

Community Report

Caribou Migration, Subsistence Hunting, and User Group Conflicts in Northwest Alaska

Gabriela Halas and Gary Kofinas

“I’ve had people go up [river] for caribou and camp for almost two weeks, they come back with nothing because the weather is too warm and [the caribou are] not moving. And even the pilots that come and drop off hunters even say that there’s not any caribou. It’s too warm. Everything is up further north.”

“We hurt a lot. No meat. Now we gotta go to the store and buy it. Most of the people around here don’t have steady jobs... We work and have to get what we can get. We like the fat from the caribou. That’s the prime, you know. It taste good. So we hurt a lot when we don’t have that. We live with it and we raise up with it. We share it with the elders and everybody. When we don’t have it, it hurt a lot of people around here.”

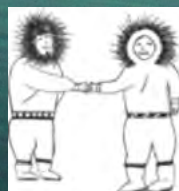
“Life blood of people here is caribou, we know how and when to hunt, there is lots of local information passed on from elders to youth.”

“I’m out supplying food for my family or for my village. I know they’re out there just for sport. A lot of time, they don’t even come into our village. They don’t buy from our grocery store. They don’t buy gas from our store. So, we’re not getting any income for them coming on our river.”

“It’s not the same like it used to be...when [caribou] bunches [would] come or when you [would] talk about a bunch, you’re talking about 500 to 1,000 and when you go into the herd, they don’t stop...Nowadays the herds are smaller, maybe 50 to 100. Long ago, we used to take our pick...It’s not the same as it used to be.”

—Quotes from Noatak community residents

A project of University of Alaska Fairbanks, National Park Service, and the Native Village of Noatak (IRA) - CESU Cooperative Agreement P13AC01025; Task Agreement Number: P13AC01071



ARIGGAA INUPIATUM
NATIVE VILLAGE OF NOATAK



Introduction

Caribou is an important subsistence resource for the people of Noatak. Noatak is an off-road rural community in northwestern Alaska where residents depend heavily on caribou for economic, nutritional, and cultural needs. In the last decade there has been an increase in caribou hunting activities by non-locals in Noatak's traditional hunting lands, including the Noatak National Preserve. This community report presents key findings of a research project of the University of Alaska Fairbanks, the National Park Service, and the Native Village of Noatak that studied the links between caribou, interactions of local and non-local hunters, and changes to subsistence caribou hunting.

The study was completed from 2012 to 2015 and documented Noatak residents' traditional knowledge of caribou ecology and caribou hunting as a way of informing caribou science and wildlife management in northwestern Alaska. The project was initiated and funded by the National Park Service, the federal land

management agency responsible for management of the Noatak National Preserve. The study produced the master's thesis, "Caribou Migration, Subsistence Hunting, and User Group Conflicts in Northwest Alaska: A Traditional Knowledge Perspective," by Gabriela Halas (2015). A digital copy of the thesis is available upon request from Gary Kofinas (gary.kofinas@alaska.edu).

Background on the project

Over the past decade, the number of transporter flights into Noatak National Preserve has increased approximately 3–5% each year, delivering an increasing number of non-local hunters to the area, with many hunting caribou. Residents of the community of Noatak have repeatedly expressed their concern that non-local sport hunters dropped off by air taxis and transporters cause caribou to change their migration patterns and affect local subsistence caribou harvesting and Noatak's ability to meet its subsistence needs.

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Marking Caribou Use Areas on the map.



Numerous biological studies have examined the impacts of human activity on caribou behavior, but there is very little documented local and traditional knowledge that addresses issues of human disturbance on caribou. This lack of documentation of traditional knowledge has resulted in planning and decision-making processes that rely primarily on western science.

Traditional ecological knowledge (TEK) is defined in this study as the collective body of lived experiences, which includes observations and understandings about ecological and social systems. Documenting traditional knowledge is important as it captures not only what people see happening on the landscape, but understandings of changing conditions over time. Traditional knowledge takes into consideration the values and traditions of a community, which is dependent on culture and worldview. Traditional ecological knowledge is an important consideration when discussing how local Noatak subsistence hunters see the changes in their hunting, caribou migration and interactions with non-local hunters.

This study, carried out by the University of Alaska Fairbanks and funded by the National Park Service, was granted approval by the Noatak Tribal Council, UAF Institutional Review Board, and the US Department of Interior (NPS) Office of Budget and Management. To administer the project in Noatak, project researchers worked with a three-person local Noatak Steering Committee, who helped with research protocols and logistics.

How did we do this research?

In 2012, a proposal to do the project was made to the Noatak Tribal Council. Upon being granted approval, two research questionnaires were developed. One, “The Active Hunter Survey,” was used to document all active Noatak hunters’ knowledge about their caribou hunting practices, changes to caribou and caribou hunting, impacts to caribou, interactions with non-local hunters and commercial operators. The survey also asked hunters for ideas on improving management of caribou hunting in the area. A total of 62 Noatak residents were interviewed. The interviews were completed in November of 2013.

The second questionnaire, “The Knowledgeable Hunter Interview,” included both active and non-active hunters and incorporated mapping the traditional knowledge of

select Noatak hunters. A total of 19 residents participated in this interview, with each hunter creating extensive maps of caribou movement, areas of caribou and predator use, areas of interaction of Noatak hunters with non-locals, and other spatial features. The interviews also asked questions regarding caribou ecology, changes and impacts to caribou, locals’ experiences with non-locals, important lessons to teach Noatak youth about caribou, and ideas for improved management of caribou hunting the region. These interviews were completed in February 2014.

Major Findings of the Study

The section below summarizes eight key findings from the study. These are organized in two categories:

- Perceptions of Changes to Caribou, and
- Perceptions of Interactions with Other Users

More details and findings are published in the thesis by Gabriela Halas (2015).

Perceptions of Changes to Caribou

Finding #1: Interviewed hunters of Noatak ranked aircraft and non-local hunters as the highest negative impact to caribou migration, but also mentioned other types of impacts.

We asked hunters to tell us which activities they saw as having the greatest impacts to caribou migration. Seventy-nine percent said that aircraft have the highest negative impact to caribou migration, with 57% saying that non-local hunters as the next highest negative impact. Hunters also said that predation by bears (39%) and wolves (44%) is negatively impacting caribou migration followed closely by climate change (34%) and habitat change (27%). Non-motorized boats, local Noatak hunters, and helicopters were reported to having the least impact (Figure 1, next page).

Noatak hunters reported a number of impacts to caribou migration with specific detailed and descriptive information. We compiled a list of impacts as described by Noatak hunters, and we focused on impacts perceived as the most negative, aircraft and non-local hunters (Table 1, next page).

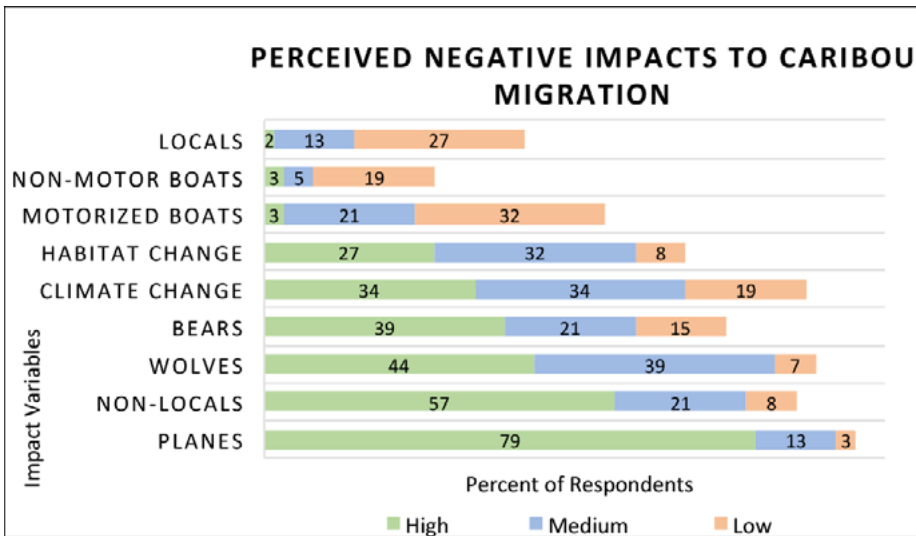


Figure 1. Hunters' perceptions of negative impacts to caribou migration.

Finding #2: Noatak hunters have a rich understanding of the spatial aspects of caribou ecology and caribou hunting.

Map 1 (opposite) shows hunters' reported locations of predators: wolves, bears, and others (fox, wolverine). Predators were noted to be on the increase in the Noatak River area, and reported to be impacting caribou migration.

Map 2 (lower opposite) shows caribou habitat by season. Areas of feeding, or important habitat where noted, as well as summer areas where caribou fatten up before winter.

Map 3 (page 6) shows past and present caribou movements. Although fewer hunters identified where caribou moved in the past, present-day migration shows that caribou can be very scattered, but their movements generally follow rivers and creeks, moving down valleys from the north, and also moving along the coast.

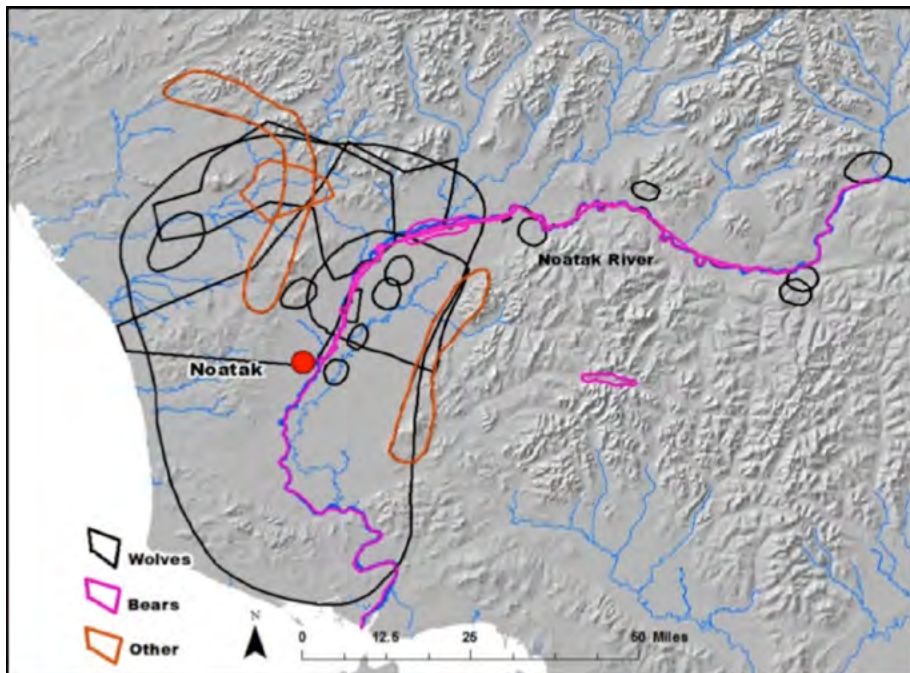
Perceptions of Interactions with Other Users

Finding #3: Noatak hunters use many of the same areas as non-local hunters and commercial transporter operators.

There are two important areas to consider around the Noatak River, the Noatak Controlled Use Area and the National Park Service Commercial Use Area, which were created to lessen hunting pressures on both locals and non-locals during hunting seasons. These "zoned" areas are shown on Map 4, along with areas where Noatak hunters

Table 1. Descriptive information from Noatak hunters about disturbance to caribou.

Impacts to caribou by non-local activity	
General disturbance:	<ul style="list-style-type: none"> 'Scaring' caribou into hills/mountains – away from the Noatak River Diverting caribou off former/typical migration routes
Disturbance by transporters:	<ul style="list-style-type: none"> Aircraft move non-locals multiple times to new areas to hunt, often 'right in the path of the caribou' Noise from aircraft impacts caribou Low-flying, 'swooping', 'buzzing' aircraft impact caribou Dropping hunters' on the side of the Noatak where caribou is on/coming towards Aircraft diverting caribou towards waiting sports hunters
Non-local camps disturbance:	<ul style="list-style-type: none"> Located on the side caribou is on/are coming towards Non-local camps too close together, too many in some locations Non-locals hunters walk/travel away from the river into the hills to pack caribou out Non-locals leave trash on the land Non-locals shoot caribou leaders, diverting path of caribou group
Other:	<ul style="list-style-type: none"> Recognition that some disturbance to caribou is 'unintentional'

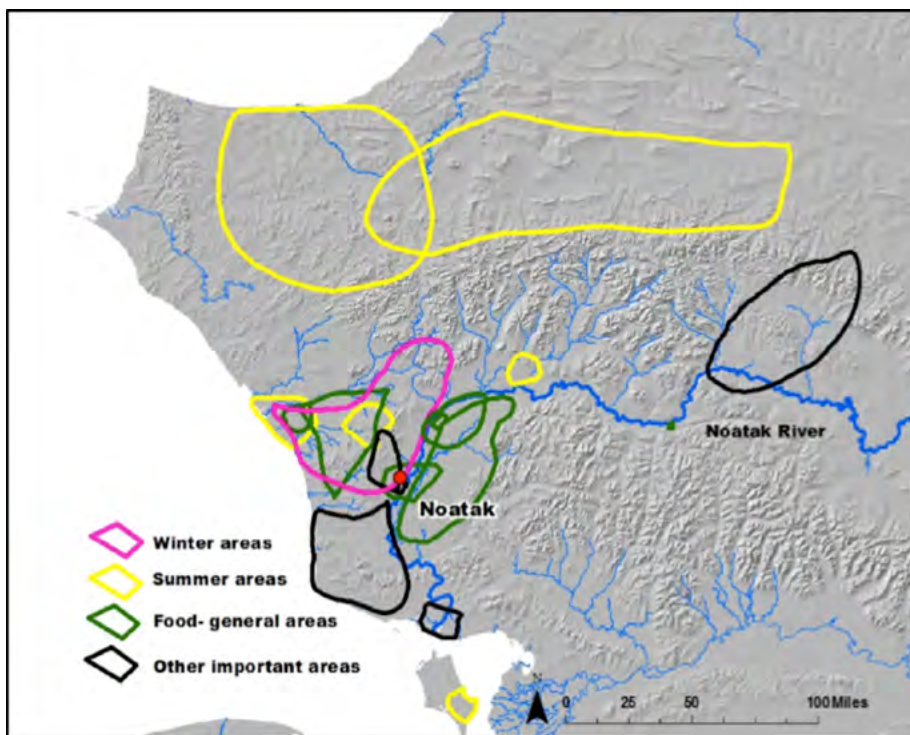


Map #1: Locations of observed predators reported by Noatak hunters. Notes: 'Other': wolverine, fox.

reported to have encountered non-locals or transporters, including where they had negative experiences with non-locals.

Negative encounters between local Noatak hunters and non-locals occurred largely within the Noatak Controlled Use Area.

Also, a high number of negative encounters occurred outside the Noatak Controlled Use Area, near Nimiuktut and Ninnuqtuchiaq creeks. Similarly, 53% of interviewed Noatak hunters reported Nimiuktut and Ninnuqtuchiaq creeks to be frequently used by caribou as crossing places.



Map #2: Important habitat areas for caribou.

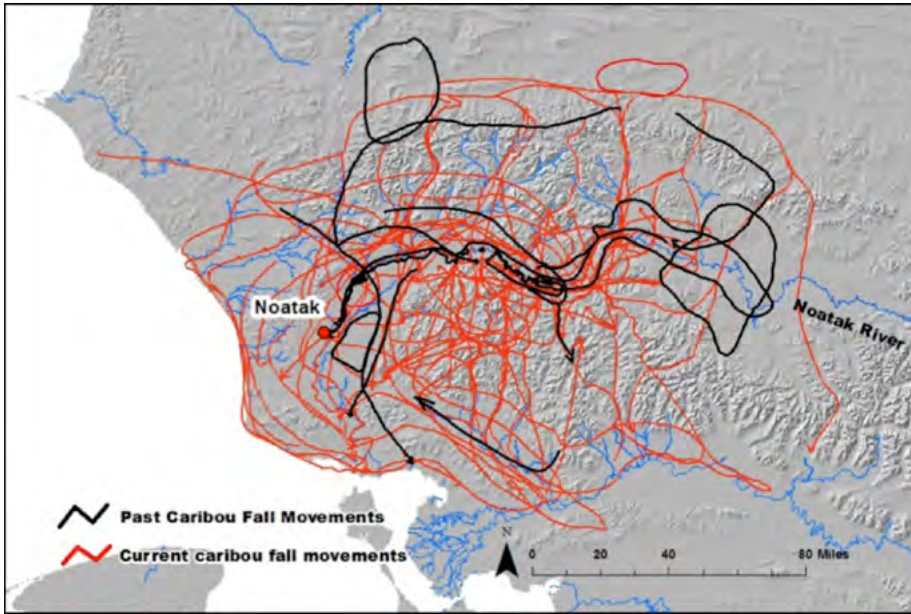
The highest number of negative encounters between local and non-locals also happened within areas of caribou fall migration river crossings. The majority (58%) of Noatak hunters interviewed mapped caribou crossings at Sapun and Niaquulik creeks. These areas were also identified as areas of high negative encounters between locals and non-locals (See Map 4, page 6).

Finding #4: Noatak hunters ranked traits that make for a successful hunt, with coming home safely and harvesting caribou being reported as the two top traits.

Harvesting more than one caribou, spending time with family and friends, seeing other locals on the land, camping, and going to a favorite spot were also reported as important. In contrast, seeing non-locals on the land was of relatively low level of importance for a successful caribou hunt, along with having good weather (Figure 2, page 7).

Finding #5: Noatak hunters ranked aircraft and non-local hunters as the highest negative impact to caribou hunting.

Seventy-six percent of surveyed hunters indicated that aircraft have the highest negative impact to caribou hunting. Fifty-six percent identified non-local hunters as the next highest negative impact. Climate change was ranked as the third most negative factor to caribou hunting (43%), followed by predation (wolves 36%, bears 34%). The least negative impacts to caribou hunting

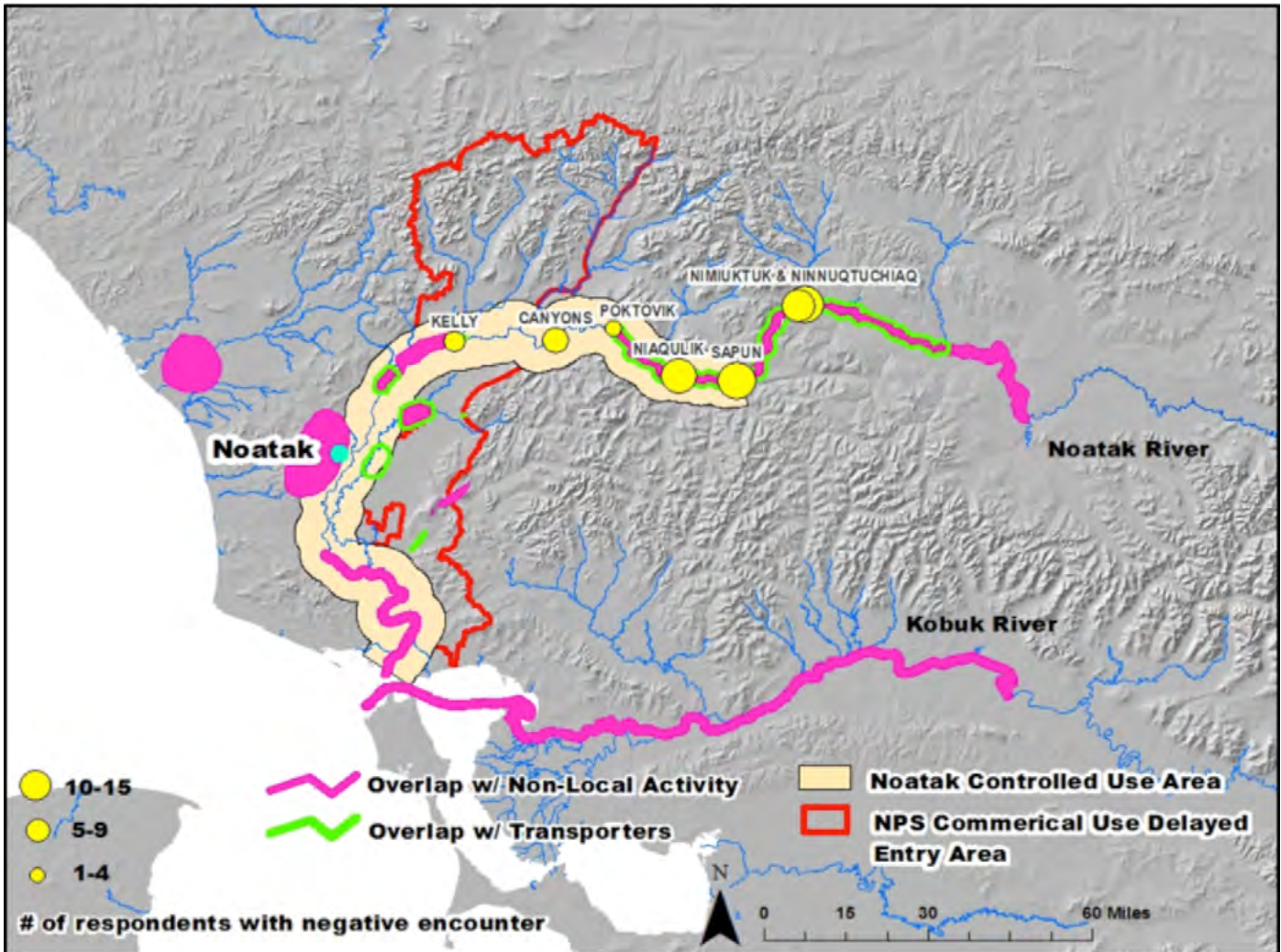


Map #3: Current and past caribou fall migration movements.

are non-motorized boats, and local Noatak hunters (Figure 3, lower opposite).

Finding #6: Noatak hunters identified social-economic and value differences between locals and non-locals as having the greatest impact on their caribou hunting

Noatak hunters perceived that their subsistence harvest is being impacted by non-local hunters. Local hunters noted that non-local hunters are not contributing to the local Noatak economy by



Map 4: Interactions between local and non-local hunters as mapped by Noatak hunters.

Pink: Areas where Noatak hunters interact with non-local activity.

Green: Areas where Noatak hunters interact with transporters.

Yellow: Circles showing the number of interviewed Noatak hunters who had a negative encounter with non-locals or transporters.

not coming to the community or working with local residents. Local hunters reported they spend a lot of money on gas for caribou hunting, often pooling money with other families for hunting expenses. Local hunters also said that if no caribou are harvested, they must spend more money on meat at the store.

Value differences were also expressed by local Noatak hunters. Non-local hunters are seen as shooting caribou for sport and only wanting the antlers, and not for meat. Some Noatak hunters said they are unhappy knowing non-locals are in their traditional territories hunting and that in general, there are too many transporters and non-local hunters.

Table 2: Impacts to caribou hunting by non-local activity

Socio-economic

- Scaring away 'our food source'
- Non-local visitors to area not contributing to local economy
- Locals spending lots of money for hunting, coming home empty-handed
- If no caribou harvested, money is spent on 'store meat'; economically unsustainable

Value differences:

- Non-local hunters shooting for antlers; 'shooting for sport, not food'
- Non-locals discarding meat/letting meat spoil in the field
- Dissatisfaction knowing that non-locals are 'out there' on the land

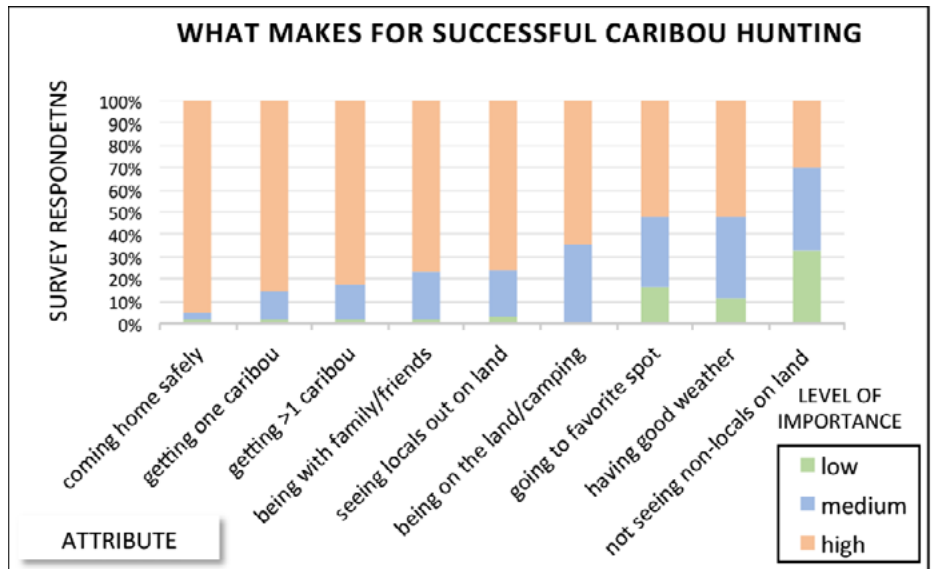


Figure 2. Ranking of traits that make for a successful hunt by local Noatak hunters.

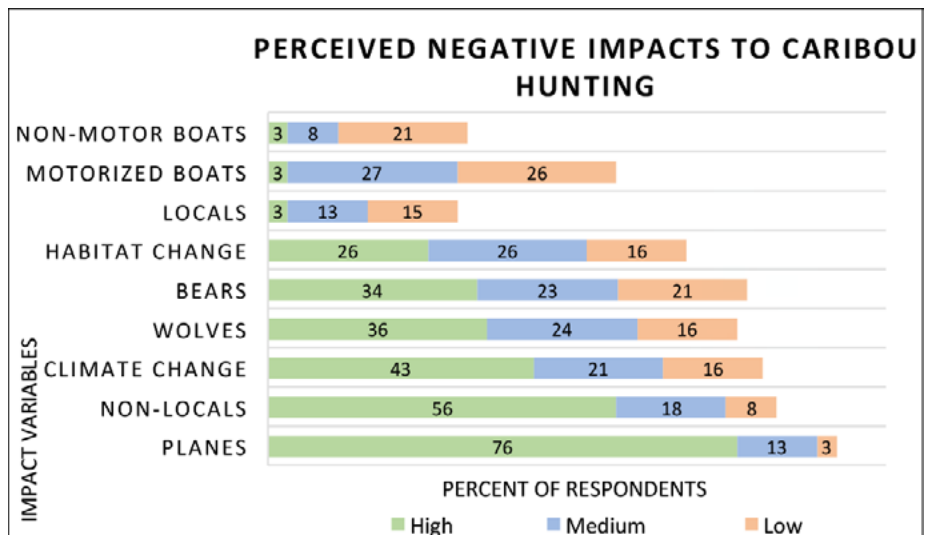


Figure 3. Perceptions of negative impacts to caribou hunting.

- Non-locals & aircraft 'too plentiful'; more than local hunters
- Official hunting guides used to work on the Noatak; more respectful than transporters

Other:

- Dissatisfaction that transporters are 'unregulated'
- Transporters do not follow rules; reduce aircraft ID numbers, change paint schemes on planes to

avoid local reporting of behavior

- Transporters seen as 'big business', able to influence decision-makers
- Recognition that some positive interactions between locals & non-locals occurs; communication while hunting about caribou locations

Finding #7: Noatak locals offered suggestions for improving caribou hunting management near and within the Noatak National Preserve from the “Active Hunter Survey” (n = the number of people who had a specific suggestion).

The main suggestions offered were to stop or lessen sports hunting, reduce gas prices, teach youth of the village traditional ways of hunting, work together with other users of the area (non-locals, transporters) to discuss and resolve conflicts, have land management

agencies play a strong role in the issue, and give a hunting preference local hunters. Other specific suggestions included improving caribou hunting management by further setting boundaries and limits to non-local caribou hunting activity in the area. More recommendations included letting 1,000 caribou to first pass before shooting; closing the Aggie River corridor to non-local hunters; and spacing out non-local camps. See Table 3.

Table 3: Suggestions for improving management of caribou hunting in the Noatak area	
Theme	General Comments
Stop or lessen sport hunting	<ul style="list-style-type: none"> • Less drop-off hunting • Fewer planes in migration areas • Fewer non-local, non-resident hunters • Ban flying and sports hunting • “Sports hunters got to respect our village and food; some people won’t be able to eat as a result” • Change when planes can fly seasonally • “When it’s our turn to hunt they shouldn’t fly” • Planes not to fly in or around river • “Bothers” respondent that outsiders come and use the land to “tickle their fancy”; glad to see locals on the river as it makes him feel safer • “Non-locals need to respect our lands, they leave trash and carcasses; they are not following rules”
Reduce gas prices	<ul style="list-style-type: none"> • Lower gas prices, respondent spent \$800 going up river • Lower gas for hunting/subsistence • “Lower gas prices for hunting; agencies should help with that, people [locals] pitching in a lot nowadays”
Teach youth traditional ways	<ul style="list-style-type: none"> • “Young kids not listening to older experienced hunters” • “Elders have good information” • Education of younger people on traditions and rules of hunting is very important • “Younger hunters need training, the young men need to listen; they want to be the first to get caribou and that is greedy” • “Don’t toss out old ways of hunting or managing the herd” • “Life blood of people here is caribou, we know how and when to hunt, there is lots of local information passed on from elders to youth”

<p>Need to work together</p>	<ul style="list-style-type: none"> • “Locals and sports hunters need to settle on agreement, this needs to get resolved” • Work with transporters to salvage meat, especially for low income people or people with no boats • More non-locals and sports hunters/self-guided hunters should work with Noatak; set up programs to work together • “Non-locals have to understand some of what we do (such as letting the 1st herd pass, allowing large herds to cross the river), but need defined dates for non-locals too when they can hunt caribou” • “All user groups have their rights including recreational groups (sports hunters, fishing, sight-seeing), we need to work together with all user groups so each get their catch; do what they want as long as we get our share”
<p>Agencies should play a role</p>	<ul style="list-style-type: none"> • “ADFG to take a bigger role with tagging, studies; they have lots of info and needs to be communicated more” • More agency representatives on the river • More trips to the village from agencies • Need more communication on population (from ADFG, biologists), more newsletters, “we hardly know anything” • Control no-fly zone (CUA) more, extend dates of no-fly times • “Do the state and feds really hear our concerns? There are two groups, us and them and we are all alone in everything” • “Good to know BOG [Board of Game] is there to oversee what we have out here and biologists giving us information” • Respondent: Locals do not know who to contact if there is an issue to planes/ non-local hunters • Changes to regulations should be passed down to inform locals
<p>Local preference needed</p>	<ul style="list-style-type: none"> • Local people should get their first shot at hunting • “Make it easier for local people, keep fighting and going to the law” • Local people to be used as guides using boats (be transporter with a boat)

Conclusion

The Noatak Caribou Traditional Knowledge Project documented a wealth of knowledge by local Noatak hunters about a range of topics—on caribou behavior, migration, and hunting practices. The study also documented the interactions and experiences of local hunters with non-local hunters and commercial operators working in and near the Noatak National Preserve.

The findings of this study show that caribou hunters of Noatak are concerned that caribou migration is changing. These changes are seen to be due to a number of factors, but mostly because of the presence of aircraft

and non-local hunters in the region. Predation by wolves and bears, climate change, and habitat change were also identified as having negative impacts to caribou migration and caribou hunting. Noatak hunters reported that safety and harvest of caribou largely determine what makes for a successful caribou hunt. Noatak hunters reported that these changes have resulted in a decrease in harvesting caribou, with hunters having to go on longer and more caribou hunting trips, and seeing more people out while hunting. Local and non-local hunters often used the same areas along the Noatak River, both inside and outside special areas, such as the National Park Service Commercial Use Area and the Noatak Controlled Use Area, and often during same

hunting seasons (fall). Noatak hunters have specific ideas on how management of caribou hunting could be improved and hope their ideas will be considered by decision makers.

Thank you!

The Noatak Caribou Traditional Knowledge Project would not have been possible without the support of the Noatak Tribal Council, the project advisory committee of Enoch Mitchell, Janet Mills, and Eileen Foster, and the many hunters of Noatak who agreed to be interviewed. The National Park Service provided all funding (UAF-NPS -CESU Cooperative Agreement Number: P13AC01025; Task Agreement Number: P13AC01071). The project has been presented to a number of conferences and meetings including the North American Caribou Workshop in Whitehorse, Yukon Territory (2014) the Wildlife Society Alaska Chapter (2015), and three meeting of the Western Arctic Caribou Herd Working Group (2012-2014). Last and most important, the residents of Noatak provided continued support and engagement, without which this project would not have been possible. All photos by Gabriela Halas and Gary Kofinas.

For more information, or for an electronic copy of the full final report (thesis) please contact: Gary Kofinas (gary.kofinas@alaska.edu).

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ATTN: DEIRDRE HELFFERICH
UNIVERSITY OF ALASKA FAIRBANKS
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“WE SHOULD TRY TO KEEP THE TRADITIONAL IDEAS ALIVE ABOUT HUNTING CARIBOU.”

(Noatak hunter)

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