

Community Interviews for Research Project: Identification and Selection of Ecological, Social and Economic Indicators in the Inuvialuit Settlement Region, Canada.

Results and Project Updates to the Community of Aklavik

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PROJECT OVERVIEW

This three-year project aims to identify and select regional indicators to be used for monitoring marine resources in the Inuvialuit Settlement Region (ISR). During year one, we worked to summarize the objectives from different co-management agencies across the ISR, as well as as well as to identify common objectives for

indicator selection and management actions. This report provides the community perspective for marine monitoring in the community of Aklavik and the ISR.

Ongoing research under this project also focuses on identifying long-term datasets that can be used for monitoring within the region.

COMMUNITY INTERVIEWS IN AKLAVIK

During February 4-8, 2017 researchers Dr. Carie Hoover and Kate MacMillan interviewed 15 community members in Aklavik to learn what individuals would like to see monitored within the marine environment.

Interviews began by asking participants how they use the ocean, if they have any general concerns about the ocean, and their awareness of marine monitoring activities. Next, participants were asked to identify what they would like to see monitored in the ocean. Specifically:

What would you like to see monitored in the ocean?

- Why is this important to you?
- Have you observed any changes related to what you would like to see monitored what you would like to see monitored?
- What other things might tell you about why this has changed/ could change?
- Is this currently being monitored?

Each participant was able to list as many things as they wanted. Finally, participants were asked to rank each of their answers.



Kate MacMillan (L) and Carie Hoover (R)

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RESULTS

Of the 15 interviews completed, 7 participants were hunters, 2 were non-hunters, 3 were elders, and 3 were youth. Each participant provided between 1-7 personal interests to be monitored. An overview of responses is provided in the table below.

A summary of responses are provided in the table below:

What would participants like to see monitored?	Top concern(s)	Related changes- or- potential influences Related changes- or- potential influences
Beluga whales (n=5)	<ol style="list-style-type: none"> 1. Health of belugas 2. Healthy population levels (for harvest) 3. Less people hunting 4. Arrive later in season 	<ul style="list-style-type: none"> • Diseases or toxins: if they are healthy to eat (e.g. toxoplasmosis, Mercury levels, abnormalities, spots on liver) • Changes in prey species • Increase in ocean temperature • Sea ice break-up occurring sooner • Leads in ice are opening sooner • More wind (have to hunt earlier in the season to avoid wind) • More dangerous to travel on the water
Bowhead (n=1)	<ol style="list-style-type: none"> 1. Bowhead reported washed up onshore 	<ul style="list-style-type: none"> • Sampling the whale to find out why it died • Increased hunter observations to keep records
Orcas (n=1)	<ol style="list-style-type: none"> 1. Increasing in frequency 	<ul style="list-style-type: none"> • Changes in climate cause them to increase frequency
Walrus (n=1)	<ol style="list-style-type: none"> 1. New sightings in the area * 	<ul style="list-style-type: none"> • Changes in climate cause them to increase frequency
Caribou (n=2)	<ol style="list-style-type: none"> 1. less caribou than in the past 	<ul style="list-style-type: none"> • Where do they go to eat • Lichen availability (do they have enough food) • Erosion (may be damaging mating grounds)
Water (quality) (n=4)	<ol style="list-style-type: none"> 1. Water is muddy (dirtier) 2. More moss/ grass in the water 	<ul style="list-style-type: none"> • Changes in currents bring in debris • Erosion from land • Increased wind • Less fish caught in water with silt
Sea Ice (n=2)	<ol style="list-style-type: none"> 1. Loss of sea ice 	<ul style="list-style-type: none"> • Thinner Sea ice • Freeze-up is later • Increased Temperatures • Bigger waver • Thinner Polar Bears • Unpredictable weather patterns

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What would participants like to	Top concern(s)	Related changes- or- potential influences
Oil Spills (n=2)	<ol style="list-style-type: none"> 1. Impacts on fish and other food items 	<ul style="list-style-type: none"> • Check oil levels in soil to identify contaminated places • PCB levels in fish and environment
Char (n=7)	<ol style="list-style-type: none"> 1. Healthy population (for future generations) 2. Healthy Individuals (no deformities) 	<ul style="list-style-type: none"> • Size of fish • Age of fish • Changes in habitat (through tagging programs) • Changes in spawning locations • Increasing water temperatures • # salmon in relation to char • Greyling abundance and interaction with char
Climate Change (and related changes) (n=5)	<ol style="list-style-type: none"> 1. Increased wind 2. Increased erosion 3. Changes in weather patterns (e.g. storms) 	<ul style="list-style-type: none"> • Wind is unpredictable • Miniature tornadoes now appearing in summer • Changes in water levels • Increased storm frequency, intensity, and changes in timing • Increased flooding • Loss of houses at Shingle Point • Changes in travel routes • Increased erosion
Erosion (n=7)	<ol style="list-style-type: none"> 1. Changes travel routes 2. Alters coastline 	<ul style="list-style-type: none"> • Permafrost melting increases erosion • More clay in water from slumping (hard to see fish nets) • Warmer temperatures • Changes water depth • Ice disturbances from storms • Loss of cabins • More winds • Changes in land shape • More vegetation in the water (may harm fish) • Contaminants from soil could go into the ocean • Cannot travel to some places • Need smaller boats to get through channels • More expensive to travel (longer routes)

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What would participants like to see monitored?	Top concern(s)	Related changes- or- potential influences
Whitefish/ Coney (n=5)	<ol style="list-style-type: none"> 1. Healthy Fish 2. Fish are getting softer 	<ul style="list-style-type: none"> • Increases in water temperature • Increases in freshwater • Seeing more abnormalities/ deformities • More pollution in water • More silt in water • Increase in beavers and otters- damage creeks for fishing • Less minnows that are food for other fish
Freshwater Fish (general) (n=1)	<ol style="list-style-type: none"> 1. Increasing in numbers at Shingle Point 	<ul style="list-style-type: none"> • More sediment (silt) in water • Less sea ice • More waves and erosion along coastline • Stronger winds
Salmon (n=5)	<ol style="list-style-type: none"> 1. Increasing in numbers 	<ul style="list-style-type: none"> • Spawning locations (are they in competition with char) • Prey- what they are eating • Parasite levels (if they can spread parasites to char) • Increasing water temperatures • Changes in water pH levels • Timing of the salmon run
River flow/ water levels (n=3)	<ol style="list-style-type: none"> 1. Less river flow (rivers drying up) 2. Lower water levels 	<ul style="list-style-type: none"> • Less snow • Increasing temperature • Changes in permafrost • Wind and waves are getting bigger • Water draining out of the hills • Erosion • Changes to travel routes

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What would participants like to see monitored?	Top concern(s)	Related changes- or- potential influences
Loche (n=5)	<ol style="list-style-type: none"> 1. Seeing more spots on the liver 2. Increased abnormalities 3. Fish are getting softer 4. Fish are getting smaller 	<ul style="list-style-type: none"> • More silt in water • Water is not as clean (not drinkable anymore) • More beavers (contribute to dirty water) • More toxins/pollution in the water • Potential changed in prey species (no specific prey mentioned) • Potential changes in spawning grounds (due to river flow) • Changes in river flow • Increases in Mercury • Increases in Temperature • Oil in the water
Herring (n=4)	<ol style="list-style-type: none"> 1. Fish are getting softer 2. less blue herring over time 3. Fish are healthy 	<ul style="list-style-type: none"> • Water temperatures are increasing- they like colder water • More freshwater (less saline) • Changes in climate • Catches from other countries- Alaska might be catching more, causing less in ISR. • Less blue herring over time (ratio of herring/blue herring) to show changes • Size of fish • Number of fish with parasites or spots on liver
Bears (brown Grizzly) (n=1)	<ol style="list-style-type: none"> 1. More bears have been seen at the dump 	<ul style="list-style-type: none"> • Look at their food source to see if it is changing • Tagging to see where they are going

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HOW RESULTS WILL BE USED

The results will be used to help understand how community concerns are linked to the environment. It will also help identify gaps and alignment between management and community priorities for long-term monitoring in the marine environment. This will allow individual and community perspectives to be compared with management goals to highlight similarities and differences. Results will be made available summarizing interviews from interviews from all ISR ISR communities in late 2017 once all communities have been interviewed. Results once all communities have been interviewed. Results will be presented will be presented in a report made available to DFO, FJMC, and any other individuals or agencies interested.

INDICATORS INVENTORY

As part of this project, we are collecting data to summarize the datasets being collected or monitored for the marine environment. This will serve as an inventory of indicator datasets and will be used to see if community priorities and management goals have data available to support them. Datasets can include Ecological, Social, Cultural, Governance, and Economic. As we are still developing this inventory, we are working with co-management agencies to identify what data is being collected under different monitoring programs. To date, we have over 600 datasets identified across the region, with much work still to be done. Updates on this phase of the research will likely be presented at the 2017 BSP meeting. If you have any questions regarding this work, please find our contact information below.

FUTURE RESEARCH

Priorities identified from the BSP working groups will be used for future work on regional indicators in the ISR. During the next 2 years, the research team will work to assess current indicators and potential gaps in current monitoring programs. We aim to identify indicators that meet the objectives from co-management agencies and communities.

FEEDBACK AND CONTACT INFORMATION:

If you would like a copy of the previous survey, the full list of objectives used in the survey, or more information on this project please contact:

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