

**Executive Summary**  
**52<sup>nd</sup> Meeting of the Polar Bear Technical Committee**  
**1-4 February 2021**  
**Virtual Meeting**  
**Host: Government of Québec**

The 52<sup>nd</sup> meeting of the Polar Bear Technical Committee (PBTC) was hosted by the Government of Québec, 1-4 February 2021 in a virtual format due to travel and health restrictions associated with the COVID-19 pandemic. The meeting used an online conferencing platform and a modified agenda that considered both reasonable lengths of time for participants to be sitting in front of computers or on the phone and the time zones over which the participants were spread (5½ hours). The meeting was attended by 16 of 18 Committee Members (Nunavut Tunngavik Incorporated and Wildlife Management Advisory Council - North Slope were unable to attend), as well as 18 permanent participants, invited specialists, and support staff.

Both 'open' and 'closed' sessions comprise the formal meeting of the PBTC. The 'open' session occurs first and provides a forum for members, permanent participants, invited specialists, observers, and support staff to participate and exchange information.

**Day One – Open Session**

On the morning of the first day of the meeting, the PBTC discussed an email correspondence from the PBAC requesting changes to the comments section of the PBTC status table regarding Nunavut's change from a 2:1 to a 1:1 sex ratio harvest. The PBAC's suggestion was to remove that language from the "Comments" for all subpopulations to which it applies and to replace with a footnote:

*"The Government of Nunavut targeted a 2:1 male-biased harvest sex ratio starting in the early 1990's to support a maximum sustainable yield approach to harvest and to promote recovery of polar bear sub-populations. Starting in the 2019/20 harvest season, Nunavut adopted a harvest of up to 1:1 females per male in response to input from Nunavut Users and Co-management partners. The Government of Nunavut and the Wildlife Management Boards will continue to closely monitor the harvest, including the actual proportion female, as harvest is expected to remain male-biased given prohibitions on the take of females with cubs".*

The PBTC members noted that it took considerable time to come up with language in the status table that was supported by all, and that it is an accurate technical comment. Members agreed to revisit during the closed portion of the meeting.

The PBTC also learned that the PBAC has changed its own Terms of Reference to include language that allows the PBAC to suggest changes to PBTC status table, but the changes to the PBAC Term of Reference occurred without consultation with PBTC. PBTC members expressed concern that this has the potential to limit PBTC's independence as a technical committee. Finally, PBTC expressed concern that while changes to PBTC Terms of Reference go to PBAC for approval, the PBAC does not reciprocate and seek feedback on potential changes to PBAC Terms of Reference that might affect PBTC. Thus, PBAC could change their Terms of Reference to override advice provided to it by the PBTC.

The PBTC briefly reviewed the annual datasets it maintains including the harvest table, which feeds into the status table, and the research table, which summaries the types and intensity of research on polar bears undertaken in the previous year. Most noteworthy was that there was no polar bear field research (physical capture, genetic biopsy, or aerial survey) undertaken in 2020 due to the COVID-19

pandemic. Thirteen active satellite collars are currently on bears, all have release mechanisms that will drop the collars in fall 2021.

To streamline the meeting to accommodate the reduced length of each day, many of the typical presentations from each jurisdiction were eliminated and the reports were posted on a SharePoint site in advance. Thus, presentations were limited to the most important ones with an open period in which to ask questions either on the presentations or the written reports.

Government of Nunavut provided final reports on new estimates of abundance for the Gulf of Boothia and M'Clintock Channel subpopulations. These reports were welcomed by the PBTC and address two of the five subpopulations (Gulf of Boothia, Lancaster Sound, M'Clintock Channel, Norwegian Bay, and Viscount Melville Sound) for which abundance estimates are > 20 years old.

Based on these new assessments, it appeared that M'Clintock Channel had likely increased whereas Gulf of Boothia was stable. Both reports noted that issues of emigration and immigration confounded survival rate estimates and thus subpopulation estimates. Satellite telemetry was identified as a component in both studies that would have helped, but its use was not supported by communities.

Nunavut noted that it was planning to begin genetic mark-recapture surveys in Lancaster Sound and Norwegian Bay in spring 2021, but that pandemic restrictions may alter plans. Nunavut indicated it hoped that a final report for the Davis Strait subpopulation reassessment might be out in next 2-4 months. Some caution was expressed from Nunavut that costs of doing these types of inventories have increased, which may result in Nunavut not being able to complete inventories according to schedule.

Although no report on the reassessment of Viscount Melville Sound was presented, it was suggested that a final report was coming very soon.

The PBTC had a brief discussion about whether it is time to rethink trying to estimate maximum sustainable harvest levels, which requires detailed data that is becoming expensive to collect. A different approach might allow for less frequent and less expensive inventories that, while less precise, would probably still be a valid approximation.

The USGS presented a summary of recent work undertaken to update survival and abundance of bears on the US side of Southern Beaufort Sea. It was noted that with Canada's moving of the boundary between the Southern Beaufort Sea and Northern Beaufort Sea subpopulations in 2014, that approximately 80% of the Southern Beaufort Sea subpopulation now occurs within US boundaries. Thus, the work being done on the US side likely represents a good index of what is going on across the entire subpopulation. USGS research/analysis has extended the Southern Beaufort Sea time series through 2015. It shows that there has been general stability in number of bears in the range of 500-600 from 2005 onwards. The USGS stressed that the analysis was based only on data collected in the US and does not include Canadian data.

The PBTC Indigenous Knowledge Working Group provided an update on its ongoing work relative to the strengthening of IK within the PBTC. Proposed tasks for the coming year include to (1) continue working on the IK guidelines compendium; (2) generate list of recommended future invited specialists, including IK holders for consideration; (3) develop glossary of terms for PBTC related to IK; (4) develop a contact list for each region (who prospective researchers should be in touch); (5) continue to revise IK Definition and PBTC's Status Table Terms (focusing on IK); and, (6) consider revisions to PBTC status table structure.

The opening day ended with summary updates of the 2020 meeting of the Polar Bear Range States (PBRS) in Svalbard, the PBRS Circumpolar Action Plan, recent activities of the Polar Bear Specialist Group, and the PBRS Conservation Award having been given to Ian Stirling.

## **Day Two – Closed Session**

The closed session began with a revisitation of the PBAC email requesting that PBTC rephrase language in the status report regarding comments that “recent change in managed harvest sex ratio in Nunavut could reduce population growth rate”. The PBTC was asked to remove this language for each subpopulation and to replace with an asterisk that references a single footnote.

It was agreed that if the PBTC had missed or not included important information that it is appropriate for the PBAC to request changes. However, the PBTC remained of the opinion that there was technical merit in the original status table submission. The discussion ended with intent to continue the next day.

At the 2020 Meeting of the PBTC, a Status Table Working Group was established and tasked to review the current status table and make recommendations on potential restructuring if necessary. The working group felt that the main structure of the table was fine but there were some areas where clarification and/or transparency improvements could be made.

The working group recommended that the PBTC should not refer to subpopulation estimates as being current but rather as being recent. Current implies that an estimate is more up-to-date than it may be. For example, the estimate for Viscount Melville Sound is from 1992. While it may be the most recent estimate, a 1992 estimate is not current.

The working group suggested no longer reporting old subpopulation estimates in the Population Estimate column but rather using “Unknown” to reflect a technical opinion that estimates do get outdated and that there is no longer confident in the number. This change remains in discussion.

The working group suggested improvements to the information conveyed about harvest numbers by breaking down actual harvest by jurisdiction. Further, harvest numbers should include a calculation of what the harvest was as percentage of total population size.

A discussion regarding recent trend assessment concluded without resolution. A forward agenda item is for PBTC to clarify whether the recent trend assessment should be from the present year back over the 15 years, or from the most recent estimate, regardless of date, back 15 years from when the estimate was made. While the intention has been for jurisdictions to update inventories every 15 years or less, in reality there are few subpopulations for which this can be done. For example, the last Davis Strait estimate is for 2007. Should the new estimate be released in 2022, that would represent a 15-year period and recent trend could be assessed. However, in 2023, there will be only one estimate within a 15-year period. There was recognition that PBTC does not undertake inventories, but rather relies on assessing the best available information. If PBTC continues to use 15 years by which recent trend is evaluated, it is likely that in any given year most subpopulations will be assessed as Unknown/Data Deficient.

## **Day Three – Closed Session**

Status Table discussions continued and began with whether to make the PBAC requested changes regarding 1:1 harvest in Nunavut. The PBTC decided to not make the requested changes and keep the table as is. There was agreement that the subpopulation narratives that accompany the status table should be expanded and include a separate section on harvest management, where each jurisdiction describes its harvest system to provide the reader with more detail. This would be advantageous to both Ontario and Québec, neither of which has a quota system, and to Manitoba that does not harvest polar bears, but may have removals as a result of defense of life and property incidents. A working group was struck to develop a draft response letter to the PBAC that will be circulated for comment by entire membership.

The membership agreed that PBTC would change the 'Recent Trend' column to 'Most Recent Trend' and to include the year assessed for each subpopulation. For the 2021 status table, the structure of the 2020 table would be used by default, with the exception of accepting the working group's suggestion of providing more details about harvest numbers.

The PBTC reviewed the information populating the status table, cell-by-cell, for each subpopulation to confirm accuracy. Additional text was added to the Northern Beaufort Sea comments cell to clarify that harvest is not managed on the current population estimate (1291), but rather on a 'management estimate' (1711). The rationale is to be explained in the subpopulation narrative. It was noted that, in the past, other subpopulations have had estimates increased when areas not surveyed; however, the increased estimate was always identified in the table as the population estimate. Current legal harvest is 77, which is 6.0% of the population estimate but only 4.5% of the estimate being used for management purposes.

There were no other substantive changes to any subpopulation except Gulf of Boothia and M'Clintock Channel, where new estimates were presented. Most recent trend for Gulf of Boothia is 'stable' (2000-2016) and for M'Clintock Channel, 'increased' (2000-2016). The membership agreed that accompanying subpopulation narratives will be reviewed and updated by appropriate jurisdictions and circulated for review/comment rather than trying to review these line-by-line at this meeting. Most of material previously footnoted in table will be moved to the narratives.

#### **Day Four – Closed Session**

The day began with revisiting of a few outstanding issues with respect to status table, which resulted in the opening of new discussions on table structure and what should or should not be included. Some members wanted to include more detailed information about harvest, particularly where multiple jurisdictions are implicated. Others thought that by doing so, we would create the potential of needing to explain in greater detail or creating confusion. It was agreed that the status table would be kept simple and that detailed harvest statistics would be included as a separate table that is included as part of status table package. Further, it was agreed that the status table, narratives, and harvest numbers would all comprise part of a single document rather than be a series of separate documents that may or may not be read for context.

Concern was expressed with showing the sex-specific harvest percentages because some locations have incomplete reporting of total removals and/or sex-specific removals. While no concerns were stated with showing raw harvest numbers, expressing as percentage of estimated subpopulation abundance could be problematic or a distortion.

Passages of the PBTC Terms of Reference pertaining to attendance and the role of support staff, observers and invited specialists were discussed. A decision was made to maintain the status quo, allowing member organizations the freedom to determine whether they use support staff and whom they use, and retaining the distinction in the Terms of Reference between observers and invited specialists, as well as the mechanism whereby members discuss and approve any proposed observer/invited specialist invitations before they are made

Both Vicki Trim and Mark Basterfield agreed to remain as Co-Chairs.

The membership discussed the next two meetings and noted there were a lot of unknowns with respect to pandemic travel and health restrictions and what may or may not be possible in February 2022. Whether there will be a face-to-face meeting or a virtual meeting is unclear at the moment. The Government of Québec was supposed to host a face-to-face meeting in 2021 and is still interested in doing so. In 2020, the Government of Nunavut had offered to host the 2022 meeting. There was support

by the membership that the 2022 and 2023 meetings would be hosted by the Government of Nunavut and the Government of Québec. It was agreed that the dates, locations, and formats would be left to Nunavut and Québec to discuss and finalize between them.