



Caribou Protection in Nunavut — What Makes Sense?

Environmental Consultants and
Sivumut Abluqta — stepping forward together

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Caribou and Sivumut Abluqta — 'stepping forward together'

1. Environmental consultants and caribou interest in Nunavut;
2. Identify what tools consultants bring to the table;
3. Identify consultant needs from other parties at the table.



Who we are...

And what we do about caribou





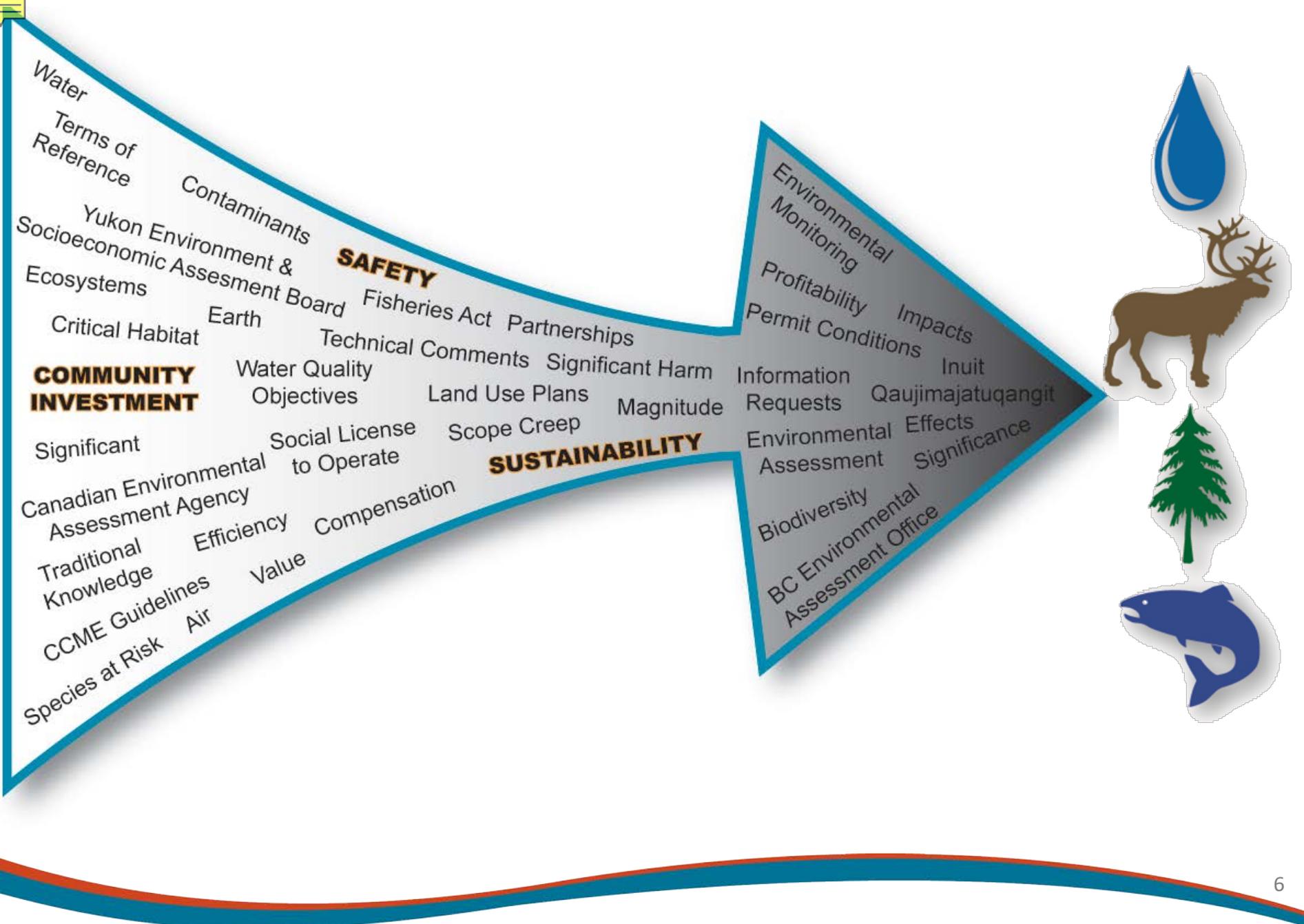
Professional Biologists

- EDI is Terrestrial, Aquatic and Water Science focused
 - Living things and where they live
- EDI and others work on mining projects across north, all have caribou “issues”
- Collectively more Registered Professional Biologists applied to arctic caribou than GNWT and GN combined.



Project	Location	Caribou Issue
Mary River Iron Mine	Baffin Island, eastern Nunavut	North Baffin: Low in 70 year <u>cycle</u> ; increased <u>knowledge</u>
Kiggavik Uranium Mine	Baker Lake, central Nunavut	Multiple herds: New <u>road</u> access through summer habitat, increased <u>harvest</u> pressure
Grays Bay Road and Port	Western mainland Nunavut	Bathurst: Road at edge of traditional <u>calving ground</u> Dolphin Union: Road in <u>winter range</u>
Casino Copper/Gold Mine	Central Yukon	Klaza herd: road access through winter range
Coffee Gold Mine	Central Yukon	Fortymile herd historical winter range
Northern Cross Yukon oil and gas	North Yukon	Porcupine herd: movement







College of Applied Biology (R.P.Bio.): Code of Ethics

1. Provide objective, science-based, unfettered, forthright and intellectually-honest opinion, advice and reports in applied biology.
 - I. refuse to enter into agreements where compensation is contingent upon the conclusions or recommendations meeting the client's desired conclusions or recommendations;





R.P.Bio. Code of Ethics

3. Meet a professional standard of care by practicing applied biology with attention, caution, prudence, and due diligence.
 - due diligence means that **...the level of effort expended is appropriate to the task as defined by the activities undertaken and the potential risks; ...**





R.P.Bio. Code of Ethics

5. Have regard for the health and safety of *the public* in the performance of professional duties.
 - identify and communicate the level of risk and appropriate measures for prevention or mitigation;



R.P.Bio: Principles of Stewardship

1. Take a comprehensive, holistic view
2. Maintain resilient ecosystems
3. Minimize harm, improve and enhance
4. **Assess alternatives**
5. Maintain future options
6. **Learn and respond**

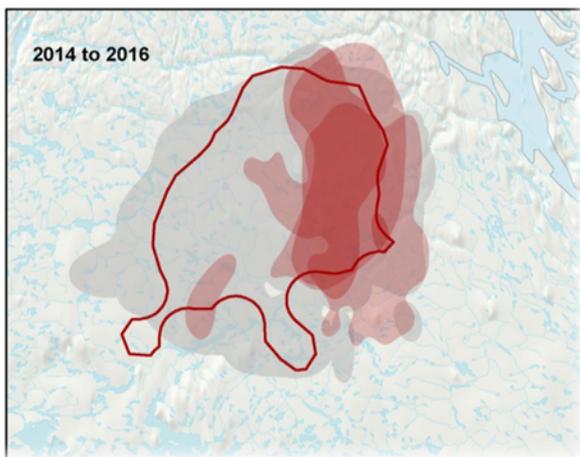
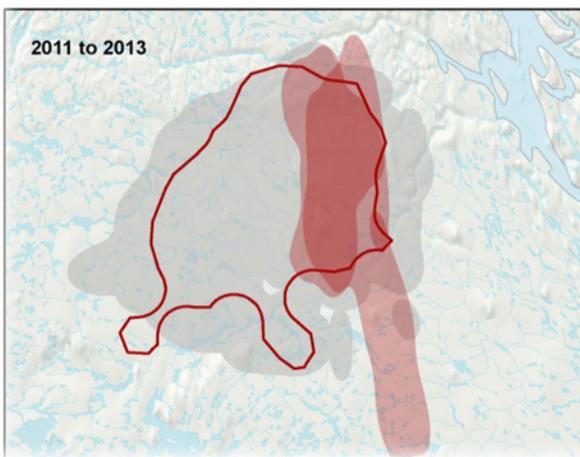
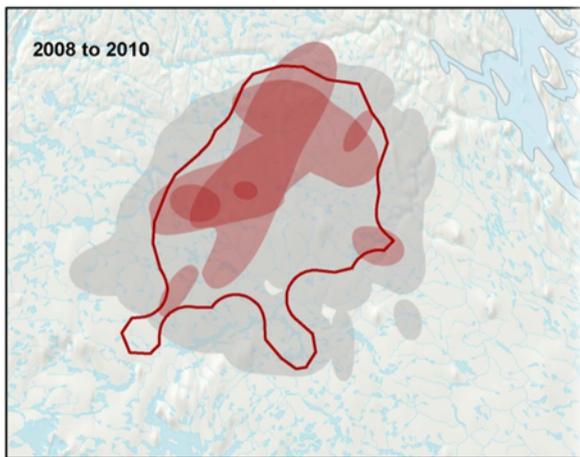
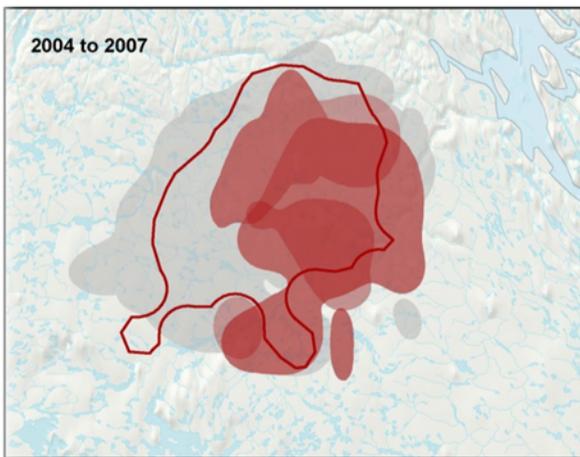
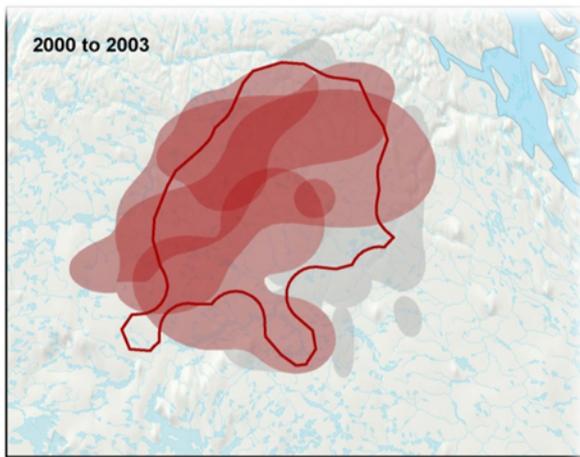
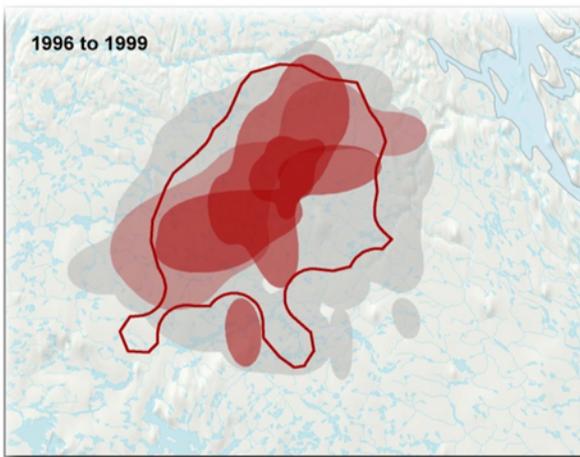


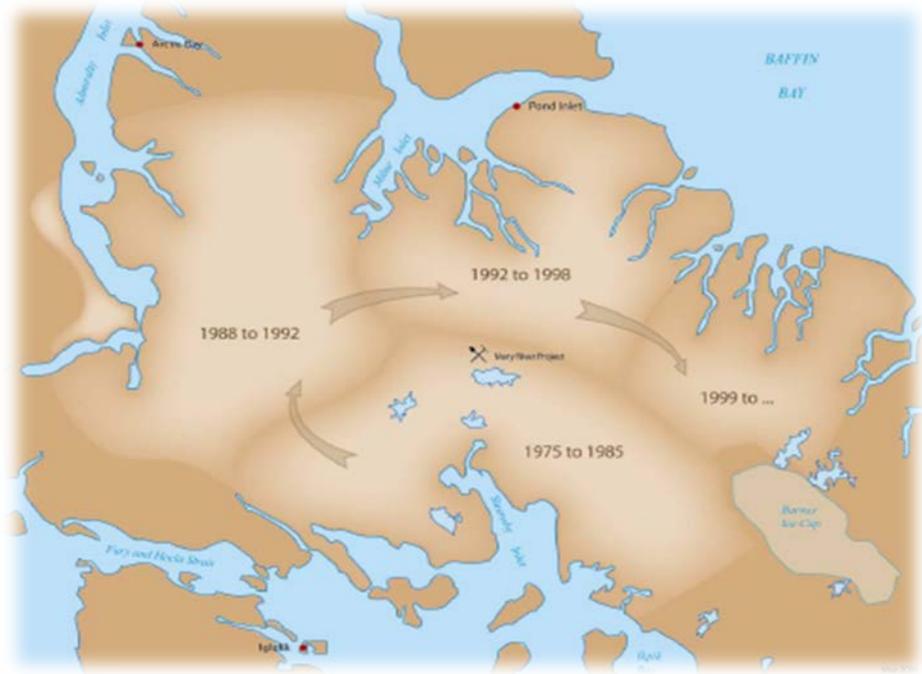
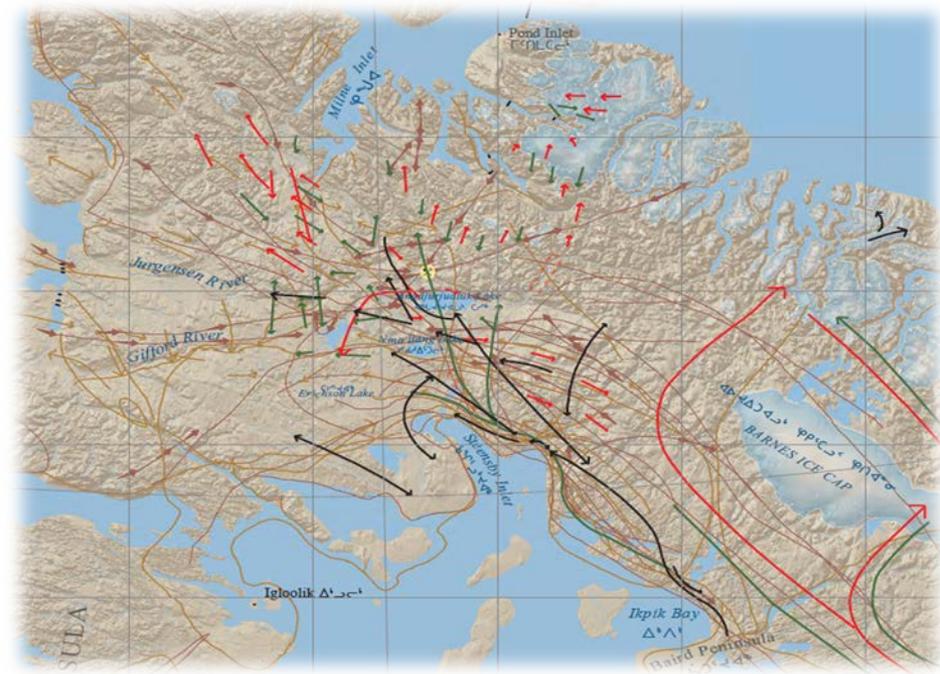
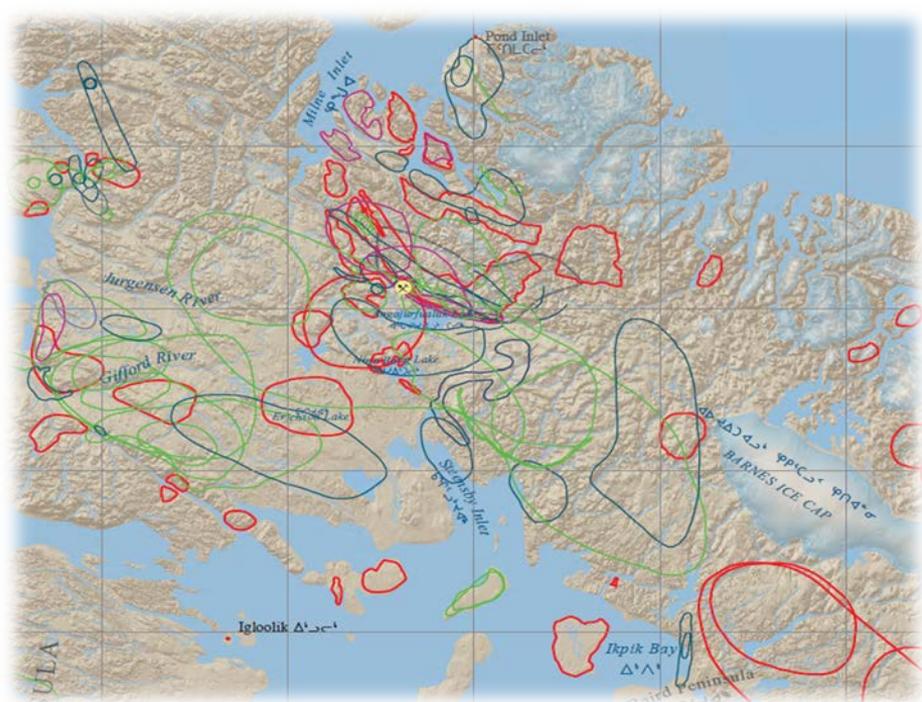
What we do..

What we bring to the table







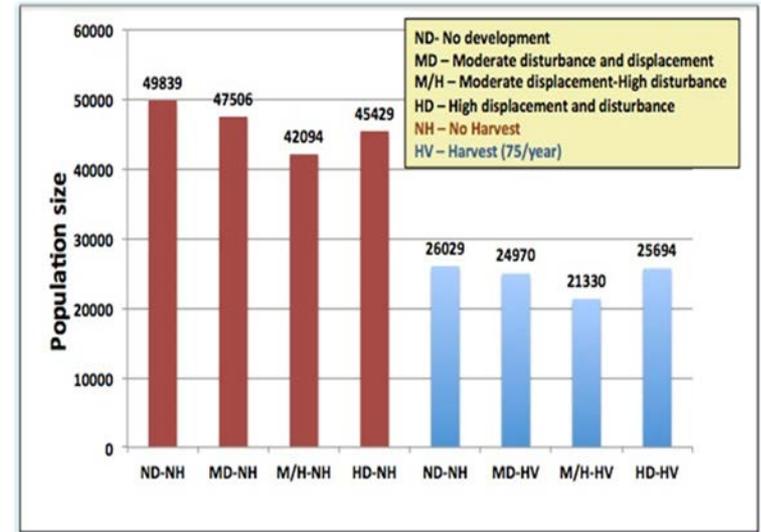
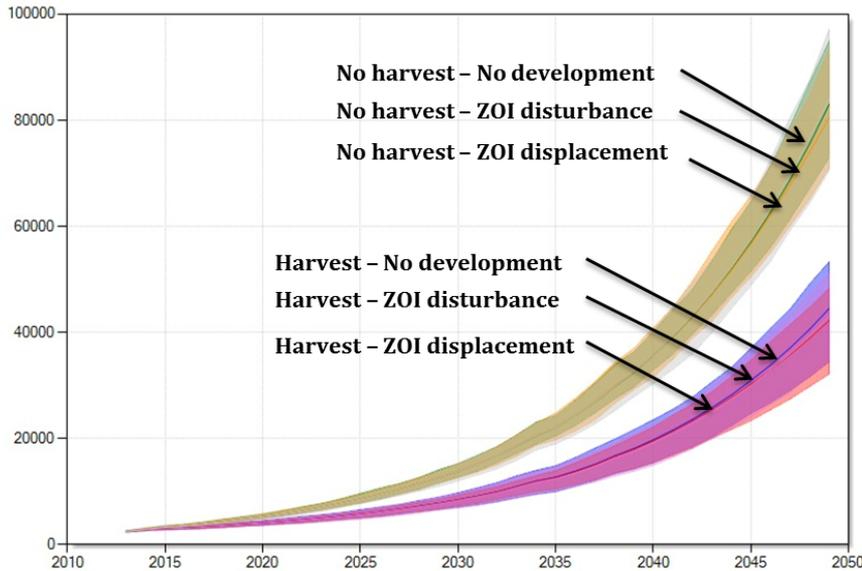


Environmental Assessment Results

Season	Precautionary % Effect across caribou herd range
Calving	-1.25
Growing	-1.24
Winter	-1.27



Energetics... Population



Variables	Change from baseline
Birth weight	-2.9%
June calf weight gain	-4.7%
Summer protein gain	-4.8%
September fat weight	-5.9%
Rut cow weight	-1.7%
Rut calf weight	-3.2%
Pregnancy rate	-6.4%



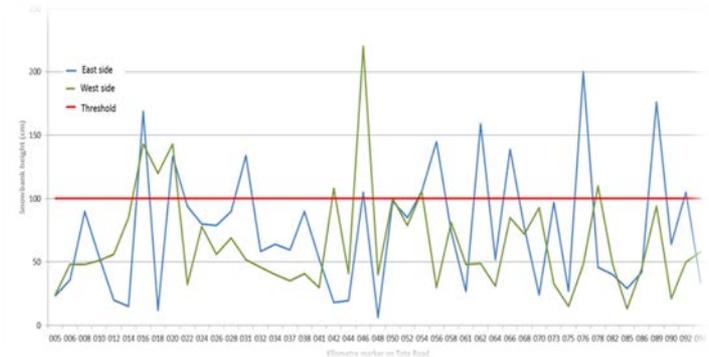
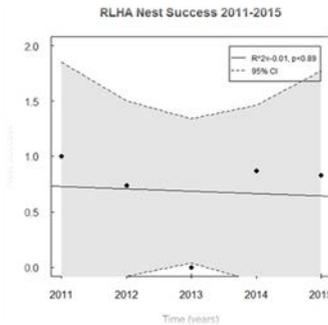
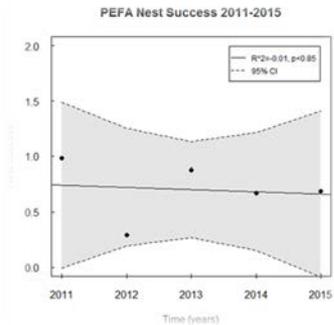
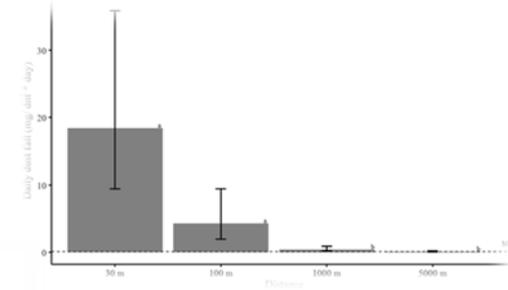
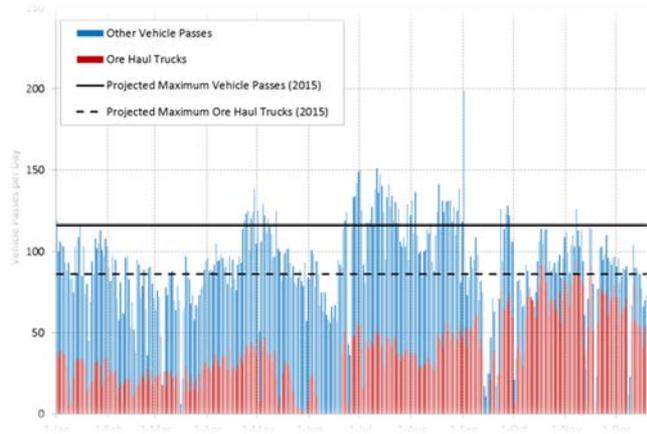
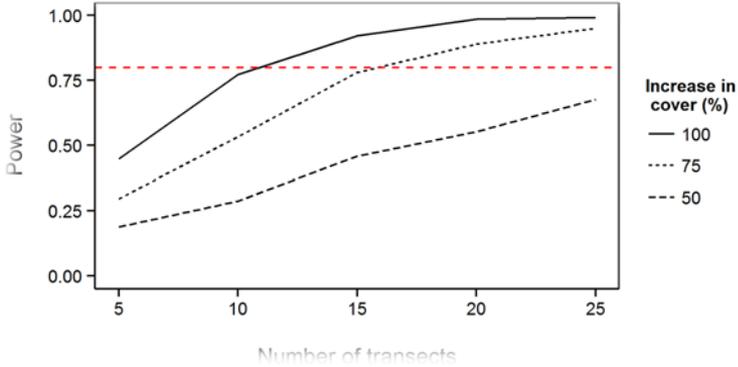


Cumulative Effects

1. Meadowbank Project
 - Ahiak, Beverly, Qamanirjuaq and Wager Bay
 2. Gahcho Kué Project
 - Bathurst and Ahiak herds
 3. Meliadine Project
 - Qamanirjuaq caribou herd's post-calving range
 4. Kiggavik Project
 - Qamanirjuaq annual range exposure
 5. Jay Project
 - Bathurst herd
 6. Back River Project
 - Bathurst post-calving and summer; Beverly summer and winter, both annual ranges
- etc.



Follow-up Monitoring



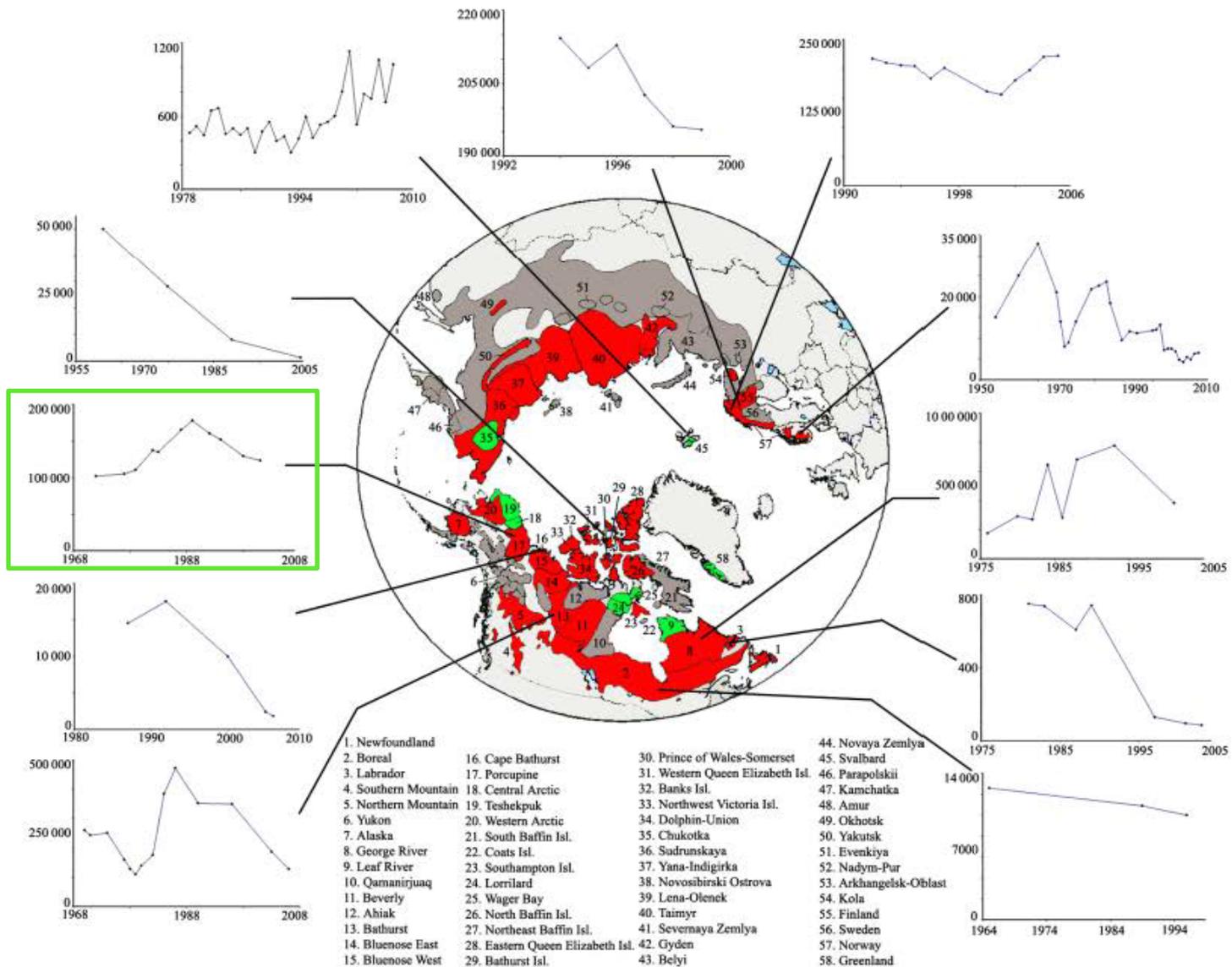
Stewardship: Learn and Respond



The caribou hot topic...



Circumpolar Caribou Decline



Nunavut Caribou Decline

Nunavut Herd	Recorded High	Recent Estimate	Percent Change	Present Trend
Bluenose East	114,472	38,592	-66	Declining
Bathurst	472,000	19,769	-96	Declining
Qamanirjuaq	495,000	264,661	-46	Declining
Southampton	30,381	12,297	-59*	Increasing
Baffin Island	235,000	4,856	-98	Declining
Beverly/Ahiak		195,529		Declining (?)
Lorillard + Wager Bay	41,000	41,000		Unknown
Boothia Peninsula	6,658	6,658		Unknown
Coats Island	4,236	500		Unknown

Multiple sources – GN and GNWT reports





The Precautionary Principle Challenge

“Where there are threats of serious irreversible damage, lack of full scientific certainty must not be used as a reason for postponing cost-effective measures to prevent environmental degradation.” [NIRB Guidelines]

It is the Proponent who bears the burden of proof to show that despite uncertainty, the potential for adverse environmental impacts can be mitigated or reversed.





An unachievable standard...

“When the Board has concluded that a *higher standard* of the precautionary principle is called for, the Board requires evidence of positive and preventative actions that will be taken to ensure that where there is potential for a serious risk of environmental degradation, and high levels of uncertainty, the measures proposed to limit or reduce the potential for adverse impacts are highly protective and do not require evidence of impact before they are triggered.”

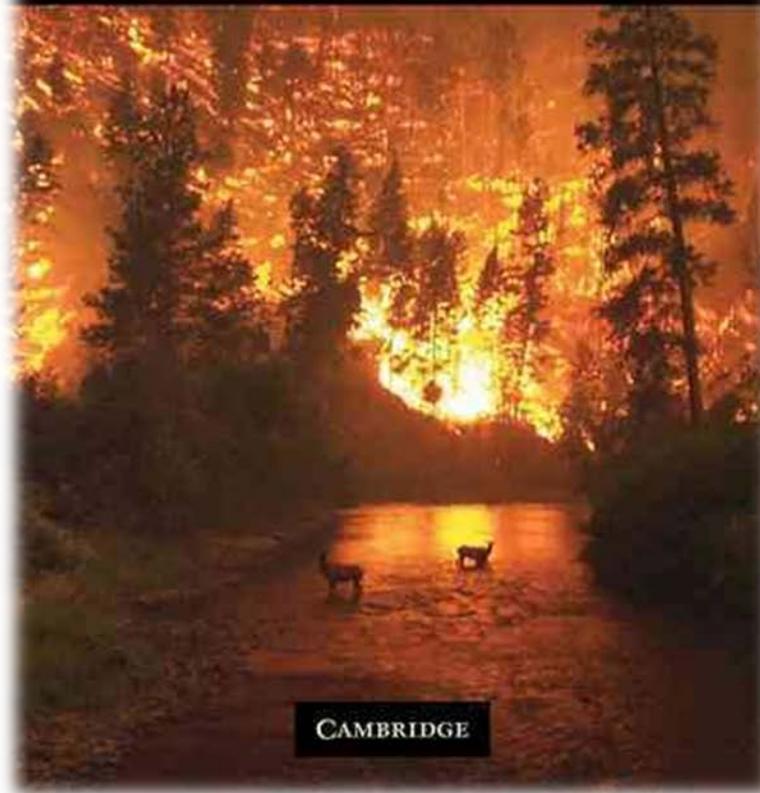


CASS R. SUNSTEIN



Laws of Fear

BEYOND THE PRECAUTIONARY PRINCIPLE



CAMBRIDGE





What we need from other parties...

Sivumut Abluqta — stepping forward together





Regional Inuit Organizations

- Acknowledge uncertainty and risk
- Provide clarity —use of Inuit Owned Land
- Land use directions and policies
- Risk tolerance
- Partner in assessment and mitigation
- Informed and engaged consultants
- Tools
 - KivIA Mobile Caribou Protection Measures
- Access to IQ





Government of Nunavut

- Acknowledge uncertainty and risk
- Manage risk to caribou
 - *Where is Working Together for Caribou: Caribou Framework (DRAFT 2010)*
- A weak link in the review and mitigation process
- Shared responsibility of mitigation
- Provide unhindered access to data
- Regulate AND Engage



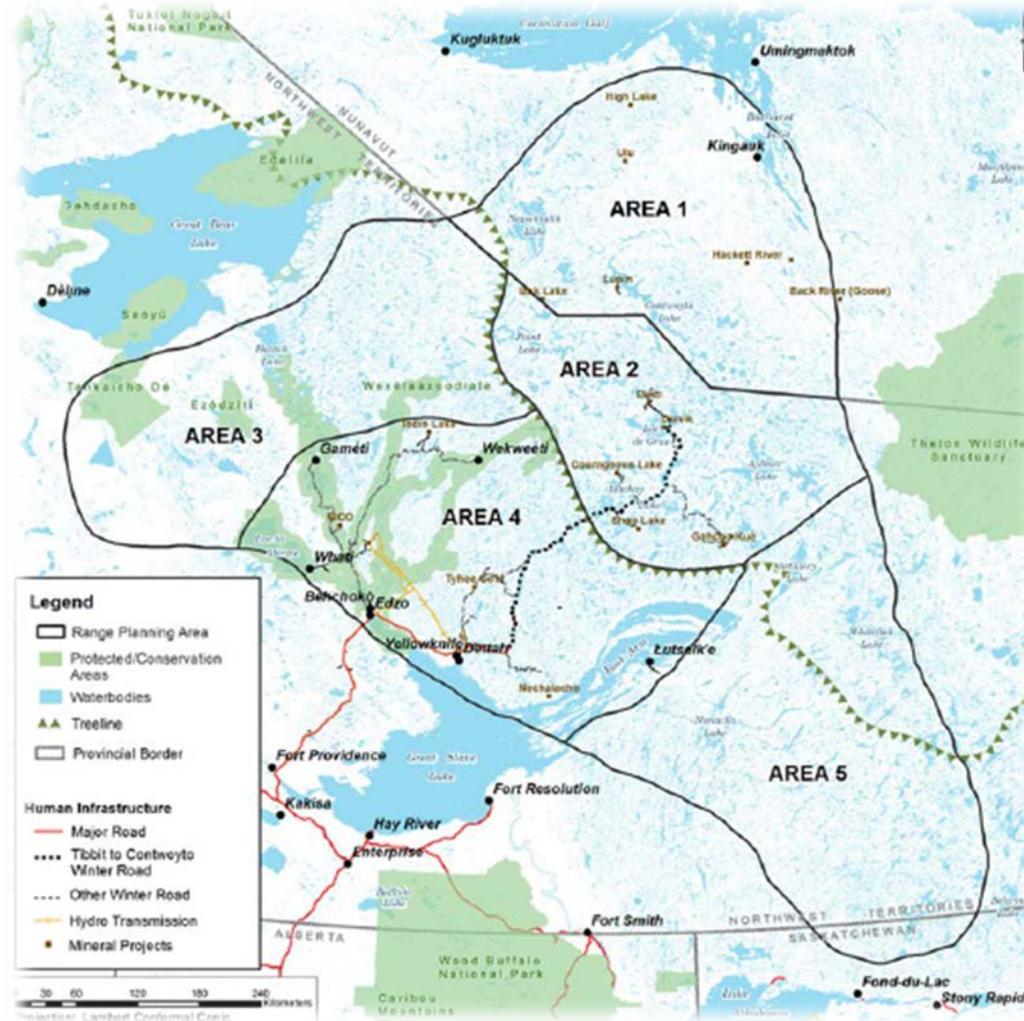


Industry

- Do not trivialize concerns
- Link assessment to operation
- Combine resources – issues are common
- Engage, consult, listen
- NIRB process is fair and transparent
- Monitoring is long-term
- Invest in Professional Biologists
- Bathurst Range Management Plan discussion



Bathurst Range Plan — Participate





Professional Consulting Biologists

- EA is stale
- Public lack of trust in scientists
- Listen and learn from IQ
- Push the boundaries
- Stewardship and ethics



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