



# **Status & Proposed Management 2016-2019 for Bluenose-East Caribou Herd GNWT, Environment & Natural Resources SRRB Hearing March 1-3, 2016**

**link to animations on page 3 [http://www.caslys.ca/SRRB\\_CaribouAnimations/main.html](http://www.caslys.ca/SRRB_CaribouAnimations/main.html)**

**Northwest Territories**  
Environment and  
Natural Resources

# Status & Management: Bluenose-East Caribou 2016-2019

## GNWT ENR: Presentation Overview

Part A: Bluenose-East Herd Status  
Part B: Proposed Actions



Photo J. Adamczewski, ENR



# Status & Management, BNE Caribou 2016-2019

## GNWT ENR: Presentation Overview, Part A (Herd Status)

1. GNWT wildlife management responsibilities
2. How caribou herds are defined (Animations)  
link to animations [http://www.caslys.ca/SRRB\\_CaribouAnimations/main.html](http://www.caslys.ca/SRRB_CaribouAnimations/main.html)
3. Herds as basis for management
4. Fluctuations in caribou numbers and global trends
5. Factors that affect herd size and trend
6. Caribou herds – indicators of increase and decrease
7. Bluenose-East herd trend and indicators
8. Bluenose-East caribou have not moved
9. Future trend of Bluenose-East herd



Photo J. Adamczewski, ENR



# 1A. GNWT Wildlife Management Responsibilities

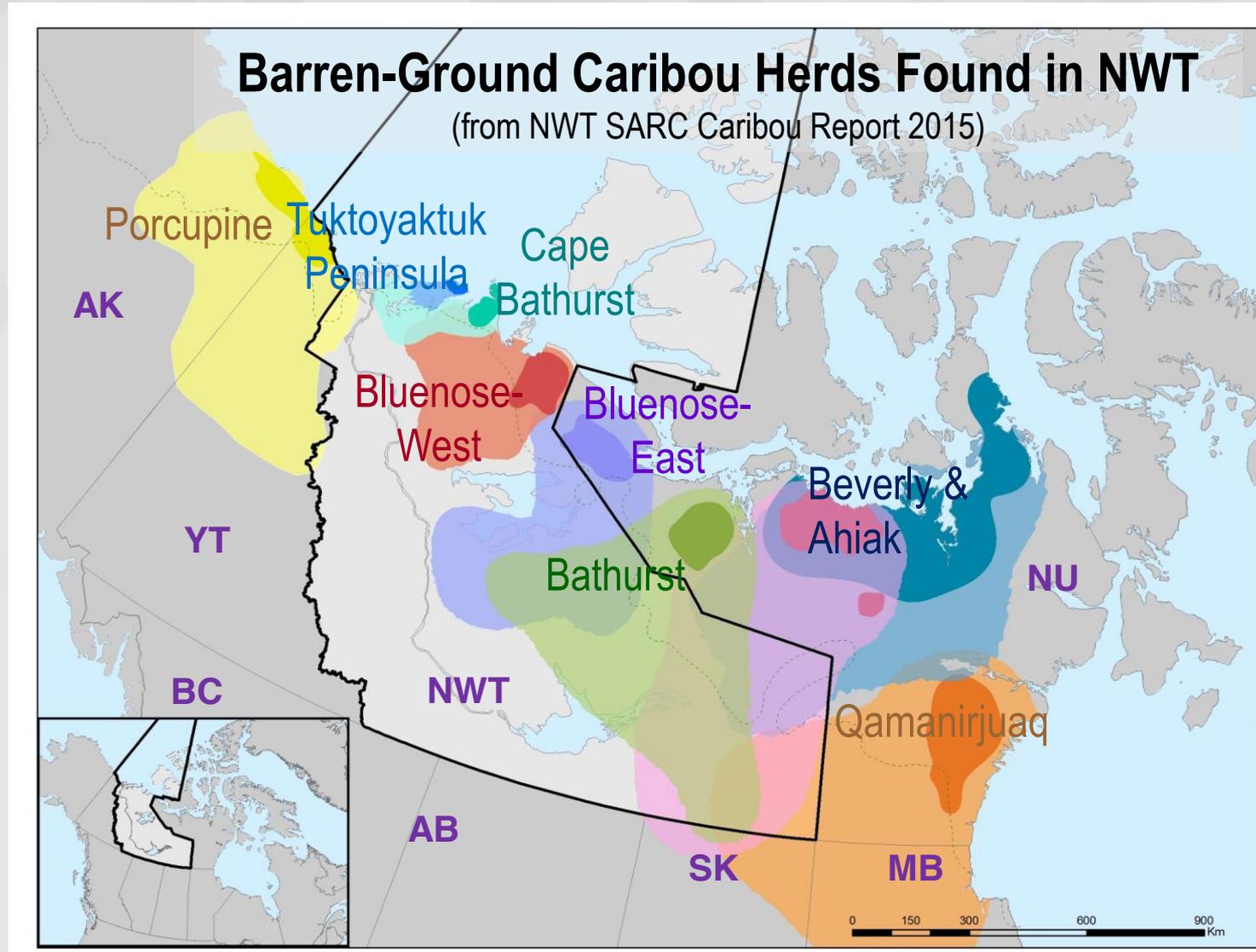
- *Northwest Territories Act*
- *Wildlife Act*
- Sahtú Agreement  
Sahtú Renewable Resources Board
- Tłı̨chǫ Agreement  
Wek'èezhìi Renewable Resources Board
- Co-management Processes
- Responsibility to other Aboriginal Governments,  
Boards & Organizations
- Collaborative Approach



Photo A. Gunn



## 2A. How Caribou Herds are Defined (Animations)



# 3A. Caribou Herds as Basis for Management

## 1. Migratory Caribou & Reindeer Herds Defined Based on Calving Grounds

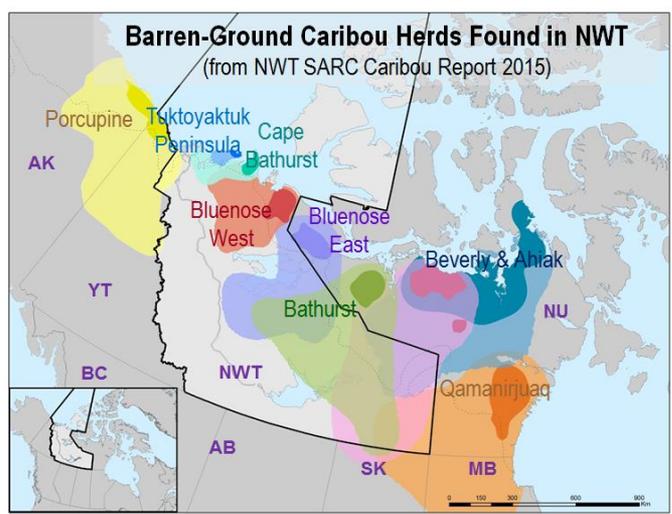
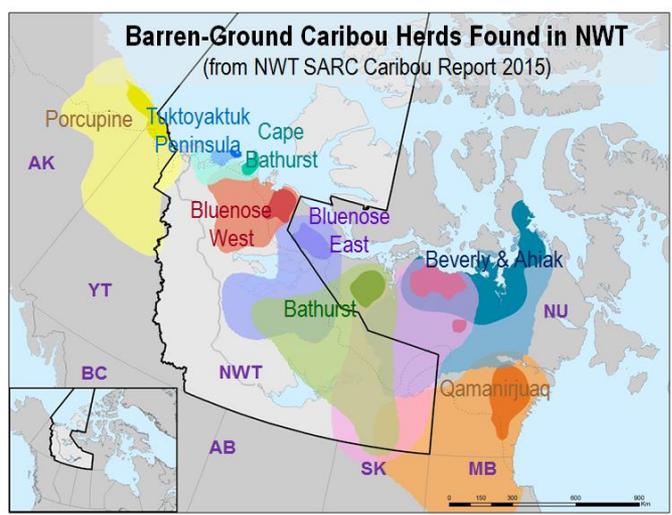


Photo J. Adamczewski, ENR



# 3A. Caribou Herds as Basis for Management



1. Migratory Caribou & Reindeer Herds Defined Based on Calving Grounds

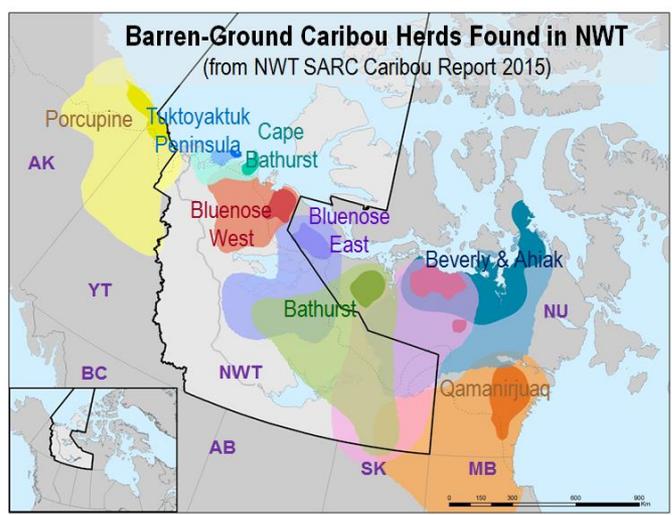
2. **Cows Normally High Fidelity to Calving Grounds (96-98%, based on Collars)**



Photo J. Adamczewski, ENR



# 3A. Caribou Herds as Basis for Management



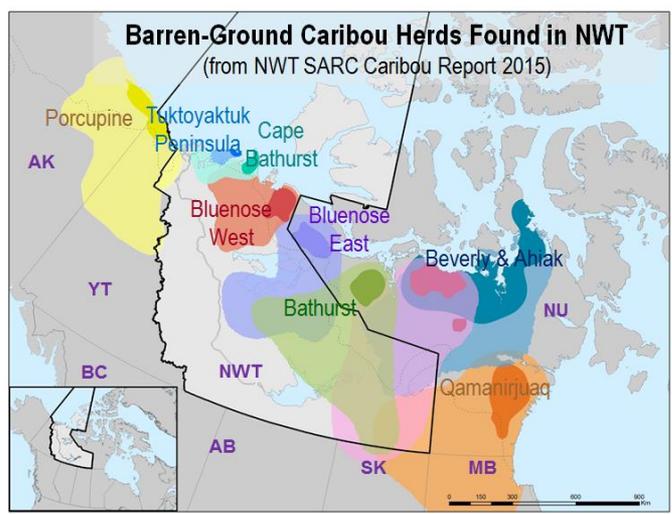
1. Migratory Caribou & Reindeer Herds Defined Based on Calving Grounds
2. Cows Normally High Fidelity to Calving Grounds (96-98%, based on Collars)
3. **Same Approach: Alaska, Canada, Russia**



Photo J. Adamczewski, ENR



# 3A. Caribou Herds as Basis for Management



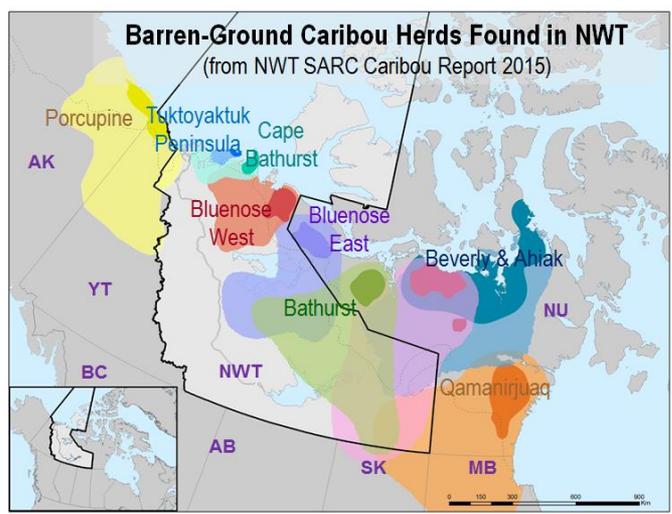
1. Migratory Caribou & Reindeer Herds Defined Based on Calving Grounds
2. Cows Normally High Fidelity to Calving Grounds (96-98%, based on Collars)
3. Same Approach: Alaska, Canada, Russia
4. **Why Manage by Herds**



Photo J. Adamczewski, ENR



# 3A. Caribou Herds as Basis for Management



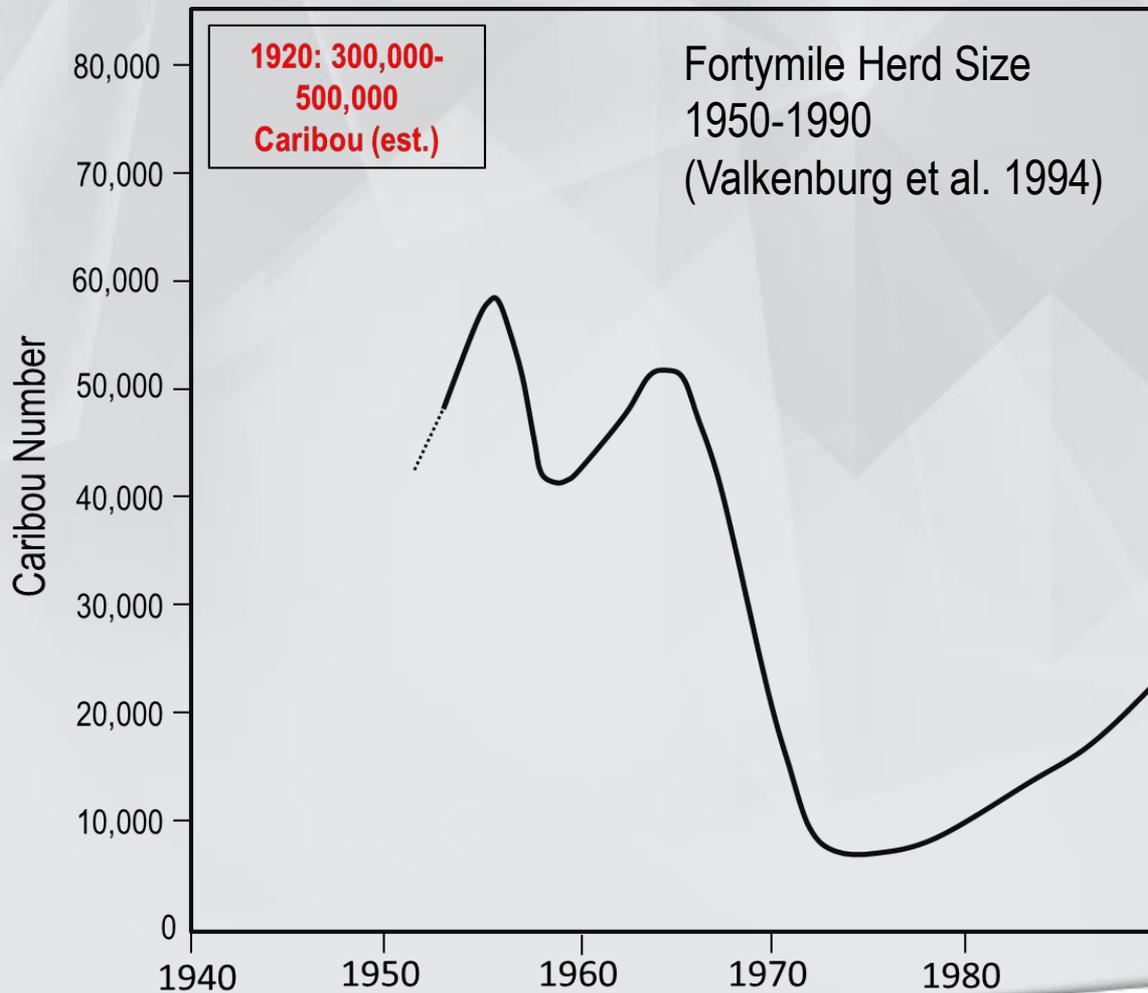
1. Migratory Caribou & Reindeer Herds Defined Based on Calving Grounds
2. Cows Normally High Fidelity to Calving Grounds (96-98%, based on Collars)
3. Same Approach: Alaska, Canada, Russia
4. Why Manage by Herds?
5. **Herd-Based Management Endorsed by Alberta Research Council (2009)**



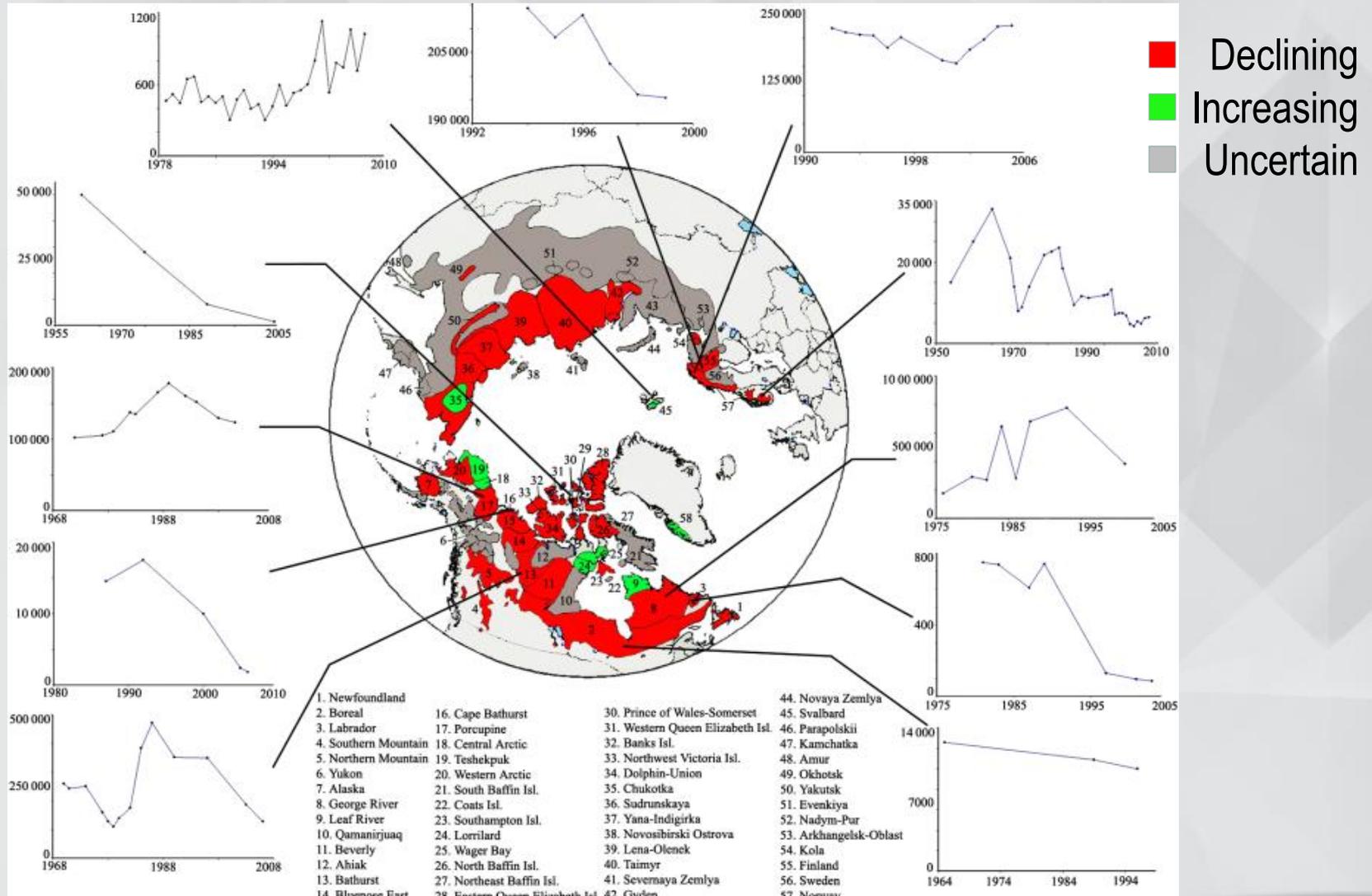
Photo J. Adamczewski, ENR



# 4A. Fluctuations in Caribou Numbers: Not Always Predictable



# 4A. Global Trends



(From Vors and Boyce. 2009. Global declines of caribou and reindeer, *Global Change Biology* 15: 2626-2633)



# 5A. Factors That Affect Herd Size and Trend:

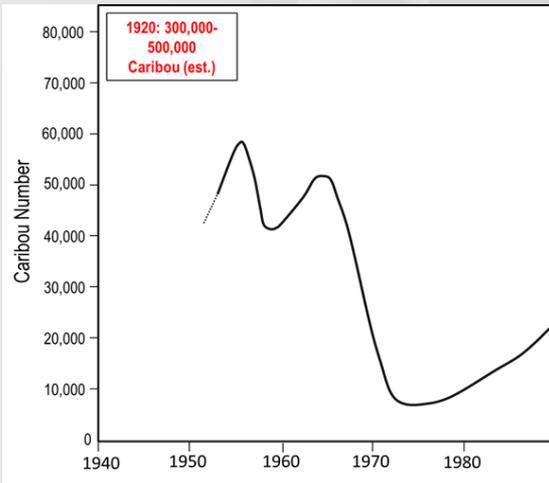


Photo J. Adamczewski, ENR

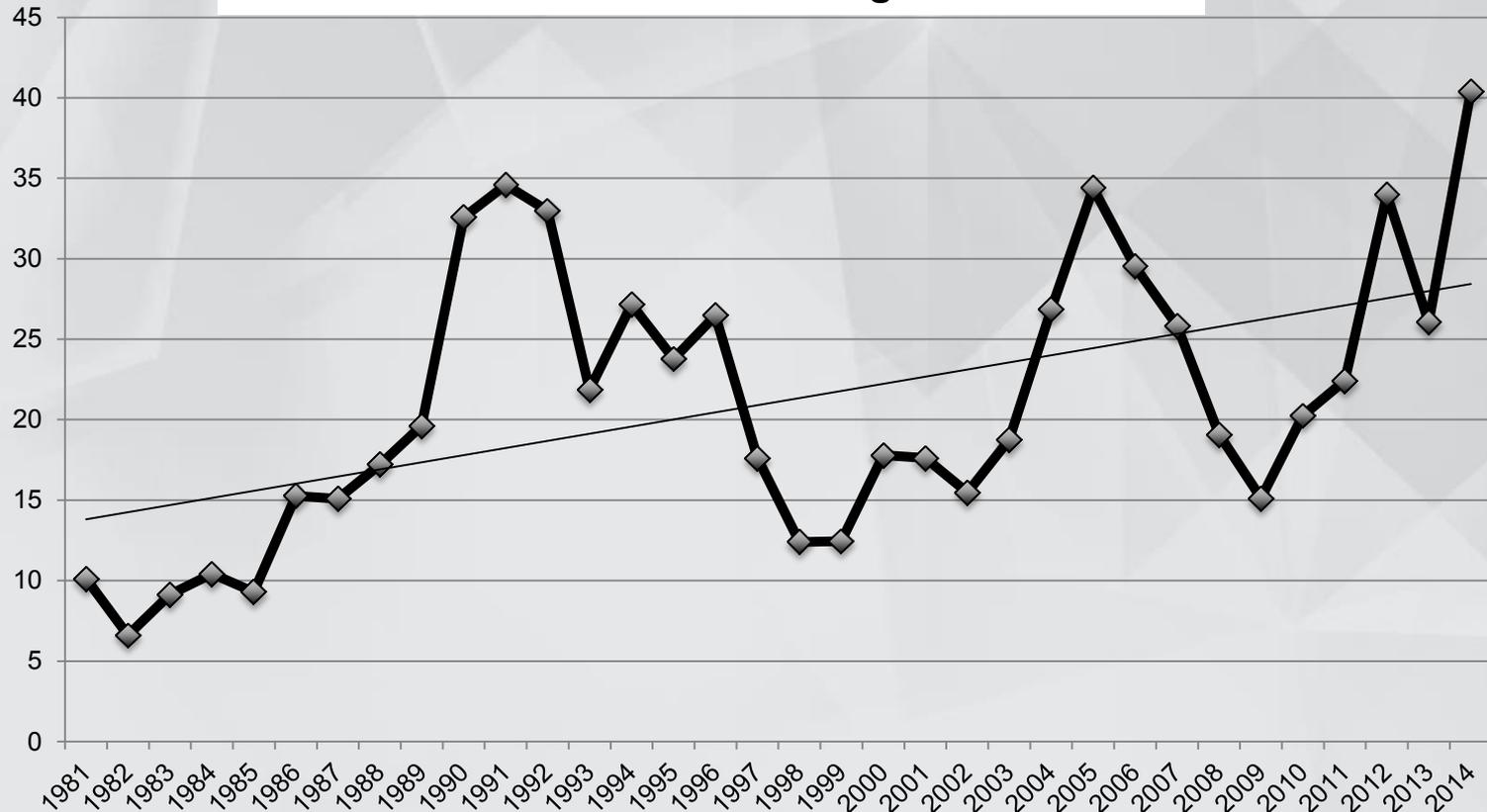
1. Weather
2. Harvest
3. Predators
4. Fire
5. Cumulative Effects of Development



# 5A. Factors That Affect Herd Size and Trend: Weather

(courtesy D. Russell, CARMA network, Nov. 2015)

**July Drought Index (3-year running average)  
Bluenose-East Summer Range 1981-2014**



# 5A. Factors That Affect Herd Size and Trend: Harvest

## Cape Bathurst, Bluenose-West & Bathurst Herds 2000-2012

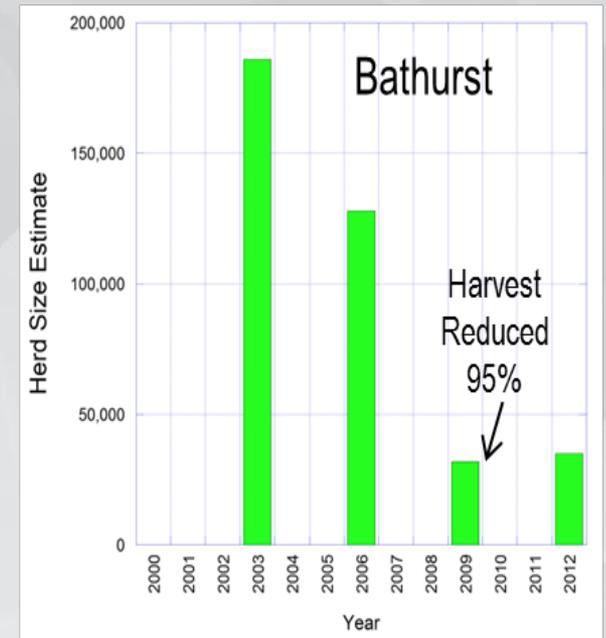
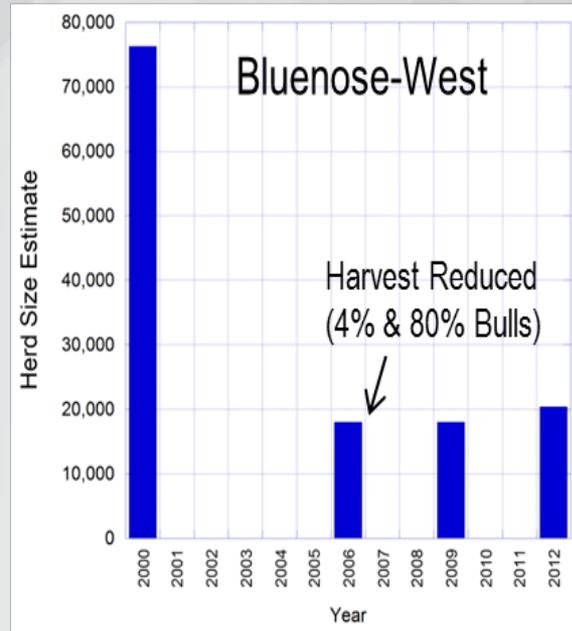
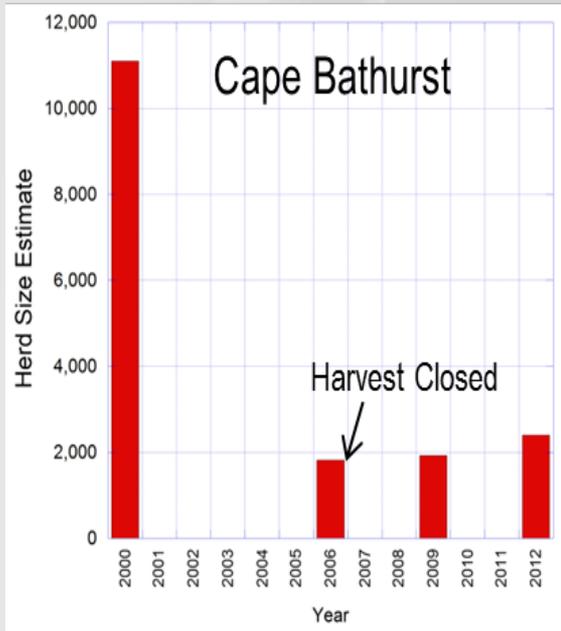
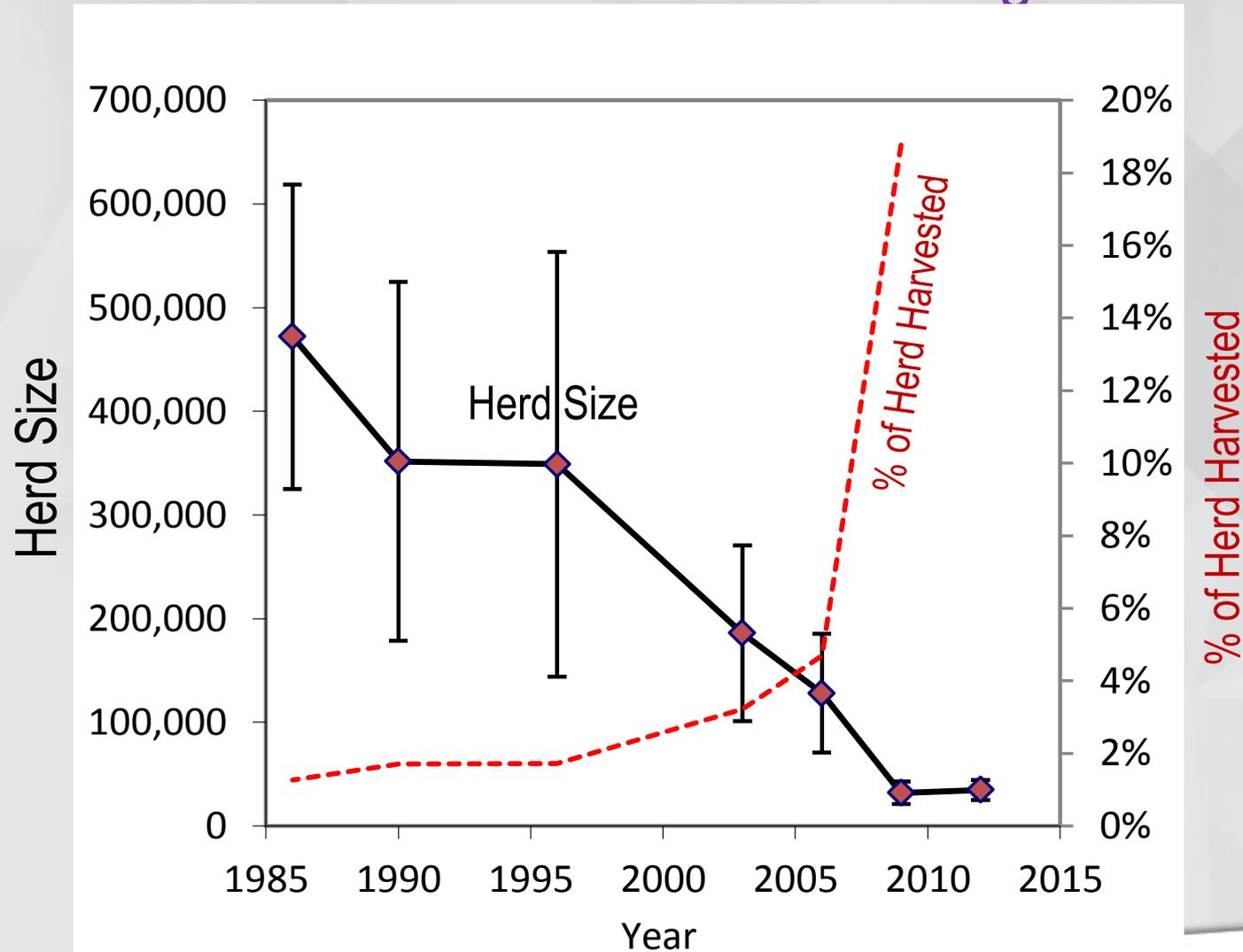


Photo A. Gunn



# 5A. Factors That Affect Herd Size and Trend: Effect of Constant Harvest of 6000 from Declining Bathurst Herd



—◆— Herd size (adults)    - - - - % herd harvested (harvest=6000)

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# 5A. Factors That Affect Herd Size and Trend: Predators



Internet Photo



Photo J. Adamczewski, ENR

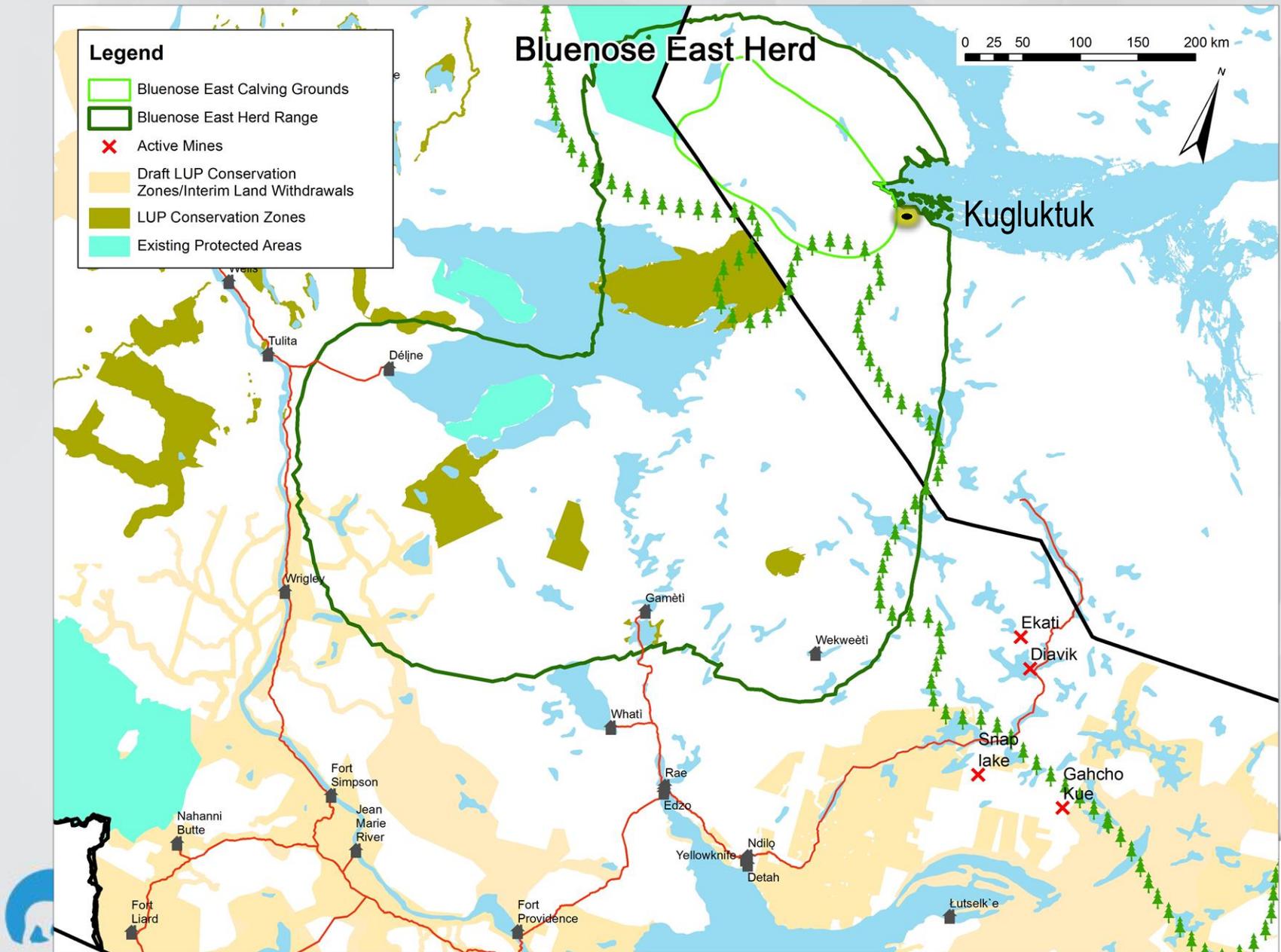
1. Wolves Kill Caribou Throughout the Year
2. Grizzly Bears Kill Caribou on Calving Grounds
3. Wolves Difficult to Count
4. Wolves on Bathurst range:  
Reduced Numbers & Productivity
5. Wolves Abundant – Communities
6. Wolves Likely More Important  
for Small/Declining Herds



# 5A. Factors That Affect Herd Size and Trend: Fire



# 5A. Factors That Affect Herds: Mines and Cumulative Effects



# 6A. Caribou Herds – Indicators of Increase & Decrease

## Three Key Vital Rates:

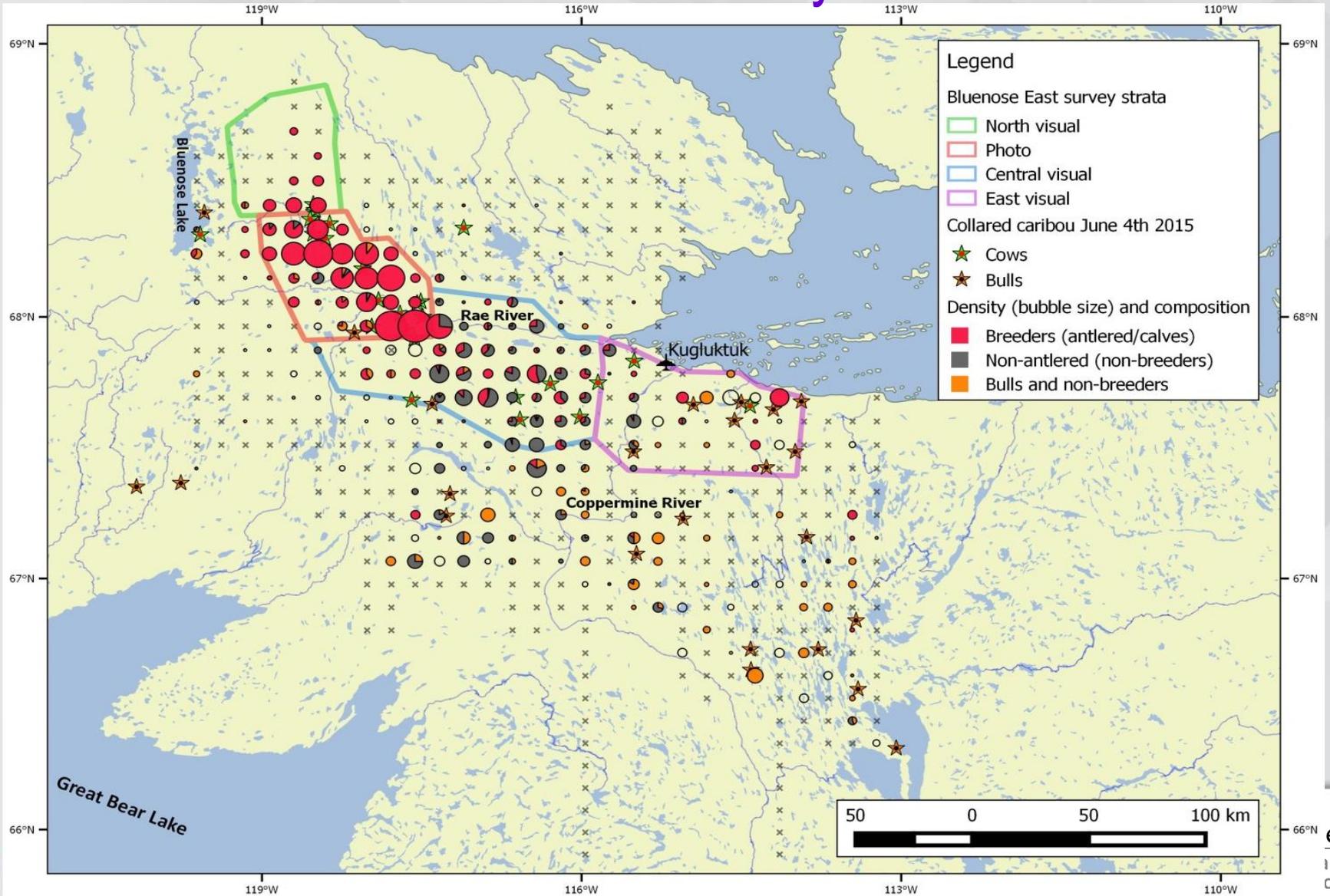
1. Cow Survival Rate: *80-85% for stable herd*
2. Calf Recruitment: *Spring ratios 30-40:100 for stable herd*
3. Pregnancy Rate: *At least 80% in healthy herds*



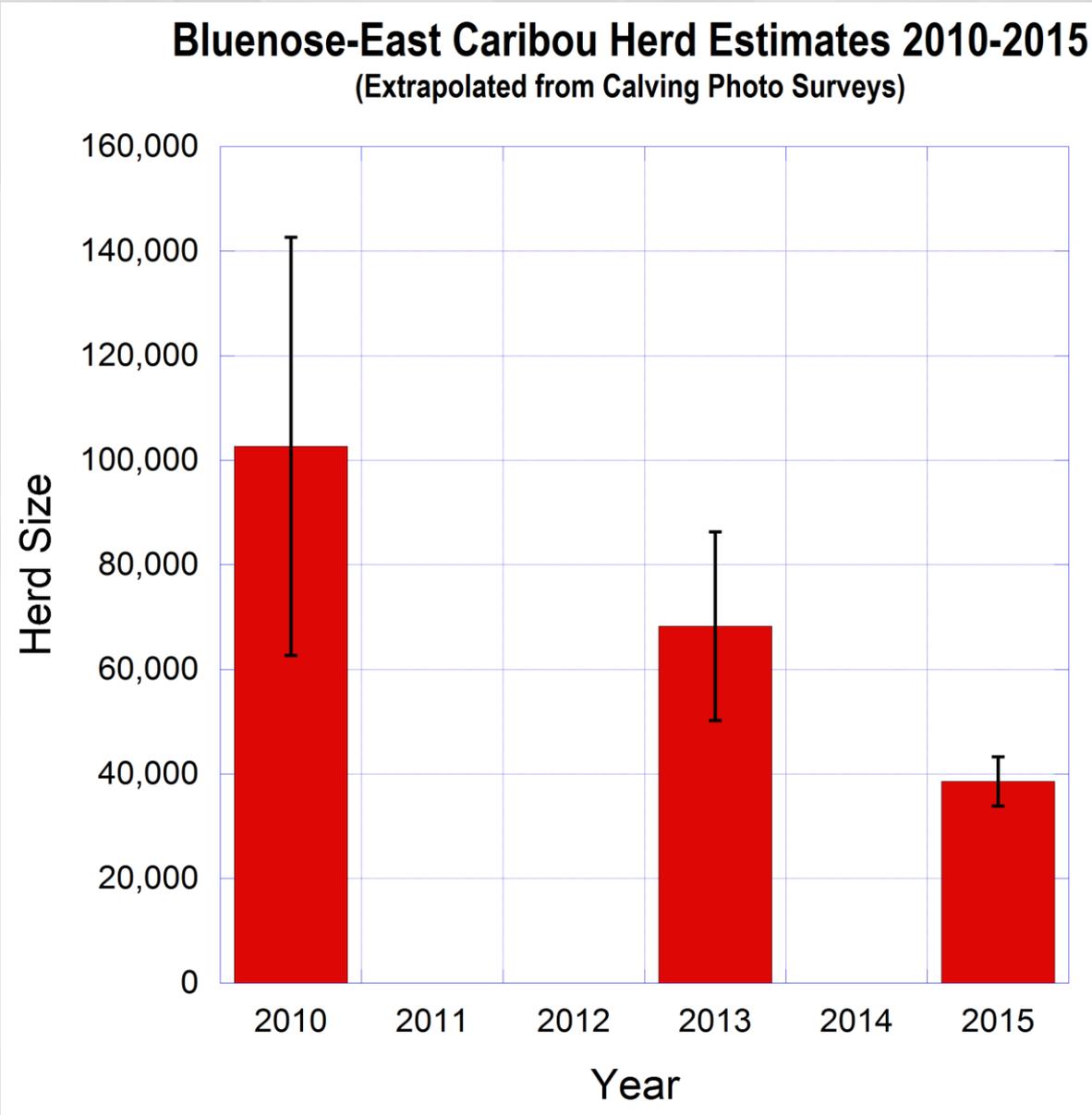
Photo J. Adamczewski, ENR



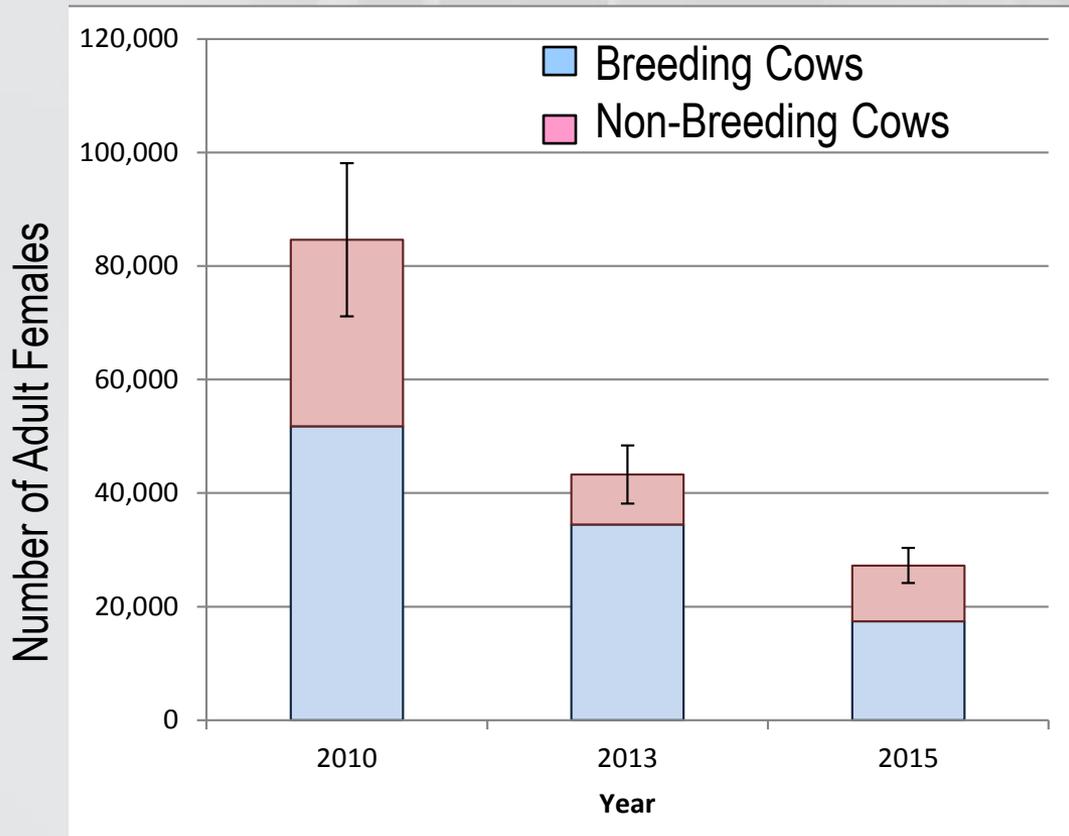
# 7A. Bluenose-East Herd Trend & Indicators: June 2015 Survey Area



# 7A. Bluenose-East Trend & Indicators: Herd Size 2010-2015



# 7A. Bluenose-East Trend & Indicators: Numbers of Cows in 2010, 2013, and 2015



## Breeding Female Estimates:

2010: 51,800

2013: 34,500

2015: 17,400

***2013-2015: 50% decline***



# 7A. Bluenose-East Trend & Indicators: Vital Rates 2015

## Three Key Vital Rates:

1. Cow Survival Rate: Needs to be 80-85% for stable herd  
*Estimated 71% 2013-2015*
2. Calf Recruitment: Need spring ratios 30-40:100 for stable herd  
*Estimated 25:100 (average) 2014-2015*
3. Pregnancy Rate: At least 80% in healthy herds  
*Estimated 64% in 2015*

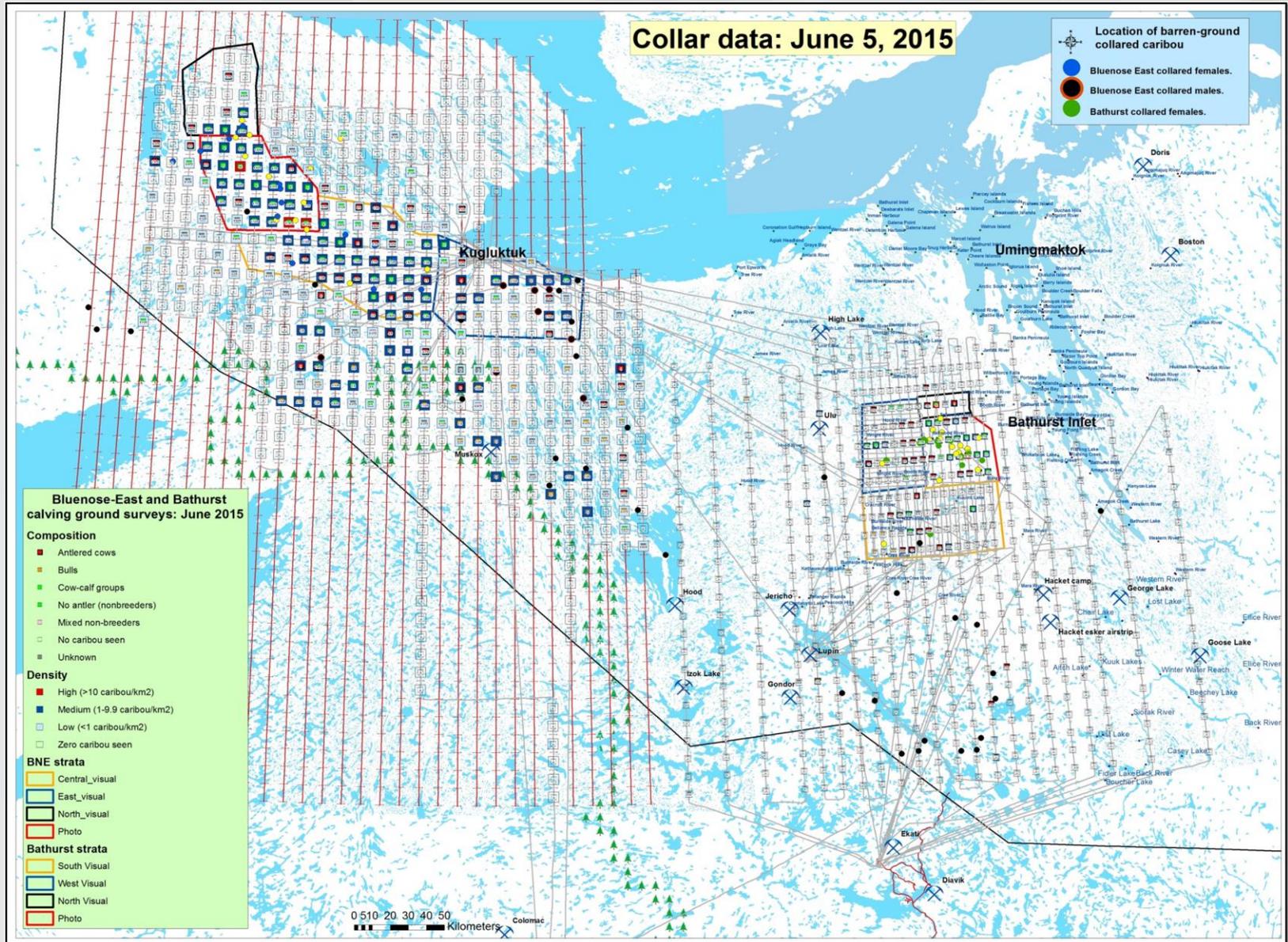


Photo J. Adamczewski, ENR



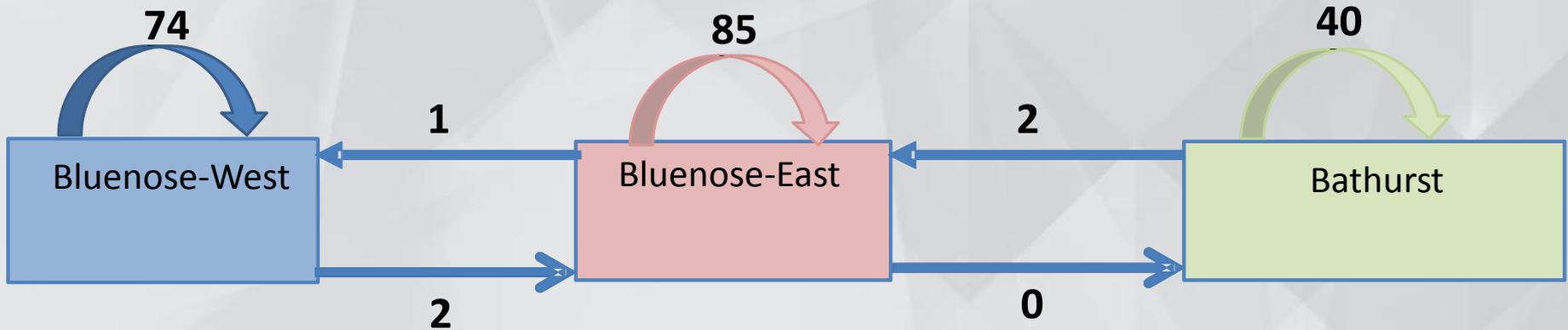
# 8A. Bluenose-East Caribou Have Not Moved Elsewhere

## Extent of Flying & Collared Caribou Locations June 2015



# 8A. Bluenose-East Caribou Have Not Moved Elsewhere

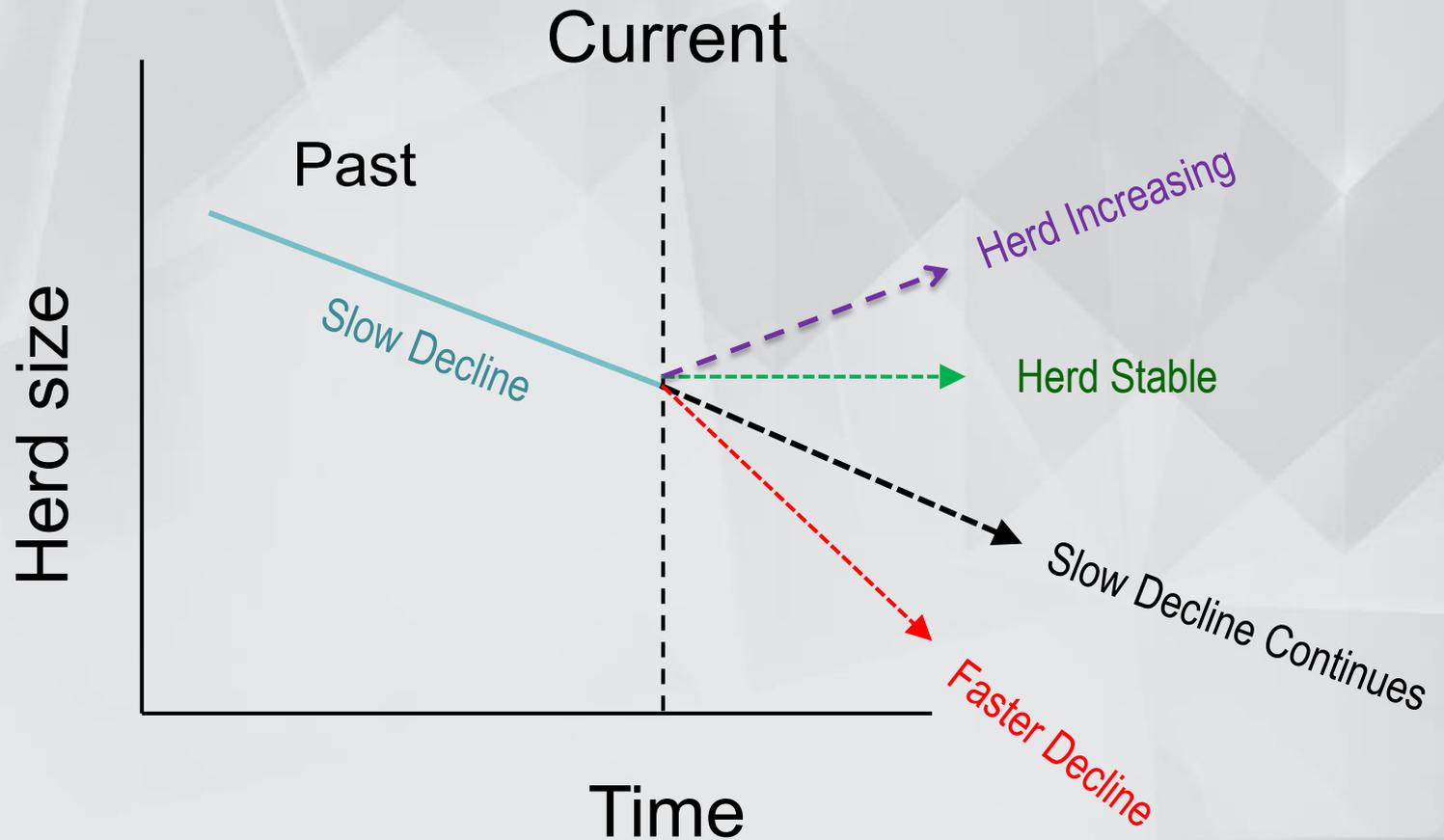
## *Movements of Collared Cows 2010-2015*



204 Consecutive Pairs of June Locations:  
199 Returns to Same Calving Ground  
5 Switches  
**97.5% Loyalty to Calving Grounds**

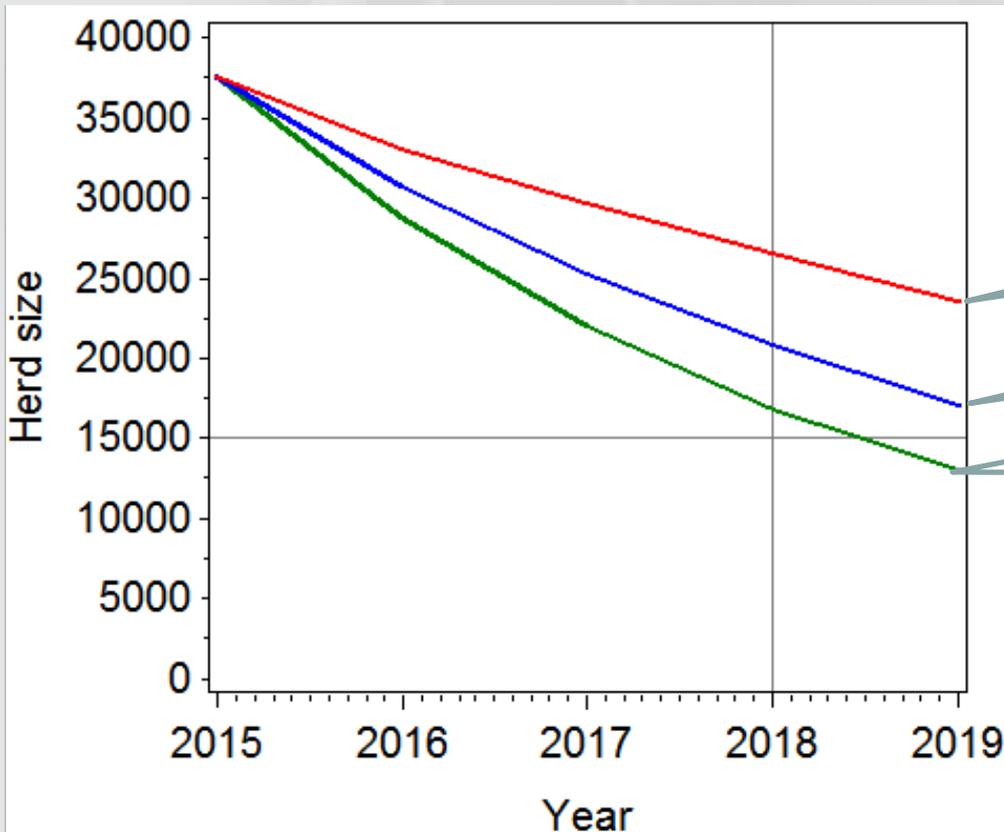


# 9A. Future Trend of BNE Herd (Model Projections)



# 9A. Future Trend of Bluenose-East Herd 2015-2019

*If Vital Rates Stay the Same & No Harvest*



2008-2010 Calf Productivity (44:100)

Average Calf Productivity (34:100)

2013-2015 Calf Productivity (25:100)

*Harvest = 0*

*Cow Survival Stays at 71%*

*2018: Herd 17,000-27,000*



# Status & Management BNE Caribou 2016-2019

## GNWT ENR: Presentation Overview

### Part A: Bluenose-East Herd Status

### **Part B: Proposed Actions**



Photo J. Adamczewski, ENR



# Status & Management BNE Caribou 2016-2019

## GNWT ENR: Presentation Overview, Part B (Proposed Actions)

1. Management context, Bluenose-East herd
2. Proposed actions 2016-2019
3. Highlights of consultation & engagement
4. Bluenose-East caribou management in Nunavut
5. Summary

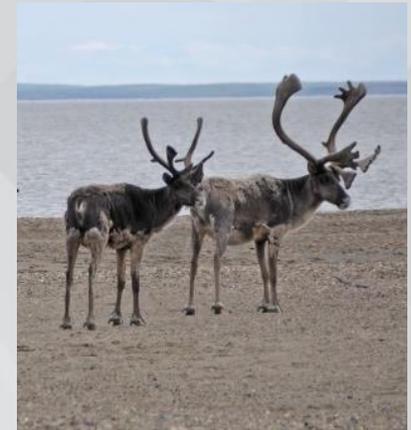


Photo J. Adamczewski, ENR



# 1B. Management Context, Bluenose-East Herd



## Taking Care of Caribou

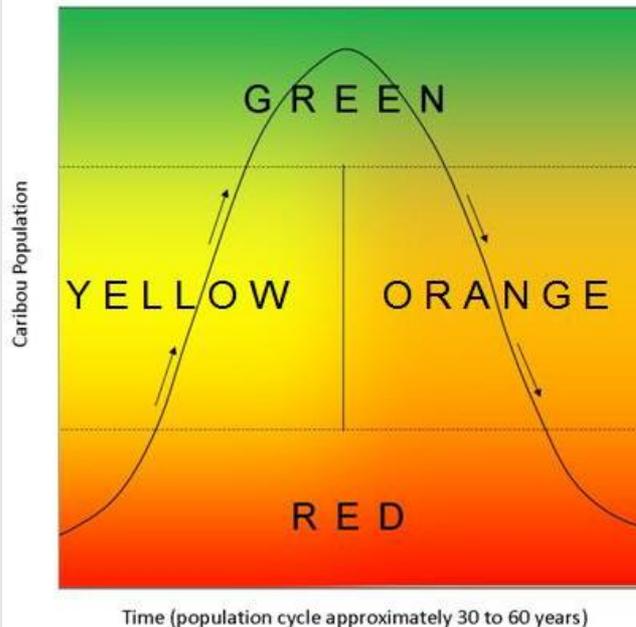
The  
CAPE BATHURST, BLUENOSE-WEST,  
AND BLUENOSE-EAST BARREN-GROUND  
CARIBOU HERDS MANAGEMENT PLAN

Advisory Committee for Cooperation on Wildlife  
Management

November 3, 2014

## ACCWM Management Plan 2014:

1. For Cape Bathurst, Bluenose-West, Bluenose-East herds
2. Colour Phase Chart for Herd Status
3. Recommendations on harvest, predators, land use
4. Bluenose-East herd in orange (declining) phase
5. Action Plan under development



# 1B. Management Context, Bluenose-East Herd

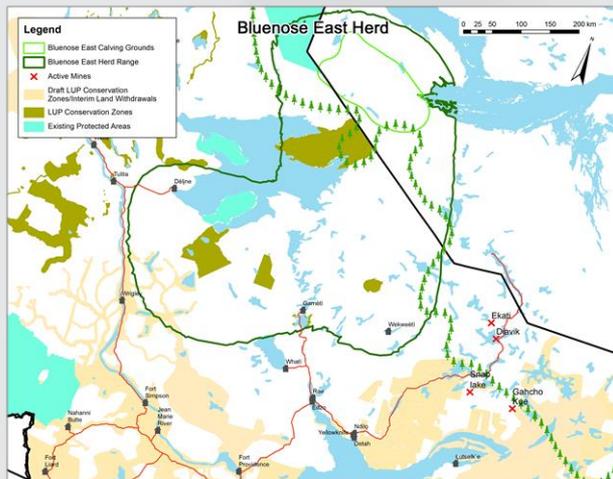


## ACCWM Management Plan 2014:

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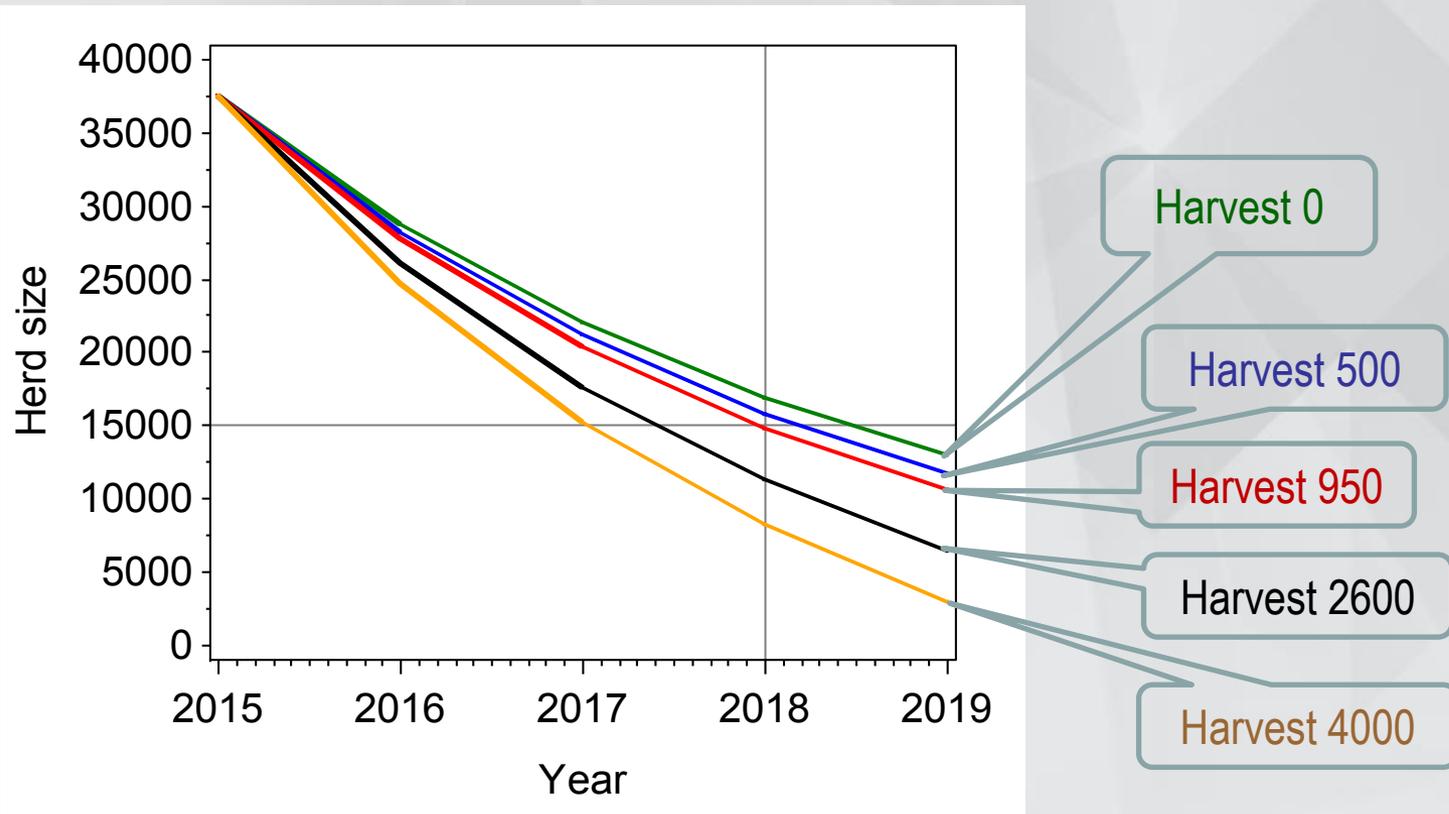
## Environmental Assessment & Land Use:

1. ENR participates in all Environmental Assessments on Bluenose-East range (NWT & NU)
2. ENR participates in NU meetings on caribou habitat protection
3. ENR and GN opposed Tundra Copper exploration
4. Sahtú & other Land Use Plans



# 2B. Future Trend of Bluenose-East Herd 2015-2019

*If Everything Stays the Same & Harvest Continues*

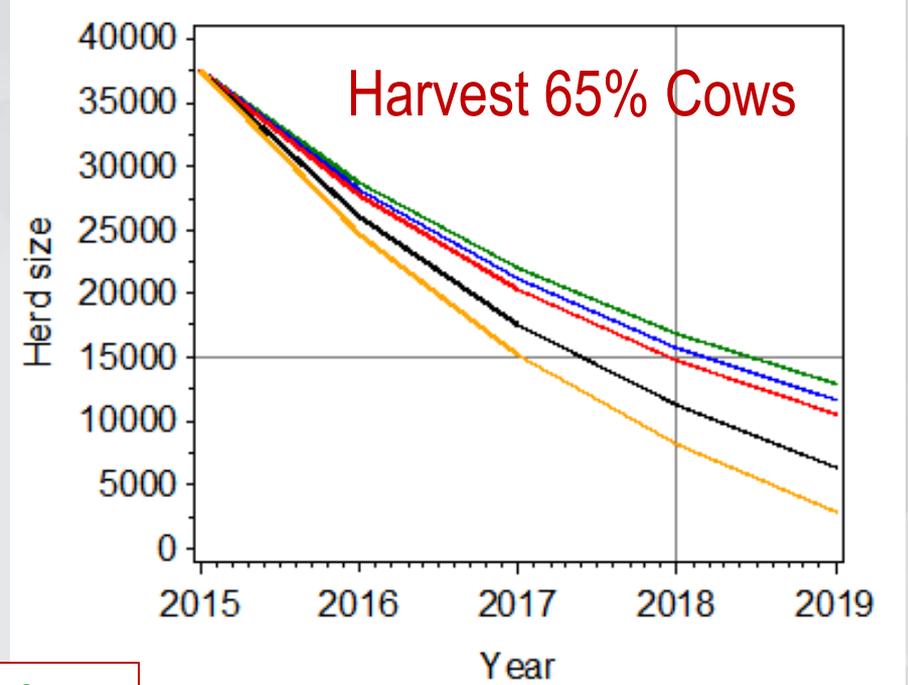
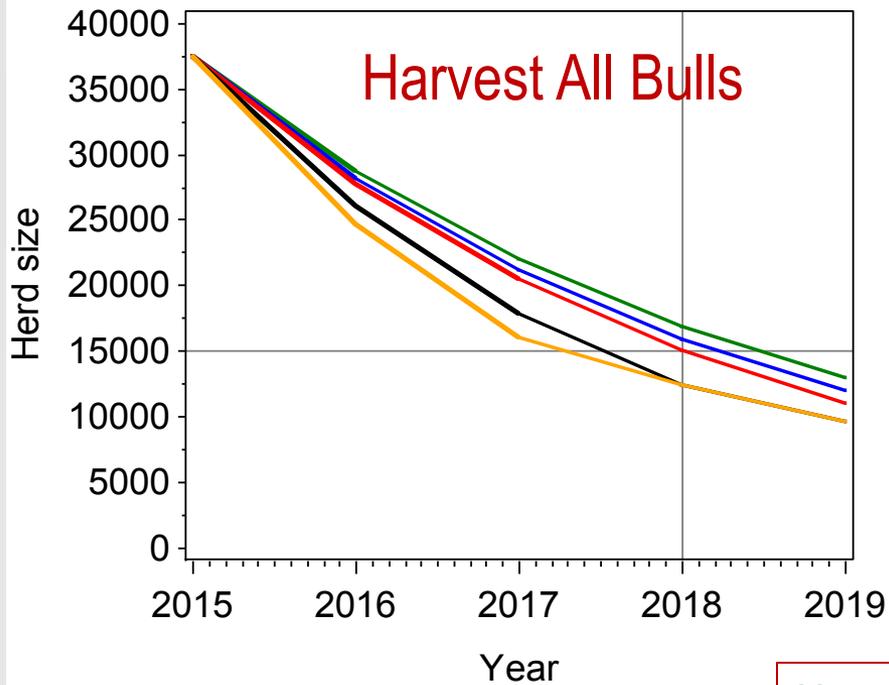


*Cow Survival Stays at 71%  
Calf Productivity at 2013-2015 Levels  
Harvest 0-4000, 65% Cows  
**2018: Herd Size?***



# 2B. Future Trend of Bluenose-East Herd 2015-2019

## Harvest of Cows and Bulls



Harvest 0  
 Harvest 500  
 Harvest 950  
 Harvest 2600  
 Harvest 4000



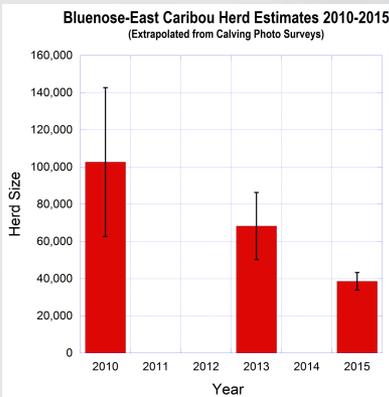
## 2B. Proposed Actions 2016-2019: Harvest

### Harvest Recommended as 950 (All Bulls) Because:

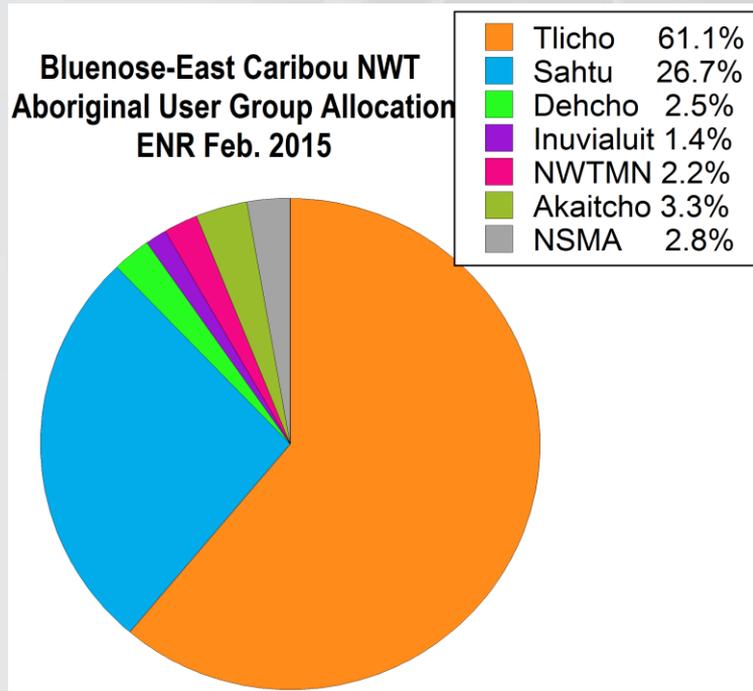
1. Herd in Orange (Declining) Zone (ACCWM Plan)
2. Loss of 50% of Breeding Cows in 2 Years
3. Herd Likely to Decline Further
4. Harvest Adds to Mortality, Chance of Decline
5. Annual Review of New Information
6. NWT harvest would be 611 (339 for Nunavut)
7. Tłı̄ch̄q Government support



Photo A. Gunn



## 2B. Proposed Actions 2016-2019: Harvest Allocation



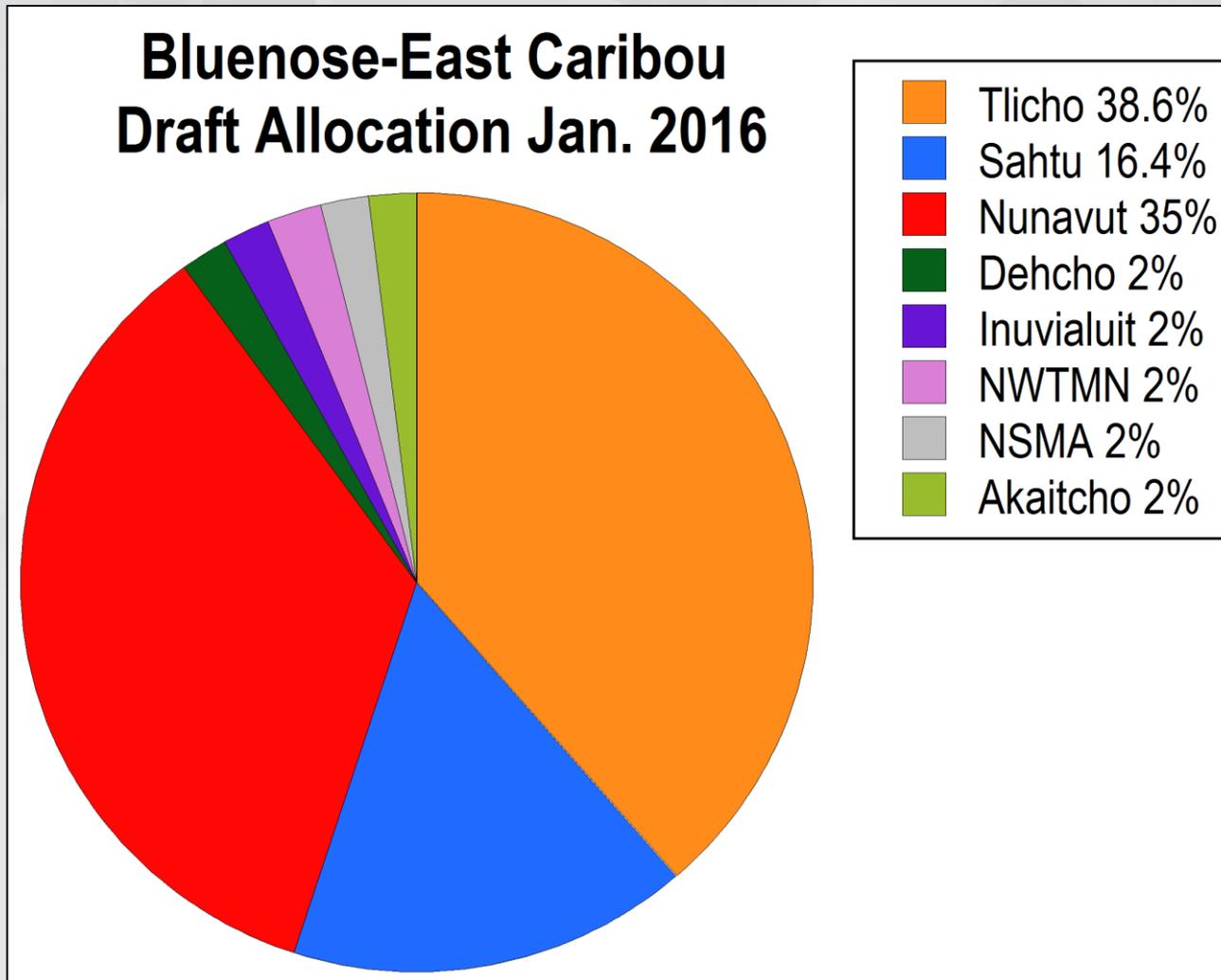
1. Meetings & Correspondence 2014-2016
2. Allocation Conference Call Feb. 2, 2015 for 2014-2015
3. ENR Allocation Feb. 6, 2015 for 2014-2015
4. ENR Allocation considered recent harvest (2010-2014) & other factors
5. Precedents: ACCWM 2011 draft allocation Bluenose-East;  
Bluenose-West allocation 2006  
Porcupine Harvest Plan 2010
6. Allocation Meeting Jan. 20, 2016



Photo A. Gunn

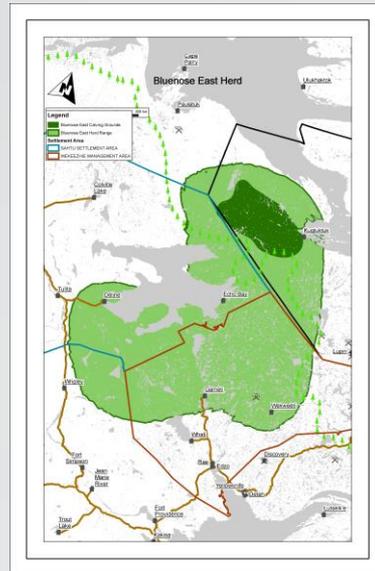


# 2B. Proposed Actions 2016-2019: Alternate Harvest Allocation Proposed 2016



## 2B. Proposed Actions 2016-2019: Wolf Management

1. ENR Wolf Management Feasibility Assessment
2. Pilot Tłıçhǫ Wolf Harvest Program (Bathurst Herd)
3. Collaboration with other Aboriginal Governments



Internet Photo



# 2B. Proposed Actions 2016-2019: Wolf Harvest Incentives



Internet Photo

## Wolf Harvested

### No Handling

A harvester brings an intact wolf to any ENR office throughout the Territory.

Harvester Receives: \$200

**Total: \$200**

### Traditional Handling

A harvester brings a wolf pelt prepared to traditional standards.

Harvester Receives: \$ 400

Processed Skull: \$50

**Total: \$450**

### GMVFP Handling

A harvester brings a good quality, prime, well-handled and properly prepared wolf pelt.

Harvester Receives: \$ 400

Processed Skull: \$50

Prime Fur Bonus: \$350\*

**Total: \$800**

\* If the pelt sells for more than \$200 at auction, the harvester receives the prime fur bonus.



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## 2B. Proposed Actions 2016-2019: Monitoring

1. Reconnaissance surveys on calving grounds (annual)
2. Calving photo survey 2018
3. Calving ground composition surveys (every 3 years)
4. Fall sex ratio composition survey (every 2-3 years)
5. Spring calf:cow composition survey (annual)
6. Caribou condition assessment (annual)
7. Cow survival rate estimation (every 3 years)
8. Monitor all harvest (annual)
9. 50 Collars (30 cows, 20 bulls) updated annually
10. Wolf harvest (annual)



Photo J. Adamczewski, ENR



## 2B. Proposed Actions 2016-2019: Adaptive Co-Management

1. Annual Review of New Information, Re-assess Management: (SRRB, WRRB, ENR, Aboriginal Governments, Nunavut)
2. Continued Engagement with ACCWM
3. Guidance from ACCWM Management Plan for Cape Bathurst, Bluenose-West, Bluenose-East herds

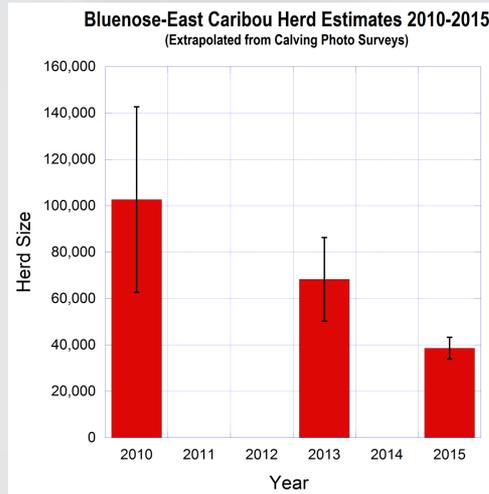


Photo A. Gunn

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# 3B. Highlights of Consultation & Engagement: Bluenose-East Herd

## A. Fall-Winter 2014-2015:

1. Leaders meetings August 28, Nov. 7, Nov. 28, 2014
2. Technical meetings Oct. 9-10, Oct. 23-24, 2014
3. Sahtu Gathering for Caribou Jan. 27-29, 2015
4. Allocation Conference Call Feb. 2, 2015

## B. Summer, Fall, Winter 2015-2016:

1. Updates on surveys & management: July 9, Aug. 7, Sept. 24, Dec. 2, 2015
2. Meetings, Joint Proposal Tłıchǫ-ENR to WRRB Dec. 15, 2015
3. GNWT Proposal to SRRB Dec. 15, 2015
4. Meetings ENR, Sahtú communities, SRRB, Fall & Winter 2015-2016
5. Deline Caribou Conservation Plan Nov. 23, 2015
6. Allocation Meeting Jan. 20, 2016

## C. Board Hearings

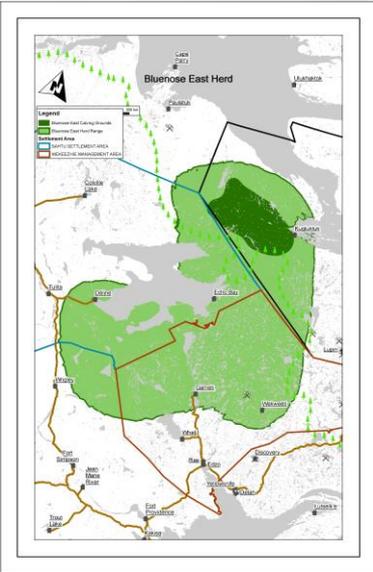
1. SRRB Hearing on BNE herd March 1-3, 2016
2. WRRB hearing on BNE herd March 15-17, 2016



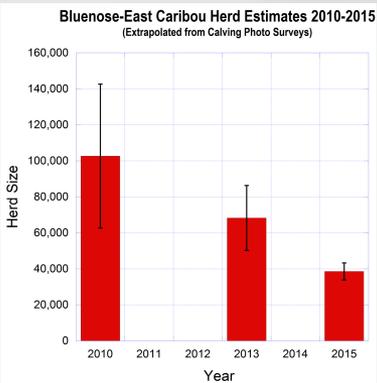
Photo J. Adamczewski, ENR



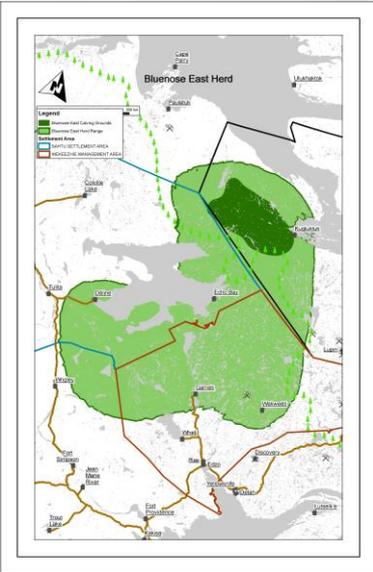
# 4B. Bluenose-East Caribou Management in Nunavut



- 1. Harvest:**  
**GN recommended TAH of 340 Bluenose-East bulls in NU  
NWMB hearing 2016 (GNWT will participate)**  
**GNWT recommended Bluenose-East harvest of 339 for NU  
(part of 950 total)**



# 4B. Bluenose-East Caribou Management in Nunavut



## 1. Harvest:

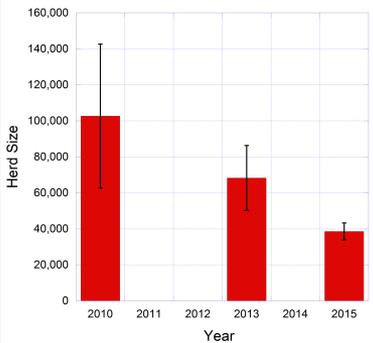
GN recommended TAH of 340 Bluenose-East bulls in NU  
NWMB hearing 2016 (GNWT will participate)

GNWT recommended Bluenose-East harvest of 339 for NU  
(part of 950 total)

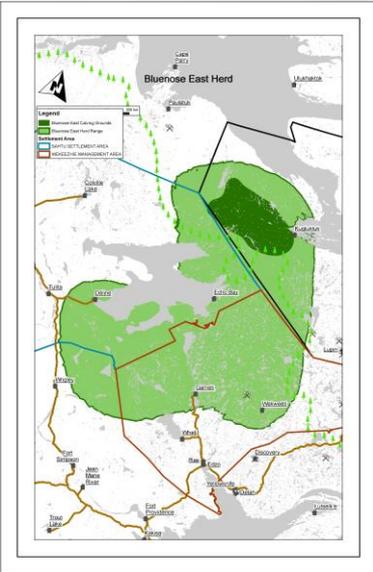
## 2. Wolves:

**Discussions with NU representatives – interest in hunting  
wolves in NU on BNE range**

Bluenose-East Caribou Herd Estimates 2010-2015  
(Extrapolated from Calving Photo Surveys)



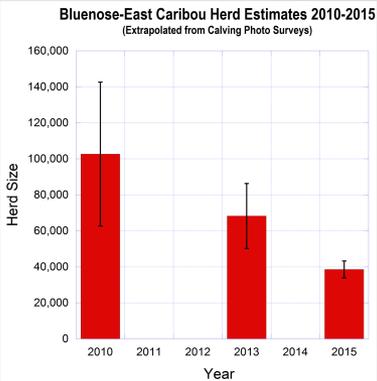
# 4B. Bluenose-East Caribou Management in Nunavut



- 1. Harvest:**  
GNWT recommended Bluenose-East harvest of 339 for NU (part of 950 total)  
GN recommended TAH of 340 Bluenose-East bulls in NU NWMB hearing 2016 (GNWT will participate)

- 2. Wolves:**  
Discussions with NU representatives – interest in hunting wolves in NU on Bluenose-East range

- 3. Land Use:**  
**GN, GNWT agree on calving ground protection (all herds)**  
**ENR has participated in NU meetings on caribou habitat protection**  
**ENR participates in NU environmental assessments**



# 5B. Summary: BNE Caribou Management

Bluenose-East Caribou Herd Estimates 2010-2015  
(Extrapolated from Calving Photo Surveys)

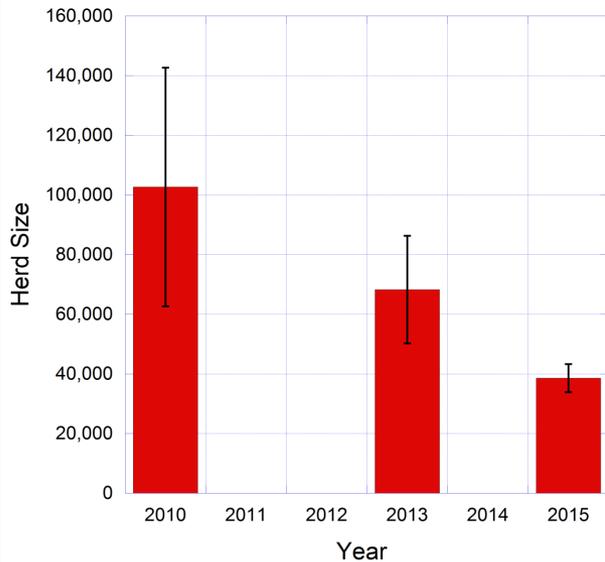


Photo J. Adamczewski, ENR

1. BNE herd has declined almost 50% from 2013.
2. Herd will likely decline further.
3. ENR recommends harvest of 950 Bluenose-East bulls, with annual review.
4. ENR will lead a collaborative feasibility assessment of wolf management options.
5. Land use issues addressed via environmental assessment; ENR supports calving ground protection.
6. We all need to work together.





# *Our Turn to Help*



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Drawing J. Adamczewski

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