

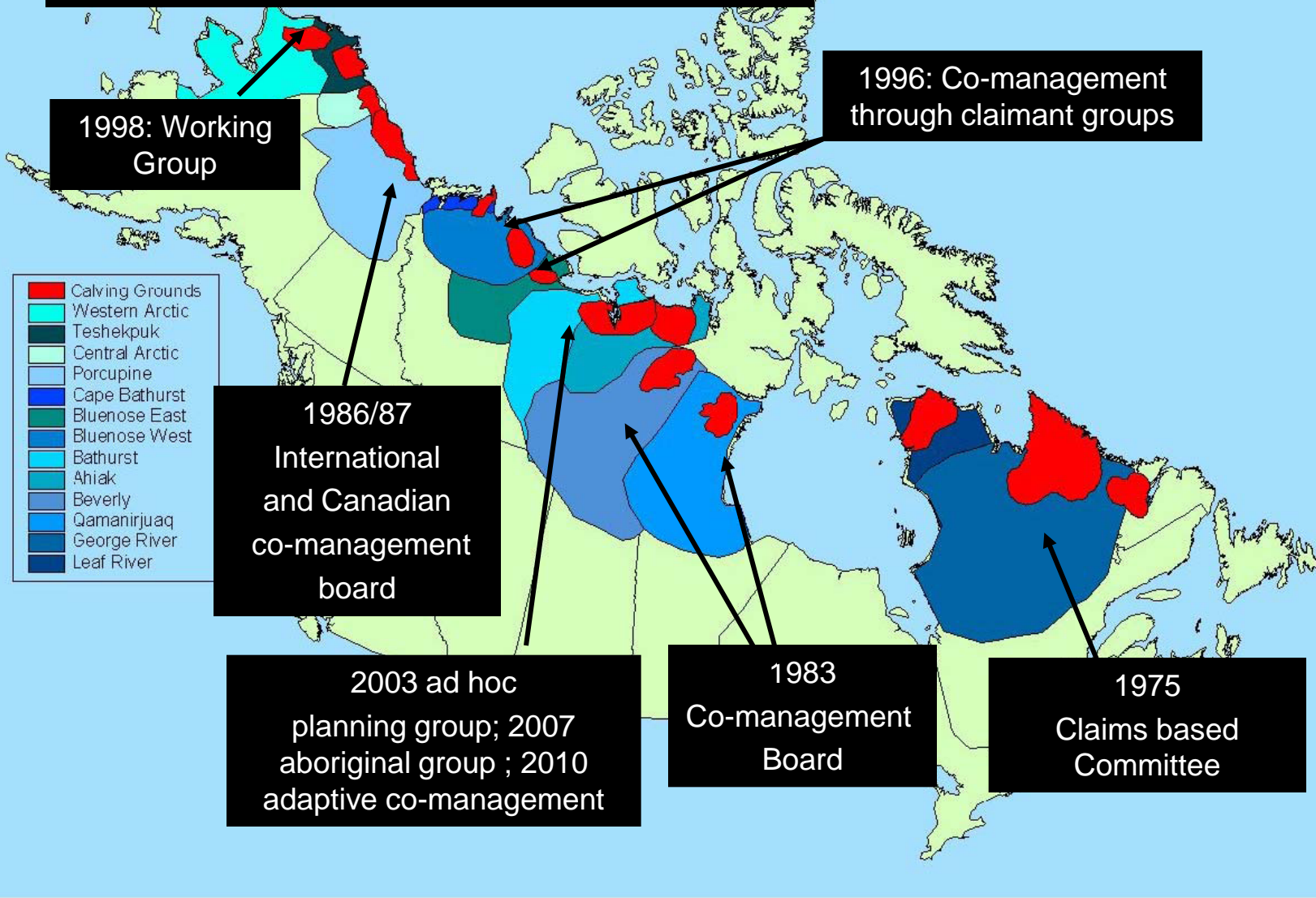
Towards Adaptive Co-Management of Caribou in North America?

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North American Co-management Systems



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CARIBOU NEWS

in Brief

Keeping people in touch with the Beverly and Qamaniruaq Caribou Management Board (BQCMB), and with issues affecting caribou.

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Facts point to major decline in Beverly herd

Although the size of the Beverly herd population is still unknown, the Government of the Northwest Territories (GNWT) says evidence from its June 2007 and June 2008 systematic reconnaissance surveys at the peak of calving season shows that the herd's numbers have dropped sharply.

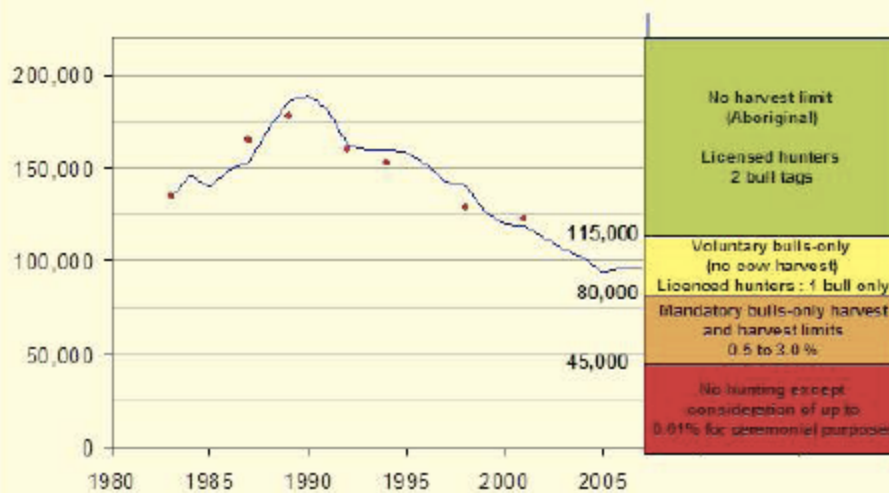
Wildlife director Susan Fleck spoke to BQCMB members at their November 2008 meeting in Winnipeg, and the Board quickly responded by alerting media to the situation. Biologists and wildlife staff met again in February to come up with practical suggestions to aid Beverly caribou. All agreed that Beverly caribou had not abandoned their calving ground. But a clear challenge is figuring out what type of population survey can be done, now that the herd is so sparsely populated.

Signs of trouble



Gret Inobillard

Porcupine Caribou Herd Census



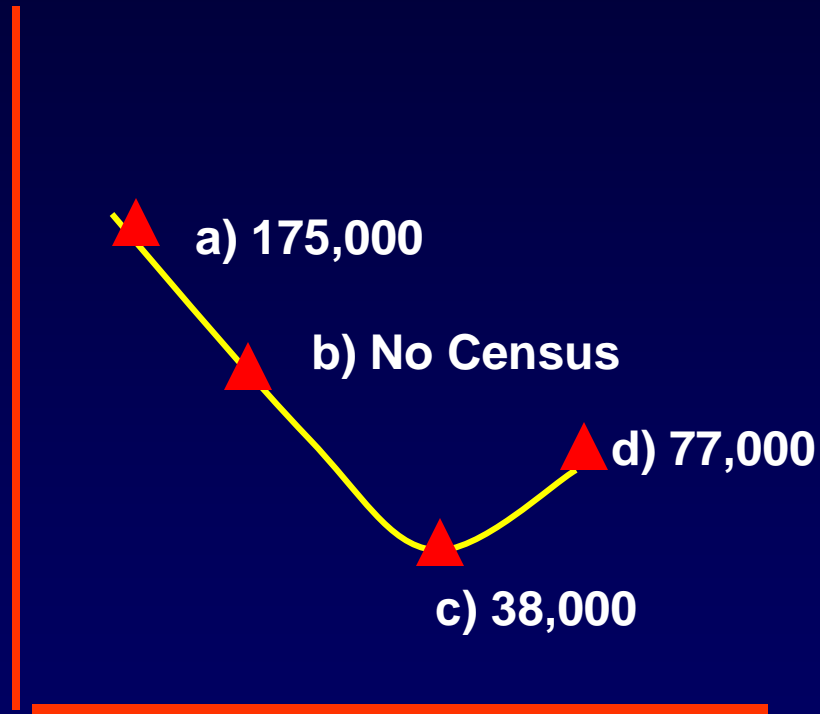
Challenges

- ***Monitoring herd abundance***
 - Uncooperative caribou, weather, equipment
 - On-going skepticism by locals about pop estimates
 - Traditional knowledge impeded monitoring
 - Agency unresponsiveness to co-management; “other priorities”
- ***Achieving Regional Consensus***
 - Slow movement of co-management to make decisions
 - Agencies taking actions without co-management consensus
- ***Planning for decline***
 - Legal conflicts in times of scarcity; less conflict in times of abundance
 - Waiting for legal fix
- ***Jurisdictional misfit with ecosystem***

Innovations :

- ***Anticipating inevitable change***
 - ***Harvest Management Planning***
- ***Hunter involvement in monitoring***
 - Experimentation in methods
- ***Use of decision-support tools***
 - Used for risk assessment, not prediction
 - Used in the absence of data
 - There is a learning curve for use of models
- ***First Nations led consensus, without agencies***

2009 Charrette at CARMA 6



Charrette afterthoughts (1)

- Complacency when lots of caribou
- “The information we don’t have” (harvest numbers)
- ‘Uncertainty’ as a major barrier in decision making
- Too late to gather information when low
- Delayed shift from reactive to proactive
- Few options of things to do to recover a herd
- Frustration because no connection between actions and outcomes

Charrette afterthoughts (2)

- Population estimate is not the only indicator
- Needed inexpensive ways to monitor
- Different kinds of people had different ways of framing problems and solutions
- Remember “ecosystem management” (i.e., habitat)
- Learn from adjacent herds & management systems
- Right decisions more obvious after the fact
- Need to understand issues early

Responding to change in abundance is

- not simply a technical problem
- Social, political, economic and institutional dimensions matter
- Success dependent on prior
 - “buy in” takes time
 - trust (communications, security)
 - Proactive strategy
 - agreed upon management objectives & actions
 - dynamic knowledge base
 - balancing context with design principles

Adaptive Co-Management

Design Principles

- flexible & responsive to change
- social–ecological systems
- informed by a diversity of perspectives
- monitoring, modeling, & policy making linked
- reflective in decision making
- anticipate surprise
- innovative in problem solving
- cross-scale networks
- good leadership

Surface air temperature change : 1961 - 2004
summer (JJA) - °C

