



Friday, January 18, 2013

Honourable Tom Hedderson
Minister of Environment and Conservation
Government of Newfoundland and Labrador
P.O. Box 8700
St. John's, NL, Canada
A1B 4J6

Re: Polar Bear Total Allowable Harvest in the Labrador Inuit Settlement Area

Dear Minister Hedderson,

I am writing to inform you of the Torngat Wildlife and Plants Co-Management Board's 2013-14 Total Allowable Harvest review of Polar Bear in the Labrador Inuit Settlement Area. Part 12.9.1(a) of the Labrador Inuit Land Claims Agreement (the Agreement) empowers the Board to establish, modify, or eliminate Total Allowable Harvests (TAH) of Non-Migratory Species of Wildlife. This correspondence is intended to capture the Board's annual assessment of whether recent information or interpretation merits modification to, or elimination of, the existing TAH.

Polar Bear ecology is complex, and so is Polar Bear management and research: Polar Bear are an iconic species that are significant locally, regionally, nationally, and internationally. Locally, the Board is engaged in an Inuit Knowledge study, and a report is expected in late 2013. Regionally, the Board is reviewing a draft version of a revised management plan, and is planning to convene a second user workshop for the three jurisdictions that share the range of the Davis Strait population. Nationally, the Board maintains membership on the Polar Bear Technical Committee and the Polar Bear Administrative Committee, and is working with Environment Canada, Inuit Tapiriit Kanatami, Regional Inuit Governments and Organizations, and Co-Management Boards to develop a national standard for the collection and integration of Aboriginal Traditional Knowledge. Internationally, the Board is represented on the Canadian delegation to the Conference of Parties to the Convention on International Trade in Endangered Species in March of 2013, where Polar Bear will be considered for uplisting to Appendix I.

Pending the outcome of these and other processes, the Board met on November 13, 2012, and decided not to modify or eliminate the Total Allowable Harvest for Polar Bear for the 2013-hunting season within the Labrador Inuit Settlement Area. We hope that this annual correspondence will be part of a continuing dialogue about Polar Bear management in Nunatsiavut. We invite your comments by way of a written response and we are available to meet at your convenience.



Sincerely,

Ron Sparkes Ed.D
Chairperson
Torngat Wildlife and Plants Co-Management Board

CC: Honourable Darryl Shiwak, Minister of Lands and Natural Resources



Polar Bear Total Allowable Harvest in the Labrador Inuit Settlement Area

Decision:

Consistent with chapter 12 of the Labrador Inuit Land Claims Agreement, the Torngat Wildlife and Plants Co-Management Board has decided to:

- Not modify or eliminate the Total Allowable Harvest (TAH) of Polar Bear for the 2013 hunting season within the Labrador Inuit Settlement Area.

Background:

1. Case History and Context

- The Torngat Wildlife & Plants Co-Management Board ('TWPCB' or 'the Board') is the creation of the three negotiating parties to the Labrador Inuit Land Claims Agreement ('LILCA' or 'the Agreement') and established under the Agreement in Part 12.8 of Chapter 12, with its powers and responsibilities outlined in Part 12.9. For greater clarity, and ease of reference, the TWPCB is empowered by the LILCA to establish, modify and eliminate Total Allowable Harvests (12.9.1(a)) for all species of wildlife, other than caribou and migratory birds (12.1.1).
- In the absence of a TAH established under the terms of Chapter 12 of the Agreement, Inuit have the right to harvest throughout the Labrador Inuit Settlement Area to their full level of need for food, social and ceremonial purposes (12.3.2).
- On January 25, 2010, the TWPCB submitted its decision to establish a TAH of 12 bears, as per 12.9.1(a), and 12.1.1 of the LILCA. In a letter dated March 12, 2010, the Minister of the Newfoundland and Labrador Department of Environment and Conservation disallowed the decision of the TWPCB, citing Parts 12.9.4 and 12.9.5 of the LILCA, as well as Sections 39 and 114 of the Wild Life Regulations and the annual Polar Bear Hunting Order.
- On December 21, 2010, the TWPCB submitted a more thorough analysis to the Minister of Environment and Conservation, and reaffirmed its decision to establish a TAH of 12 Polar Bears in Nunatsiavut. The decision was varied, in favour of a flexible quota system allowing for a carry-forward of up to 6 unused licences from one season to the next. The flexible quota system resulted in an effective TAH of 11 in 2011.
- On November 23, 2011, the TWPCB submitted its decision to establish a TAH of 12 Polar Bears in Nunatsiavut: the Minister accepted the Board decision in a letter dated January 23, 2012.

2. *Scientific Knowledge*

- The Board included its analysis of scientific knowledge of the Davis Strait subpopulation in its previous submissions, and there has been little new information to warrant further elaboration beyond a recap of the main points:
 - i. Despite methodological challenges and inconsistencies, the Davis Strait subpopulation is understood to have undergone a multi-decadal increase to an estimated 2,158 bears in 2007 (Peacock and others 2012, Stirling and others 1980, Stirling and Killian 1980).
 - ii. Harp Seals comprise 90% of the Polar Bear diet in Davis Strait South. The Harp Seal population has increased since the 1950's to approximately 9 million animals (DFO 2011). The Harp Seal increase corresponds with the Polar Bear increase.
 - iii. Polar Bear densities estimated in 2007 were very high, at 5.1/1000 KM² of sea-ice.
 - iv. Sea-ice is important, and possibly critical, Polar Bear habitat (Stirling and others 1999, Ferguson and others 2000). There is some empirical evidence to support a correlation between demographic vital rates and individual health, and sea ice decline, in Western Hudson Bay (Regehr and others 2007, Stirling and others 1999) and the Southern Beaufort Sea (Regehr and others 2010, Rode and others 2010). Sea ice coverage in the Davis Strait is highly variable, as is the timing of ice breakup. Stirling and Parkinson (2006) report that the timing of breakup fluctuated annually without trend from 1978 to 1991, and trended downwards from 1991 to 2004. Peacock and others (2012) suggest a downward trend in summer ice concentration from 1985 to 2008.
 - v. Density-dependent effects are an important driver of Polar Bear population dynamics. Peacock and others (2012) report that recruitment rates in the Davis Strait subpopulation are low relative to other populations, but survival rates are high (both are higher in Davis Strait South than they are in Davis Strait Central or North). They conclude that this pattern, coupled with apparent declines in body condition (Rode and others 2012), is consistent with density-effects and/or habitat degradation.

3. *Inuit Knowledge*

- Kotierk (2010), working on behalf of the Government of Nunavut, conducted a public opinion pole to quantitatively assess issues relating to polar bear abundance, environmental change, Inuit knowledge, and wildlife management. The methodology employed is consistent with definitions of Inuit knowledge that recognize Inuit values and understandings as critical components of the Inuit knowledge system. The project was intended to develop and quantify an understanding of social carrying capacity for

polar bears – the optimum abundance to maximize positive human/bear interactions through hunting and viewing opportunities, without exceeding social tolerance for negative interactions such as property damage or a decreased sense of security (after Peyton and others 2001). Most respondents involved in the study indicated that they preferred a medium abundance (neither low nor high). Amongst Inuit hunters surveyed, 54% indicated that polar bear abundance is higher than they would prefer, and 37% indicated that polar bear abundance is at their preferred level.

Key Considerations:

- The 16th biennial Conference of the Parties to the Convention on International Trade in Endangered Species will be held in Thailand in March of 2013. The Parties will vote on a proposal to uplist Polar Bear from Appendix II to Appendix I, which would ban international trade. The Canadian delegation is lobbying against the proposal, arguing that trade does not drive harvest, and that a ban on trade may in fact jeopardize or undermine domestic Polar Bear conservation initiatives, and compromise social-economic sustainability in Northern Communities.
- There is no explicit management objective common to the three jurisdictions that share the range of the Davis Strait subpopulation. One of the primary goals of the inter-jurisdictional user-to-user workshop held in Kuujuaq, September 13-16, 2010, was to develop a clear management objective for the entire subpopulation, but no common goal emerged. The Davis Strait subpopulation is understood to be abundant and dense – human/bear conflict appears to be increasing, and density or habitat impacts may be affecting reproductive rates, litter sizes, and body condition. It is possible that the subpopulation has exceeded or is approaching social and ecological carrying capacity, and a population decrease may therefore be socially and ecologically preferable. This discussion is included only to underscore the fundamental necessity of an explicit management objective common to all three jurisdictions.
- The Torngat Wildlife and Plants Co-Management Board has partnered with Memorial University to conduct an Inuit Knowledge study in Nunatsiavut. Interviews were conducted in the winter of 2012-13, analysis is underway, and a final report is expected by the fall of 2013.
- The Newfoundland and Labrador Polar Bear Management Plan expired in 2011. A revised plan has been drafted and was released for comment in November of 2013. The plan will include management and research objectives for the Newfoundland and Labrador portion of the subpopulation.



- The Board is working with partners in Nunatsiavut, Nunavik, and Nunavut to develop a follow-up to the 2010 user-to-user workshop. The follow-up will provide an opportunity to develop management objectives, research priorities, and sharing principles.
- The quota/TAH for the Newfoundland and Labrador harvest of DS Polar Bear was established at 4 in 1994, increased to 6 in 2003, increased to 11 in 2011¹, and increased to 12 in 2012. Nunavut increased their harvest of Davis Strait Polar Bear from 34 to 46 in 2004, and to 61 in 2012. Nunavik does not have a quota system, but their harvest increased to 52 in 2011-12 (5 year average of 25), from 23 in 2010-11 (5 year average of 18). The Greenlandic quota increased from 2 to 3 in 2013. In total, the allowable harvest for the subpopulation increased from 72 in 2010-11, to 101 in 2012-13². The overall trend has been one of stability punctuated by change – most notably and dramatically in the last two years. Some stability is desirable, and will greatly increase the potential to monitor population effects of changing harvest rates.

Meetings:

- The Board met on 13 November, 2012, in Happy Valley – Goose Bay and developed this decision.

¹ The 2011 TAH in Nunatsiavut was effectively increased to 11 through a carry-forward of 5 unused licences from 2010.

² These figures use a 5 year average of the Nunavik harvest in lieu of a quota or TAH. The 2010-11 figure uses a 5 year average ending 2010-11, and the 2012-13 figure uses a 5-year average ending 2011-12.



References:

DFO. 2011. Current Status of Northwest Atlantic Harp Seals, (*Pagophilus groenlandicus*). DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2011/050.

Ferguson, S.H., Taylor, M.K. and Messier, F. 2000. Influence of sea ice dynamics on habitat selection by polar bears. *Ecology* 81(3): 761---772.

Kotierk, M. 2010. The Documentation of Inuit and Public Knowledge of Davis Strait Polar Bears, Climate Change, Inuit Knowledge and Environmental Management using Public Opinion Polls. Nunavut Wildlife Service, Iqaluit, Nunavut. 103pp.

Peacock, E., Taylor, M.K., Laake, J., and I. Stirling. Accepted 2012. Population Ecology of Polar Bears in Davis Strait, Canada and Greenland. *Journal of Wildlife Management*. 45pp.

Peyton, B., P. Bull, T. Reis and L. Visser. 2001. An assessment of the social carrying capacity of black bears in the lower peninsula of Michigan. Submitted to Michigan Department of Natural Resources, Wildlife Division.

Regehr, E.V., Hunter, C.M., Caswell, H., Amstrup, S.C. and Stirling, I. 2010. Survival and breeding of polar bears in the southern Beaufort Sea in relation to sea ice. *Journal of Animal Ecology* 79: 117-127.

Regehr, E.V., Lunn, N.J., Amstrup, S.C. and Stirling, I. 2007. Effects of Earlier Sea Ice Breakup on Survival and Population Size of Polar Bears in Western Hudson Bay. *The Journal of Wildlife Management* 71[8]: 2673-2683.

Rode, K., Peacock, E., Taylor, M., Stirling, I., Born, E.W., Laidre, K.L., and Wiig, O. 2012. A tale of two polar bear populations: ice habitat, harvest, and body condition. *Population Ecology* 54: 3-18.

Rode, K.D., Amstrup, S.C. and Regehr, E.V. 2010. Reduced body size and cub recruitment in polar bears associated with sea ice decline. *Ecological Applications* 20[3]: 768-782.

Stirling, I. & Parkinson, C. L. (2006) Possible effects of climate warming on selected populations of polar bears (*Ursus maritimus*) in the Canadian Arctic. *Arctic*, **59**, 261-275.

Stirling, I., Lunn, N.J. and Iacozza, J. 1999. Long-Term Trends in Population Ecology of Polar Bears in Western Hudson Bay in Relation to Climatic Change. *Arctic* 52[3]: 294-306.

Stirling, I. & Killian, H. P. L. (1980) Population ecology studies of the polar bear in northern Labrador. Canadian Wildlife Service Occasional Paper 42. 19 pp.



Stirling, I., Calvert, W. & Andriashek, D. (1980) Population ecology studies of the polar bear in the area of southeastern Baffin Island. Canadian Wildlife Service Occasional Paper 44. 31 pp.