



**SUBMISSION TO THE**

**NUNAVUT WILDLIFE MANAGEMENT BOARD**

**FOR**

**Information: X**

**Decision:**

**Issue:** Results of the 2021 survey results and community consultations of the Southern Hudson Bay (SH) Polar Bear Subpopulation.

**Background:**

- The Southern Hudson Bay (SH) polar bear subpopulation is shared between Ontario, Québec, and Nunavut (Figure 1). The last inventory studies to estimate abundance were conducted in 2011 and 2016, which resulted in estimates of 943 and 780 bears, respectively. The SH polar bear subpopulation was considered declining at that time.
- Sanikiluaq hunters harvest from SH. The current Total Allowable Harvest (TAH) for SH is 25 bears per year. This TAH was set under the Flexible Quota System (FQS) at a 2:1 harvest sex ratio and was maintained under the 1:1 harvest sex ratio when the new Harvest Administration and Credit Calculation System (HACCS) came into effect in 2022. The average harvest between the 2011/2012 and 2022/2023 harvest seasons was 28 bears per year (Figure 2).
- SH and Western Hudson Bay (WH) have been following a 5-year monitoring regimen, with the most recent surveys completed in 2021. Following community consultations via phone in 2021 (in-person consultations were not possible due to COVID-19 related travel restrictions), the survey began in August 2021 and finished in September 2021. A minimally invasive aerial abundance survey method was used for this study. WH was surveyed at the same time by the GN.
- Environment and Climate Change Canada (ECCC) has been conducting scientific studies in WH since the 1980s. Ongoing research includes a biopsy darting genetic analysis project which has been conducted since 2017 along the Manitoba and Ontario coast. This research examined movement between WH/SH and ice dynamics in Hudson Bay. The results from this report were very informative and help to explain the higher estimate from the 2021 aerial survey.

## Current Status:

- The final report and results for the 2021 SH study were distributed to all relevant co-management partners in November 2022. The new abundance estimate of 1003 bears is more than the estimates from 2011 and 2016.
- The WH and SH estimates for 2011, 2016, and 2021 were combined in the WH report. This resulted in combined estimates of 1892, 1622, and 1621 bears, respectively. When both subpopulations are combined, this shows a stable population (WH and SH) between the 2016 and 2021 surveys.
- Given the limitations of an aerial abundance survey, it was unclear to what degree the increase in SH in 2021 was due to movement of bears into SH from WH, which the ECCC and Ontario genetic mark and recapture studies confirmed.
- The ECCC biopsy darting report determined that the increase in SH in 2021 was largely due to movement of bears into SH, likely due to remnant ice in SH near the time of the aerial survey.
- The ECCC biopsy darting report also examined harvested bear locations. It reaffirms that the SH management boundary is valid because bears harvested in SH were initially biopsied in SH, whereas bears harvested in WH were initially biopsied in WH.

## Consultations:

In-person community consultations with the Sanikiluaq Hunters and Trappers Association (HTA) was held on May 13, 2024. Consultations focused on the results of the aerial abundance survey and ECCC biopsy darting study. HTA members had many questions about research methods and welfare of bears with more invasive research methods (collaring and biopsy darting). HTA members expressed interest in submitting their own letter to NWMB with their ideas on the TAH recommendation. Staff from Nunavut Wildlife Management Board attended the meeting. See details in SH Consultation Summary Report by GN ENV.

## Recommendations:

1. ENV recommends **no change to the current TAH of 25 for the SH subpopulation**. When considering the SH and WH estimates collectively between 2016 and 2021, the subpopulations remain stable under current environmental conditions and harvest levels.

2. In keeping with current national and international polar bear management initiatives, ENV requests that the NWMB establish a management objective for the Southern Hudson Bay polar bear subpopulation. ENV suggests that the management objective is to **maintain current abundance**.

# Appendix 1

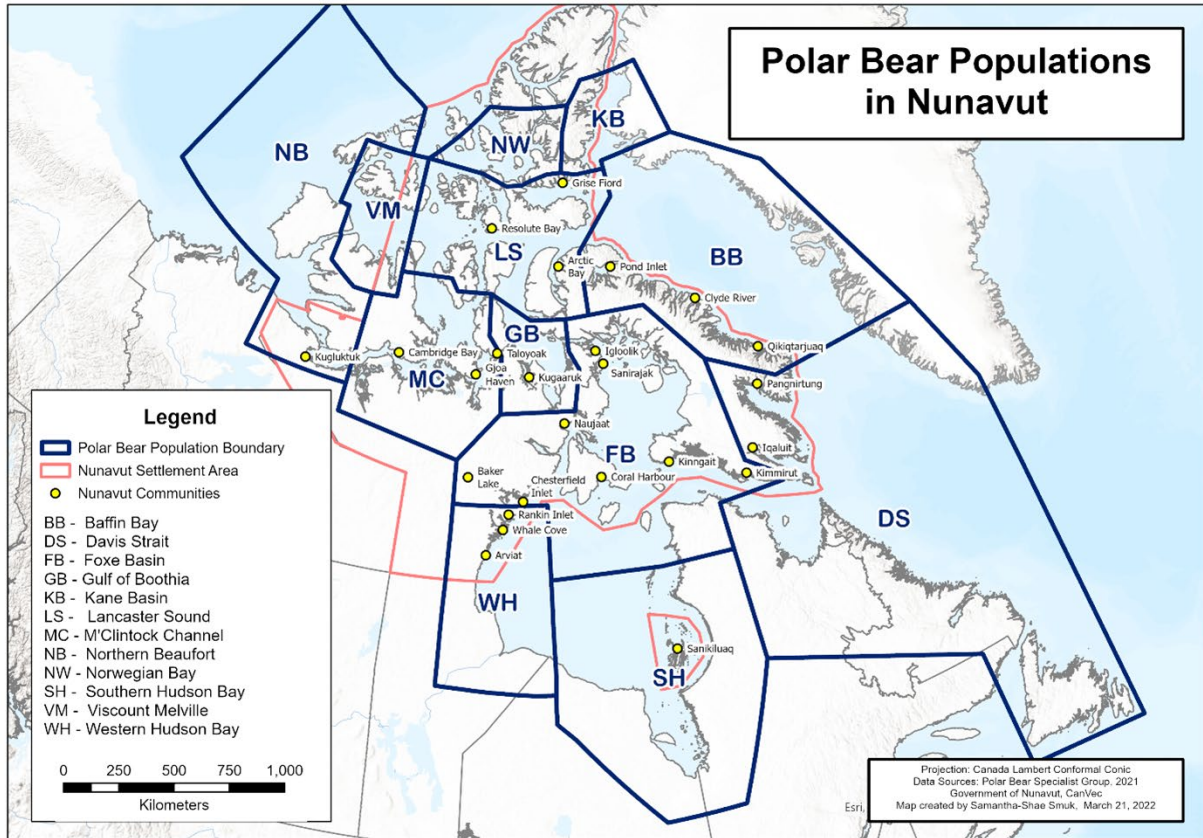


Figure 1. Overview of Nunavut polar bear subpopulations (WH = Western Hudson Bay, SH = Southern Hudson Bay).

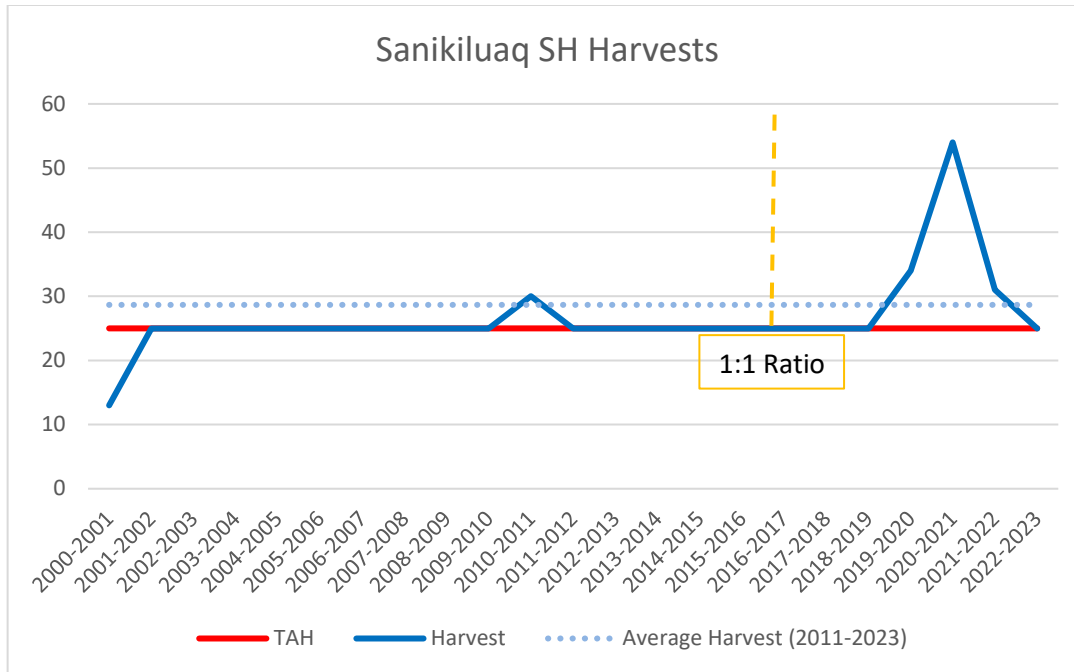


Figure 2. Overview of the Southern Hudson Bay polar bear Total Allowable Harvest (TAH), total and average harvest since 2000.

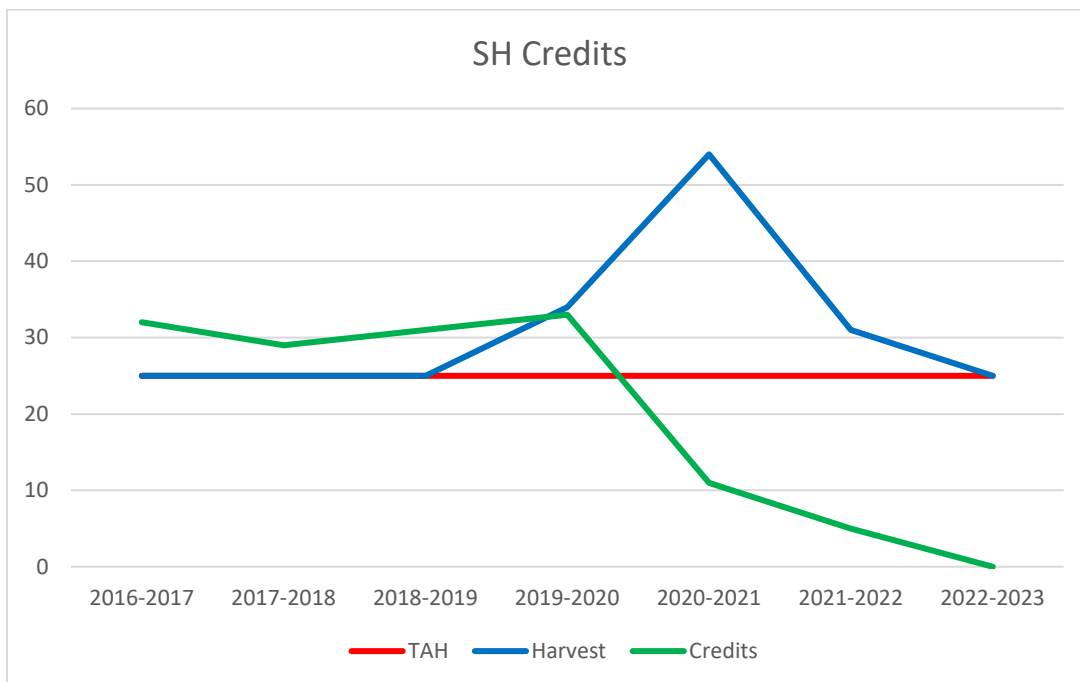


Figure 3. Overview of the Southern Hudson Bay polar bear credits since 2016.

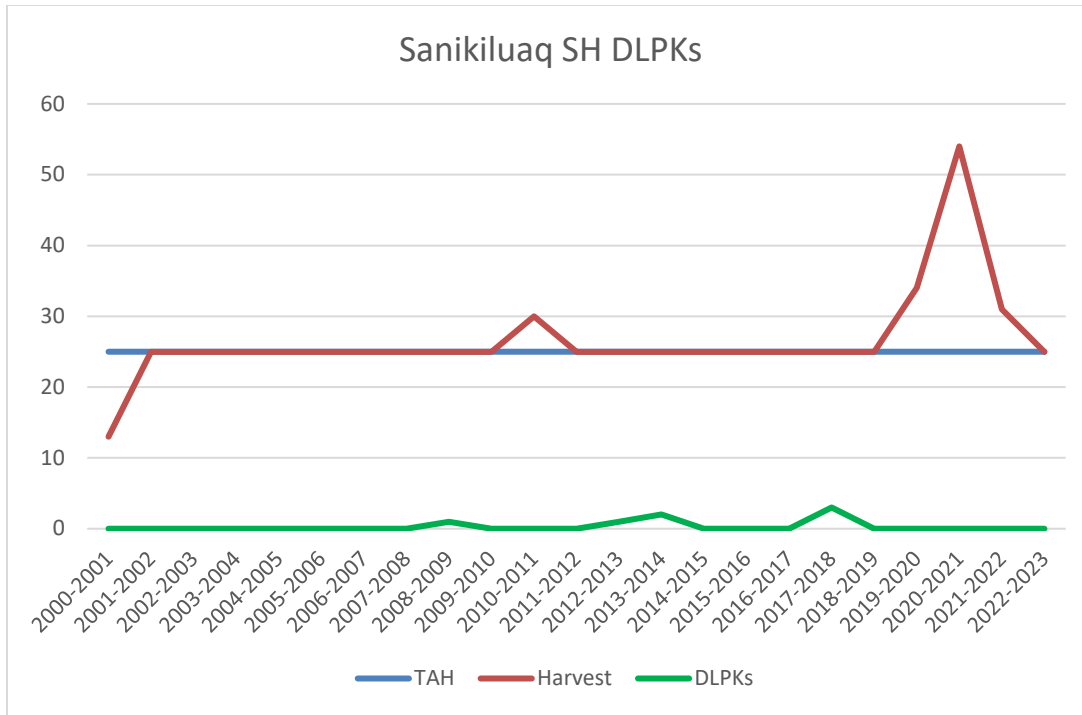


Figure 4. Number of Defence of Life and Property polar bear kills (DLPKs) in Southern Hudson Bay since 2000.