



SUBMISSION TO THE

Nunavut Wildlife Management Board

Information: X

Decision:

Issue: Update on Baffin Bay and Kane Basin sub - population study results and consultations.

Background:

The Baffin Bay (BB) and Kane Basin (KB) polar bear populations were surveyed in the 1990s (1993-1997) using capture and tagging methods. These studies estimated population size to be approximately 2074 bears in BB and 164 bears in KB. Population viability analyses and status assessments based on the results from these surveys predicted that both populations would decline due to high harvest and the potential negative effects of long-term reductions in sea-ice habitat. In contrast, local knowledge and Inuit Qaujumajatuqangit (IQ) indicated that the BB population was stable or increasing while the status of KB was uncertain.

Both BB and KB are harvested by hunters from Nunavut and Greenland. In 2009, a Memorandum of Understanding was signed by Canada, Nunavut and Greenland to help coordinate the management of polar bear in these shared populations. Under this MOU, the Canada-Greenland Joint Commission (JC) for the management of polar bears was established. In 2010, the JC reviewed the available information on polar bears concluding that the scientific information for both populations was out dated and that the IQ information was limited. The JC recommended that new studies be conducted to provide updated scientific information and IQ. This new information was needed in-order to properly manage harvest and to help resolve differences between the IQ and the scientific information collected in the 1990's.

Current Status:

New population surveys in BB and KB were conducted between 2011 and 2014. In response to concerns expressed by Nunavummiut regarding the capture and handling of bears, biopsy darting to collect DNA was used in both surveys. Biopsy darting does not require capture or drugging. By using this genetic mark-recapture technique, levels of capture and handling were reduced by more than 90%.

For Baffin Bay, results from the survey estimated the population size in 2013-2014 to be approximately 2800 bears. Due to significant differences between the methods used

during the 1990s survey and the recent survey, it was not possible to directly compare population estimates from the two studies. It therefore remains unclear whether there has been a true change in population size since the time of the previous study. Although the BB population estimate indicates an abundant and viable population at present, results from the recent study show that reproductive output and overall body condition are declining. This decline may be a response to the long-term deterioration in sea-ice conditions that has been recorded in this region. Movement patterns on the sea-ice and denning behavior on land are changing. Bears are coming ashore earlier and spending longer on land.

For Kane Basin, results from the survey estimated the population size in 2014/2015 to be approximately 357 bears. This population appears to be stable or possibly increasing. This change in status may be the result of reduced hunting pressure and/or more favorable ice conditions in KB. Hunting pressure in the Greenland sections of KB has been reduced in recent years due to the introduction of a quota and to sea-ice conditions that have made it difficult for hunters to access the area. A decline in multi-year ice and an increase in first-year ice cover may have increased the productivity of this area. Unlike BB, there was no evidence of declines in body condition or reproductive performance between the 1990s and the recent survey.

The combined harvest in BB has averaged 163 bears per year from 1992 to 2014; with a peak harvest of 206 bears in 2003. During this period, harvest levels have changed significantly. In 2004, Nunavut increased the Total Allowable Harvest (TAH) for BB from 64 to 105 tags. Between 2010 and 2014, this TAH was reduced by 10 tags per year over 4 years; bringing it down to 65. In 2006, Greenland introduced its first quota on polar bear hunting, setting a limit on the number of bears harvested each year across all populations but not setting limits on individual populations. The combined harvest in KB has averaged 9 bears annually between 1993 and 2014. During this period most of the harvesting in KB has been conducted by Greenland hunters. The Nunavut TAH has remained unchanged at 5 bears per year but this TAH has rarely been filled (e.g. only 1 bear being harvested between 2011 and 2014).

The development of harvest management recommendations for BB and KB will consider the results from these new surveys and recent IQ studies, along with information on historical harvest levels.

Recommendation: *N/A*

Consultations:

From January 9-16 2017 representatives from the Government of Nunavut, Nunavut Tunngavik Inc., the Qikiqtaaluk Wildlife Board and the Nunavut Wildlife Management Board met with Hunters' and Trappers' Organizations from Grise Fiord, Pond Inlet, Clyde River, and Qikiqtarjuaq to discuss the results of these scientific studies, and a recently completed IQ study.

Next Steps:

- The Scientific Working Group (SWG) was tasked by the JC to prepare a report by June 2017 that examines various harvest risk scenarios for the Baffin Bay polar bear subpopulation.
- The various harvest options and associated risks of decline will be discussed between the co-management partners, and evaluated as to how these align with community objectives and concerns.
- Discussions about management objectives and goals for the BB and KB polar bear populations will occur during a face-to-face JC meeting.
- The JC will also seek input from the user –to –user group concerning the SWG harvest recommendations before developing final harvest and management recommendations.
- Further Community Consultations will be conducted following the release of the SWG harvest risk analysis and recommendations and the JC face-to-face meeting to discuss harvest recommendations.
- Harvest recommendations will be provided to the NWMB based on the recommendations from the JC.