

## Progress Report, Action #1

### 2018-2020 Bilateral and Multilateral Actions, Circumpolar Action Plan: Conservation Strategy for the Polar Bear

<b>Action</b>	Consider the cumulative effects of climate change and human activities on polar bear subpopulation and habitats when making management decisions using tools such as predictive modeling.
<b>Point(s) of contact or Lead country</b>	Greenland Amalie Jessen, Heidi Hansen <a href="mailto:AMALIE@nanoq.gl">AMALIE@nanoq.gl</a> ; <a href="mailto:hmha@nanoq.gl">hmha@nanoq.gl</a> ;
<b>Partner Countries</b>	n/a
<b>Timeline Description as per 2018-2020 implementation table</b>	Task proposed for 2018-2025 Proposed Timeline: October 2017: application of the Regehr et al. (2017a) modeling framework for harvest risk assessments of the Baffin Bay and Kane Basin subpopulations. 2018-2025 (ongoing, as new scientific data are obtained): application of harvest risk assessment methods that consider the combined effects of human-caused removals and habitat change to help inform management strategies for different subpopulations.
<b>Baseline Status</b>	Coordinated circumpolar action not yet completed some subpopulations currently using tools such as Amstrup et al. (2008)
<b>Planned Outputs</b>	
<b>Modifications made to date</b>	
<b>Progress Report Date</b>	September 30, 2019

#### Progress Report on Activity:

- Harvest risk assessment methods that consider the effects of human-caused removals and habitat change have successfully been applied to the Chukchi Sea and Southern Hudson Bay polar bear subpopulations, as documented in the following reports:
  - Regehr, E. V., L. Polasek, A. Von Duyke, J. M. Wilder, and R. R. Wilson. 2018. Harvest Risk Assessment for Polar Bears in the Chukchi Sea: Report to the Commissioners of the U.S.-Russia Polar Bear Agreement, 25 June 2018. Unpublished report, 95 pp.
  - Regehr, E., M. Dyck, G. Gilbert, S. Iverson, D. Lee, N. Lunn, J. Northrup, A. Penn, M.-C. Richer and G. Szor. 2019. Provisional Harvest Risk Assessment for the Southern Hudson Bay Polar Bear Subpopulation. Report to the Southern Hudson Bay Polar Bear Subpopulation Advisory Committee, 07 June 2019. Unpublished report. 75 pp.
- The project “Circumpolar Assessment of Sustainable Harvest for Polar Bears Under Climate Change” has been funded by the Ministry of Fishing, Hunting, and Agriculture of the Government of

Greenland. This project will be conducted by Principal Investigator Eric Regehr (University of Washington) and co-investigators Jon Aars, Todd Atwood, Markus Dyck, Kristin Laidre, Nick Lunn, Michael Runge, Dag Vongraven, and James Wilder. The project will consider the best-available data for the 19 polar bear subpopulations to achieve the following objectives:

- Evaluate relationships between subpopulation abundance, maximum intrinsic growth rate, carrying capacity, and harvest level.
- (2) Project future trends in sustainable harvest level based on estimated relationships between sea-ice availability and the demographic parameters listed above.
- Ability to participate in this project has been confirmed by the co-investigators listed above. An analytical outline for the project has been developed and reviewed by co-investigators.
- Planned outputs include at least one manuscript submitted for publication to a peer-reviewed scientific journal.

**Next Steps:**

- Action complete. Allocate required funding.
- Action complete. Identify co-investigators.
- Action complete. Develop analytical outline for the project and obtain review from co-investigators.
- Winter 2019/2020. Consolidate available scientific data.
- Spring/summer 2020. Develop and apply modeling framework.
- Summer/autumn 2020. Draft manuscript with analytical results and interpretation.
- Winter 2020/2021. Submit manuscript to a peer-reviewed scientific journal.

**Considerations Going Forward:**

Considering your experience implementing this CAP Action to date, would you recommend that it be retained as a priority action moving forward (i.e. will it provide a positive conservation benefit for polar bears, and will multilateral collaboration on the action benefit the RS). If not, please provide a short explanation of why. If yes, then please also provide any suggested modifications going forward to make the action more meaningful in terms of goals/objectives/desired outputs. Please ensure that any modifications result in a clear expected outcome(s) (e.g. a report) and a method for sharing that report (conference, Range State website etc).

No alterations or modifications at the time being, as the analysis and main project has not been finalized yet. It is considered a highly significant action item which will benefit all Range States on both a unilateral and bilateral scale.