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Industrial Development in the Calving Grounds of the Porcupine Caribou herd in Alaska: At What Cost?

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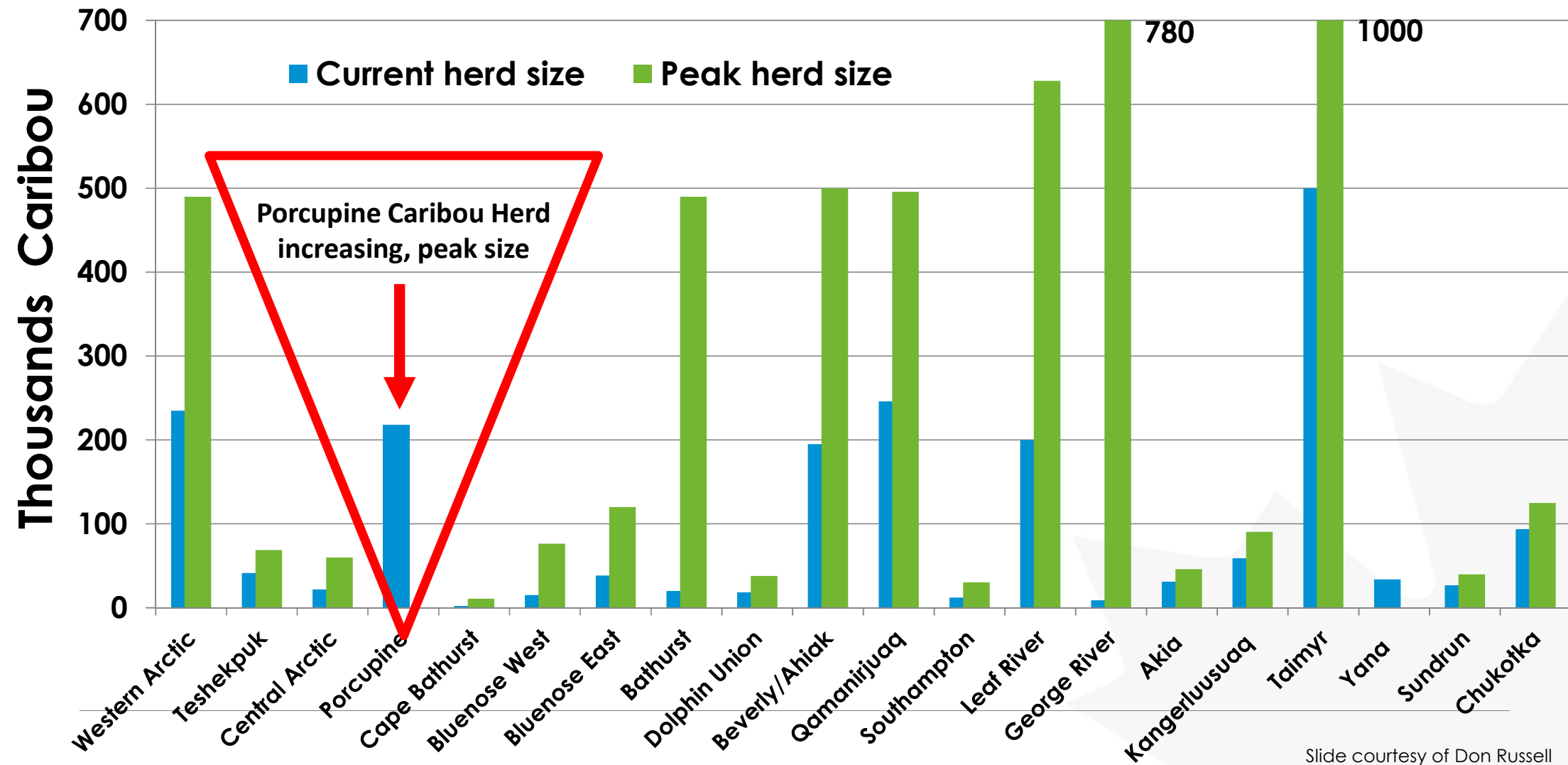
CAFF Arctic Biodiversity Congress

Rovaniemi, Finland, October 11, 2018

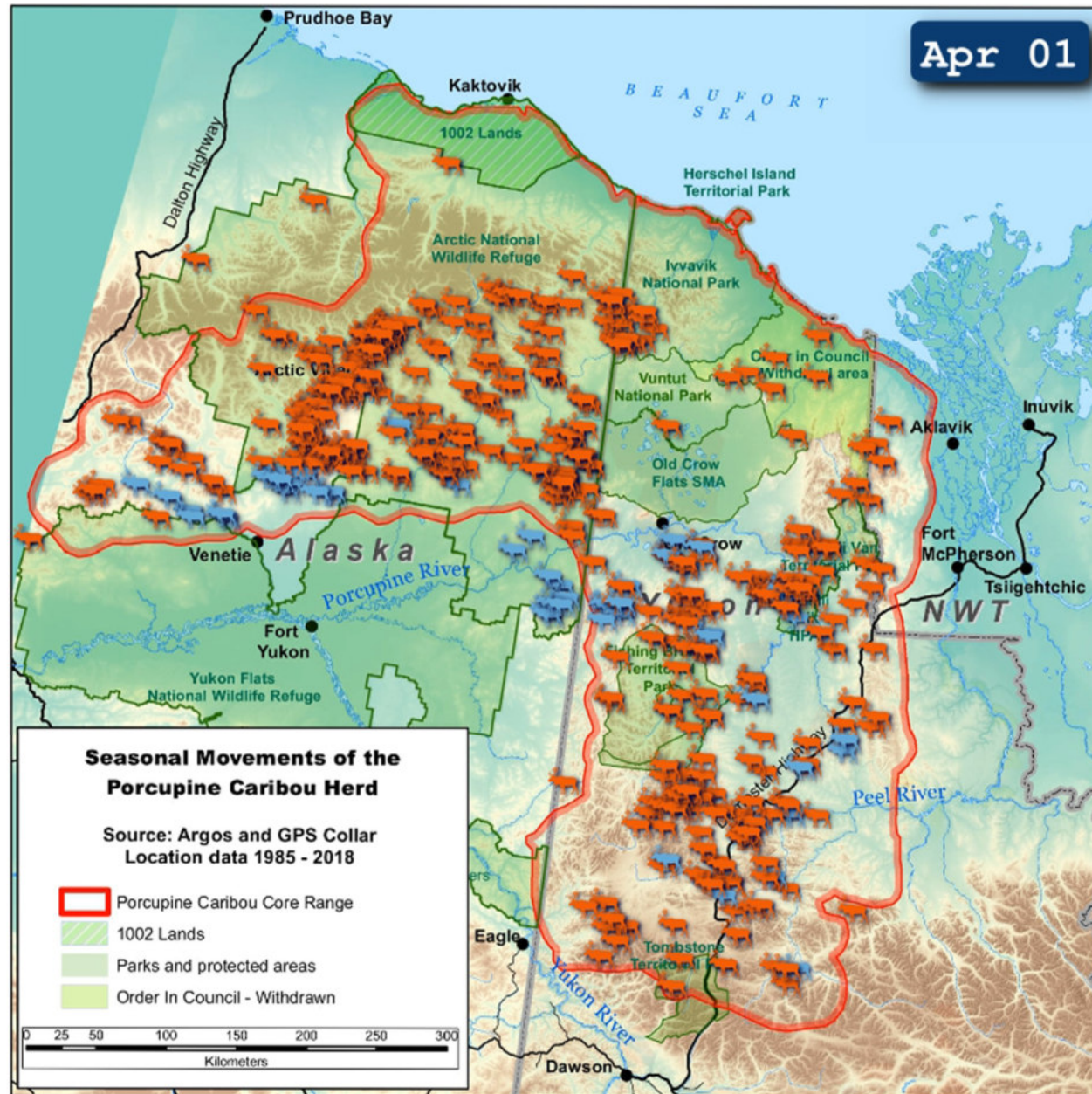




North American caribou herds are not doing well!



Slide courtesy of Don Russell



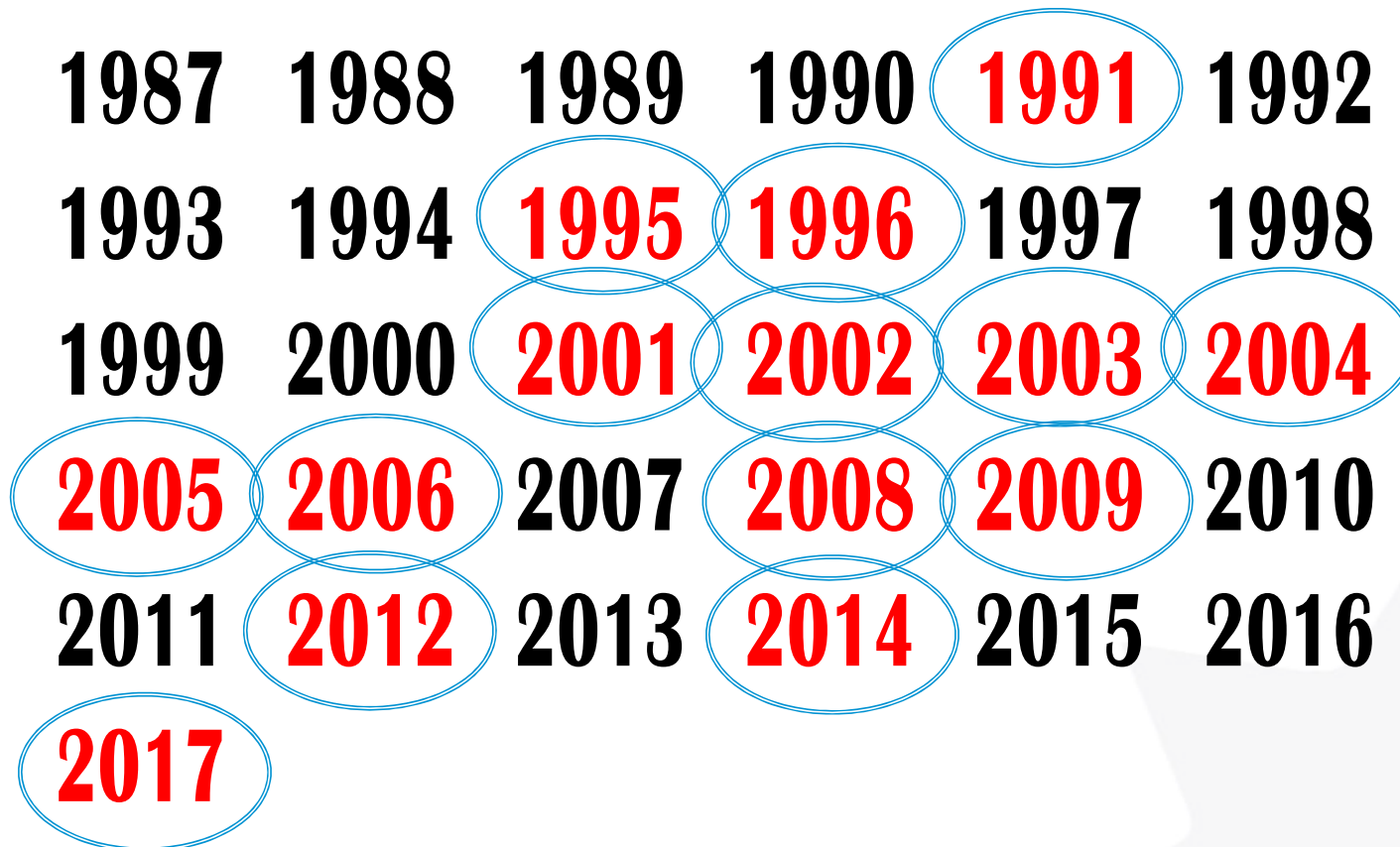
33 years of collar locations

Animation courtesy of Yukon Government

Red = cows
Blue = bulls

See animation at "Migration" under:
www.pcmb.ca/habitat

30+ years of attempts to open ANWR to drilling



Why develop the 1002 lands?

- "The legislation I [*Senator Murkowski*] released tonight will put Alaska and the entire nation on a path toward greater prosperity by **creating jobs, keeping energy affordable for families and businesses, generating new wealth, and strengthening our security...**" Nov 9, 2017
- "Developing our resources on the coastal plain is an important facet for meeting our nation's energy demands and **achieving energy dominance**," said Interior's assistant secretary for land and minerals management, Joe Balash. April 19, 2018

U.S. 'likely' has taken over as the world's top oil producer



Country has leapfrogged past Saudis and now Russians too, preliminary numbers suggest

The Associated Press · Posted: Sep 12, 2018 5:30 PM ET | Last Updated: September 12

(Sept 2018)

Canada's concerns



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Agreement Between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd

E100687 - CTS 1987 No. 31

The Government of Canada and the Government of the United States of America, hereinafter called the “Parties”:

The objectives of the Parties are:

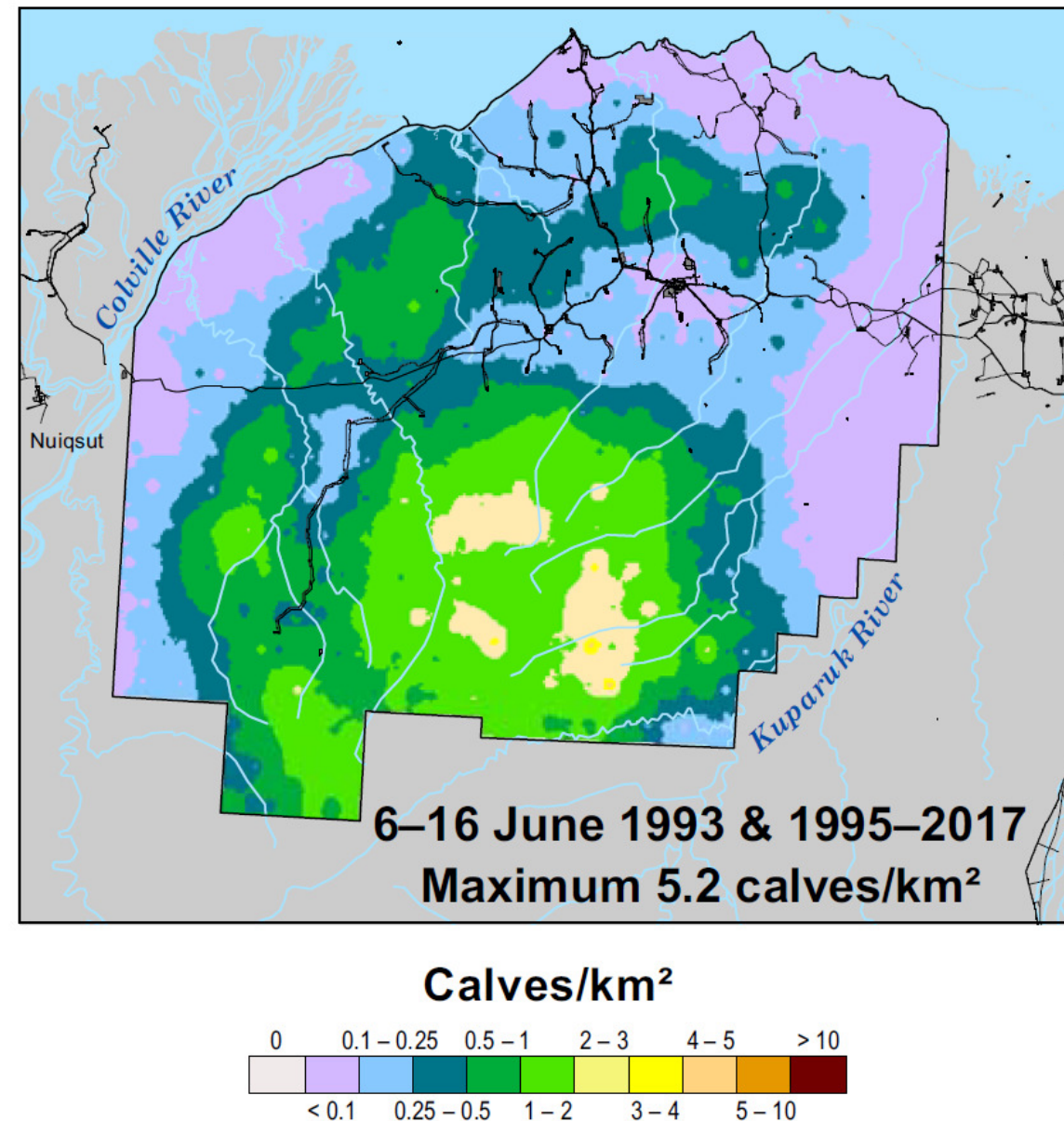
Conserve the ... Herd and its habitat..

1. To conserve the Porcupine Caribou Herd and its habitat through international co-operation and co-ordination so that the risk of irreversible damage or long-term adverse effects as a result of use of caribou or their habitat is minimized;
2. To ensure opportunities for customary and traditional uses of the Porcupine Caribou Herd by:
 1. in **...ensure opportunities for customary and traditional use...**
 2. in Yukon and the Northwest Territories, Native users as defined by sections A8 and A9 of the Porcupine Caribou Management Agreement (signed on October 26, 1985) and those other users identified pursuant to the process described in section E2(e) of the said Agreement;
3. To enable users of Porcupine Caribou to participate in the international co-ordination of the conservation of the Porcupine Caribou Herd and its habitat;
4. To encourage co-operation and communication among governments, users of Porcupine Caribou and others to achieve these objectives.

Caribou are sensitive to development

- Avoid roads during calving (but will use for insect relief if abandoned).
- Calving areas shifted to lower forage biomass areas.
- Reduced body condition and lower parturition rate
- (see Cameron et al 2005, Arctic 58(1):1-9)

Graphic courtesy of ABR, Inc. –
Environmental Research and Services



An aerial photograph showing a vast, dense herd of caribou (reindeer) spread across a flat, open landscape. The animals are small, dark, and numerous, covering the entire ground area. The terrain appears to be a tundra or a similar open, grassy field. The lighting suggests a bright day, with some shadows visible.

Porcupine Caribou Sensitivity

- -High calving density
- -Low productivity - No explosive growth potential
- -High cow/calf survival needed
- -Cows need to be relatively heavy to get pregnant

Image courtesy of Alaska Dept of Fish and Game

Mitigation effectiveness is (mostly) not well understood

- Very little in the peer-reviewed literature.
- Little experimental design and testing of mitigations.

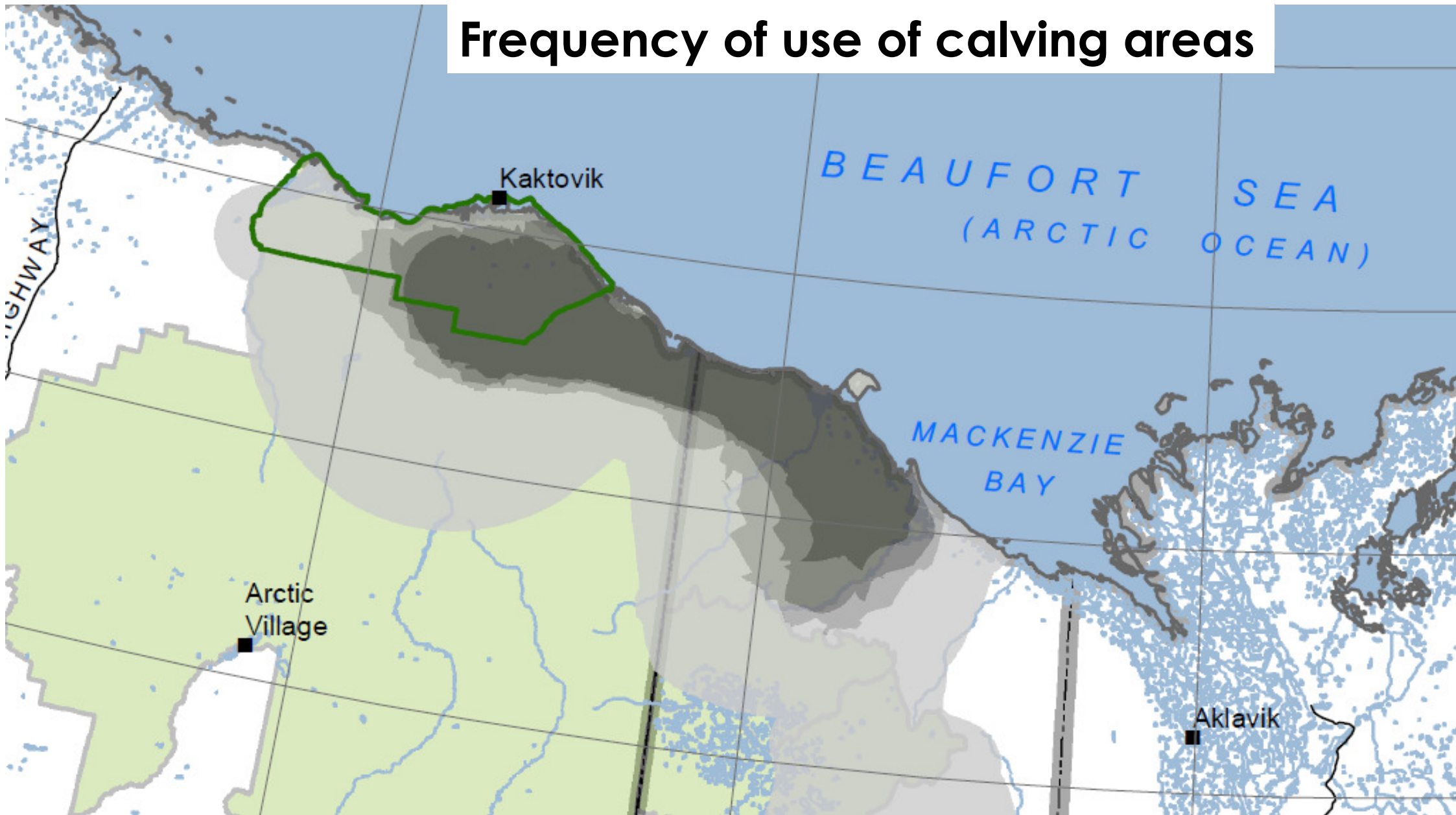
“It is not necessarily shortage of information on mitigation but its organization and integration such that we would struggle to give credible answers to the underlying questions”

Models predict displacement from development



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Frequency of use of calving areas



Canada's Efforts

- Calving grounds protected
- Advanced domestic management regime
- Comprehensive science review and update
- Using treaty mechanisms



Should You Be Concerned?

- Significant, adverse effects?
- We support socio-economic opportunities for local communities...
- But is large-scale industrial use of land worth the transboundary impact on caribou and people?
- Are we ready to take a risk with unproven mitigation techniques?
- Is this a one country issue, a North American one or a global one?