Using Participatory Action Research Methods for Planning Long-term Management of an Arctic Wildlife Population
Overview

- Introduction: Study area & populations
- Types of Participation
- Participatory Action Methods
- Description of the Draft Management Plan
- Take-Home Messages
Baffin Island, Inuit and Caribou

- World's 5th largest island; 1,600 km long
- Human population: About 10,000 in 1985 & 16,700 in 2011
- South Baffin caribou population about 120,000 in 1980s
- Annual Baffin caribou harvest in 1980s: > 15,000
- Annual replacement value, 1980s: $4.4 million
<table>
<thead>
<tr>
<th>Type of Participation</th>
<th>Characteristics</th>
<th>Use with South Baffin Caribou</th>
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</thead>
</table>
| Manipulated           | Management pretence  
Intentional or cross-cultural incompatibility | Various meetings |
Decisions already made. | Announcements re commercial quotas, 1981-85 |
| Incentive             | Public paid to participate. 
Others control process/decide. | Surveys, specimen collections, research, meetings, 1981-2005 |
| Informative           | Public answer questions. 
Others control process/decide. | Local knowledge for surveys, 1981-86; Long-term TEK, 1983-95 |

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<tr>
<td>Consultative</td>
<td>Public provide opinions. Others control process &amp; decisions.</td>
<td>Consultation re commercial quotas, 1985-87</td>
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<tr>
<td>Functional</td>
<td>Public take greater, but restricted, roles in setting management goals. Shared, but limited decision making. Processes inherently non-indigenous.</td>
<td>Co-management boards, 1990-2005</td>
</tr>
<tr>
<td>Interactive</td>
<td><strong>Joint</strong> problem identification, planning, research, analysis, interpretation, and decision making throughout the entire process.</td>
<td>South Baffin caribou research &amp; co-management planning, 1987-2005</td>
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<tr>
<td>Self-mobilized</td>
<td>Public initiate independently Local/regional actions often (but may not always) challenge existing power relationships.</td>
<td>Not yet!</td>
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Distribution and abundance of caribou on southern Baffin Island during winter 1980-1983

Abundance of caribou according to traditional knowledge of informants:

- 0: No caribou or tracks seen by hunters
- 1: Usually only tracks seen
- 2: Some caribou but not enough to meet hunters needs
- 3: Enough caribou to meet needs
- 4: Many caribou, hunters have lots of choice
- 5: Too many caribou

Seasonal migration in spring or fall

Map showing distribution and abundance of caribou in different regions of southern Baffin Island during winter 1980-1983.
Overall Densities of Caribou from 1910 to 1990

The graph shows the overall densities of caribou in people's square kilometers from 1910 to 1990. The densities are differentiated between summer and winter seasons. The highest density in the early 1910s is evident, with a decline in the 1920s and a gradual increase in the 1960s and 1970s. A significant peak is observed in the late 1980s.
What is Participatory Action Research and Management (PAR)?

- Iterative, collaborative process involving communities of people who want to improve their situation.
- Participants identify a range of potential actions, and
- Then determine information and research needed to enable making choices or decisions,
- Usually with advice and support of outside experts
  - Researchers and managers act as facilitators as requested.
- Participants make decisions and initiate actions,
- Followed by on-going re-assessment, research & revision.
PAR and Management Planning for South Baffin Caribou

- Workshops and community meetings on previous research, 1996-2000
- Two management planning workshops, 2004-05
- Draft plan presented to the NWMB, March 2005
South Baffin Caribou Management Plan, 2006 - 2020

- **Phase I:** 15-20 years, average annual decline 10%, enable some restricted harvesting, educate the public, protect habitat, and prevent extirpation of any sub-population

- **Phase II:** 25-30 years, continuing low abundance, high risk of over-harvesting / impacts, forage recovery

- **Phase III:** 35-40 years, 8% annual growth, ease conservation actions, experiment with limiting growth
Phase I: Draft Research Strategy

- 2006-09: Undertake intensive population ecology research, develop monitoring program, and understand habitat processes, & study impacts of wolves & harvesting (using IQ & science).

- 2010-13: Analyze research, implement annual monitoring of caribou distribution & health (using IQ & science)

- 2014-20: Conduct second intensive research program, followed by a major review of the Management Plan before Phase II of caribou cycle.
Phase I: Draft Habitat Protection and Land Use Management

- **2006-09:**
  - Minimize cumulative effects of disturbance during summer
  - Map & protect core wintering & summering areas used by caribou in the 1930s-50s, based on IQ.

- **2010-20:**
  - Protect habitat to support limited harvesting by Inuit & restrict development in core areas.
Phase I: Draft Harvest Management

- **2006-09:**
  - Public education program
  - Efficient caribou harvest monitoring program
  - Community-based harvest rules, based on customs & rules used by Inuit in the 1940s-50s.
  - Models to predict population sizes and harvesting impacts

- **2010-20:** Implement & update harvest-monitoring program, and HTO and government harvest restrictions.
Fate of The Draft Management Plan

- The Plan has not been implemented
- Co-management may have left the local participants dependent on government to push for implementation of the plan.
- Self-mobilized participation by local HTOs may be needed to implement plans using in IQ & science equitibility.
Take-Home Messages

- Researchers and co-managers should frequently re-assess the type or quality of participation that they are allowing.
  - Is it truly interactive? Is it culturally appropriate?

- L and TEK can be used as a sound basis for wildlife management planning.

- Elders (seniors) and mature hunters can provide sound knowledge and predictive concepts for long-term research and conservation, with understanding of local customs.

- PAR and similar processes are inherently collaborative & proactive, enabling long-term adaptive management of wildlife!

- Strong self-mobilized participation probably is the only way the public can get the results that they may need/expect!
Thank You!


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Thank You!

Management Plan - Workshop Chairpersons:

Delegates - Qikitaaluk Wildlife Board:
Joannie Ikidluak, Jayko Alooloo

Delegates – Elders: Simeonie Aqpik, Mangitak Kellyphalik

Delegates – Local Hunters and Trappers Organizations:
Isohagitok Etungat, Michael Qarpik, Sandy Akavak, Toomasie Newkingak, Mosesie Qaapik


Workshop Logistical Organizer: Grigor Hope
Thank You!

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