



NOV 23 2017

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

Dear Mr. Shewchuk:

Thank you for your letter of October 20, 2017, to Catherine McKenna, Minister of Environment and Climate Change, which extended an invitation to provide written submissions in response to the Government of Nunavut – Department of Environment's (Nunavut DOE's) proposal concerning a Total Allowable Harvest (TAH) for the Western Hudson Bay (WH) polar bear subpopulation.

It is my understanding that the key matter before the NWMB at its January 9-10, 2018 public hearing in Rankin Inlet will be to discuss what an appropriate and sustainable removal level should be in WH starting with the 2018-19 hunting season. The reason for the re-assessment is a new aerial survey conducted by the Nunavut DOE in August 2016, from which a new subpopulation abundance estimate was derived. The new estimate assessed the subpopulation at 842 bears (95% CI: 562-1121). This compares to a previous estimate of 1030 bears (95% CI: 754-1406) in 2011 using the same aerial survey methodology (a downward adjustment in population estimate of 18%). As the Nunavut DOE report notes that a population trend cannot be inferred from two data points, the 2016 WH aerial survey abundance estimate now constitutes the most recent and best available information upon which to make decisions on the TAH of the WH subpopulation.

I note that the NWMB refers to TEK that indicates greater numbers of bears have been observed in and near communities in recent years than in the past and that this increase in bear incursions constitutes a threat public safety. In light of the public safety concern, ECCC agrees with NWMB in its call for the Government of Nunavut to continue to work with communities to take measures to minimize human-bear conflict and protect people (e.g., bear patrol programs, providing steel bins for storing country food, use of electric deterrent fences around dog team pens).

With respect to total allowable harvest of the WH, as was noted by the PBTC as well as in the report prepared by Nunavut DOE, there is reason for concern about the near-term and long-

term prognosis of this subpopulation, including: (1) evidence that reproductive performance has been lower in WH than other polar bear subpopulations in Canada, and (2) research conducted by ECCC, Science and Technology Branch at field sites in Manitoba indicate declines have occurred in polar bear body condition, reproductive performance, and survival in association with sea ice decline. Supplementary information raises additional concern about the status of ice-adapted species in the Hudson Bay ecosystem. Declines in ringed seal density and blubber thickness have been documented in Hudson Bay by the Department of Fisheries and Oceans Canada scientists.

Preliminary results from a polar bear aerial survey conducted in the adjacent Southern Hudson Bay (SH) subpopulation indicate lower polar bear abundance than was previously measured. According to information provided by Ontario Ministry of Natural Resources and Forestry (OMNRF) to the Polar Bear Administrative Committee (PBAC) in July 2017, the SH abundance estimates were 943 (95% CI: 658-1350) in 2011/2012 and 784 (95% CI: 593-1037) in 2016 (a 17% downward adjustment in population estimate). Similar to the findings of ECCC scientists for WH, OMNRF scientists have documented declines in body condition and survival of SH polar bears.

Finally, with respect to sea ice, there are long-term trends toward earlier breakup and later freeze-up, which directly impact the amount of time that polar bears in Hudson Bay have access to seals, their main prey. Breakup of sea ice on western Hudson Bay has advanced by 22 days and freeze-up prolonged by 15 days since 1979. Thus, there is a growing body of independent scientific evidence of changes occurring in the Hudson Bay marine ecosystem as a whole that collectively suggest that the WH subpopulation is not healthy and that the ecosystem is not stable. It is this weight of evidence that warrants a precautionary approach be taken when setting harvest levels.

The most recent status assessment of the WH subpopulation by the Canadian Polar Bear Technical Committee (PBTC) was in Spring 2017, prior to the release of the 2016 aerial survey final report. At the time, the PBTC noted the population trend over the past 15 years as 'likely stable' and that the subpopulation was considered to be 'increased' from previous levels on the basis of TEK. However, it also noted that based on a variety of biological and environmental factors, such as changes in polar bear body condition, reduced reproductive productivity, as well as observed and expected declines in sea ice coverage, that the WH subpopulation will 'likely decline' over the next ten years.

When last invited by NWMB to provide a written submission concerning a TAH for WH, ECCC supported a TAH of 24 bears, which represented a 2.3% harvest rate of a subpopulation numbering 1030 polar bears. In ECCC's opinion, the underlying conditions that led us to support a precautionary harvest level have not changed. The most current information now indicates the point estimate of the size of the WH subpopulation to be 842 bears.

Also, as the NWMB is aware, products from species that are listed under Appendix II of the Convention on International Trade in Endangered Species (CITES), such as polar bear, require an export permit. A sustainable harvest rate for the WH subpopulation will support a finding that

the export will not be detrimental to the survival of the species. Such a finding is required prior to issuance of a CITES export permit.

In light of the aforementioned considerations, ECCC recommends that co-management partners consider undertaking a comprehensive harvest risk assessment to provide assurance to co-management partners, stakeholders, and the public that whatever TAH is adopted, it will not have an adverse effect on the WH polar bear subpopulation viability. Precedent for such an analysis can be taken from the Baffin Bay polar bear subpopulation. Until such time as a comprehensive risk assessment is completed, ECCC recommends that a precautionary approach be taken to setting a TAH for the WH polar bear subpopulation.

Sincerely,



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