



THE
HUDSON BAY
CONSORTIUM

Community Priorities for
Coastal Restoration in
James Bay and Hudson Bay

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Introduction

This report is the result of collaborative efforts by the coastal communities of James Bay and Hudson Bay, through the Hudson Bay Consortium, to identify priorities and coordinate on coastal restoration efforts for the region.

The Hudson Bay Consortium initiative has been providing capacity for a coordinated approach to research and stewardship across the complicated jurisdictional landscape of the greater Hudson Bay and James Bay ecosystem. The Hudson Bay Consortium was officially formed at the inaugural Hudson Bay Summit in February 2018, which included a workshop on coastal restoration. Communities worked together to map priority restoration sites, identify common themes and articulate their concerns to a wide audience. A Coastal Restoration Working Group was established at the Summit, which provided additional opportunities over the past year for consultation and engagement via teleconference meetings on the outcomes of the Hudson Bay Summit and next steps. A follow-up Coastal Restoration Workshop was held at the East Hudson Bay/James Bay Regional Roundtable meeting in Timmins in January 2019, providing opportunities for verifying and updating community priorities for restoration, in addition to follow-up by phone and email with western Hudson Bay communities. This report is the result of these collaborative efforts, indicating disturbed sites and outstanding priorities for coastal restoration important to communities, marine species and the greater Hudson Bay ecosystem. It is intended that this report will be a starting point used to guide future activities by government and regional organizations to address these priorities and restore key coastal habitats in James Bay and Hudson Bay.





Background

Summary

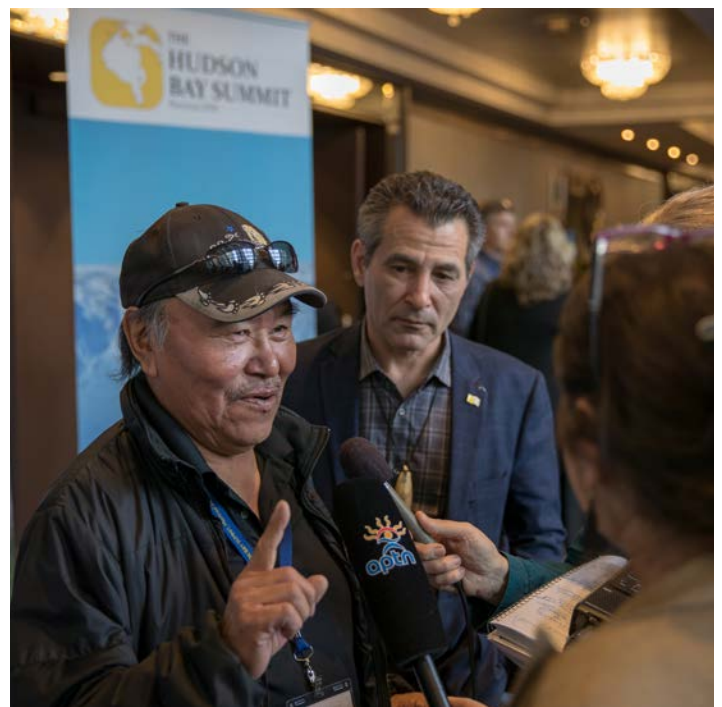
1. Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. In other words, it is a way to fix natural areas that have been damaged.
2. Hudson Bay and James Bay communities explained their priorities for coastal restoration at meetings in 2018 and 2019.
3. Common restoration needs identified by communities included cleaning polluted sites and debris, addressing effects of shipping and changes to hydrology, and fixing erosion and habitat loss.
4. People also identified changes in ice and snow conditions and in species distributions due to climate change
5. Communities can use this report to develop partnerships and projects with each other and with regional organizations, and advocate for government- or corporate-sponsored restoration. This report will also be used by DFO to look for other funding sources for coastal restoration.

Responsibility for Restoration

To paraphrase one of the participants:

“We didn’t create the problems. We’re observers and caretakers of the land, but we are stuck with the damage done by others. We want government officials to make contact to help.”

Many agencies external to the communities of Hudson Bay have been responsible for the ecosystem damage, and associated human health impacts, about which community members expressed concern. Examples include site contamination as a result of military installations, marine and other debris, and changes to hydrology and species distributions due to the operation of hydroelectric dams.



General Recommendations to External Agencies

1. Fisheries and Oceans Canada: Remove all derelict vessels
2. Department of National Defence / Defence Construction Canada: Clean up military debris and contaminated sites, for example at old radar stations (e.g. Mid Canada Line, DEW Line, supply points)
3. Transport Canada, airlines, tourism companies and shipping companies: Avoid seabird nesting habitat in June and July – e.g. ships should travel in the middle of the channel near Digges Island; prevent ballast water release from foreign waters; avoid important marine mammal areas to reduce noise-related disturbance, e.g. Walrus Island (Coral Harbour), Deception Bay, Chesterfield Inlet;
4. Environment and Climate Change Canada: Support for climate change adaptation
5. Hydroelectric companies: Address community priorities through water management that mimics natural cycles, and habitat compensation

Many of the restoration concerns identified by the communities are due to climate change and hydroelectricity generation, which are driven by human behaviour in southern latitudes in Canada and the United States. In considering restoration goals in these northern communities, it is crucial to alter southern behaviour to reduce fossil fuel consumption and greenhouse gas emissions, invest in public transit, conserve energy and invest in green energy sources that do not involve large-scale hydroelectric power.

Project Goal

The goal of this project was to provide consultation on key community priorities for coastal issues and restoration across the greater James Bay and Hudson Bay region. Outcomes will help develop next steps for local coastal restoration planning, developing proposals for coastal restoration funding, coordinating among communities and jurisdictions on coastal issues, and exploring linkages from coastal restoration to long term stewardship through establishing protected areas at restoration sites.



What Was Done

1. A coastal restoration workshop was held at the Hudson Bay Summit in February 2018, and included the following:
 - a. Presentation on ecological restoration definition, methods and examples
 - b. Mapping exercise where summit participants, primarily community representatives, provided direct input onto large maps of Hudson Bay sub-regions
 - c. Roundtable discussion of community priority areas for coastal restoration
 - d. Synthesis map created from mapping exercise, roundtable discussion and subsequent conversations with individual participants
 - e. Common themes identified
 - f. Participants were invited to join a Coastal Restoration Working Group
2. A summary of the coastal restoration workshop was produced, distributed and posted on the Hudson Bay Consortium website as part of the Hudson Bay Summit report. This summary included a copy of the synthesis map produced at the workshop.
3. Two Coastal Restoration Working Group conference calls were held in November and December 2018 with interested community members and DFO Coastal Restoration Fund representatives to explain the opportunities and requirements of the second application process for the Coastal Restoration Fund.
4. A follow-up workshop was held at the Eastern Hudson Bay / James Bay Roundtable meeting in January 2019, and included the following:
 - a. A presentation of the common restoration needs identified by participants at the 2018 Coastal Restoration Workshop
 - b. Presentation of the restoration priorities identified by each community that were recorded in the Hudson Bay Summit report
 - c. Roundtable discussion where communities identified corrections or additional information about their coastal restoration priorities
5. Communities that were not in attendance at the Eastern Hudson Bay Roundtable meeting were contacted individually to review and provide input on their communities' sections of the draft report.
6. Preparation of this final coastal restoration priorities report for distribution to the communities and DFO, and for publication on the Hudson Bay Consortium website.



1. Participants were introduced to concepts and methods for ecological restoration in coastal areas, and had the opportunity to identify areas in Hudson Bay where they felt restoration is needed, and what actions may be required for those areas to recover.
2. Participants received background information on ecological restoration, in particular the following:
 - a. Ecological restoration is when people assist an ecosystem that has been damaged, to help it recover.
 - b. Some areas can be restored more easily than others. Some can be restored through physical methods, for example by reintroducing important species or habitats, or removing debris or invasive species. Other areas can be restored by changing the way people use it or manage it.
 - c. Examples of restoration projects from other coastal regions in Canada.
3. Community members and other participants identified potential coastal restoration sites throughout Hudson Bay and James Bay
4. These sites were recorded and compiled into a digital map.
5. Community members articulated their coastal restoration priorities in detail to the Hudson Bay Consortium and Eastern Hudson Bay Roundtable.
6. These priorities were described in detail in the Hudson Bay Summit report, which has been shared with participants and posted on the Hudson Bay Consortium's website.
7. The report content was presented at the Eastern Hudson Bay Roundtable, verified and updated based on additional community input.
8. Several common coastal restoration needs were identified:

Debris removal

- Derelict vessels, shipwrecks, old structures and waste materials such as old oil
- barrels and buried tanks are causing contamination, blockages to navigation or fish passage, or aesthetic effects in several areas

Polluted sites

- Several sites require cleanup due to historical and ongoing chemical or oil contamination, inadequate waste disposal options, or lack of sewage treatment
- Light pollution was identified in one area
- Oil spills
- A need for spill/pollution prevention and emergency response plans
- Water quality issues, for example lack of access to drinking water in areas where drinking water used to be abundant, and loss of lake productivity
- Effects of using explosives during construction

Hydrology

- Many of the restoration priorities in this category related to addressing various impacts of hydroelectric developments
- Deepening, enhancing and restoring waterways for travel and fish passage
- Changing water management to restore flows
- Effects of increased flow rate on turbidity, salinity and freezing
- Clearing blocked channels
- Less water quantity in areas where drinking water used to be abundant



Shipping effects

- Pollution, noise and disturbance affect marine mammals that are hunted and important for food security
- Requests to find alternative means of transporting supplies
- Changes due to dredging of shipping channels

Erosion

- Stopping erosion
- Clearing rock slides and landslides that have blocked access and fish passage, and affect stream flows
- Increased siltation that affects navigation and transportation

Fish and wildlife habitat

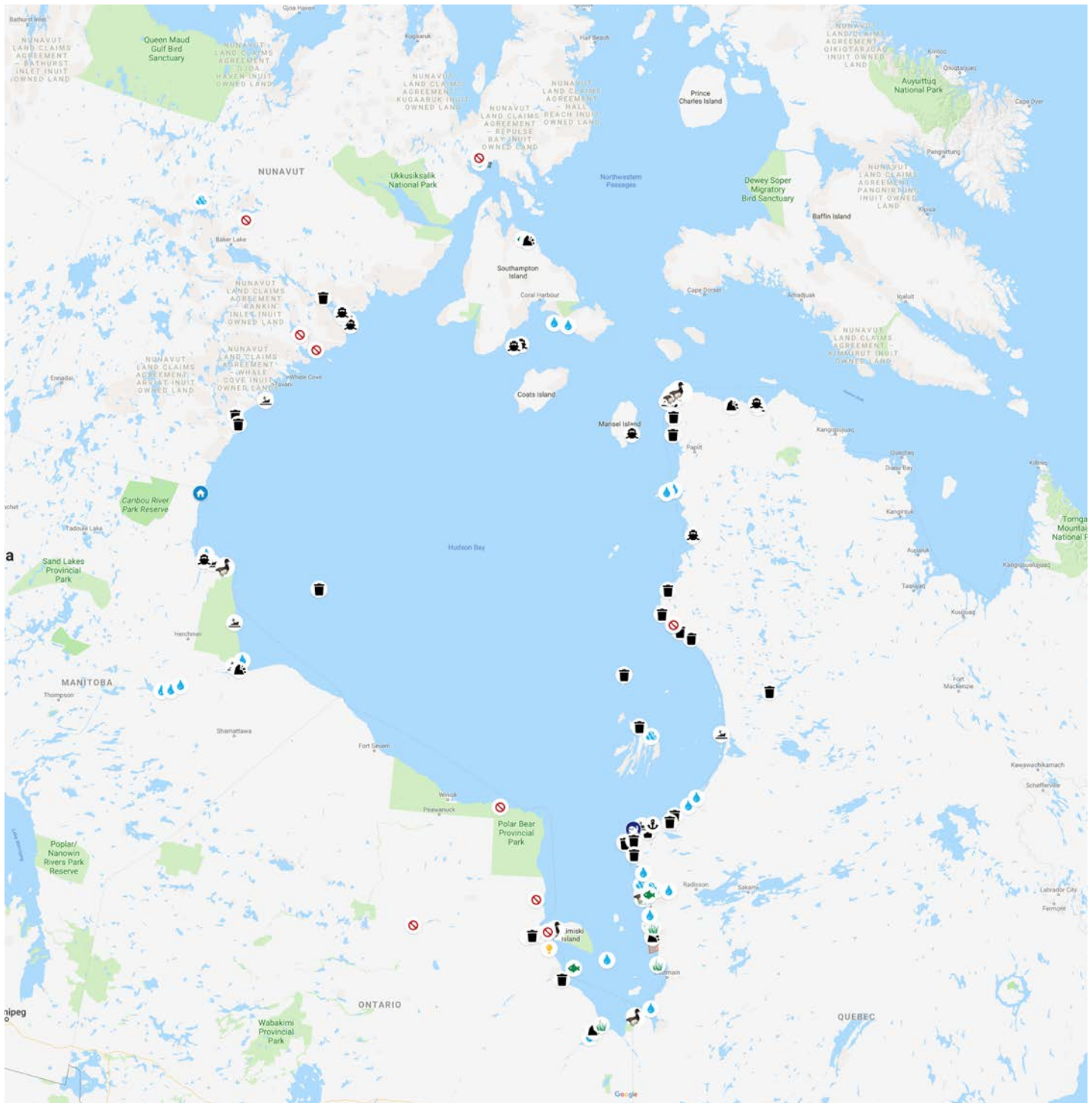
- Many of the restoration priorities identified in this category are also related to changes in hydrology, often as a result of hydroelectric developments
- Restoration of fish habitat by restoring stream flow or unblocking fish passage
- Changes in eelgrass beds
- Removal of invasive species
- Decreased abundance of berries near communities
- Habitat degradation by Lesser Snow Geese in one area of the coast.
- Effects on intertidal species such as mussels

Changes in ice and snow conditions

- Changes in freeze-up due to changes in hydrology resulting from hydroelectric developments or climate change
- Glacial melting
- Changes in snow cover and permafrost; mild winters



Coastal Restoration Workshop Synthesis Map



- | | | | | | | | | | |
|---|-------------------|---|-------------------|---|---------------------------|--|-------------------------------------|---|-----------------------|
|  | Navigation Hazard |  | Eelgrass Issues |  | Ice Issues |  | Debris & garbage/dumping |  | Blasting effects |
|  | Contaminants |  | Fish Issues |  | Erosion & rock/land slide |  | Water Flow/Levels Management Issues |  | Building or Structure |
|  | Shipping Effects |  | Water Fowl Issues |  | Light pollution |  | Shipwreck/ Derelict Vessel |  | Radar Station |

Community Priorities for Restoration

🏠 Akulivik



- Need to clean up all oil spills properly, even small ones. Saw a young beluga without a mother near Kuujuaraapik. There are oil spills along the beach. The community tries to clean them.
- When you harvest animals, their abundance is better. When we harvested mussels they were very skinny; now when they harvest them they are tender and fatter again
- Dead lake where there used to be plenty of Arctic char. The animals around it have gone away.
- Some cases where seafood has worms in them.
- Damage to coastal species from hydro impacts: River enhancements made them almost stop flowing. Some areas where arctic char need to go upstream are still too shallow. In mainland rivers we go fishing in the winter. We set up nets further inland so the Arctic Char can go upstream – they are very keen and aware and sometimes do not want to go back if it's been affected. The fish come from all around the coast. Rivers have to be flowing. Fish are coming from long distances, e.g. Long Island,

Mansel Island, Belchers. You can tell from the skin. There is a dead lake where there used to be lots of char, maybe due to drainage from minerals; nothing has been done. Consider fixing the lake bed. Are there any examples from other communities where this has been fixed? Now the community has to go far away and spend more money in transportation to find arctic char.

- There is a big lake but it is dead where Akulivik used to fish; the river was flowing from the hills.
- The water is not good for drinking near Akulivik because of:
 - Dump sites from mining companies
 - Empty barrels/oil drums along the coast
 - Unfinished cleaning - it must be done for sure
- We need to identify areas for food security, to go fishing. Fish go upstream but need to go a very long way. We have been really impacted by river dams. They have even affected the mussels. Logs and trees are just put in the river. Debris from mining company was just buried and is affecting fish.
- Concern about whether Hydro wants to develop underwater power lines
- Ships are char fishing at Mansel Island
- There is mining exploration near the community
- The Arctic char are fading; is this due to over-fishing?
- The salinity in the sea water has been decreasing since there has been increased freshwater. We want to understand why, via university studies.
- Companies destroy the habitat, for example by damming rivers.
- Because of climate change, forming and thickness of ice takes time. What can we do about climate change?
- Seeing black bears for the first time.

Arviat



- Want monitoring of Arctic Char
- Want sunken Bombardier to be retrieved/ salvaged
- At Bibby island where the Bombardier sank in 2017, younger hunters are starting to hunt where Mugoose River flows into to the sea.
- Where the river divides there are 20-30 empty barrels that may affect areas where many Inuit go for greyling, char, trout, whitefish; should do a cleanup.
- 20+ drums of diesel/gasoline dumped west of Austin Island are no longer there. Not sure if they drifted or were cleaned up. They used to be there, but they're not there anymore so they may have drifted out when the water levels rose. The water gets very deep there when the snow melts. They possibly drifted out southeast, along the Hudson Bay coastline.
- Address dumpsites closer to the coast. The hamlet council is responsible for this.
- HTO concerns about a helicopter and boat that sank; their location are unknown.

Attawapiskat (Katawapiskat)



- Contaminants are at a radar site north of community near river Tosagi (?) – the site was cleaned up by the Ministry of Natural Resources and a contractor, but the community wants to know the monitoring results to know if the water, plants and wildlife are still contaminated (e.g. by PCBs, hydrocarbons).
- Canada geese and snow geese are increasing in abundance; they weren't there 100 years ago. They used to just migrate through, but now they stay and live on the island – why? Does the change in plant distribution make them come further south? The snow geese also taste different – is this due to changes to the water?
- Seagulls migrate south and bring back PCBs
- There is mercury in the fish; can groups from both sides of the bay work together?
- Concerned that flooding due to beaver activity is affecting the water quality.
- The dumpsite is unregulated; it's not a proper landfill.
- 200 miles upriver there are diamonds and the Ring of Fire; we are concerned about the environmental assessment and the effects on the watershed, including mercury poisoning.

🏰 Baker Lake



- Three major heritage rivers flow into Baker Lake, but the water level is dropping
- There is a glacier on the north side of Schultz Lake that is diminishing. We are working on water monitoring since August 2018.
- Other lakes are drying up
- Seeing changes in species numbers
- Concern about possible contaminants from Meadowbank Mine. We are doing site monitoring on the mine road.
- We see something new come up each month.

🏰 Chesterfield Inlet



- Not seeing seals, due to tankers supplying Meadowbank. Ships are throwing garbage into the ocean. A guide is supposed to be with the ship; if it's too rough it does not happen and the ship goes without a guide
- Tanker stop in the area
- Contaminants southeast of Ellis Island
- Concern with shipping and possible spill; grey water ballast
- Tankers moored up to 8-10 at a time

🏰 Chisasibi



- The waste from an old outfitting camp at Roggan River is still there. Seems like it's really slow in what's been done to clean up. There's a generator there and it's almost in the river. We put our nets not far from the generator. I'd like it to get fixed as soon as possible. There was a lot of waste of oil back then, because they were using generators for the outfitter camps in the 70s. We need to dispose of it responsibly and restore the area. The river is very powerful, and because of the diversion it does not freeze during the winter. There is increased turbidity because the river is so powerful. We had asked for funding to clean up the Roggan River area, including oil spills in fishing areas. This could be fast and easy, but we didn't receive the funds.
- At the Rupert River diversion the river seems to flow faster than it used to when we had the reservoir. It has affected the freshwater in northern communities. It does not freeze, and I don't taste

the saltwater out in the bay (change in salinity). Ice in the bay is thin. There have been changes in fishing/hunting issues, and travel routes are getting shallower (due to channeling of waterways). Put the river back to how it was. We're seeing decreased wildlife and fish spawning habitats, dried-up ponds, and encroachment of predatory fish (new arrivals). Shallow river mouth: sandbars and shallow waters are causing boat transport issues

- Eelgrass transplants, plants, seeds
- Change in Canada goose migration routes and eelgrass availability?
- Powerhouse doors are opened more often. Dams are affecting species due to flooding.
- We want the government and company to do something fast; the company has money.

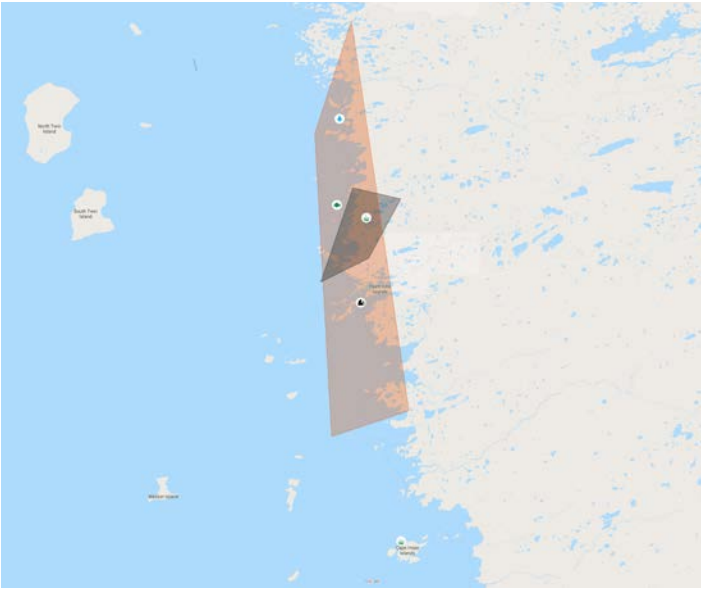
🏠 Coral Harbour



- Slumping into Canyon River: At the North end of the island at the Canyon River (as it's known in English), when I was younger I traveled there by dog team with no problems. In this day and age it is much different. Where we go fishing there are three lakes along the river. Landslides (rock slides) from a hill went into the river. Rock slides last spring 2017 are causing a noticeable decline in fish. Closer to the ocean it's not so bad. The permafrost slumped in two areas where fish (char) now have a problem going upstream to spawn. We need river enhancement so it can flow, and so there will be fish spawning in the lakes again. This is urgent to us because there was spawning in the past. We used to go there in the fall, but because of the landslides we cannot if there is not enough snow. We go now in April when there is more snow and we hunt seals, beluga and narwhal in the inlet.

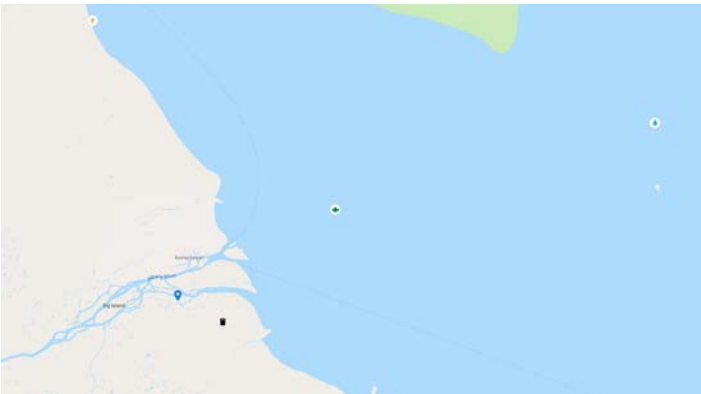
- Lake channel broken/gone: In southeast area of island, due to erosion, channel is blocked; belugas and seals used to be able to go inside and come out. Waves created a dam from rocks. Want to clear the channel again. On windy days community boats used the lake for shelter. In another location in the same area, the lake is blocked at high tide.
- In channel between Southampton Island and Coats Island: Walrus Island. Ships associated with mining coming from Baker Lake disturb animals and make animals move elsewhere. 12 ships will be bringing material up to Baker Lake through this channel. Suggest that instead of going through this channel, they go on south side of Coats Island so at least the animals will be drawn back towards Coral Harbour. This is one of the community's big worries right now; should correct it early. They want to get compensation for all the ships going through the area, because all the animals are driven out and children and grandchildren won't have anything to hunt. Mining company in Baker Lake (Agnico-Eagle) said they have an agreement with Coral Harbour, but the community hasn't seen it.
- In channel between Southampton Island and Coats Island: Russian cruise (?) ships come to take pictures of walrus at Walrus Island. Ships arrive without notifying the Coral Harbour community. In one case, small boats had gone to the island to hunt walrus, but the ship was already there with zodiacs going around island. The community members thought the people on the ship were animal rights activists so they didn't want to shoot the walrus.

Eastmain



- At Cape Hope Islands: Not much growing in this area. Lots of sediment on the bottom, no plants.

Fort Albany



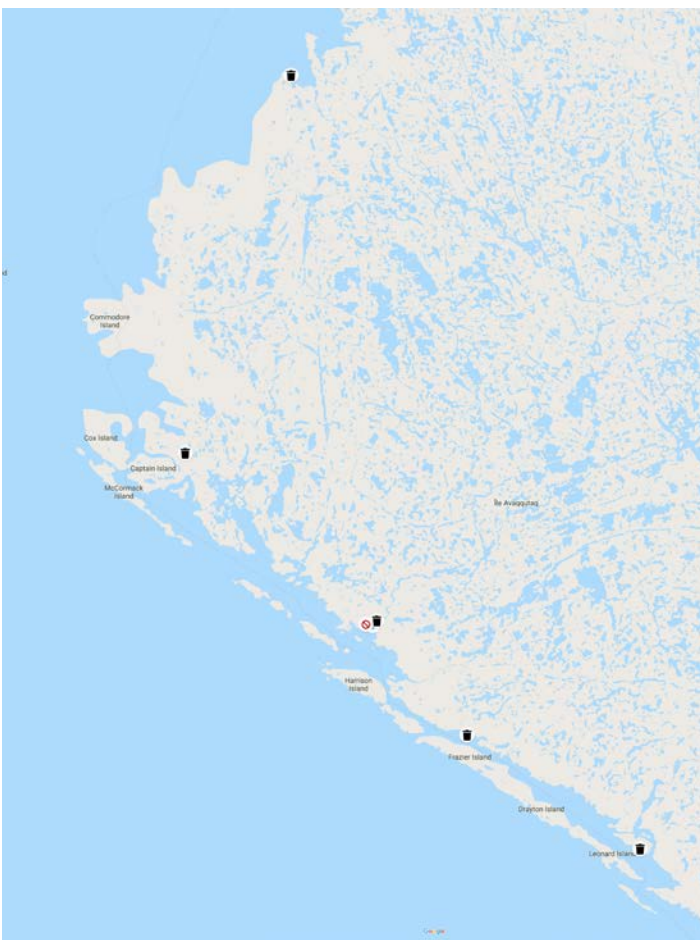
- In the region, along the west coast of James Bay we rely heavily on a barge service to bring supplies and resources to the community. Fort Albany can no longer be reached by barge because the mouth of the river is too shallow due to hydro dams. There are 2-3 hydro dams and the diversion of the water from the Albany River into the great lakes. The great lakes were getting shallow so they diverted the water. There are many reasons why rivers are going dry. The diversion creates sand bars. This year we really noticed it because fishermen could not go up the river. The moose hunt did not start until later. I commute between Albany and Kashechewan. The easier way is to go out to the bay or around the islands at high water. I tried different boats and canoes and it takes longer. I eventually gave up and walk over or take a 4-wheeler. We can't rely on the winter road; it's being downgraded because the Victor Diamond mine used to fund it. Would dredging the river be something that could

be a restoration project? I used to travel with my dad along the Albany River into the Bay. He would have a cup in the canoe and if he wanted to drink water he would scoop water from the river. Now we cannot. Now we get our water from a lake beside an airport, but there are lots of fumes affecting the lake water that we drink from. We need a secure water source. Now we have to carry at least 20 gallons of drinking water when we go hunting. Before, every 20 miles along coast there was a water hole and we could get water there; we did not worry about water drying up. Water has been drained from a previous water source. My grandfather used to say we should create a path where the canoe can travel – we share one hospital and we need to visit. It's hard to visit in summer. The negotiation and conversation should be with First Nations and we should have compensation for the lack of water from Hydro. No one asked us when they decided to divert water into the Great Lakes. First Nations need to be empowered to negotiate compensation for damages to boats and propellers because of shallow water.

- People gather berries, and now sometimes have to go 30 miles south to get cranberries and blueberries; now there are no blueberries and in dry season hardly any cranberries, due to climate change.
- We get our medicine by picking herbal plants, but it is hard to find sage and sweet grass.

- There are old radar sites at Fort Albany and further north. There still needs to be more research on the contaminants that were buried (5-gallon drums) and tanks that need to be dismantled. When barrels and waste are buried, contaminants go into the water system. After the residential school burned down in 1992, INAC came in with explosives and blew up the whole school. Lots of people were watching were affected by inhaling the smoke and asbestos. People that lived in that residential school are dying of disease.
- We need restoration and beautification for mental health reasons; we need to clean up our communities.
- These wage lagoons are overflowing and going into the water. The tide water comes in and brings waste back in.
- There are also dumpsites containing garbage.
- Telephone tower between Kashechewan and At-tawapiskat keeps its lights on, which scares away birds.
- Mercury concerns regarding food security and safety, particularly for pregnant women: decrease in consumption, deformed fish.
- There is debris, including plastic, along the river.
- There needs to be reconciliation and recognition of the traditional territory in restoration. The work has to make sure not to override anyone's jurisdiction, including where there are territorial disputes.
- We also need prevention measures. There is consideration of a coastal all-season road, which may lead to overhunting. There needs to be consultation on its location and protection of sacred sites.

Inukjuak



- Human debris goes into river. RCMP used to throw garbage into river. Now char doesn't go up the river due to debris.
- There are tanks and tankers in the middle of the community. Oil has spilled. Tanks were removed, but drainage from the previous tanks hasn't been cleaned yet.
- The river is getting shallower due to debris and ice is flowing up the river. When ice breaks up it doesn't overflow anymore, mainly because the river breaks on top of the ice and flows down. Deepen the estuary.
- Old drums at Hotchkiss Island
- Waste at point near Tupirviturlik (north of Frazier Island).
- Old campsites east of Captain Island and at Nauligavik
- Want federal government to clean up the garbage; expected that they would have done this following last year's meeting. Nothing has been done yet. They made plans and were supposed to arrive, but it didn't happen.
- We need money for cleaning.
- In the 1900s the Hudson Bay Company harvested 9000 belugas; they are finally starting to return.
- Communities in Hudson Bay are asked to travel far to harvest belugas, but we don't know those areas. We want to harvest locally.
- This area could be a source for donor eelgrass beds for eelgrass restoration projects in other areas; eelgrass in this area is blocking fish passage upstream.



- Oil drums (airplane fuel) left south of Ivujivik since the 1960s have damaged seashells; have to be cleaned. When there is a small waterfall, the pollution goes into the water and weakens the mussels. The volume and weight is too much for local people to remove with their canoes.
- Old batteries left in hunting grounds, next to 2 groups of fishing lakes, under responsibility of mapping people. Want them cleaned.
- Inuk Island: shipwreck with guidance systems that are rotting. We want them taken away. Canada geese and eiders nest on this island.
- On the island west of Ivujivik, there is a shipwreck – we would like it to be cleaned. It's too big and

heavy for the community to get with their canoes. The ground is old, and it's a brown mess.

- We are seeing more polar bears in eider nesting areas, which is affecting eider nesting. The number of polar bears is increasing in most islands in front of us where we collect eider down. The area is ruined by bears that are living next to us now.
- Murre numbers are decreasing. They seem to take different routes. A million murre nest in a large area on Digges Islands and the adjacent mainland coast. We want ships and planes (e.g. Air Inuit) to not go near the island during nesting season in June and July, as they disturb the nesting birds. Ships should go in the middle of the channel at this time, and planes should avoid the area and route their flights over inland areas. We want more support from Makivik with First Air and Air Inuit because their planes fly next to the murre nesting islands.
- With climate change there is less snow, so a lot of rocks are visible.
- Coastal animals we live on, and their food, are also being affected by rivers being dammed. They eat somewhere else now, for example murre are eating baby cod. When we shoot seals now they sink, they don't float. We see dams' effects way up in Ivujivik – we need support.
- We see strange (new) birds, worms and bugs that we've never seen before.
- Former murre feeding grounds on offshore island north of Ivujivik. Murre have moved northeast, perhaps because their prey has moved, or because they have been disturbed by noise.

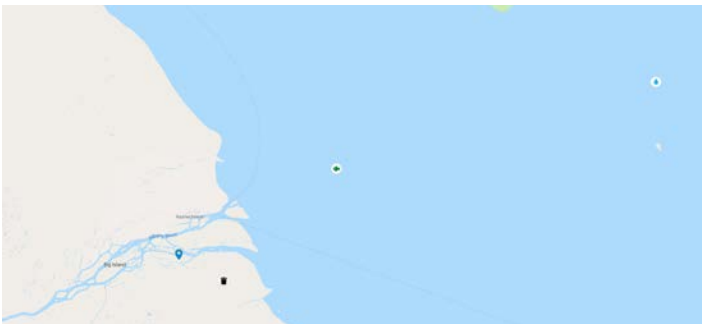
Kangiqsujuak



- Prevent ships from releasing water from other places into Deception Bay. There are two mines that can be reached within 20 minutes: ships arrive in the winter when there's ice. Ships arriving from overseas don't have cargo yet, so they have a lot of water and dump waters into our waters. Alien species enter the local waters. We are seeing strange things, for example in seal stomachs.
- Noise pollution from mineral ships: Mineral (ore) ships and icebreakers are loaded at Deception Bay and travel to Kangiqsujuak. This disturbs ringed seals and other animals. People fear the animals and will go away from there. When ships came, the seals came inland and I could use a hook. After the ships came they are not scared of people, just ships. When they start to transport minerals, seals do not like the noise of the ships and the damaging of the ice (from ice breakers). The engines make noise underwater and the seals are impacted; they are very sensitive to noise. Can there be other ways to transport the minerals?

- Want to go back to old habitats where ancestors used to live. Affects community's ability to have country foods. We used to live inland and we were relocated to coast – we would like to prepare a plan for such projects. We get store bought food but need to go make misirak and fermented foods.
- Fish habitat has been impacted; when we go to the lake where we drill, there used to be an odour from this lake.
- We see lots of snow. We like to see more frost in winter but it has been mild.
- Ice thickness has changed with climate change.
- My father said the sun sets in a different area. There was an earthquake - has the Earth moved? Now have snowfalls early and looking at the sun it seems like the earth has changed. Climate change and global warming.
- We have upgraded the rivers where fish spawn; used to pull out boulders and deepen the river.
- The river has a strong current but these days, fish are not coming.
- There is mining in a fishing area, so the char are getting fewer and stranger because of the mine contaminants. We have met with the mining company, but our concerns continue.
- Seal numbers have been decreasing, and we see seals with oily skin – is this oil from ships?
- See high tides in the community area. Clams and seashells are affected.
- The new thing we are seeing today is that climate change is affecting animal locations.

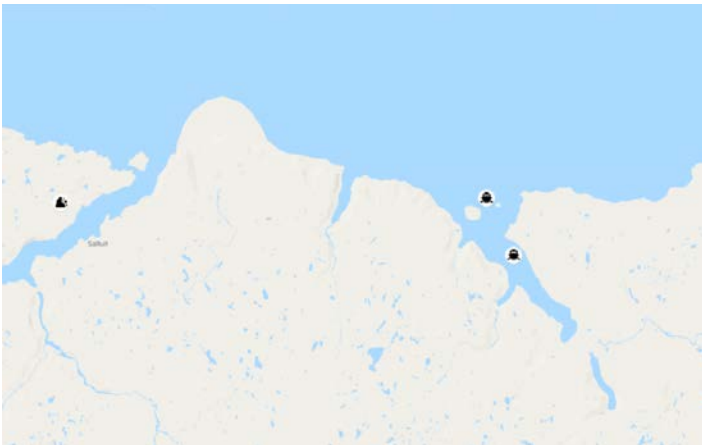
Kashechewan



- Need clean-up of radar stations: they are causing cancer in the community (radar station is located on Fort Albany side)

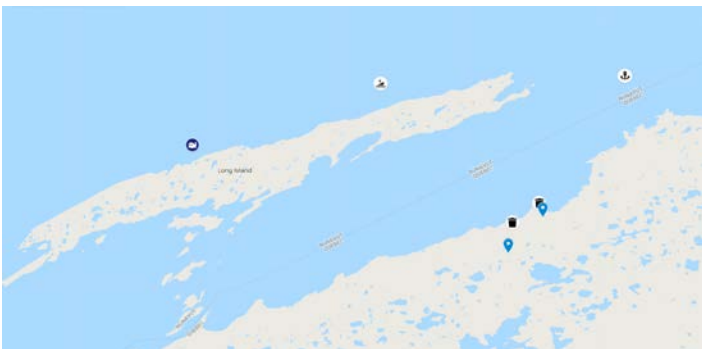
- Community is impacted a lot by lead and other contaminants in the spring.
- Our main concern is considering the relocation of our community. We need a stable, sustainable and safe community to sustain the teachings from the land.
- There has been a loss of wildlife due to an increase in eagles in the community and on the bay, and an increase in cormorants, leading to a decreased number of fish in the river and less access to our traditional diet. How do we get rid of the new animals coming in?

Kativik Regional Government



- Full shoreline mapping being done: Nunavik region: Mapping the risks in 2017-18. The full shoreline has been filmed in high resolution and the risks (e.g. shoreline erosion) have been identified on maps. Report in 2018 for 9 villages, and 5 other villages in 2018-19. Work done by the CEN/Ministry of Public Security.
- Shoreline in front of Salluit village needs restoration for protection of houses and infrastructure.

Kuujjuaraapik



- The oil spill needs to be cleaned up between Chisasibi and Kuujjuaraapik. We would like some support from James Bay.

- There is fresh water 4-6 m above salt water, so the seaweed is not healthy anymore. Mussels and sea shells are not fat anymore.
- There is a sunken barge at Long Island. Barge tipped over/sank and spilled vehicles into the ocean. The vehicles are probably leaking oil. Whoever put them there [Moosonee Transportation Limited] should remove them. Vehicles are making noise on the bottom and potentially scaring beluga whales. Walrus also used the area. Looking for support to clean up site to restore habitat for beluga. Important beluga hunting site for the community. We can't hunt belugas near our communities anymore. We can't go to Long Island because of DFO government regulation. There needs to be a clean-up because we're not able to hunt belugas in the area. We need to go to Long Island to hunt beluga.
- In the 1950's the army came and affected our coast with airplanes and ships. They impacted wildlife and cleaning needs to be done. Even James Bay where we go hunting has been impacted by the army.
- At the mouth of the Great Whale River, when it is low tide we have to be careful for our hunters' safety; we can only use area at high tide. We lost an outboard motor; we need markers in water that will not interfere with mussels and urchins. We are concerned about our hunters and their expensive equipment; we cannot get insurance. The estuary is too shallow even for canoes; river flow is weaker. Seeing sand erosion. In 1970s the ice would be 3-4 feet thick, now only 2 feet. Caused by dams at La Grande.

- There is a strong current and we cannot drink water because of E. coli bacteria from Nunavik down.
- Youth do not have proper training from their fathers to learn; we need mapping and work with Hunter support programs.
- At western point (south of Long Island): Giant tower has fallen and old building with large fuel tanks, left by army in the 1950s and 60s. Old army buildings, barrels and garbage, tank farm from army. Abandoned camp made from buildings and tanks. Military camp inland still has oil barrels and other debris, as well as radar stations.
- On mainland coast south of northeast end of Long Island: Garbage and about 150 barrels left by the army; pipeline from coast to top of hill – degraded.
- Southwest of Whapmagoostui: buildings that have fallen down, big fuel tanks and about 200 empty barrels stacked up that were left by the army in the 1950s and 1960s.
- Shallow areas along coast (broader area): add markings to help prevent boating accidents.
- Northeast of community: new gulf created by meteor; seen by community watching baseball game – a few days later they discovered a new bay. Should be studied because it prevents travel along the coast in the fall and prevents getting to hunting grounds.
- 2018-19 winter has been very cold, but there are openings in the ice that formed to the Belcher Islands and the ice is breaking up. This has never happened before. The ice is supposed to be safe, but it's breaking up and we can't use it. We use to have lots of seals and now we can't harvest because of the ice conditions. It's very rough, but when it breaks it will be flatter. There are cold summers now; they used to be hot and shorter. Winter wasn't as cold as it is today.
- The geese have changed their route, and different birds are arriving, such as pigeons – there is no Inuktitut word for 'pigeon.' Seagulls were important to the diet, but we can't harvest them now. There are also many fewer Arctic terns nesting in the area.
- Areas are shallower; there is more land where there used to be water.
- There are fewer sea urchins because of decreased salinity.
- The water in the creek and river is shallower; big ships used to go up the river, but not anymore. There is more land where there used to be water; some islands and not island anymore, and became part of the mainland.
- It's windy, which increases the roughness of the ice. We have to think about a coastal road to reach our hunting grounds, but we don't want this road to extend south and increase access by others to the area.
- Army debris was never cleaned; can the Kativik Regional Government help?

☰ Moose Cree



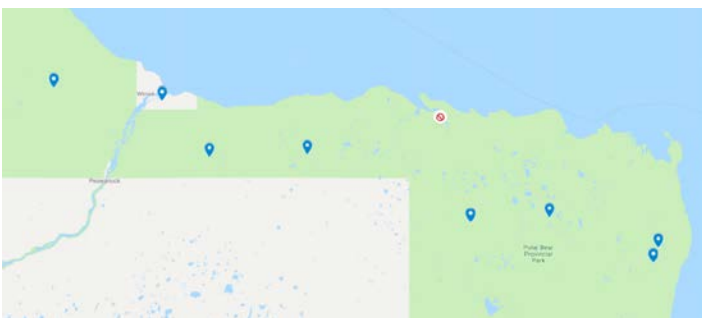
- Need coastal and shoreline restoration in Moose River estuary about 10 kms upstream from Moose Factory
- There are concerns with siltation in the Moose River drainage basin. We need dredging for transportation needs; tug boats are having trouble getting in and can now only get in at high tide.
- They may have to relocate to the Quebec side.
- Fish do not have travel routes anymore.
- Isostatic rebound is causing land to rise and our waterways are drying up.
- Need an eelgrass inventory: assessment of decline and possible restoration.
- Moose River estuary around Moose Factory all the way to North French is a priority for travel.
- Erosion concerns; need shoreline stabilization to give productivity and traditional medicine, restoration of coastal shoreline for shorebirds and food security
- Fish movement in the river has changed
- Contaminants such as mercury in rivers due to pulp and paper and hydro dams
- Dredging to restore travel routes, for tug boats and barges could affect supply lines

☰ Naujaat



- During the summer sometimes motors and canoes can hit bottom because the nearshore areas are shallower.
- Need measures for emergencies related to the oil tanker that delivers oil and gas. Need to protect for future wildlife and food security
- Need sewage treatment

☰ Peawanuck



- Contaminants at radar site along north coast of Polar Bear Provincial Park. One of the largest such sites in Canada. Mountains of drums washed up on shore, including 50,000 in one spot. They have been sitting there for decades. People have handled and been exposed to a lot of lead and asbestos. There is a high cancer rate in the community, and the highest proportion of autism in children due to lead exposure. This needs to be researched.
- Because of climate change we are now seeing polar bears when they used to be rare. They are breeding and denning in the area. We want harvest limits. We see more moose, pike, walleye and new whitefish species, cougars, orcas, pelicans, vultures and garter snakes. There are willows growing taller in the tundra, ponds are dying and permafrost is melting.
- We want to protect the Winisk River for moose hunting and fishing.
- We need a say with environmental assessments and mitigation, not just hear from the consultants.

Puvirnituq



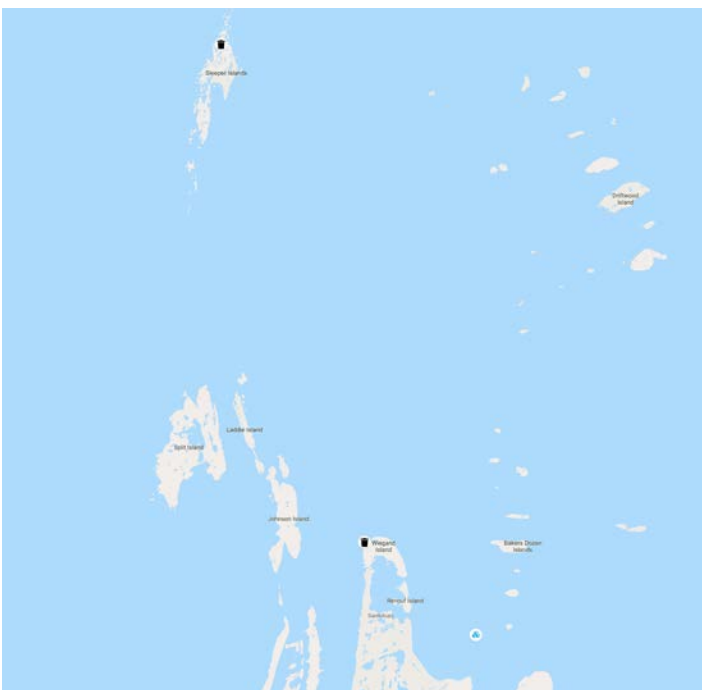
- Oil tankers have to know more and be alert within communities when they deliver oil or fuel; in the past there has been an oil spill.
- Ships go through beluga harvesting areas and could interfere with belugas and other mammals (bearded seal?). Is there another way to bring in supplies?
- A river on the island that flows down to the sea is drying up; want some boulders removed from that river.
- Concern about use of explosives in the community during construction, and their impacts on fish.

Rankin Inlet



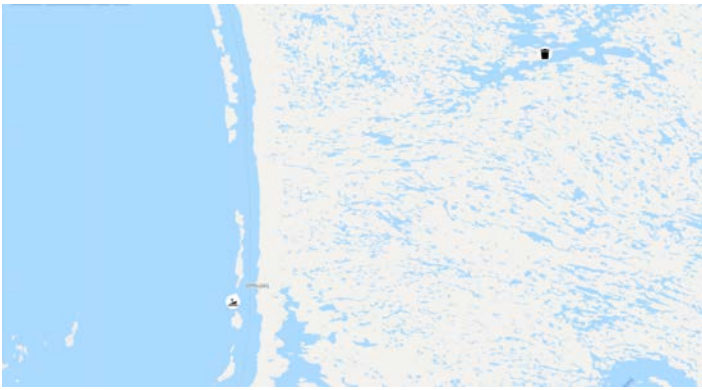
- Possible spills or contamination southwest of community: Concern about possible spills or contamination from Meliadine Mine and exploration projects (fuel caches)
- Gas spill east of community from refuelling last year
- Need a spill prevention plan and emergency response plan related to tanker traffic going into Rankin Inlet.

Sanikiluaq



- Sometimes belugas get caught in freeze up in fall
- Shipping may have impacts
- Protect birds and berry picking areas if there will be any mining, oil drilling or developments.
- Mussels have been damaged
- Garbage at Weigand Island and Sleeper Islands
- Concerns about cumulative impacts of hydroelectric developments and winter freshwater inputs on coastal ecosystem.

Umiujaq



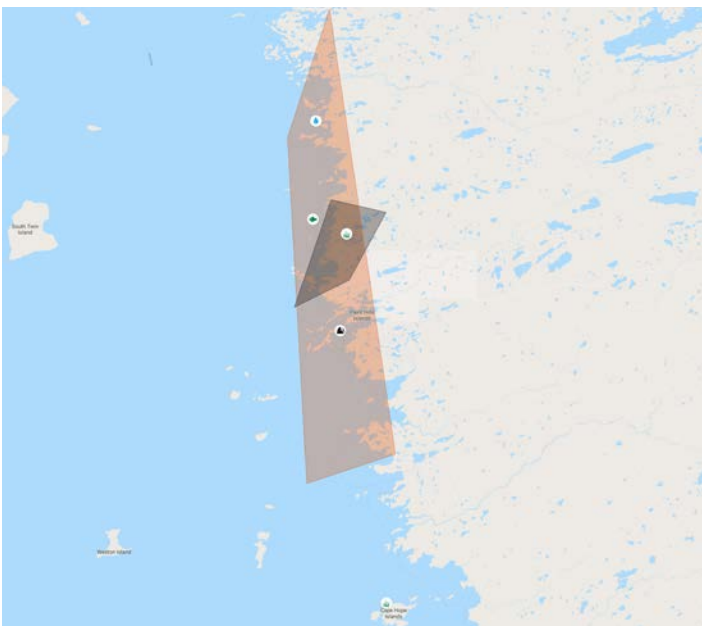
- Old barge rusting up to shoreline is a hazard to navigation and wildlife
- Inland lake: 50 old rusted barrels, some with jet fuel

Waskaganish



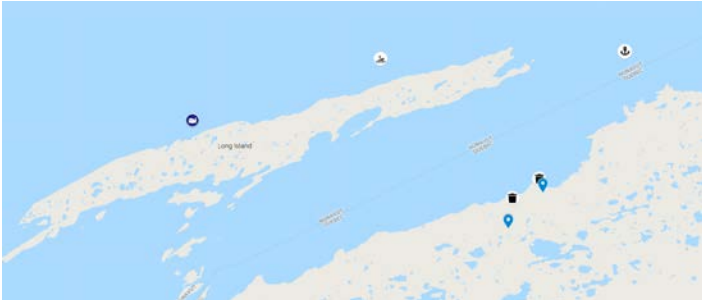
- Hardly any snow geese. Used to be a fall hunt, but can hardly hunt anymore. Fewer Canada geese. The eelgrass is disappearing, leading to loss of water-fowl feeding and migration habitat.
- The Rupert River has been diverted due to development. We can't eat the fish anymore because of mercury and other contaminants. There are also different fish species due to the hydro dams. There is a growth in the land.
- There is an increase in the number of bald eagles, which are scaring migratory birds.
- We didn't create the problems. We're observers and caretakers of the land, but we are stuck with the damage done by others. We want government officials to make contact to help.

Wemindji



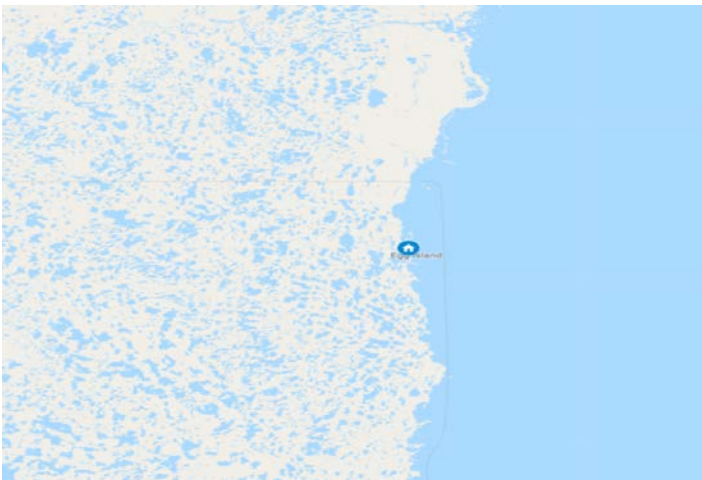
- Disappearance of eelgrass is our main issue. Eelgrass decline and restoration required in Moar Bay and Old Factory Bay and Blackstone Bay and north of Wemindji, Pointe au Heron and Paint Hills Bay.
- Isostatic rebound; the land is growing (elders say), some of the changes caused by isostatic rebound (natural cycle) or is it other causes (getting shallower)? Seeing broken boat motors and propellers
- Rabbits Ridge: bank erosion in community (mini-dam) downstream of it there is a lot of erosion, lots of debris on the islands
- Trout spawning beds have been affected; trout are hardly coming up creeks anymore. Not sure why; perhaps due to water level?

Whapmagoostui



- For the first time in 3 years, ships can't come into the river because there's a lot of difference in the outflow of the water.
- Also in the mouth of the river, it's not as good as it used to be. When we set our nets the fish were good; now we can't even do that because there are a lot of pollutants coming from the sea, e.g. from oil cans, oil barrels, shipwrecks. Those things need to be cleaned up. Need areas where geese can be hunted, maybe could do this as a project – a pond.
- Some 8 km from where we are, there were some channels along the coast. Those channels are no longer there. They've been taken into the mainland; there's no channel there anymore because of the growth on the land.
- Barrels have been 2 miles inland for 30-50 years. There's an old military site, and we don't know what kind of contamination is there.
- We are also concerned about the sunken barge at Long Island and about 10 vehicles on the sea floor leaking chemicals there. We don't know all the effects.
- Need an action plan including contaminant studies and coastal clean-ups.

York Factory



- At the estuaries of the Nelson and Churchill Rivers, there have been profound effects of hydroelectric developments. There has been up to 80% diversion from the Churchill River. Area of reduced flow at Churchill River estuary, consider ecosystem in water management. Consider management of Churchill River Diversion water control structures. Consider system management on Nelson River; incorporate environmental concerns in operating water management.
- Port of Churchill: Dredged channel for shipping in river and Hudson Bay
- Shipwreck Ithaca in Bird Cove
- Damaged abandoned boat along coast of Wapusk National Park
- Shipwreck and debris (bridge) at Port Nelson
- Old dams obstructing fish passage: Consider site specific restoration at sites of Hydro dams built before current environmental assessment standards; upgrade construction and local habitats, fish passage, etc. at historic dams
- Erosion at York Factory historical community site; possible natural changes in riverbed.
- Habitat degradation from Lesser Snow Geese (in bay at north of Wapusk National Park, and extending further down the coast).

Synergy between Coastal Restoration Fund Projects in the Canadian Arctic

Correspondence was held with Dalhousie University staff involved with the Coastal Restoration Nunavut project. Mapping work conducted through the Coastal Restoration Nunavut project identified similar concerns as those identified through this Hudson Bay Coastal Restoration project. Nunavut communities may have the opportunity to work with the Coastal Restoration Nunavut project to implement smaller-scale restoration. Work is being conducted, for example, in Coral Harbour, to clear blockages to fish passage. The level of detail that communities shared through the Hudson Bay Coastal Restoration project could help the Coastal Restoration Nunavut project to identify and work on restoration projects within additional communities. Addressing the larger and more historical restoration needs identified through both projects remains a challenge that must be addressed with the support and cooperation of larger institutions and federal or territorial agencies. A need was also identified to connect communities and HTOs with community government services, economic development and transportation, and climate change departments of territorial governments. It would be helpful for DFO to bring together the people working on coastal restoration in the Canadian Arctic to strategize about how to address the identified restoration needs.

Support, Solutions and Ideas

Organizations you can contact to request support:

- Kativik Regional Government has a program and staff to address mining debris. Contact them for this and other support. This approach worked for Sanikiluaq: when they were concerned that their rivers were drying up, they went to the Nunavut government's Environment Department for support.
- The Government of Nunavut's Environment Department could be of support:

Government of Nunavut
P.O. Box 1000 Station 200
Iqaluit, Nunavut
X0A 0H0

Toll free: 1-877-212-6438
Tel: (867) 975-6000
Fax: (867) 975-6099
Website: www.gov.nu.ca
Email: info@gov.nu.ca
- Contact Société du Plan Nord for support in Nunavik/Quebec: Ms. Julie Simone Hébert, Phone: 418 748 2817 Toll-free: 1 855 214-9807
E-mail: juliesimone.hebert@spn.gouv.qc.ca
- The Metcalf Foundation (<https://www.metcalffoundation.com>) may be interested in supporting projects. Present your project ideas to Andre Lavallillee at: avallillee@metcalffoundation.com
- Indigenous leadership lobbied the Province of Ontario for the Department of National Defence to clean up old military sites on western side of Hudson Bay; same could be done by Indigenous communities in eastern Hudson Bay.
- Defence Construction Canada, a crown company called was used for most of the construction and pipelines since the 1950s. Ask for information from them about the plans and materials at each radar station. <https://www.dcc-cdc.gc.ca/english/homepage/>. They have an environmental services department, whose work includes a Department of National Defence contaminated site remediation program.

Report prepared for the Department of Fisheries and Oceans Canada
Under funding from The Coastal Restoration Fund
By the Hudson Bay Consortium Secretariat
www.hudsonbayconsortium.com

Hudson Bay Consortium (2019)
Community Priorities for Coastal Restoration in James Bay and Hudson Bay. 26 Pages.
Published by The Arctic Eider Society, Sanikiluaq, Nunavut.