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Conserving wildlife through the application of Inuit Qaujimajatuqangit and scientific knowledge

August 23, 2012
Hon. James Arreak
Minister of Environment
Government of Nunavut

Dear Minister Arreak:

Re: August 15th 2012 decision of the Nunavut Wildlife Management Board concerning the level of regional total allowable harvest for the Western Hudson Bay Polar Bear Population

1. THE NWMB DECISION

On August 15th 2012, the Nunavut Wildlife Management Board (NWMB or Board) held its in-camera decision-making meeting with respect to your May 24th 2012 request for decision on the total allowable harvest (TAH) for the Western Hudson Bay (WH) polar bear sub-population (request). That decision-making meeting was the culmination of a written hearing process that formally commenced with the issuance of a public notice on June 26th 2012. The Board subsequently received and carefully considered written response submissions from Nunavut Tunngavik Inc., the IUCN Polar Bear Specialist Group, and the World Wildlife Fund-Canada.

Following its consideration of the request and all of the submissions, the Board passed the following resolution:

“RESOLVED that-pursuant to Sections 5.3.3, 5.6.16, and 5.6.17 of the Nunavut Land Claims Agreement (NLCA) - the NWMB approve a regional total allowable harvest (TAH) of twenty four (24) polar bears for the Western Hudson Bay subpopulation for three (3) years only, to be formally reviewed following the 2014-2015 harvesting season, or at such time as new relevant information based on western science and/or Inuit Qaujimajatuqangit becomes available.”

Pursuant to Section 5.3.8 of the Nunavut Land Claims Agreement (NLCA), the NWMB hereby forwards you its decision.

2. EVIDENCE AND ARGUMENTS CONSIDERED

An aerial survey of the Western Hudson Bay subpopulation was conducted by the Government of Nunavut Department of Environment (GN-DOE) in 2011 and forms the basis of the arguments and evidence provided for the position as set out in the request for decision:

- The 2011 aerial survey resulted in a subpopulation estimate of 1000 bears (95% CI = 715-1398);
- This estimate is consistent with that derived from the 2004 mark-recapture study by Environment Canada;

- The results are not consistent with predictions made in 2004 and 2007 that a continued decrease in subpopulation size would occur; and
- Mean litter size and numbers of dependant offspring were low, which suggests that recruitment rate is low.

With respect to scientific evidence, the Board received clear and helpful submissions which express concern about the uncertainties surrounding the status of the WH polar bear. These submissions took the position that the TAH should not be increased until such time as the results from all of the scientific work in this and neighbouring subpopulations are available. Another party to the hearing argues that the proposed harvest rate is lower than that of the surrounding subpopulations, and offers traditional knowledge stating that the WH subpopulation has increased steadily since the early twentieth century. The Board received additional compelling evidence and arguments based on Inuit Qaujimajatuqangit (IQ) and observations by Nunavummiut:

- There are ongoing, regular and dangerous encounters with polar bears resulting in a significant number of defence kills;
- Inuit are seeing disturbing changes in bear behavior and list a number of contributing factors;
- WH bears are part of a shared population with neighboring subpopulations including Foxe Basin, Southern Hudson Bay, and Davis Strait; and
- Polar bear numbers are higher than ever before and that most community members would like to see fewer polar bears.

The Board was also made aware of:

- The perception that polar bears are considered by many to be more important than people's safety; and
- Concerns that Western science population surveys continue to produce low estimates.

A summary of the positions, arguments, and evidence as presented in the request for decision and the response submissions is attached as Appendix A to this decision letter. Copies of the full request for decision and all written submissions are available from the NMWB's Hearing Registry on the Board's website (www.nwmb.com).

In addition, all of the hearing parties, as well as the NWMB, are awaiting updated analysis by Drs. Lunn and Regrher of the WH mark-recapture and harvest data through 2010.

3. REASONS FOR THE NWMB DECISION

As in 2007, 2010, and most recently in 2011 the NWMB was confronted with divergent positions and arguments concerning the status of the WH polar bear subpopulation. After thoroughly weighing all of the evidence and arguments, the Board's decision was made based on both Western science, and Inuit Qaujimajatuqangit (IQ).

The specific reasons for the NWMB's present decision are the following:

The specific reasons for the NWMB's present decision are the following:

1. Inuit in the WH communities are concerned for their safety and are wondering if polar bears are considered more important than people¹. This position is supported by the increase in defence kills in recent years.
2. IQ suggests that the population has been increasing steadily since the 1940s, which is consistent with a 2012 Public Opinion Poll conducted by GN-DOE. An essential objective of the NLCA Article 5 is a wildlife management system that promotes public confidence².
3. The population estimate from the 2011 aerial survey is consistent with the results from the 2004 mark-recapture survey and suggests that the WH subpopulation has remained stable, despite earlier scientific predictions that the population would decline significantly.
4. A TAH of 24 bears applies the precautionary principle: taking into account the population estimate of 1000 bears from the 2011 aerial survey and the eight bears allocated to Manitoba's control activities, a total harvest rate from the subpopulation of 32 bears annually falls below the generally accepted sustainable harvest level of 4.5%.
5. The most recent evidence, as presented at the hearing, suggests that the WH polar bear subpopulation is stable or increasing. As such, establishing a TAH for a three year period - subject to review upon the presentation of new information - does not present a conservation concern.

4. CONCLUSION

Mr. Minister, despite some fundamental differences of opinion among the hearing parties concerning the appropriate management measures necessary for the WH polar bear subpopulation, there is a shared overall view that it is best to employ the precautionary principle while waiting for results from additional scientific studies. The NWMB feels that their decision demonstrates a stable approach to balancing public safety considerations with the concerns of uncertainty raised by some members of the scientific community regarding the status of the subpopulation. Please be assured that the Board remains committed to working cooperatively with you, and to maintaining strong communications concerning appropriate management actions for the WH polar bear subpopulation.

If you have any questions or concerns regarding this letter, please do not hesitate to contact the NWMB.

Yours sincerely,



Peter Kusugak
Acting Chairperson of the
Nunavut Wildlife Management Board

¹ The NWMB and the Nunavut Minister of the Environment previously agreed that public safety is the highest priority in polar bear management (see your December 11, 2009 letter to the NWMB, and the Board's February 17, 2010 response for example).

² See specifically NLCA S. 5.3.1(b)(v). This rationale is justified under NLCA S. 5.3.3(b) because it gives effect to NLCA S.5.1.3(b)(v).

Appendix 1: Summary of Party Positions

Government of Nunavut-Department of Environment Position: The TAH for the WHB subpopulation for the 2012-2013 harvesting season should be 24 bears to be allocated by the Regional Wildlife Organization amongst the Nunavut communities that harvest from WHB.

Evidence / Arguments:

- An aerial survey of the entire summer range of WHB subpopulation was conducted by the GN-DoE in 2011 (Atkinson and others, 2012). The survey estimated the subpopulation size at approximately 1000 bears (95% confidence interval gives a possible range of subpopulation sizes between 715 and 1398).
- The aerial survey estimate is consistent with Environment Canada's 2004 capture-based estimate, indicating that the subpopulation has likely remained stable since 2004, despite continued harvesting.
- The results of the aerial survey are not consistent with predictions made in 2004 and 2007 that suggested that a continued decrease in subpopulation size could be expected.
- Using the most recent subpopulation estimate of 1000 bears and assuming a sustainable harvest rate of 4.5% (Taylor et al. 1987), there is potential for a sustainable harvest of 45 bears per year. The recommended TAH of 24 bears takes the following into account:
 - Manitoba has a guaranteed allocation of 8 for their control activities;
 - There was an overharvest of 3 bears in WHB by Nunavut communities in 2011-2012; and
 - There is uncertainty about the present subpopulation dynamics in WHB and preliminary observations and scientific analysis suggest that the recruitment rate is low (recruitment is the number of young in a population that survive to be reproductive adults). Therefore it is best to employ the precautionary approach and set the 2012-2013 TAH at 24 bears.
- Community consultations were held with HTO representatives from Rankin Inlet, Baker Lake, Arviat, Whale Cove and Chesterfield Inlet in March 2012. The communities indicated they would like a new TAH based on concerns for public safety, and the common perception of more bears in the subpopulation. A summary of the consultations can be found in Tab 9.
- As part of GN-DoE's social science/Inuit Qaujimajatuqangit research program, a public opinion poll was conducted in WHB communities in March, 2012. The most common response when participants were asked for their opinion on current polar bear abundance was that there are "the most they have seen" in recent history. The majority of people surveyed also stated that they would like to have fewer bears. Additional details on the public opinion poll can be found in Tab 8.

Nunavut Tunngavik Inc. (NTI) Position:

- NTI recommends a TAH of 3.5 percent of the most recent subpopulation estimate (1000 bears). Based on the GN-DoE's 2011 aerial survey this is equal to 35 bears.

Evidence/Arguments:

- In 2005, NTI conducted a workshop with elders and hunters from Arviat, Whale Cove, and Rankin Inlet. They all reported that polar bears had increased substantially since the early 1900's. Beginning in the 1980's Inuit began to see more bears.
- IQ reveals that polar bear subpopulations fluctuate with environmental conditions over long periods of time.

- This subpopulation of polar bears is the most handled subpopulation in the world. The effect of handling which has taken place over the last 20 years is unknown.
- An entire tourism industry has been built around polar bears in Churchill. In the past bears were fed by humans. This is no longer tolerated but Inuit report the behavior of some bears is different because they actively search for food near communities.
- In 2005 the Canadian Wildlife Service (CWS) reported that the subpopulation had been in decline since 1984. Inuit dispute this result because of methods used and the study area covered.
- In 2007, the RISKMAN model predicted a decline in the subpopulation to 700 animals by 2012. NWMB decided to reduce the TAH to 8. Since that time there have been many polar bear encounters in communities and Inuit have expressed concern for their personal safety and security.
- The GN-DoE's 2011 subpopulation estimate of 1000 bears is likely an underestimate because bears were known to be denning at the time of the survey and therefore not all bears were counted.
- Inuit feel that the target subpopulation for WHB polar bears has been set too high. A lower subpopulation level has been more typical historically, and therefore is more appropriate for conservation based on sustainable use. Target subpopulation size should realistically account for natural long-term subpopulation fluctuations.
- The average annual harvest of WHB polar bears between 1990 and 2011 is 35 animals per year, which is 3.5% of the current subpopulation estimate. The harvest level of surrounding subpopulations (Foxy Basin, Davis Strait and Southern Hudson Bay) is currently between 4% and 6% of the subpopulation estimates.

IUCN-Polar Bear Specialist Group Position:

- The PBSG strongly opposes the GN proposal for a TAH of 24 bears for Nunavut for 2012/2013. The submission does not specifically recommend a TAH but states that "... it is likely that even with the previous TAH of 8 that the harvest would be unsustainable."

Evidence / Arguments:

- The TAH is being proposed before the results from all the studies of this subpopulation are available.
- The 2011 aerial survey identified only 3% of the animals counted as yearlings, instead of 10-15% expected in a healthy subpopulation. Atkinson (2011) states that the average litter size and the proportion of cubs and yearlings were lower in WHB than in any other subpopulation.
- There is no indication that any other jurisdictions or agencies that share responsibility for the conservation and management of this subpopulation support this proposed TAH.
- Atkinson et al. (2011) says that the aerial survey-based estimate of 1000 bears accurately reflects the number of polar bears within the bounds of WHB during August 2011.
- There is no indication of an overall management goal or desired subpopulation size for WHB.
- Several years of trend data on body condition, reproduction, and survival of cubs indicate that these parameters are declining.

- No new traditional knowledge has been presented that would support the proposed TAH. The recommendation appears to be based on “strongly held views”. The PBSG does not see this approach as defensible.
- It does not appear that any effort was made during the last aerial survey to evaluate the influence of possible changes to sea ice break up patterns on the distribution and movement of polar bears.
- Proposing this TAH in a subpopulation where there is no indication it could be supported is not consistent with the “precautionary principle”.

World Wildlife Fund-Canada Position:

- WWF recommends that the previous year’s total allowable harvest of 21 bears for Nunavut remains unchanged.

Evidence / Arguments:

- There continues to be a concern among scientists and managers, as well as within communities, about the impacts of climate change on the behavior and long-term prospects of polar bears at the southern margin of their range.
- Polar bear hunting in Canada is coming under increased international scrutiny and criticism; some groups are calling for the polar bear to be up-listed to CITES Appendix 1 at the next Conference of Parties in 2013.
- Results from Environment Canada’s new mark-recapture study and an aerial survey estimate from the neighboring Southern Hudson Bay subpopulation are not yet available. The combination of these studies and the recently published report on Foxe Basin polar bears will give managers a better understanding of the polar bears in the greater Hudson Bay area.
- Maintaining the previous TAH would send a message to the international community that Canada is not making rash decisions in polar bear management.