

SUBMISSION TO THE NUNAVUT WILDLIFE MANAGEMENT BOARD

FOR

Information: X

Decision:

Issue: Sustainable Removals of Eastern Arctic Bowhead Whales

Background:

In January 2007, Fisheries & Oceans Canada (DFO) scientists updated the Nunavut Wildlife Management Board (NWMB) about recent research on Eastern Arctic (EA) Bowhead whales, and offered preliminary advice on sustainable removals from this stock. This advice was considered preliminary because the bowhead aerial survey materials were to be re-analysed. The bowhead aerial survey data were re-analysed between August and October of 2007, and reviewed by DFO's National Marine Mammal Peer Review Committee (NMMPRC) in November 2007.

In December 2007, DFO advised the NWMB that the DFO NMMPRC had accepted the fully corrected partial population estimate of 14,400 bowhead whales for the EA Bowhead population. DFO noted that, in view of the large uncertainty attached to the revised population estimate (95% CI 4811-43105) it would be prudent for Canada to wait for international scientific input on the EA bowhead survey re-analysis before establishing an official Potential Biological Removal (PBR). DFO recommended that the NWMB continue to set a short-term Total Allowable Harvest (for a year or two) and wait for subsequent DFO Science advice following that discussion.

DFO Science recently completed its assessment of the Eastern Arctic bowhead whale population (see attached Science Advisory Report 2007/053). The assessment includes an estimation of the level of human induced mortality that bowheads can sustain while still allowing the population to rebuild to an optimum sustainable size. DFO calculated these levels based on an internationally accepted mathematical formula called Potential Biological Removal (PBR). PBR only considers human induced mortality which, for bowheads includes such causes as hunting (including struck and lost), net entanglements, ship collisions, etc. Potential Biological Removal does not consider bowheads that are killed by killer whales, or that die from natural causes.

The DFO Science Advisory Report concludes that a Potential Biological Removal of 18 bowhead, from all human-induced mortality, is recommended for the EA bowhead population at this time. The Report says that "Given the high level of uncertainty, both with the current and pre-commercial whaling population estimates, it is recommended that a high level of risk avoidance (i.e. $F_R = 0.1$, $PBR = 18$) be considered for the management of this population until it can be demonstrated that a higher PBR is warranted." Changes in the Arctic environment (e.g. resulting from

climate change) may also warrant a cautious approach to management of the EA bowhead population.

Bowhead whales are a migratory species and the EA bowhead population is shared by Nunavut, Nunavik and Greenland. Nunavut Tunngavik Incorporated's Wildlife Policy Advisory Committee (WPAC) have recommended that 3 bowheads per year for the next 5 years will satisfy the full level of Inuit needs (WPAC resolution #WPAC 07-NOV-002). Nunavik Inuit have requested a harvest of one bowhead whale in 2008. In June 2007, the International Whaling Commission awarded Greenland two bowhead strikes/year for each of the years 2008-2012 subject to annual review. The current potential harvest level (n=6) by Nunavut, Nunavik and Greenland, in addition to the current known levels of mortality from other human causes (e.g., net entanglement), is below the recommended PBR of 18.

The NWMB may wish to continue setting short-term TAHs (for a year or two) and wait for results of international peer discussion and subsequent Science advice before setting a long-term annual quota for EA bowhead. This approach would allow the Board additional time to consider issues such as how bowhead harvesting might be structured (e.g. adults/juveniles) within Nunavut. At the same time, research will continue towards refining the dive correction factors used in estimating population abundance.

The NWMB may wish to consider both the pros and cons of a large increase in bowhead TAH. Canada's Aboriginal hunt of large whales has not been an issue internationally because the take is considered to be small. A sudden and dramatic rise in Canadian bowhead quota may draw unnecessary attention internationally and may even provoke the US and other nations to impose sanctions on Canada.

The allocation of bowhead between Nunavut and Nunavik is the responsibility of the Minister. DFO prefers that the sharing arrangement of bowhead harvesting be decided between Nunavut and Nunavik.

Consultations: B. Hunt, K. Pelley, K. Fisher, L. Postma, K. Martin, H. Cleator, E. Couture, D. Gillis

Recommendations: That the NWMB review the Science Advisory Report on the assessment of EA Bowhead whales (SAR 2007/053) and consider continuing a short-term approach to establishing TAH for EA bowhead whales (for a year or two) until results from an international discussion are resolved before setting a long-term annual quota for the EA Bowhead

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