Measuring motivations as a way to reduce conflict associated with the Western Arctic Caribou herd

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Study Site Overview
Study Site Land Management
Study Objectives

• Assist BLM in collecting information for Kobuk-Seward Peninsula Resource Management Plan (RMP)
• Benefits-based management (BBM)
  – Activities
  – Setting
  – Desired experiences (motivations)
  – Benefits
• Assess perceived conflict in area
Methods

• The two groups identified (local and non-local hunters) would require different methodologies.
  – Focus groups and interviews were conducted in villages of Kiana and Noorvik.
  – An onsite and mail-out survey was conducted for non-local hunters.
• The REP scales were utilized to measure non-local hunters’ motivations.
• Focus groups and interviews in local communities asked why this area was important to individuals and their community.
Methods - Assessing Conflict

• Conflict can be difficult to measure (Jacob & Shreyer 1980).
  – Many people’s idea of conflict differs (e.g. given the same situation one person might believe conflict to exist whereas another may not).
  – Cultural values and norms affect people’s perception of conflict (e.g. Inupiaq cultural value of avoiding conflict).

• The study focused on determining potential sources of conflict.
  – To what extent people perceived certain behavior to be a problem.
  – Measured contacts with other groups and the level of crowding.

Results

• 184 surveys were returned (response rate of 55%).
• These surveys were combined with onsite sample for total sample size of 201.
• In Kiana, a focus group with three individuals and interviews with nine individuals were conducted October 18\textsuperscript{th} & 19\textsuperscript{th}, 2008.
• In Noorvik, a focus group with 14 individuals was conducted on November 5\textsuperscript{th}, 2008 with five interviews taking place that weekend.
Characteristics of Non-local Hunters

- Residency – About 3 of 4 hunters (73%) were from the Lower 48 (n = 198)
- Group size – Most hunters (74%) traveled in groups of two to four (n = 201)
- Length of stay – Most hunters (58%) spent between five and seven days in the area; 28% spent eight or more days in the area (n = 180)

Hunting for Trophy versus Meat

<table>
<thead>
<tr>
<th>Hunt only for “trophy”</th>
<th>“Trophy” and meat equally important</th>
<th>Hunt only for meat</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>2</td>
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Non-local hunters (mean 4.33; std. dev. 2.28)
Motivations for Hunting: Non-Locals

- Escape crowds
- General nature experience
- Exploration
- Excitement
- Escape personal-social pressures
- Being with friends
- Exercise-physical fitness
- Family togetherness
- Teaching-sharing skills

n = 192 to 198
Non-local Hunter Cluster Group Descriptions

The Family Hunter
- Family togetherness and teaching & sharing skills
- Responded closest to hunting only for meat on “trophy” versus meat scale.
- Low number of hunters (4%) using guides.

The Social Hunter
- Being with friends and family
- Large number of hunters traveling in groups of four or more (40%)

The “Trophy” Hunter
- Large number (38%) of hunters traveling alone
- More moose and bear hunters than other groups
- Responded closest to hunting only for “trophy” on “trophy” versus meat scale

General Hunting Experience
- General nature experience, being with friends, and escaping crowds
- Mostly caribou hunters (81%)

n = 187; all characteristics significant at p < 0.05
Crowding Related Issues

• On average non-local hunters encountered 3.58 groups during their visit (0.52 encounters per day).
• From a list of potential sources of crowding, none emerged as a problem.
• The response to crowding in the area indicating that hunters felt “not at all” crowded.
• Minimal contact between local and non-local hunters.
## Response to Sources of Conflict: Non-local Hunters

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>Not at all a Problem</th>
<th>Slight Problem</th>
<th>Moderate Problem</th>
<th>Extreme Problem</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions regarding specific problem or potential source of conflict in the area</td>
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<td>3</td>
<td>4</td>
<td>5</td>
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### Not at all a Problem (mean below 1.5)
- Non-local hunters preventing locals from hunting in traditional areas (23%)
- Non-local hunters causing stress to local communities (19%)
- Hunters causing caribou to change migration patterns (25%)
- Competition among hunters for game (9%)
- Conflict among guided hunters (17%)
- Competition among hunters for campsites (8%)
- Hunting for “trophy” (13.1%)
- Hunters not salvaging meat (15%)
- Hunters let meat rot in Kotzebue (26%)
- Conflict between local and non-local hunters (6%)

### Slight Problem (mean 1.6 to 2.5)
- Lack of meat processing facilities in Kotzebue (7%)
- Lack of meat shipping facilities in Kotzebue (8%)

n = 143 to 184; (% unsure)
Hunters let meat rot in Kotzebue had the highest mean of 2.9, no issue was identified on average as an “extreme problem”
<table>
<thead>
<tr>
<th>Activity*</th>
<th>Setting</th>
<th>Experiences</th>
<th>Benefits</th>
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<tbody>
<tr>
<td><strong>Local Hunters</strong></td>
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<tr>
<td><em>Primary species:</em> caribou</td>
<td>Concentrated in southeast section of area</td>
<td>Connection with nature and family</td>
<td>Subsistence resource, maintaining way of life, and positive economic impact of subsistence food, fresh water</td>
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<tr>
<td><em>Other species:</em> bear, sheep, &amp; moose</td>
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<tr>
<td><strong>Non-local hunters</strong></td>
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<tr>
<td><em>Primary species:</em> caribou</td>
<td>73% of hunters concentrated in northwest section of area</td>
<td>Escape crowds, general nature experience, and exploration, family was important to some</td>
<td>A greater connection with nature, awareness of natural world, improved outdoor knowledge</td>
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<tr>
<td><em>Other species:</em> Bear, moose, fox, &amp; wolves</td>
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Conclusion

• Conflict could be due in part to differing social values related to hunting.
• Conflict in the Squirrel River area appears to be asymmetrical. Non-local hunters do not perceive conflict to exist to the extent of locals.
• Commonly cited amongst local residents as a source of conflict:
  – disruption of caribou migration by non-local hunters,
  – non-local hunters letting meat rot, and
  – hunting for “trophy”.
• Results from the survey show that not all non-local hunters are trophy hunters and that they share some similarities with the local hunters.
Management Implications

- Contact between groups is already minimal and currently the area does not appear to be near social carrying capacity.
- Non-local hunters do not want their meat to rot. Can meat processing and shipping facilities be provided in Kotzebue?
- An education program appears to be the most appropriate method to reduce conflict in the area.
  - Non-local hunter and pilot education has recently been put in place.
  - However, local education could show that not all non-local hunters are “trophy” hunters and are concerned about meat spoilage.
Reducing User Conflicts

Residents and subsistence users of GMU 23 have long had concerns about hunting traffic and aircraft operations during fall migration hunting. These concerns revolve around four major themes: noise, diverting animals from traditional migration routes, campsites that are not kept clean, and camp locations that compete with local users. The following section lists some of these concerns and recommends actions pilots can take to help minimize these problems.

1. **Concern**: Residents of Kotzebue find the constant noise from many take-offs each day objectionable.
   **Suggested Action**: Whenever possible avoid early morning and late evening departures and use arrival and departure routes that best avoid homes and businesses.
Acknowledgements

Alaska Department of Fish & Game: Charlotte Westing and Jim Dau

United States Department of the Interior Bureau of Land Management: Shelly Jacobson, Roger Delaney and Bill Overbaugh