Sanikiluaq, ᓴᓂᑭᓗᖅ, "Home of sandy kiluaq"

Introduction

Sanikiluaq in the Qikiqtaaluk Region is located on the northern tip of Flaherty Island, about 150 kilometers off the west coast of Nunavik, Quebec. It is the southern-most Hamlet in Nunavut. In 2016, the population of Sanikiluaq was 882. Integrated with wage-based activities, hunting and fishing are crucial economic activities that support the traditional lifestyle of the community[1]. The community's hunting and fishing area covers approximately 400 km north to south, and 550 km east to west. Important species are ringed seal, bearded seal, beluga, polar bear, mussels, arctic char, caribou, and eider ducks[2]. The community has long been depended on the eider for food and their feathers[2]. Processes are underway to establish the Kinngaaluk Territorial Park for the preservation of flora and fauna, archeological remains from the Dorset and Thule cultures, and to allow for seasonal hunting[3].

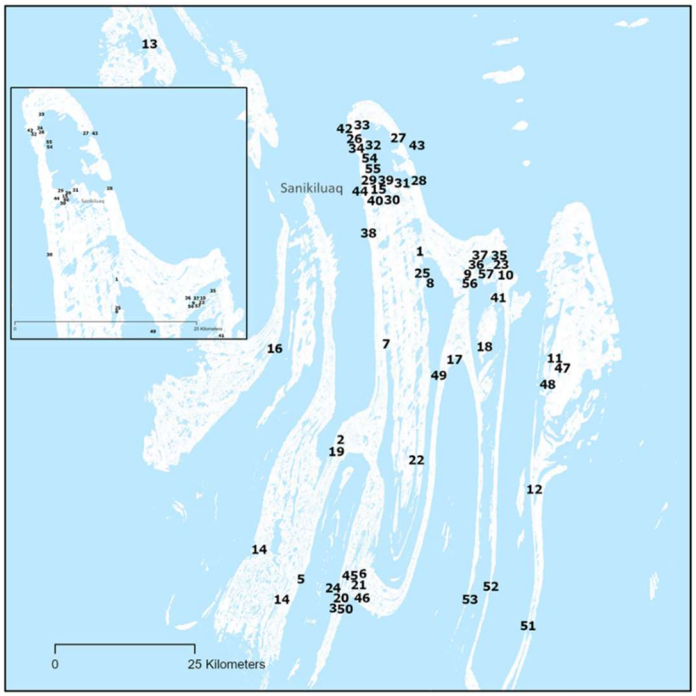
Community Restoration Priorities

1. Construction of a new fence at the dump to decrease contaminants in surrounding marine and terrestrial areas; **2.** Investigation as to why seaweeds and cod are disappearing along the coastline; and **3**. Research on echinoderm health to ensure long-term subsistence harvest.

Community Map and Workshop Highlights

The CRN research team visited the community in March 2018. According to residents, seaweeds and cod are no longer in abundance along the shore. Sea cucumbers are also turning white, and sea urchins are developing without spikes (since the Rupert diversion). Other changes include more brittle ice during winter, and the behavior of marine mammals, such as belugas, as they do not come close to the community now – thought to be because of run-off from the dump.

Sanikiluaq



Map Legend

Water issues: **1 - 8** River drying up, **9 - 13** River drying up, so HTO completed work to restore, **15 - 17** River dried up, haven't used since the 1960s, **18 - 21** Priority to restore/deepen area - char, lake trout, white fish, **22** Lake drying up, cod fish present, **31** Seaweed disappearing; shallower; ice in spring can scrap bottom; currents changing; boats can't even pass now - deep in 1970s, and **40** ATVs pass here because so shallow now.

Building or structure: **14** Sewage lagoon, **28** Dump, **29** Sewage Lagoon, **30** Abandoned dump site, **43** Runway, and **46** Hudson Bay post closed ~1963.

Erosion: **23 & 24** Trail crossing, build bridge - ATVs driving through rivers and disturbing fish; animals healthier before machines, sounds, disturbances, fish size decreased, and **38 & 39** Because of culverts in stream, char can't migrate now.

Harvesting areas: **25** Taste of mussels has changed, **32** Cod present where deeper waters, **33** Sea urchins without spikes; sea cucumbers turned white, **34** Cod fishing site in the past; no cod fish anymore; no bearded seal now - too shallow, **35** Sculpins in freshwater, **36** Char, no changes noted, **41 & 42** Mussels, scallops, **44** 4 hours by ATV from centre of community, **50 & 51** Mussels, **52** Mussels where there are passages, and **56** Tender eider ducks.

Shipping issues: **26 & 27** Boat traffic.

Mammal migration: **37** Summer 2016: one killer whale stranded, two others washed-up dead-on shore.

Contamination: **45** South camp, **47** Soapstone mine, **49** Brownish ice now - Hydro Quebec?, **53** ATV, **54** Machine boat, and **55** Camp.

Species change: **48** Used to be lots of freshwater seals here; now sick fish because not enough seals.

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Literature Review

The area southwest of Flaherty Island is utilized by polar bears for winter denning. lemmings, arctic hare, and arctic fox are also commonly found here[2]. Reindeer were introduced in 1978 to replace the vanished caribou herd[2]. During the 1990's, many of the polynyas around the Belcher Islands exhibited increased ice cover because of weaker than usual ocean currents combined with calm wind conditions[2]. People linked this event to hydroelectric development in the James Bay region of the Province of Quebec[4].

Attributes	Examples of Environmental Changes and Observations
Sea ice	• Freeze-up is occurring later in the fall, and conversely the spring break-up happens earlier. People are concerned with the impact that this has on hunter safety[2].
Seasonal events	• The region experiences sudden windstorm events, which are common to this area of the Hudson Bay[2].

Attributes	Examples of Ecosystem Changes and Observations
Polar bears	• Polar bears have become numerous on the region when coast is ice bound[2]. Bears were also increasing and becoming more abundant each year, although they appeared to be thinner[4]
Seals	• In recent years, ringed seals have been losing fur or have patches of fur missing. Overall, seals appeared much thinner than in the past[2]
Whales	• Belugas were getting caught in the fall freeze up[6]
Fisheries	• Some species of fish appear to be deteriorating in health, e.g., exhibiting boils and scratches. Different species have also decreased over the years[2].
Birds	• Most of the islands provide special breeding grounds for numerous species of migratory seabirds, ducks, and geese[4].
Invertebrates	• Mussels, sea urchins and sea cucumbers are found in areas with currents. Mussels are also found in rocky areas, while scallops and clams are on sandy bottoms[2].

Based on the Current Gaps in the Literature, Research Needs Include:

- **Economic development:** Residents have identified mussels and Arctic char as having the potential to be more heavily utilized within the community. However, community members were unsure if the species populations were high enough for commercial exploitation[2]. Some members though that tourism would also be a good means for developing economic opportunities if it did not affect the wildlife[2].
- **Shipping and transportation studies:** Concerns regarding the increase in shipping, and the impacts this may have on wildlife[2,4].
- **Hydroelectric development**: Concerns relating to the cumulative impacts of hydroelectric developments and winter freshwater inputs on coastal ecosystem[2].

Selected references:

1. Government of Nunavut (n.d.) *Integrated Community Sustainability Plan (ICSP) Webtool. Sanikiluaq community profile*. https://bit.ly/2LahxDR Accessed May 8, 2020.
2. Government of Nunavut (2010). *Nunavut Coastal Resource Inventory – Sanikiluaq*. Retrieved from https://bit.ly/2WemT7d.
3. Nunatsiaq News (22 March 2019). *Plans for proposed Nunavut park win national award*. https://bit.ly/3crT6Nt. Accessed May 8, 2020.
4. The Hudson Bay Consortium (2019). *Roundtable - Coastal Restoration Workshop Report*. Retrieved from https://bit.ly/2y88u2R.

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