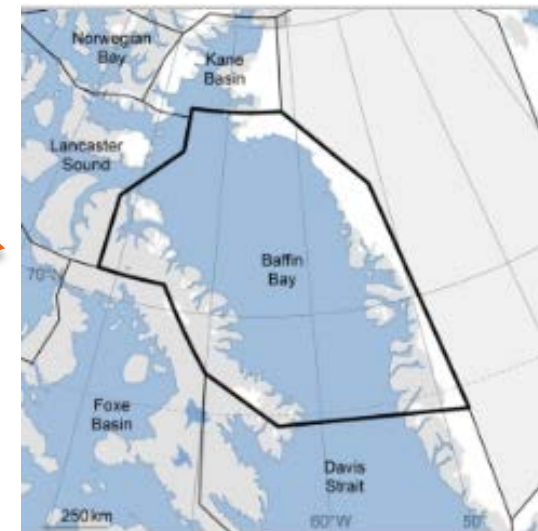
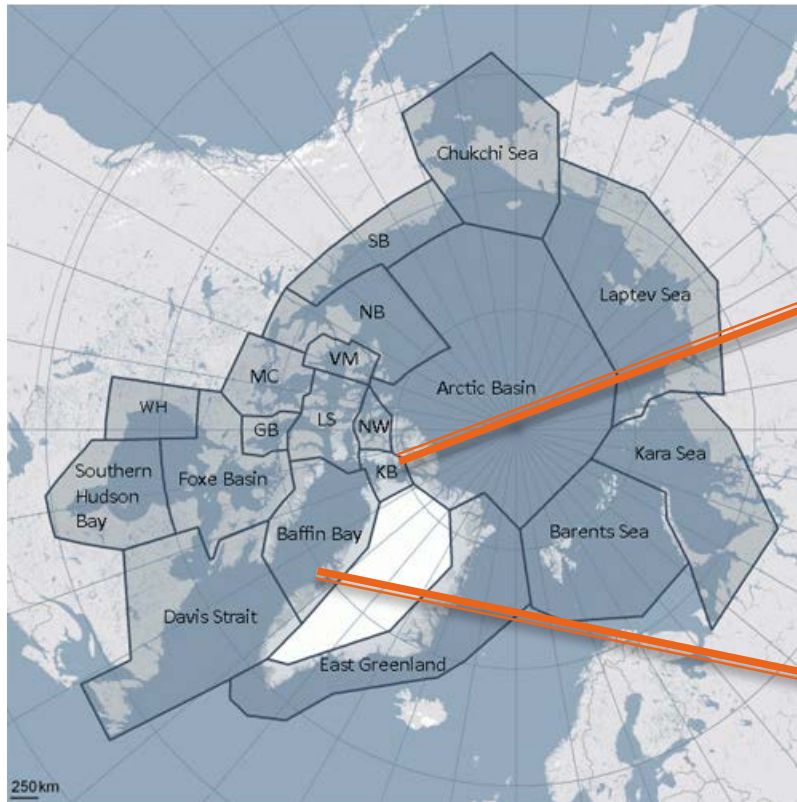


Memorandum of Understanding between the Government of Canada, the Government of Nunavut and the Government of Greenland for the Conservation and Management of Polar Bears

Presentation to the Polar Bear Range States
Meeting of the Parties
February 2–4, 2018
Fairbanks, Alaska, United States
Draft 10 – Jan 9, 2018

Baffin Bay and Kane Basin subpopulations



Memorandum of Understanding (MoU)

- ▶ Signed on November 11, 2009 in Kangerlussuaq, Greenland
- ▶ The Joint Commission:
 - Appointed by each party
 - Greenland:
 - Amalie Jessen (Ministry of Fisheries and Hunting)
 - Jens Danielsen (Greenland's Association of Fishermen and Hunters) (represents all areas)
 - Canada:
 - Caroline Ladanowski (Environment and Climate Change Canada)
 - Nunavut:
 - Drikus Gissing (Government of Nunavut)
 - Paul Irngaut (Nunavut Tunngavik Incorporated)
 - James Qillaq (Qikiqataaluk Wildlife Board)
- ▶ Participants/jurisdictions agreed to collect and exchange relevant information in a timely manner to the Joint Commission and Working Groups

Purpose and principles

▶ Purpose:

- to manage polar bear within the Kane Basin and Baffin Bay subpopulations to ensure their conservation and sustainable management into the future.

▶ Adhere to principles of conservation:

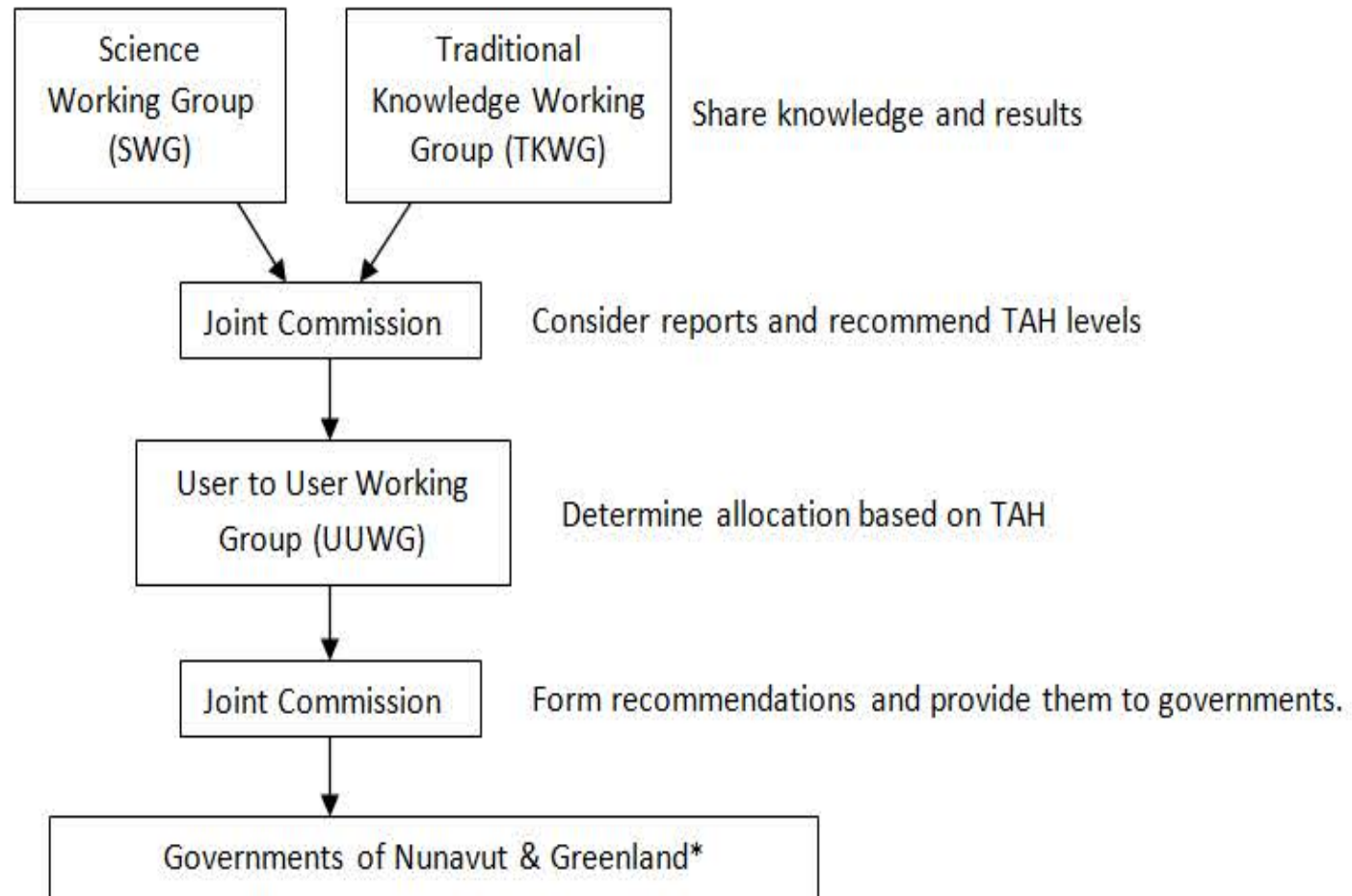
- maintenance of the natural balance of ecological systems;
- protection of wildlife habitat;
- maintenance of vital, healthy, wildlife populations capable of sustaining harvest needs; and
- restoration and revitalization of depleted populations of wildlife and wildlife habitat.

1st meeting of the JC (January 2010, Ottawa, Canada)

- ▶ Working Groups were formed:
 - Science Working Group (SWG)
 - Co-chairs: Dr. Erik Born (GN), Dr. Nick Lunn (ECCC), Dr. Stephen Atkinson (NU)
 - Traditional Knowledge Working Group (TKWG)
 - Interim co-chair: Mr. Jens Danielsen (KNAPK)
- ▶ A workplan was created indicating the procedure for determination of Total Allowable Harvest (TAH) & allocation
 - The JC tasked the SWG with using the best available information to propose TAHs for KB & BB and provide science advice for monitoring the effects of habitat changes on polar bears

Joint Commission Workplan

1. Procedure for determination of TAH & Allocation, including Working Group relationships



2nd meeting of the JC (May 2010, Ilulissat, GL)

- ▶ Presentations on Science and Traditional Knowledge (TK) were given.
- ▶ Summary of statements from the SWG:
 - SWG recommends the following research needs be given priority: (1) population size; (2) distribution & movements; (3) physical condition; (4) vital parameters
 - Caution when using models that project trends too far in the future
- ▶ Summary of statement from TKWG:
 - Concerns about sea ice melting, hunters observations – population of bears has increased, including females with multiple cubs, and polar bears are hunting on thin ice and open water.

Outcomes of 2nd meeting of the JC in 2010:

1. Monitoring data for KB & BB are outdated;
2. The need for new science and TK was identified.

▶ Actions to be undertaken:

- Update estimates of subpopulation size and survival based on a genetic mark-recapture research program on polar bears in Baffin Bay (2011–2013) and Kane Basin (2012–2014);
- Joint live-recapture and dead-recovery mark-recapture models used to analyze data;
- Harvest Risk Analysis under three management scenarios.



Management of KB & BB

- ▶ Three management objectives were explored:
 1. Maintain a relatively stable subpopulation size;
 2. Maintain a subpopulation size that achieves maximum sustainable yield, with respect to a potentially changing environmental carrying capacity;
 3. Reduce subpopulation size by approximately 30% in 10–15 years.

- ▶ Key findings:
 - Updated population estimates of both subpopulations; significant decline of BB sea-ice habitat, significant changes to the sea-ice dynamics in KB.
 - New information is needed every 15 years to recalculate the TAH, which is expected to decline over several decades. A precautionary approach to management is recommended.

Traditional Knowledge Studies

▶ Greenland:

- Polar Bears in Northwest Greenland (Borne *et al.*, 2011)
 - An interview study about the 'Catch and the Climate'

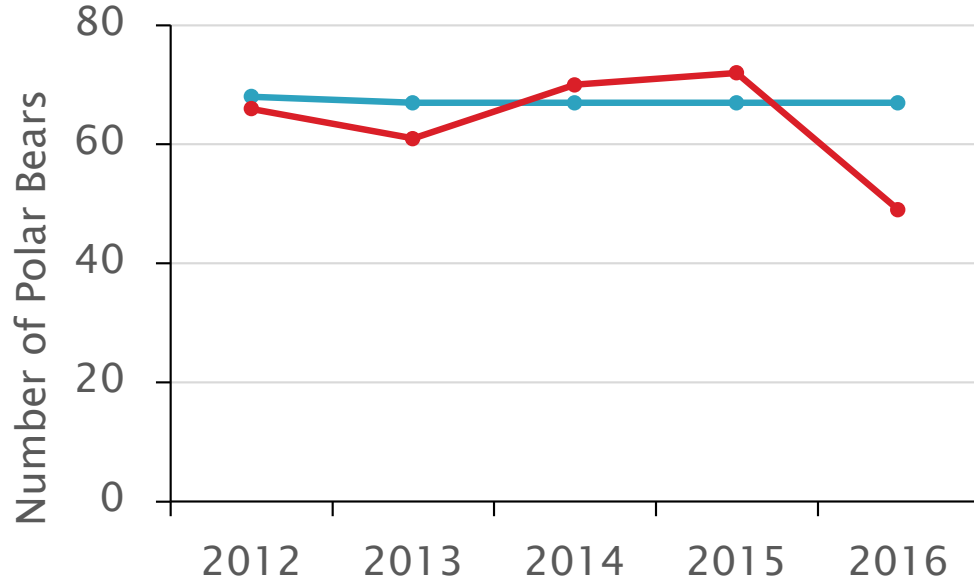
▶ Canada

- Inuit Knowledge Regarding Climate Change and the Baffin Bay Polar Bear Population, Final Wildlife Report No. 1 (Dowsley, 2005)
 - An interview study with elders and senior hunters from Pond Inlet, Clyde River and Qikiqtarjuaq

Baffin Bay Harvest

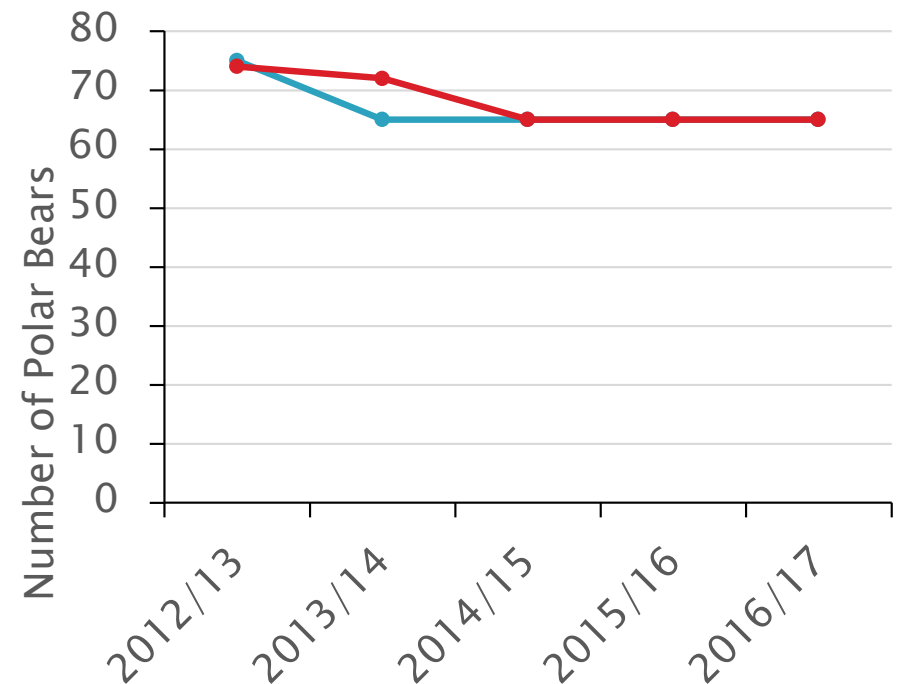
Quota
Removals

Greenland



Average annual removal = 63.6

Canada

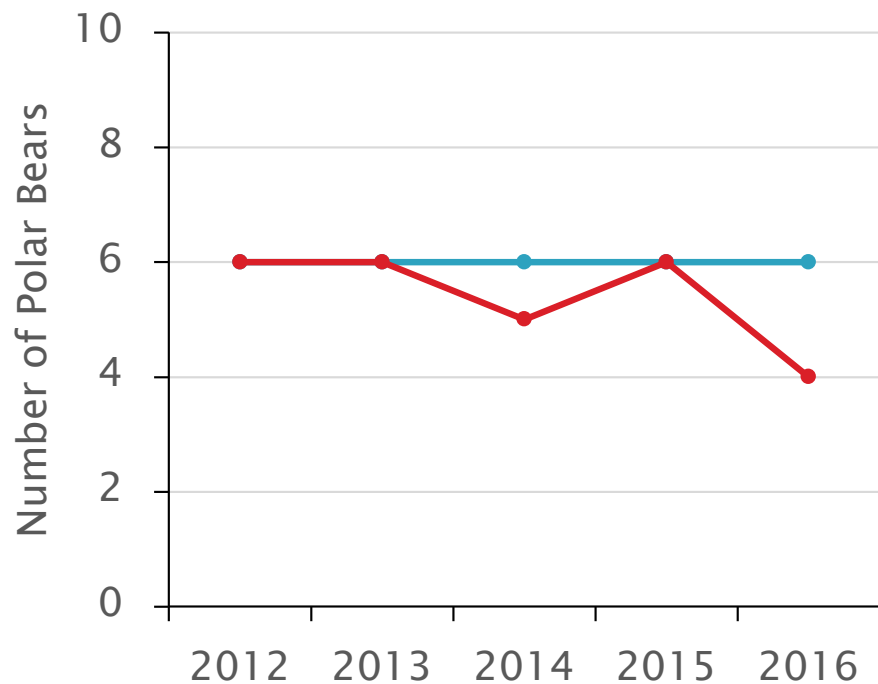


Average annual removal = 68.2

Kane Basin Harvest

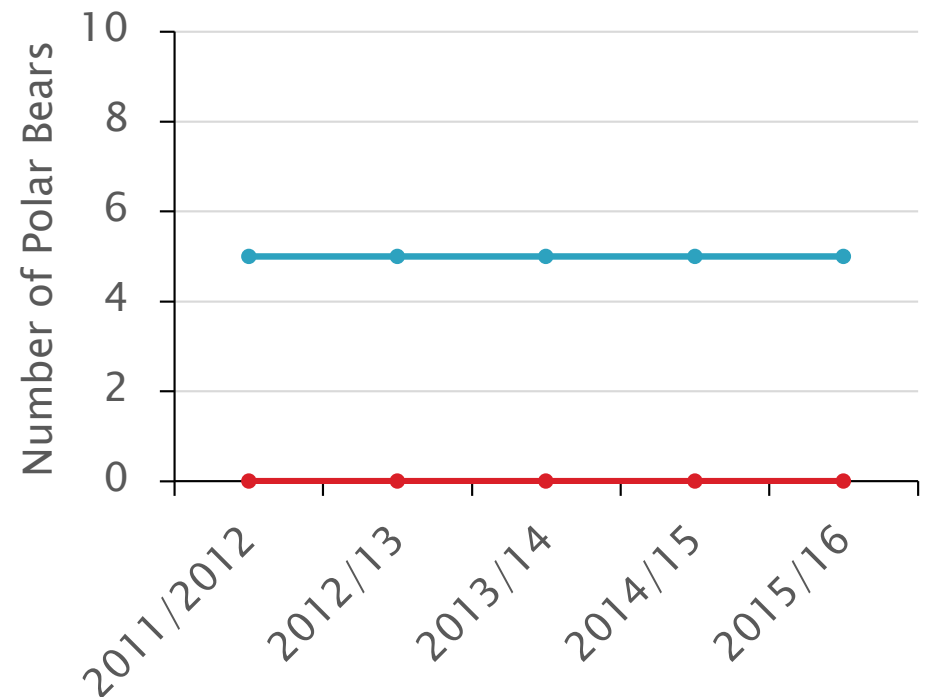
Quota
Removals

Greenland



Average annual removal = 5.4

Canada



Average annual removal = 0

3rd meeting of the JC (Oct 2017, Ottawa,CA)

- ▶ Implementation of the Harvest Risk Analysis model from the scientific data provided by the SWG.
- ▶ Agreement of a sustainable harvest in Baffin Bay polar bear subpopulation between Greenland and Nunavut, and recommendations to the responsible Ministers.
- ▶ Formal re-assessment of harvest levels in each country under established decision-making processes, including consideration of JC recommendation, can now commence.

Challenges & ongoing work with respect to KB

- ▶ Not able to reach consensus regarding the Kane Basin quota or allocation during the face-to-face meeting.
- ▶ Each country is going through individual decision-making processes.
- ▶ The wish of all parties signatory to the MoU is that a consensus on a shared quota is reached.
- ▶ A process has been started and will continue.

Future work under the MoU

- ▶ Revise and structure the MoU Agreement.
 - ▶ Revise and finalize the Terms of Reference for the JC and each Working Group.
 - ▶ Formalize Rules of Procedure.
-
- ▶ Aim to have the work done within the first few months of 2018

Thank you for your attention



Participants at the 3rd Meeting under the Memorandum of Understanding between the Government of Canada, the Government of Nunavut and the Government of Greenland for the Conservation and Management of Polar Bears