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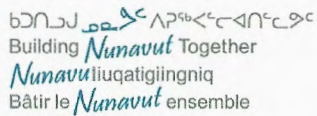
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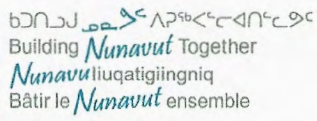
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RESOLVED that the NWMB approve, pursuant to Sections 5.6.16, 5.6.17(b), 5.3.3(c), and 5.3.3(a), of the Nunavut Agreement, an increase of four (4) bears to the regional total allowable harvest in the Nunavut Settlement Area for the Western Hudson Bay polar bear subpopulation—resulting in an overall regional total allowable harvest of thirty-eight (38) bears.

FURTHER MOVED that the NWMB recommends that the Nunavut Department of Environment complete a harvest assessment for the Western Hudson Bay polar bear subpopulation at the earliest reasonable opportunity to identify the risks of the current management decision and develop management objectives for this subpopulation.

2. MAIN POINTS OF AGREEMENT AND DISAGREEMENT AMONG HEARING PARTIES

2.1 Main points of agreement among hearing parties

- The target number of 1400 polar bears set out in the 2005 Memorandum is no longer relevant given climate change impacts on sea ice habitat and the potential effects on polar bear abundance, demographics, and distribution, and community public safety concerns.
- Inuit along the western Hudson Bay coast are observing and interacting with a greater number of polar bears in and near their communities, especially during fall and early winter.
- The protection of persons and property from polar bears is a significant and ongoing concern for all western Hudson Bay communities and needs to be given appropriate consideration in polar bear management decision-making.
- More direct actions such as bear monitoring patrols and attractant management are needed to address public safety concerns.
- Climate change is affecting the sea ice habitat of WH polar bears but the mechanisms and how sea ice change impacts polar bear demography is not fully understood.
- More research is needed on the Inuit Qaujimajatuqangit of WH polar bear abundance, behaviour and ecology.
- There is a need for more ecological studies to understand the effects of climate change and the influence of polar bear predation on ringed seal (primary prey species of polar bears) abundance along the western Hudson Bay coast.



recognizes as the maximum sustainable harvest level. However, the Board considered that its decision to increase the total allowable harvest was a balanced decision that took into careful consideration the information provided by knowledgeable Inuit at the hearing and the scientific information.

Finally, the NWMB took into consideration the social, cultural and economic impact of defense kills. An increase in the total allowable harvest will provide an opportunity for Elders and harvesters to pass on their skills and practices to younger generations, which is an important part of Inuit culture.

Most parties to the hearing agreed that the target number of 1400 polar bears set out in the 2005 Memorandum is no longer relevant because of the changes in polar bear abundance since that time, climate change impacts to sea ice habitat and on polar bears, and community public safety concerns. Recognizing that a modification of this subpopulation's management objective will not likely occur until the Nunavut Polar Bear Co-Management Plan is further developed, the Board recommends that the Department of Environment undertake a harvest assessment of the WH polar bear subpopulation and use the results to develop management objectives for this subpopulation.

As demonstrated by the 2017 harvest assessment of the Baffin Bay and Kane Basin polar bear subpopulations, harvest assessments are a very useful tool for identifying the potential risks of harvest management decisions and provides essential information for identifying long term management objectives. As such, the Board recommends that the Department of Environment conduct a similar harvest risk assessment for the WH polar bear subpopulation.



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Appendix 1

Summary of Western Hudson Bay polar bear Total Allowable Harvest public hearing party positions and arguments

Please Note: The Nunavut Wildlife Management Board's (NWMB or Board) public hearing on Western Hudson Bay polar bear total allowable harvest (TAH) included both written submissions from hearing parties and an in-person hearing. The full written submissions and public hearing transcript (transcript) are available upon request.

Government of Nunavut-Department of Environment

Position: The Government of Nunavut-Department of Environment (Department of Environment) supports and has implemented the September 2017 NWMB decision to set a regional TAH of 34 polar bears for the Western Hudson Bay polar bear subpopulation (transcript p.52 lines 13-21).

Evidence/Arguments:

- The 2016 aerial survey resulted in an abundance estimate of 842 polar bears (95% Confidence Interval = 562–1121) (July 2017, Department of Environment Briefing Note to NWMB p.3).
- The Department of Environment's analysis showed that the 2016 abundance estimate is not statistically different from the 2011 aerial survey estimate of 1030 polar bears (95% Confidence Interval = 754-1406) that used similar survey methods (July 2017, Department of Environment Briefing Note to NWMB p.3).
- The Department of Environment's conclusion was that the Western Hudson Bay polar bear subpopulation abundance remained relatively stable between 2011 and 2016 (July 2017, Department of Environment Briefing Note to NWMB p.3, transcript p.40 lines 6-11).
- During the 2016 aerial survey, cubs-of-the-year and yearlings comprised a small proportion of the bears observed (37/339) compared to adjacent Foxe Basin and Southern Hudson Bay subpopulations (July 2017, Department of Environment Briefing Note to NWMB p.3).
- In accepting the NWMB decision to increase the TAH to 34, the Minister considered all Inuit Qaujimajatuqangit (IQ) that was used by the NWMB to arrive at its decision (transcript p.52 lines 13-21).
- The Department of Environment recognizes that public safety in communities is a concern and will continue to work with communities to minimize bear-human interactions through polar bear deterrence (transcript p.41 lines 11-15).
- Climate change may have altered polar bear distribution patterns and behavior, giving Inuit hunters the impression that there are more bears because there are more bear-human encounters (July 2017, Department of Environment Briefing Note to NWMB p.3).
- The Department of Environment has made a commitment to incorporate IQ into wildlife research and decision-making (transcript p.51 lines 17-21).

Nunavut Tunngavik Incorporated

Position: Nunavut Tunngavik Incorporated (NTI) supports the September 2017 NWMB decision to increase the TAH for the Western Hudson Bay polar bear subpopulation by six (6) for the 2017-2018 harvest season (resulting in a regional TAH of 34 bears for Nunavut). Will not oppose an increase to the TAH beyond 34 if that decision is made by the NWMB (NTI written submission, p.1, transcript p.122 lines 21-25)

Evidence/Arguments:

- NTI noticed that in arriving at its September 2017 TAH decision, the NWMB considered the knowledge, insight and perspective of Inuit, who have advocated for a TAH increase on the grounds of public safety (NTI written submission, p.1).
- Supports IQ that the number of polar bears have increased, and public safety is a major concern (transcript p.117 lines 24-25).
- Encourages and supports the NWMB in-person public hearing process as these hearings provide Inuit the opportunity to voice their concerns in person (NTI written submission, p.1).
- The NWMB decision prioritized public safety over the sale of polar bear hides, and NTI is therefore not concerned about a negative non-detriment finding for bears harvested from the Western Hudson Bay subpopulation (transcript p.121 lines 09-21).
- Would like to see a moratorium on the flexible quota system and associated credits and penalties until the issue is appropriately dealt with in the draft Nunavut Polar Bear Co-Management Plan (NTI written submission, p.4, transcript p.119 lines 18-23, p. 130 lines 1-6).
- Strongly encourages the inclusion of IQ in wildlife management research and decision making to improve public confidence in the Nunavut Agreement co-management system (NTI written submission, p.2).

Environment and Climate Change Canada

Position: Calls for taking the precautionary approach when setting the TAH which takes into account the growing scientific evidence that climate change is affecting the western Hudson Bay marine and sea ice ecosystems, resulting in impacts to polar bears and their primary prey species, ringed seals (Environment Canada written submission, p.1-2; transcript p.212 lines 4-8).

Evidence/Arguments:

- Recognized that IQ indicates a greater number of polar bears have been observed in and near communities and that these increased observations constitute a threat to public safety (transcript p.208 lines 10-24).
- Recognized and applauds the Department of Environment for a robust and effective polar bear deterrent program in partnership with WWF-Canada and the affected communities (transcript p.209 lines 2-8).

- Agrees with the sentiments expressed by the NWMB that the Department of Environment should continue to work with communities and other parties as appropriate to ensure public safety (transcript p.209 lines 8-12).
- Notes that sea ice break up in Western Hudson Bay has advanced by twenty-two (22) days and freeze up by fifteen (15) days since 1979 (transcript p.211 lines 12-16).
- Recognized that the Department of Environment 2016 aerial survey resulted in an abundance estimate of 842 bears (95% Confidence Interval = 562–1121) which represents a decline of 18% when compared to 1030 bears (95% Confidence Interval = 754–1406) recorded during the 2011 aerial survey, although this decline is not statistically significant (transcript p.209 lines 13-18).
- Considers research conducted by Environment Canada, Science and Technology Branch, at field sites in Manitoba that indicates declines in polar bear body condition, reproductive performance and survival, as a consequence of sea ice decline (Environment Canada written submission, p.2).
- Recognized that based on observed changes in body conditions, reduced reproductive productivity, as well as observed and expected decline in sea ice coverage, the Polar Bear Technical Committee has determined that the Western Hudson Bay polar bear subpopulation will likely decline over the next ten (10) years (Environment Canada written submission, p.2).
- Considers research conducted by Fisheries and Oceans Canada, which shows declines in Western Hudson Bay ringed seal density and blubber thickness and that ringed seals make up at least 60% of the Western Hudson Bay polar bear diet (transcript p.211 lines 5-10; p.221 lines 20-23).
- Recognized other reasons why there more polar bears entering communities including: (1) bears are spending more time onshore; (2) bears remember feeding locations (e.g. garbage dumps) and will come back to them; (3) delayed freeze-up may allow more bears from Manitoba to reach communities before finding ice (transcript p.239 lines 12-25; p.240 lines 1-25).
- Notes that Canada's management of polar bears is under intense scrutiny and it is essential to demonstrate that our levels of harvest are sustainable according to international standards (transcript p.212 lines 17-24).
- Recommends that co-management partners and stakeholders undertake a comprehensive harvest risk assessment to identify the potential risks of future TAH decisions on poplar bear subpopulation prior to decision making (transcript p.212 lines 10-16).
- Notes that polar bears show strong site fidelity on the land, but on ice, the range of Western Hudson Bay polar bears extends beyond the current management boundaries (transcript p.228 lines 1-15).

Kivalliq Wildlife Board

Position: Kivalliq Wildlife Board (KWB) supports an increase in the TAH from 34 to at least 45 polar bears (40 for Nunavut and 5 for Manitoba).

Evidence/Arguments:

- KWB remains committed to working with its co-management partners on polar bear management in Nunavut (KWB written submission, p.3).
- Public safety and protection of property is a major concern for people in the Kivalliq Region and a priority of the KWB (KWB written submission, p.4).
- KWB was happy to see the recent increase in the Western Hudson Bay polar bear TAH from 28 to 34 although 34 tags are still not enough to deal with the current public safety crises in the Kivalliq Region (KWB written submission, p.3, transcript p.403 lines 22-25).
- Harvest limitations and increased polar bear encounters have led to increased defense of life and property kills thereby limiting the ability for Inuit to participate in and learn traditional polar bear hunting practices (KWB written submission, p.4).
- Does not agree to the current population point estimate of 842 polar bears for the Western Hudson Bay subpopulation but considers 1000 bears a reasonable population estimate based on Inuit Qaujimagatuqangit and that 1000 bears is within the 95% confidence interval of the 2016 aerial survey (transcript p.410 lines 15-25).
- Recommends a TAH 45 polar bears for the Western Hudson Bay polar bear subpopulation (i.e., 4.5% of 1000 bears; 40 for Nunavut and 5 for Manitoba) (KWB written submission, p.4, and transcript p.405 lines 9-10).
- Recommends a moratorium on the severe penalizations to harvesters that come from overharvesting of females in the flexible quota system (KWB written submission, p.7, and transcript p.411 lines 08-25).
- Recommends that the Department of Environment extend the polar bear deterrence program currently implemented in Arviat to Whale Cove and Chesterfield Inlet (KWB written submission, p.8).
- Recommends that the Department of Environment increase funding levels and improves access to the Wildlife Damage Prevention and Compensation Programs (KWB written submission, p.8).
- Recommends that the Department of Environment and municipalities work together to reduce polar bear attractants in communities (KWB written submission, p.8).

Arviat Hunters and Trappers Organization

Position: Supports an allocation of 25 polar bear tags for Arviat (transcript p.150 lines 21-25).

Evidence/Arguments:

- The WH polar bear subpopulation is increasing based on the number of bears seen in or near communities (transcript p.148 lines 11-25, p.150 lines 7-10)
- Arviat HTO is concerned about the public safety and the destruction of property (transcript p.150 lines 11-25, p.154 lines 1-5)
- The seal population around Arviat is in decline (transcript p.155 lines 14-21)

Whale cove Hunters and Trappers Organization

Position: Supports an allocation of 20 polar bear tags for Whale Cove (transcript p.175 lines 08-11).

Evidence/Arguments:

- The WH polar bear subpopulation is increasing and public safety is a major concern (transcript p.166 lines 16-25, p.167 lines 1-5)
- Beluga whale carcasses that are left floating on the shorelines can act as attractants to polar bears. Beluga whale harvesters should be encouraged to dispose carcasses properly (transcript p.167 lines 16-25)
- The polar bears that come into Whale Cove seem to be in good health (transcript p.176 lines 8-15)

Chesterfield Inlet Hunters and Trappers Organization

Position: Supports an allocation of 20 polar bear tags for Chesterfield Inlet.

Evidence/Arguments:

- The sex-selective harvest restriction does not work very well for us because it is very difficult for young hunters to distinguish between male and female bears (transcript p.180 lines 15-20).
- We do not support the removal of tags from community allocations when polar bears are harvested in defense of life or property (transcript p.181 lines 1-25, p.182 lines 16-25).
- Beluga whale carcasses that are left floating on the shorelines can act as attractants to polar bears. Beluga whale harvesters should be encouraged to dispose carcasses properly (transcript p.181 lines 16-25).

Rankin inlet Hunters and Trappers Organization

Position: Supports a regional allocation of 40 polar bear tags (transcript p.185 lines 14-17).

Baker Lake Hunters and Trappers Organization

Position: Supports an allocation of at least one polar bear tag for Baker Lake (transcript p.198 lines 18-24).

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- Tourism and research related to polar bear handling and habituation in Churchill, Manitoba is the reason why polar bears have lost their fear of humans and increasingly come into communities (transcript p.112 lines 1-12, p.113 lines 1-25).

World Wildlife Fund Canada

Position: World Wildlife Fund Canada (WWF-Canada) supports a precautionary approach to setting a TAH with clearly defined and measurable management objectives. WWF-Canada recommends a more direct method of addressing public safety concerns that reduces defense kills and maximizes traditional harvest opportunities.

Evidence/Arguments:

- There is a strong need to finalize the draft Nunavut Polar Bear Co-Management Plan, define the management objectives for the subpopulation, and address community concerns about the flexible quota system (transcript p.445 lines 21-25).
- It is very evident that the number of polar bears that are coming into the communities exceeds the capacity of local and territorial governments to ensure the safety of community members and maximize traditional harvest opportunities (transcript p.447 lines 1-4).
- Polar bear harvest is a vital part of Inuit culture and economy and is not a threat to polar bear populations in Canada (transcript p.448 lines 3-7).

