

Summary Tables: Indigenous Knowledge of cumulative effects impacting the Tuktoyaktuk Peninsula, Cape Bathurst, Bluenose-West, and Bluenose-East Caribou in the NWT¹

Table 1: Observations Regarding Status and Trends

Status and trend observations	Main themes by region and / or by herd ²			
	Inuvialuit (TP, CB, BNW) ³	Gwich'in (CB, BNW) ⁴	Sahtú (BNW, BNE) ⁵	Wek'èezhii (Tłı̄chǫ Region) (BNE) ⁶
<p>Including:</p> <p>Abundance, distribution, range & movement patterns, migration, habitat change, etc.</p>	<ul style="list-style-type: none"> Tuktoyaktuk (CB & TP): Population is steadily increasing over last 4-6 years. In contrast to large herds that congregated in one area and travelled together in the 1970s & 1980s, caribou are in smaller groups of 15-20 animals, with maybe 30-50 groups scattered all over the range. (ACCWM 2022, 2021) Inuvik (CB): Population size is same as previous years, so stable but low. 	<ul style="list-style-type: none"> CB: Few Gwich'in are hunting in the CB area, so there are not many observations on herd status recently (ACCWM 2022, 2021, 2020, 2019). The population is the same for about the last 10 years, i.e., stable or slightly decreasing (ACCWM 2022). Hunters either did not see any caribou or saw small groups of 5 or 10 animals. (ACCWM 2022, 2021) 	<ul style="list-style-type: none"> BNW: The population is about the same as previous years. Not many people have gone out as other years as the herd is more spread out. (ACCWM 2021) BNW: Population seems about the same as last year, but things have changed over the last 10 years. Migration route has shifted more to the north; hunters have to travel farther to 	<ul style="list-style-type: none"> Disrespect, mistreatment, and mismanagement of caribou from mining, harassment, and more has caused caribou to go away; resource extraction, poor management practices, human activity, and climate change are all affecting caribou (TRTI 2022; SARC 2017) Extended monitoring program to new base camp at Deèzàati to start

¹ Information sources cited here are referenced in the accompanying written summary. Information is presented for each topic by herd/community where possible, with most recent information first.

² Generally, most Indigenous Peoples do not differentiate barren-ground caribou by herds but consider them to be all of one type – herd designations come from Western science understandings of calving ground fidelity (SARC 2017). For management discussion purposes, herd designations may be used, however, due to overlapping ranges, in many cases it is not possible to attribute information to a specific herd. Where possible, information has been attributed to herd and/or community, consistent with how information was presented in sources.

³ Tuktoyaktuk Peninsula caribou tend to be harvested by people from Tuktoyaktuk; their winter range overlaps with that of the Cape Bathurst Herd, and Inuvialuit harvesters do not distinguish between these caribou and Cape Bathurst caribou (Nathoo 2022).

⁴ Ranges of Cape Bathurst and Bluenose-West herds overlap in areas where Gwich'in hunters encounter them; knowledge-holders attest that the two herds cannot not generally be differentiated by sight and therefore refer to all barren-ground caribou in this area as 'bluenose' (Benson 2015). Inuvialuit and Gwich'in representatives pointed out that the community knowledge collected by the Wildlife Management Advisory Council (NWT) and the Gwich'in Renewable Resources Board (GRRB) for Bluenose-West caribou is largely identical to that presented for Cape Bathurst (ACCWM 2021).

⁵ Harvesters from Colville mostly encounter and hunt caribou from the Bluenose-West herd. Délı̄nǫ harvesters may hunt caribou from both the BNW and BNE herds, but have not been encountering BNW caribou much in recent years. In the Sahtú or Great Bear Lake region, Délı̄nǫ Got'ı̄nǫ use the term ǰekwǫ́ to refer to barren-ground caribou; neregħa goǰekwǫ́ refers to caribou encountered on the north shore of Great Bear Lake (Bluenose-West habitat), and ǰehdaı̄la goǰekwǫ́ refers to barren-ground caribou usually encountered in the ǰehdaı̄la area (corresponding to habitat of the Bluenose-East herd). Many of the themes presented here are also reflected in observations from other knowledge-holders that harvest from the Bluenose-East herd (e.g., Kugluktuk, Dehcho) but are not included in the scope of this work.

⁶ While efforts have been made to only include information regarding BNE caribou, a lot of Tlı̄chǫ info is not differentiated by herd but references both the Bathurst and Bluenose-East herds.

Table of Indigenous Knowledge of four barren-ground caribou herds in four regions of the NWT

	<p>It's hard to make observations about changes in population due to changes in distribution but they are much lower than decades ago. (ACCWM 2022, 2020, 2019). There are fewer caribou in Inuvik's usual hunting areas than before the Inuvik – Tuktoyaktuk Highway (ITH) was built. (ACCWM 2022, 2020)</p> <ul style="list-style-type: none"> • Paulatuk (BNW): The herd is stable or increasing. It has been close to the community; people are seeing thousands of caribou – numbers not seen since the 1980s. Population appears to be healthy and vibrant. (ACCWM 2022, 2021) • People are seeing more caribou on Richards Island now. Vegetation drives migration patterns; there are large changes in migration over time. (HG 2021a) • Tuktoyaktuk: The population is going up; a group of 300 caribou was seen on the Tuk Pen in March. (ACCWM 2020) • Tuktoyaktuk (CB & BNW): In past 4 years more caribou have been seen than prior to 5 years ago. People are seeing a few more caribou and groups are getting bigger compared to 2017. (ACCWM 2020, 2019) • Lots of caribou on Tuk Pen – thousands of cows, lots of bulls, cows and calves all over until mid- 	<ul style="list-style-type: none"> • BNW: Hunters are not encountering BNW caribou as much now, so have few recent observations. Numbers seem the same or a bit less than previous years. (ACCWM 2022, 2021) • CB: Four harvesters said they didn't see any caribou; some said there were more caribou 3-4 years ago at Husky Lakes; one harvester said he believes there are fewer CB caribou now. (ACCWM 2020) • Harvesters hunt where CB & BNW ranges overlap, so comments are same for both herds – i.e., there are not many caribou around and there is little evidence that hunters are harvesting caribou in that area in late winter. (ACCWM 2021,2020) • CB: There are fewer caribou now than in the distant past. People used to hunt around and north of Caribou Lake, now there are none there. (ACCWM 2020) • BNW: 4/6 harvesters interviewed did not see caribou; those that did said there were fewer than normal and they seem to be in different areas, but that can change from year to year. (ACCWM 2020) • CB & BNW: Some harvesters said caribou used to come down in the GSA around Caribou Lake. Another mentioned that maybe they have 	<p>get to them, so it is hard to make observations. (ACCWM 2021)</p> <ul style="list-style-type: none"> • BNW: Movement patterns were different in 2020 as there was less snow. There are some caribou that are not migrating, but staying in the mountains or on islands on Great Bear Lake. (ACCWM 2021) • We are seeing fewer caribou - some communities expressed concerns over the availability or declining population of ɤekwɛ́/ɤadə/nódele. (HG 2022b) • People are seeing fewer caribou now. (HG 2021) • Délıne: Looked for ɤekwɛ́ at ʔehajla and Neregha in fall and summer 2020 and saw nothing. Community continues to be concerned about lack of availability; this concern has heightened from 2019. (ACCWM 2021) • Délıne (BNW): One or two ɤekwɛ́ seen at Neregha (North Shore); they are in much smaller numbers than usual. (ACCWM 2020) • Colville Lake (BNW): No significant changes in abundance noted. The population of ɤadə is stable. (ACCWM 2020; SRRB 2020) • Délıne (BNE): Community members have not been seeing much ʔehajla ɤekwɛ́ over the past year. The community is concerned about lack of availability. (ACCWM 2020) 	<p>monitoring sahti ɤekwɛ́ Sept. 2020, but BNE were too far north and teams only saw 2 caribou in 4 weeks (TRTI 2021)</p> <ul style="list-style-type: none"> • There are fewer animals and they are seen in smaller groups than before. (ACCWM 2021, 2020) • There are fewer animals than have been seen in the past, but it is difficult to compare current and past observations, as current observations are only from Wekweèti, and people might be comparing what they see now to a time when the Bathurst herd used to be near Wekweèti. (ACCWM 2020) • Caribou are changing the way they move; they aren't around Gamèti and Whatì anymore. They used to go near the communities, but they aren't now. (ACCWM 2019; SARC 2017) • There used to be caribou, but now there are not even tracks. (ACCWM 2019) • Caribou do not stay in one spot, they are always moving so they find good feeding areas. (ACCWM 2014)
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	<p>Sept. still heading north. In spring could see 500 caribou, mostly cows and calves. A few weeks later there were still lots of caribou in whole area. Early Aug. to mid-Sept. there were caribou all over; herds of 25-50 scattered over whole range. Increase over past few years. (ACCWM 2021)</p> <ul style="list-style-type: none"> • Paulatuk (BNW): Caribou numbers are higher than last 2-3 years; population has been steadily increasing but last year was especially good. Population is better than any previous years, with exception of 2006. Migration paths and locations are changing slightly, now about 40-50 km from previous harvesting locations. (ACCWM 2020) • Paulatuk (BNW): People see caribou in their region year-round now; they used to have to go to Anderson River to get caribou. Population appears to be increasing compared to 1990s. For past 8 years you still have to go further inland to get caribou, but not as far as in 1990s. Caribou movements are further south from Paulatuk. Eastward migration was early this year. Caribou never came up to coast, likely because they didn't need to escape mosquitoes or cool off – weather was cool and rainy. In 	<p>moved away because the food they usually get was not there anymore. Another harvester doesn't think that movement patterns have changed between 2018 & 2019. (ACCWM 2020)</p> <ul style="list-style-type: none"> • CB & BNW: It seems like the population is stable or has increased. (ACCWM 2019) • Inuvik (CB & BNW): People used to see caribou around Inuvik around 30 years ago. Now there are none. CB caribou hang out around Husky Lakes in winter. (ACCWM 2019) • BNW: Population is the same as previous year. (ACCWM 2019) • BNW: Bluenose caribou used to migrate much further into the GSA, closer to Inuvik and Tsiigehtchic. During those years (1970s and 1980s), they would start to arrive in the traditional fall and winter hunting areas of Gwich'in communities in October. They would migrate through Campbell Lake, over to the Caribou Lake area, and then on to the Travaillant Lake area. (Benson 2015) • BNW: Distribution and range of Bluenose caribou has changed drastically since the early 1990s. Herds have not migrated close to Inuvik or Tsiigehtchic for several decades; they moved closer to Fort 	<ul style="list-style-type: none"> • Délı̄ne: People are not seeing BNE caribou around traditional places (e.g., Caribou Point); they are seeing some on the north side of Great Bear Lake but they are alone or in pairs – not large groups. Community members are very concerned about the barren-ground populations. (ACCWM 2020) • BNE caribou didn't come near any Sahtu communities in 2018. (ACCWM 2019) 	
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	<p>March and April caribou weren't where they were supposed to be due to ice. (ACCWM 2019)</p> <ul style="list-style-type: none"> • Tuktoyaktuk (CB): Harvesters seeing larger herds. (ACCWM 2019) • Tuktoyaktuk (BNW): Caribou move all over and can switch herds. (ACCWM 2019) • CB: There is good community info when the herd is near the highway, less when severe weather means people can't access the herd. (ACCWM 2019) • Some evidence TP may be increasing; CB trend not clear. (SARC 2017) • Paulatuk: Herds migrate using different routes now. (ACCWM 2014) 	<p>Good Hope and Colville. This change is thought to be due to changes in feed availability, number of forest fires around Travailant Lake and within previous winter range, and/or hunting pressure. Currently, caribou overwinter closer to Tuktoyaktuk and around Husky Lakes, or even around Noell Lake. Some say it is because there are a lot fewer caribou now and they are trying to survive and conserving energy by not travelling so far. Others say this is part of a natural cycle. (Benson 2015)</p> <ul style="list-style-type: none"> • BNW: After a long time with no caribou, the habitat becomes even better. (Benson 2015) 		
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Table 2: Natural Factors

	Main themes by region and / or by herd			
Natural factors	Inuvialuit (TP, CB, BNW)	Gwich'in (CB, BNW)	Sahtu (BNW, BNE)	Wek'èezhii (Tłı̄chǫ Region) (BNE)
<p>Predators and competitors</p> <p>(Including other species interactions)</p>	<ul style="list-style-type: none"> • Inuvik (CB): Unclear whether wolf and bear numbers are still increasing; people are harvesting a lot but there are fewer people harvesting predators than in the past. Wolverine abundance reported to be unusually high. Foxes and eagles can also prey on calves. (ACCWM 2022) 	<ul style="list-style-type: none"> • CB & BNW: Not many wolves seen, but high abundance of wolverines in 2021. (ACCWM 2022) • CB & BNW: there is no inter-specific competition; species mind their own business. (ACCWM 2021) 	<ul style="list-style-type: none"> • Délı̄nǫ: There are concerns about the impacts of muskoxen in making caribou move away. (ACCWM 2022, 2021) • BNW: More woodland caribou are closer to Colville. People are seeing moose and beaver where they haven't seen them before. Muskoxen are also expanding everywhere. Muskoxen eat what caribou rely on, they are noisy, and when they 	<ul style="list-style-type: none"> • There are more foxes and eagles now, and they could be taking calves. (TRTI 2022) • There are more moose, muskoxen and bison moving onto the barrenlands and in the treeline. (TRTI 2022) • High numbers of wolves were seen by Tłı̄chǫ monitors 2017-2019. (TRTI 2022)

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	<ul style="list-style-type: none"> • Inuvik (CB): During a 2021 helicopter flight only one caribou was seen but lots of muskoxen. Reindeer are now grazing where caribou used to be. (ACCWM 2022) • Paulatuk (BNW): Mixed reports regarding wolf abundance, but people are seeing many bears. People are seeing lots of reindeer and moose. (ACCWM 2022) • BNW: Wolves are following herds to calving grounds. Bears are becoming a significant predator; hunters are asking for more grizzly bear tags and some want to see more actions to control population. (ACCWM 2021) • CB: There are fewer wolves than 3 years ago, more wolverines and increasing sightings of grizzly bears. There are more eagles around town. (ACCWM 2021) • There are not large numbers of grizzly bears on Tuk Pen – some big dominant boars this fall – 3 taken – and sows with cubs – maybe more juvenile grizzlies. (ACCWM 2021) • There is more wolf sign and large packs. (HG 2021a) • Reindeer interact with caribou more now in some areas. More muskoxen are being observed on CB & TP ranges, but learn to use same area over time. (HG 2021a) 	<ul style="list-style-type: none"> • CB: Most hunters mentioned that they did not see many or any predators and predator tracks. (ACCWM 2021) • CB: Predation is a concern and more focus needs to be placed on getting people to hunt grizzlies; more research is needed on the impact predation is having on the herd’s recovery potential. (ACCWM 2020) • BNW: Hunters are not seeing any predators or tracks. (ACCWM 2021) • CB & BNW: One harvester said that predators were about the same in 2018 & 2019 around Miner River. (ACCWM 2020) • CB: Predation is causing low number of caribou. (ACCWM 2020) • CB & BNW: One harvester saw a lone wolf toward Sitidgi Lake, and said a bounty should be put on them because too many wolves can affect the population because they eat a lot of caribou. He also said there are more grizzly bears now. (ACCWM 2020) • BNW caribou may be interbreeding with reindeer. (Benson 2015) • Bluenose herds mix and they mix with woodland caribou on their 	<p>are around there are no moose. (ACCWM 2021,2020)</p> <ul style="list-style-type: none"> • BNW: Trappers are noticing a change in wolf numbers – with fewer people trapping there are more wolves in places they wouldn’t normally be found. When there are more hunters and trappers on the land, the wolves have less impact on the caribou. (ACCWM 2021) • Colville: People are seeing lots more todzi now, and in some areas where they’ve never seen them before. (HG 2022b) • Sahtú Dene and Métis' knowledge teaches that all things are connected; both predators and humans are generally seen to be part of a working, healthy system that sustains caribou. (HG 2022b; Winbourne 2021; SRRB 2016) • A complex relationship exists among wolves, caribou, and other wildlife, which has been influenced by the impacts of climate change. This occurs when other wildlife, such as muskoxen or moose, serve as alternative prey for wolves, especially during the absence of caribou herds. (HG 2022b; Winbourne 2021) • A decline in trapping is having an impact on fur populations and this will be affecting all fur bearers, but nature balances itself. (HG 2022b; Winbourne 2021; ACCWM 2014) • Some IK holders have observed wolves as primary caribou predators aside from 	<ul style="list-style-type: none"> • The rapid decline in BNE 2015- 2018 occurred despite a very limited harvest in the NWT and Nunavut. Low adult and calf survival rates at that time suggested that predation may be a key limiting factor. A number of actions were put in place for the reduction of wolves and wolf predation to assist with recovery of BNE through a coordinated wolf management program. The program consists of support for wolf harvesters and the traditional economy, including training and incentives; the use of aerial removals if harvest targets are not met through ground harvest); and extensive research and monitoring. 84 wolves were removed in 2020 and 135 wolves in 2021 from areas where most of the Bathurst and BNE herds were wintering. In 2021, Tłı̄ch̄q harvesters removed 32 wolves from a base at Roundrock Lake, a ten-fold increase in wolves taken in 2020 by Tłı̄ch̄q harvesters. (TG & ENR 2022) • Annual review, assessment and adjustment of the wolf management program takes place under the approval, recommendations and commitments made in accordance with the WRRB’s 2020 Wolf Management Proceeding and the associated WRRB Reasons for Decision
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	<ul style="list-style-type: none"> • Tuktoyaktuk (CB & BNW): There are more wolves and grizzly bears. There were grizzlies spotted with 3 cubs. There are more and larger packs of wolves, more wolverines than usual, and increasing eagles – one was seen taking calves. There was one observation of a grizzly chasing a muskox until it aborted its young. There are fewer hunters in the younger generation so less pressure on predators. Cost of gas and equipment make it difficult to hunt predators. If price of fur is low, people won't hunt predators as much, but some people harvest opportunistically. (ACCWM 2020) • Paulatuk (BNW): Wolves were all over until early Oct., but didn't see a major pack that is commonly seen; no increase in wolf packs in 2019. Most wolves were taken from around the community. Grizzly populations are increasing. (ACCWM 2020) • Paulatuk (BNW): A harvester got a reindeer in late Aug. – maybe a hybrid. It was hanging out with 15 other bulls, its fur had white spots, it had short legs and big antlers without velvet. (ACCWM 2020) • Tuktoyaktuk (CB & BNW): There are stray reindeer and muskox are moving south and west. People want to deal with invasive species and/or 	<p>winter range; woodland caribou are shifting their distribution. (Benson 2015)</p> <ul style="list-style-type: none"> • Caribou mix with moose but caribou and muskoxen stay away from each other. Muskox are expanding their range to the south. Some have been spotted around Rengleng River, far into Bluenose caribou winter range (Benson 2015) • BNW: Wolves, bears and eagles prey on caribou calves, but wolves are the main predator of Bluenose caribou. Snow condition affects wolf predation success. (Benson 2015) • BNW: Lynx and wolverines also kill caribou. (Benson 2015) • Grizzly bear and eagle numbers are increasing. (Benson 2015) • People are seeing cougar now. (Benson 2015) • Wolf numbers were reported to be increasing in the mid to late 1990s; bounties may have controlled the population before that, but it has been noted that wolf numbers may also rise in response to culls. More information is needed on wolf predation rates. (Benson 2015) • BNW: A lot fewer people are trapping wolves now so their 	<p>grizzly bears. This observation maintains that wolf predation can influence caribou survival, and predator avoidance is significant in caribou habitat choice. (HG 2022b)</p> <ul style="list-style-type: none"> • Délı̄ne: ʔəjire are moving back into ɬekwé areas, causing them to move away from some areas. (DEWG 2021) • Harvesters are the same as other predators; they have an agreement with caribou to co-exist with them and other wildlife to maintain a respectful sharing relationship. (DEWG 2021; Winbourne 2021; SRRB 2016) • Knowledge holders from the Sahtú believe that díga/bele is a spiritually powerful animal that must be treated with respect and helps to maintain balance. Failing to respect díga/bele has dire consequences, including physical harm and sickness. (DEWG 2021; Winbourne 2021; SRRB 2016) • There are mixed views about the relationship between ɬejire (muskoxen) and caribou. Some IK sources cite direct competition between muskoxen and caribou for food/habitat, others say they share habitat and cycle independently. Muskoxen may negatively impact barren-ground caribou through direct competition for food, destruction of caribou food, avoidance behavior, and attracting/supporting wolf predation. (Winbourne 2021) 	<p>report, January 2021. (TG & ENR 2022)</p> <ul style="list-style-type: none"> • Increases in predator populations and increasing concern about levels of predation reported (ACCWM 2021,2020,2019) • A joint management plan aimed at reducing the wolf population on the winter ranges of the BNE and Bathurst caribou herds was initiated in 2020, including provisions for training harvesters and monitoring wolves with tracking collars. In 2020, TG stationed hunters 50 km east of Wekweèti in an area expected to have lots of wolves, then moved camp closer to Wekweèti after an unsuccessful initial wolf hunt. Monitors observed that the wolves were using the winter road more than the other areas. Only three wolves were harvested. Tı̄chq̄ people are not usually wolf harvesters – with strong cultural ties to wolves, a lot of families do not approve of hunting wolves. TG worked hard to get approval to have people out hunting wolves and hope to repeat the program with more input from knowledge holders to be more successful. (ACCWM 2021) • More wolves are being observed; TG is developing a wolf harvest program. (ACCWM 2020)
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	<p>competitors before they get out of hand. (ACCWM 2020)</p> <ul style="list-style-type: none"> • Inuvik (CB & BNW): People didn't see too many wolves, but snow was deep and if there were predators it would be hard for caribou to escape. Not many predators in general. Some small packs of wolves (4–5) around Miner River; lots of wolverine and tracks heading north out of treeline. No bears spotted in that area, indicating early emergence from dens. (ACCWM 2020) • Tuktoyaktuk (CB): Every year there are more grizzlies in the region, more cubs, and at least one sow with 3 cubs was seen. (ACCWM 2020) • Tuktoyaktuk (CB & BNW): Predators are always around (grizzlies, wolverines, wolves); there are lots of golden and bald eagles, more every year. A few years ago a bald eagle was seen taking a calf; this year there are far more grizzly bears, some sows with 4 cubs and lots with 3; hunting females with cubs is restricted so that makes it hard to harvest. (ACCWM 2019) • Inuvik (CB): Community members observed lots of small grizzly bears. (ACCWM 2019) • BNW: Populations of wolves and grizzlies are increasing and people are concerned. (ACCWM 2019) 	<p>population is rising, but wolf numbers cycle with caribou numbers, and they have got lower as the Bluenose numbers have. (Benson 2015)</p> <ul style="list-style-type: none"> • Wolves were in the delta in the 1980s and returned in recent years. (ACCWM 2014) • Wolf populations are increasing; numbers of grizzlies and wolverines have also gone up. There are fewer trappers now. (ACCWM 2014) • Reindeer eat all the caribou food in some areas. (ACCWM 2014) 	<ul style="list-style-type: none"> • Increases in predator populations and increasing concern about levels of predation. (ACCWM 2021,2020,2019) • Délı̄ne: Concerns about the impacts of muskoxen making caribou move away. (ACCWM 2021) • Délı̄ne: There has been an increase in grizzly bear and wolf sightings. (ACCWM 2019) • Colville: Wolves keep the caribou healthy. (ACCWM 2021) • Colville: Plan to promote harvest of moose and muskox which are newly coming into the area. (ACCWM 2020) • Fort Good Hope (BNW): People are seeing more wolves and bears. Wolf packs are big and there are more bears along the Mackenzie in areas people haven't seen them before. (ACCWM 2019) • Colville (BNW): There are more grizzly bears; they are staying out of the den and hunting longer. The snow is crustier and the wolves can get around on it easier. (ACCWM 2019) • Wolf numbers increased, pack sizes are large. (ACCWM 2014) • New animals like muskoxen and cougars impact caribou. Muskoxen are moving from the barren lands to below treeline. They are overpopulated in some areas. Muskox directly compete with caribou by eating their food or destroying lichen – 	<ul style="list-style-type: none"> • Ranges of wood bison and barren-ground caribou have the potential to overlap in the portion of their ranges near the community of Behchok̄. The Mackenzie population of wood bison has been expanding northwards in recent years as well, being observed as far north as Whati; wood bison are seen as bringing predators and disease (e.g., anthrax) into barren-ground caribou range as well as competing for forage that has already been impacted by forest fires. (SARC 2017) • Wolves and bears have relations with caribou that are bigger than just their actions as predators. Wolves and bears hunt caribou, just as humans do; caribou are 'food for them all'. Grizzlies go after the calves at calving grounds, and there are so many grizzlies, there is a fear there is no way to protect the caribou if grizzlies are taking so many calves. Maybe caribou have moved to another calving ground because of the predators – especially grizzlies. (WRRB 2016) • More boreal caribou are joining barren-ground caribou as they return to the tundra now. (WRRB 2016) • The wolf population is big in some areas; it seems to be increasing every year. (ACCWM 2014)
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	<ul style="list-style-type: none"> • Tuktoyaktuk (CB & BNW): Small caribou herds are being seen near small muskox herds in May, so they are sharing feeding areas near Mason River area. (ACCWM 2019) • Paulatuk (BNW): Wolf numbers are up and wolves seem healthy – they don't usually have much fat in summer but they did this year. Grizzly bear numbers are up and they have a lot of fat; the community is maxing out their grizzly tags. There are more eagles. Wolverine numbers haven't changed. (ACCWM 2019) • With restrictions on caribou hunting, people are also hunting predators less. (ACCWM 2014) • Muskoxen compete with caribou; caribou don't like muskoxen. (ACCWM 2014) 		<p>they paw it down so it doesn't grow back. (ACCWM 2014)</p> <ul style="list-style-type: none"> • When more muskoxen and moose move in, more wolves come and caribou move out. (ACCWM 2014) 	
Wildfires	<ul style="list-style-type: none"> • Fire is not a big issue; Inuvialuit have always lived with fire. Caribou have been coming back to areas that had fire. (HG 2021a) • Forest fires have impacted caribou habitat – once an area is burned caribou don't go there anymore. (ACCWM 2014) 	<ul style="list-style-type: none"> • BNW: Forest fires change the caribou's food supply; it can take lichen at least 10 and up to 40 years to grow back. As things grow back the land is rejuvenated though. (Benson 2015) • BNW: caribou have not migrated close to Inuvik or Tsiigehtchic for several decades; they moved closer to Fort Good Hope and Colville Lake. One cause could be forest fires around Travailant Lake and within their previous winter range. Because their food 	<ul style="list-style-type: none"> • Déljne: There were no fires in 2020. (ACCWM 2021) • Tuli't'a: Previous generation only used to see wildfires once in a while. (HG 2022b) • People are seeing more wildfires. <ul style="list-style-type: none"> ○ Fires are part of the natural system. ○ With reduced tree stands there is less shade for caribou in the forested areas. (HG 2022a; SRRB 2016) • Déljne: There is more risk of fire now. (DEWG 2021) 	<ul style="list-style-type: none"> • There is much more forest fire now. (TRTI 2022) • Fire in forested, winter range of BNE can impact herd movements and access to key wintering areas. (TG & ENR 2022) • There is a lot of concern about previously burned areas and forest fires; caribou are avoiding these areas. Fires are all over now and caribou can't find enough to eat. Forest fires and climate change have changed the land so that caribou don't come

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		<p>supply burned they travelled further north of the lake. (Benson 2015)</p> <ul style="list-style-type: none"> • Forest fires have impacted caribou habitat – once an area is burned caribou don't go there anymore. (ACCWM 2014) 	<ul style="list-style-type: none"> • People are very concerned about present and future impacts of fire on ɔ́ekwé and their habitat. (SRRB 2016) • Forest fires have impacted caribou habitat – once an area is burned it takes a long time for lichen to grow back. (ACCWM 2014) 	<p>around anymore. (ACCWM 2020,2019)</p> <ul style="list-style-type: none"> • Caribou trails and water crossings need to be considered when discussing fire management. Caribou habitat needs to be protected; need more protected areas. (WRRB 2016) • Forest fires have impacted caribou habitat – once an area is burned caribou don't go back there for years. (ACCWM 2014)
<p>Climate and climate change <i>(Including comments on weather)</i></p>	<ul style="list-style-type: none"> • There are increasing signs of climate change, with more rain and permafrost melt, more slumping all over the region, more willows. People are concerned about the slumps, as caribou can get stuck in the mud when they go there to lick salts and minerals. (ACCWM 2022) • Paulatuk (BNW): There is a lot of slumping, evidence of climate change, and changes to caribou behavior and movement patterns. Warmer conditions cause caribou to spend time looking for places to cool off. (ACCWM 2022) • Freeze-up/thaw are 2-3 weeks later / earlier than before; migration routes have changed (timing & locations) as a result (ACCWM 2022). With late freeze this fall caribou were waiting to cross Husky Lakes for 3 weeks; they have to wait there for freeze-up or it's a dead end. (HG 2021a) 	<ul style="list-style-type: none"> • CB: It is warming earlier now, there is lots of erosion and slumping, alders are moving onto the tundra, moose are moving further north. (ACCWM 2022) • CB & BNW: There was less snow in winter 2021, which should have helped the caribou. (ACCWM 2022) • BNW: Forest fires, lots of erosion and slumping, alders are moving into the tundra, moose are moving further north. (ACCWM 2022) • CB: Most hunters said the environment and habitat were similar to last year. No notable changes were recorded. One hunter mentioned that when he was out in April, it was getting warm, snow was melting fast. (ACCWM 2021) 	<ul style="list-style-type: none"> • Déljñé (BNE): There are concerns about the impacts of climate change on caribou. (ACCWM 2022) • Déljñé: There was lots of rain and no fires in 2020 – both of which can be good for caribou – but there was rain in December which would have been hard on them. (ACCWM 2021) • Colville: There were no fires in 2020, but permafrost melts have led to changes in habitat. (ACCWM 2021) • Colville, BNW: Migration route shifted further north about 10 years ago, possibly in response to warming weather patterns. In March 2019 the weather warmed up unexpectedly fast and caused the caribou to leave the area a month earlier than normal. (ACCWM 2021) • It is getting warmer. Water levels are increasing. We are seeing more erosion, this is affecting how animals travel on the land and how they can navigate river crossings. (HG 2022b) 	<ul style="list-style-type: none"> • Lichens are the prime food for caribou, but when the weather gets too hot they dry up. Summers are drier and there is less snow. There are new plants now, less permafrost and more fires; snow condition has changed from dry to soft and slushy, and there is more winter ice. (TRTI 2022) • For caribou, climate change means changing vegetation, younger forests, less insect and heat refuge, and changes in food quality and quantity. (TRTI 2022) • Climate change results in more fires; warmer winters mean less snow, which makes it easier for caribou to find forage but also makes it easier for predators to hunt. There are also a lot more areas with thin ice now, and caribou are falling through the ice. (ACCWM 2020)

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	<ul style="list-style-type: none"> • Changing climate patterns are changing where caribou are going. Frozen crust on snow makes it hard for them to get food. There is more permafrost exposure; lots of coastal erosion; more willows – not sure how this is affecting caribou. (ACCWM 2022; HG 2021a) • Inuvik (CB): The last couple years had little snow; this can benefit caribou. (ACCWM 2022) • Changes in permafrost – slumping. Land is soft underfoot in summer – harder to travel. Not as much snow in winter. Snow came late last year; wasn't much snow right until Nov. (ACCWM 2021) • CB: Caribou are coming south later in fall now and coming out of treeline later in spring. If there is too much snow, caribou stay later on Tuk Pen in spring. (ACCWM 2021) • CB: Cooler, wet summers past 3 years, less bugs, makes for healthier caribou. There was freezing rain past couple years, but not likely bad enough to make crust on snow that limits access to food. Some past years got hit harder than others. (ACCWM 2022,2021) • CB: There is a rise in signs of climate change: more landslides, slumping, and warmer temperatures; the 	<ul style="list-style-type: none"> • CB: One harvester noted that during springtime, it was fairly warm. He said the lakes were slushy, but there was lots of snow in the forest, around 3-4'. Two harvesters said the snow was the same as usual, both for the forested and barren areas. (ACCWM 2020) • Inuvik (CB & BNW): People are concerned about climate change; it is changing a lot of things. There is more thawing; it's warm and wet. It used to be colder (a long time ago). Now, it's still 2-3 degrees in September. Lots of landslides around Caribou Hills north of Inuvik. (ACCWM 2022,2019) • Caribou start and stop migration based on weather – e.g., in fall they start moving when the lakes are frozen – so changes to the land and climate can be significant threats to caribou. (Benson 2015) • Population cycles can be driven by factors such as changing weather patterns, which can bring higher temperatures and forest fires. (Benson 2015) • When there is rainfall after it snows, a hard crust can form on the snow; a crust can also form in 	<ul style="list-style-type: none"> • Déljne: Water in the top 2' of Great Bear Lake has changed temperature. (HG 2022b) • Overall it is getting hotter in the Sahtú. This is causing a number of trends and changes: <ul style="list-style-type: none"> ○ It is too hot for caribou, and they're changing their behaviour. ○ There are fewer ice patches/snow to protect the caribou. ○ Lakes are not frozen for as long. ○ Lake surface temperature is changing, getting warmer. ○ There are more wildfires. ○ There has been an increase in shrubby vegetation in the Mackenzie Mountains and there are more willows growing in the forested areas; however, these changes are not yet occurring in the tundra. ○ Insects are more active with warmer climate. (HG 2022a) • There are changes in the permafrost and increased melting. Caribou are getting caught/bogged down in the mud in some areas. (HG 2022a) • Déljne: The land is drier. There are more shrubs on the tundra now. ʔekwé behaviour is changing, they seem to be travelling differently on the land, possibly not travelling as far as they normally would. Snow and ice conditions are changing, and affect how well ʔekwé can 	<ul style="list-style-type: none"> • There are lots of burned areas now that are changing the way the caribou move around; they are avoiding the burned areas. Berries and vegetation aren't as rich as before. There is less snow and the snow is softer than before, which makes it hard for the caribou to move around. Warmer winters are causing the ice to be thinner. There were lots of warble flies in 2019. (ACCWM 2020) • Climate change has impacted harvesting – e.g., it is difficult and unsafe to hunt in spring now, and that's when cows were usually taken (WRRB 2016) • Late freeze up is increasing mortality when caribou fall through ice during migration. (ACCWM 2014)
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	<p>impacts on caribou are hard to predict. (ACCWM 2020)</p> <ul style="list-style-type: none"> • Tuktoyaktuk (CB & BNW): There are more caribou in the trees because of very low snow conditions. There are fewer bugs and caribou don't have to go to coast to escape them. There are lots of caribou in east between Anderson and Horton/Mason River; they are tamer due to less hunting pressure. Seeing many more caribou from Cape Bathurst to above Husky Bend on Anderson River, and all along eastern shore of Liverpool Bay Apr./May – have been seeing more past three years. (ACCWM 2020) • Tuktoyaktuk (CB & BNW): There was an icing event in Jan. with about a ½" ice layer; icing events cause caribou to lose hair on their legs. Summer weather is cooler, with fewer bugs. Ice isn't thick enough, limiting caribou movement across water bodies. There are more slumps and slides. (ACCWM 2020) • Inuvik (CB & BNW): Distribution is different – caribou stayed around Miner River almost all winter, not in usual harvesting areas around Old Man Lake and Urquhart Lake. Caribou didn't come out of the trees until at least the end of Apr. There is deep snow until late spring, a bit of icing earlier, more noticeable in 	<p>the spring when the snow warms up and then freezes. These 'icing' conditions are bad for caribou; they can injure their legs, it's harder for them to get their food, and it makes it easier for wolves to hunt. Icing events happen more in the last 10-20 years. (Benson 2015)</p> <ul style="list-style-type: none"> • Around winter 2004/05 there was lots of rain, caribou starved, then there was a hot summer and an increase in predators – the caribou were impacted by all at once. (Benson 2015) • Summers are hotter now and there are more mosquitoes and less rain, also fall is coming later. (Benson 2015) • Weather may be having the greatest negative impact on caribou today. (Benson 2015) • Climate and weather changes have changed the land that caribou need; there are more willows now. (Benson 2015) • BNW: Climate change may benefit Bluenose caribou with earlier warming in spring. (Benson 2015) • Harsh or strange weather and icing events are impacting caribou, causing them to starve. (ACCWM 2014) 	<p>travel and access food in winter. There is less Ɂededáhk'á (good home, habitat) for Ɂekwé to survive in. (DEWG 2021)</p> <ul style="list-style-type: none"> • Lots of rain and no fires in 2020, both of which can be good for caribou, but there was rain in December which would have been hard on them. There are concerns about climate change. (ACCWM 2021) • At ɁehdaɁla, lots of snow (about 2 to 2.5 feet) with a hard crust on top on April 20–21. The food was hard to get at. Ɂekwé were staying on the lake and in open areas. (ACCWM 2020) • Colville (BNW): People are seeing a lot of changes – more landslides, more erosion, changing waterways, changes in migration timing, more snow crusts, more wolves, more bears. It is getting warmer; there were more caribou when it was cold. (ACCWM 2019) • Climate change is increasingly affecting people and caribou. (SRRB 2016) • Weather has changed. Rain on snow events make it hard for the caribou to survive. (ACCWM 2014) • The wind direction has changed. (ACCWM 2014) 	
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	<p>tundra than in treeline. At end of Feb., some hills were glazed. Lots of slumping in places there never used to be, a lot more landslides around Caribou Hills. Many rivers are getting silty and shallower. Shallow Bay has areas you can't go through due to low waters. (ACCWM 2020)</p> <ul style="list-style-type: none"> • Paulatuk (BNW): Summers are longer but cooler, and rainy, with fewer bugs. A lot of stronger winds from all directions except from south, which is more than usual. There was rain in Oct. & Nov. 2018, Mar./Apr. 2019, and Oct. 2019. People can't predict storms anymore; there were storms in Feb. & Oct., which was unusual. (ACCWM 2020) • Paulatuk (BNW): Changing climate is creating weather conditions which prevent hunters from going out for wolves. (ACCWM 2020) • Tuktoyaktuk (CB & BNW): Weather and snow conditions were favourable for caribou in 2018 other than one freezing rain even in Dec/Jan that caused a lot of ice. There were fewer bugs in summer. Caribou are calving earlier in Apr. rather than May. Caribou are moving further up into the bush because snow levels are lower. There were more slumps and landslides, including near caribou trails; creeks are plugged up by 	<ul style="list-style-type: none"> • Climate change is impacting caribou timings, movements and migration patterns. (ACCWM 2014) • Warming temperatures are melting permafrost and making the ground too swampy for caribou. (ACCWM 2014) • Increasing shrubs make it harder for caribou to move/travel. (ACCWM 2014) 		
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	<p>beavers, so there is overflow and creeks are widening; last few years have been far fewer bugs (warble flies, etc.) so caribou are staying where there is better food and not running around as much; had a cold spring and summer, lots of rain and wind. (ACCWM 2019)</p> <ul style="list-style-type: none"> • Inuvik (CB): There was rain on snow this winter. (ACCWM 2019) • BNW: Changing weather conditions can be hard on caribou. 2018/19 was cold with rain and snow throughout summer, and freeze-up came early. Some caribou were very skinny in early Aug., and effects of rain and ice during winter were visible – e.g., abrasions on nose and legs – but animals were otherwise healthy. Cold weather meant fewer bugs and caribou didn’t travel to coast to avoid them. (ACCWM 2019) • Paulatuk (BNW): 2018 was bad weather – cold with rain and snow throughout summer. Green-up was about the same time. There was an extended spring thaw. There was no berry-picking due to weather (cold spell in Jul. killed aqpiqs). Cranberries are late. There are lots of blueberries. There were icing events in Dec/Jan – there was a 3” layer of ice. There was a lot more slumping and erosion. North-facing snowbanks melted 			
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	<p>despite cold in Rat Lake area. Lots of green foliage; Arctic cotton growing a lot and lupines; freeze-up already here in mid-Sep. (ACCWM 2019)</p> <ul style="list-style-type: none"> • Timing of break-up and ice thickness have changed – ice melts sooner and is thinner. Climate change is impacting caribou timings, movements and migration patterns. (ACCWM 2014) 			
<p>Caribou health (condition) (Including productivity, recruitment & adult composition)</p>	<ul style="list-style-type: none"> • Inuvik (CB): Animals are in good shape with lots of fat; bulls are putting fat on earlier now (ACCWM 2022). No observations of sick caribou or bad legs. People are seeing more caribou each year and they seem healthier. (ACCWM 2021) • Inuvik (CB): Haven't seen Brucellosis or disease for a while now. Used to see Besnoitia quite a bit in the bulls, don't see it as much anymore. (ACCWM 2022) • Inuvik (CB): It is hard to comment on adult composition because harvesters see caribou in winter after bulls and cows have separated; ratio probably about 50/50 bulls and cows. Hard to comment on trends in productivity as cows are encountered before calving. (ACCWM 2022) • Paulatuk (BNW): There is a good mix of bulls and cows. While caribou were generally healthy, some of the bigger bulls were very skinny by fall, 	<ul style="list-style-type: none"> • CB: There is a mix of both positive and negative indicators – e.g., average body condition is good, but productivity is low. Caribou seem healthy, with no disease and a decent amount of fat. (ACCWM 2022) • BNW: There are fewer males than normal, but animals seem healthy with no sign of disease. (ACCWM 2022) • BNW: Gwich'in hunters usually take Bluenose caribou when they are on their northward migration, as they are in very good condition at that time (Feb/Mar). Body condition varies depending on weather and climate. (Benson 2015) • Some people feel animals are always healthy, others say they are less healthy now – possibly due to poor weather conditions, 	<ul style="list-style-type: none"> • BNW: Any harvested caribou have been healthy and fat. Bull to cow ratio seems to be about 1:1. (ACCWM 2021) • BNW: The more isolated caribou are from people, the more stressed they are by wolves. (ACCWM 2021) • Colville (BNW): the ɬədə remain as fat as always; caribou seem to be in normal good health. (ACCWM 2020; SRRB 2020) • Déljne: Insects cause ɬekwé stress, so any increases may affect caribou health. (DEWG 2021) • Déljne: harvest at Caribou Pt., 8/12 caribou were pregnant and in fair condition. (ACCWM 2020) • Group of ɬehdájla ɬekwé observed on April 21 were in fair condition with some chafing on legs from ice crust on snow. (ACCWM 2020) • BNW: A lot of the caribou do not have much fat on them, suggesting they have trouble grazing. (ACCWM 2019) • Colville (BNW): There are more grizzly bears; they are staying out of the den 	<ul style="list-style-type: none"> • In 2016 & 2017 the weather was warm, dry and buggy – many injured caribou were seen but also many calves. Since 2018 the weather has been good for caribou – wet and cool with fewer insects – and animals are fat and healthy, but there are few calves. (TRTI 2022) • Caribou have a lot of warble flies. The animals that were harvested were healthy, but skinnier than before. Some are reporting white spots on meat, puss on meat and legs, white stuff on legs and arms. (ACCWM 2020) • Not many yearlings were observed and no cows were harvested. There were equal amounts of bulls and cows. (ACCWM 2020) • Deep snow and icing conditions from freezing rain negatively impact caribou body condition and health, as caribou are not able to remove the snow from their feed. (SARC 2017)

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	<p>with some evidence of disease. (ACCWM 2022)</p> <ul style="list-style-type: none"> • TP & CB: Have seen more calves last 3 years. (ACCWM 2021; HG 2021a) • CB: There are lots of young with cows, lots of twins, more calves and more caribou now. There are lots of young bulls, cows and calves. At end of Sep. there are more big bulls; 3-4 year old bulls are very healthy, really fat, in good shape. Both bulls and cows are fat and healthy. People are seeing way less warble flies in the skin. Even toward end of season (Mar.), hardly any warble flies on backs. Cold summers past two years, warbles moving south; maybe that's why caribou are healthy. When grazing, nothing is bothering them, there is less insect harassment, and animals are getting fatter. On Tuk Pen a hunter saw lots of caribou with very young calves. (ACCWM 2021) • BNW: Saw a majority of cows in 2020, but with lots of bulls mixed in. Not noticing any numbers of unhealthy caribou, maybe one or two here or there. (ACCWM 2021) • Inuvik (CB & BNW): Hunters are getting bulls near Inuvik which are really healthy with a lot of fat. Caribou in late spring are very lean, more than the last few years, but seem healthy, with no sickness and 	<p>icing events or predators. (Benson 2015)</p>	<p>and hunting longer. The snow is crustier and the wolves can get around on it easier. (ACCWM 2019)</p> <ul style="list-style-type: none"> • Caribou are not as fat now. (ACCWM 2014) 	<ul style="list-style-type: none"> • Caribou seem tired and stressed, and so females often give birth prior to reaching the calving grounds – the condition of their habitat before and after reaching the calving grounds needs to be considered to protect caribou. (WRRB 2016) • Caribou are not as fat now, maybe because of burns or contaminants. (ACCWM 2014)
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	<p>clean livers. There is fat around organs, none on rump, and good bone marrow considering they are leaner – looked like they were about to put on weight. Out of 9 caribou harvested, only 2 had visible fat on outside. (ACCWM 2020)</p> <ul style="list-style-type: none"> • Inuvik (BNW): Harvesters are not in area where cows are. In 2017, there were a lot of cows & calves in Old Man/ Uruqhart Lake area, but none in that area in 2019. (ACCWM 2020) • Tuktoyaktuk (CB & BNW): Caribou are really fat, almost 'obese'. They are getting fatter faster in summer because of fewer bugs. There is no sickness, fewer warble flies, fewer bugs due to cold damp summer. (ACCWM 2020) • Tuktoyaktuk (CB): No change in adult composition. In winter and spring, there are a lot of young bulls with cows, more than usual. Observations of 15 big bulls together in late Oct. near ITH and 60 bulls last Nov. in tag zone. (ACCWM 2020) • Inuvik (BNW): Limited observations as areas travelled (Miner River, in treeline) has mainly bulls. Caribou are separated by the time Inuvik harvesters go out. (ACCWM 2020) • Paulatuk (BNW): People saw and harvested a lot of bulls – there are 			
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	<p>many bulls, so not harvesting many cows. (ACCWM 2020)</p> <ul style="list-style-type: none"> • Tuktoyaktuk (CB & BNW): Young bulls had 1–1.5” of fat in Mar.; most caribou harvested are healthy; one had pneumonia; one had tapeworms; some atypical antlers recently; in Jul. bulls were already fat and had big antlers, some lost velvet early this year; bulls had 2.5–3” of fat by end of Jul., and by Aug. were almost obese. (ACCWM 2019) • Tuktoyaktuk (CB & BNW): Twins seen in spring; a calf for every two cows in I/BC/06; calves look very healthy. Lots of calves in Mar.; good number of cows with calves, including yearlings. Calves were seen in Apr. in 2018; in the past they weren’t seen until May. (ACCWM 2020, 2019) • Paulatuk (BNW): Animals are abundant, healthy, with 3-5” of fat. There are fewer calves than previous years; some young ones but not as much as past years – more yearlings than calves. Harvest is away from where calves and cows are; they are further east. Cows and calves are in excellent shape – calves look healthy, likely because of cool summer and few mosquitoes. There are a lot of bulls. (ACCWM 2020) • Paulatuk (BNW): Lots of cows with calves; also lots of young bulls 			
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	<p>around Falaize Lake (beginning of Sep.). (ACCWM 2019)</p> <ul style="list-style-type: none"> • Paulatuk (BNW): Caribou by coast were very skinny at beginning of Aug. There were fatter ones further out, up in the hills by Billy Lake; saw rain effects this year (rain was heaviest in Dec./Jan.) – in Mar./Apr. there were abrasions from ice on noses and legs; sometimes a caribou has its lungs stuck to the ribs. Otherwise it is healthy. (ACCWM 2019) • Inuvik (CB): Not many caribou had nose bots. (ACCWM 2019) • Tuktoyaktuk (BNW): There are lots of lone bulls in Jul./Aug., but later in Aug. bulls start mixing with cows & calves. Fewer community observations because people not able to get out this fall due to bad weather. (ACCWM 2019) • Harassment from mosquitos can be severe when conditions are hot and humid and cause a loss of body fat; nose bot larvae are commonly found and not considered overly harmful; caribou are bothered by biting warble flies and may lose fat or die from exhaustion trying to run away from the irritation. (SARC 2017) • Some years caribou are fat, other years not. Freezing rain lowers their condition and people don't hunt as much. (ACCWM 2014) 			
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Table 3: Human Factors

Human factors	Main themes by region and / or by herd			
	Inuvialuit (TP, CB, BNW)	Gwich'in (CB, BNW)	Sahtu (BNW, BNE)	Wek'èezhii (Tłı̄chǫ Region) (BNE)
<p>Land use (development)</p> <p>Including human disturbance</p>	<ul style="list-style-type: none"> Inuvik (CB): There are fewer caribou in usual hunting areas than before ITH was built. Decades ago there were thousands of caribou close to Inuvik year-round; this stopped when seismic activity began in the area. Parsons Lake used to be a rutting /wintering area. (ACCWM 2022) Inuvik (CB): There are much fewer caribou now and they stay further east, away from the road. There is less habitat available to them now, less space to graze. (ACCWM 2022) Inuvik (CB): Cabins around Aginalik (on Husky Lakes) are a barrier – caribou used to cross there, now there are so many cabins that caribou avoid it. There are at least five new cabins per year since the road opened, plus tent frames – approximately 100 camps from Tutsi Bay to Sitidgi, right where the caribou migration route was. (ACCWM 2022) Inuvik (CB): Cows don't seem to follow bulls into treeline since ITH was built but stay on the barrens. (ACCWM 2022) Paulatuk (BNW): There are concerns about impacts of research, collaring, and surveys on caribou, as well as 	<ul style="list-style-type: none"> CB: The ITH is changing where caribou go now; since construction, caribou are no longer seen on the west side of the road. (ACCWM 2022) BNW: Little or no disturbance in range in 2020. (ACCWM 2022, 2021) CB & BNW: The oil and gas industry that used to be in the area is why there are fewer caribou now; the harvest is mostly sustainable and not the cause of low population numbers. (ACCWM 2020) CB: One harvester said he doesn't think the highway has affected the caribou. Another said that when oil and gas started, the population declined. A harvester said he doesn't think harvesters are having a big impact on the caribou now, and that the harvest is sustainable. (ACCWM 2020) CB: People are concerned about landscape change and human disturbances. (ACCWM 2019) Inuvik (CB): The highway makes it easier to poach Cape Bathurst caribou. Numbers seems to have gone up, but there are still 	<ul style="list-style-type: none"> Colville: Caribou move away from noise and diesel smells. (HG 2022b) Tulit'a: The Mackenzie Valley Highway will impact waterways and peoples' hunting areas. (HG 2022b) Délı̄ne: With DGG efforts to get people back out on the land, more structures are being built and people are moving into some areas where they haven't been for 30 yrs; those things might eventually impact the migration of caribou. They have seen caribou migration patterns change in response to hunting in a certain area for generations. (ACCWM 2022; HG 2022b) Colville: There will be more problems with erosion, river crossings, creeks will straighten out more; economic reasons also impact all that, how much people are harvesting. (HG 2022b) Look at the road to Contwoyto Lake and the diamond mines to see the impact of roads on caribou – reduced vegetation 	<ul style="list-style-type: none"> Disrespect, mistreatment, and mismanagement of caribou from mining, harassment, and more has caused caribou to go away; resource extraction, poor management practices, human activity, and climate change are all affecting caribou (TRTI 2022; SARC 2017) Caribou are being stressed by helicopters, ski-doo's, trucks, mine explosions, and mining chemicals. (TRTI 2022) Mines have resulted in many important changes to caribou and the land. Since the first mine was started in 1996, Elders have seen changes in caribou migration, more abandoned mine sites, and a lot of noise, dust, and contamination. Dust and chemical contamination caused by mines could be making caribou unhealthy, causing calves to die, or causing pregnancies to fail. Mines and chemicals can lead to sick or injured caribou. Predation, sickness, and stress caused by harassment and disturbance along mine roads are possible causes for lower calf survival or failed pregnancy in cows. Blasting and explosions can directly

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	<p>some concerns about cruise ship landings, quad traffic, and more hunters. (ACCWM 2022)</p> <ul style="list-style-type: none"> • There is more permafrost exposure, especially with human disturbance, like along the ITH. Initial construction had a big impact on caribou because of activity. Animals move away during construction, avoiding noise from roadworks and blasting. Noise is the main disturbance factor; roads and seismic lines themselves are not an issue. They get used to the road after. (HG 2021a) • There have been some caribou behaviour changes around the ITH. When highway was/is not being used (i.e., idled sections during construction or lack of vehicle activity once opened), caribou were using the area and using highway surface to lie on and avoid bugs, but disappeared from ITH corridor when highway opened (i.e., due to traffic noise). (HG 2021a) • Hunting has changed with ITH. There is better access to Husky Lakes, more access to TP herd; this may affect movement/migration. (HG 2021a) • Seismic lines are not an issue north of Inuvik, above treeline. When snow is deep, caribou follow skidoo trails because they have less snow and are easier to walk on. New gas well 	<p>concerns about poaching along the ITH. (ACCWM 2019)</p> <ul style="list-style-type: none"> • Inuvik (BNW): There are concerns about the ITH and traffic – caribou may leave the area and year-round access has increased. This could increase poaching. (ACCWM 2019) • Cumulative effects impacting caribou include many factors such as industry (seismic, drilling, mining), roads, global warming and the presence of people. (Benson 2015) • BNW: The Mackenzie Highway and the fibre link will travel through the Bluenose caribou’s historic winter range and close to their current winter range. The highway will provide easy access to hunters. Both active development (such as seismic activity or road-building) and more permanent or long-term changes to the landscape will impact caribou. (Benson 2015) • Some feel that caribou are very sensitive to active industrial development and landscape changes due to development, others say they can get used to it. (Benson 2015) • Caribou stay away from disturbed areas, including areas burned by forest fires or cut lines, but will use 	<p>along the road corridor, caribou avoiding the noise. (HG 2021b)</p> <ul style="list-style-type: none"> • BNW: Little or no disturbance in range in 2020. (ACCWM 2021) • Délı̄ne: No new information about development impacting habitat; there is concern about less opportunity to monitor BNE caribou because they are far away. (ACCWM 2021,2020) • Colville (BNW): The winter road has had an impact since it was first laid by increasing access for visiting harvesters. (ACCWM 2020) • Declines in are in part due to loss of habitat, and resource extraction is one of the most immediate and imminent anthropogenic factors affecting barren-ground caribou. Current and proposed access roads—both winter and all-season—are a serious concern. (SARC 2017) • Key habitat like migration corridors, calving grounds, and water crossings can be protected in land use plans (SRRB 2016) • Impacts of industrial activities and developments on caribou need to be considered and monitored. Impacts are direct (e.g., noise, pollution) and indirect (e.g., impacts to caribou habitat). 	<p>injure caribou or cause loose gravel with rocks that can cause caribou to hurt their legs, and at both active and abandoned mines chemicals and dust on the land can damage hooves and cause limping. (TRTI 2022)</p> <ul style="list-style-type: none"> • Currently, there is limited industrial development on BNE range. TG and GNWT are participating in environmental assessments and land use planning processes in NWT and Nunavut that may affect this herd and its range. (TG & ENR 2022) • Wolves are using the road more than other areas. (ACCWM 2021) • No new disturbance with respect to exploration or development. (ACCWM 2020 & 2021) • Many non-Dene and younger Dene do not know how to behave around caribou. This is a problem as caribou avoid human activities that demonstrate lack of knowledge and respect such as: wide winter roads, being chased by loud and fast snow machines and planes, the process of putting on the collar and the collar itself, people who do not know the Dene rules of respectful behaviour toward caribou. (TRTI 2022; WRRB 2016) • Problems are associated with such things as: pollution, development that blocks caribou migration routes,
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	<p>outside of Tuktoyaktuk may affect caribou behavior with increased traffic to Inuvik. (HG 2021a)</p> <ul style="list-style-type: none"> • Land use changes and impacts resulting from changes to access: <ul style="list-style-type: none"> ○ Increased access to Husky Lakes and CB on winter range. ○ More boating access to lakes (trailers on the ITH). ○ Dusty vegetation and berries on each side (300 m) of the ITH. Dust covers caribou food and causes snow to melt faster resulting in an extra month of sun exposure along roads. ○ Increased trucking (7 tankers/ day during production) associated with TUK M-18 natural gas well and Inuvialuit Energy Security Project. ○ Construction of ITH resulted in more permafrost exposure and slumping. Run-off patterns have been influenced. (HG 2021a; ACCWM 2020) • CB: There was less disturbance to caribou because there were fewer flights due to COVID; fighter jets really loud (military training). DND helicopters coming and going from Dewline sites during breakup. Also ENR caribou surveys and others; 6 months of the year flights are disturbing caribou. (ACCWM 2021) 	<p>seismic trails or linear disturbances to travel. (Benson 2015)</p> <ul style="list-style-type: none"> • BNW: The Mackenzie Valley Highway will provide a lot more access to Bluenose winter range for both hunters and developers and could have a significant impact on the herd. (Benson 2015) • Once there are roads there is more industrial activity. (ACCWM 2014) • Not all types of development negatively impact caribou. Impacts of industrial activities and developments on caribou need to be considered and monitored. (ACCWM 2014) • Habitat protection needs to be part of management planning. (ACCWM 2014) 	<p>Habitat protection needs to be part of management planning. (ACCWM 2014)</p> <ul style="list-style-type: none"> • Air and land pollution (like sewage or diesel generators) are a problem for the animals and they stay away. Caribou stay away from noise, such as helicopters and drilling activities. (ACCWM 2014) • Industry can negatively impact caribou habitat; limiting industry needs to be part of management planning. (ACCWM 2014) • Roads also increased access in some areas. With more exploration there will be even more access. (ACCWM 2014) 	<p>loss of habitat – summer, fall, winter, water-crossings and narrows and a lack of understanding on how to treat caribou. Industrial developments are taking much needed space from caribou, and these spaces should be ‘left alone’. More areas set aside for caribou protection should be established such as Edajjla (Caribou Point). (WRRB 2016)</p> <ul style="list-style-type: none"> • Industrial development creates ‘a wall’ against caribou migration to flow particular ways. (WRRB 2016) • Airports, highways and winter roads are also barriers and much bigger than the cat-trails that once ran through the boreal forest. (WRRB 2016) • Caribou water crossings have been destroyed by industry. An important water crossing at Hottah Lake, where the Bluenose and Bathurst herds merge, has been disturbed and the site has yet to be cleaned up. (WRRB 2016) • Areas around industrial development cause loss of habitat – they are poor foraging areas for caribou due to dust deposition and noise. Caribou are tired and stressed due to lack of food and need to travel additional distances. (WRRB 2016)
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	<ul style="list-style-type: none"> • Tuktoyaktuk (CB & BNW): Caribou get skittish when they are hunted and chased with fast skidoos. Need to increase enforcement; an ENR officer should be based in Tuktoyaktuk all year for regular patrols. Should increase enforcement in no-harvest areas and when tags are finished. (ACCWM 2020) • Inuvik (CB & BNW): Aircraft are not a concern as they fly really high. More caribou spotted from road this year than previous years; quite a few around Jimmy Lake and Husky Lakes. Members were not concerned around ITH – caribou around road are very tame. (ACCWM 2020) • Paulatuk (BNW): Industry are not following community guidelines and are flying low. There are tourists and visitors in the Park without community knowledge while caribou are there. Research activities have cumulative effects on species and on communities. (ACCWM 2020) • CB: Caribou don't seem bothered by traffic on ITH, but increases in human disturbance, especially from aircraft, were observed in summer. (ACCWM 2019) • Tuktoyaktuk (CB & BNW): There are lots of helicopters and planes flying around at end of Jun./early Jul. up peninsula past Campbell Island; 			<ul style="list-style-type: none"> • There is a big impact on caribou because of mineral exploration and mining. Mining activities negatively impact caribou through noise, traffic, and pollution. (ACCWM 2014) • Too many mines at once block caribou migration. (ACCWM 2014) • Roads increase access to caribou and increase harvesting. (ACCWM 2014) • Elders always told us that the caribou migration route is in the heart of where the mines are located now. Impact on caribou migration has to occur because they run into the mines. (ACCWM 2014) • The winter road makes it easier for those from other regions to harvest here; they have killed a lot of caribou and brought them to communities outside our region. (ACCWM 2014) • Industrial activity can change migration patterns. (ACCWM 2014)
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	<p>caribou are more startled by noise (i.e., ATVs) than they used to be. (ACCWM 2019)</p> <ul style="list-style-type: none"> • Inuvik (CB): There is concern about ITH now it is open and there is a lot of traffic – caribou will leave the area. Caribou seen near the highway in spring 2018 didn't seem bothered. (ACCWM 2019) • Paulatuk (BNW): Human disturbance from mining activities may be impacting caribou. Generation Mining flew helicopters all summer and the noise could be an added disturbance on an already stressed population. A community monitor said most flights were low level. Majority of caribou weren't congregating when they flew; ENR was also surveying at that time. (ACCWM 2019) • There are concerns about many types of industrial development and human activity that impact caribou (e.g., mining, seismic, helicopters, recreational traffic, low level flying). Impacts are direct (e.g., noise, pollution) and indirect (e.g., impacts to caribou habitat). Caribou change their movements and distribution in response to industrial activity (e.g., after seismic work caribou don't return to that area for several years.) Increasing development will continue to negatively impact caribou, and may 			
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	<p>need to be restricted to protect caribou and habitat; limiting industry needs to be part of management planning – not just limiting hunters. Development also increases hunter access to caribou. (ACCWM 2014)</p>			
<p>Harvest (and harvest practices) (Including changes to access, changes to harvest pressure, & impacts of restrictions)</p>	<ul style="list-style-type: none"> • Inuvik (CB): There is less harvesting of CB caribou due to accessibility of Porcupine herd. IHTC hasn't filled quota for years. (ACCWM 2022) • Paulatuk (BNW): No one is harvesting in spring anymore. Fall harvest information is lacking but community harvest was small. There are more hunters and more traffic now. (ACCWM 2022) • Inuvik (CB): There are concerns about harvest pressure at crossing points over Husky Lakes – there is too much traffic there, not letting caribou cross – the caribou are stopped and turned around at their main migration points because there are too many people and boats. (ACCWM 2022) • Tuktoyaktuk (CB & TP): Only reporting is with tags because harvest study is paused. Good sample returns in tag zone. Need enforcement for tag attachment. Much more caribou are being harvested than being reported because of poaching and selling. Fewer caribou were harvested on Tuk Pen fall 2021. (ACCWM 2022, 2021) 	<ul style="list-style-type: none"> • CB: Harvest is low. (ACCWM 2022) • BNW: Harvest is low. (ACCWM 2022) • BNW: 6 caribou (tags) were harvested out of the 34 tags available. No BNW caribou were harvested amongst the 5 hunters interviewed. One harvester went around Sitidgi Lake late winter; he saw several old tracks, some old skidoo tracks, but no indication caribou had been harvested there). Most people are harvesting Porcupine caribou now. (ACCWM 2021) • CB & BNW: Main time of harvest was late winter / early spring. A few harvesters went around Husky and Sitidgi Lakes for BNW. They didn't see any caribou and saw very few tracks. Only one harvester interviewed was successful for BNW. (ACCWM 2020) • Aklavik (BNW): The trip to get BNW was too expensive for only 5 tags. The uncertainty of the caribou's location and where they could be harvested were also reasons for 	<ul style="list-style-type: none"> • Colville (BNW): Because caribou are further away from the community, not many people are hunting them. Less than 130 were harvested in 2020 and less than 300 in 2019. (ACCWM 2021,2020) • Changes in hunting equipment (snow machines, guns) and information (caribou collar maps, harvest data) have changed hunting practice and success over time. (HG 2022a; SARC 2017) • The cost of harvesting has increased (price of gas, cost of snow machines) affecting overall harvest levels. (HG 2022b; SARC 2017) • Fewer people have been harvesting caribou recently. (HG 2022a; SARC 2017) • With Covid-19 we are seeing fewer people traveling and harvesting. Our community members are staying closer to home. We are seeing fewer tourists as well. (HG 2021b) • Reduced trapping and reasons to go out on the land has made 	<ul style="list-style-type: none"> • Trophy hunters have searched for and taken a lot of the big bulls. (TRTI 2022) • Awareness of unsafe, illegal and disrespectful hunting practices and wastage on the mine winter roads was raised after the 2020/21 winter harvest season. (TG & ENR 2022) • Relatively low harvest of BNE in SSA, Wek'èezhii and Kugluktuk (NU) last 3 winters has likely had a limited effect on population trend in recent years. Total reported harvest: 204 caribou (2018/19), 164 caribou (2019/20), and 246 caribou (2020/21). On average, 205 caribou were taken from BNE herd (estimated at 19,300 in 2018), for a harvest rate of 1.1% - with a substantial proportion of those being bulls. In the NWT, access to the herd has in recent winters been limited, and in the North Slave region, most caribou harvest in the winter has been from the Beverly herd. (TG & ENR 2022) • Limitations on hunting have negative impacts on the continuity of Tłjchq

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	<ul style="list-style-type: none"> • Tags issued as part of a TAH for BNW are now being used in an area with CB caribou and could be impacting the CB herd (ACCWM 2021, 2020). The TP herd has also started coming into expanded area of I/BC/06 in winter where tags can be used. It is difficult to tell which herd harvested animals in this area are from. (ACCWM 2021) • BNW: Only hunting bulls now; 18 bulls and 2 cows were harvested during a community hunt. Current management actions seem to be working and are supported by community; there are lots more caribou around. (ACCWM 2021) • CB: Due to low numbers caribou harvest is paused, but there are more caribou being harvested than reported; some people are poaching to sell meat. There has also been some wastage. Need ENR presence. Only dealing with 3-4 poachers in each community, but need to educate new hunters or next generation there will be more poachers. (ACCWM 2021) • Decline in trapping has led to a change in caribou travel; caribou used snow machine trails set by trappers. (HG 2021a) • Access to Husky Lakes is easier. People get across the harbour and use ATVs to hunt TP caribou earlier. 	<p>not having used tags. (ACCWM 2020)</p> <ul style="list-style-type: none"> • BNW: Only one harvester interviewed was successful in harvesting a BNW caribou. (ACCWM 2020) • CB: People are concerned about poaching along the highway. (ACCWM 2019) • BNW: Harvesters used 12/22 tags; all communities asked for tags as Porcupine caribou moved west. People want more tags, want to see TAH increased. (ACCWM 2019) • BNW and CB herds were historically used by people from Tsiigehtchic and Inuvik; modern use has been restricted by access restraints – mostly due to current migration routes and the tag system. (Benson 2015) • BNW: have become more spooky and wild in recent years due to being chased by skidoos. (Benson 2015) • BNW: can be threatened by a high number being harvested and by the style or method of hunting. (Benson 2015) • Bulls-only harvest rules may be problematic as it is the bulls that break trail for the herd and prime bulls are needed for breeding. (Benson 2015) 	<p>hunting a more deliberate activity. Before harvesting was often done while traveling for different reasons. So the costs to hunt are higher. (HG 2021b)</p> <ul style="list-style-type: none"> • Délı̄nę: no harvest of BNE in 2020 and low harvest last several years; community didn't use TAH of 50 in 2019. People can't provide much info on monitoring criteria as they are not seeing caribou. (ACCWM 2021,2020) • Apr. 2019 BNE harvest: 8 bulls, 12 cows, & 5 calves (total = 25). As of Nov. 2019, community agreed to ceremonial harvest of 30, with max. cow harvest of 6 for the next 3 years, and 50 Neregha ɤekwę. RRC has curtailed financial support for community members to harvest ɤekwę. The community has done a lot of work to rethink their ceremonial harvest. Earlier, they had planned to limit the harvest to 150. (ACCWM 2020) • Délı̄nę: Náts'ezé restrictions can lead to an erosion of people's way of life and relationships with ɤekwę. The ɤekwę migration is being disrupted by increased presence of ɤehdzo got'ı̄nę in the Délı̄nę District and in other regions. Náts'ezé practices have changed with airplanes and 	<p>culture, language and way of life. (TG & ENR 2022)</p> <ul style="list-style-type: none"> • BNE herd only found near community of Wekweèti so other Tłı̄chq communities gave their tags to Wekweèti to be used there. 76 of 176 tags were used. Most caribou were harvested on the winter road near Wekweeti. Wekweeti held a community hunt and sent meat to each Tłı̄chq community; meat was distributed to elders, single mothers and those who can't get wild meat on their own. Community hunt took place 20km south of Wekweèti in May and was all bulls. There was no other harvest recorded during the year. (ACCWM 2021) • Preliminary data indicate 40 BNE caribou were harvested in 2019 – which is well below the 295 TAH; majority of harvest was undertaken by residents of Wekweèti. (ACCWM 2020) • The herd did not enter the region and local hunters were not able to harvest any BNE caribou. (ACCWM 2019) • People decided to not hunt to help caribou recover, now business / industry / development need to do their part. (WRRB 2016)
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	<p>Harvesters influence TP caribou, which are disturbed really easily. TP caribou need to travel southeast and cross Husky Lakes and may be disturbed by industrial activity and harvesters. People are also hunting on day trips now (faster snow machines) as compared to camping (30 years ago). (HG 2021a)</p> <ul style="list-style-type: none"> • Cost of living and income in the community affect how people harvest; demand for caribou increases as costs increase and/or income decreases. (HG 2021a) • Tuktoyaktuk (TP, CB, & BNW): There is good information where tags are regulated in hunting zones. Successful harvest this year on TP herd. There are less harvesters on western coast (McKinley Bay area) because of highway access to Husky Lakes. Fewer people going out due to weather and other reasons. Harvests leading to rut season are mostly bulls. After freeze-up/rut, harvesting is young bulls and dry cows. There is caribou meat for sale. (ACCWM 2020) • Inuvik (CB & BNW): Caribou are very tame. It was hard to travel because of icing and thick trees so there was less hunting pressure this year. (ACCWM 2020) • Inuvik (CB): Not all tags were used in 2019; successful community harvest 	<ul style="list-style-type: none"> • BNW: The Mackenzie Valley Highway provide a lot more access to Bluenose winter range and could have a significant impact on the herd. There will need to be harvest regulations around the new highway. (Benson 2015) • Roads increased access, harvest and poaching; need to consider increased access with all-weather roads. (ACCWM 2014) • People harvested more in the past when they had dogs. (ACCWM 2014) • Harvesting did not traditionally target just bulls but a mix of bulls and cows depending on season, location and condition of the caribou. (ACCWM 2014) • A bulls-only harvest interferes with caribou genetics and behavior/ movements. (ACCWM 2014) • People in Inuvik and Aklavik had a hard time filling quota due to closed zones. People were hunting less in some areas due to regulations and / or zones. (ACCWM 2014) • Closures, regulations, and hunting zones changed distance to travel so the cost of harvesting went up (people had to go further and gas was more expensive). As a result, people were not harvesting as 	<p>skidoos, so there's more náts'ezé of ts'ída (female caribou) in spring. In other regions, ɤekwé náts'ezé is being restricted. A culture shift is needed to address changes in ɤekwé populations and maintain good relationships with our neighbours. Náts'ezé monitoring is needed to keep track of our relationship with ɤekwé. (DEWG 2021)</p> <ul style="list-style-type: none"> • Délıne: 2019 & 2020: no reported harvest of ɤekwé (barren-ground caribou); community working on harvesting other species. (SRRB 2021) • Fort Good Hope: People haven't seen caribou in their area for years so have adapted their harvest to other species. (SRRB 2020; ACCWM 2019) • BNW: People are not going out for caribou as much now. The community is trying to balance supporting hunters to be on the land and to hunt alternative species like moose and muskox, both of which seem to be more prevalent now. The community as whole has reduced the hunt and are trying to lower the cost of food so that people don't need to hunt as much. We believe that the caribou won't come around if we 	<ul style="list-style-type: none"> • The caribou population has continued to go down even with harvest restrictions. (WRRB 2016) • Roads increase access to caribou and increase harvesting. (ACCWM 2014) • The winter road makes it easier for those from other regions to harvest here; they have killed a lot of caribou and brought them to communities outside our region. (ACCWM 2014) • We used to harvest more in the past; more people are working and using store-bought food now. The effect on caribou is positive, but there are other impacts such as forest fires affecting them. (ACCWM 2014) • When caribou are not fat or have been in contaminated areas people don't want to eat them. (ACCWM 2014) • Need to concentrate on monitoring hunters, not caribou. There are a lot of young people and different hunters now. (ACCWM 2014)
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	<p>but people are too busy to hunt. Caribou are not in areas where people usually hunt; they were at Miner River instead of Old [Man] Lake area. Harvesters have to travel further, and most people are not comfortable travelling into areas where caribou are due to quick changes in weather. All harvests are being reported. (ACCWM 2020)</p> <ul style="list-style-type: none"> • Paulatuk (BNW): People saw and harvested a lot of bulls – there are many bulls, so not harvesting many cows. Successful community harvest of 21 caribou, of which 19 were bulls. (ACCWM 2020) • CB: People are concerned about poaching along the highway, meat sales and wastage. (ACCWM 2019) • Tuktoyaktuk (CB & BNW): It is harder to harvest by ATV because caribou are more startled by noise now. Some people are hunting without tags or in the closed zone; some are wasting meat; some are still selling meat. (ACCWM 2019) • Inuvik (CB): All tags were filled in 2018 and 25 (mostly bulls) were taken in a community harvest. (ACCWM 2019) • Paulatuk (BNW): There was a lower harvest this summer due to weather – people were not able to go out as much. People try not to harvest cows at any time but wait for bulls in 	<p>much or switched to other herds/types of caribou or to moose. (ACCWM 2014)</p> <ul style="list-style-type: none"> • Some people changed their harvesting to conserve caribou, but there are more harvesters now. (ACCWM 2014) • Traditional knowledge (TK) and practices have played an important role in sustaining caribou. More TK needs to be documented and its use promoted. Harvest regulations should accommodate traditional practices. Traditionally, people would go in certain seasons and they would let the leaders pass; if we mess up that timeline it changes where the caribou go. (ACCWM 2014) • Monitoring hunters and hunting levels are most important when caribou numbers are low. Need to better understand impacts of harvesting on herds. (ACCWM 2014) 	<p>don't hunt them and don't follow the traditions of respect towards the caribou. When there are lots of caribou it is okay for people to come from other areas, but when their numbers are low, only local harvesters should have access. (ACCWM 2019)</p> <ul style="list-style-type: none"> • BNE caribou didn't come near any Sahtu communities; no BNE caribou were harvested in Déljne in 2018. (ACCWM 2019) • Development is still going ahead even when Sahtú organizations and co-management boards have made recommendations to not. (WRRB 2016) • A lot more people are harvesting now. Roads increased access in some areas. With more exploration there will be even more access. (ACCWM 2014) • Skidoos and ATVs made it easier to hunt. Roads also increased access in some areas. In some areas there was no change in harvesting. In other areas, harvesting costs increased as people had to go further and gas was more expensive, so they harvested less. (ACCWM 2014) • Traditionally, people just took what they needed and hunted when caribou were close to 	
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	<p>spring. Many more bulls are harvested than cows. People don't harvest in Oct./Nov. because of rut / stink. In past, cows were harvested but not anymore; there is a decrease in local harvesting because of conservation efforts. (ACCWM 2019)</p> <ul style="list-style-type: none"> • People harvested more in the past when they had dogs. Skidoos and ATVs made it easier to hunt. Roads also increased access. Hunting pressure used to be seasonal but is year-round now and has increased in some areas – e.g., there is a lot of pressure on Tuk Pen. (ACCWM 2014) • Targeting only prime bulls will impact breeding; they are needed during the rut. (ACCWM 2014) • Hunting zones changed distance to travel so the cost of harvesting went up (people had to go further and gas was more expensive). As a result, people were not harvesting as much. (ACCWM 2014) 		<p>communities. Some people think harvesting has gone down because of stores; others say it has gone up because there are more harvesters now. (ACCWM 2014)</p> <ul style="list-style-type: none"> • Harvesting did not traditionally target only bulls but a mix of bulls and cows depending on season, location, and caribou condition. It was important to keep a balance of bulls and cows and to harvest them when fat so there is more meat. (ACCWM 2014) 	
<p>Governing systems & knowledge</p> <p>(Including management plans & stewardship activities; traditional knowledge, laws & protocols; conflicts with scientific</p>	<ul style="list-style-type: none"> • COVID-19 impacted air travel and changed how much time harvesters are on the land. The pandemic also impacted the ability of member boards to conduct in-person consultation and interviews. (ACCWM 2022) • Inuvik (CB): Harvest study should document other observations and not just harvest counts. (ACCWM 2022) 	<ul style="list-style-type: none"> • COVID-19 restrictions have limited the ability to document community information. (ACCWM 2021) • People should let BNW repopulate as the Porcupine caribou are readily available on the highway now. (ACCWM 2021) • CB & BNW: One harvester said he was fine with the increase in tag numbers because the population 	<ul style="list-style-type: none"> • Colville (BNW): Caribou are happy when people are out on the land and this is an important part of management – you can't take care of caribou without being on the land. Support is needed to help people get out. (ACCWM 2022) • Délı̄nę: 'Human factors' are more than just hunting regulation. (HG 2022a; SRRB 2021, 2020) 	<ul style="list-style-type: none"> • A lack of respect for caribou and for the land, and a loss of traditional ways and language has made caribou go away. Tłı̄chų are spending less time on the land, taking shorter trips with many snow machines and bigger rifles; there is less respect and understanding, and as a result the caribou are stressed. (TRTI 2022)

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<p>knowledge systems; solutions)</p>	<ul style="list-style-type: none"> • Inuvik (CB): Suggestion to do community hunts in fall to target bulls. More education is needed. (ACCWM 2022) • Paulatuk (BNW): Hunters are reporting some caribou with healthy body condition and fat levels, some ‘obese’ caribou, and some skinny ones. (ACCWM 2022) • Tuktoyaktuk (CB & TP): Education and communication about caribou are important. Traditional values and good practices need to be taught. More education and better enforcement is needed to deal with poachers. (ACCWM 2021, 2020; HG 2021a) • The way people hunt today is very different than in the past - there are different hunting techniques now with snow machines. We are seeing lots of chasing with snow machines, and hunters are not letting caribou ‘settle in’. Before hunters would stalk caribou, not chase them. We see caribou run away when approached within 500m. We need to teach the younger generation how to hunt properly. (HG 2021a) • BNW: There is some conflict between what ENR is requesting and traditional practices in Paulatuk. A lot of things in traditional lifestyle have 	<p>had increased. Another mentioned that he respects the GRRB and the tag system. Nowadays, people only hunt caribou, but it should be seasonal. Harvest should change depending on the season, e.g., geese in the spring, rabbit in winter. Also, now there are fewer hunters because there are fewer caribou. (ACCWM 2020)</p> <ul style="list-style-type: none"> • Gwich’in hunters have always valued caribou by hunting them in a respectful way – e.g., people only take what they need, use every part of the animal and don’t shoot the leaders. There should be a greater reliance on Traditional Knowledge and information from Gwich’in hunters. (Benson 2015) • BNW: Since hunting regulations prevent hunters from harvesting Bluenose caribou except in a location very far from Inuvik, it has become more difficult to monitor them. (Benson 2015) • There needs to be collaboration across the NWT to protect the herds. Education is also important; people need to understand traditional ways of harvesting. (Benson 2015) • Scientific surveys miss some caribou and are stressful scientific surveys were for caribou; research 	<ul style="list-style-type: none"> • Need community-based decisions from people that care about caribou and pass knowledge and relationships of caribou and land to next generation through culture and language. Include key Sahtú Dene concepts, such as ʔehtsáó ʔeráyha (Grandfather Ayha) prophet’s teaching that if you don’t take care of caribou, they won’t be here; conservation that comes down to respectful behavior towards caribou, land and environment (HG 2022a). If people treat caribou disrespectfully they will make themselves unavailable to people. (SRRB 2020) • Dene knowledge perspective needs to be reflected in modelling; framework should accommodate Indigenous ways of thinking/ cosmology. Use both knowledge systems to support community-based decision-making, framing in ecological context from an IK perspective (respecting caribou, and Dene law – looking after caribou). (HG 2022a) • Mutual respect in caribou stewardship involves recognizing caribou's ability to look after itself rather than intervening directly – 	<ul style="list-style-type: none"> • Tłı̨chǫ Government (TG) is expanding programs focused on cultural practices on the land, including: sustaining cabins; traditional canoe trails; and winter skidoo trails to harvesting areas, along with other programs. (TG & ENR 2022) • TG has been developing programs that promote alternative harvest such as the Tłı̨chǫ Dǫtaàts’eedi program where fish is provided to community members and fuel subsidies assist people to go moose hunting. These programs have provided resources for Tłı̨chǫ citizens to provide for their families in hopes of reducing caribou harvest. TG also plans to continue and expand its delivery of programs focused on cultural practices on-the-land, emphasizing continued use and maintenance of traditional sites and trails. The long-term aim is continuation of projects that teach TK of the land and caribou by bringing elders, youth and community members together. Such activities are important for the practice of the hunting culture, and maintaining cultural identity and continuity as a hunting people, ultimately, to condition people with skills and knowledge of the land, for
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	<p>changed because of the tag system. (ACCWM 2021)</p> <ul style="list-style-type: none"> • HTCs provide harvester assistance to help deal with harvester costs (e.g., Community Harvesters Assistance Program). HTCs also have community hunts to bring caribou back to the community. (HG 2021a) • We have our own approach to limiting our harvest; the focus needs to be on managing predators. (HG 2021a) • CB: People talk about the need to hunt wolves all the time but no one is going out because the cost isn't worth it. (ACCWM 2020) • Paulatuk (BNW): Since tag system and harvest sex-ratio implemented, not enough tags to do late fall community harvest (used to harvest mainly cows in early November for winter stock-up). (ACCWM 2020) • Despite the numbers, we have never overharvested. We are natural conservationists; we only harvest bulls 3 months out of the year; the community harvest will happen again this year for Elders and single parents and we will target bulls; if a harvester can't take a bull, they will take a dry cow. (ACCWM 2019) • Harvest restrictions and scarcity impacted values, limited sharing, and made poaching a concern. When 	<p>methods should be adapted to minimize stress on caribou at sensitive times. Don't bother caribou so much. (ACCWM 2014)</p> <ul style="list-style-type: none"> • Locals should be trained and employed to do field surveys, TK interviews, harvest surveys and document and share information. (ACCWM 2014) • Land claims recognize Aboriginal organizations' responsibility for some of the 'tough decisions'; everyone needs to be involved in management. (ACCWM 2014) • Management should apply the precautionary principle; stricter harvesting regulations may be necessary. (ACCWM 2014) • Communities will need to define and act on commercial harvesting. (ACCWM 2014) • Peoples' ability to meet their food needs will have to be considered in management. (ACCWM 2014) • Need to think about the future of the caribou and manage actions accordingly. (ACCWM 2014) • Management plans need to be adaptive, to change as the herd size changes. (ACCWM 2014) • Good planning for caribou will be reliant on respectful communication and cooperation across regions. (ACCWM 2014) 	<p>western approaches fail to recognize this. (HG 2022b; DEWG 2021; SRRB 2016)</p> <ul style="list-style-type: none"> • Current approaches to conservation (e.g., collaring) are disrespectful to caribou, invasive and harmful. (ACCWM 2022; HG 2022b; SARC 2017; SRRB 2016) • Colville: Maintaining the relationship with caribou is the most important thing. (ACCWM 2022; HG 2022b) • Colville (BNW): BAFN encourages trappers to go to areas with more wolves (ACCWM 2021), has a management plan based on traditional laws, have stopped community harvest at Horton Lake, and are promoting alternative harvesting. (ACCWM 2020) • CCPs and self-government have positive impacts for caribou by (re)-enhancing relationships between people and caribou. (HG 2022b; SRRB 2016) • Délı̄ne: Communities will have more control over decision-making, there will be more aboriginal context and way of life included in governance. More funding is being used to get people out on the land now, 	<p>when caribou return. (TG & ENR 2022)</p> <ul style="list-style-type: none"> • TG is working with elders and harvesters to document key caribou habitat and prioritize them for protection, such as ekwò no'oke (water crossings) and tataa (land crossings, as well as the implementation of mobile protection measures. (TG & ENR 2022) • A collaborative project is underway to assess cumulative effects of development and climate factors on BNE caribou and to provide a decision-support tool for managers. TG worked with elders and hunters to identify key unburned areas of winter habitat and provided locations to ENR to be considered as values-at-risk in fire management decisions. TG and GNWT will continue to support TK and scientific research (including the Ekwò Nàxoèhdee K'è caribou monitoring program) focused on climate change and other factors affecting caribou health, abundance and condition of the range. (TG & ENR 2022) • Ongoing communication and engagement with communities and harvesters about the status of barren-ground caribou herds and management actions, as well as
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	<p>sharing declined more emphasis was placed on dollar value of meat. People that couldn't get enough caribou had to take part in the wage economy to be able to support their families. (ACCWM 2014)</p> <ul style="list-style-type: none"> • Some people harvest a lot because they share the meat. (ACCWM 2014) • Some people are unhappy with and reject the tag system; they would rather rely on traditional harvesting practices. The tag system influences how people share, whether they can provide for elders and others in the community, and whether they pass on TK. Hunting restrictions make it harder to pass on traditions about respectful harvesting and sharing. (ACCWM 2014) • Harvest restrictions, as well as meat/quota distributions, need to be fair within communities, between communities, and between regions; hardships caused by hunting restrictions have impacted people differently. (ACCWM 2014) • Accurate harvest reporting is needed for management planning and harvest surveys need to use local people. When caribou are not available, people usually switch to other foods, but those need to be monitored too. (ACCWM 2014) 	<ul style="list-style-type: none"> • Forms of compensation, organized hunts or community meat purchases could help people meet their needs and take pressure off caribou. (ACCWM 2014) • When caribou are not available, people usually switch to other foods, but those need to be monitored too. (ACCWM 2014) • Tag/quota allocations and closures in some areas impact other nearby areas and user groups differently; quotas need to be fair and consider regional impacts. (ACCWM 2014) • Harvest restrictions, as well as meat/quota distributions, need to be fair within communities, between communities, and between regions; hardships caused by hunting restrictions have impacted people differently. (ACCWM 2014) • Need to address commercial sales/hunts; some feel sport hunting negatively impacts herds. (ACCWM 2014) • Need to make sure enforcement of rules takes place, especially when caribou numbers are low. More resources are required for effective enforcement; there are concerns about how to regulate or enforce rules with industry. (ACCWM 2014) 	<p>harvesting will increase. (HG 2022b)</p> <ul style="list-style-type: none"> • Déljñę: Alternative harvests and robust Dene ts'įłį on the land are good for caribou. (HG 2022b; DEWG 2021; SRRB 2016) • CCPs are a viable conservation approach that can be more effective, rights-compliant and community-led, and should be considered in place of TAH limits, which are only to be used when required and to the extent necessary (SRRB 2021, 2016). Development of CCPs based in traditional values, practices, and self-regulation can be beneficial to caribou. (ACCWM 2019) • Déljñę: The TAH system has led to competition for ɤekwę quota between regions and families. There is a lack of trust and confidence to work with decision-makers, and a lack of consensus among community leaders. Sahtú communities are not working together. (DEWG 2021) • Déljñę Got'jñę Government (DGG) is supporting alternative harvests of species like fish, moose, muskox and boreal caribou, and trade with other areas. CCP is being implemented, building trust that will lead to better data in the 	<p>education/public awareness initiatives to promote traditional ways of harvesting, improve hunter practices and reduce wounding and wastage. E.g.,</p> <ul style="list-style-type: none"> ○ Adapting GNWT's Hunter Education program for new/young hunters for Tłjchq communities to be taught in schools. ○ TG & ENR collaboration in training Tłjchq monitors to teach the Hunter Education program. ○ TG development and implementation of the Ekwò Harvest Monitoring Program. ○ Social media campaign to share information on caribou conservation. ○ Respected Harvesters Gathering to improve education and communication about the Tibbett to Contwoyto winter road. (TG & ENR 2022) • TG and GNWT support continuing SK and TK research into factors contributing to caribou abundance and health. In 2020, TG expanded the Ekwò Nàxòèhdee K'è caribou monitoring program in summer to BNE range at Point Lake, but due to few caribou in 2020 and covid travel
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	<ul style="list-style-type: none"> • Management planning needs to consider how people will meet their needs to be effective. Forms of compensation, organized hunts or community meat purchases could help people meet their needs and take pressure off caribou. (ACCWM 2014) • Need to address sales of caribou meat as it creates a financial incentive to harvest. There needs to be greater monitoring and/or regulation of commercial meat sales; education helps with compliance. (ACCWM 2014) • Traditional knowledge and practices have played an important role in sustaining caribou. Animals have a better chance of surviving if this knowledge is shared. More TK needs to be documented and its use promoted. Harvest regulations should accommodate traditional practices. (ACCWM 2014) • Good conservation education could be more effective than restrictions. Educate children in respectful harvest practices, TK, and safety in school out on the land. (ACCWM 2014) • TK research is an information gap that can negatively impact caribou. (ACCWM 2014) <ul style="list-style-type: none"> ○ Need to document TK on caribou cycles. 	<ul style="list-style-type: none"> • If harvest restrictions mean people aren't on the land as much, then they aren't learning traditional practices and people can't share, but some can't afford store-bought meat. (ACCWM 2014) • Educate youth in respectful harvest practices and safety in school and by taking them out on the land. Education should include TK and harvesting practices for caribou. Adults also need education about respectful harvesting practices (e.g., no waste, proper sighting, let leaders, pass, etc.). (ACCWM 2014) • TK research is an information gap that can negatively impact caribou. (ACCWM 2014) <ul style="list-style-type: none"> ○ Need to document and use TK in management planning. ○ Caribou population declines or cycles need to be better understood. ○ Studies need to look at habitat and changes to migration. ○ Monitoring frequency should be based on population status and should consider traditional and local knowledge. 	<p>future. (ACCWM 2021; DEWG 2021)</p> <ul style="list-style-type: none"> • BNW: CCP for Colville Lake is being finalized. Colville/Fort Good Hope will undertake collaborative non-invasive research to address information gaps. (ACCWM 2021; SRRB 2021) • Harvest regulation for caribou must be subject to CCP measures, based on Sahtú Indigenous governance systems. Colville has primary responsibility for Ɂədə stewardship in Area S/BC/01; Colville shares stewardship with Fort Good Hope in S/BC/02 where there may also be Ɂədə. Déljñę has primary responsibility for Ɂekwé stewardship in S/BC/03. (SRRB 2020) • SRRB approved DGG's Belare Wíle Gots'é Ɂekwé CCP in 2019, promoting a return to traditional systems of respectful relationships with caribou. (SRRB 2020) • SRRB supports TG participation in Sahtú meetings, as information sharing leads to stronger understanding of shared goals / values. (ACCWM 2020) • Ceremonial harvests can be beneficial – help re-ignite and maintain respectful Dene-caribou 	<p>restrictions in 2021, monitoring has not yet begun (TRTI 2021).</p> <ul style="list-style-type: none"> • In 2020, monitors were out at Point Lake in September and saw no caribou, but lots of wolf tracks. (ACCWM 2021) • There was a lot of activity on the winter road this year. TG stationed harvest monitors there; they also collect samples and educate harvesters against wastage and wounding. It is a priority to continue educating hunters to respect caribou and follow traditional laws. So harvest monitors work in the community doing outreach and communications on top of their monitoring activities on the land. Some of this work is done in partnership with ENR in Wekweèti and they hope to expand to other the communities in the future. (ACCWM 2021) • Humans have to start talking about themselves – being responsible for their own behaviour. People can't just talk about caribou; they are not separate from them. The Dene way is a very different way of going about the business of living life on earth – humans accepting they are part of the ecosystem rather than separate from it. It is not appropriate to only talk about 'caribou' rather than 'our
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	<ul style="list-style-type: none"> ○ Traditional and local knowledge and perspectives should inform how surveys are done. ○ Research needs to look at ‘inter-herd’ movements. ○ Research needs to look at cumulative impacts to habitat, including impacts of climate change and human disturbance. ○ Predation rates and impact on herds should be studied. (ACCWM 2014) ● Management plans need to include both scientific and TK. (ACCWM 2014) ● Scientific surveys miss caribou and can be stressful for caribou; research methods should be adapted to minimize stress on caribou at sensitive times (e.g., December-May) or can cause birth defects or death. (ACCWM 2014) ● Locals should be trained and employed to do field surveys, TK interviews, harvest surveys and document and share information. (ACCWM 2014) ● Management needs to be cooperative, and negotiations need to be based on respect and good faith. It is difficult to get cooperation and consensus on caribou management plans. (ACCWM 2014) 	<ul style="list-style-type: none"> ○ Some research stresses caribou; put money into other types. ○ Predation rates and impact on herds should be studied; may need to consider predator control as part of management. ○ Need to research and monitor impacts of developments like all-weather roads. ○ Need to research impacts of management actions such as bull-only harvesting. ○ Research needs to look at changes in habitat, including cumulative impacts of climate change, human disturbance and fire. ○ Need to research the relationships between herds or ‘inter-mingling’. ○ Need to understand impact of harvesting on caribou numbers. (ACCWM 2014) ● Harvest reporting from all users should be mandatory. Harvest surveys need good promotion and education programs to be successful. (ACCWM 2014) 	<p>relations – and are an aspect of Délı̄ne CCP tying harvest to Dene laws, ideals, governance, leadership & behaviour. (DEWG 2021; WRRB 2016)</p> <ul style="list-style-type: none"> ● Colville (BNW): Ask outsiders to get permission to hunt here. (ACCWM 2019) ● It is not about quotas, but about how people use the land and where they hunt that matters. A mixed harvest of young males and some females, mostly in fall, should be encouraged. (SRRB 2016; WRRB 2016) ● Need mechanisms for respectful harvesting and sharing; Dene laws are most effective at managing for caribou. There is a long relationship between caribou and people, based on respect. When young people learn this they don’t shoot too many and don’t sell caribou. Loss of culture and old ways is part of the problem. Educate children and adults in respectful harvest practices and safety (e.g., no waste, proper sighting, let leaders, pass, etc.). Good management needs to use both TK and SK; harvest regulations should accommodate traditional practices. TK research is an information gap that can 	<p>role impacting caribou’. (WRRB 2016)</p> <ul style="list-style-type: none"> ● An increase in awareness and use of traditional laws and harvesting protocols has the potential to increase respectful behaviour to caribou and to reduce wastage and overharvest. Traditional laws and harvesting protocols about respect for caribou will be key positive influences in the present and the future for barren-ground caribou and their habitat. (SARC 2017) ● Tłı̄chq harvesting is very strategic and resourceful. Caribou harvesting was done at water crossings, in the water and with snares in conjunction with caribou fences. Trapping and fishing was part of the hunting. When thinking about self-regulation of harvesting we need to look at the big picture. (WRRB 2016) ● Human-animals relations are being broken down. There are rules associated with how we should treat all animals, not just caribou – even rabbits and bears. Our people are forgetting and we need to teach them again. Our older harvesters and elders know how to treat and respect caribou, but we get visitors, they come and do not know how to behave on our land or towards caribou. (WRRB 2016)
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	<ul style="list-style-type: none"> • Communities should take action and not just wait for action from Minister. (ACCWM 2014) • Good planning for caribou will be reliant on respectful communication and cooperation across regions. (ACCWM 2014) 		<p>negatively impact caribou. More TK needs to be documented and used. (ACCWM 2014)</p> <ul style="list-style-type: none"> • Scientific surveys and research methods can be stressful for caribou and should be adapted to minimize stress. Locals should be trained and employed to do field surveys, TK interviews, harvest surveys, and to document and share information. (ACCWM 2014) • Accurate harvest reporting is needed; surveys need good promotion and education as well as funding for harvest monitoring. Should share information between communities / regions. Stricter harvesting regulations may be necessary; management needs to be cooperative and restrictions need to be followed by each region. Communities need to be involved in management; elders should be making decisions about caribou. Everyone needs to work together, cooperatively. Good planning is reliant on respectful communication, cooperation, and better information-sharing. (ACCWM 2014) • Effective plans need to consider how people will meet their needs. Compensation, organized hunts or 	<ul style="list-style-type: none"> • Collars are necessary for ENR (and other non-Dene) to acquire information but, for the Dene, caribou collars are disrespectful due to human-animals relations. This is a dilemma as most participants consider collars as one of the reasons why caribou are not returning to the people in larger numbers. (WRRB 2016) • Dene need to be providing their own education programs so young people understand the Dene way in addition to the non-Dene way. (WRRB 2016) • Harvest restrictions affect how traditions are passed down and how our youth learn to hunt. (ACCWM 2014) • There is a long relationship between caribou and people, based on respect. (ACCWM 2014) • Traditional knowledge (TK) and practices have played an important role in sustaining caribou. More TK needs to be documented and its use promoted. (ACCWM 2014) • Good management needs to use both TK and SK; ENR and communities need to cooperate. (ACCWM 2014) • Young people need to be shown how to use caribou wisely and be taken out on the land. (ACCWM 2014)
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			<p>community meat purchases could help and take pressure off caribou. Need better distribution of meat from outfitters. Sharing is important and should continue. Tag/quota allocations in some areas impact other areas and user groups differently, need to be fair, consider regional impacts. There needs to be greater monitoring and/or regulation of commercial meat sales. There are concerns about how to regulate harvesters coming from other areas. It is difficult to enforce regulations that differ by herd. There are concerns about outfitter methods, harvest rates and impacts on herd structure (i.e., taking big bulls). (ACCWM 2014)</p>	<ul style="list-style-type: none"> • We have to work together, as the caribou users. (ACCWM 2014) • Harvest traditions were taught on the land. People traditionally only took what they needed and used all parts of the caribou. Not following traditions of respect can affect how caribou behave. (ACCWM 2014) • Scientific counts miss some caribou; need to share knowledge from everyone. Elders should be the keepers of the caribou. Locals should be trained and employed to do field surveys, TK interviews, harvest surveys and document and share information. (ACCWM 2014) • Need to consider outfitted hunts (trophy hunts and killing only bulls causes the caribou to decline); commercial hunts and people coming to hunt from other areas also takes a toll on the population. (ACCWM 2014)
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Acronyms

ACCWM	Advisory Committee for Cooperation on Wildlife Management
CB	Cape Bathurst
BAFN	Behdzi Ahda First Nation
BNE	Bluenose-East caribou
BNW	Bluenose-West caribou
CCP	Community Conservation Plan
DEWG	Déłıne ʔekwé Working Group
DGG	Déłıne Got'ıne Government
ENR	Environment and Natural Resources, GNWT
GNWT	Government of the Northwest Territories
GSA	Gwich'in Settlement Area
HG	Headwater Group
HTC	Hunters and Trappers Committee
IK	Indigenous Knowledge
ISR	Inuvialuit Settlement Region
ITH	Inuvik-Tuktoyaktuk Highway
NU	Nunavut
NWT	Northwest Territories
SARC	Species at Risk Committee
SRRB	Sahtú Renewable Resources Board; ʔehdzo Got'ıne Got'sé Nákedı
SSA	Sahtú Settlement Area
TAH	Total Allowable Harvest
TG	Tıchq Government
TK	Traditional Knowledge
TP	Tuktoyaktuk Peninsula caribou
TRTI	Tıchq Research and Training Institute
WMAC-NWT	Wildlife Management Advisory Council, NWT
WRRB	Wekèzhı Renewable Resources Board