



August 7, 2020

Mr. Daniel Shewchuk
Chairperson
Nunavut Wildlife Management Board
P.O. Box 1379
Iqaluit, NU X0A 0H0

Mr. Gordon Blackned
Chairperson
Eeyou Marine Region Wildlife Board
PO Box 580
4 Chief Isaiah Salt Road
Waskaganish QC J0M 1R0

Mr. Robert Moshenko
Chairperson
Nunavik Marine Region Wildlife Board
P.O. Box 433
Inukjuak, QC J0M 1M0

Mr. Serge Tremblay
Chairperson
Hunting, Fishing and Trapping
Coordinating Committee
1080, Beaver Hall, Office 1420
Montréal QC H2Z 1S8

Re: Total Allowable Harvest/Take recommendations for the Southern Hudson Bay Polar Bear subpopulation

Dear Chairpersons,

Management authority for the Southern Hudson Bay (SH) polar bear subpopulation is a shared responsibility of the governments of Nunavut, Québec, Ontario and Canada, as well as the wildlife management boards and advisory council that you chair (Nunavut Wildlife Management Board (NWMB), Nunavik Marine Region Wildlife Board (NMRWB), Eeyou Marine Region Wildlife Board (EMRWB), and Hunting, Fishing and Trapping Coordinating Committee (HFTCC)).

The Total Allowable Harvest/Take limits that are currently in place in the SH polar bear subpopulation are based upon an abundance estimate derived from an aerial survey conducted in 2011 and 2012 that is now out-of-date. This abundance estimate has been replaced by an abundance estimate derived from an aerial survey conducted in 2016, which was formally accepted by management authorities in May 2018. In addition, new scientific information and new Indigenous Knowledge information have been collected since the previous harvest quotas were determined.

Cooperation and coordinated decision-making is of the utmost importance given the complex, inter-jurisdictional nature of the management for this subpopulation. The governments of Nunavut-Department of Environment (DOE), Québec, and Canada therefore request that the three Boards/HFTCC re-assess Total Allowable Harvest/Take limits, where such limits exist (NWMB, NMRWB, NMRWB/EMRWB for overlap area),



and determine or recommend Total Allowable Harvest/Take limits where they are currently lacking (EMRWB, HFTCC).

The governments of Nunavut-DOE, Québec and Canada further request that the three Boards/HFTCC conduct processes in a coordinated fashion, such that harvest/take outside your jurisdictions (including take in Ontario) is considered to ensure the total removal of polar bear is in accordance with management objectives and sustainable at a subpopulation level.

To support your decision-making, the following attachments are provided (full-reports are in English, executive summaries are in Inuktitut-Nunavut dialect, Inuktitut-Nunavik dialect, French and English):

1. Re-Assessment of the Southern Hudson Bay Polar Bear Subpopulation (hereafter, **Subpopulation Status Report**)
2. Provisional Harvest Risk Assessment for the Southern Hudson Bay Polar Bear Subpopulation (hereafter, **Harvest Assessment Report**)
3. Southern Hudson Bay Polar Bear Subpopulation Harvest Re-assessment: Consultation Report (hereafter, **Consultation Report**)

Subpopulation Status Report

The Subpopulation Status Report was prepared by the Southern Hudson Bay Technical Working Group (hereafter Technical Working Group) and approved by the Southern Hudson Bay Advisory Committee (hereafter Advisory Committee) in September 2019. It includes information about the current and historical abundance estimates, current and historical harvest levels, Indigenous Knowledge studies, and scientific completed for the subpopulation.

Harvest Assessment Report

The Harvest Assessment Report was prepared by a polar bear population-modelling expert, Dr. Eric Regehr (University of Washington), under the direction of the Technical Working Group and approved by the Advisory Committee in June 2019. It evaluates projected changes in polar bear abundance under a range of harvest scenarios. The intention of the Harvest Assessment Report is to equip Indigenous rights holders and management authorities with a means of comparing the predicted outcome of harvest over a range of different intensities, while incorporating uncertainty about how polar bears will respond to future environmental change.



Consultation Report

The Consultation Report was completed by the Southern Hudson Bay Consultation Working Group and approved by the Advisory Committee in June 2020. It summarizes the outcome of community engagement sessions conducted during winter 2019-2020 and a User-to-User meeting held in Montreal on February 25-26, 2020.

Key Considerations

Subpopulation status

- **Canada's Polar Bear Technical Committee (PBTC) has assessed the recent trend in abundance for the SH polar bear subpopulation to be "likely declined" based upon scientific data.** PBTC's assessment was based on several factors. These included a 17% decline in point estimates of abundance between a 2011-2012 aerial survey (943 bears, 95% CI: 658–1350) and the 2016 aerial survey (780 bears, 95% CI: 590-1029) and concurrent declines in polar bear body condition, reproduction and survival in association with long-term sea ice reductions. A similar decrease in point estimates of abundance in the adjacent Western Hudson Bay (WH) polar bear subpopulation over the same period was considered an additional line of evidence suggesting a larger ecosystem change may be occurring. Collectively these factors represent a potential conservation concern for the subpopulation. However, the 95% confidence intervals between the 2011-2012 and 2016 SH abundance estimates were overlapping, which indicates a level of statistical uncertainty in the assessment.
- **The PBTC's Indigenous Knowledge assessment of the SH subpopulation is that it is "stable" in James Bay and "likely increased" in east Hudson Bay.** The assessment was based upon information from a number of published sources, including a recently completed report by the Nunavik Marine Region Wildlife Board. **The consensus view of Indigenous rights holders at the February 2020 User-to-User meeting was that polar bear health is better than presented by scientists and most Inuit and Cree reported seeing more polar bears than in the past.**

Current harvest quotas and reported harvest

- Current harvest quotas for the SH subpopulation are as follows:
 - 25 polar bears per year in Nunavut (established under an assumption of 2:1 male to female harvesting; during the 2014/15 and 2015/16 hunting seasons the number had been voluntarily reduced to 20, but the quota reverted to 25)



- in 2016/2017). The current Total Allowable Harvest of 25 can include a maximum harvest of 50% female bears based on a 2019 decision from the NWMB.
- 23 polar bears per year in the Nunavik Marine Region and the “Inuit Zone” and “Joint Inuit/Cree Zone” of the Nunavik Marine Region-Eeyou Marine Region Overlapping Interests Area (established under an assumption of 2:1 male to female harvesting; 22 allocated for Nunavik Inuit and 1 allocated for Eeyou Istchee Cree)
 - Polar bear take by Cree in the SH subpopulation occurs primarily in defense of life and property situations. Since the 2011/12 hunting season, reported Cree take has averaged:
 - 1.1 polar bears per year by Eeyou Istchee Cree in Québec
 - 1.8 polar bears per year by Ontario Cree
 - Thus, the combined annual quotas for Nunavut (25) and Inuit in the Nunavik Marine Region (22), plus the average annual take by Cree in Quebec (1.1) and Ontario (1.8) is **approximately 50 polar bears per year for the subpopulation as a whole**. Under the previous 2011-2012 abundance estimate of 943, this equates to a removal rate of 5.3%. Under the current 2016 abundance estimate of 780, this equates to a removal rate of 6.3%.
 - Harvest reporting approaches 100% in Nunavut, whereas Nunavik Inuit, Eeyou Istchee Cree and Ontario Cree harvest reporting is incomplete. The lack of complete reporting is a significant impediment to effective harvest management. An actual total harvest of 36.4 polar bear per year has been estimated based on data reported to management authorities for the 5-year interval ending in 2017/18. Under the previous 2011-2012 abundance estimate of 943, this equates to an actual removal rate of 3.9%. Under the current 2016 abundance estimate of 780, this equates to an actual reported removal rate of 4.7%

Management objectives and allocation of harvest

- Community engagement sessions and the User-to-User meeting made clear that there are concerns about the safety of people with the current abundance of polar bears in the SH subpopulation. The need to ensure that Indigenous knowledge (Inuit and Cree) is properly included in management decision processes was noted, as was the view that there should be allowance to harvest more males than females, but the harvest ratio should not be fixed at a 2:1 ratio of males to females.



- There was no consensus reached during the User-to-User meeting on how the harvest should be allocated, but there was agreement that the parties should work together and support for a joint decision process by the wildlife management boards

Harvest risk assessment

- The Technical Working Group recommended the “middle of the road” environmental scenario with respect to future environmental conditions and a moderate level of risk with respect to the probability of achieving a maximum sustainable yield moving forward. The **recommended harvest under this scenario was a maximum of 10-12 females per year** [20-24 bears per year at a 1:1 sex ratio or 30-36 bears per year at a 2:1 sex ratio].
- The harvest risk assessment provided an option of a more optimistic environmental scenario that predicts the SH subpopulation will remain as productive as it has been during the past 30 years and will only experience minor effects with continued environmental changes. The input received during community consultations and the User-to-User meeting, as well as collected Indigenous Knowledge, favoured this scenario given that knowledge about the response of bears to environmental changes will be one of adaptation. **The recommended harvest under this scenario was a maximum of 20-21 females per year** [40-42 bears per year at a 1:1 harvest ratio or 60-63 bears per year at a 2:1 sex ratio].

Recommendation

Based on the 2016 survey results, which indicate a lower point estimate of abundance, but uncertainty about subpopulation trend, and the Indigenous Knowledge that indicates the subpopulation has either remained stable or increased in abundance, the Governments recommend that the management boards agree to an overall removal rate between 12-16 females per year. At a 2:1 male to female harvest ratio, this would equate to an overall removal **between 36-50 bears per year** (24-34 males and 12-16 females). At an up to 1:1 male to female harvest ratio, this would equate to an overall removal **between 24-32 bears per year** (12-16 males and 12-16 females). This recommendation should not be construed as constraining the decision-making authority of our respective Ministers. The intention is rather to offer the consensus advice of program officials.

This range of options considers the best available information from science and Indigenous Knowledge, with the higher options carrying more risk. With an impending new survey of the subpopulation (proposed in 2022), the risk associated with the higher range is mitigated. We recommend that these harvest levels, for the entire SH subpopulation, be effective until results from the next aerial survey are available, at



which time a re-assessment can be conducted. In the absence of male-biased sex-selective harvest, the Total Allowable Harvest/Take would need to be lower in consideration of the greater impact that female harvest has on polar bear population dynamics than male harvest.

The allocation of the overall harvest will need to be decided by the relevant wildlife management boards in collaboration with the appropriate Inuit Organizations and user groups.

This recommendation takes into account the input provided by the SH Technical Working Group, feedback during community engagement meetings, and information gathered at the User-to-User meeting. The recommendation ensures that harvest does not exacerbate the current conservation concern for the population in the immediate future, while awaiting the results of the next aerial survey. This constitutes a reasonable application of the precautionary principle, while also recognizing the significant Indigenous Knowledge that was shared. Adaptive adjustments to the management system can be made as needed once new abundance results are available or strong evidence based on Indigenous Knowledge or scientific research indicates a significant change in the status of this subpopulation.

Signatories:

Steve Pinksen
Assistant Deputy Minister
Department of Environment
Government of Nunavut

/for

Julie Spallin
Director General
Wildlife Management Directorate
Canadian Wildlife Service
Environment and Climate Change Canada

Danielle St-Pierre
Director
Expertise Department on Terrestrial Fauna, Herpetofauna and Avifauna
Wildlife and Habitat Management Branch
Ministry of Forests, Wildlife and Parks
Government of Québec