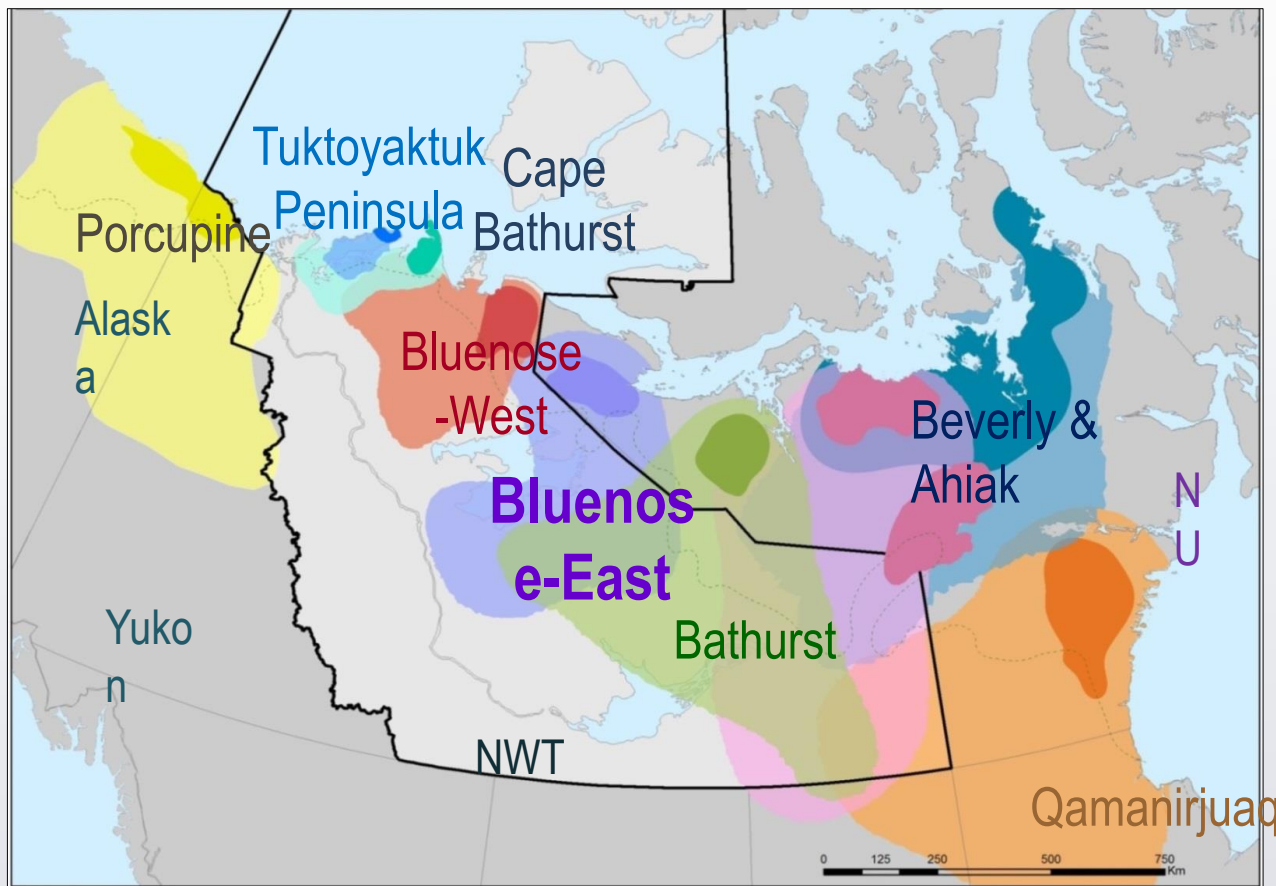


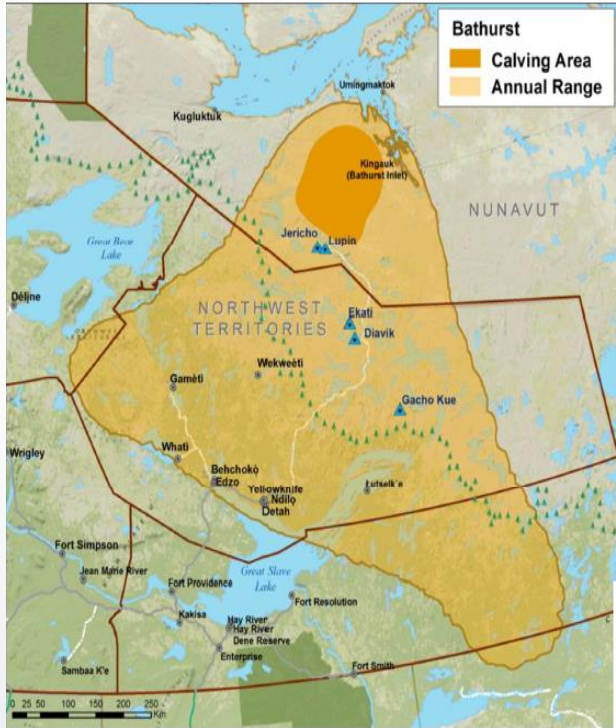


**The Department of Environment (DOE) would like to
inform the Board of the 2018 estimate of Bathurst
Caribou herd
and ask the board to make a decision on the proposed
management recommendations**

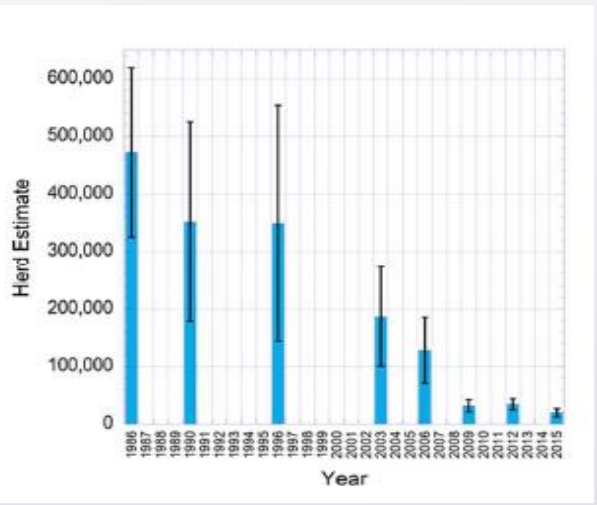


Barren-Ground Caribou Herd Ranges & Calving Grounds



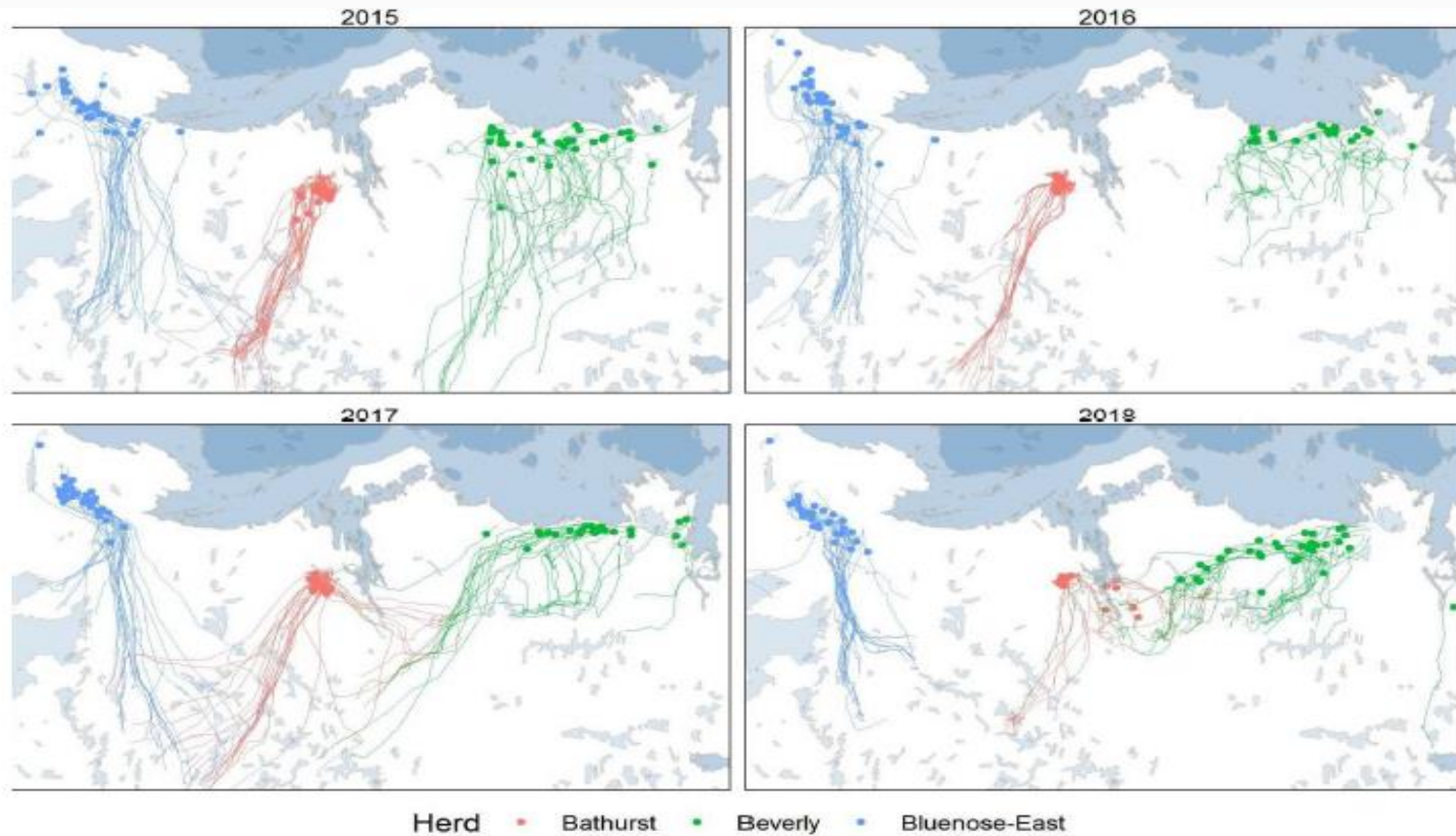


- The Bathurst herd's calving grounds are located in Nunavut
- The Bathurst caribou herd reached peak estimates at 472,000 animals, in 1986
- The herd initially declined slowly in the 1990s and then more rapidly after 2003



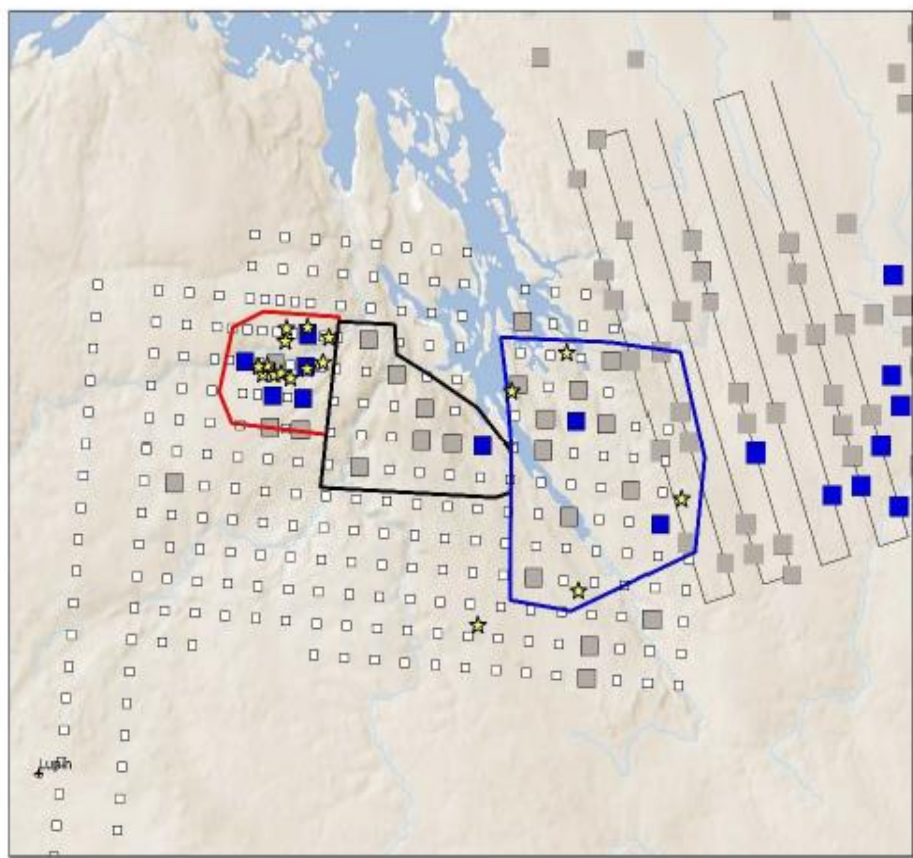


Collared caribou locations - 2018



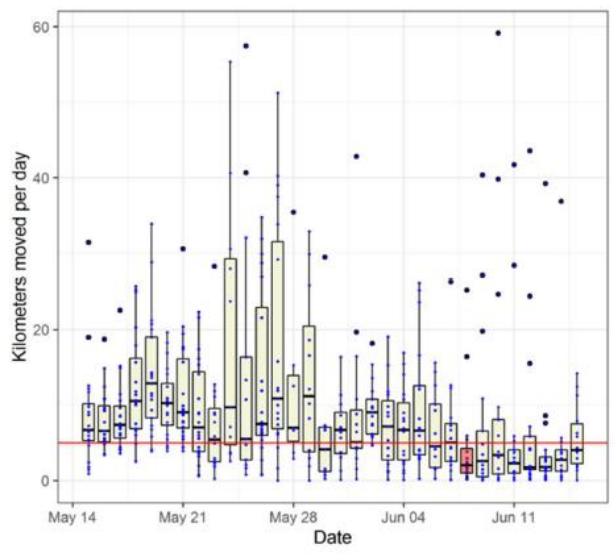


Reconnaissance Survey- June 5-7, 2018



- Bathurst 2018 survey**
- Strata
 - Photo
 - Visual east
 - Visual west
 - Segment densities
 - High (>10 caribou/km²)
 - Medium (1-9.9 caribou/km²)
 - Low (<1 caribou/km²)
 - Zero caribou seen
 - GN survey flight line
 - ☆ Collar locations (Cows) June 8

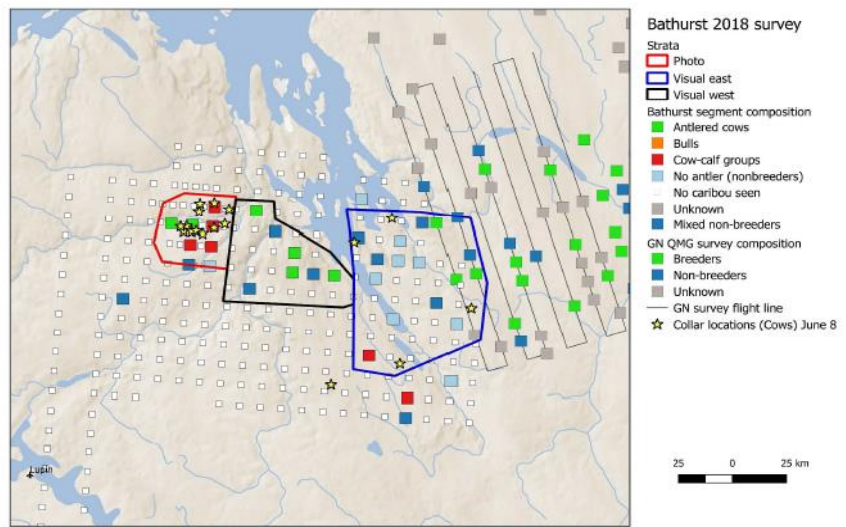




Before flying the visual strata (coloured boxes), we examined daily movement rates of female cows, and collared caribou locations within the strata.

The visual survey needs to be done no later than 3-4 days after the reconnaissance survey.

Movement rates of female collared caribou before and during calving in 2018.



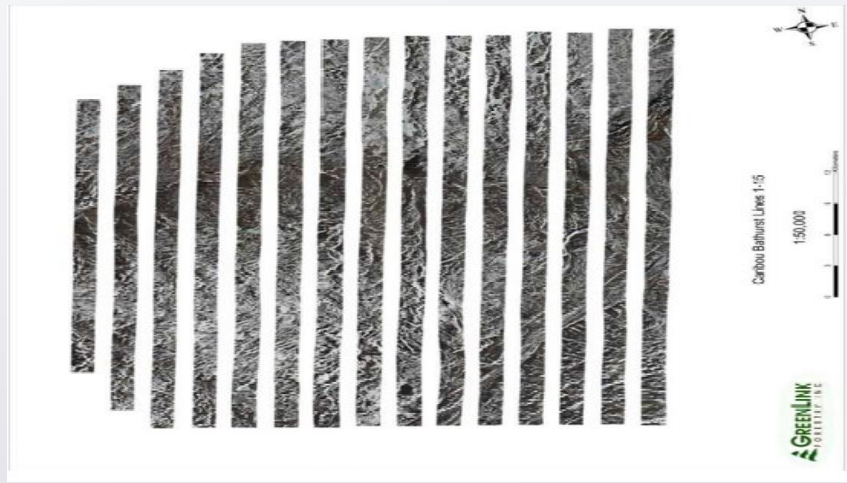
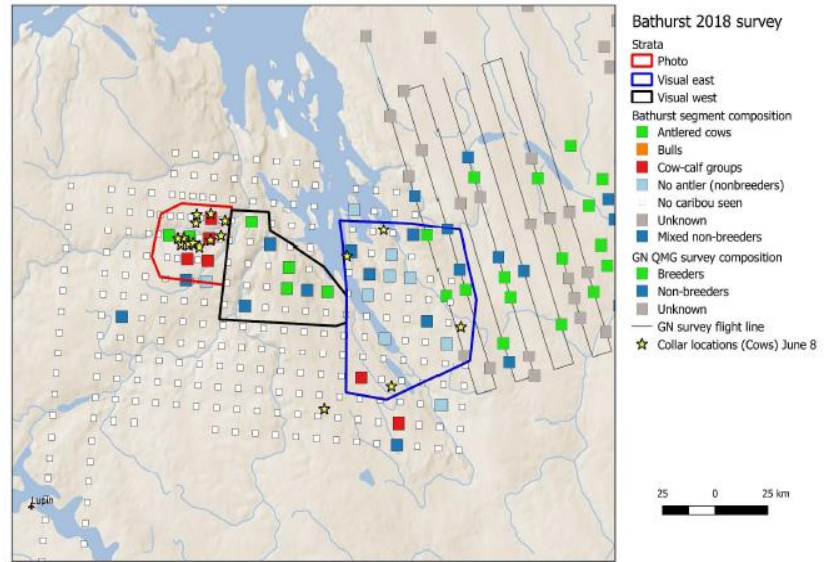
Location of collared Bathurst female caribou and movements, up to June 8, 2019



Photo Strata

Strata, identified as high density (red), are flown at a higher percentage of coverage (56%) by a photo plane.

Surveyors then count caribou on each photo to generate a more precise number.



Calving ground and Fall composition survey

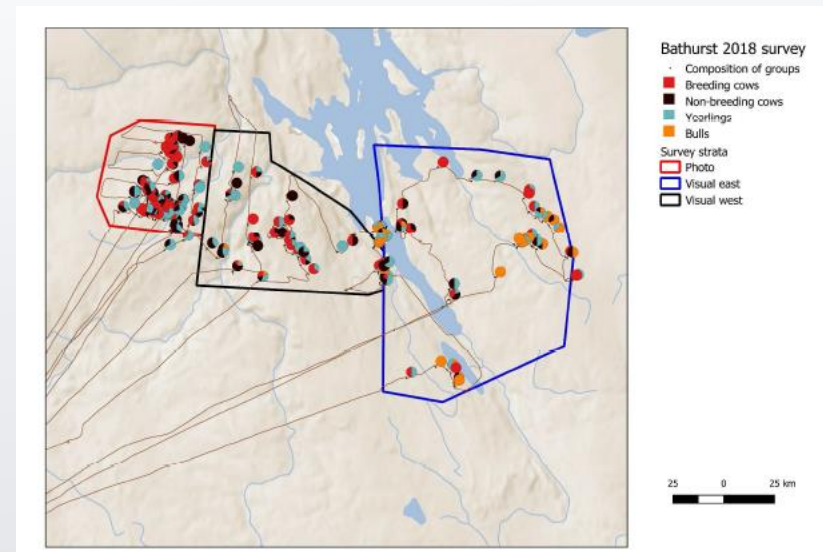
Table 11: Summary of composition survey results on Bathurst calving ground June 2018 in photo and visual strata.

Stratum	# groups	Adult females			Yearlings	Bulls	Total caribou (1 yr+)
		Total	breeding	non-breeding			
Photo	80	1,517	1,134	383	242	0	1,759
Visual East	38	46	20	26	33	36	115
Visual West	52	135	72	63	94	34	263

Cows	Bulls	Calves	Groups
940	532	431	39

Calving ground composition surveys are used to determine the proportion of breeding females, non-breeding females, yearlings, and bulls.

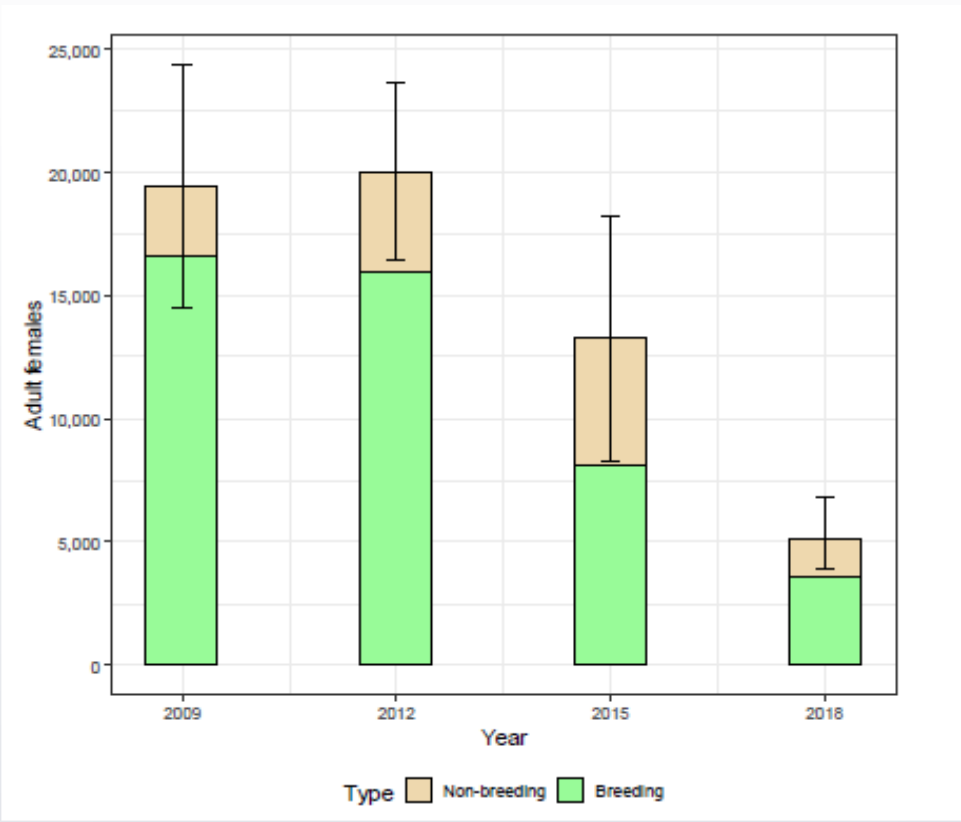
Fall composition surveys are used to determine the ratio between bulls and COWS.





2018 Bathurst Caribou Herd Estimate

The estimate of adult Bathurst caribou (2 years old) is 8,207.





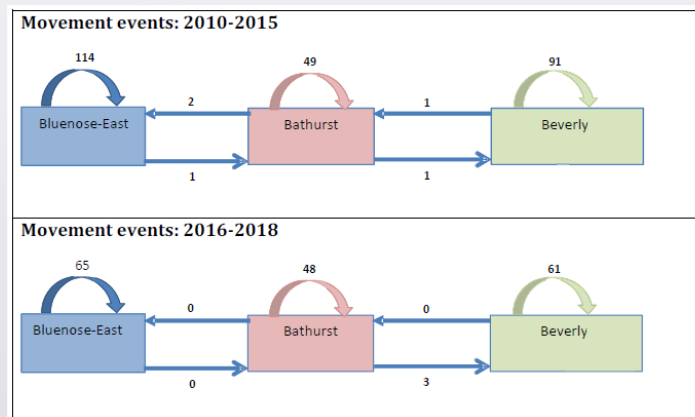
Estimation of Bathurst adults females, emigration to the Queen Maud Gulf

Emigration does happen between herds at an estimated rate of 3% switching and 97% fidelity in the Bathurst herd.

11 known Bathurst cow collars were used during the survey. Eight went to the traditional Bathurst calving ground and three collared caribou moved to the Beverly calving ground in the Queen Maud Gulf coastal calving area (30% of collared cows).

Movement of collared Bathurst bulls and females suggest an unexpected degree of movement into the inland area next to to the Queen Maud Gulf, after the two herds were mixed all winter.

However, this movement of Bathurst cows to the Beverly calving ground alone does not account for the significant decline in adult females (61%) or herd size (58.5%).





Population Demographic Indicators

Integrated Population Model estimate of cow survival is 0.82

Summer Calf:cow (June) 0.25 calves:100 cow. Far below levels needed for stable herd.

Fall Calf:cow (October) 21 Calves:100 Cows (Very low)



Harvest

	2016-2017	2017-2018	2018-2019
Nunavut	30	30	30
All users	30	30	30

The herd is naturally declining, and the harvest is not currently sustainable and needs to be managed as a risk.



Board Decision in Northwest Territories

- The Government of Northwest Territories (GNWT) made a recommendation for a herd-wide total allowable harvest of **0** caribou from the Bathurst Caribou herd following the 2018 survey results.

Due to the serious conservation concern, the harvest on the Bathurst is remaining 0 on the Bathurst Caribou herd.



The Department of Environment recommendations

The Government of Nunavut DOE supports the GNWT recommendation of a herd-wide TAH of 0 for the Bathurst Caribou herd for Nunavut.

DOE also recommends:

- Community-based management initiatives that promote herd recovery;
- Increased monitoring efforts by conducting a population survey every two years, and calving ground and fall composition survey every year.

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THANK YOU
QUANAQUTIN
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