blending into Omushkego traditional territory. But those concerns faded quickly. With support from environmental non-governmental organizations like Oceans North and Wildlands League, as well as funding from private donors, Mushkegowuk Council investigated federal marine protection options through Fisheries and Oceans Canada, Canadian Wildlife Service and Parks Canada. Leadership chose to make a resolution to pursue a NMCA for their traditional marine areas in 2020. “The opportunity came up and they embraced it,” says Anna Baggio, Wildlands League’s conservation director. “The will was always there, and now there was a willing partner in the federal government to make it happen.”

McNamee recalls the excitement and challenge of working with the Mushkegowuk Council and the various ENGOs advising them to negotiate a Memorandum of Understanding to launch a feasibility assessment for and confirm a study area—all the while navigating the Covid-19 pandemic. “It was incredible how we were able to meet with Elders and Mushkegowuk staff and actually develop relationships over two-hour video calls,” he says. “It’s because we had a common vision, a commitment to conservation, quickly developed trust, and were prepared to break new ground. There are so many great qualities and shared values in this proposal. It reinforces the resolutions that have guided Mushkegowuk Council and dovetails perfectly with federal objectives to support reconciliation, encourage Indigenous leadership, and increase Canada’s protected areas coverage.”

The Omushkego Elders had their own term for the special synergy that emerged over a year of discussions: “Wahkohtowin” means building relationships with each other, oneself and the natural world. “It means speaking from your heart, choosing the right words and showing kindness,” explains Martin. “It’s all about sharing and building trust.”

A big part of this relationship has been built on efforts to braid generations of intimate Indigenous knowledge with Western science in creating an inventory of the Mushkegowuk NMCA’s biophysical and cultural values. “Some of our people have a distrust of science,” says Martin. “I still get the question, ‘why do we need the scientists when our Elders know all this information?’”

“We have established data-sharing agreements to make our people more comfortable,” Martin adds. “Words mean a lot. “The idea of ‘braiding’ represents the strength of working together.”

Elders and residents have always recognized the significance of the coastline and offshore waters of Weeneebeg and Washaybeyoh in supporting life. Researchers like Professor Zou Zou Kuzyk, an earth scientist at the University of Manitoba specializing in coastal areas, allude to a huge gap in quantifying the global significance of these northern waters, which is just starting to be addressed through collaboration with local knowledge-keepers. Non-Indigenous scientists are beginning to appreciate the richness of the “inherent knowledge systems” of Indigenous communities, says Dr. Jeff Wells, the vice-president for boreal conservation with the National Audubon Society. “Indigenous people have learned through immersion and spending time on the land. The result is a rich, deep knowledge that’s far more holistic than Western science. It’s been developed over thousands of years of living, thinking, watching and sharing the information.”

This outlook of weaving multiple knowledge systems supported the creation of Tallurutiup Imanga, a marine conservation area in the Arctic Ocean’s Lancaster Sound established in partnership between the Qikiqtani Inuit Association and the Government of Canada. Inuit hunters, Elders and community members highlighted important natural and cultural locations missed by Western science. In the end, these contributions expanded the initial 39,000 sq km study area to a 108,000 sq km NMCA, which is currently in the final phases of establishment.

Martin sees the proposed Mushkegowuk NMCA as more than just a marine protected area. When former Minister of Environment and Climate Change Jonathan Wilkinson came to Moose Factory to meet Indigenous leaders and agree to work together, it marked a huge milestone in Wahkohtowin, issuing legitimate recognition of Indigenous sovereignty and a strong message of Reconciliation. Martin says, “Talking about trauma and developing healing programs is a big part of what we’re doing”.

While they have been working hard to establish a national marine conservation area, Mushkegowuk Council was also awarded Project Finance for Permanence in 2022 as part of \$800 million in funding from the federal government and philanthropic partners to support the creation of four new Indigenous-led terrestrial protected areas across Canada. This project will complement the NMCA by focusing on safeguarding the immense wetlands and wild rivers of the Breathing Lands, which would create broader protection for Weeneebeg and Washaybeyoh and all of Aski-Gitchei Bayou. “It finally gives us the opportunity to realize our vision for our territory,” says Alison Linklater, the past Grand Chief of the Mushkegowuk Council. “Unlike boom-and-bust resource extraction projects, this investment will sustain us forever.”

Ultimately, Martin hopes the O mushkego can share their territory—and holistic perspective—with Canadians and the world. “‘Conservation’ is not a word we use in Cree,” he says. “You have a relationship with the land, you have a relationship with everything. You are part of the environment. The Elders teach us that when you live in harmony with the Earth, you won’t do things to harm it. You watch it and monitor it, and protect it from intruders. This relationship is the foundation of our way of life. It allows us to calm down and heal.”



Figure 10: Mushkegowuk Council’s Lawrence Martin and Moose Cree’s John Turner walk along the western shore of Weeneebeg not far from Halfway Point. Credit: Trevor Hesselink, supplied by Wildlands League

GLOSSARY

Aski-Gitchi Bayou is the Cree term for the traditional lands of the Omushkego, meaning “land that expands into the water.”

Wahkohtowin is the Cree term for having a relationship, and it can be applied to relations between people and communities, with one’s self, and between people and the natural world. Wahkohtowin means working together with mutual respect, kindness and good intentions.

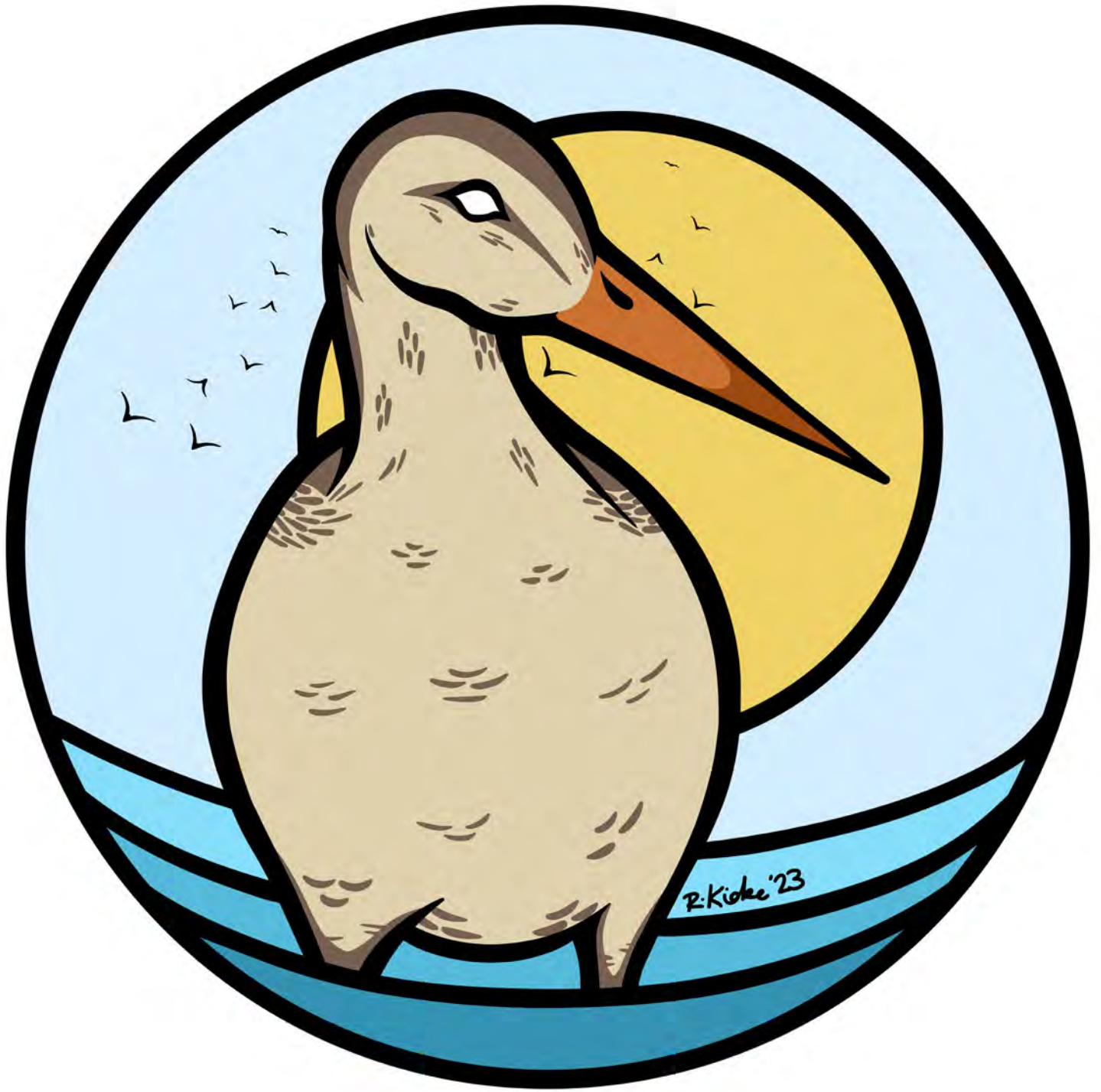
Washaybeyoh is the Cree place name for Hudson Bay, referring to the tidal gyre which flows in a counterclockwise manner along the shore, connecting Omushkego communities by water. Nutrients move on these currents, supporting many forms of life in and around the water.

Weeneebeg translates to “muddy waters,” and it refers to the colour and brackish qualities of the waters known to settlers as James Bay. The Omushkego Cree recognize Weeneebeg as being unique in the way it accepts water from many inflowing rivers, essentially functioning like a massive estuary that supports a huge array of marine and freshwater species. The city of Winnipeg shares this descriptive place name.

Tawich is an Indigenous term referring to the coastal zone and offshore waters of Washaybeyoh and Weeneebeg, including the rivers and estuaries, coastal wetlands, tidal flats, beach ridges and more.

WHY HERE?





Art Credit: Robin Kioko

A Globally Significant Seascape with Incredible Culture and Biodiversity



Figure 11: Weeneebeg's coastline is globally significant for wetlands, polar bears, birds and so much more.
Credit: Trevor Hesselink, supplied by Wildlands League

The Omushkego homelands are one vast ecosystem, connected by water. Aski-Gitchi Bayou is subtle in terrain, without the towering cliffs and stunning surf beaches of some other marine areas. Yet the seascape and surrounding landscapes are overwhelming in their sheer size and level of integrity. The region supports globally significant populations of fish, birds and wildlife; encompasses wild rivers and vast intact wetlands; and performs a critical function as a planetary thermostat. The natural wonders of Washaybeyoh and Weeneebeg are products of a much greater whole.

- 1,287 km of seacoast (longer than Hawaii's)
- 91,000 sq km of offshore waters (nearly double the size of Nova Scotia)
- Seasonal sea ice contributes to a cooler regional climate, supporting the southernmost permafrost and tundra vegetation in North America, as well as salt marsh vegetation reflective of polar regions
- Tidal mixing and prevailing northwest winds create open-water polynyas and recurring ice leads in the winter months, further increasing biological productivity
- 6 major waterways maintain Weeneebeg's low salinity and supports immense biological productivity in coastal marshes
- The multitude of waterways draining the peatlands of Aski-Gitchi Bayou transfer nutrients and materials from the land to the marine ecosystem, forming the foundation of incredibly diverse coastal and marine food webs
- Globally unique polar bear habitat. Polar bears in southern Hudson Bay and James Bay are ecologically and genetically unique and this biodiversity is at serious risk of loss



Figure 12: The proposed NMCA includes the world’s southernmost year-round population of polar bears, estimated at 900 to 1,100. Female polar bears venture up to 150 km inland to find denning sites (photo by Water Brothers/Wildlands League).

- Continentally important hotspot for hundreds of species of breeding and migratory birds including key stopover areas for red knot, an endangered shorebird
- 14 species of migrating shorebirds are “hardwired” to rest and refuel in the productive tidal flats, eelgrass beds and sandy coastlines
- Sea ducks (including scoters) use the area as a safe haven during flightless molt periods
- 35 species of waterfowl (representing 80 percent of North American waterfowl diversity) rely on open waters and coastal wetlands for habitat
- 2 to 3 million migratory snow geese migrate through in the spring and fall, forming a staple of the traditional Indigenous diet
- 5 species of seals and a population of Atlantic walrus
- Bowhead whale and killer (orca) whale are also occasionally reported
- Supports 2 subpopulations of beluga whales, making up around 20 percent of Canada’s total, including a year-round, genetically distinct resident population in Weeneebeg
- Arctic foxes are found along the coastal corridor throughout the year, marking the southern edge of the species’ range
- Seacoast that is rising over 1 m per century, representing the fastest rate of postglacial uplift in North America
- Unique coastal landforms, including beach ridges radiating inland from the ocean and acting like berms to contain the northernmost peatlands of the world’s third-largest wetland
- Extensive, continuous permafrost near the southern shores of Washaybeyoh
- Important coastal habitat in spring and summer for Southern Hudson Bay caribou (with a population around 16,000 according to recent estimates). Caribou is a staple for Omushkego diet in Peawanuck, Fort Severn and Attawapiskat



Figure 13: A mega-herd of southern Hudson Bay caribou was observed walking on the ocean floor and aggregating on the coast in July 2022, not far from Sam Hunter’s cabin (drone photo by Water Brothers/ Wildlands League). Sam called it “a blessing.” Wildlands’ Anna Baggio later counted them one by one and confirmed that at least 3162 caribou were spotted that day.



A photograph of three individuals in winter attire, including jackets and hats, gathered around a table in what appears to be a laboratory or field station. They are focused on examining a sample, possibly a piece of ice or a container. The scene is dimly lit with a strong blue and green color cast. One person in the center wears a dark beanie with a logo that includes the text 'Arctic Science'.

**TAKING CARE OF
CANADA'S OCEAN
IN PARTNERSHIP
WITH INDIGENOUS
PEOPLES**

An Introduction to National Marine Conservation Areas

The Government of Canada made a commitment in 2020 to protect 25 percent of its lands and oceans by 2025 and 30 percent by 2030. That same year it joined the international High Ambition Coalition to mitigate climate change and prevent species extinction. Canada is uniquely positioned to contribute to these important goals. It has the second-largest land mass, a fifth of the world's fresh water, and the longest ocean coastline in the world. Altogether, this amazing natural wealth is a global treasure. Our forests, grasslands, ocean and peatlands absorb enormous amounts of carbon pollution and are our best ally in protecting our climate.

“The way we are going to do it,” the Right Honourable Prime Minister Justin Trudeau said, “is by working with Indigenous Peoples who are our partners in protecting the land and who understand how important it is to be good stewards of the lands and waters that sustain us.”

In 2020, the Mushkegowuk Council of Chiefs took advantage of this once-in-a-lifetime opportunity to work in partnership with Canada to conserve the marine environment and showcase it to the world. The Chiefs passed a motion directing the Grand Chief and the Lands and Resources Department to initiate Nation-to-Nation talks between Mushkegowuk First Nations and Canada, with the goal of creating a First Nation-led National Marine Conservation Area (NMCA) on the Western side of James Bay.

NMCAs are part of a growing worldwide network of marine protected areas. They include submerged lands, the water above them, and any species found there. They can also take in wetlands, estuaries, islands and other coastal lands. Parks Canada is the federal agency responsible for NMCAs. NMCAs can be established and managed in partnership with other provincial or Indigenous authorities and are established under the *Canada National Marine Conservation Areas Act*.

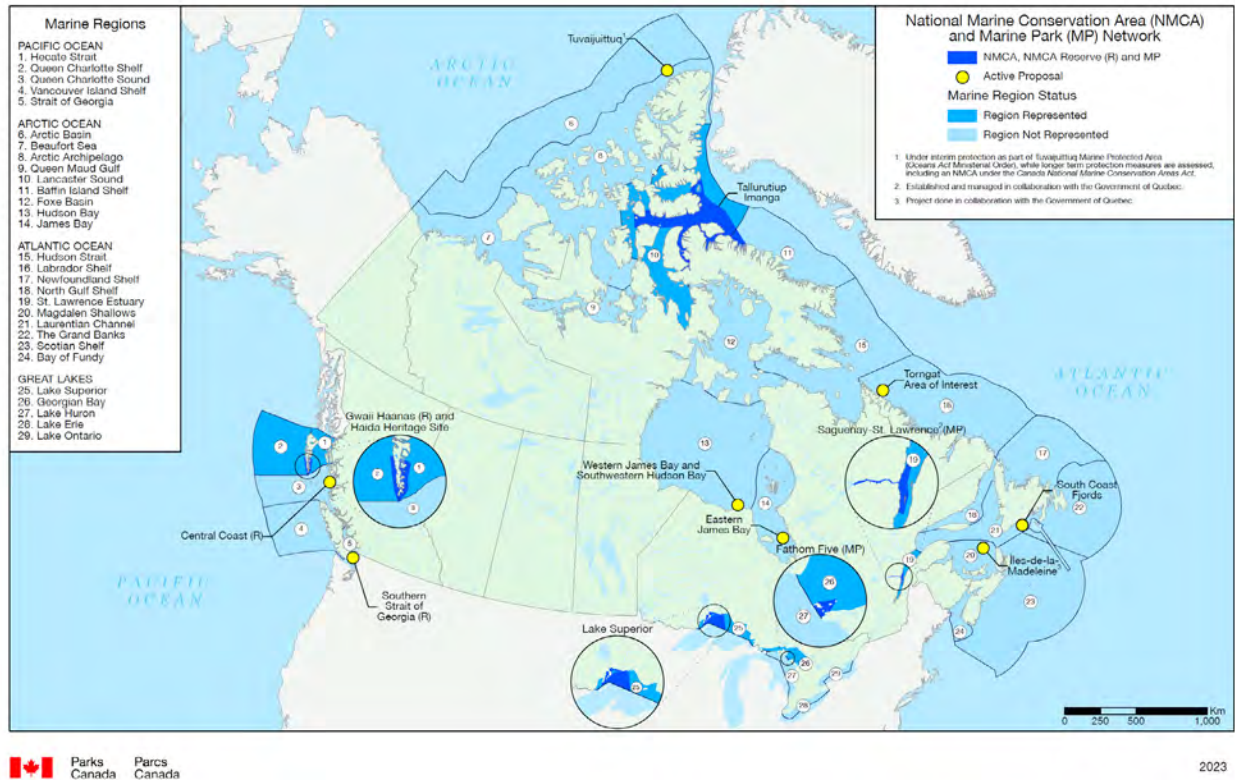


Figure 14: The current National Marine Conservation Area network in Canada, including active proposals. Parks Canada is the federal agency responsible for NMCAs. NMCAs can be established and managed in partnership with other provincial or Indigenous authorities.

RIGHTS OF INDIGENOUS PEOPLES IN NMCAS

“ Indigenous peoples have long standing connections with lands, waters and ice across Canada through generations of use, occupancy and stewardship. Indigenous peoples’ special constitutional relationship with the Crown is recognized and affirmed in section 35 of the Constitution Act, 1982. Work to establish and manage NMCAs support Canada’s commitment to advancing reconciliation and the implementation of rights, treaty obligations and related commitments. It also upholds the United Nations Declaration on the Rights of Indigenous Peoples and the specific obligations within the United Nations Declaration on the Rights of Indigenous Peoples Act. — From Parks Canada’s Policy of the Establishment and Management of National Marine Conservation Areas, 2022

KEY ELEMENTS IN THE OMUSHKEGO-LED NMCA:

Primary role and leadership of Indigenous peoples in the establishment and management of the area

Indigenous laws, governance, and knowledge systems are identified through extensive community planning

Lands and waters where Indigenous governments have the primary role as co-creators and co-managers to protect and conserve ecosystems

Can be designated through partnership agreements using Indigenous law and under Crown legislation

Long-term commitment to stewardship

Support recognition and exercising of Indigenous rights

See Appendix A an overview of the key features of a NMCA.

SUMMARY OF PROJECT MILESTONES TO DATE:

Mushkegowuk Council of Chiefs (2020) and General Assembly (2021) motions support Nation to Nation talks with Canada on the creation of an Indigenous-led NMCA and protecting the waters within Omushkego traditional territories	2020, 2021
Canada and the Mushkegowuk Council sign an MOU to publicly launch a feasibility assessment for a NMCA in western James Bay and southwestern Hudson Bay	AUGUST 2021
Establishment of a Steering Committee, consisting of Parks Canada and Mushkegowuk Council representatives	NOVEMBER 2022
Commencement of engagement sessions with First Nations communities and Chief and Councils to provide information about NMCAs and discuss proposed vision	JANUARY 2023
Adoption in principle of high-level timeline and Feasibility Assessment report table of contents by the Steering Committee	MARCH 2023
Commencement of engagement sessions with federal departments to provide information about the proposed NMCA and discuss shared objectives	BEGAN IN JUNE 2023
Scoping issues and key terms and conditions identified by Mushkegowuk Council including governance and how to protect Indigenous rights	BEGAN IN AUGUST 2023

CURRENT GOVERNANCE SPECTRUM – PARKS CANADA AND INDIGENOUS PEOPLES

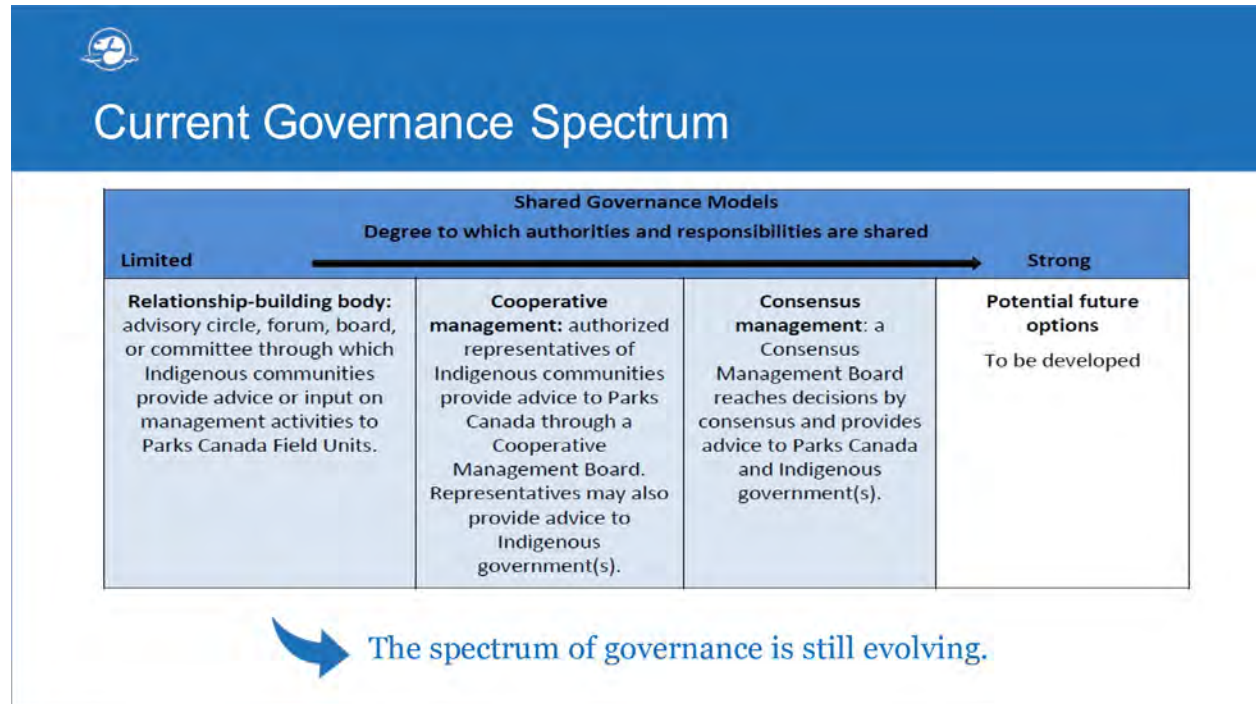


Figure 15: The current spectrum of governance options used by Parks Canada.

Mushkegowuk Council is currently exploring a consensus management model approach for the NMCA and a mechanism to ensure community member views will be heard and that there is a meaningful link from the communities to that proposed board. In the next five years, Parks Canada has informed us it intends to improve upon its governance options to better align with Indigenous-led approaches. This may require legislative changes.

Fisheries and Oceans Canada and Transport Canada continue to regulate fishing and marine transportation activities in NMCAs, in keeping with the purpose of NMCAs and the specific conservation objectives of each NMCA. Oil and gas exploration or exploitation, mining, and disposal at sea will be prohibited in a NMCA. The Marine Protected Areas Protection Standards (<https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/protection-standard-norme-protection-eng.html>) will also be applied in the NMCA.

See Appendix B for an overview of Establishment Process Steps.



A photograph of a man in a leather jacket and sunglasses, smiling and holding a large bundle of green plants. The image is overlaid with a green tint. The text "THE FA PROCESS" is written in large, white, bold, sans-serif capital letters across the center of the image.

THE FA PROCESS

Indigenous engagement

Creating a task force was one of the first priorities of investigating the potential of a NMCA. This consists of a panel of community leaders from each community to advise the process, emphasizing that internal engagement with communities has been a priority throughout. A marine manager was hired to be responsible for day-to-day management of the overall process. The team has expanded since the early days in 2020. A total of 12 Marine Research Assistants (MRA) were hired in 7 communities including 1 urban MRA. Together they conducted over 124 interviews with 90 participants as part of the Tawich Study. This work continues.



Corrina Payne, Associate Director, Lands and Resources for the Council, says, “We’ve come a long way since the early days, when it was just Vern, Lawrence and myself. Today we have a dynamic, thriving team working to implement the vision of the Elders and community members in Weeneebeg and Washaybeyoh.” Payne adds, “I’ve really enjoyed listening to Mushkegowuk members and connecting with environmentalists, funders, government civil servants, scientists and videographers. They all want to work with us to build something truly Indigenous-led.”



Figure 16: Mushkegowuk Council’s Lawrence Martin and Stephane Friday in Kashechewan at a community meeting in March 2023. Credit: Wildlands League

The Mushkegowuk Council GIS department assisted in supervising and training the MRAs and joined the marine team on early visits to the communities. They have also set up a digital hub to house all the data and information. This will have lasting benefits beyond the NMCA project. They have been engaged in an intensive process to digitize data and transcribe and translate the interviews. About 30 percent of the interviews have been translated and that work continues. The data presented in this draft report draw on early Tawich study results as well as materials from the 2010-18 Mushkegowuk Land Use Plan and historical data. Together, the knowledge and expertise of Omushkego land users and Elders is presented alongside and braided with key findings from scientific studies and scientists. We led with the Omushkego.

Since 2020, there have also been at least 12 expeditions into the Bays by researchers, film crews, environmentalists, media, funders, artists and Parks Canada. These efforts have been done in close collaboration and in concert with local people and Mushkegowuk Council. Sam Hunter of Peawanuck hosted three alone this past summer at his cabin on the shores of southern Hudson Bay.



Figure 17: A Wildlands League/Weenusk First Nation 2023 Expedition meets the R/V William Kennedy in southern Washaybeyoh 8km from Winisk River. The chef on board the vessel sent breakfast to the crews in the boats. Photo courtesy of Jane McDonald

The hiring of a Cree-speaking communications person has also increased the ability of the team to get the message out on social media and in the media and to help facilitate community engagement sessions. A website has been built (mushkegowukmarine.ca) to support the endeavour.

Internal community engagement is another high priority. There have been at least 15 community visits and counting including 8 to remote communities requiring charter flights.



Figure 18: Troy Woodhouse of Mushkegowuk Council staffs a table in Takwa Tagamou Nation at its Annual General Meeting talking about the NMCA. Credit: Wildlands League

Parks Canada staff have been very supportive of the process being led by the Mushkegowuk Council and openly embraced different approaches, rather than how things had been done in the past. The Council also invited Parks Canada staff to attend almost all community sessions, recognizing that internal discussions help build trust, offer transparency and build support for the initiative. The Council also enlisted the support of several environmental groups, scientists and advisors in the feasibility assessment process charting its own unique path to building a national marine conservation area in its territory.

Socioeconomic reports were commissioned by the Mushkegowuk Council for the communities (to date, Attawapiskat and Missinaibie are outstanding), along with Weenusk and Fort Severn. Wakenagun Community Futures Development Corporation¹ carried out the study. The Council enlisted the assistance of Wildlands League, a not for profit with over 20 years' experience in the region, in the writing of this feasibility assessment report, community engagement and liaising with scientists and Parks Canada staff.

² A federally incorporated not for profit serving the Mushkegowuk region,

Table 2: What's been done so far by the numbers.

# OF MARINE RESEARCH ASSISTANTS HIRED	12
# OF COMMUNITY VISITS SO FAR	15
# OF INTERVIEWS CONDUCTED	124 FROM 90 PEOPLE
% OF INTERVIEWS TRANSCRIBED AND TRANSLATED	ABOUT 30%
# OF BCRS SECURED TO SUPPORT PARTICIPATION IN FEASIBILITY ASSESSMENT	4
# OF MESSAGES RECEIVED FROM CANADIANS IN SUPPORT OF OMUSHKEGO'S EFFORTS TO PROTECT THE BAY	1912





**CARING
FOR THE LANDS
AND WATERS**

A Braided Narrative

Omushkego people have always recognized the myriad of ecological connections ebbing and flowing across their homelands: from the immense, sphagnum-dominated peatlands known as the “Breathing Lands” to the estuaries, coastlines, islands and open waters of Washaybeyoh and Weeneebeg. Despite repeated efforts to separate Indigenous people from their traditional territories, askiik (the land) and Tawich (the bay) remain central to the Omushkego identity. This reaffirms Mushkegowuk Council’s priority to protect the lands and waters for today and future generations.

The Omushkego have an intimate understanding of all parts of their traditional territory. “We’ve always been observers,” says Linda Hunter, a resident of Peawanuck and participant in the Tawich Study, a series of interviews to document and map Indigenous Knowledge of the land, rivers, coastal areas and offshore islands. Hunter demonstrates the ways people of her community and others appreciate the lands and waters from a holistic perspective, reflecting generations of year-round occupancy that continues today. She says natural laws, passed down since time immemorial, impose certain “golden rules,” such as allowing fish and animals space to breed. “Starting at the end of March there are no caribou killed unless it’s a bull,” she says, by way of example. “That’s because the calving season goes from March until August.”



Figure 19: Southern Hudson Bay caribou calving on the coast in the summer of 2022 Credit: Trevor Hesselink, supplied by Wildlands League

Hunter explains other similar practices, including not fishing for most species during the spawning season of July and August. “With muskrats, beavers, otters, geese, ducks, seals...you name it,” Hunter says, “we’ve always known when they’re breeding to leave them alone, and when to hunt them. It’s always rotating.” This underscores the importance of preserving ecological integrity to support subsistence lifestyles across the entire region. The nuanced, long-term understanding of Omushkego like Hunter provide a unique outlook on the interconnectedness of Aski-Gitche Bayou and how changes have occurred over time.

Whereas Indigenous Knowledge is timeless, Western science arrived in Aski-Gitche Bayou more recently. It tends to focus on individual components of the ecosystem, often in terms of assessing economic benefits (such as mineral potential), understanding population dynamics of endangered species, or quantifying the capacity of the peatlands and marine areas to sequester and store greenhouse gases. As the value of Traditional Knowledge becomes more apparent, however, scientists and government researchers are partnering with Indigenous Knowledge Keepers for a broader perspective. Ultimately, braiding both outlooks provides a more detailed narrative of the significance of lands and waters.

The NMCA focuses on a 20-km coastal corridor and offshore waters, but the Omushkego people recognize this complex marine system is shaped by broader freshwater and terrestrial influences, across a vast region known to Westerners as the James and Hudson Bay Lowlands. Hydrologists characterize the area as a network of “water towers and conveyor belts,” with some of Canada’s largest undammed rivers—including the Severn, Winisk, Attawapiskat, Ekwan and Albany—tumbling off the Canadian Shield and coursing through immense peatlands, before draining into the bays. Washaybeyoh and Weeneebeg create a cold microclimate in the coastal zone, supporting tundra vegetation and some of the world’s largest and best developed polar salt marshes, says Christian Friis of Canadian Wildlife Service.

The coastline of Weeneebeg also features inverted marshes, where freshwater vegetation thrives closer to the marine environment and brackish-tolerant plants are found in saline soils further inland. These rare features are found in very few locations around the world, including San Francisco Bay.

Countless rivers large and small flow across the peatlands like a network of veins and arteries. Residents of coastal communities like Fort Severn, Peawanuck, Attawapiskat, Kashechewan, Fort Albany and Moose Factory depend on rivers as watery highways, leading to and from fishing areas, gathering sites, traplines and places to hunt for ducks, moose and caribou. Tawich study maps (see Fig. 19 below) reveal constellations of Omushkego landmarks—including hunting, fishing and gathering sites, as well as cabins, campsites, graves and spiritual places—along the rivers and up and down the coast, offshore to Akimiski Island and even remote Bear Island, at the mouth of Weeneebeg.

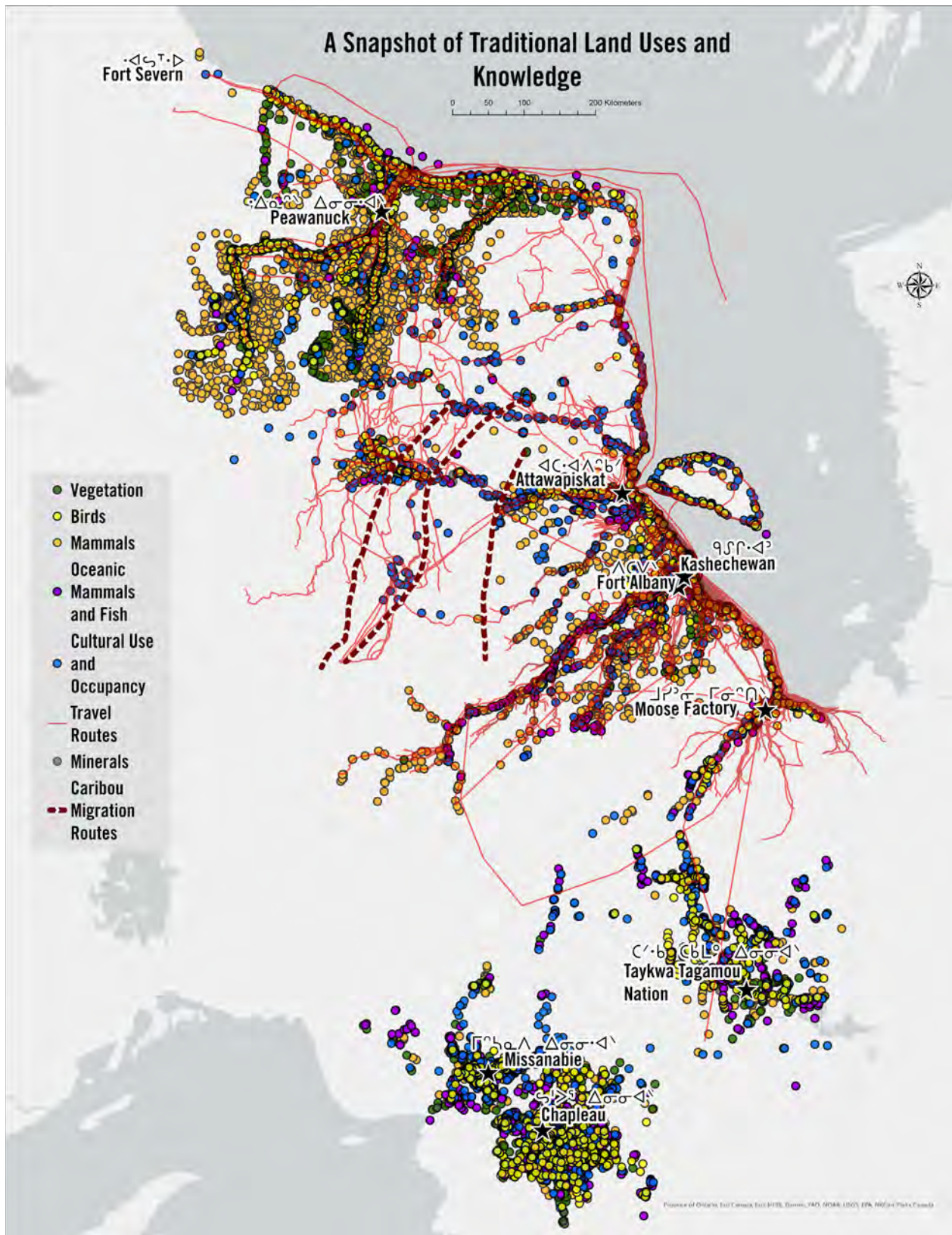


Figure 20: A snapshot of traditional land uses and knowledge. Data synthesized from early Tawich Study results (2022-ongoing) and Mushkegowuk Land Use Plan (2010-18).

Flowing water also transports nutrients—and toxins—across the entire drainage basin, from headwater lakes atop the Canadian Shield to the tidewater of the proposed NMCA. Professor Zou Zou Kuzyk, an earth scientist at the University of Manitoba, is currently working with a team of scientists aboard the *R/V William Kennedy* to measure the, “terrestrial energy subsidy that rivers provide to estuarine and marine food webs,” meaning the influence of inflowing waterways on the bays’ chemistry and its ability to support biodiversity including birds, fish and marine mammals—as well as smaller organisms that form foundation of the food chain.



Figure 21: Weenusk First Nation members and Wildlands League staff visit the R/V William Kennedy in August 2023 while scientists on board were conducting estuary-related sampling to better understand the estuary of the Winisk River and what role it plays in the offshore and connected coastal areas of Hudson Bay and James Bay. Click here to see a story map from the 2022 expedition. <https://arcg.is/1TG90S2>

Such broad use of lands and waters make the Omushkego experts at detecting even the most subtle of changes in ecosystem dynamics. Now, communities are consistently reporting less winter ice, milder breakups and persistent low water, which creates sandbars that impede boat travel in the summer months. Less water is allowing pioneer species like willow to take over previously wet areas. There are also grave concerns around non-native species like smallmouth bass and brown bullhead, which have already started to appear in some of the southern headwaters and may move north.

Indeed, water is the lifeblood of the land, and it imparts many unique characteristics on the marine ecosystem. Nearly 500 taxa of phytoplankton form the foundation of a robust food web. Weeneebeg acts like a massive estuary of brackish water, fed by so many tributaries. This supports the movement of fish species typically found only in freshwater, including northern pike, brook trout, walleye, sucker and whitefish—one of the few places on the planet where they move freely and seamlessly between marine and river environments.

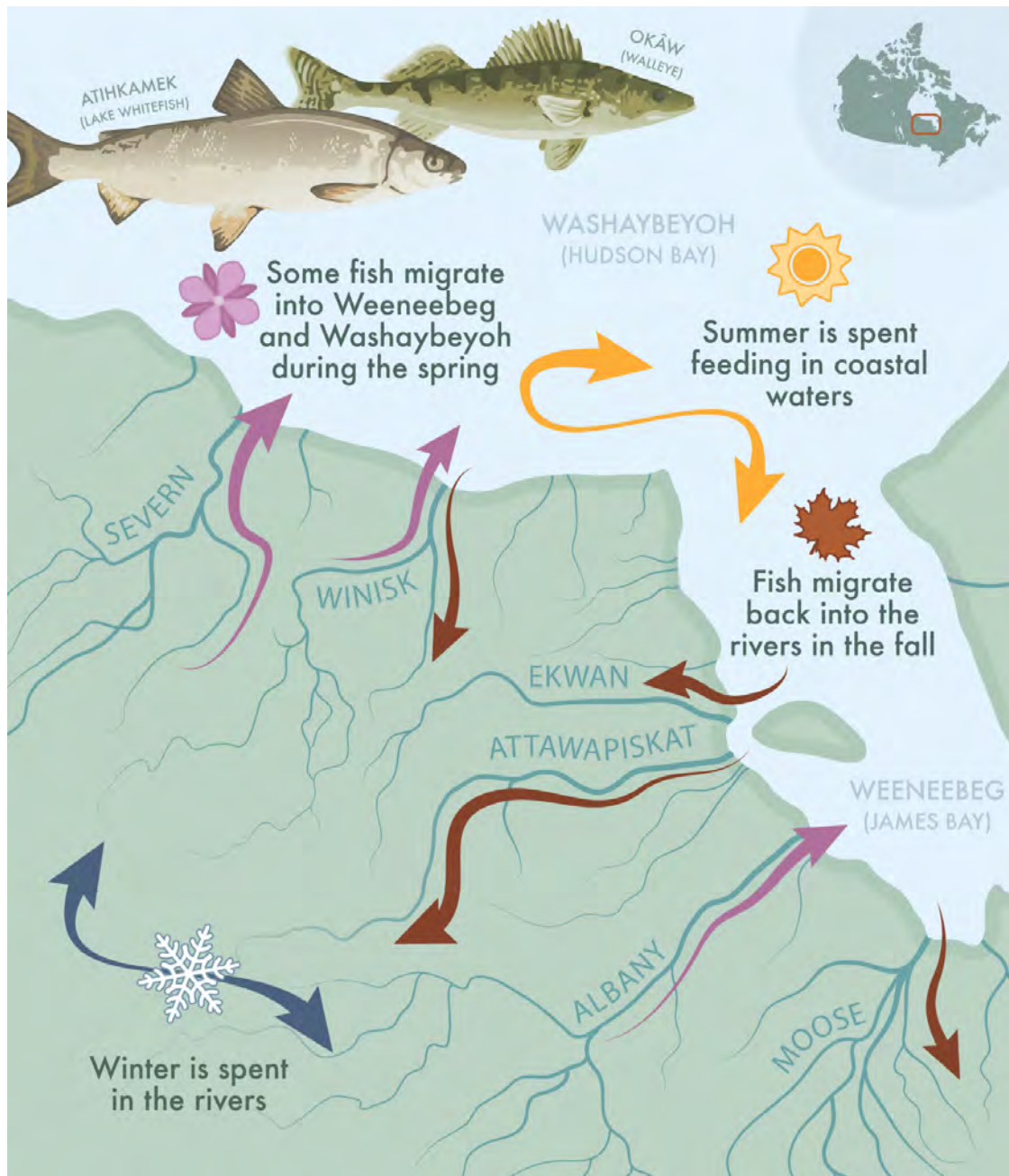


Figure 22: The lands and waters around Weeneebeg and Washaybeyoh form a connected system between huge expanses of boreal forest, peatlands and marine ecosystems. Many freshwater species rely on both inland and coastal waters throughout the seasons. For some species, this is the only place in the world where typically freshwater fish are also found in marine habitats. Image provided by WCS Canada

Lake sturgeon populations have been decimated through much of their historical global range, but Aski-Gitchi Bayou remains a place where they still have access to the intact rivers that they need to thrive. Linda Hunter notes that Peawanuck residents have tracked a decline in sturgeon, and have stopped their harvest. Elder Remi Fireman reports that Attawapiskat River sturgeon are also diminishing in number. Overall, the region supports about 50 fish species, many of which are important sources of food for traditional anglers like Hunter and represent the highest number of freshwater fish with low impacts across Canada.

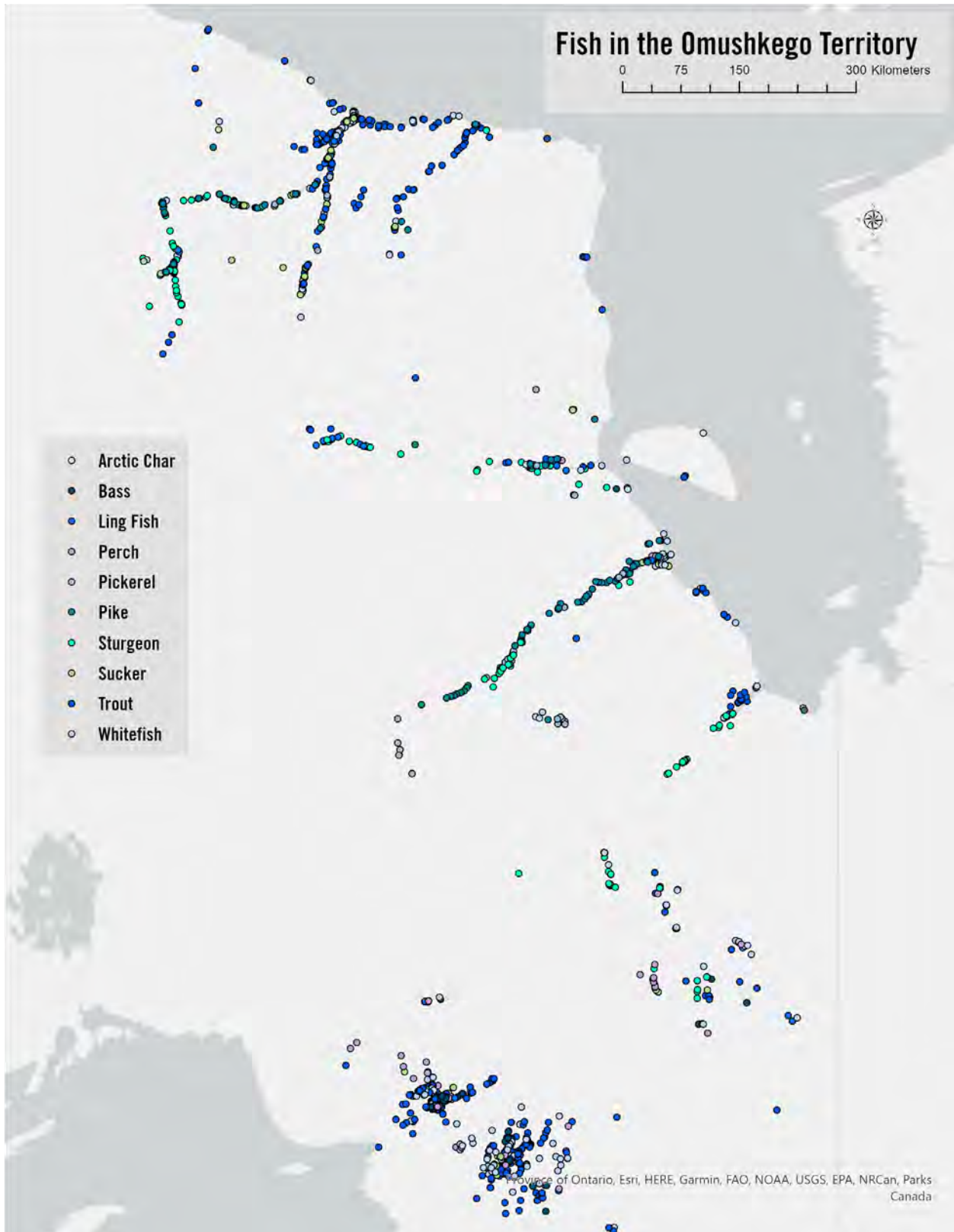


Figure 23: Fish of the Omushkego traditional territory identified in both the Tawich Study and Mushkegowuk Land Use Plan.

With data collected aboard the *R/V William Kennedy*, scientists and Indigenous guardians are just starting to quantify the bathymetry, “blue carbon,” and other aspects of ocean chemistry in the proposed NMCA waters. “Newly collected oceanographic data show that the river plumes in southern Hudson Bay and James Bay strongly affect carbon exchanges between the bay’s waters and the atmosphere,” says Kuzyk of University of Manitoba. Collaborative sampling by researchers and community members has only just begun to identify the amounts and forms of carbon being transported laterally from the peatlands to the rivers and on into the bay and how much processing and loss of the carbon occurs along the way.

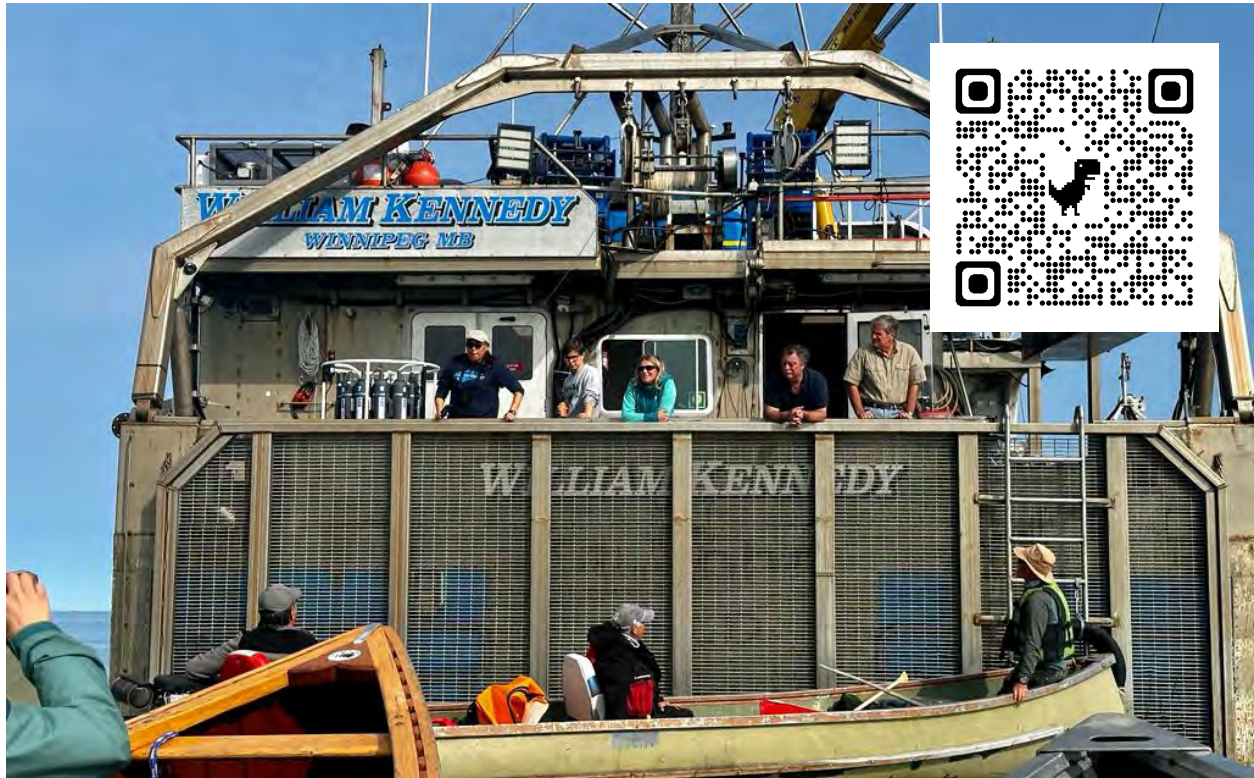


Figure 24: Crew of R/V William Kennedy greets visitors in summer 2023. From L>R on the deck, Vicki Sahanatien, Hannah Louis, Zou Zou Kuzyk, Captain David McIsaac, and Tim Papakyriakou. Credit: Carrie Gray, National Audubon Society

“With northern areas warming several times faster than the global average,” Kuzyk adds, “the transfers of materials from the watersheds to the bay are likely to change, affecting the region’s overall role as a vast carbon store that limits climate warming, and possibly impacting coastal ecosystem functioning.”

Tawich study interviews emphasize how Washaybeyoh's counterclockwise currents circulate nutrients, enhancing productivity to support an incredibly robust food web, ranging from algal diatoms to zooplankton, dense beds of eelgrass, a myriad of fish and marine mammals. It's no wonder that participants in the Tawich study repeatedly affirmed the importance of coastal areas in supporting subsistence harvesting. "The marine environment is necessary for food security," says Dylan Chookomolin of Peawanuck. "It provides everything you need as long as it's protected. It's the only option for healthy food."



Figure 25: Sam Hunter from Weenusk First Nation demonstrating how to harvest whitefish from nets set in the Winisk River in summer 2023. He said he had to temporarily move his nets from the bay to the river because there were “too many bears, seals and whales” destroying them. He caught 40 that day. Credit: Jane McDonald

Because of the responsible stewardship of Indigenous communities, coastal areas support a remarkable array of marine mammals. Weeneebeg and Washaybeyoh provide habitat for a population of over 30,000 beluga whales, comprising about 20 percent of Canada's total number, including a genetically distinct population in James Bay. Linda Hunter says narwhals are occasionally observed alongside belugas, especially amongst ice floes in offshore waters as spring gives way to summer. Bowhead whales and orca whales have also been reported. Five species of seals inhabit the area, along with Atlantic walrus. In fact, Weebejeemakok (Walrus Point) is the preferred Cree name for the southern tip of Akimiski Island (rather than the colonial Cape Duncan). Elder Adeline Koostachin of Fort Severn mentioned that she used to see walrus along the coast there but now they are more to the east around Mooshwok (or Cape Henrietta Maria) in Weeneebeg.



Figure 26: Elder Adeline Koostachin and Anna Baggio from Wildlands League in Fort Severn in March 2023 pore over a photo of the mega caribou herd. Elder Koostachin also described how she used to see walrus along their coast but now they are more to the east around Mooshwok (or Cape Henrietta Maria). Credit: Barb Duffin

Leo Metatawabin of Fort Albany has observed walruses on Akimiski Island and on nearby Gasket Island. Jeronimo Kataquapit of Attawapikat adds, “Last summer we were boating 3 or 4 km offshore on a calm day and we saw what looked like a rock in the distance. It turned out to be a baby walrus. It must have died not even an hour before, it was just floating there and hadn’t sunk yet. Walrus do go as far south as Akimiski but they’re really shy animals. They see you coming from 1 or 2 km away and dip under the water. If you’re lucky you may see them pulled up on shore, but you can’t get within a kilometre when they’re in the water. My goal is to find walrus on the beaches and get up close with the drone.”



Figure 27: A 2021 Fisheries and Oceans Canada survey estimated 16,300 belugas in Weenebeg (James Bay). The last aerial survey of the Winisk and Severn Rivers in 2004 identified approximately 14,800. The Winisk and Severn belugas are part of the western Hudson Bay population, which is considered to be the most abundant in the world. Movements and habitat use by walrus in James Bay is poorly known by scientists.

The study area also supports the world's southernmost year-round population of polar bears, owing to the immense productivity of the marine ecosystem and the way sea ice remains longer in the shallow waters of southwestern Washaybeyoh than other portions of the bay. An estimated 900 to 1,100 polar bears patrol the sea ice for over half the year, hunting ringed and bearded seals. When the ice melts in the summer, rivers act as corridors between the marine and terrestrial habitat, allowing polar bears to venture as far as 150 km up the Severn, Winisk and other waterways, where they essentially fast for the entire ice-free season and females seek den sites.

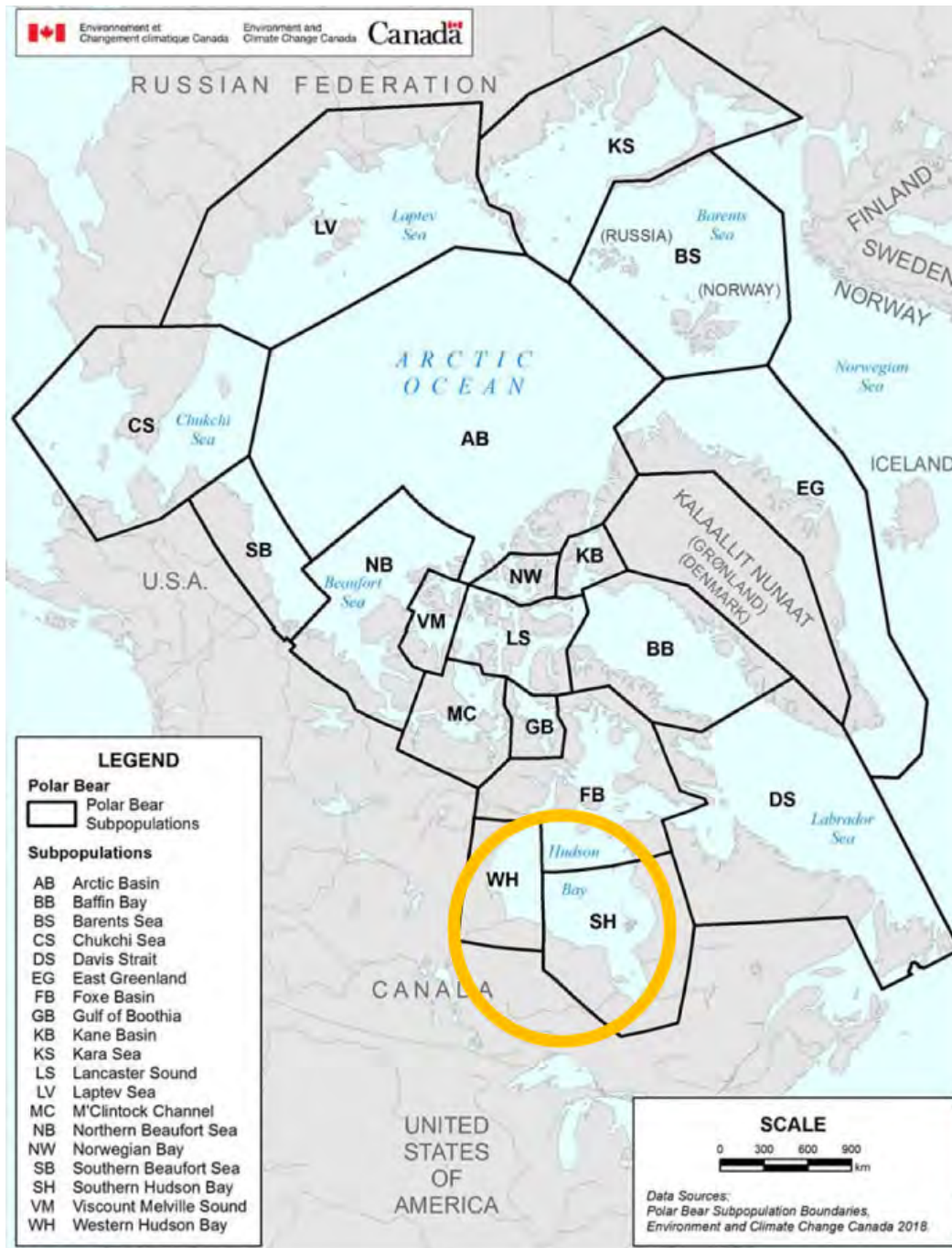


Figure 28: Two polar bear subpopulations straddle the proposed NMCA (see orange circle). Polar Bears in Ontario are considered Threatened by the Committee on the Status of Species at Risk in Ontario (COSSARO).

Indigenous communities are tracking human encounters with polar bears, as well as offering insights into bears' foraging behaviours during the ice-free months. Jessie Sutherland says polar bears are now being observed in the vicinity of her community of Fort Albany; and Attawapiskat resident Andrew Koostachin relates his own close encounters at summer campsites at Lake River, Hawley Lake and on the Ekwon River. "Once a polar bear was afraid of humans... and when he sees human tracks he just leaves the area right away," Koostachin says. "But nowadays they're different," he adds, perhaps because of longer ice-free seasons.

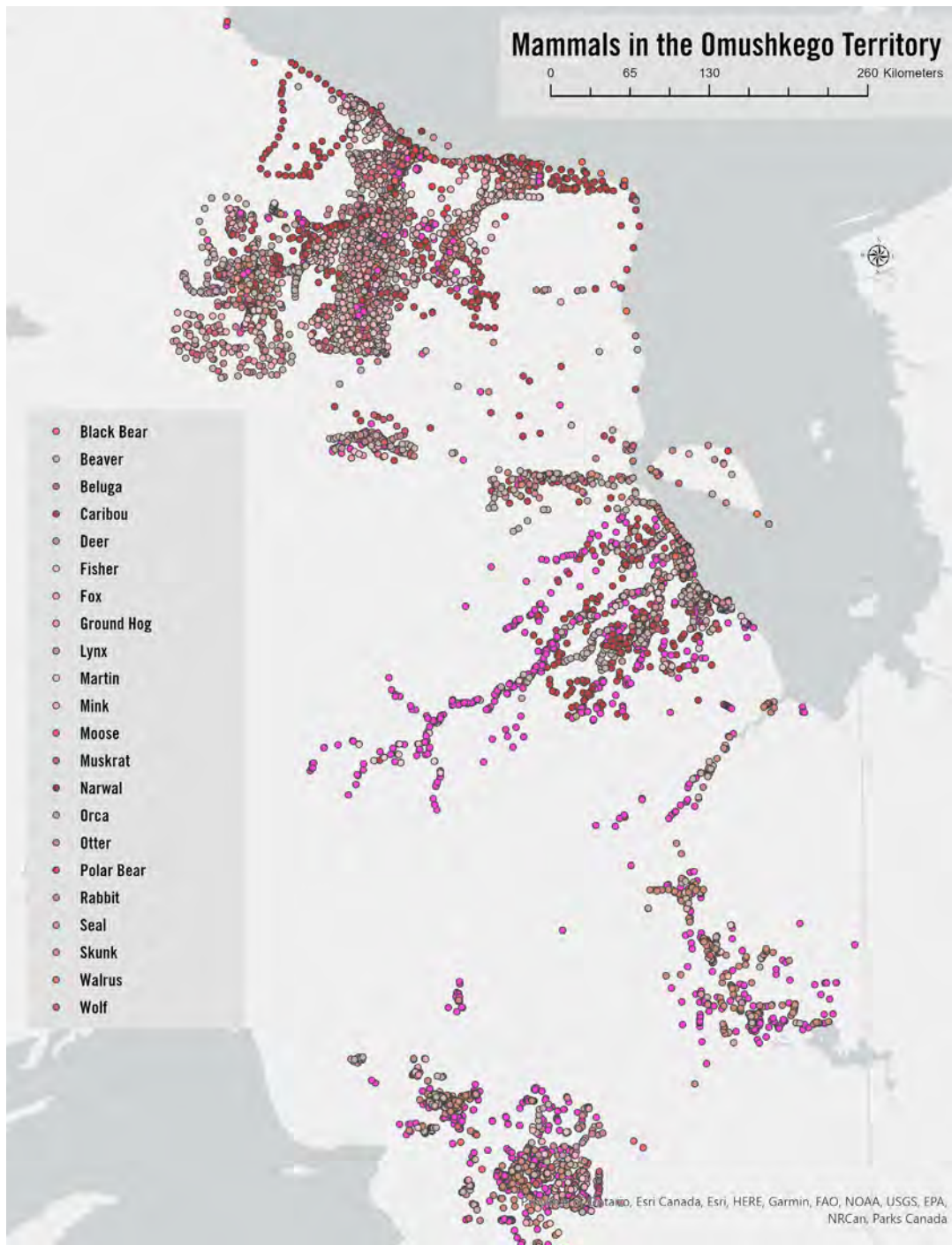


Figure 29: Mammals of the Omuškego traditional territory identified in both the Tawich Study and Mushkegowuk Land Use Plan.

Researchers like Gregory Thiemann of York University are making strong correlations between reductions in sea ice due to climate change and “declines in polar bear body condition, reproduction, survival, and abundance.” The impact of climate on polar bears is especially stark for pregnant females. They move inland in the summer, den in late autumn and give birth to cubs during the winter—fasting for upwards of eight months. Mother bears finally return to the ice to recover their body mass and care for their young, and do not give birth for another three or four years.

This recovery period has lengthened as the ice-free season has increased due to climate change. Already, a one degree Celsius increase in surface air temperature has caused the extent of sea ice on Washaybeyoh and Weeneebeg to decrease by 14 percent. Projections for Weeneebeg up to 2070 suggest a greater than 50 percent reduction in winter ice thickness, with freeze up delayed by 26 days and breakup occurring 39 days earlier than historic norms. “The longer term trend has been earlier break-ups and longer ice free periods,” Thiemann says. “Historically, when the population was growing, females [in the NMCA study area] had a two-year cycle, and weaned their cubs a year earlier than other parts of the Arctic.

“It speaks to the productivity of Hudson Bay,” Thiemann adds. “When there’s ice, it’s a great place to be a polar bear.”



Figure 30: A polar bear swimming 8 km off shore in southern Hudson Bay in 2023. “The proposed area represents globally unique polar bear habitat,” says Dr. Greg Thiemann of York University. “We too often think of biodiversity as the number of species present, but ecological/genetic variation within a species is a critical aspect of biodiversity and is the foundation of adaptation and evolution. Polar bears in southern Hudson Bay and James Bay are ecologically and genetically unique and this biodiversity is at serious risk of loss.”

Photo: Water Brothers/Wildlands League



Figure 31: Southern Hudson Bay polar bear range during the ice-free season. Source: Government of Ontario

Flat, subtle and soggy coastal terrain is interrupted by beach ridges, crescent-shaped waves of dry, packed gravel that radiate inland and show historic sea levels as the Earth continues to rebound from the weight of the glaciers of the last ice age. Beach ridges serve as travel corridors for Indigenous hunters in all seasons of the year and wildlife, including eastern migratory caribou—which form aggregate herds of 3,000 or more to calve and escape biting insects on tidal flats during the summer months. A story from Peawanuck Elder Dr. Louis Bird captures this behaviour, describing how caribou “eat on the shore and then once in a while they go out into the tidewater,” feeding on seaweed.

In his Tawich study interview, Fort Albany Elder Edward Metatawabin identifies two distinct types of caribou that inhabit the region. “[The] caribou that comes here every 20 years, that’s the pimatik (migrating caribou),” he says. “Wayapasis (woodland boreal caribou) are the ones that are left behind by the migrating caribou. They hang around here and drift around [the muskeg area].” Pimatik’s movements are dictated by the availability of lichen to browse, Metatawabin explains, with migrations extending past Peawanuck to Churchill, Manitoba, where they are stopped by the railway.

Northwestern portions of the proposed NMCA’s 20-km coastal corridor have also been shown to have the highest probability of wolverine occupancy in Ontario. This reality is well-known amongst Peawanuck trappers, says Linda Hunter. Wolverines can make life difficult for people on the land, and Hunter’s own encounters with what’s recognized as one of Ontario’s most elusive species suggest that the regional wolverine population should be changed “from endangered to rebounded,” to improve the success of Indigenous trappers. Arctic foxes are found along the coastal corridor throughout the year, marking the southern edge of the species’ range.

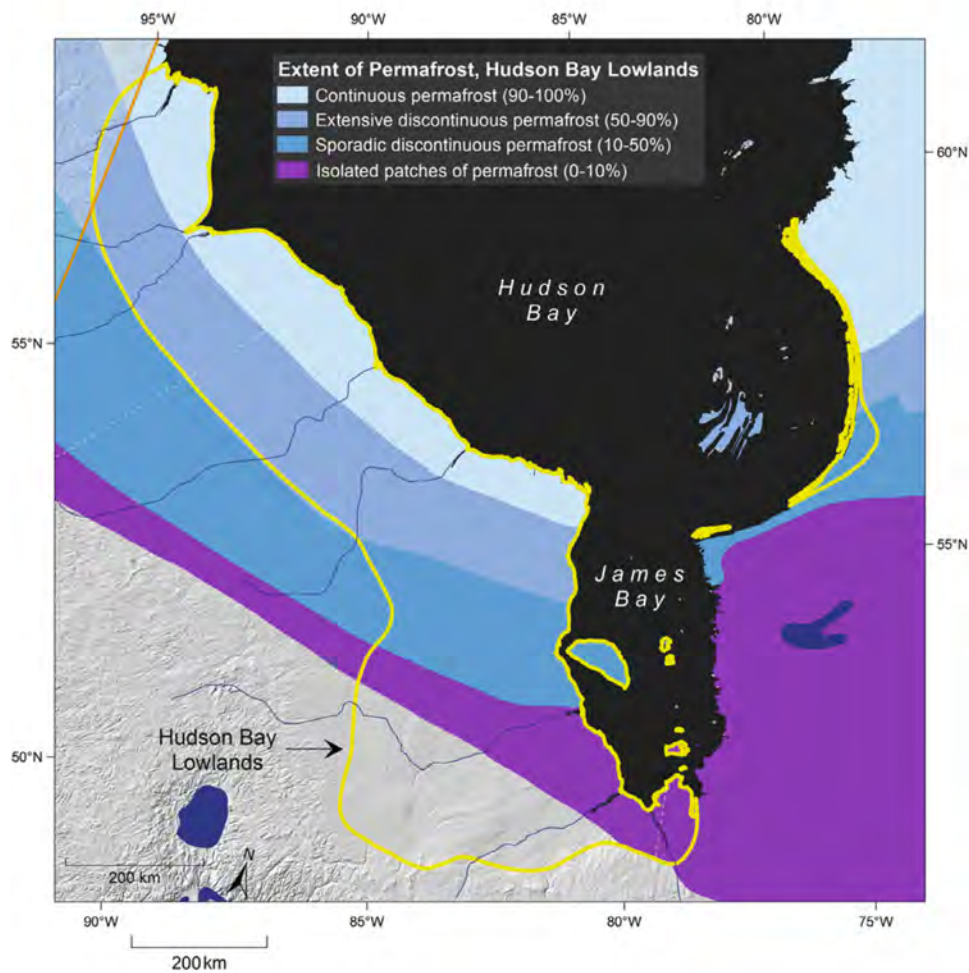


Figure 32: Permafrost distribution in the Omushkego territory of the Hudson Bay Lowlands.
Image: Dredge and Dyke, 2020).

The coastal zone includes some of Canada's southernmost permafrost, reflecting the cold climatic influence of the Arctic Ocean (see Figure 30). Permanently frozen rock, soil and peat is revealed in heaves, ridges and depressions on the surface. These features have supported open grasslands areas with countless ponds and gravel ridges that make travel easy, creating a "northern Serengeti" that was cherished by Indigenous knowledge keeper Sam Hunter of Peawanuck. However, Hunter has been tracking the loss of permafrost-related features due to climate change for many years. Ponds and wetlands are disappearing in the coastal zone, including many of his favourite places to harvest ducks. These coastal wetlands are rapidly draining and being replaced by grasses and fast-growing shrub forests.

An Ontario government survey assessing historical aerial photographs of an area near the Attawapiskat River estimated a 26 percent loss of permafrost features between 1954 and 2011. This is a huge concern because permafrost landforms are critical to supporting biodiversity across the region, such as providing habitat for waterfowl and shorebirds and den sites for polar bears. Now, sudden changes are having profound impacts on wildlife behaviour and forcing locals to adapt hunting and gathering patterns.

Climate-related changes are manifesting stunningly fast across the entire coastal corridor. For example, Attawapiskat Elder Remi Fireman recalls hearing stories from his father in law, Xavier Sutherland, describing tundra at Mooshwok (Cape Henrietta Maria). In fact, the O mushkego place name translates to "a barren or treeless headland," which attracted snow geese and served as an important hunting site. Now, expanding forests of evergreens and tamaracks have replaced the barrens. Warmer winters have also reduced the scouring effect of river ice at breakup, Fireman adds, allowing vegetation to grow more prolifically in and around waterways, impeding navigation by boat in the summer. Portions of the Attawapiskat and Ekwana rivers are becoming "willowed in," Fireman says. With less snow and ice to melt, "it doesn't really feel like a break up at all," he explains. "Some areas between the islands are getting all grown in."

The proposed NMCA is a "Birthing Place" for nearly 100 bird species. Millions of migratory birds travel from across the hemisphere to rear their young and take advantage of the bounty of resources within the proposed NMCA. Dozens more use the area as foraging grounds during the breeding and migratory periods, including the two to three million geese funneling through each spring and fall. "When you look at this area," says Carrie Gray, a boreal conservation specialist with the National Audubon Society, "you can't help but think that other parts of the world were once [pristine] like this."

The arrival and departure of geese and ducks mark important annual milestones for Indigenous people. The excitement of "goose season" is palpable, says Vern Cheechoo of Mushkegowuk Council. Communities track the movement of migratory geese and ducks and keep close observations of their populations and habitat preferences over time. For example, Cheechoo says snow geese migrations have shifted westward since the 1980s, perhaps reflecting the loss of habitat elsewhere on the flyway. Cheechoo says people in his community of Moose Factory still anticipate the spring goose hunt, but they have shifted to hunting moose in the fall. People in coastal communities all the way north to Fort Severn are observing similar changes. "[Snow geese] fly over the open ocean now, making it more difficult to harvest them," adds Clinton Patrick of Peawanuck. "It's harder and harder, it seems like every year."

"Akimiski is the main island for my family," explains Jeronimo Kataquapit. "We have a camp there. It goes back generations—it's where my family on my dad's side is from." Jeronimo's father, James Kataquapit, speaks of the cultural importance of the annual spring harvest on Akimiski when he says, "The goose brings our family together."



Dad Dragging Geese
Credit: Patrick Cheechoo

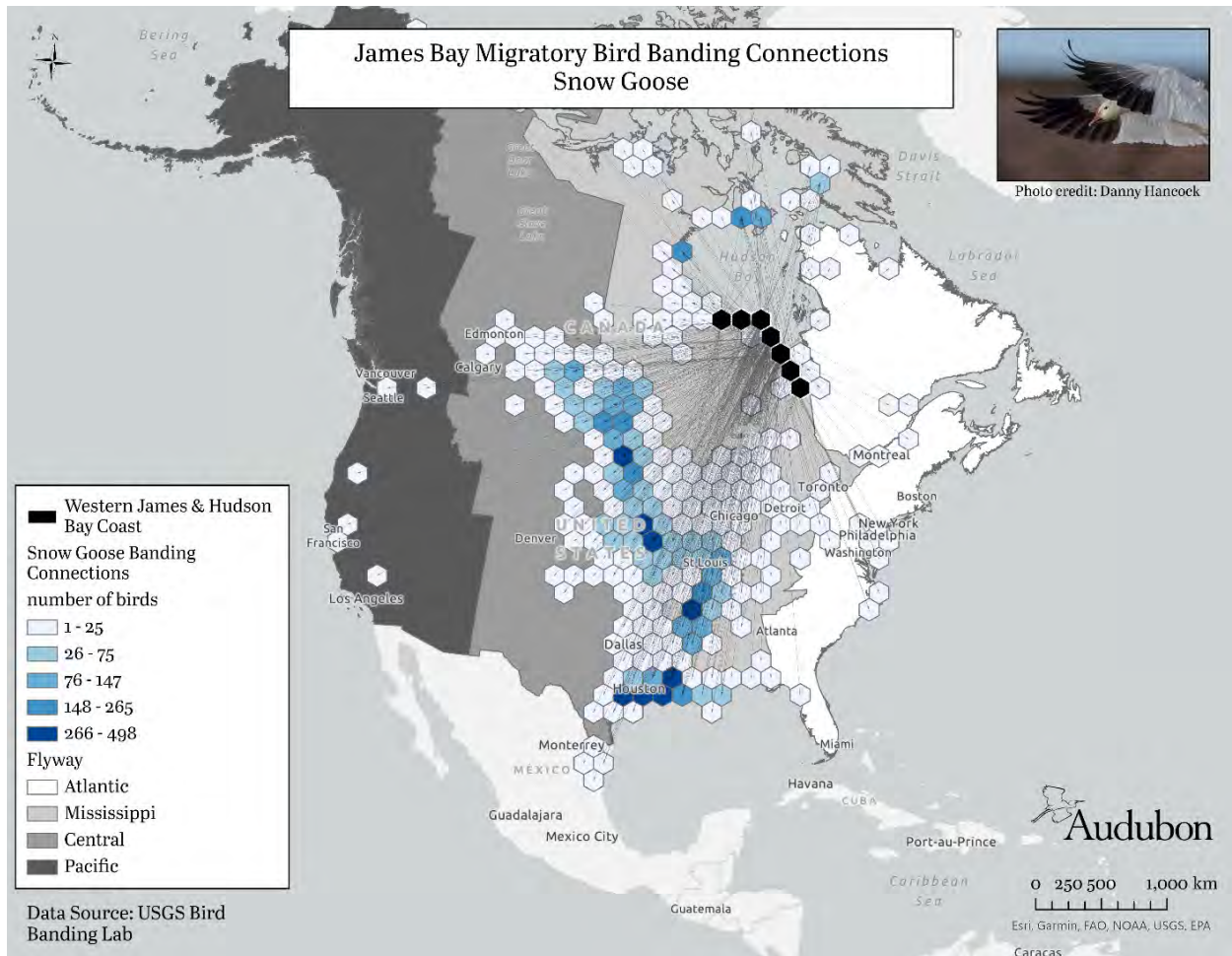


Figure 33: Bird banding connections across North America for snow goose, an important part of the traditional Indigenous diet. Image: National Audubon Society

Moose Cree Elder Norm Wesley has noticed fewer geese around his camp near the mouth of the Moose River since the mid-1980s. Wesley attributes it to habitat changes and less food, which has caused the geese to bypass the area. Coastal areas that were once wet and boggy are drying up and being replaced by vegetation like shrubs and trees, says Wesley. “They’re going elsewhere to find their food. It’s as simple as that,” he adds. “I don’t hunt geese in the fall anymore, like I did when I was much younger.”

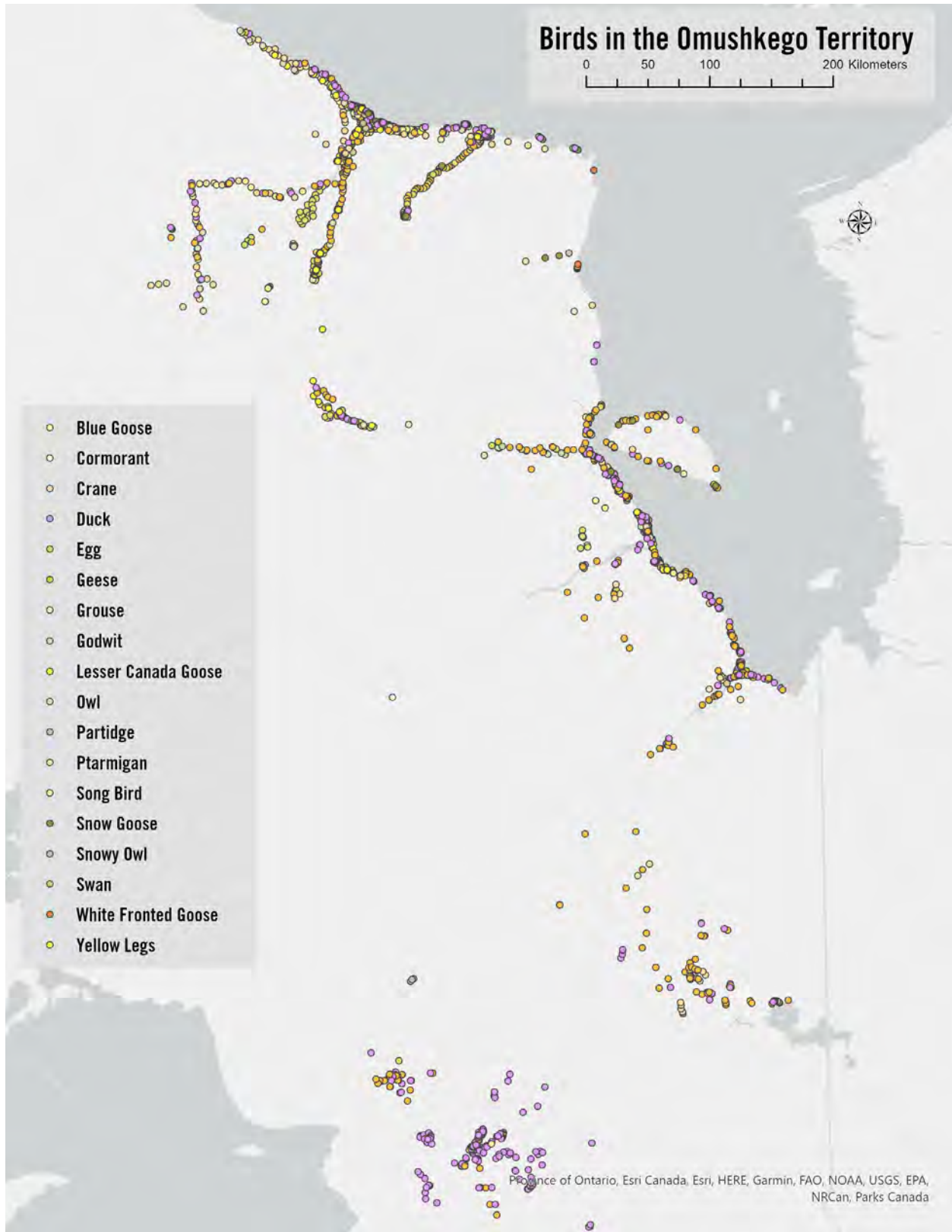


Figure 34: The proposed NMCA is a “Birthing Place” for nearly 100 bird species. This map shows birds as identified in the Tawich Study and Mushkekegowuk Land Use Plan.

Nearly the entire coastal area is encompassed within 11 candidate Key Biodiversity Areas of Canada, a designation indicating exceptional importance for wildlife and biodiversity, including birds (see figure below). These are identified important areas for birds, but they need more data, which could be an excellent opportunity for Guardians programs. Estuaries, tidal flats and freshwater ponds adjacent to Weeneebeg and Washaybeyoh are teeming with invertebrates, fish, and plant foods that birds need to raise their young. Coastal zones are important stopover and staging areas for long-distance migratory shorebirds to rest and refuel on journeys often spanning the length of North and South America.



Figure 35: An illustration of Key Biodiversity Areas (KBAs), Candidate KBAs, and Important Sea Duck Habitats within the proposed Mushkegowuk NMCA. All KBAs and Candidate KBAs in the map were previously designated as Important Bird Areas (IBAs). KBAs are a global system replacing IBA classifications to designate areas that contribute significantly to the survival of global biodiversity. Credit: National Audubon Society

A recent study indicated that 26 of 28 species of North American shorebirds are in decline, including the endangered *rufa* red knot, a species whose population has decreased by an estimated 70 percent over the last 25 years and relies on intact habitat in the proposed NMCA.



Figure 36: Red knots are one of the longest-distance migrants in the animal kingdom. Some travel more than 14,000 km each way between the Arctic and southern tip of South America, relying on the same stopping sites each year along their migratory routes to refuel their bodies. Weeneebeg is a critical stopover site. Colleagues at the National Audubon Society report that one red knot was tracked leaving James Bay in fall and flew 5,000 km non-stop to the Caribbean.



Art Credit: John Reuben

The NMCA includes a coastal zone spanning more than 1280 km of coastline. Further inland, and within the proposed 20 km buffer zone, the coastal wetlands transition to peatlands, which store the majority of the massive carbon stock of the adjacent “Breathing Lands”. Thus, this buffer zone plays a critical role in supporting the establishment and initiation of peatlands, while also holding a significant stock itself.

The best available datasets for estimating the carbon content of the 20-km buffer zone include the dataset of Hugelius et al (2020) which is a dataset that covers the entire northern hemisphere and estimates carbon content in peat soils from available soil maps combined with spatial modelling. The estimates of total soil carbon from this data set are 391 million tonnes of carbon.

In another estimate, which is a global scale analysis of terrestrial carbon in both soil and biomass, Soto-Navarro et al (2020) combine information derived from publicly available soil and vegetation datasets with satellite remote sensing and spatial modelling and estimate 1.8 billion tonnes of carbon in the top 1 metre of soil and in the vegetation.

The significant difference between these two estimates shows that there is large uncertainty in the total carbon stocks in this area, and in the spatial variability of those stocks. This uncertainty is due to a lack of actual ground-based measurements of soils within this buffer zone. Since the estimates of Hugelius et al. and Soto Navarro et al. are large scale analyses that rely on ground-based measurements to make accurate spatial predictions, it is necessary to validate these estimates for the buffer zone. Several groups of scientific researchers are currently working to produce the first available carbon estimates for the proposed NMCA coastal zone; these will be used to refine and improve the available estimates.

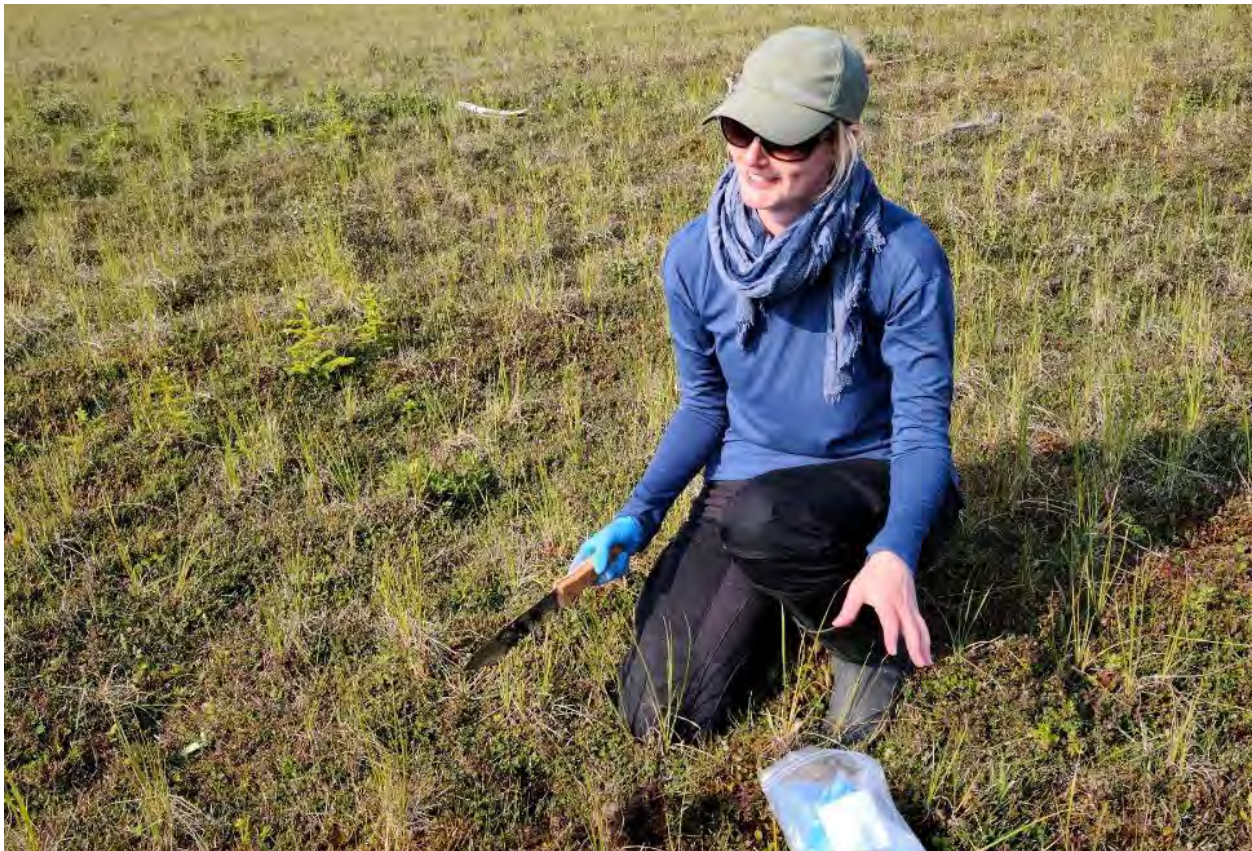


Figure 37: Dr. Lorna Harris of Wildlife Conservation Society Canada digging into a peat-forming fen a couple kilometres away from Sam Hunter’s cabin on the southern Hudson Bay coast. Harris and other biogeochemistry experts assert that protecting this complex of peatlands is essential to prevent an even greater climate emergency. Credit: Wildlands League



Figure 38: A close up of peat soils taken from a young peat-forming fen near the southern Hudson Bay coast.

Just as its peatlands help buffer global warming, climate change is influencing Aski-Gitchi Bayou's ecological communities, with direct effects on the Omushkego way of life. The Tawich study serves as an important barometer of change. Andrew Koostachin says American white pelicans now appear regularly on the coast; he tells of how Attawapiskat Elder Theresa Hookimaw named them *gaagobikayjik*, "one that scoops up water or fish." Meanwhile, Linda Hunter wonders what's causing "Quebec fish"—distinctly different from the *atihkamek* (whitefish) she's familiar with catching around the mouth of the Winisk River—to migrate westward in great numbers. "I don't know what they're doing here," Hunter admits. "All of a sudden we're getting the fish that everybody's missing on the Quebec side."

Signs of changes to the lands and waters are alarming because Omushkego people depend on a healthy environment for all elements of their livelihood. The land delivers "complete nourishment," Peawanuck resident Clinton Patrick insists. "Everything you eat is medicine." Omushkego people play an active role in the ecosystem of their home territories, making them fully aware that environmental integrity is the foundation of maintaining and creating social and economic values. The resolve to fulfill a sacred obligation to the Creator to serve as guardians of the lands and waters, along with local expertise, means the full support of Omushkego communities is critical in guiding the development and management of the proposed Mushkegowuk NMCA.

HEALTH, WELL-BEING, COMMUNITY SOCIO-ECONOMICS





A healthy environment is the foundation of a sustainable future

Each summer, one Mushkegowuk community hosts Ininew Makoshewin (“a celebration of life”), where families and friends gather for ceremonies, feasts and games. Today’s Creefest continues the tradition of Omushkego ancestors, who came together to celebrate the richness of the land and waters. In his book *Telling Our Stories* (2005), Peawanuck Elder Dr. Louis Bird recounts the oral history of such gatherings held at the mouth of the Ekwan River. “It was the most famous place where the Omushkegos used to gather together in the spring,” he says, “...to welcome each other, to reunion with their friends, and also to have a celebration, to celebrate being, surviving during the winter.”

Dr. Bird sets a scene including all of nature’s abundance that still punctuate the seasons of Minoskamin (blooming earth and open water season) and Niipin (summer) in Tawich: multitudes of geese, waterfowl, fish, caribou. “All around, about 200 miles, inland from the sea,” Dr. Bird says, “people live there as the animals move—they move with animals, they move with season.”

Dr. Bird’s storytelling also reveals the importance of caring for and protecting all elements of the natural world to ensure vibrant social and economic values. Today, Mushkegowuk Council consists of 7 First Nations, including Moose Cree, Fort Albany, Kashchewan and Attawapiskat. Located outside of the marine corridor, Chapleau Cree, Missanabie Cree and Taykwa Tagamou Nation bring the total Mushkegowuk population living on and off reserves to 13,735. Weenusk and Fort Severn First Nations are neighbours and collaborators on the NMCA project, with reserves and traditional territories overlapping much of the coastal and marine areas. Socioeconomic reports were commissioned by the Mushkegowuk Council for the communities (to date, Attawapiskat and Missanabie are outstanding), along with Weenusk and Fort Severn. Wakenagun Community Futures Development Corporation¹ carried out the study. A brief summary² is provided in Table 3.

3 A federally incorporated not for profit serving the Mushkegowuk region.

4 In an earlier section, called What We Heard, more feedback can be found based on these reports, as well as community visits and engagement sessions by Mushkegowuk Council and partners.

Table 3: Brief socio-economic summary of Mushkegowuk communities and collaborating Nations in the proposed National Marine Conservation Area from a study by Wakenagun Community Futures Development Corp. for Mushkegowuk Council and other sources.

Community	Population	Language spoken	Economy
FORT SEVERN	729	N dialect of Cree and Ojibwe	Traditional activities; Transportation; Education; Health care; Community development & infrastructure
KASHECHEWAN	1,800	L dialect of Cree	Local governance; health care; education
MOOSE CREE	5,070	L dialect of Cree	Moose Cree Group of Companies; Moose Band Development Corp; healthcare; services; tourism
WEENUSK (PEAWANUCK)	597	N dialect	Traditional activities; seasonal employment - health care, education, tourism
TAYKWA TAGAMOU	667	L dialect of Cree	Forestry, mining and hydro partnerships; on-reserve employment
CHAPLEAU CREE	749	primarily English	Off-reserve employment; potential for ecotourism & partnerships in mining
FORT ALBANY	5,425	N dialect	Subsistence allowance; seasonal employment; opportunities in education, health care, transportation, retail/service and band office
ATTAWAPISKAT	3,722	N dialect	
MISSANABIE	625	primarily English	

Community profiles demonstrated that all Omushkego communities, as well as Weenusk and Fort Severn, face real socioeconomic concerns, including access to basic services such as housing, clean water, health care and education.

Community members have a long track record of standing up for Weeneebeg and Washaybeyoh. For example, a De Beers proposal to transport diesel fuel to the then Victor Diamond Mine by ocean tankers and barge (risking spills and requiring dredging of the mouth of the Attawapiskat River) was emphatically rejected in the early 2000s. Instead, DeBeers built a transmission line to bring power to the mine site.

Community members also continue to be on guard against a destructive scheme from the 1960s to dam James Bay (referred to as the GRAND canal scheme) to divert water through the Great Lakes to the US. Recently when the idea re-appeared in a southern newspaper, on behalf of all coastal communities Mushkegowuk Council restated its opposition noting, “Under no circumstance will our people, the Omushkego, allow the damming of James Bay to occur. Since the 70s, our Elders have warned us of the catastrophic impacts of this project to our lands, waters and to us as a people...and how it would be an irrevocable violation of our human rights, Treaty Rights and inherent rights to dam it”.

Food security and traditional foods are of paramount importance for all communities in the study area. A 2019 paper concluded that “subsistence harvesting shapes the unique socio-cultural fabric” of Attawapiskat, Fort Albany and Moose Cree communities. The same survey indicated that subsistence harvesting is important for 76 percent of households. Moreover, a 2003 survey of Fort Severn indicated that caribou, geese, whitefish, pike, mussels, seaweed and clams comprised a large portion of the community’s diet. Across the entire region, caribou, moose and geese make up two-thirds of the traditional food harvest, a value that’s remained steady over time. Tawich interviews conducted for the proposed NMCA emphasize the importance of the lands and waters, and especially the marine area, for food security.




Figure 39: Walking in polar bear country along southern shore of Washaybeyoh. Credit: Jane McDonald

The lands and waters “are our lifeblood,” says Vern Cheechoo of Mushkegowuk Council. Indeed, Omushkego identity is strongly connected to Tawich. “It keeps you healthy, it teaches you, it brings you knowledge, it brings who you are,” says Peawanuck resident Clinton Patrick. “Our young people could be so healthy, more active on the land.” Patrick and others in Tawich interviews emphasized the “language of the land” and the importance of reclaiming Indigenous place names across all of Omushkego Aski. “All of these lands where I hunt, it’s all said in Cree,” Patrick adds. “We need to bring . . . our language back so we can communicate one way, by respecting the land.”

“We need to preserve our language, our culture, and going out on the land,” adds Jessie Sutherland, child welfare manager in Fort Albany. “We are losing our language. But I firmly believe we can still get it back.” The proposed NMCA holds great potential in replacing colonial place names with the more holistic, descriptive terms still used by Cree Elders. It also offers the opportunity for youth to reconnect with the environment, a proven strategy for developing stronger social dynamics. “When we teach kids land-based activities, when we take them places,” says Linda Hunter of Peawanuck, “that’s where they learn the most.”

Hunter alludes to “healing walks,” where residents trek 33 km from the town of Peawanuck to the abandoned village of Winisk, near the shores of Washaybeyoh. William Edwards, a native of Fort Albany, describes a deep feeling of contentment when he’s “boating in the Tawich.” “There’s a lot of healing in the bush,” says Edwards. “Spirituality is what’s happening outside of the communities. When you’re in the community, [money is] the focus.”

 **The living stories of Indigenous food sovereignty and food insecurity shared by research participants, made it clear that food justice cannot be enacted without water justice.” -Tyna Legault Taylor, Attawapiskat member and PhD candidate at Lakehead University**

While environmental protection is the primary goal of the Mushkegowuk NMCA, Lawrence Martin envisions broader long-term socio-economic benefits feeding directly into communities. Ultimately, these will help create vibrant places to live and support sustainable local economies. A comprehensive budget will include provisions for staffing, including management and administration, as well as full-time, seasonal and junior Guardians based in Omushkego communities. Funding has been requested to cover the construction costs and utilities for new houses for full-time Guardians as well as multi-use facilities. Two new research flagship stations are also being proposed for Peawanuck and Moose Factory in addition to remote monitoring centres.


Table 4: A glimpse of stated priorities to improve each community (as shared by members) in the Wakenagun study.

Community	Stated priorities to improve the community
FORT SEVERN	<ul style="list-style-type: none"> • More job opportunities for all age groups, improved housing facilities and a fortified stand on environmental concerns • Bigger boats • The community is striving for energy self-sufficiency and reductions in carbon footprint, with a 253-kw solar project along with a hybrid solar-wind system with battery backup offering a balanced, cost-effective solution that's tailored to the unique needs and existing assets of Fort Severn First Nation • Cleaning up of a sunken bulldozer in the river was mentioned in a community visit
WEENUSK (PEAWANUCK)	<ul style="list-style-type: none"> • 17 areas were described from food security to educational advancements, employment opportunities, youth development and involvement, need for a youth healing lodge and more • Multi-use facility and support for tourism development
ATTAWAPISKAT	<ul style="list-style-type: none"> • Protection of the Attawapiskat traditional territory • Members want full control of islands • Need to conduct (studies) Attawapiskat and Ekwan Rivers from De Beers Canada and other exploration activities from Ring of Fire impacts • Attawapiskat issued a moratorium on all activity in the Ring of Fire, leadership said they must respect that • Ontario to stop issuing exploration permits • Housing and ATR (Additions to Reserve) are important too and water infrastructure
KASHECHEWAN	<ul style="list-style-type: none"> • Infrastructure: investing in healthcare, education and a community centre for physical, emotional and cultural well-being • Community members expressed interest in using the NMCA as a catalyst for sustainable tourism, especially reestablishing goose hunting camps, multi-use facility • Need housing for 200 families
FORT ALBANY	<ul style="list-style-type: none"> • Investments to create additional housing and a new multi-use facility with arena in the community • Developing more awareness and strategy around climate change • Tourism development centered around experiences on the land, notably hunting and fishing • Central to their vision is the cultural preservation and collective healing, emphasizing the need for larger healing gatherings, traditional dances, and songs
MOOSE CREE	<ul style="list-style-type: none"> • Developing a seaport and a treatment facility • Community infrastructure, all season road and recreation centre • Developing community programs to support environmental protection

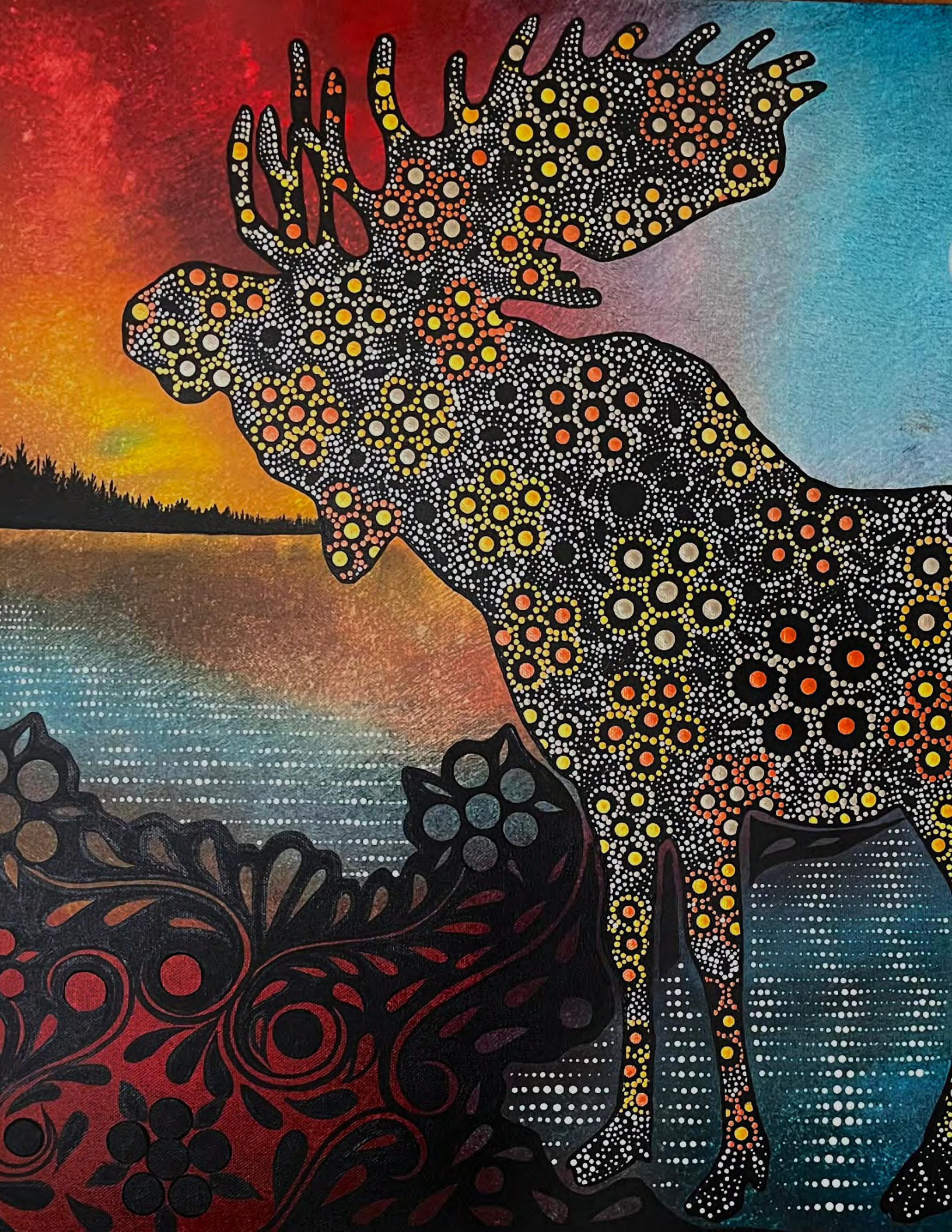
Community	Stated priorities to improve the community
CHAPLEAU CREE	<ul style="list-style-type: none"> • Improving digital connectivity (internet and cellular) • Sustainable tourism—especially hunting, fishing, cultural and other outdoor activities—on or off reserve
TAYKWA TAGAMOU	<ul style="list-style-type: none"> • Sustainable tourism focused on cultural experiences • Land-based healing lodge • Facility upgrades, including education and water treatment, as well as community housing and new community gathering spaces
MISSANABIE CREE	<ul style="list-style-type: none"> • Installation of infrastructure to establish community after 100+ years of reserve land dispute • Steady growth in homes on the new reserve land base • Growth and operation of the evacuation center - 800 person facility. • Continued institution building of the Lands and Resources Dept - to meet growing territorial responsibilities assigned by leadership/governance

The Wakenagun Community Futures Development Corp reports identified sustainable tourism development as a consistent theme in five communities. However, it's clear that tourism initiatives must be tailored to support local needs. "There is a shared understanding that ownership of tourism camps and related enterprises be anchored with community members," Wakenagun concluded. "Individuals within these communities bring a wealth of experience and intimate knowledge of the land, coupled with expertise in harvesting and safety protocols. Their primary role will be to curate and deliver the authentic experiences tourists are increasingly seeking."

It is also evident that progress can only be made through functional, trusting relationships between Omushkego communities, Mushkegowuk Council and the federal government. The historic MOU to explore the potential of an Indigenous-led marine conservation area in Aski-Gitche Bayou marks a great opportunity to rally around a universal goal of preserving the environment to foster healthy relationships, promote Reconciliation and bring lasting socio-economic benefits to Omushkego communities.

An aerial photograph of a river delta with a central forested island, overlaid with a green gradient and white text.

**OTHER HIGH LEVEL
SOCIO-ECONOMIC
CONSIDERATIONS**



Related to mining, oil and gas, shipping and other developments

SUMMARY:

There is **little potential for oil and gas** development in the region and there are no existing rights to explore or exploit oil and gas

10 mining claims covering 1500 ha have been identified representing 0.13% of the total land within the proposed protected 20 km buffer

Two winter roads and an existing transmission line were identified for exclusion from the NMCA

The decades old **GRAND Canal scheme** to dam the mouth of Weeneebeg remains top of mind concern for communities to this day. Its periodic reappearance in media is very upsetting for Omushkego people

Moosonee is a hub for regional transportation; barges operated by **Moosonee Transportation Ltd** service both sides of Weeneebeg

The municipality of Moosonee is looking for synergistic opportunities for **tourism related to the NMCA**

DeBeers retains their mineral holdings (diamonds) for potential future possibilities 90 km upstream of Attawapiskat. Worries over oil tankers in the bay could resurface in future if DeBeers chooses to develop **kimberlite pipes**

Mid Canada Line sites (old radar sites) have been cleaned up (but are proposed to be excluded from the boundary)

Ontario Power Generation continues to eye rivers in the territory for hydro electric development

In the past, the province requested proposals for **wind power in James Bay** from outsiders

Proposed mining in the **Ring of Fire** represents a very significant concern for downstream communities including the potential for **contamination, disruption of peatlands and waterways**, and the opening up of the region to outsiders

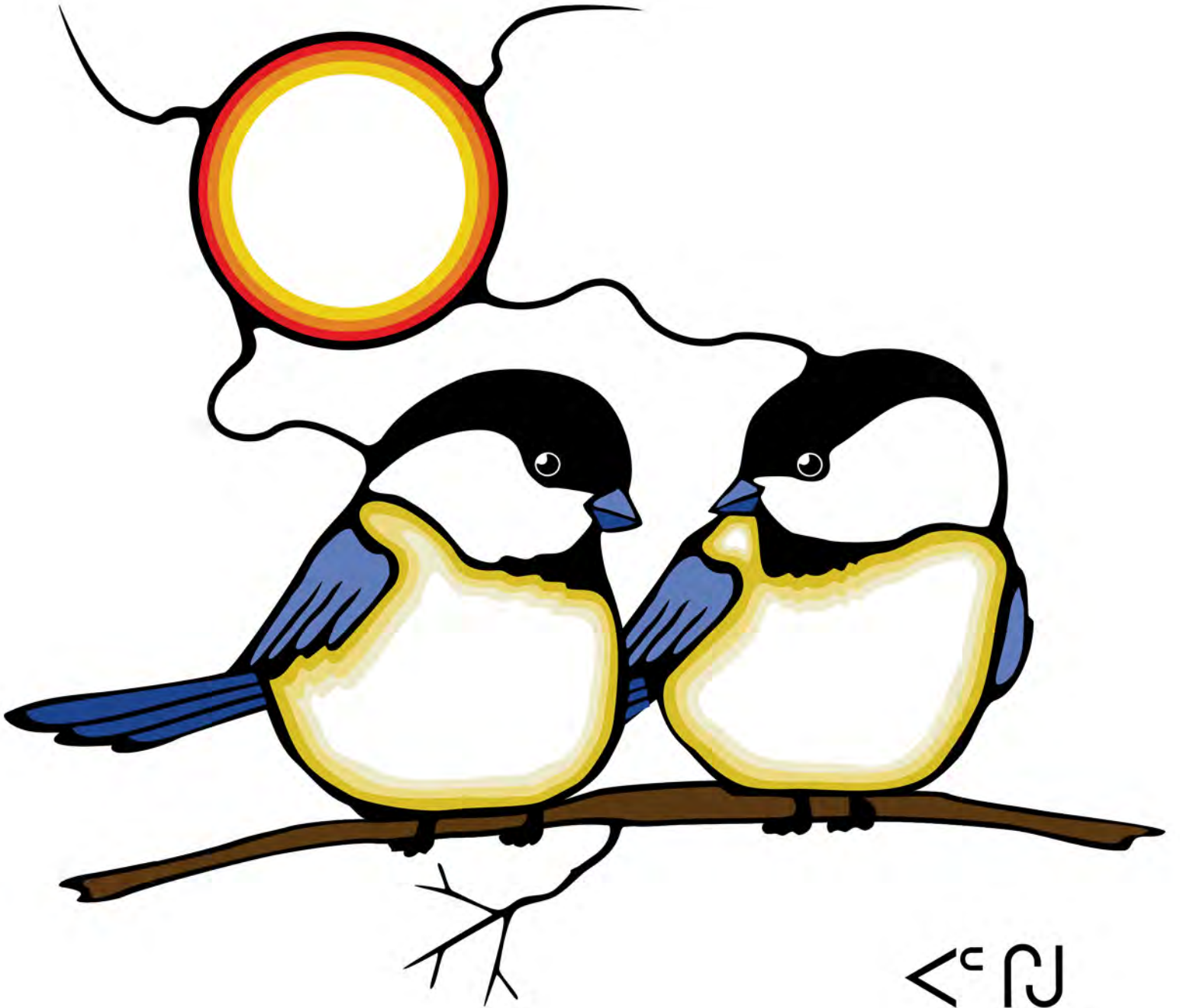
Reclaiming the islands in Weeneebeg given to Nunavut is a priority

Coming up with an **overlapping agreement with the Eeyou Istchee** on shared marine territory in Weeneebeg is needed

Need to **identify any contaminated sites** within the territory that may overlap with NMCA (i.e., mercury contamination from old hydrometric stations)

There is a desire from communities for an **all weather road**

There are **historical shipwrecks in Weeneebeg**. These would need to be mapped at a minimum



<° ∩

A photograph of three hikers walking away from the camera on a dirt path through a grassy field. The scene is overlaid with a green gradient. The hiker in the foreground is wearing a dark jacket, a cap, and a large backpack. The hiker in the middle is wearing a dark jacket and a backpack. The hiker in the background is wearing a light-colored jacket and a backpack. The text "NEXT STEPS" is centered over the image in a large, white, sans-serif font.

NEXT STEPS

More Indigenous engagement planned

We are at a critical moment. In order to take the next step, we need to hear from communities on this draft report, incorporate feedback and confirm this is the direction they want to go either through band council resolutions or community declarations. This report is intended to be part of the official recommendation to the federal environment minister and Grand Chief of Mushkegowuk Council on next steps.

In the coming weeks and months, there will be intense community engagement with this report so people can absorb, digest and make an informed decision. We need community direction to take the next step and move to the next stage.

Bibliography

- Abraham, Kenneth Floyd and McKinnon L M. 2014. *Hudson Plains Ecozone+ Evidence for Key Findings Summary*. Canadian Biodiversity: Ecosystem Status and Trends 2010 - Evidence for Key Findings Summary Report, no. 2. Ottawa, Ontario: Canadian Councils of Resource Ministers.
- Abraham, KF, and CJ Keddy. 2005. "The Hudson Bay Lowland." In *The World's Largest Wetlands: Ecology and Conservation*, edited by Lauchlan H. Fraser and Paul A. Keddy. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511542091>.
- Armstrong, Ted. 2013. "Management Plan for the Beluga (Delphinapterus Leucas) in Ontario." Prepared for the Ontario Ministry of Natural Resources. Ontario Management Plan Series. Peterborough, Ontario.
- Atkinson, S. N., and M. A. Ramsay. 1995. "The Effects of Prolonged Fasting of the Body Composition and Reproductive Success of Female Polar Bears (Ursus Maritimus)." *Functional Ecology* 9 (4): 559. <https://doi.org/10.2307/2390145>.
- "Atlas of the Breeding Birds of Ontario, 2001–2005." 2007. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, & Ontario Nature. <https://academic.oup.com/condor/article/112/1/185-186/5152558>.
- Auer, NA. 1996. "Importance of Habitat and Migration to Sturgeons with Emphasis on Lake Sturgeon." *Canadian Journal of Fisheries and Aquatic Sciences* 53: 152–60.
- Badzinski, Shannon, Ken Ross, Shawn Meyer, Ken Abraham, Rod Brook, Richard Cotter, François Bolduc, Christine Lepage, and Steve Earsom. n.d. "Project 82: James and Hudson Bays Molting Black Scoter Survey." Annual Project Summary for Endorsed Projects FY 2013– (Oct. 1, 2012, to Sept 30, 2013). Sea Duck Joint Venture (SDJV).
- Bird, Louis. 2005. *Telling Our Stories: Omushkego Legends and Histories from Hudson Bay*. Peterborough, Ont: Broadview press.
- Bowman, TD, JL Churchill, C Lepage, SS Badzinski, SG Gilliland, N McLellan, and E Silverman. 2022. "Atlas of Sea Duck Key Habitat Sites in North America." Sea Duck Joint Venture. <https://seaduckjv.org/atlas/pdf/Sea%20Duck%20Atlas%20all%20hires%203-21-22.pdf>.
- Browne, David R. 2007. *Freshwater Fish in Ontario's Boreal: Status, Conservation and Potential Impacts of Development*. Toronto, Ont.: Wildlife Conservation Society Canada.
- Cadman, M.D., F.F. Eagles, and F.M. Helleiner. 1987. *Atlas of the Breeding Birds of Ontario*. University of Waterloo Press.
- Canada National Marine Conservation Areas Act*. 2002. 2019, c. 28.
- "Canada's Changing Climate Report." 2019. Ottawa, ON: Government of Canada.
- Chan, Farrah T., Keara Stanislawczyk, Anna C. Sneekes, Alexander Dvoretzky, Stephan Gollasch, Dan Minchin, Matej David, Anders Jelmert, Jon Albretsen, and Sarah A. Bailey. 2019. "Climate Change Opens New Frontiers for Marine Species in the Arctic: Current Trends and Future Invasion Risks." *Global Change Biology* 25 (1): 25–38. <https://doi.org/10.1111/gcb.14469>.
- Chetkiewicz, CLB, M Carlson, C O'Connor, BE Edwards, FM Southee, and M Sullivan. 2017. "Assessing the Potential Cumulative Impacts of Land Use and Climate Change on Freshwater Fish in Northern Ontario." Conservation Report 11. WCS Canada.
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC). 2018. "COSEWIC Assessment and Update Status Report on the Lake Sturgeon (Acipenser Fulvenscens) – Western Hudson Bay Populations/Saskatchewan-Nelson River Populations/Southern Hudson Bay-James Bay Populations/Great Lakes-Upper St. Lawrence Populations – in Canada." Ottawa: Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
- COSEWIC. 2004. "COSEWIC Assessment and Update Status Report on the Beluga Whale Delphinapterus Leucas in Canada." Ottawa: Committee on the Status of Endangered Wildlife in Canada.
- COSEWIC 2016. "Designatable Units for Beluga Whales (Delphinapterus Leucas) in Canada." COSEWIC Special Report. Ottawa: Committee on the Status of Endangered Wildlife in Canada.
- COSEWIC 2018. "COSEWIC Assessment and Status Report on the Polar Bear (Ursus Maritimus) in Canada 2018." Ottawa:

Committee on the Status of Endangered Wildlife in Canada (COSWEIC). <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports/polar-bear-2018.html>.

COSSARO. 2021. "Ontario Species at Risk Evaluation Report for Polar Bear Ours Polaire Nanook (*Ursus Maritimus*)."

Davies, Marissa A., Jerome Blewett, B. David A. Naafs, and Sarah A. Finkelstein. 2021. "Ecohydrological Controls on Apparent Rates of Peat Carbon Accumulation in a Boreal Bog Record from the Hudson Bay Lowlands, Northern Ontario, Canada." *Quaternary Research* 104 (November): 14–27. <https://doi.org/10.1017/qua.2021.22>.

De Beers Canada Inc. n.d. "Victor Diamond Mine Project Comprehensive Study."

DFO. 2018. "Harvest Advice for Eastern and Western Hudson Bay Beluga (*Delphinapterus Leucas*)." Canadian Science Advisory Secretariat 2018/008. Science Advisory Report. Québec and Central and Arctic Regions: DFO Canadian Science Advisory Secretariat Science Advisory Report.

Dove-Thompson, D, C Lewis, PA Gray, C Chu, and WI Dunlop. 2011. "A Summary of the Effects of Climate Change on Ontario's Aquatic Ecosystems." CL23135 11. Ministry of Natural Resources and Forestry Climate Change Research. <https://www.publications.gov.on.ca/summary-of-the-effects-of-climate-change-on-ontarios-aquatic-ecosystems-climate-change-research-report-crr-11>.

Dredge, L. A., and L. D. Dyke. 2020. "Landscapes and Landforms of the Hudson Bay Lowlands." In *Landscapes and Landforms of Eastern Canada*, edited by Olav Slaymaker and Norm Catto, 211–27. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-35137-3_8.

Durkalec, Agata, and Kaitlin Breton Honeyman. 2021. "The Hudson Bay, James Bay and Foxe Basin Marine Ecosystem: A Review." Polynya Consulting Group. <https://www.oceansnorth.org/wp-content/uploads/2021/06/HBME-Final-2021-06-11.pdf>.

Elkie, P, K Green, G Racey, M Gluck, J Elliot, G Hooper, R Kushneriuk, and R Rempel. 2018. "Science and Information in Support of Policies That Address the Conservation of Woodland Caribou in Ontario: Occupancy, Habitat and Disturbance Models, Estimates of Natural Variation and Range Level Summaries." Ontario Ministry of Natural Resources, Forests Branch.

Environment and Climate Change Canada. 2020. "Amended Recovery Strategy for the Woodland Caribou (*Rangifer Tarandus* Caribou), Boreal Population, in Canada." Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada.

Environment and Climate Change Canada 2021. "National Inventory Report 1990–2019: Greenhouse Gas Sources and Sinks in Canada." Environment and Climate Change Canada. <https://publications.gc.ca/site/eng/9.506002/publication.html>.

Environment and Climate Change Canada n.d. "Government of Canada." Migratory Bird Sanctuaries across Canada. Accessed September 26, 2023. <https://www.canada.ca/en/environment-climate-change/services/migratory-bird-sanctuaries/locations.html>.

Environment Canada. 2013. "Bird Conservation Strategy for Bird Conservation Region 7 in Ontario: Taiga Shield and Hudson Plains." Canadian Wildlife Service, Environment Canada. https://www.canada.ca/content/dam/eccc/migration/main/mbc-com/676a7f99-807b-432d-8571-a0781b173bb2/barts20125_bcr_7_on_-_final_english.pdf.

Ewing, Kern, and K. A. Kershaw. 1986. "Vegetation Patterns in James Bay Coastal Marshes. I. Environmental Factors on the South Coast." *Canadian Journal of Botany* 64 (1): 217–26. <https://doi.org/10.1139/b86-031>.

Far North Science Advisory Panel (Ont) and Ontario Ministry of Natural Resources Far North Branch. 2010. "Science for a Changing Far North: The Report of the Far North Advisory Panel." <https://www.worldcat.org/title/Science-for-a-changing-far-north--the-report-of-the-Far-North-Advisory-Panel/oclc/755211123>.

Godfrey, W. Earl, and John A. Crosby. 1986. *The Birds of Canada*. Rev. ed. Ottawa, Canada: National Museum of Natural Sciences, National Museums of Canada.

Government of Canada. 2022. "Protecting More Nature in Partnership with Indigenous Peoples," December 7, 2022. <https://www.pm.gc.ca/en/news/news-releases/2022/12/07/protecting-more-nature-partnership-indigenous-peoples>.

Environment and Climate Change Canada n.d. "Species at Risk Public Registry." Environment and Climate Change Canada. <https://www.canada.ca/en/environment-climate->

[change/services/species-risk-public-registry.html](https://www.nature.com/subjects/species-risk-public-registry.html).

Grill, G., B. Lehner, M. Thieme, B. Geenen, D. Tickner, F. Antonelli, S. Babu, et al. 2019. "Mapping the World's Free-Flowing Rivers." *Nature* 569 (7755): 215–21. <https://doi.org/10.1038/s41586-019-1111-9>.

Hargan, Kathryn E, Kathleen M Rühland, Andrew M Paterson, James Holmquist, Glen M MacDonald, Joan Bunbury, Sarah A Finkelstein, and John P Smol. 2015. "Long-Term Successional Changes in Peatlands of the Hudson Bay Lowlands, Canada Inferred from the Ecological Dynamics of Multiple Proxies." *The Holocene* 25 (1): 92–107. <https://doi.org/10.1177/0959683614556384>.

Harris, Lorna I, Karen Richardson, Kelly A Bona, Scott J Davidson, Sarah A Finkelstein, Michelle Garneau, Jim McLaughlin, et al. 2022. "The Essential Carbon Service Provided by Northern Peatlands." *Frontiers in Ecology and the Environment* 20 (4): 222–30. <https://doi.org/10.1002/fee.2437>.

Harris, Lorna I., Nigel T. Roulet, and Tim R. Moore. 2020a. "Mechanisms for the Development of Microform Patterns in Peatlands of the Hudson Bay Lowland." *Ecosystems* 23 (4): 741–67. <https://doi.org/10.1007/s10021-019-00436-z>.

Harris, Lorna I, Nigel T Roulet, and Tim R Moore. 2020b. "Drainage Reduces the Resilience of a Boreal Peatland." *Environmental Research Communications* 2 (6): 065001. <https://doi.org/10.1088/2515-7620/ab9895>.

Harvest Advice for Eastern Hudson Bay and James Bay Beluga (Delphinapterus Leucas). 2022. Science Advisory Report, 2022/024. Ottawa, ON: Canadian Science Advisory Secretariat.

Haxton, Tj, and Tm Cano. 2016. "A Global Perspective of Fragmentation on a Declining Taxon—the Sturgeon (Acipenseriformes)." *Endangered Species Research* 31 (October): 203–10. <https://doi.org/10.3354/esr00767>.

High Ambition Coalition for Nature and People. n.d. "High Ambition Coalition for Nature and People." n.d. <https://www.hacfornatureandpeople.org/home>.

Hobbs, Roderick, Randall Reeves, Jill Prewitt, Genviève Desportes, Kaitlin Breton-Honeyman, Tom Christensen, John Citta, et al. 2020. "Global Review of the Conservation Status of Monodontid Stocks." *Marine Fisheries Review* 81 (3–4):

1–53. <https://doi.org/10.7755/MFR.81.3-4.1>.

Hori, Yukari. 2010. "The Use of Traditional Environmental Knowledge to Assess the Impact of Climate Change on Subsistence Fishing in the James Bay Region, Ontario, Canada," May. <https://uwspace.uwaterloo.ca/handle/10012/5225>.

Hugelius, Gustaf, Julie Loisel, Sarah Chadburn, Robert B. Jackson, Miriam Jones, Glen MacDonald, Maija Marushchak, et al. 2020. "Large Stocks of Peatland Carbon and Nitrogen Are Vulnerable to Permafrost Thaw." *Proceedings of the National Academy of Sciences* 117 (34): 20438–46. <https://doi.org/10.1073/pnas.1916387117>.

Humpenöder, Florian, Kristine Karstens, Hermann Lotze-Campen, Jens Leifeld, Lorenzo Menichetti, Alexandra Barthelmes, and Alexander Popp. 2020. "Peatland Protection and Restoration Are Key for Climate Change Mitigation." *Environmental Research Letters* 15 (10): 104093. <https://doi.org/10.1088/1748-9326/abae2a>.

International Union for the Conservation of Nature (IUCN). 2008. "IUCN Red List of Threatened Species: Acipenser Fulvescens." 2008. <https://www.iucnredlist.org/species/223/13036599>.

IUCN 2010. "Sturgeon More Critically Endangered than Any Other Group of Species." 2010. <https://www.iucn.org/content/sturgeon-more-critically-endangered-any-other-group-species>.

IUCN. 2019. "Acipenser Fulvescens: Haxton, T. & Bruch, R.: The IUCN Red List of Threatened Species 2022: E.T223A58134229." <https://doi.org/10.2305/IUCN.UK.2022-1.RLTS.T223A58134229.en>.

Joly, S., S. Senneville, D. Caya, and F. J. Saucier. 2011. "Sensitivity of Hudson Bay Sea Ice and Ocean Climate to Atmospheric Temperature Forcing." *Climate Dynamics* 36 (9–10): 1835–49. <https://doi.org/10.1007/s00382-009-0731-4>.

Kolenosky, George B., and J. Paul Prevett. 1983. "Productivity and Maternity Denning of Polar Bears in Ontario." *Bears: Their Biology and Management* 5: 238. <https://doi.org/10.2307/3872543>.

Lamb, Juliet S., Peter W. C. Paton, Jason E. Osenkowski, Shannon S. Badzinski, Alicia M. Berlin, Tim Bowman, Chris

- Dwyer, et al. 2019. "Spatially Explicit Network Analysis Reveals Multi-species Annual Cycle Movement Patterns of Sea Ducks." *Ecological Applications* 29 (5): e01919. <https://doi.org/10.1002/eap.1919>.
- Lawn, Judith, and Dan Harvey. 2003. "Nutrition and Food Security in Fort Severn, Ontario: Baseline Survey for the Food Mail Pilot Project." Ottawa: Department of Indian Affairs and Northern Development. www.ainc-inac.gc.ca.
- Legault Taylor, Tyna. 2023. Supporting Food Justice and Ongoing Healing Through Stories of Indigenous Food Sovereignty and Food Insecurity in Attawapiskat First Nation. Master's thesis, Social Justice Studies, *Lakehead University*, 1-131.
- Litvinov, A. 2010. "Lake Sturgeon Contamination Study." Mushkegowuk Environmental Research Centre.
- Litvinov, A. 2020. "Aquatic Baseline Studies within Ring of Fire, Moose River Watershed, 2019." Prepared for Land and Resources Department Mushkegowuk Council. Moose Cree First Nation, Land and Resources Department.
- Litvinov, A, and M Fleming. 2016. "Freshwater System Assessments in the Mushkegowuk Territory and Other Areas in the Far North of Ontario." Mushkegowuk Environmental Research Centre.
- Lunn, Nicholas J., Sabrina Servanty, Eric V. Regehr, Sarah J. Converse, Evan Richardson, and Ian Stirling. 2016. "Demography of an Apex Predator at the Edge of Its Range: Impacts of Changing Sea Ice on Polar Bears in Hudson Bay." *Ecological Applications* 26 (5): 1302–20. <https://doi.org/10.1890/15-1256>.
- Macdonald, Amelia J., Paul A. Smith, Christian A. Friis, James E. Lyons, Yves Aubry, and Erica Nol. 2021. "Stopover Ecology of Red Knots in Southwestern James Bay During Southbound Migration." *The Journal of Wildlife Management* 85 (5): 932–44. <https://doi.org/10.1002/jwmg.22059>.
- Marshall, T R, and N E Jones. 2011. "Aquatic Ecosystems of the Far North of Ontario: State of Knowledge." *Ministry of Natural Resources*. Government of Canada.
- Martini, IP, RI Morrison, WA Glooshenko, and R Protz. 1980. "Coastal Studies in James Bay, Ontario." *Geoscience Canada* 7 (1): 11–21.
- McDermid, Jenni, David Browne, Cheryl-Lesley Chetkiewicz, and Cindy Chu. 2015. "Identifying a Suite of Surrogate Freshwaterscape Fish Species: A Case Study of Conservation Prioritization in Ontario's Far North, Canada: Freshwaterscape Fish Species in Ontario's Far North." *Aquatic Conservation: Marine and Freshwater Ecosystems* 25 (6): 855–73. <https://doi.org/10.1002/aqc.2557>.
- McDonald, Miriam, Lucassie Arragutainaq, and Zacharassie Novalinga. 1997. *Voices from the Bay: Traditional Ecological Knowledge of Inuit and Cree in the Hudson Bay Bioregion*. 1st ed. Ottawa, Ont. : Sanikiluaq, N.W.T: Canadian Arctic Resource Committee.
- McLaughlin, Jim, and Kara Webster. 2014. "Effects of Climate Change on Peatlands in the Far North of Ontario, Canada: A Synthesis." *Arctic, Antarctic, and Alpine Research* 46 (1): 84–102. <https://doi.org/10.1657/1938-4246-46.1.84>.
- Middel, KR. 2014. "Movement Parameters and Space Use for the Southern Hudson Bay Polar Bear Subpopulation in the Face of a Changing Climate." M.Sc. Thesis, Peterborough, Ontario: Trent University. <https://arthurarchives.trentu.ca/objects/etd-257>.
- Morin, R., and J.J. Dodson. 1986. "Chapter 15 The Ecology of Fishes in James Bay, Hudson Bay and Hudson Strait." In *Elsevier Oceanography Series*, edited by IP Marini, 44:293–326. Canadian Inland Seas. Elsevier. [https://doi.org/10.1016/S0422-9894\(08\)70908-5](https://doi.org/10.1016/S0422-9894(08)70908-5).
- Morrison, RI. 1983. "A Hemispheric Perspective on the Distribution and Migration of Some Shorebirds in North and South America." In , edited by H Boyd, 84–94. Ottawa: Canadian Wildlife Service.
- Morrison, RI, and BA Harrington. 1979. "Critical Shorebird Resources in James Bay and Eastern North America." In . Washington, DC: Wildlife Management Institute.
- Obbard, M E, M R L Cattet, E J Howe, K R Middel, E J Newton, G B Kolenosky, K F Abraham, and C J Greenwood. 2016. "Trends in Body Condition in Polar Bears (*Ursus Maritimus*) from the Southern Hudson Bay" 32 (March): 15–32.
- Obbard, Martyn E., and Kevin R. Middel. 2012. "Bounding the Southern Hudson Bay Polar Bear Subpopulation." *Ursus* 23 (2): 134–44. <https://doi.org/10.2192/URSUS-D-11-00030.1>.
- Obbard, Martyn E, Seth Stapleton, Kevin R Middel, Isabelle Thibault, Vincent Brodeur, Charles Jutras, Southern Hudson, and Bay Á Ursus. 2015. "Estimating the Abundance of the

- Southern Hudson Bay Polar Bear Subpopulation with Aerial Surveys." *Polar Biology* 38 (10): 1713–25. <https://doi.org/10.1007/s00300-015-1737-5>.
- Obbard, Martyn E., Seth Stapleton, Guillaume Szor, Kevin R. Middel, Charles Jutras, and Markus Dyck. 2018. "Re-Assessing Abundance of Southern Hudson Bay Polar Bears by Aerial Survey: Effects of Climate Change at the Southern Edge of the Range." *Arctic Science* 4 (4): 634–55. <https://doi.org/10.1139/as-2018-0004>.
- Oceans North Conservation Society, World Wildlife Fund Canada, and Ducks Unlimited. 2018. "Canada's Arctic Marine Atlas." Oceans North Conservation Society. https://www.oceansnorth.org/wp-content/uploads/2023/07/Canadas-Arctic-Marine-Atlas_July2023-Update.pdf.
- Peacock, E., A.E. Derocher, G.W. Thiemann, and I. Stirling. 2011. "Conservation and Management of Canada's Polar Bears (*Ursus Maritimus*) in a Changing Arctic." *Canadian Journal of Zoology* 89 (5): 371–85. <https://doi.org/10.1139/z11-021>.
- Pironkova, Zlatka. 2017. "Mapping Palsa and Peat Plateau Changes in the Hudson Bay Lowlands, Canada, Using Historical Aerial Photography and High-Resolution Satellite Imagery." *Canadian Journal of Remote Sensing* 43 (5): 455–67. <https://doi.org/10.1080/07038992.2017.1370366>.
- Pringle, Catherine. 2003. "What Is Hydrologic Connectivity and Why Is It Ecologically Important?" *Hydrological Processes* 17 (13): 2685–89. <https://doi.org/10.1002/hyp.5145>.
- Pringle, Catherine M. 2001. "Hydrologic Connectivity and the Management of Biological Reserves: A Global Perspective." *Ecological Applications* 11 (4): 981–98. [https://doi.org/10.1890/1051-0761\(2001\)011\[0981:HCATMO\]2.0.CO;2](https://doi.org/10.1890/1051-0761(2001)011[0981:HCATMO]2.0.CO;2).
- Ramsay, M. A., and K. A. Hobson. 1991. "Polar Bears Make Little Use of Terrestrial Food Webs: Evidence from Stable-Carbon Isotope Analysis." *Oecologia* 86 (4): 598–600. <https://doi.org/10.1007/BF00318328>.
- Ramsay, M. A., and Ian Stirling. 1988. "Reproductive Biology and Ecology of Female Polar Bears (*Ursus Maritimus*)." *Journal of Zoology* 214 (4): 601–33. <https://doi.org/10.1111/j.1469-7998.1988.tb03762.x>.
- Richard, Pierre. 2005. "An Estimate of the Western Hudson Bay Beluga Population Size in 2004." Canadian Science Advisory Secretariat (CSAS) 2005/017. Winnipeg: Fisheries and Oceans Canada.
- Riley, J.L. 2011. "Wetlands of the Ontario Hudson Bay Lowland: A Regional Overview." Nature Conservancy of Canada.
- Ross, R.K. 1982. "Duck Distribution along the James and Hudson Bay Coasts of Ontario." *Le Naturaliste Canadien* 109: 927–32.
- Ross, R.K. 1994. "The Black Scoter in Northern Ontario." *Ontario Birds* 12: 1–7.
- Ross, R.K., and K.F. Abraham. 2009. "Annual Survey of Moulting Black Scoters in James Bay (SDJV Project #82)." Endorsed Projects FY 2009 – (Oct. 1, 2008, to Sept. 30, 2009) 82. Sea Duck Joint Venture Annual Project Summary. Sea Duck Joint Venture (SDJV).
- Ross, R.K., K.F. Brook, and R. Cotter. 2009. "Feasibility Assessment of Monitoring the Eastern Black Scoter Population through Aerial Surveys of Moulting Flocks in James Bay." Unpublished Report. Canadian Wildlife Service and Ontario Ministry of Natural Resources.
- Smith, Paul A., Adam C. Smith, Brad Andres, Charles M. Francis, Brian Harrington, Christian Friis, R. I. Guy Morrison, Julie Paquet, Brad Winn, and Stephen Brown. 2023. "Accelerating Declines of North America's Shorebirds Signal the Need for Urgent Conservation Action." *Ornithological Applications* 125 (2): duad003. <https://doi.org/10.1093/ornithapp/duad003>.
- Southee, F. Meg, Brie A. Edwards, Cheryl-Lesley B. Chetkiewicz, and Constance M. O'Connor. 2021. "Freshwater Conservation Planning in the Far North of Ontario, Canada: Identifying Priority Watersheds for the Conservation of Fish Biodiversity in an Intact Boreal Landscape." Edited by Brett Favaro. *FACETS* 6 (1): 90–117. <https://doi.org/10.1139/facets-2020-0015>.
- Species at Risk in Ontario List. 1990. "O Reg 230/08." <https://canlii.ca/t/538>.
- Stapleton, Seth, Stephen Atkinson, Daryll Hedman, and David Garshelis. 2014. "Revisiting Western Hudson Bay: Using Aerial Surveys to Update Polar Bear Abundance in a Sentinel Population." *Biological Conservation* 170 (February): 38–47. <https://doi.org/10.1016/j.biocon.2013.12.040>.

- Stewart, D B. and Committee on the Status of Endangered Wildlife in Canada. 2006. *COSEWIC Assessment and Update Status Report on the Atlantic Walrus, *Odobenus Rosmarus Rosmarus*, in Canada*. Ottawa: Committee on the Status of Endangered Wildlife in Canada.
- Stewart, D. B., and W.L. Lockhart. 2005. "An overview of the Hudson Bay marine ecosystem." Canadian Technical Report of Fisheries and Aquatic Sciences. Ottawa: Fisheries and Oceans Canada.
- Stirling, I, C Jonkel, P Smith, R Robertson, and D Cross. 1977. "The Ecology of the Polar Bear (*Ursus Maritimus*) along the Western Coast of Hudson Bay." *Canadian Wildlife Service Occasional Paper*, no. 30: 64.
- Stirling, Ian, Nicholas J. Lunn, and John Iacozza. 1999. "Long-Term Trends in the Population Ecology of Polar Bears in Western Hudson Bay in Relation to Climatic Change." *ARCTIC* 52 (3): 294–306. <https://doi.org/10.14430/arctic935>.
- Taha, Wael, Maryse Bonneau-Lefebvre, Arian Cueto Bergner, and Alain Tremblay. 2019. "Evolution From Past to Future Conditions of Fast Ice Coverage in James Bay." *Frontiers in Earth Science* 7 (October): 1–20. <https://doi.org/10.3389/feart.2019.00254>.
- The Key Biodiversity Area Partnership. 2023. "Map Search: Key Biodiversity Areas." 2023.
- The Washaho First Nation at Fort Severn, The Weenusk First Nation at Peawanuck, Raynald Harvey Lemelin, Martha Dowsley, Brian Walmark, Franz Siebel, Louis Bird, et al. 2010. "Wabusk of the Omushkegouk: Cree-Polar Bear (*Ursus Maritimus*) Interactions in Northern Ontario." *Human Ecology* 38 (6): 803–15. <https://doi.org/10.1007/s10745-010-9355-x>.
- Tonge, M.B., Pulfer, T.L. 2011. "Recovery Strategy for Polar Bear in Ontario." Ontario Recovery Strategy Series. Peterborough, Ontario: Ontario Ministry of Natural Resources.
- Turetsky, Merritt R., Benjamin W. Abbott, Miriam C. Jones, Katey Walter Anthony, David Olefeldt, Edward A. G. Schuur, Charles Koven, et al. 2019. "Permafrost Collapse Is Accelerating Carbon Release." *Nature* 569 (7754): 32–34. <https://doi.org/10.1038/d41586-019-01313-4>.
- United Nations. 2007. "United Nations Declaration On The Rights Of Indigenous Peoples."
- University of Manitoba. 2022. "James Bay Expedition Aboard the William Kennedy – Cruise Report 1-17 August 2021." Winnipeg, MB: Centre for Earth Observation Science (CEOS).
- Vukelich, M, and S McGovern. 2010. "Hudson Plains Ecozone: Status and Trends Assessment. Canadian Biodiversity: Ecosystem Status and Trends 2010." Technical Ecozone Report. Canadian Councils of Resource Ministers.
- Wells, Jeff V, ed. 2011. *Boreal Birds of North America: A Hemispheric View of Their Conservation Links and Significance*. 1st ed. Studies in Avian Biology. University of California Press.
- Wells, Jeffrey V. 2020. "Overlap Between Carbon Stores and Intact Boreal Woodland Caribou Ranges in Canada's Boreal Forest." In *Encyclopedia of the World's Biomes*, 279–86. Elsevier. <https://doi.org/10.1016/B978-0-12-409548-9.12444-3>.
- Wells, Jeffrey V., and Peter J. Blancher. 2019. "2. Global Role For Sustaining Bird Populations." In *Boreal Birds of North America*, edited by Jeffrey V. Wells, 7–22. University of California Press. <https://doi.org/10.1525/9780520950580-005>.
- Wells, Jeffrey V., Natalie Dawson, Nada Culver, Frederic A. Reid, and Shaunna Morgan Siegers. 2020. "The State of Conservation in North America's Boreal Forest: Issues and Opportunities." *Frontiers in Forests and Global Change* 3 (July): 90. <https://doi.org/10.3389/ffgc.2020.00090>.
- West, AS. 1977. "Tidal Salt-Marsh and Mangal Formations of Middle and South America." In *Wet Coastal Ecosystems*, edited by VJ Chapman, 194–213. New York: Elsevier Scientific Publications Co.
- Wetlands International. 2023. "Ramsar Sites Information Service." The Convention on Wetlands Secretariat. 2023. <https://rsis.ramsar.org/>.
- Whittington, Peter, and Jonathan Price. 2012. "Effect of Mine Dewatering on Peatlands of the James Bay Lowland: The Role of Bioherms." *Hydrological Processes* 26 (12): 1818–26. <https://doi.org/10.1002/hyp.9266>.
- Wilson, NC, and D McRae. 1993. "Seasonal and Geographic Distribution of Birds for Selected Sites in Ontario's Hudson Bay Lowlands." Toronto: Ontario Ministry of Natural Resources.
- World Wildlife Fund Canada. 2017. "A National Assessment of Canada's Freshwater Watershed Reports." World Wildlife Fund. <http://watershedreports.wwf.ca/>.

Appendix A

KEY FEATURES OF NMCAS

A type of marine protected area with conservation and economic benefits administered by Parks Canada under the *Canada National Marine Conservation Areas Act* and managed collaboratively with others.

Protect and conserve areas representative of Canada’s marine and Great Lakes environments for the benefit, education, and enjoyment of Canadians.

Traditional harvesting rights are not affected.

Mineral and hydrocarbon exploration and development are prohibited.

Ocean dumping (i.e., disposal of any substance in the waters of an NMCA) is prohibited under the *Canada National Marine Conservation Areas Act* except in special circumstances.

As with all federal MPAs, bottom trawling and the use of deleterious drugs and pesticides (i.e., some types of aquaculture) are prohibited in NMCAs.

Multi-use areas which balance protection and sustainable use through management as well as zoning.

Must be zoned, including zones which fully protect special features and sensitive elements of ecosystems and zones where the ecologically sustainable use of renewable marine resources may occur.

Fisheries and Oceans Canada and Transport Canada continue to regulate fishing and marine transportation activities, in keeping with the purpose of NMCAs and the specific conservation objectives of each NMCA.

Local support and continued involvement in management is essential.

Appendix B

