INVESTIGATING SCIENTIFIC, SOCIAL AND OTHER INFLUENCES ON THE 2017 BRITISH COLUMBIA GRIZZLY BEAR HUNT BAN

by

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THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
IN
NATURAL RESOURCES AND ENVIRONMENTAL STUDIES

UNIVERSITY OF NORTHERN BRITISH COLUMBIA

December 2019

Abstract

British Columbia has the largest grizzly bear population in Canada. In 2017, B.C. banned the hunt of grizzly bears citing a lack of societal support, despite government-cited science that the hunt was sustainably managed. I explored the factors that influenced popular perceptions of grizzly bears, the hunt, how these factors may have influenced the province's decision to implement the ban, and its reception by various actors. Methods included: examining key claims in government documents preceding the ban; surveying media coverage of the ban; and interviewing experts (n = 30) about their role in, and opinion of the ban. Results indicated that public perception of the hunt, and its framing as a trophy hunt outweighed scientific evidence of hunt sustainability. However, controversy over the representativeness of the "public opinion", and comprehensiveness of government consultation processes remain. I suggest avenues for further research into roles of social values in natural resource policy.

Acknowledgements

To my supervisor, Dr. Zoë A. Meletis, this thesis would not have been possible without your unwavering guidance and support. Thank you for your encouragement throughout this entire process. Thanks also for helping to partially fund this project. Thanks to the Real Estate Foundation of British Columbia and to UNBC for funding elements of this project.

To my committee members, Dr. Chris Johnson and Dr. Monica Mattfeld. Thank you for your input in bringing this project to its completion. The knowledge and insights that you both shared with me along the way were invaluable.

To my interview participants, thank you. This project would not have been possible without the participation of those experts who took time out of their busy schedules to be interviewed, which I truly appreciate.

To my friends and support system, here in Prince George including Rebecca DeLorey, Heather and Lucy Mitchell and Shayna Dolan. I would like to extend my sincerest gratitude for pushing me to achieve this goal, which at times I felt was impossible.

Finally, to my parents and family, for their support and encouragement to pursue my goals, even though it meant moving so far from home.

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Chapter 1 - Introduction

The province of British Columbia (B.C.), Canada is often promoted as a nature-lover's dream; a place of pristine wilderness. It provides habitat for many species of charismatic megafauna, including humpback whales (*Megaptera novaeangliae*), wolves (*Canis lupus*), and various bears such as the Kermode or spirit bear (*Ursus americanus kermodei*). The province is also home to the largest percentage of grizzly bears (*Ursus arctos)* in Canada. Grizzly bears are a species which is often described as an icon of the wilderness and an iconic species for B.C. Therefore, grizzly bear management is critical for both ecological and "human dimensions" reasons.

In Canada, the management of natural resources and wildlife has historically been controlled by the federal and provincial governments, and largely informed by science. B.C. is home to a large extractive industry that is also regulated by the federal and provincial governments. The habitat that supports wildlife like caribou, moose and grizzly bears is the same land for which industries such as forestry, oil and gas, and mining are competing. The struggle to balance wildlife and ecosystem health with the economic benefits of industry, and also maintain the image of "Super, Natural British Columbia" often contributes to controversial natural resource and wildlife management decisions by government.

This thesis is about a recent wildlife management decision for grizzly bears in B.C. and the contexts that informed that decision (media; policy; public consultation; stakeholder and expert input). This is an exploratory look at the factors that influence popular perceptions of grizzly bears and the grizzly bear hunt, how these factors may have influenced a recent decision by government to enact a ban, and its reception by various actors.

The focus here is on policy changes that led to the 2017 ban on the B.C. provincial grizzly bear hunt:

1. On August 14, 2017, a grizzly bear *trophy* hunt ban was announced and went into effect on November 30th, 2017.
2. On December 18, 2017, a province-wide ban on *all* hunting of grizzly bears, with exceptions for First Nations, was announced and went into effect immediately.

The first announcement was made in August 2017 by the Honorable Doug Donaldson, Minister of Forests, Lands, Natural Resource Operations and Rural Development (MFLNRORD), stating that the trophy hunt ban was being implemented because the hunt was not a "socially acceptable practice in 2017" (Pynn, 2017). Four months later, in December 2017, Donaldson was quoted as describing the decision to expand the ban to include any and all hunting of grizzly bears (except by Indigenous peoples) by saying: "It's mostly a social values issue; when it comes down to it, this species is seen as an iconic species for B.C., and people just weren't willing to accept the hunting of grizzly bears anymore in this province" (CBC, 2017).

This thesis project evolved as a response to such pronouncements and was designed to examine claims made about factors contributing to this policy decision, and perceptions of these factors by different actors connected to the hunt. Through this project I have examined how public opinion, science, perceptions of wildlife, and other influences contributed to the ban of the grizzly bear hunt throughout B.C. I did this by examining media coverage, analyzing policy documents and interviewing experts. Findings from this thesis will add to literature concerning media portrayals of public opinions on conservation, perceived shifts in these opinions, and their purported roles in policy decisions.

This work is timely as the ban is relatively new and has already been expanded beyond the original proposed trophy hunt ban announced in August 2017 (which allowed for the continuation of a meat hunt). It is now a complete ban on all grizzly hunting. Social values were cited as the reason for both iterations of the ban. When the first version of the ban (ending the *trophy* hunt) was announced, the Province began a public consultation period described by Minister Donaldson as involving both: 1) "face-to-face meetings with hunting associations, guide outfitters and First Nations" (CBC, 2017); and 2) requests for feedback from members of the public on two separate documents, each entitled "*Policy Intent Discussion Paper - Grizzly Bear Trophy Hunt Ban"* on their website (link no longer available). That consultation period began on October 4, 2017, and ended on November 2, 2017. During that time, the government received input from almost 4,200 respondents (Government of British Columbia, 2017). According to the government, 78% of the respondents opposed the hunting of grizzly bears, which informed the expansion of the August ban in December (Government of British Columbia, 2017).

There is no single, comprehensive document or resource that reports the history of the grizzly bear hunt, moratorium, bans, and related public opinion and media coverage. The literature reviews, media survey and interviews that I conducted for this project will begin to address these gaps. This thesis takes the first steps towards generating a portrait of the social, scientific, and political landscapes surrounding the ban. The findings from this project will improve our understandings of the human dimensions of the grizzly bear hunt ban in B.C. and its precursors. Careful consideration of such information is important given that attention to context and human dimensions of wildlife issues is necessary for long-term conservation success (Artelle et al., 2018; Clark, Workman, & Slocombe, 2014; Richie, Oppenheimer, & Clark, 2012). Documents and presentations resulting from this project will

contribute to a better understanding of the ban, and the conservation and management climates likely to inform future decisions in B.C.

Context

Here, I provide an overview of the bear hunt-related culture and climate regarding animal welfare, wildlife/natural resource management, and public opinion in B.C. (as related to bear hunting) leading up to the 2017 bear hunt ban. I am interested in how such elements are portrayed in: 1) information available on the Government's website, and 2) media coverage of related current events and stories. I begin with a brief look into animal welfare and the categorization of animals, and emphasize potential connections to the B.C. context. This is followed by an overview of the recent history of North American natural resource/wildlife management and policy, ending with a discussion of conservation and wildlife management approaches currently being employed in B.C. and Western Canada. I end with a summary of the discourses prevalent in discussions of attitudes toward grizzly bears, and the social acceptability of the grizzly bear hunt, as represented in relevant media.

Animal welfare and related current events in B.C.

One indication of how a society views animals, including wildlife, is to consider its related laws. According to a government factsheet on animal welfare, B.C.'s *Prevention of Cruelty to Animals Act* is described as "having among the toughest penalties" for "anyone who causes suffering or distress to an animal in British Columbia". This document is a publication of the Ministry of Agriculture, and is mainly in reference to livestock/animal owners, and cat/dog breeders. This piece of legislation is enforced by the B.C. Society for the Prevention of Cruelty to Animals (BCSPCA), an organization that also helps to rescue and protect wildlife. The *Prevention of Cruelty to Animals Act* does not apply to wildlife,

however. Wildlife is defined in another piece of legislation called the *Wildlife Act.* The *Wildlife Act* defines wildlife as "raptors, threatened species, endangered species, game and other species of vertebrates prescribed by regulation, and [for some sections of the Act] includes fish". The Wildlife Act (which includes bears as "big game") is typically enforced by conservation officers, park rangers and police officers. Therefore, from a policy and enforcement standpoint in B.C., there is a clear distinction between different categories of animals based on dominant framings of their relationships with humans (e.g. pets, livestock, wildlife, etc.). Consequently, the ways in which a certain species or an individual animal is categorized is a key consideration in determining which rights/protections they are afforded, which piece of legislation is applicable, and which entity/entities are responsible for enforcement of such.

Members of the B.C. media contribute to and reinforce such categories in terms of what and how they report information concerning the use, protection, management or conservation of animals in B.C. Their reporting often illustrates or reflects the significance of such categories and designations, as well as the influences of such categorizations on rights afforded to animals and human owners/users/hunters (both in individual cases and more generally). For example, in February 2018, several outlets reported that an adopted potbelly pig was killed and eaten by its owners. This caused public outrage, as this pig was classified as a pet. In North America, particularly in urban centers, the designation of "pet" is seen as being different from livestock or other categories of animals that one might consume as food. This potbellied pig was perceived as a domesticated pig but not one to be used for agricultural or harvest purposes (i.e. the consumption of the pig was not acceptable to many because the "companion animal" or "pet" category does not allow for consumption in many

North American minds) (Preece & Chamberlain, 2009). And yet, B.C. law does not prevent or forbid the killing of a pet, as long as it is done humanely.

Negative public reactions to the story of the pot-bellied pig illustrate that people can raise ethical and social objections about the treatment of animals even when no illegal activities are involved. By extension, one could argue that B.C. laws may not reflect some dominant social values with respect to animal ethics and common understandings of animal categorizations. The case of this pig and the reactions to its demise suggest that many people object to the idea of killing and eating a pet pig (as distinct from an agricultural hog), because they somehow view pets as a different category of animal, and one worthy of differential treatment because of this distinct status.

Common conceptions of pets and distinctions made between one type of domesticated animal (pet pig) and another (agricultural hog) are just one interesting point of consideration with respect to human-animal relations in B.C. and beyond. Another B.C. arena that acts as a magnet for lively debate about common categorizations of animals and clashes between different conceptualizations is the Vancouver Aquarium. It is a site to watch for evidence of a shift in animal welfare-related beliefs and values in Vancouver that could extend to other areas of the province. To a certain degree, it is beholden to popular opinion, while also trying to fulfil educational and scientific mandates that may not always fall neatly in line with public opinion. For example, John Nightingale, the President and CEO of the Vancouver Aquarium recently declared that "Things have changed in Vancouver in the court of public opinion". He said this while explaining the decision to accept a ban on keeping new cetaceans (dolphins and whales) at the Aquarium (Lazaruk & Luymes, 2018). Bill S-203 was recently passed, banning all whale and dolphin captivity in Canada (Ending the Captivity of Whales and Dolphins Act, 2019). The debate on cetaceans in captivity has long preceded

the four-year consideration of the recently passed bill, and a postulation of a shift in public opinion both in Vancouver and in general was put forth in early media coverage of this ban (Lazaruk & Luymes, 2018; Lindsay, 2018).

Context surrounding natural resource management in B.C.

Wildlife management in Canada often falls under the umbrella of natural resource management, establishing wildlife as a type of resource among others such as forests, minerals, and water. This is evident in British Columbia, especially in relation to grizzly bears, as the management of grizzly bears is primarily the responsibility of the Ministry of Forests, Lands, *Natural Resource Operations* and Rural Development (MFLNRORD) (emphasis added). The Ministry of Environment and Climate Change Strategy (MECCS) also shares a portion of this responsibility. What exactly each Ministry is responsible for is unclear, as pointed out in "An Independent Audit of Grizzly Bear Management" (Office of the Auditor General of British Columbia [Auditor General], 2017). Furthermore, the North American Model of Wildlife Conservation (NAMWC), which informs much of Canadian and U.S. wildlife management policy, explicitly refers to wildlife as a resource (Eichler & Baumeister, 2018).

Aside from being equated to a resource, wildlife (especially large carnivores/game species like the grizzly bear) is also linked to other types of natural resources. For example, the scale of habitat needed to sustain healthy grizzly populations inevitably links grizzlies to other natural resources such as the forests and "wildernesses" of B.C. These large areas of habitat are often the same areas that could be used for resource extraction. Therefore, management of grizzly bears has potential implications for land use planning decisions (Gibeau, Clevenger, Herrero, & Wierzchowski, 2002), and vice versa. The War in the Woods, a

recent resource-related conflict, culminated with the formation of the Great Bear Rainforest (GBR). This is indicative of the complex interactions between wildlife and B.C. resource culture.

The War in the Woods refers to the battle over forestry policy between environmentalists and logging companies in B.C. A portion of this conflict came to a head with the Clayoquot Sound protests in 1993. These protests brought B.C. forestry policy to the international stage, via media attention to activism and responses (Stefanick, 2001). Historically, forestry in B.C. had been based on a tenure system which enabled private logging companies to lease portions of crown land in order to harvest timber (Cashore, 2014). After World War II, tree farm licenses were introduced to the tenure system in an effort "to promote the long-term sustainability needed to spur capital investment and job creation" (Stefanick, 2001, p. 53). However, despite the goal of fostering a sustainable level of extraction, government forestry policy continued to favour logging companies during this time and the forestry industry in B.C. experienced a boom (Cashore, 2014). By 1994, over 300 communities within B.C. relied in part or entirely on the forestry industry for employment and income (Stefanick, 2001).

Beginning in the 1970s, activism and advocacy of environmentalists interested in protecting areas valuable both to the forestry industry and as grizzly bear habitat started to fight for greater conservation in B.C. At the same time, the political power of First Nations across B.C. started to gain more recognition from government (Cashore, 2014). Furthermore, the rise of the internet and social media added new fora and networks for connecting environment-interested people with information and with each other. In the mid-1990s, advances in technology further promoted networking between actors in B.C. and like-minded, conservation-oriented groups internationally, putting pressure on B.C. to implement

a more sustainable forestry management plan (Cashore, 2014; Page, 2014). All of this contributed to the environmental management and conservation status quo in B.C. being challenged in significant ways (Cashore, 2014; Page, 2014). And, this land-related conflict is linked to and affects wildlife.

In addition to related interventions by First Nations and environmentalist groups, it can be argued that the grizzly bear itself has used non-human agency to help bring about policy changes and the preservation of large tracts of important habitat (Dempsey, 2010; Page, 2014). This has largely been accomplished through the non-human charisma inherent within grizzly bears. This is combined with human framing of grizzly bears as an indicator of ecosystem health and biodiversity, and as a symbol of wilderness. These characteristics have made the species a perfect symbol for the protection of the GBR, and First Nations and environmental groups have employed the grizzly bear more broadly to promote conservation and management causes (Dempsey, 2010; Kellert, Black, Rush, & Bath, 1996).

Coinciding with, and possibly helping to end the "War in the Woods", environmental groups began focusing their efforts on an area that came to be known as the "Great Bear Rainforest" (GBR) in 1996 (Dempsey, 2010; Page, 2014). The Kermode bear[1] or Spirit bear was arguably the most prominent symbol used in the ground-breaking collaboration of disparate stakeholders in the case of the GBR. The grizzly bear, however, was also a powerful presence in the establishment of the GBR. According to a 1999 Sierra Club publication entitled "Canada's ancient rainforest: home of the great bears and wild salmon", the GBR " is called the Great Bear Rainforest because it is one of the great grizzly bear strongholds in the world" (cited by Dempsey, 2010, p. 1150). Large tracts of unfragmented

[1] "The Kermode bear is a white phase of the North American black bear that occurs in low to moderate frequency on British Columbia's mid-coast" (Marshall & Ritland, 2002, p. 685)

land are necessary in order to sustain a viable population of these wide-ranging carnivores, (Gibeau et al., 2002). The GBR, remaining largely untouched, offered ideal habitat at the time of its creation (Dempsey, 2010; Page, 2014). Forestry and logging policy in the GBR were shaped by the necessity to preserve this "critical" grizzly, black and Kermode bear habitat. Biodiversity and values of First Nations were also contributing factors informing the formation of the GBR.

Natural resource management in B.C.

Scaling up to B.C. as a whole, science still seems to rule wildlife management, officially. Today, upon visiting the government website: https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/wildlife/wildlife-conservation/grizzly-bear, it appears that science largely guides decisions focused on the management of grizzly bear populations and their habitat (see Figures 1 & 2). In B.C., grizzly bear management is divided between two ministries: the MFLNRORD and the Ministry of Environment and Climate Change Strategy. According to a recent report by the Office of the Auditor General of British Columbia (2017), "In establishing and defining the roles of these two ministries, however, government created an unclear organizational structure for wildlife management" (p. 3). The report also finds that grizzly bear management decision-making lacks transparency (Auditor General, 2017). These are two examples that highlight some of the shortcomings of the government in their related management role.

Figure 1: Top section of government website, captured October 16, 2019, displaying links to science-based documents on the right-hand side of the page. (For full text version of this webpage, see Appendix A).

Figure 2: Middle section of government website, captured October 16, 2019, displaying "science-based harvest management" and conservation plans from 1995. (For full text version of this webpage, see Appendix A).

The limitations of strictly science-based management, at the foundational level, are also evidenced in the dispute over grizzly bear population numbers. Grizzly bear population estimates have been disputed by researchers and biologists, and these arguments have been reported by the media. For example, one such article published by CBC reports, "Biologist Paul Paquet from the Raincoast Conservation Foundation says it's extremely difficult to do a

proper count and there could be as few as 6,000 grizzlies in B.C." (The Canadian Press, 2014). This is in contrast to the often-cited estimate of 15,000 provided to the Province by their scientists, and reveals that even within the scientific community there exists debate. At a more complex level, overreliance on primarily science-based wildlife management fails to address the intricacies of the grizzly bear as situated within a B.C. society composed of humans (and non-human actors).

Over the past several decades, there are indications of shifts in B.C. towards resource management that is more holistic and attempts to incorporate social, cultural and economic aspects alongside environmental concerns (i.e. in the case of ecosystem-based management used in the GBR). The shift in the management framework in the GBR does not signify an overall change in management approaches for natural resources in the remainder of the province, but rather illustrates one case where a shift does seem to have occurred (Howlett, Rayner, & Tollefson, 2009). The call to include other types of knowledge outside of traditional Western science, including ethics, public input, traditional ecological knowledge and/or social values is also present in much of the current literature surrounding wildlife management (Artelle et al., 2018; Eichler & Baumeister, 2018; Fox & Bekoff, 2011; Madden, 2004; Vernon, Bischoff-Mattson, & Clark, 2016).

The history of grizzly bear management in B.C. is complex. The unclear delegation of specific ministry responsibilities cited by the Auditor General report (2017) reflects this. The shifting geography of grizzly bear population calculations and management is also complicated. In the mid-1980s, grizzly bear populations were being estimated using densities based on habitat, and Biogeoclimatic Ecosystem Classification (BEC) zones (Hamilton & Austin, 2002). By the early 1990s, Geographic Information Systems (GIS) was being used in re-mapping these density estimates (Hamilton & Austin, 2002). In 1995, the

current management structure for grizzly bears was developed. The current system is based on Grizzly Bear Population Units (GBPUs) (See Appendix B). These are used to estimate populations, and to track grizzly mortality, including deaths related to both hunting and non-hunting causes (Artelle et al., 2013).

The GBPUs were originally delineated based upon sub-populations of the species (Hamilton & Austin, 2002). In 2000, the boundaries of the GBPUs were re-drawn to more closely coincide with harvest Management Units (MUs). This was done to make it easier to manage overlapping units, especially in the case of hunting regulations (Hamilton & Austin, 2002). The joining of the GBPUs and MUs was important, because management goals such as population targets and land use plans are established using these units and the reconfiguration of them reduced overlap (Hamilton & Austin, 2002).

Another potential challenge in grizzly bear management "on the ground" is inadequate attention to the human context (Chaffin, Gosnell, & Cosens, 2014). The absence of cultural and social considerations in management plans can sometimes lead to long-lasting, adverse opinions or an unwillingness by members of the public to consider or act upon science and management information. For example, perceptions of biologists treating grizzly bears in inappropriate ways by Indigenous community members caused distrust in the Kluane region of the Yukon, and the collapse of multiple attempts at collaborative grizzly bear management planning (Clark et al., 2014). Considering social processes, norms and values pertaining to grizzly bears could have been of great benefit to those in charge of grizzly bear management in that case.

Claims about the social acceptance of grizzly bears hunting

When examining B.C. Government announcements about the current grizzly bear hunt ban, official government discourse suggests a shift from science-based decision making, to one that places greater emphasis on social factors. For example, the official explanation of 2017 changes to the grizzly bear hunt was that changes were being made to better reflect "social values" (CBC News, 2017). This is different than suggestions captured in media coverage of the 2001 moratorium on grizzly bear hunting. In that case, science was frequently cited as a basis for the proposed three-year ban on grizzly bear hunting. Quotes such as the following reflect the emphasis on science: "Interim NDP leader Joy MacPhail defended the halt imposed in the months before the election. 'A three-year moratorium made perfect sense,' she said. 'We decided to err on the side of science.'" (Lunman, 2001).

In theory, science is still a key aspect of grizzly bear management in B.C. But, as elsewhere, B.C. seems to be creating more space for "human dimensions" considerations. For example, prior to the most recent cessation of all grizzly bear hunting in December of 2017, the MFLNRORD asked for citizen input on two policy intent discussion papers (Government of British Columbia, 2017). According to the government, this elicited almost 4,200 responses to these papers. There is little information on the geographical distribution of these responses, or on respondent demographics. The government did, however, characterize 78% of respondents as being opposed to the hunting of grizzlies (Government of British Columbia, 2017). The government also held meetings with different stakeholders and First Nations, between October 4, 2017, and November 2, 2017, to gain further insights. The government website offers few details on which groups participated in this process, why, or what the outcomes were. This project seeks to ask exploratory questions about the role that science and public opinion are currently playing in B.C. grizzly bear management.

Study rationale and research questions

My primary objective was to study contributing influences on the decision-making process that led to the 2017 B.C. grizzly bear hunt ban. I was interested in the relative roles played by different influences 1) as conveyed on the government website and through associated government documents, 2) as represented by the media, and 3) as perceived by those involved either directly (if/when possible) or indirectly. For example, since November 2017, Hon. Doug Donaldson of the MFLNRORD has made multiple claims in the media about the attitudes of B.C. residents concerning the hunt of grizzly bears. How accurate and representative of British Columbians are these claims? What significance do they have in the decision-making process that led up to this recent change in policy? I investigated such questions in an attempt to ascertain if B.C. is indeed in the midst of a shift away from wildlife management decisions based on scientific information, to one prioritizing social factors in conservation management. Although the government cites social factors as the major influence on the decision to ban the grizzly hunt, such a shift would contradict claims in government documents that grizzly bear management is primarily influenced by "the best available science" (Figures 1 & 2; Appendices C & D).

Therefore, my first research question is:

1. **How is/was science, and/or public opinions on grizzly bears and the grizzly bear hunt (or perceptions of these) incorporated into decisions regarding the 2017 grizzly bear hunt ban in B.C.?**

To speak to this, I examined how public opinion and science have affected the recent course of the B.C. grizzly bear hunt ban. For the purpose of my research, I decided to treat all iterations of the hunt ban as an evolution of the 2001 moratorium on grizzly bear hunting into the total ban on grizzly hunting that is in place today. The emphasis in this project, however,

is on the 2017 ban and ban extension. I have analyzed influences on the decision to enact the 2017 complete ban of the grizzly bear hunt and also considered the role of those influences on the two prior iterations of the ban (the 2001 moratorium and the 2017 trophy hunt ban). I paid particular attention to the context surrounding the case of recent grizzly bear hunt bans in B.C. (i.e. social, political, scientific, economic, etc. climates).

These considerations allowed me to explore my second research question:

2. **Are we in the midst of a significant change in public attitudes and policy regarding the grizzly bear as a species, or the grizzly bear hunt?**

The overall purpose of this research was to determine how different contributing factors (i.e. science, social values, etc.) appear to have been weighed in the decision to enact the ban, and if there have been changes between current and past processes in B.C.

Although my research focuses on one species – the grizzly bear – within the specific context of B.C., my findings could have implications beyond the species and the province. Grizzly bears can be categorized as large carnivores, charismatic megafauna, and an umbrella species within their ecosystems (Dempsey, 2010). There is conservation-related research for each of these classifications, and the framings of changes to the hunt, and public perceptions of grizzly bears in B.C. could allow for generalizability of my findings within such categories. Furthermore, decision-makers and others in neighboring provinces and U.S. states that have grizzly bear populations and current/future hunting regulations may also be interested in my findings, as similarities may exist across jurisdictions, populations, and hunts/bans.

Chapter 2 – Methodology and methods

Approach: qualitative case study

I used a case study as the methodology for my project because it allowed me to both ground my topics of interest in a material geography (B.C.), while also connecting it to broader themes such as claims of shifts in perceptions of wildlife and narratives about hunting and conservation (Yin, 2006). Also, a case study approach allowed me to explore the ban in depth using document review, interviews, and related analysis (Yin, 2006). There are several definitions of a case study, but a commonality that connects them all is the idea of intensive study of a case within its context (Yin, 1981). To me, that contextual element of investigation explains why case studies can be used as foundations or "building blocks" for additional research (Thomas, 2011). I will make suggestions regarding future research in Chapters 5 and 6.

Furthermore, I chose to use a case study because I wanted to triangulate on a topic, using several data sets. I wanted to approach the new grizzly bear hunt ban from several angles, to understand it as a unique process and outcome in B.C., but also nested in wider contexts. Baxter and Jack (2008) suggest that "…a case study is an excellent opportunity to gain tremendous insight into a case. It enables the researcher to gather data from a variety of sources and to converge the data to illuminate the case" (p. 556). Since case studies have to be delineated, I have defined my case as the 2017 complete ban on all hunting of grizzly bears in B.C. I decided to treat this ban as the result of evolving policy decisions. The complete ban and the partial trophy hunt ban that preceded it were foreshadowed by the 2001 moratorium put in place by the New Democratic Party of B.C. before they lost power that same year. The change of government that followed resulted in an end to the moratorium within a year of its implementation.

My research includes the evolution of the ban over time. Case studies can be longitudinal when the same case is revisited at different times, especially when research methods involve the analysis of media discourse or policy document (Baxter, 2016) . My project involves analyses of media framings of the hunt, bears, and other related concepts. It also includes an analysis of themes, narratives, and claims in interviews with experts, and an initial exploration of policy documents. Considering the resulting data and analyses situated in context, allows for consideration of the history of the ban within past contexts, as a case study (Yin, 1981).

Using a case study is also appropriate because the ban has been imposed in one particular place (B.C.), and because I employed mixed methods to gather and analyze the necessary data (Baxter & Jack, 2008). The two methods I used to collect data were: 1) systematic review of policy documents and media samples; and 2) analysis of expert interviews. My data analysis included content analysis, which examined texts both quantitatively to search for surface topics (e.g. topic counts and topic associations), and qualitatively (e.g. recording sub-themes and particular vocabularies and words used) for deeper themes (Dunn, 2016). I used thematic analysis to identify overall themes, and then examined the construction of and relationships between those themes (Braun & Clarke, 2006). The combined retrospective has provided context-related insights into my second research question – about whether or not we are in the midst of a significant change in B.C. attitudes and policy regarding the grizzly bear trophy hunt. Case studies can also be used to test or to develop theory (Baxter, 2016). Through my research, I have sought to test claims about the social climate and its influence on bear hunt management decision-making process (and the ban).

Some have contested the generalizability of the case study approach (Baxter, 2016) but a case study can produce general findings. I agree with the assessment by Flyvbjerg (2006) that:

> One can often generalize on the basis of a single case, and the case study may be central to scientific development via generalization as supplement or alternative to other methods. But formal generalization is overvalued as a source of scientific development, whereas "the force of example" is underestimated (p. 228).

Elements of a single case can be related to other cases. For instance, it is reasonable to believe that aspects of my analysis could be helpful to those responsible for moose or caribou hunt management in B.C. It might also be useful for those managing bear hunts and populations elsewhere. Different cases of hunt management might include common narratives and debates about population numbers/trends, sustainability of the hunt, habitat as an important consideration in management, etc. Similarly, decision-makers and other grizzly-interested parties in states and provinces outside of B.C. with grizzly bear populations, hunts and/or hunt bans may also be able to draw useful material from this study.

Adapted grounded theory

One of the goals in this thesis was to compare and contrast expert opinions on the hunt and ban with messages in the media, to get a sense of divergence and overlap between the two. For this work, I employed adapted grounded theory, the principles of which are described by Charmaz (2008) as: "(1) minimizing preconceived ideas about the research problem and the data, (2) using simultaneous data collection and analysis to inform each other, (3) remaining open to varied explanations and/ or understandings of the data, and (4) focusing data analysis to construct middle-range theories". Grounded theory is used to search for concepts grounded within the empirical data to generate or contribute to theory (Burck, 2005). During my data analysis, I sought out themes I anticipated to find as

indicated in relevant literature, but also: 1) allowed for themes to emerge from the data; 2) performed initial steps towards data analysis while continuing to collect data (i.e. at times editing and/or adding questions in the semi-structured interview based on reflections of interviews I had already completed); and 3) maintained a journal during data analysis in the interest of implementing constant comparison analysis when searching for themes (Strauss & Corbin, 1994).

Theoretical framework: political ecology

Political ecology can be broadly defined as the study of power relations within society, emphasizing economy and politics (formal and informal) and how the environment changes over time in response to such factors (Robbins, 2004). From its beginnings, the field of political ecology has acted as somewhat of a bridge between the natural science of ecology and the social sciences of cultural ecology (Walker, 2005). Many political ecology-influenced scholars also focus on how environmental decision-making and its impacts affect local, Indigenous, and marginalized populations, particularly in the Global South (McCarthy, 2002). This imbalance towards studying groups located in the Global South or "developing" communities can be attributed (at least in part) to interest in the entry of such communities into capitalist market systems. Political ecologists, many of whom are geographers, are interested in the intersection of politics and environmental decision-making, particularly in terms of the roles of relationships and power dynamics, in contexts ranging from local to global (Robbins, 2004). In the last twenty years, political ecology has increasingly been applied to cases in the Global North, including both North American and European contexts (McCarthy, 2002; Walker & Fortmann, 2003).

As a field of study, political ecology allows scholars and activists to employ both biophysical and social sciences, as they see fit, to study human-environment relationships

through hierarchies of power (Rocheleau, 2008; Walker, 2005). However, these relationships are often not linear in nature or influence. So, political ecology has moved into exploring the dynamics of complex webs of power relationships (Rocheleau, 2008). Given the various influences of experts, non-expert government, interest groups, and non-human actors in my study of the grizzly bear hunt ban, political ecology seems an appropriate lens to help me study the interactions and context of the web of actors involved in the ban. Political ecology allows me to explore the relative power of these actors and factors involved in the policy decisions which resulted in the ban. Political ecology is also interested in investigating environmental phenomena as they occur both in the physical realm and in the socio-cultural realm (Robbins, 2004), and this ban reflects and impacts both.

The involvement of the general public in addition to First Nations and stakeholder groups during government consultation, combined with a tradition of making management decisions based on the "best available science", makes the grizzly bear hunt ban a unique and complex case, suitable for examination through the lens of political ecology. Political ecology encourages the examination or deconstruction of environmental decision-making processes. Political ecologists argue that this should be done in order to reveal key influences, examine key discourses or vocabularies, and to consider networks and connections forming the superstructure for resource management in a particular place. Political ecologists also advocate for tracing environmental decision-making back through time in order to discover and document key influences on process and outcomes (Robbins, 2004). As an applied framework, political ecology supports the longitudinal aspect of my research. According to Rocheleau (2008), "critical applied geographers could and should move across scales of time and space, as well as bridging the barriers between critique and technique in resource management" (p. 717).

My research, as presented here, will become part of the bridge between the approach used in decision making in the case of the ban, and the assessment of such. I will also tailor different outputs from this research for different audiences, given the mix of applied and academic interests in this project. Political ecologists support diverse knowledge mobilization and the idea of for communicating research using a different "voice" depending on the audience (Rocheleau, 2008). In the following section, I will detail my research design. The design reflects interests in different types of knowledge, perceptions, framings, discourses, and processes, as they relate to power, outcomes and influences.

Research design

In order to address my research questions, I developed a research design comprised of three separate, but related phases: 1) a media survey, 2) interviews with experts, and 3) a policy review of key documents and internet-accessible materials. These three phases received focused attention, but also overlapped during my research process. I began with the media survey, and conducted expert interviews as I was completing analysis of the media survey. I reviewed policy documents and related texts throughout my project.

I focused my media survey on claims about public perceptions of the grizzly bear hunt/ban, and common framings of and comments on the ban, the hunt, grizzlies, and bears more broadly. For this phase, I chose a purposive sample of articles from Canadian media outlets (n = 496), emphasizing several publications based in B.C. This sample was designed to include a diverse set of sources in terms of their sizes (circulation numbers and frequency), home office locations (urban/rural), and approaches (reputations for political leanings). I attempted to retrieve and examine all articles, editorials, interviews, and letters to the editor regarding the grizzly bear hunt and portrayals of related public opinion (2000 – 2018). At the same time as I carried out my media survey, I interviewed experts with considerable

knowledge of grizzly bears (n = 30), some of which were involved in the hunt/ban decision-making or frequently quoted by or mentioned in the media coverage of the ban. In my policy review, I sought to cover documents related to decisions on the grizzly bear hunt and grizzly management in B.C., from 2000 until today, including reports produced for the government, information found online through the B.C. government website (https://www2.gov.bc.ca) and government-authored documents. The analysis of the collected data represents a novel set of consolidated information on the human dimensions of the ban and its history.

Data Collection

Media survey

One of my first research tasks was to compile a history of the grizzly bear hunt and bans as presented in the media. I did this through a review of all articles that resulted from a search of the phrase "grizzly bear hunt" on the website for each publication that I chose for the media survey (Table 1, p.24). My selection of media outlets aimed to include publications with different main audiences (e.g. rural; urban) to ensure that I was collecting samples across diverse geographies. I sought to include some newspapers circulated in northern or rural areas of the province, where populations may be more directly affected by the grizzly bear hunt ban (e.g. via loss of guiding income).

Table 1: Names of publications included in media sample focused on the ban of hunting grizzly bears in B.C.

Publication	No. of articles/ Starting year	Rationales for inclusion	
		HQ location/ Market	Weekly Circulation
Canadian Broadcasting Corporation	80 / 2000	Toronto, ON / National	N/A[2]
Dawson Creek Mirror	12 / 2011	Dawson Creek, BC/ Dawson Creek Area	9385 (Thursday distribution only
Prince George Citizen	15 / 2011	Prince George, BC/ Prince George	68,502 (print/digital)
Salmon Arm Observer	17 / 2015	Salmon Arm, BC/ Salmon Arm, BC	2,000 (print)
Terrace Standard	20 / 2011	Terrace, BC/ Terrace, Stewart, Hazleton, New Hazleton, Dease Lake, Inskut, Ness Valley	9,000 (print)
The Globe and Mail	264/2001	Toronto, ON/ National	2,149,124 (print/digital)
The Tyee	9/2005	Vancouver, BC/ British Columbia	N/A[2]
The Vancouver Sun	79 / 2009	Vancouver, BC/ Vancouver	869,571 (print/digital)

I had originally intended to search for articles dating back to 1990 in order to include more than two changes in B.C. governments (from New Democratic Party, to BC Liberal Party, and back). However, the number of articles (n = 764) included in the search from 2000 – present was more than anticipated, so I decided to end the sample there. The final decision to limit the scope to the period from the year 2000 to present was also based on a preliminary review of articles retrieved from *The Globe and Mail* (chosen because it had the most articles from 2000 - present at n = 406) from the original idea of 1990 through 2000. The articles

[2] Data not available, despite efforts to find publicly available figures and contact publications directly.

found during this decade (1990 – 2000), using the same search term, did not appear to have very much relevance to the history of the 2017 hunt ban. It is for these reasons that in the end, the media survey began in 2000 instead of 1990.

Expert Interviews

To gain insights into grizzly bear management in B.C., with a focus on the recent ban, I also needed to engage with experts. I began conducting interviews with identified experts after receiving approval from the UNBC Research Ethics Board (see Appendix E). I used the method of peer-referral in order to increase my sample size. Peer-referral is a method by which one research participant facilitates contact between fellow associates or colleagues who might be interested in the project with the researcher (Christmann, 2009). I was either provided names and contact information of potential participants, or my information was shared by interviewees with other potential candidates (see Question 10 of Appendix F – Interview guide). In order to recruit experts, I began identifying key actors through contacts suggested to me by my supervisor, Dr. Zoë A. Meletis and my committee member, Dr. Chris Johnson. I also introduced my project to the local office of Fish and Wildlife (part of the MFLNRORD), in Prince George, B.C. and inquired about potential participants.

Each interviewee provided their informed consent to participate in the project. I used alpha-numeric codes to maintain the confidentiality of each participant. I also screened published text and removed identifying details (e.g. positions and regions). Furthermore, interviewee contact information was stored separately from interview data (both electronic or hard copy). All raw data were kept in locked UNBC offices on password protected computers/laptops. Only my supervisor, transcriber, and other team members have access to

the raw data. The transcriber signed a UNBC confidentiality form and was trained in respecting and protecting data before beginning the work.

I used a semi-structured interview guide to direct the interviews (see Appendix F). This approach allowed flexibility in the flow of the conversation while maintaining a level of consistency in the main topics addressed across all interviews (Dunn, 2016). I asked participants about their involvement in the decision-making process, individual connections to and personal values concerning grizzly bears, and perceived relevance of factors in the formulation of the ban. After obtaining participant consent, I recorded each interview with an audio recorder. Recording the interviews was invaluable in allowing me to re-listen to parts of the interview for content on which I wanted clarification. I transcribed interviews at a later date and used field notes to keep track of any recurrent themes that arose and connections or insights that became apparent (Charmaz, 2008), including the appearance of new themes. I also noted atmospheric components (e.g. laughter; pauses) when relevant.

I sought to interview a broad range of expert in order to explore a wide array of perspectives. I separated the participants into five main categories. I based these categories on main actor types represented in media coverage of the ban, in order to facilitate comparisons between the data sets while searching for themes. Most interviewees held more than one role, and could have been placed in two or more categories. I assigned each participant to a category based on my interpretation of their primary identity through their responses. In all, I conducted 30 interviews spread across the categories of: conservation groups/non-governmental organizations (NGOs) (n = 4); First Nations (n = 4); government (n = 7); hunters/guide outfitters (n = 9); and scientists/biologists (n = 6). Seven of the interviewees were women and 23 were men; eight interviews were conducted in-person and 22 were completed over the phone.

During the interviews, I tried to remain sensitive to the fact that my research topic could be controversial and divisive. Changes to hunting legislation have real-life consequences for people directly involved with the hunt. For these reasons, and to generally reduce risk and discomfort for participants, my supervisor and I took great care in designing the interview portion of my research. Questions were formulated to minimize leading questions, and to minimize risk and discomfort for the interviewee.

In preparation for the interview portion of my data collection, I performed two pilot tests of the interview guide before using it in the field. One was conducted in-person with an environmental academic person who is not connected to this research, but who was previously employed by the Province. The second was conducted over the phone with a current conservation-related government employee (not connected to this project). These allowed me to test both modes of delivery (in-person; on the phone) with people who have similar kinds of expertise and experience to those who will be invited to participate in the interviews.

Policy Review

I included a policy review in my research design in order to answer policy-related questions about the role of public opinion in the ban, and to complement my media survey and interview data. I began by locating policy documents related to grizzly hunt management from 2000 to present day. My initial search, for documents authored by the government in relation to grizzly bear management or the ban, yielded few results. Those that were authored by the province (see Appendices C & D) were procedural manuals that described policy and harvest procedure. The content of each document was similar, so I decided to expand my search in order to include documents that informed government policy

on grizzly bear management and harvest. I also included news/press releases made during the announcement of the ban that can be found on the B.C. government website.

Through my search for scientific reports on grizzly bear management, I also found documents compiled for use by MFLNRORD and the MECCS to inform decisions on grizzly bear/grizzly bear hunt management (Boyce, Derocher, & Garshelis, 2016; Auditor General, 2017; Peek et al., 2003). I used these documents as the primary sources for the policy review. I also found "News Releases" (see Appendices G, H & I) and general information on grizzly bear management through the B.C. Government's website. I, along with my supervisor and my committee members, decided that analysis of any additional documents I found authored by or provided to the government about grizzly bear management, the hunt, or the ban would be included in the policy review component of this project. I used a total of five core documents from 2001 through 2017.

Data Analysis

Media Survey

To analyze the media survey data, I used thematic analysis to look for emergent themes and concepts present in coverage of the grizzly bear hunt ban. In addition to including articles written by journalists or the Canadian Press, I also included opinion pieces and letters to the editor as representations of public opinion. I used the qualitative analysis software NVivo to organize themes under different nodes, which allowed me to refine emergent and expected themes through the separation or combination of nodes. Expected themes were based on a combination of relevant literature, casual perusal of media coverage of the ban prior to the start of my project, and official announcements. For example, based on official announcements, I began coding for public opinion, politics, and science separately as major

themes for the basis of the decision to enact the ban. I then began separating texts under these codes into those in favour of or opposed to each of these factors. I also considered their potential influence on the decision to enact the ban.

Although I expected to find major themes such as public opinion and science, a majority of the coding I completed at the initial stage was to do with emergent codes. For instance, I began with the node "bear: portrayal" because investigating media portrayal of grizzly bears was a focus of this project. After the first round of coding, I had 12 different "portrayals". After completing my second round of analysis, I was able to collapse some of these nodes into 5 main themes for media portrayal of bears. Searching for emergent themes allowed me to consider how themes were composed and constructed, while also thinking about relationships between themes and actors – typical inclusions in political ecology-informed work.

Unanticipated themes emerged as I coded the media articles. For example, I expected to find the theme of a geography-based divide regarding opinions of the ban. I expected this based on the literature and the distributions of both human and bear populations in B.C. I considered whether claims of public opinion were reported generally (e.g. about B.C. as a whole), or whether claims included specific suggested geographies (i.e. rural versus urban). While investigating claims in the media about opinions held by "urbanites" in the "lower mainland", an unexpected theme emerged. Some articles suggested that there was little to no difference of opinions on the grizzly bear hunt between urban and rural British Columbians. By beginning with expected themes, and allowing others to emerge, I was able to complete a comprehensive thematic analysis of my media dataset.

Expert Interviews

I completed 30 interviews with experts. My main objective in interviewing those with grizzly-related positions in government, recreation or conservation, was to learn from people closely involved in or well-informed on the ban. In order to keep good records of my interviews I recorded and then later transcribed the interviews. I then uploaded text files into NVivo. This enabled me to analyze and compare interview data with my media survey data in the same program. I analyzed the interview data in search of themes which coincided with or diverged from those present in the other two data sets (media survey; policy documents).

I used a similar thematic coding process for the interview data as I did for the media survey. I searched for both expected and emergent themes. However, I had more expected themes to emerge from the interview analysis than from the media survey. This is partly because I used a semi-structured interview guide and therefore knew most of the topics that were likely to be discussed (see Appendix F). I was also heavily engaged in thematic analysis of the media survey before most interviews were conducted or coded. Thematic analysis of my interview data was also informed by my field notes and relevant literature.

Policy Review

As the final portion of my data analysis, I investigated language and claims present in government-authored documents related to grizzly bear management, and those that the government points to as informing management decisions, to triangulate in answering my research questions. I did not complete a collective analysis of documents collected as part of the policy review. Instead, documents were analyzed individually because of differences among them. For example, I did not find it appropriate to include procedural manuals for the harvest of grizzly bears (see Appendices C & D) produced when the B.C. Liberal Party was

in power with news releases authored by the New Democratic Party on the ban. I chose instead to analyze the content and language of each document in this data set in order to gain insights into the types of information that has historically informed policy. I compared and contrasted the analysis of this data set with those of my media survey and expert interviews.

Chapter 3 – Literature review

A critical component of addressing my research questions involved a review of academic literature relating to public opinions of wildlife, and past and current trends in management practices. The following section contains summaries of these and related topics. I begin by discussing relevant literature in political ecology as it pertains to wildlife management and the 2017 B.C. grizzly hunt ban. This is followed by a section on animal studies, including the anthropomorphism of bears. I include this since the projection of human characteristics on to grizzly bears is prominent in the media and no doubt factors into public perceptions of bears and bear hunts. I also review studies on perceptions of wildlife, specifically grizzly bears and other large carnivores, and factors that influence these perceptions. I then provide biological information about grizzly bears, and influences that affect population numbers. I follow this with an overview of traditional, science-based management approaches to grizzly populations, highlighting associated limitations. I do this in order to showcase the role of science as a central component in developing policy for grizzly bear management. I end my literature review with a short discussion of emerging frameworks in resource management, including adaptive management, and recommendations for greater inclusion of social context in natural resource management (Artelle et al., 2018; Clark et al., 2014; COSEWIC, 2012; Fox & Bekoff, 2011; Housty et al., 2014; Richie et al., 2012).

Political ecology

Political ecology of wildlife management/conservation – a focus on hunting

Political ecology has frequently been used to frame or analyze natural resource and wildlife management, as well as conservation initiatives. Political ecologists investigate the power dynamics involved in natural resource management, including access, and control of land and resources. Socio-economic factors such as class, education level and gender can play a major role in access and control of access to different resources, including wildlife and game for hunting (Robbins, 2004). For instance, trophy or sport hunting has historically been critiqued as a privilege afforded to the elite; namely wealthy, white men (Boulé & Mason, 2019; Preece & Chamberlain, 2009).

The sport hunting community has influenced North American management decisions through monetary donations to different organizations and powerful connections within their social network. An example can be found by looking at the formation and conservation work of Ducks Unlimited Canada (DUC). DUC was formed in 1930 in order to acquire and create ideal habitat for waterfowl, with the goal of increasing and managing populations for sportsmen (Loo, 2011). Loo explains one aspect that contributed to the conservation achievements of DUC:

> To a great extent, the organization's success in saving wetlands was attributable to the influence of its wealthy and well-connected leadership and the dollars it could bring to bear on the task. DUC's officers and directors were certainly well positioned to open the doors of various government ministries, but they often found those doors were already wide open (pp. 191).

Conflicts over water and land use that arose between DUC and neighboring ranches or farms were usually decided in favour of DUC (Loo, 2011) The powerful relationships possessed by

DUC is one aspect of the organization that facilitated its conservation endeavors, and amplified its political influence.

It has also been argued that trophy hunters have had a major influence on the NAMWC (Eichler & Baumeister, 2018; Feldpausch-Parker, Parker, & Vidon, 2017). The NAMWC is the model upon which Canada and the U.S. have based wildlife management practices, and is focused on game species admitting in the summary, "Game species have received greater management attention because of public interest and desires, funding mechanisms, and the management intensity necessary for species that are harvested" (Organ et al., 2012, p. 30). Although the NAMWC was popularized in the mid 1990s, the tenets upon which it is based have informed wildlife management since the late 19th century, which illustrates the enduring power hunters have over management practices.

The persistent power of science in wildlife management

In this thesis, I was also interested in exploring the relative role of science in grizzly bear management. In this vein, I read about the role of science in North American wildlife management. Principle 6 of the North American Model of Wildlife Conservation (NAMWC) asserts that "science is the proper tool to discharge wildlife policy" (Organ et al., 2012). Science as the basis for natural resource and wildlife management is widely accepted. Even when utilizing the best available science, large carnivore populations are notably difficult to manage, due in part to their complex role in ecosystems as apex predators (Bergstrom, 2017; Loo, 2011; Treves et al., 2017). Furthermore, science-based management of large carnivores can include methods of lethal control that can have unintended consequences and have been criticized for being inhumane (Bergstrom, 2017; Foran, 2018). Yet despite missteps such as these, science continues to persist as the foundation for wildlife management decisions.

As political ecologists are wont to point out, science and scientific debates are also susceptible to political forces. A recent paper by Darimont et al. (2018) speculates that politicians might manipulate inherent uncertainty in scientific estimates in order to feign support of publicly favoured results in contentious management decisions. Further, open debate by scientists on numbers like population estimates for a species could be used for political gain (Treves et al., 2017). In their paper *Predators and the public trust*, Treves et al. (2017) warn that "public trust in science may dwindle and the credibility of scientific evidence in policy debates and legal proceedings may erode" (p.266) in a scenario where science becomes influenced by political forces.

Another way in which science can be used to influence power dynamics among actors, is illustrated through the privileging of "Western" science over other forms of knowledge. The science referred to in the NAMWC is Western science, reflecting a power imbalance in policy decisions, as it excludes other forms of knowledge, such as traditional ecological knowledge. In their critique of the NAMWC, Eichler & Baumeister (2018) explain, "The "true" knowledge determined by the scientists does not take into consideration Native methodologies, thus disrespecting Indigenous communities and disregarding their ability to make autonomous conservation decisions" (p. 81). This is an example in which science is used as a mechanism to privilege one group in society over another.

Wildlife values and the urban/rural divide

Political ecologists study the influence that socioeconomic factors have on power dynamics of actors in populations. Some of these factors include average education level, economic status, and place of residence (Manfredo, Teel, & Bright, 2003) and have been correlated with a difference in social norms and values that inform attitudes towards wildlife.

Higher levels of education and economic status, as well as residence in urban areas all correlate with a decrease in utilitarian attitudes towards wildlife, according to the literature (George, Slagle, Wilson, Moeller, & Bruskotter, 2016). Therefore, when urban populations control a disproportionate amount of political power through votes, they are able to influence popular constructions of conservation issues. This could be the case with the grizzly bear trophy hunt ban, given the increasingly urban nature of B.C.'s population.

However, there are some recent studies that dispel this apparent divide and its influence on attitudes towards wildlife/natural resource management (Dwyer & Childs, 2004; McFarlane, Stumpf-Allen, & Watson, 2007). Migration of individuals and families from an urban setting to a rural area and vice versa, as well as increased participation of urban residents in ecotourism are cited as possible reasons for the softening of these geographical divides (Dwyer & Childs, 2004; Huddart-Kennedy, Beckley, McFarlane, & Nadeau, 2009). Indeed, positive attitudes towards animals, and large carnivores in particular, are also associated with experience and exposure (Kellert et al., 1996). The literature suggests possible influences on perceptions of and relationships with wildlife, but also emphasizes their complexity and context-specific nature.

Animal studies

Animal welfare

Animal welfare is different from but related to animal rights. It involves considerations of the humane and ethical treatment of animals (Foran, 2018). The animal welfare literature contests the anthropocentric view of animals as a commodity that should be dominated and exploited by humans (Belicia & Islam, 2018; Preece & Chamberlain, 2009). Instead, animals are seen to "have intrinsic value or worth, irrespective of their utility to other animals,

including humans" (Fox & Bekoff, 2011, p. 129). Individuals within a species are also afforded their own value as individuals, separate from that of their species as a whole (Foran, 2018; Lorimer, 2007). This ontology challenges the dualism of humans as being separate from the natural world, including animals.

The belief that the life of each individual animal within a species is important seems to be gaining momentum across Canada, but wildlife management policy does not fully reflect this. In his book *The Subjugation of Canadian Wildlife*, Foran states, "The number of people who continue to accept the instrumental, humane use of animals as a cultural norm but who would never consciously harm any living creature is growing. So is the number of those who recognize a wild being's inalienable claim to life" (Foran, 2018, pp. 71-72). Foran continues, addressing the lack of action by Canadian citizens to incite change in management policies and practices, explaining:

> But approving of wild animals and wanting to see them thrive in the wild, while trusting wildlife management to use the tools of science and common sense to strike a balance between human interests and wildlife health, is not the same as demanding that wild animals be treated as individuals, that lethal solutions be abandoned, and that ethical standards apply to nonhumans (pp. 72).

Much of the literature on animal studies in the social sciences and humanities seeks to further develop our view of animal-human relationships, in part through softening or eliminating the divide between humans/society and animals/nature. This has not yet translated into current policy decisions or management frameworks.

In practice, the treatment and management of wildlife does not place emphasis on individual lives, but rather looks at the health of the entire species (Foran, 2018). Management decisions continue to be influenced by the way in which society views nature. The ways in which wildlife and other animals are perceived is "materially affected by our degree of identity with the animals at least as much as by the logic of moral consideration"

(Preece & Chamberlain, 2009, p. 250). Ethical, moral and emotional considerations, among others, are factors that inform human perceptions and treatment of different categories of animals, including wildlife. Such factors change over time and across cultures, continuously informing our relationship with animals.

Animal-human relations

Indigenous communities and cultures around the globe have unique relationships with the environment, including wildlife. Many of these relationships include foundations of respect, of a mutual understanding of individual places within nature, and of related responsibilities (e.g. humans respecting other apex predators, or hunting prey species in sustainable ways) (Housty et al., 2014). Some species of wildlife hold a particularly distinctive status among certain cultures as kin or even a type of deity (Preece & Chamberlain, 2009). These types of connections to wildlife help to foster a reciprocal relationship between humans and non-humans (Panelli, 2010). Indigenous peoples of North America, including First Nations in British Columbia share similar epistemologies, and grizzly bears occupy a highly revered space within some communities (Bieder, 2005; Kellert et al., 1996). Stories about bears vary, with bears having a role in the creation of humankind, possessing healing powers, or controlling the change of the seasons (Bieder, 2005). These tales depict the spiritual relationship that Indigenous peoples of North America share with bears, resulting in taboos and ceremonies (Bieder, 2005).

With the introduction of Western or colonial values, a more utilitarian view of nature and wildlife developed in North America. Here, wildlife was/is perceived primarily as a resource to be exploited by humans, especially for economic gains (Foran, 2018). This designation as a resource is reflective of the human-nature binary and the hierarchical inferiority of wildlife

in such a dichotomy. But even within the resource hierarchy, it seems wildlife is viewed as almost trivial. Quoting Foran again from *The Subjugation of Canadian Wildlife*:

> Canada's place as a global economic force is dependent on its exploitation of natural resources like minerals, fossil fuels, agricultural products, and lumber. Being way down on Canada's hierarchy in terms of human benefit, wildlife are very minor players. Moreover, with their habitat requirements, wildlife often impinge on other resource extraction. Decisions as to winners and losers in these situations is not difficult to predict. [2018, pp. 42]

This perception of wildlife as a resource further ingrains the dominant tendency to view wildlife as a species rather than individual beings. This view of animals is contested by many animal welfare scholars, who propose that every animal has inherent worth; that simply existing affords animals the right to be here, and to be respected (Foran, 2018; Preece & Chamberlain, 2009; Riley et al., 2002).

The perception that has persisted of wildlife as a resource could have certain associated benefits. Non-indigenous, North American hunters tend to view wildlife as a harvestable resource. Thus, it is within hunters' best interests to ensure that populations remain healthy enough for harvest each year (Feldpausch-Parker et al., 2017). The NAMWC focuses on hunters and their roles in conservation (Eichler & Baumeister, 2018). This is namely done through conservation revenues garnered from hunting and the objective to maintain population levels for future generations (Organ et al., 2012). Although hunters have been framed as stewards of wildlife, it is unclear if this extends to large carnivores, like the grizzly bear, which are often in competition for resources and habitat with humans (Treves, 2009), and are rarely hunted explicitly for sustenance or wildlife management.

Perceptions of wildlife

The idea that wildlife has value, whether as a resource or intrinsically, is often accompanied by the purview that it should be protected (Cashore, 2014). However, not all

species are viewed equally in the eye of members of the public and other experts. Grizzly bears, for instance, are commodified and treated as a natural resource for exploitation and/or conservation, by both the B.C. public and Canada more broadly. Scholars and practitioners have researched economic advantages of different uses of grizzly bears, such as bear viewing and trophy hunting (Honey et al., 2016). As I have discussed in the previous section, the commodification of grizzly bears as a resource does not consider the value or rights of an individual bear.

Grizzly bears, and sometimes the hunting of them, are also linked to important cultural values and practices for many First Nations (Hamilton & Austin, 2002). Factors in addition to cultural affiliations and values have also been found to influence individual perceptions of grizzly bears and other large carnivores in North America. These include gender, stakeholder/community affiliation, education/economic status, etc. and the social norms that exist within each of these (Bruskotter, Vaske, & Schmidt, 2009; Preece & Chamberlain, 2009). Exposure to and knowledge about specific species are also factors that influence human opinions of species. This is especially important in the case of large carnivores such as grizzly bears, which have associated risk factors that can contribute to human fear of the species (Houston, Bruskotter, & Fan, 2010; Johansson, Sjöström, Karlsson, & Brännlund, 2012; Thornton & Quinn, 2009).

Attitudes towards wildlife are species-specific, and also context specific (Bruskotter et al., 2009; George et al., 2016). For example, the charisma associated with large carnivore species, such as wolves or grizzly bears, often elicits emotional responses from various stakeholders and the public, which can influence management policy and practice (Bruskotter et al., 2009; Kellert et al., 1996). However, context can also be an important variable. A grizzly bear viewed from a safe distance, catching salmon in the wild, will likely be

perceived differently than a grizzly bear prepared to charge while in close proximity to an observer. The former situation has associated benefits (e.g. an opportunity to appreciate an animal's majesty and ecological role in "nature"), whereas the latter would likely leave the human feeling vulnerable and frightened because of perceived risks and potential negative outcomes. The relative risk and/or benefits associated with an animal have been found to be key components of general perceptions of bear species (Booth & Ryan, 2016).

The grizzly bear has experienced varied historical representations and reputations throughout North America, over time. Throughout history, grizzlies have been 1) revered and respected; 2) feared and loathed; 3) regarded as pests or nuisances; and 4) seen as an icon of North American wilderness (COSEWIC, 2012; Kellert et al., 1996). They can be viewed through various lenses including scientific, economic, political, cultural and social ones. They are also considered as a focal species by some biologists and conservationists, meaning that they are sensitive to human impacts, changes in habitat and can be representative of ecosystem health (Dempsey, 2010). Perceptions of grizzly bears are also influenced by the human-like attributes we project onto them through anthropomorphism and charisma.

Anthropomorphism and nonhuman charisma

Anthropomorphism is the projection of human characteristics onto animals (Daston & Mitman, 2014). These characteristics (i.e. emotions; personality attributes; social relationships; physical similarities; etc.) can be projected onto an individual animal, or an entire species (Daston & Mitman, 2014). Anthropomorphism (i.e. portraying and viewing bears to be human-like in various ways) can influence public perceptions of wildlife. These public perceptions can then play an important role in the formation or alteration of laws and policy, as these often reflect cultural changes in society (Preece & Chamberlain, 2009). Most natural scientists and biologists tend to try and avoid anthropomorphic sentiments towards

their subjects, as these types of feelings are thought to have negative consequences on the "unbiased" ideologies of these branches of science (Lorimer, 2007; Preece & Chamberlain, 2009).

Aside from characteristics which we humans often project onto animals, individual animals and entire species also possess their own inherent charisma. This nonhuman charisma has been afforded to many different species, including large carnivores and grizzly bears through the designation of the animal as charismatic megafauna. Lorimer (2007) defines nonhuman charisma "as the distinguishing properties of a nonhuman entity or process that determine its perception by humans and its subsequent evaluation" (p. 916). They also describe this charisma as being comprised of ecological, aesthetic and corporeal. While charisma can be interpreted as either positive (cute and cuddly, etc.) or negative, it can prove to be an asset in promoting public awareness and opinion of certain conservation issues (Collard, 2013; Dempsey, 2010; Hovorka, 2018). Nonhuman charisma can affect the power and influence a species has on its own conservation, with animals operating as actors within a network, possessing their own agency (ibid.).

Non-human agency

There is a growing body of literature that affords non-humans and animals, not only the attributes of sentience and cognition, but also their own agency (Fox & Bekoff, 2011). Nonhuman agency is the power an individual (human or non) has to influence and alter the world around them (Dempsey, 2010). In the paper, *Tracking grizzly bears in British Columbia's environmental politics* (2010), Jessica Dempsey explores the impact of the non-human actor, the grizzly bear, in the formation of the GBR. Dempsey describes the role of

the bear as:

> The grizzly bear in the GBR is not an inert, passive object that environmentalists use as a pawn in their games, or just a symbol. The grizzly bear is a nonhuman whose presence in the space and in its past and present relationships with others, influences the `state of affairs', helping give shape to new political-economic geographies in B.C. (p. 1142).

This stance attributes value and power to grizzly bears and their position within human-nonhuman networks.

Not all nonhuman agency is created equal. Charisma (and other characteristics) that grizzly bears possess facilitates their impact on conservation campaigns such as the formation of the GBR. It influences their agency and helps to allow for the alteration of environmental politics in habitat they occupy, which extends to other flora and fauna who may not be granted the same level of influence. As Hovorka explains, "animal lives are shaped by their power relative to other animals, as enmeshed with human relations and orderings in hierarchical networks. Thus, human-animal relations necessarily shape the haves and have-nots of animal social groups (i.e. animal-animal relations)" (Hovorka, 2018, p. 5). Hovorka continues, while referencing Dempsey (2010), that in the case of the grizzly bear in B.C., "human privileging of grizzly bears brings with it policies and resources that other species do not directly receive (although they may benefit indirectly)" (p.6).

Natural resource and wildlife management

Science behind the grizzly bear population

In addition to being science-informed, conservation efforts are often designed to consider the protection-related classification(s) of an animal species as related to population numbers and population health (Artelle et al., 2018). Thus, sound population science is central to conservation assessment and protections. While a good deal of scientific research has been focused on bears and grizzly bears more specifically (Hamilton, Heard, & Austin, 2004;

Housty et al., 2014; McLellan, Mowat, Hamilton, & Hatter, 2017), there is still a fair bit of uncertainty about the grizzly bear population, its health and mortality rates in B.C., at least according to some researchers (Artelle et al., 2013; McLoughlin, 2003; Peek et al., 2003). Grizzly bear population numbers are, however, very difficult to determine for a number of reasons (Mowat & Strobeck, 2000). First, the home range of grizzlies can be quite large (Gibeau et al., 2002). For instance, the average range for a female bear is approximately 400 km^2 (Interim Assessment Protocol for Grizzly Bear in British Columbia, 2017), while a subadult (after separation from its mother until breeding maturity is reached) male grizzly bear male can be cover over 11,000 km^2 (Gau, 2004). This, among other variables (e.g. topography; habitat types; food availability) makes estimating the total number of bears in B.C. using regional populations or using geographical parameters difficult.

Other determinants of population fitness, such as reproductive productivity, also need to be evaluated when trying to establish and assess population numbers (McLoughlin, 2003). Female grizzlies are often considered separately from the total population, as their survival and reproductive success are crucial to the future of the species (Hamilton & Austin, 2002). Grizzly bears have slow reproductive rates (Artelle et al., 2013) and female grizzlies do not reach sexual maturity until relatively late ages as compared with other species. Grizzlies produce their first cubs at age six, on average (COSEWIC, 2012; McLellan et al., 1999). Cubs also stay with their mother for up to two years, and the mother does not mate during this time (COSEWIC, 2012). Another consideration is that according to some studies, females are thought to be most susceptible to human impacts on the environment (Gibeau et al., 2002).

Grizzly bear cubs, like all young wildlife, face many struggles when it comes to surviving to maturity. Adult males are known to kill cubs in order to draw their mothers away from

their care, and mate with reproductive females (Wielgus & Bunnell, 2000). Even when cubs do survive attacks from competing cannibalistic males, they face many other obstacles to survival. Because grizzlies are an apex species, without any natural predators, survival of individual grizzly bears is largely influenced by anthropogenic impacts (Artelle et al., 2013; Linke, McDermid, Fortin, & Stenhouse, 2013). Human activities such as logging, coal, oil and/or gas extraction, and the roads created to undertake these activities can have major effects on grizzly bear habitat, and therefore their population numbers (Gibeau et al., 2002; Linke et al., 2013). Encroachment of neighborhoods into grizzly bear habitat can also cause habituation to humans, increasing the likelihood of human-caused mortality (Gibeau et al., 2002).

Science behind conservation

In the past several years, there has been much debate concerning grizzly bear population estimates and uncertainty in mortality rates in relation to the B.C. hunt, particularly with respect to the B.C. trophy hunt (Artelle et al., 2013; McLellan et al., 2017; McLoughlin, 2003; Mowat & Strobeck, 2000). BC's grizzly bear populations are thought to be able to withstand a maximum (sustainable) total number of human-caused grizzly bear mortalities between 4% and 6% of the population (McLellan et al., 2017). The most widely cited study, performed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), estimated the population to be approximately 15,000 in BC (COSEWIC, 2012). However, the COSEWIC report and other studies concede that the current population estimates are exactly that – estimates – and are therefore inherently uncertain (Artelle et al., 2013; Boyce et al., 2016). Yet, studies do exist which present findings that support the sustainability of the hunt (Boyce et al., 2016; McLellan et al., 2017). Therefore, while the hunt may be highly

regulated and sufficiently managed, not having established, precise population numbers presents a problem when calculating sustainable percentages of that population that can be designated for harvest. Currently, there are procedures within the management of the hunt that do "not adequately account for uncertainty in populations and unreported mortalities, and is not transparent as to how the ministry considers uncertainty when allocating hunting licences" (Auditor General, 2017, p. 7).

Scientific-based management, focused on biology and ecology, has however been the standard for grizzly bear management in B.C. (Hamilton & Austin, 2002). Top-down management, typically overseen by a government agency has been the framework typical of most conservation approaches (Chaffin et al., 2014). In recent decades, it has become increasingly evident that this style of management has many problems. First, the science itself can be imperfect. Although it is supposed to provide factual information gathered objectively, this may not always be the case. Objectivity can be compromised, and scientific findings can be interpreted in different ways, which can make it difficult or impossible to reach a consensus (Ludwig, Hilborn, & Walters, 1993). Furthermore, science-based management can be carried out in diverse ways, and is not carried out in a political vacuum. One branch or ministry of the government, could for example, wield an unfair amount of power over decision making (Clark & Slocombe, 2011). For instance, a case study of the Foothills Model Forest in Alberta (Clark & Slocombe, 2011) revealed that simply re-shuffling one group of participants involved in a collaborative project for grizzly bear management caused the failure of a well-researched and designed grizzly bear conservation strategy. Finally, human and social factors that affect the ecosystem, and bear populations within it, are not usually given adequate consideration within top-down science-based management (Chaffin et al., 2014).

Growing interest in holistic management

Since the early 2000s, a more inclusive type of resource management style termed adaptive governance (also commonly referred to as adaptive co-management) has been growing in popularity in B.C. (Chaffin et al., 2014). Adaptive governance avoids oversimplifications that can be associated with bureaucratic science-based approaches, by incorporating complexities of the social climate into ecosystem management plans. This is done, for example, by including input from stakeholder groups and communities during decision making processes (Ascher, 2014; Richie et al., 2012). Adaptive governance as an approach positions natural resources and their management contextually, and requires a flexible framework, allowing for adaptations to address changes in contributing social and ecological factors (Chaffin et al., 2014). It is a more holistic approach which calls on related actors to understand conservation as best practiced when emphasis is placed well beyond governance of a single natural resource, or a single ecological area (i.e. a forest or watershed). The management scale employed in this case is one of social-ecological systems, with greater appreciation for "human dimensions" as part of the environment (Cheng, Kruger, & Daniels, 2003).

Chapter 4 – Findings

Official rationale and evidence of public opinion for ban implementation

Doug Donaldson, Minister of the MFLNRORD, suggested that the official basis for the 2017 grizzly bear hunt ban was "mostly a social values issue" (CBC, 2017). Media coverage of this notably different type of announcement (i.e. in contrast with claims of "the best available science" that often accompany conservation and management announcements) set the foundation for criticisms, praise and other reactions. Reactions captured by the media are from members of the general public, representatives from non-governmental organizations

involved with grizzly bear conservation, people whose livelihoods had incorporated the now illegal hunt (e.g. guide outfitters), grizzly bear scientists, representatives and staff members from different political parties, and members of some First Nations communities.

Official government statements about the ban, also captured in the media, repeatedly presented the ban as stemming from and reflecting public opinion. For example, one article in the *Tyee*, "NDP Government to End Grizzly Bear Trophy Hunting" (Gilchrist, 2017) suggests:

> "By bringing trophy hunting of grizzlies to an end, we're delivering on our commitment to British Columbians," Doug Donaldson, Minister of Forests, Lands, Natural Resource Operations and Rural Development, said. "This action is supported by the vast majority of people across our province."
>
> A public opinion poll conducted by Insights West in February 2017 found strong opposition to trophy hunting across Canada (80 per cent), including 90 per cent of British Columbians.

Proclamations such as this, which characterize this new ban as representing the values of a majority of British Columbians are commonplace in media coverage of the announcement. The lack of public support for the hunt is presented as a fact, and often supported by statistics from polls conducted by Insights West (a market research company in Vancouver) and the government consultation process. The government's public consultations preceding the ban (October 2017 through November 2017) were comprised of two parts: 1) responses to the policy intent papers on the government website; and 2) meetings with First Nations and various stakeholders. The number of responses to the online papers (4,180) and the percentage of those responses who were in favour of the ban (78%) are available on the government website (see Appendix G) and are often cited as supplemental proof of public opinion supporting a ban. Details concerning which or how many First Nations communities or stakeholders were involved in the meetings are not discussed in the government's

description of the consultation process in their statement (see Appendix H), nor are they specified in media coverage.

Public opinion by the numbers

There are very few instances in which polls or the first aspect of government-led public consultation (online responses to the policy intent papers) are questioned in present media coverage of the 2017 ban. The following excerpt illustrates a common way such statistics are presented:

> Forests Minister Doug Donaldson said the decision came about during the ministry's consultation process on implementing the end of the trophy hunt, first announced in August. "It's mostly a social values issue," Donaldson said. "When it comes down to it, this species is seen as an iconic species for B.C., and people just weren't willing to accept the hunting of grizzly bears anymore in this province."
>
> According to Donaldson, 78 per cent of almost 4,200 respondents called for an end to the hunt altogether. (CBC News, 2017)

The percentage presented and the word iconic suggest a shared valuation of the species as important. No breakdown of geographic distribution or demographics for online consultation respondents is provided.

Polling results, which are also presented as factual data for public opinion across the province, tend to be reported with slightly more detail. As reported in one *Vancouver Sun* article:

> About three-quarters of rural British Columbians oppose the grizzly bear trophy hunt, according to an Insights West poll conducted in March for an ecotourism group.
> The poll found an average of 74 per cent opposed grizzly trophy hunting in five Liberal ridings: Kamloops-North Thompson, Boundary-Similkameen, Fraser Nicola, Cariboo North and Kootenay East.
>
> A 2015 Insights West poll found that 91 per cent of British Columbians oppose the grizzly trophy hunt (Pynn, 2017).

This excerpt also suggests a perceived split between opinions of urban and rural residents. I will discuss this in greater detail later.

Polls are also present in media pieces on the 2001 moratorium, although they are not as prevalent. Details such as who conducted the poll, or information on who was polled is not provided by the media coverage of polling on the 2001 moratorium. Similar to the 2017 numbers, the results are presented as being province-wide. For example, in *The Globe and Mail* article, "B.C. ban on hunting grizzly bears may be temporary" (Matas, 2001) states, "A group of 68 biologists have called for a moratorium until comprehensive population studies were completed. More than 100 tourism operators have also called for an end to the hunt. The most recent public-opinion poll, taken five years ago, showed 77 per cent of British Columbians wanted a ban". The inclusion of scientists and other stakeholders' opinions in this example lend further credibility to the numbers presented.

In contrast to the media survey, the experts that I interviewed were aware of the polls and consultation process, and questioned and critiqued them. For one, the phrasing of poll questions, specifically, was met with skepticism by 5 of 30 of interview participants, as evidenced in this response by participant G3:

> I saw those polls and I questioned their validity, like I question the validity of any poll. Part of it is the way the questions are worded, can influence the answer that people give. I mean if the question is "do you support the barbaric slaughter of grizzly bears for the purpose of trophies?", people are going to say no. And if the question is posed, you know, "do you support the scientific management to have a sustainable harvest of grizzly bears?", people may have a different answer.

This participant continued to question the scope of the polls by asking, "So, how valid are polls, you know? I just question all of them, all the time. Do they really get a representative sample? Do they sample enough people? What are the other biases? Things like that". Similar questions regarding validity and scope are also present with respect to the online portion of government consultation.

Experts also made suggestions about possible particular geographies of opinions. Comments about geographies of correspondents emerged as a prominent issue in the interview data concerning polls or public consultation. The theme of rural/urban divide in B.C. was discussed by 19 out of 30 (almost two-thirds of) participants. Some interviewees raised questions about places of residency represented in online responses, and the role that urban influence might have played.

The comprehensiveness of feedback gained from the online policy intent papers was also challenged by some experts. For instance, H9 stated:

> I don't care whether it's to open or to close but, if it's done by polls and public opinion, it needs to be a little bit more robust than 4000 people submitting on a website when they don't even know if they were B.C. residents, or it was a campaign or whatever.

Participant G7 confirmed the suspicions of H9, stating

> I think you have to say where you're writing from. I don't know if there's any kind of tracking though. Like, did you, you know you said you're from Prince George, but you're from Vancouver – I don't know. But I think that engagebc is a lot further along than… we simply posted it on our website - the proposal - so obviously we couldn't track… well, let's just say that 90% of the comments came from Vancouver – we just wouldn't know.

These statements suggest that some grizzly-interested experts questioned the validity and inclusiveness of the provincial government's engagement process, as well as the corresponding results.

<u>Public opinion resulting from meetings</u>

With respect to the second aspect of government consultation before the ban, the meetings conducted with stakeholders and First Nations, little information can be found on government websites or in the media. Vague statements such as "Emails and letters were also sent to wildlife stakeholders and non-government organizations involved in grizzly bear research and management. Several meetings were held with most of these organizations" and "Meetings were also set up with First Nations" are found on the B.C. government website

(see Appendix G). The media coverage is similarly lacking in detail when it comes to this part of the process. For example, one *CBC* article reports, "Donaldson said the consultation process also involved face-to-face meetings with hunting associations, guide outfitters and First Nations" (CBC News, 2017). These examples illustrate a lack of transparency in the consultation process.

Data from both the media survey and the interviews suggested a distrust of this consultation process. In media coverage, questions arose about both: a) who was consulted; and b) the legitimacy of the motives behind the consultations. The media also captured certain stakeholder groups and members of First Nations communities expressing frustration about exclusion from the government consultation period. In one article, comments by John Rustad, the MLA for Nechako Lakes and the former Forests and Aboriginal Relations Minister in the recent B.C. Liberal government, was paraphrased as asking "why Donaldson would announce the policy and the deadline without consulting resident hunters, guide-outfitters or aboriginal communities" (Fletcher, 2017). Another example states:

> Mark Werner of the Guide Outfitters Association of B.C. said he was disappointed that his group wasn't consulted extensively during development of the new regulations. He argued that the true threat to grizzly populations isn't hunting. "If you want to do something great for grizzly bears, let's work on habitat. Shutting down small businesses in this province isn't going to help grizzly bears," Werner said (Johnson & Lindsay, 2017).

In both examples, frustrations over lack of access to the decision-making process by certain groups or organizations is evident.

In my interview data, expert opinions of the second part of government consultation on the 2017 ban echo many of the same criticisms present in the media. Experts raised the lack of consultation with certain stakeholder groups and First Nations, and questioned the geographic distributions of those consulted during the government process. Expert N2

illustrated these ideas, stating:

> Well I definitely think that there should have been more consultation with First Nations, with guide outfitters, with people who live in remote areas in the north. I think the decision was largely based on opinions of people who live in the south. You know, animal lovers and what not. I don't think that the safety of people in the back country was really taken into consideration, or how many ungulates are taken by grizzlies. So, the predator/prey ratio in our area, you know that wasn't taken into consideration, so…

In reference to the legitimacy of the consultations (i.e. whether the result was pre-determined by government), participant H1 said:

> Well I was on the team with the B.C. Wildlife Federation[3], which the government consults with. We were consulted in terms of the initial response from government, which was requiring meat to be – all edible portions to be brought out. We were not consulted on the ban.

When asked to clarify that this response was referring to the initial trophy hunt ban, rather than the expansion to the full ban, the participant explained, "Right. So, yeah. We weren't given any heads up other than maybe the day before the announcement was made, on the December decision".

Summary of overview of public opinion on government consultation processes

The motivations for and the legitimacy of the government-led consultation process was met with varying degrees of skepticism in both the media sample and the interviews I conducted. Both questioned the comprehensiveness of the consultation including geographical distribution, whether those who responded provided an accurate representation of the province, and if some groups/organizations were disproportionately represented.

[3] The B.C. Wildlife Federation is an organization that represents and advocates for resident hunters, outdoor recreationalists, etc. According to their website (https://bcwf.bc.ca/), their mission is "To protect, enhance and promote the wise use of the environment for the benefit of present and future generations," and to:

- Ensure public access to recreational and outdoor activities, fish and wildlife resources and crown land.
- Provide science/fact-based solutions for its members and other stakeholders in B.C.

Sometimes, a higher level of skepticism was also expressed. One *CBC* article stated, "There's also the question of whether the consultations have changed the government's mind on any topic, or just provided cover for what it already wanted to do" (McElroy, 2018).

Both the expert interviews and the media sample include critiques of the public consultation process employed by the (previous) Liberal government regarding proposed changes to hunting regulations for grizzly bears and wolves in 2005. In that case, the Liberal government also collected public feedback through their website. However, the criticisms then mainly center on technical issues and timeframe, as evidenced in an article entitled "Consultation on hunting changes botched: environmental group" (Carter, 2016) published by the Dawson Creek Mirror:

> Due to widespread technical difficulties, the proposals were re-opened for feedback on Jan. 8 with a deadline of Jan. 31. "During the initial consultation period, Pacific Wild was contacted by dozens of individuals who found the site difficult to use or were unable to open new accounts," the group said. One B.C. resident, Joan Hendrick, who learned of the opportunity to provide feedback via Pacific Wild's Facebook page, said she tried repeatedly to enter her comments but was unable to.

In an interview about the same proposed hunting regulation changes, conducted by Radio West (2015), Dr. Chris Darimont, (described as a professor and activist with Raincoast Conservation Foundation by the author, but self-described as a "hunter and naturalist") suggests imbalances or biases in the process. He is quoted as saying, "the lack of notice about the consultation period is fairly typical, and shows the government has "preferred constituents" on these matters — especially those involved in the trophy hunting business" (CBC Radio, 2015).

Criticisms about which "public" was consulted and how, the short consultation timeframe, and whether or not those consulted constitute a valid representation of the populace of B.C. are present in media coverage. At times, these critiques involve questions about the

geography of responses. Regional differences within the province – namely the split between urban and rural, whether real or perceived – is a prominent theme in my data. I will now elaborate on this theme.

Geographies and cultures of public opinion in B.C.

The suggested divide between British Columbians that emerged during my media analysis is one of a perceived split between urban and rural populations. At times, people seem to conflate the descriptor "rural" with "hunter", contrasting hunters with urbanites. For example, one *CBC* article states, "Many hunters, however, say that the trophy hunt is important to B.C.'s wildlife management strategy, and is largely misunderstood by people in urban areas" (CBC, 2013). Another example published in an opinion piece suggests, "The lines are drawn. City folk don't understand how important it is to British Columbia's already depressed rural economy to kill bears. To hear the guide/outfitters tell it, the rural economy is death-based" (Sullivan, 2001). A majority of articles I reviewed (23 out of 31) that contained themes concerning geographies of public opinion about the hunt tend to reinforce this theme of the existence of an urban/rural divide on hunt-related understanding and/or opinions.

The idea of a split between urban and rural residents is also strongly represented in the expert interview data. The theme of a perceived (and yet not well articulated) urban/rural divide, and the influences of such on the decision to enact the ban are discussed by 19 out of 30 – almost two-thirds of participants. Talk of public opinion is often associated with a perceived lack of bear-related connections and/or knowledge on the part of the majority of B.C. residents (who live in urban centers or the lower mainland). Often, members of the public are portrayed as not very knowledgeable about grizzly bears, the management of grizzly bears, and hunting. This theme appeared in 63% of the interviews that I conducted. The idea that the majority of the public are misinformed or disconnected from bear

management was also often associated with the split between rural and urban geographies in the province. Participant N4 illustrated this association by saying:

> And if we continue to rule for the masses in this sense - the people that are uninformed - we will see caribou disappear, for instance. And that would be a real travesty, for all of us. And it all, it comes down to misinformation, people not understanding the realities of nature. It's urbanization. What the hell are you going to do about it? I don't know, other than bring management back to the local level.

This response references caribou population-related concerns as potential outcomes of possible increased grizzly bear populations (and therefore predation). This was a common argument in favour of the hunt, which will be discussed later in this chapter.

Softening of a geographical divide

Interviewed experts seemed to agree that the population of B.C. is split between urban and rural opinions on the grizzly bear hunt. Media coverage however, includes a theme counter to this. The idea that geography or place of residence is unlikely to impact opinions on the grizzly hunt is present as an outlying theme in the media coverage. There are also suggestions that any existing urban/rural divide may be softening over time. Articles that include the argument that no divide exists within the province almost always reference one of the Insights West polls. For example, an article published on the *Prince George Citizen*'s website states:

> About three-quarters of rural British Columbians oppose the grizzly bear trophy hunt, according to an Insights West poll conducted in March for an ecotourism group.
>
> The poll found an average of 74 per cent opposed grizzly trophy hunting in five Liberal ridings: Kamloops-North Thompson, Boundary-Similkameen, Fraser Nicola, Cariboo North and Kootenay East. A 2015 Insights West poll found that 91 per cent of British Columbians oppose the grizzly trophy hunt. (Vancouver Sun & Prince George Citizen, 2017)

This example is one of the rare instances in which some details (i.e. specific regions polled and how they voted) of the poll being referenced are included. More often than not, the

articles referencing this Insights West poll only mention the results as stated in the headline, "New poll shows 74 per cent of rural British Columbians oppose grizzly trophy hunt" (Pynn, 2017). They typically do not discuss or question the geographic distribution of opinions, related patterns, or polling practices.

Further, some editorials and columns use strong language to emphasize the unity of opposition to the hunt, and the absence of a divide on the issue. For instance, a column published by *The Globe and Mail* (Mason, 2015) quotes the vice president of Insights West, Mario Canseco:

> A conversation with two hunters does not create a provincewide trend, in the same way a conversation with two vegans does not create a provincewide trend. The argument of urban versus rural has been thrown about with no evidence whatsoever to try to create a controversy over trophy hunting.

Canseco then claims that " there is no controversy" and that "trophy hunting is thoroughly despised throughout the province" (Mason, 2015). By contrast, 29 out of 30 interview participants suggested that indeed, there is likely a strong correlation between geography/place of residence and opinions on the grizzly hunt.

Experts expanded on this discussion by presenting factors that they see as contributing to an urban/rural divide on opinions about grizzly hunting. They identified two major perceived influences: 1) misinformation; and 2) connections/lack of connections to grizzly bears. The information (or misinformation) that informs public opinion was discussed by many interview participants, often alongside statements about connections with grizzly bears, nature and/or land. Interviewee attention to factors that they believe shape public opinion is important given that government announcements stressed public opinion as central to

enacting the ban. For example, participant H6 combined these two factors by stating:

> In my opinion there's been a lot of misinformation out there, and people have made the link that hunting grizzly bears is morally wrong, because it's just quite an easy sell. You can sell someone who doesn't hunt, or doesn't have an attachment to the wilderness, you can show them a picture of a dead animal and they can make a judgement in about a split second. But to explain the whole story behind wildlife management and what you do and why you hunt, I mean you gotta sit down with someone for several hours.

H4, when asked about public opinion being in favour of the ban stated:

> You know that's a difficult thing, the people in rural communities probably aren't but, politics in B.C. is more or less driven by the large centers like Vancouver, Lower Mainland stuff like that. There's a lot of people there that don't really have any direct connection to the land base at all. So, I think that has an influence on it.

Interviewees also noted the role of media in informing the public. Participant N3 spoke to the significance of media coverage in the 2012 ban in the GBR by saying:

> I mean part of it was in 2012, like I said, bears were in the media for maybe a day or two on the back part of a newspaper. Our strategy was to keep bears in the media all year and so all the work I told you about, whether it was a documentary, whether was a poll of British Columbians, whether it was our economic analysis, whether it was some of the science reports… all of that, we decided to put - saturate the media. Every month there'd be something different and bears would be in the media all the time. And I think a big part of it is people just didn't have the information.

Participant H9 also discussed the importance of messaging, including imagery, that the public received:

> Obviously, you know where I come from, the pro-hunting side has done a very poor job of communicating the value of grizzly bears, the value of wildlife, our role in their management. I think that we've done a poor job of explaining conservation, sustainable use. And I think that the anti-hunting community did a very good job of imagery and communicating out their message.

Indeed, competing facts and numbers appear in the media sources I surveyed. These figures are used in reference to grizzly bear populations numbers, economics of grizzly bear trophy hunting and grizzly bear viewing. Disagreements between scientists and biologists are also reported. Finally, misleading language such as "threatened" or "endangered" are used to describe grizzly bears in B.C. in approximately 50 articles that I reviewed. The

public seems to think that grizzlies are at risk, according to a report that summarizes online responses received by the Province during the consultation before the ban expansion. The "Engagement Report" provided to MFLNRORD (Alan Dolan & Associates, 2017) lists the view that grizzly bears are endangered as the third most frequently expressed reason respondents were in favour of the ban. Grizzly bears are not officially deemed Endangered in British Columbia or Canada.

Is the public misinformed on hunt/population numbers and sustainability of the hunt?

Media coverage of the ban includes conflicting arguments about the science that informs grizzly bear management. One theme present is that estimates of the number of grizzly bears are not fully agreed upon by scientists. The most recent government estimate that B.C. is home to 15,000 grizzly bears is the most cited population number (Britten, 2016; Kines, 2017; The Canadian Press, 2018). However, there are alternative population estimates and trends also present in the media, though these alternative figures appear less often. One *CBC* article, for instance, states "estimates there are roughly 15,000 grizzly bears in the province, but those numbers have been disputed by wildlife conservation groups and researchers from SFU and the University of Victoria" (The Early Edition, 2015). These discrepancies also span the media temporally. For instance, an article regarding the 2001 moratorium published in *The Globe and Mail* states "a temporary ban was necessary to allow time for scientists to count the bears. The provincial wildlife branch estimates the bear population to range between 10,000 to 13,000 but anti-hunt groups use the estimate of 4,000 to 6,000 bears" (Matas, 2001).

In the media, independent scientists are also portrayed as being at odds with each other when it comes to the accuracy of population estimates and the corresponding sustainability of

the hunt. On one hand, an article published by *CBC News* (2017) showcases independent scientists' claims that the government's grizzly bear population estimate is too high:

> About 250 grizzlies are killed annually by hunters in B.C., a number Natural Resources Minister Doug Donaldson said in August is "sustainable" for the population estimated at 15,000 bears. However, the open letter disputes the claim. "Grizzly bears are a species at risk," said Wayne McCrory, a bear biologist and Valhalla Wilderness Society director, in a news release. "For years independent scientists have warned the government B.C. may have far fewer grizzly bears than we think."

Yet, there are also examples of statements that suggest the opposite, such as "Wildlife management has 'solid scientific underpinning' and [the] province should accommodate grizzly bear hunting and viewing" (Fletcher, 2016) . The discrepancies in media coverage of grizzly bear population numbers and the science which underpins grizzly bear management is, no doubt, contributing to public confusion.

Some experts mentioned the confusion that the public might experience due to such inconsistencies in available information. Participant M1 described the challenge of competing information, saying:

> The public gets confused all the time. So, there's two aspects of public opinion: they don't believe the numbers and they don't believe the scientific conclusions about sustainability or they just think it's not right to hunt bears and leads to the same conclusion in both. Regardless of what they use, they come to the same, the public comes to the same conclusion.

Participant H6 also commented:

> It was one of the most well managed hunts we had, sustainable populations, everything. And it was thrown out the window. And people have been led to believe that [by] shutting down the hunt they are saving a species. And the species wasn't at risk for the most part.

These comments reflect not only the perception that public opinion on the ban is based on incorrect or incomplete information, but also speak to the idea that public opinion favours personal beliefs and values over scientific concerns – in this case, regarding the sustainability of the hunt.

Arguments in support of the grizzly hunt

In the media sample, hunters are among those quoted as supporting the hunt. They are often quoted defending their actions with three arguments in favour of the grizzly bear hunt (Table 2): 1) the economic aspects of the hunt; 2) hunting as a tool to prevent human-bear conflict; and 3) concern for the animals. The economic value of the grizzly trophy hunt is comprised of two arguments in the media. The first centers around the income generated from the grizzly hunt for individuals, small businesses, and communities in remote areas. The second focuses on the funding for conservation and research that is garnered through licensing fees for the hunt. Media coverage of conservation funding from hunting licenses is less prevalent than arguments about livelihoods. The same trend is true in the interview data, where arguments centered on the hunting as a source of conservation funding occur half as frequently as those about gains via individual and community livelihoods.

Table 2: Economic arguments supporting the continuation of the grizzly bear hunt in B.C.

Main point(s)	Sample quotes
The ban negatively impacts livelihoods and communities (especially northern interior/rural)	"the New Democratic government has abandoned rural British Columbia with the ban – a move he said will affect hundreds of jobs" (Bailey, 2017) "you'd see more hunters coming to those communities, like where I lived, and it would help those small businesses. You'd see the hotels fill up and it would be hunting vehicles" (Participant G2)
The ban decreases funding for grizzly bear conservation via loss of licensing sales	"hunters in B.C. pay a conservation surcharge on their licenses, contributing $3-million annually for wildlife management" (Hume, 2014) "Well because the hunt was banned, so our board was for grizzly bears, was dismantled. So now there is no dedicated - I was just told a couple days ago - there is no dedicated fund for grizzly bear research anymore" (Participant S5)

The second pro-hunt argument I found in the data was an anthropocentric fear that by no longer harvesting large, older male grizzly bears for trophy purposes, there would be more large and aggressive bears and increased human-bear conflicts. This theme is present in both the media and the interview data. However, some experts suggested habituation as another reason for increased bear-human conflict. Increased habituation, or lack of fear of humans, is not presented as a potential cause for increased conflict in the media survey.

Table 3: Arguments for a potential increase in human-bear conflicts post-ban.

Main point(s)	Sample quotes
The ban potentially increases grizzly bear populations	"The Guide Outfitters Association warns that, now that the hunt has been cancelled, well, it just won't be safe to go out into the woods. More of them damned bears." (Sullivan, 2001) "We're going to see a whole bunch of big, old mature grizzly bears. It's already, we're already seeing it. The big, aggressive male bears - they're not scared enough." (Participant H5)
The ban potentially increases habituation to humans	"Well when you could legally shoot a bear, if it was a good-sized bear you know it got shot at a few times, they probably got wise or they died, right? So now, a gunshot doesn't mean anything except somebody's killed an animal and there's going to be a gut pile there" (Participant H4) "it's too short of a time period to starting saying, "well the hunt's gone so their risk-averse nature would change in one season" I don't think. But, at the same time, that now that the hunt has ended, there's the expectation that it will - these bears will become emboldened. And certainly, it's been the case in the Northwest Territories" (Participant N4)

Lastly, and least prevalent is the concern for the health of grizzly bears (individuals or the population). In this argument, the hunt is constructed as an activity that helps alleviate certain health or population pressures on bears, thus preventing undesirable occurrences. For individual bears, the hunt is framed as a preventive health measure to prevent older bears from suffering physical ailments such as decaying teeth. The claim that the hunt is beneficial for overall grizzly population growth was referred to by one author as "the cub avenger"

argument (Erickson, 2017). In this case, it is argued that harvesting large adult males reduces their known practice of killing cubs. Thus, the removal of predatory males is constructed as contributing to population growth and renewal.

Table 4: Pro-hunt arguments focused on concern for bears.

Main point(s)	Sample quotes
Age-related ailments	"the argument for regulated, properly controlled commercial hunting is that the money that goes from shooting a very old infirm animal goes back into the protection of the other species"(Davison, 2016)
Cub avenger	"they [large adult males] are notorious for eating cubs in order to breed that female again. Taking large boars can in fact potentially increase overall bear numbers" (Erickson, 2017) "you get these older boars that just, they specialize in- usually they'll kill a lot of calves but also kill a lot of cubs too" (Participant H6)

Portrayals and perceptions of grizzly bears

The media sample I surveyed offered a complex and uneven set of constructions and portrayals of grizzly bears. All at once, they are portrayed as:

1) **positive:** the grizzly bear as iconic, a symbol of wilderness, an indicator of ecosystem health, etc.;
2) **negative:** a focus on problematic bears – grizzly attacks, "nuisance" or "problem" bears, competing with humans, having adverse effects on prey populations, etc.;
3) **vulnerable:** bears portrayed as needing protection, being misunderstood, etc.;
4) **a resource:** bears as a commodity to be hunted or viewed, as belonging to the public, etc.; and
5) **human-like or anthropomorphic:** bears characterised as displaying human characteristics such as emotion, possessing sentience, etc.

Combinations of these categories of portrayals are also presented in the media. The most common is the inclusion of negative and positive portrayals (especially concerning well-

known individual bears) in reference to management of human-bear conflict. The most heavily reported instance, which occurred in Alberta, concerned a well-known bear, Bear 148. Coverage often referred to behavior exhibited by Bear 148 as negative, alongside community support for saving the bear. This is evidenced in the title of *CBC* article, "'We want this bear alive': Thousands rally to save grizzly that's chased humans" (2017). Other combinations of portrayals (i.e. positive and resource, positive and anthropomorphic, or resource and anthropomorphic, etc.) occur less frequently.

The expert interview data generally included the same five representations found in the media survey, with one additional portrayal: bears as *not* unique from other species. The interview data were more heavily weighted towards positive opinions about and constructions of grizzlies. Furthermore, interview participants more often included combinations of one or more of these portrayals in statements concerning their views of grizzly bears. For example, participant G3 included elements of positive and vulnerable (misunderstood) portrayals when describing grizzly bears:

> I mean, like I said I worked in the woods for 20 years and never had a gun with me, I had bear spray, I never had an incident. The only person I know who got hurt by a bear was because he panicked, turned around and ran off a cliff. So, you know it was his fear that hurt him, it wasn't the bear. Like, he literally turned around and ran off the cliff cause this bear was there. And he probably just could have stayed calm and he wouldn't have been hurt at all.

Similarly, participant H2 described grizzly bears as positive, negative, resource and vulnerable:

> Normally there's no issue but um… problem bears would get a few chances to not be problem bears before they got shot. Um, now when there's no hunt that that's… they have no value they're just, they're just not the same prestige among the hunting community now. So instead of the first time they come into camp and cause trouble they'll probably get shot, where before they'd come in two, three times and everyone would tolerate it and… I mean people are worried about their health and welfare; obviously bears come into camp and I think that tolerance will go by the wayside with, in this new world order. Which is sad.

Participant S1 presented a combination of positive, negative and vulnerable portrayals in the following statement:

> Oh, I'm definitely on the positive side. It's just part of western Canada ecosystem. I think they bear the brunt of a lot of stuff that's not their fault. There's a lot of misconceptions that I constantly try and work through, like I do a lot of human wildlife conflict stuff and just even saying it in that order people like to put bear human conflict. But all those conflicts start because of people so I keep trying to say human bear conflicts, so it's just a lot of perception work to try and get stuff through.

The combination of different portrayals that emerged from the expert interview data are indicative of the complex nature of valuations assigned to grizzly bears by experts. However, all responses included positive perceptions as part of their combinations.

The positive portrayals of grizzlies forwarded by the experts support the idea that increased exposure and knowledge corresponds with more positive opinions (Houston et al., 2010; Johansson et al., 2012; Thornton & Quinn, 2009). Yet, despite the generally positive attitude towards grizzlies that emerged from the interview data, I found one representation of grizzlies (not present in the media survey) that was unexpected. This view was that grizzly bears are not unique as a species. One participant, H1, illustrated this idea by stating, "My personal opinion is… I don't know they… I don't like the word iconic with any species. They're a top predator, there should be grizzly bears on the landscape, there should be objectives for how many bears there are in a grizzly bear population unit both of females, males and cubs. And there should be objectives for habitat – like, I don't want to see them disappear". Participant M1 shared a similar perspective, "I don't think of bears as different, ecologically than any other species. I don't think there is something special about bears, or grizzly bears, or anything".

Framings of hunters and grizzly bear hunting

The homogenization of hunters and hunting is a theme present in both the media sample and the interviews. There was a lot of confusion about hunters. In general, hunters were framed in three ways in the media that I surveyed. They were portrayed as being:

1) sport/trophy hunters (specifically; distinctly);
2) general hunters, without delineations regarding motivations to do with sustenance and/or trophy capture; and
3) consumptive use or sustenance-oriented hunters.

I will focus on the portrayal of sport/trophy hunters here, as it is largely how grizzly bear hunters are described in media coverage. In reference to the grizzly hunt, there is frequently a distinction made between hunting for food and trophy hunting, in the media sample. Articles often stress that since most people do not eat grizzly bears, grizzly hunting can only truly be categorized as trophy hunting. Some examples refer to the risk of consuming bear meat such as, "While bear meat can be eaten, the B.C. government does not condone the practice because of concerns that predators such as grizzlies could be carrying a parasite which can cause trichinosis" (Mason, 2015). More often, grizzly meat is presented as low quality, unappetizing, and only to be eaten if no other meat is available. For example, as this columnist states, "if you happen to live so far off-grid that grizzly meat is a source of protein, OK, happy dining" (McMartin, 2016).

The idea that grizzly meat is rarely the primary motivation for grizzly bear hunting is also prevalent in the years leading up to the ban. For example, similar claims are made in a 2015 Radio West interview with Green Party MLA Andrew Weaver: "grizzly bears aren't commonly killed for their meat, which isn't considered to be appetizing and is subject to trichinosis if not cooked properly" (Radio West, 2015). This claim was also the basis of

criticism for the first iteration of the ban. The media frequently reported on a potential "loophole" that could allow trophy hunters to continue hunting grizzlies for trophies under the guise of a meat hunt. Concerns such as "Hunters throughout the province can circumvent the law by removing a portion of meat from a bear's carcass and claiming the kill as food," (Wadhwani, 2017) are prevalent in coverage of the first iteration of the ban.

These examples contrast grizzly hunting with other forms of hunting in which meat is the primary motivation. Very few articles present the argument that people eat grizzly meat, which essentially frames the grizzly bear hunt as a trophy hunt. This contrast extends to grizzly bear hunters, ergo suggesting that hunters who participated in the grizzly hunt are in favour of trophy hunting. Language such as "blood sport" (Vancouver Sun & Prince George Citizen, 2017), "wildlife murder" (Brend, 2017) , and "slaughter for pleasure" (Bramham, 2016) are only some of the terms used in the media in reference to trophy hunting/hunters.

The grizzly bear hunt and those that participate are further vilified via representations of meat hunts, which are framed as more respectful and less wasteful in that they are carried out by hunters who consume their kills. Consumptive hunters are often portrayed as being supportive of the initial trophy hunt ban (due to the requirement to harvest meat), creating a "good hunter" versus 'bad hunter" discourse. In fact, during the time period before the total ban of grizzly hunting was announced, representatives of the B.C. Wildlife Federation, an organization that advocates on behalf of resident hunters, appear in one article stating, "the federation doesn't object to the NDP commitment. 'We think that if you're hunting wildlife that you should utilize the whole animal and that's been part our policy and is consistent with this announcement,' he said" (Nagel, 2016).

My expert interview data reflected the idea that trophy hunting and not sustenance is the main motivation for hunting grizzlies. As examples, participant N2 stated, “the fact that they’re hunted not for their meat, not for harvesting for food”. Participant S2 expressed the belief that “hunting of any species is a societal decision based on values. We don't hunt bald eagles; I don't think we should be hunting grizzly bears. They're not used for food, it's a mostly a trophy hunt, its poorly enforced”. And participant V1 explained:

> Its grizzly bear hunting - the trophy hunt is what people considered the guide outfitters to do and the domestic hunt was something that the domestic people in British Columbia did and then that wasn't a trophy hunt. Whereby all of it was a trophy hunt because nobody eats grizzly bears. So, I would just like to go on the record saying that it was the closure of the grizzly hunt because all of it was a trophy hunt and if you say trophy hunt then people just think of the international visitors.

Only three out of 30 participants suggested that hunters eat any portion of the meat they harvest from grizzly bears.

The motivations and associations with common constructions of the dual portrayal of hunting found in the articles I reviewed, and well beyond, are illustrated in Figure 3 (p.68).

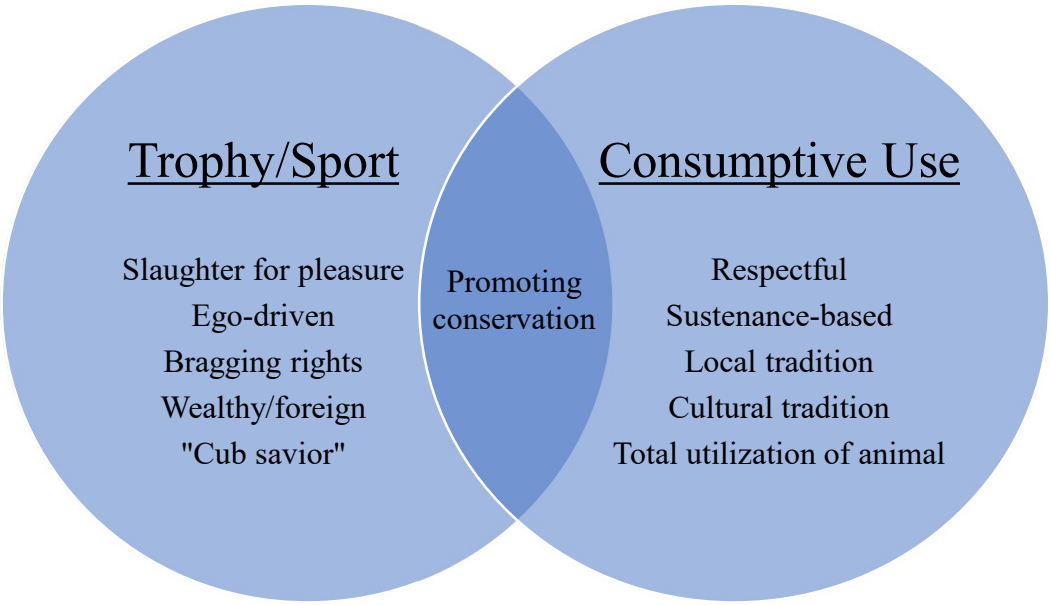

Figure 3: Diagram of motivations and attributes for different types of hunting, as found in the media sample. **Note: the degrees of overlap between the two main constructions of hunting receives scant attention.**

Ethical/moral arguments against the grizzly bear hunt

There is one final theme that emerged in the media and interview data – comments about the ethics of grizzly hunting. Statements about ethics and morals appeared as distinct from other factors involved in the debate about the grizzly bear hunt. I am separating out this theme due to the frequency with which words such as ethical and moral were used explicitly or alluded to, in the media. And while there exists a difference between morals, ethics and values in the literature (Fox & Bekoff, 2011), including differences within each of these terms (i.e. value orientations versus core values) (Zinn, Manfredo, & Barro, 2002), I found no evidence that the media and/or those quoted in the media drew a distinction between them. An example that quotes biologist Paul Paquet (Raincoast Conservation Foundation) shows, morals and ethics are used interchangeably: “but the bigger question is the moral one, he said. ‘Is this ethical, to be hunting bears? That's really what's at issue” (Moore, 2014).

Ethics/morals, are present in the arguments made by those for and against the ban, although they are not employed in the same ways. In the media, those who are for the ban are connected with these terms most often, but the framing of that connection varies. For example, proponents of the ban use ethics/morals as a basis of their argument, such as the claim made in a commentary published by *Dawson Creek Mirror* (2017) that, "A true ban aligns with society's dominant moral compass. Consistent polling data have shown strong opposition to the grizzly hunt, even in rural areas and among hunters."[4] In contrast, those against the ban portray the argument surrounding ethics/morals in a negative light, likening it to arrogance or naivety in some instances. For example, in a *Vancouver Sun* article (Palmer, 2016) , the following quote is included in reference to those proposing/supporting the ban, "Also taking a swipe against urban New Democrats on the issue was Kootenay MLA Erda Walsh. 'It's unfortunate that they act so moralistic about it. They don't live here and they don't understand the issue.'"

The presence of ethics/morals and the viewpoint of each side of the debate is made apparent in *The Globe and Mail* article, "The business of grizzly bear trophy hunting: 'Does the bear care?'" (Mason, 2015):

> In an hour-long conversation, Mr. Ellis and I debated this subject. I told him I did not think the issue was whether the trophy hunting of grizzlies should be stopped because their numbers are dwindling, rather because it is simply wrong, period. How did his organization [Guide Outfitters Association of B.C.] defend, on moral grounds, the practice of killing grizzlies for sport?

[4] No author is credited with this commentary, but the following is found in italics as the bottom of the piece:
Chris Darimont, Kyle Artelle, and Paul Paquet are scientists at the Raincoast Conservation Foundation and scholars at the University of Victoria and Simon Fraser University.
Chris Genovali is executive director of Raincoast Conservation Foundation.
Faisal Moola is the David Suzuki Foundation's director general for Ontario and Northern Canada and a conservation-policy expert at the University of Toronto.

> "We don't," Mr. Ellis told me. "We don't try to morally defend someone's personal decision. There are people who like it and some who don't. We have a free country and we have choices. But I think people have this notion that if we stop the trophy hunting of grizzlies, there will be more grizzlies."
>
> And there might be. But again, I don't think that is the issue. For most people, the issue revolves around the ethics of what is being done.

Ethics and morals are similarly present in the interview data, but the word value is also included as an analogous term. Most participants included these terms in reference to the hunt, and to discuss members of the public against the hunt. Participant S2 used ethics to critique grizzly bear hunting on the coast of B.C., saying:

> …it's important regarding fair chase in a hunt to be ethical. The animal is supposed to have a chance to get away, and I just did not see that on the coast. I'm not speaking about hunting bears in the mountains. I have no idea how that's done in British Columbia.

Interviewed experts also seem to pit morals/ethics against science. Participant S5 stated, "But as a scientist, what if I told you that you can't do that because I don't think it's morally right. But you did. Right?" Participant S2 described the roles of ethics/morals in the debate on the ban, particularly their use by those in favour of the ban:

> So, I don't think that [the numbers/science] is disputable. And I think what happened then is they realized that - I know they realized that, because I had a talk with them about it and said that this is ridiculous. You know you can argue this on a moral or ethical standpoint or you can argue it because you don't eat the meat of grizzly bears.

Ethics and science are often mentioned together both by interview participants and in the media. Both also tend to be included in arguments in favour of basing policy strictly on science, and excluding ethics/morals. Other experts expressed the viewpoint that ethical, social and cultural considerations should be included alongside science in the management of wildlife and natural resources. Ethical concerns regarding the grizzly bear hunt were often linked to the topic of animal welfare, by participating experts.

The grizzly hunt and animal welfare

Animal welfare or animal rights are topics intertwined with any type of hunting, but they are a focal point in the case of trophy or sport hunting. As I have discussed, the grizzly bear hunt is predominantly portrayed as a trophy hunt in media coverage that I surveyed. This includes arguments about animal rights. In one opinion piece published by *Dawson Creek Mirror*[2], for example, the writers criticize current management practices in terms of their ethical framing of human-animal relationships:

> The government, however, wrongly assumes that the sole purpose of wildlife populations is to serve the needs of the communities that hunt them. That presumption is clearly woven into provincial policy without proper scientific support, and represents a devolution of wildlife management away from the fundamentals of applied ecological science and environmental ethics to a largely utilitarian and agriculturalist approach.

This example highlights the idea that wildlife, and individual animals have the inherent right to exist, outside of any benefit they may provide to humans.

There is some evidence that this belief may be increasing among the general public in B.C. as well as outside the province, and that concerns about animal welfare extend beyond trophy hunting. For example, (Mason, 2015) reports:

> The Insights poll also canvassed Albertans and British Columbians on other issues related to the treatment of animals and found some surprising results. Nearly two-thirds of Albertans (64 per cent) favoured keeping animals in zoos and aquariums, but only 48 per cent of British Columbians did. While 55 per cent of Albertans supported using animals in rodeos, only 32 per cent of British Columbians shared that opinion.

This theme of wildlife possessing intrinsic value, irrespective of any value as a resource or as a source of entertainment for humans, is also present in media coverage of bear viewing. There are some articles that criticize the viewing of grizzly bears. The predominant framing, however, is that bear viewing (especially in contrast to the trophy hunt) is that viewing offers a positive, non-consumptive economically beneficial utilization of grizzly bears.

One of the only major animal welfare issues present in the interview data is attention paid

to the unknown and potentially negative effects that the bear viewing industry may be having on bears. Five participants mentioned the need for increased research on bear viewing industry. They stressed the importance of managing such activities so that they do not affect the feeding habits, or reproductive patterns of bears. When asked about where to spend hypothetical funding within grizzly bear management, participant G2 stated, "use those sort of resources for creating a regulatory framework for grizzly bear viewing, because that activity has grown so much and we don't have a lot of legislation around it."

Portrayal of First Nations in the media:

A final theme that emerged when comparing the media survey to the interview data was the one-dimensional portrayal of First Nations' views on the grizzly bear hunt. The media sample includes a singular portrait of First Nations and the hunt (Coastal First Nations[5] are mentioned specifically in many articles) as being opposed to the grizzly bear hunt.

Some articles include quotes from First Nations individuals elaborating on the significance of grizzlies to their communities. One article is about a B.C. man (Mr. Sheppe) who had a family tradition of hunting and was drawn for grizzly license after years of entries into the lottery. He then forfeited his tag after a conversation with a boat operator who he originally had hoped would provide transportation to a remote area for the hunt (Hume, 2015). According to the article, the story goes that:

> They talked about the importance of bears to First Nations.
>
> "Bears are like family. If you have a bear lost, it's a family member down," Mr. Willie said.

[5] "Coastal First Nations is a unique alliance of nine Nations living on British Columbia's North and Central Coast and Haida Gwaii. Each Nation has its own distinct culture, governance and territory." (https://coastalfirstnations.ca/our-communities/)

> "It really hit me," Mr. Sheppe said. "I never had the opportunity to go hunt one before, so I was pretty excited about this [hunt], but my views have changed. Something in my spirit has switched and I'm ready to start a new chapter and try and help promote saving these bears."

Virtually all media coverage positions First Nations as of uniform opinion – against the hunt and for the ban.

The expert interview data includes this same suggestion. When speaking about the grizzly hunt, participant N3, an Indigenous person, explained, "And all our stories we have about wildlife are about respect. This is something that was very disrespectful, you know. So here we are teaching our youth how to conduct themselves in our territory, while other people could come and still do this… exact opposite."

Participant S1 described their experience with First Nations, stating:

> No, we have some First Nations here that didn't support the hunt, ever. We did our allocation process 2 years ago, and so we did all our consultation meetings and they were around moose and grizzly bear. And out of one of those First Nation meetings actually came a letter to the Minister requesting that the grizzly hunt be shut down, and that was from one of our First Nations just out of Fort St. James.

A number of interviewees suggested that First Nations were not necessarily in favour of the hunting of grizzly bears, but are definitely against the ban. As participant N2 explained:

> I don't completely agree with trophy hunting for grizzly bears because you know I like to eat meat, and a grizzly bear hunt doesn't really do that. So, I mean, I haven't ever shot a grizzly myself. I don't really see the need to. At the same time, I don't see, you know I'm not going to disagree with anybody who wants to shoot one for a trophy, it's just not something I do for myself; I don't see the need to. But I am very respectful of them. First Nations, you know we say things like you don't really talk about bears and you don't say anything negative about them because they can hear you so, I don't know I feel like I really came from a complex background when it comes to grizzly bears and how I feel about them. I disagree with the ban. So, I mean, I guess that says that I am for grizzly bear hunting, just not for myself.

In contrast with the media sample, some interviewed experts mentioned the diversity of opinions among First Nations. For example, in reference to the breadth of participants I was attempting to interview, participant G2 questioned, "Oh, on the First Nations one, are you

talking to… cause one of the challenges we're finding is some First Nations are anti-hunting grizzly bears and, whereas others want to hunt grizzly bears." Overall, the experts I interviewed were aware of the varied opinions within B.C.'s Indigenous population with respect to the grizzly bear hunt. Whereas media coverage did not include First Nations being opposed to the ban, interviewees acknowledged heterogenous Indigenous stances on the hunt and the ban.

Chapter 5 – Discussion

In this chapter, I will examine my results as they connect to the literature review, presented in Chapter 3, and as they pertain to my research questions:

1. How was science, and public opinions on grizzly bears and the grizzly bear hunt (or perceptions of these) incorporated into decisions regarding the grizzly bear hunt ban in B.C.?
2. Are we in the midst of a significant change in public attitudes and policy regarding the grizzly bear as a species, or the grizzly bear hunt?

To speak to these two questions, I will discuss the role of science in grizzly bear management decisions. This will include criticisms of how science has been included (or not) in the 2017 grizzly bear hunt ban, and suggestions for future improvements. I will consider public opinion and whether or not increased stakeholder input seems to have informed the decision to enact the ban. I will draw from political ecology scholarship in order to examine factors that inform public opinion such as an existing or perceived urban/rural divide in perceptions of bears and bear hunting, and to raise questions about how such differences may have affected political aspects of the ban. I will also discuss current framings of hunters in the media I surveyed, and hunter roles in conservation. This will be followed by ethical

considerations with respect to the grizzly bear trophy hunt. I will end this discussion with a dominant narrative presented by the media about First Nations perspectives on the hunt. I will also be presenting comparisons and contrasts between themes present in my three data sets.

Science in grizzly management: for the hunt or for the species?

The findings from this research project suggest that science had a minimal influence on the decision to enact the 2017 ban on the hunt of grizzly bears in B.C. There was not new data or analysis to prompt a ban, and few of the experts that I interviewed offered evidence of scientific support for the ban. Recurring themes concerning the role of science in the decision in interviews include: 1) the idea that wildlife management has been, is, and should be primarily based on the best available science; 2) calls for more precise science in terms of population estimates; and 3) criticisms that science is being devalued in the decision to enact the ban. Such themes are present both in government documents and in the interviews I conducted. Furthermore, the idea that the hunt was sustainable, and managed strictly with the best available science occurs across all data sets, including media coverage. In terms of science-identified threats to grizzly bears, the hunt does not really register in interviews or policy documents—scientific data and opinion suggests that habitat fragmentation and degradation (not the hunt) are the largest threats facing the health of grizzly bear populations.

To further speak to the topic of science in grizzly bear management, I will consider grizzly bear management in two separate but related categories: management of the species, and management of the hunt. Through my data analysis and continuous reflection on the results, I found at least two different focuses/utilizations of "science", when used in reference to grizzly bear management. There is science involved with the management of the grizzly bear

hunt and there is the science that informs the management of the grizzly bear *species*. Leading up to the ban, the science behind the management of the hunt became deeply entwined with management of the species – population and mortality estimates were primarily used to determine in which populations a hunt was viable and what percentage of a population could be harvested sustainably (Boyce et al., 2016; Hamilton et al., 2004). It is important to examine "science" as being applied and framed in these two different ways (for the species; for the hunt) in order to try and understand what the "best available science" means in post-ban grizzly bear management.

Often times, the science referred to across all data sets was in reference to the management of the now illegal grizzly bear hunt, rather than about grizzly bear management more generally. Debates about the accuracy of grizzly population numbers and mortality rates are the most frequently cited aspects of scientific debate in the media (CBC, 2017; Matas, 2001). Such discussions are often presented with respect to the sustainability of the hunt. The experts I interviewed, on the other hand, agreed that science was not the basis for the ban. In their views, the hunt was managed sustainably, so no proven scientific rational for changes to the hunt existed. Government documents and information available on their website are also mainly concerned with management as it relates to the hunt (see Appendices C & D). This primary focus on managing the hunt rather than the species is reflected in the oft cited Auditor General's report, The audit found the management of the hunt to be adequate, but all other areas of grizzly bear management to be lacking (Auditor General, 2017). While the science did not seem to feature prominently in the discussion to ban the hunt, the hunt seemed to influence the science.

All of my project data sets suggest that science *should be* the basis of B.C.'s grizzly bear management framework. The data acknowledges that the use of science should be

supplemented with other considerations such as traditional ecological knowledge, Indigenous law, public opinion, and stakeholder input. The media sample, the expert interviews, and most government documents call for science to be a foundation for wildlife management. Further, each data set reveals gaps or inconsistencies in scientific data and knowledge, suggesting that more (not less) science is needed to truly understand and manage bears in B.C. Participant S10 acknowledged this by stating, "our decisions sure better be founded in good science, and that includes local and traditional knowledge, too". Interviewees point out that identifying objectives and goals, such as how many grizzly bears are wanted/needed on the landscape, beyond numbers to do with the hunt, needs to be addressed. They suggest that we have not fully considered such questions about grizzly bears in B.C. Experts interviewed also suggested that habitat conservation and restoration deserve more attention in terms of how to best support B.C.'s grizzly bear population. For example, when asked where hypothetical funding should be spent for grizzly bears, Participant G7 responded, "quite a bit should be put to ensuring that there's adequate habitat for grizzly bears". This theme did not receive similar attention in the media.

A lack of attention to habitat is clearly identified as the biggest threat to grizzly bears across the interview and policy data. Habitat-related concerns are somewhat present in the media sample, but the main media narrative remains centered on the controversy of the hunt. Habitat may not be at the foreground due to the impact improved habitat conservation could have on B.C.'s human population in unpopular or otherwise difficult ways. Grizzly bears often have to compete with humans for habitat. They occupy and use spaces that we, for example, like to dedicate to land uses associated with extractive industries (e.g. oil and gas exploration and extraction) and recreational activities (e.g. all-terrain vehicle riding; mountain biking; camping). Restrictions placed on these types of activities could affect a

large percentage of the population of B.C., particularly in certain regions of the province. Banning a relatively small scale, low participation grizzly bear hunt might be more popular and less disruptive. It is also important to note that grizzly bears and grizzly bear hunting do not occur equally in all parts of BC—the hunt was concentrated primarily in the Northern and Kootenay regions of the province, far from our largest, most populous urban centers.

Banning a hunt is likely easier and more politically palatable than improving habitat conservation. Habitat conservation is the primary concern for the conservation of grizzly bears according to the interviewed experts and key science-informed government documents. Therefore, the media emphasis on the hunt, which tends to be framed as controversial, obscures the issue by making the hunt seem more important than it likely is, with respect to grizzly conservation. The impact of this media focus deserves further research. If the decision to enact the ban is truly a reflection of public opinion in B.C. (primarily against the hunt), then additional research should be done to determine if public concern is grounded in a) a desire to improve the conservation of grizzly bears, or b) a dislike for or opposition to trophy hunting (specific or general). To date, there has been no substantive qualitative academic research to determine conservation perceptions, opinions, and priorities, with respect to grizzly bears in B.C.

Furthermore, the notion of potential constraints on human activities as the result of habitat conservation needs to be explored. Recent vocal objections raised about the new caribou recovery plan (Kurjata, 2019) suggest that limiting human recreational activities in order to preserve/restore habitat is a complex undertaking that requires care and consideration of multiple human dimensions of the environment. This includes values in favour of species conservation but also values the needs of human recreational alongside or above habitat conservation, even in rather extreme cases where species numbers are definitely on the

decline (Coogan et al., 2018). Such conflicts reveal the powerful roles that anthropocentrism and utility play in valuations of nature and wildlife.

The interview data in this project were collected from grizzly-related experts with personal connections to the species. Further research that focuses on non-expert attitudes towards grizzly bears would illuminate how opinions of grizzlies are formed in the absence of personal and professional experiences with them. This is important in determining if public opinion of grizzly bear conservation is more likely to be influenced by perceptions of grizzly bears or the ethical debate about trophy hunting. Non-sustenance hunting and trapping of other species, such as wolverine, lynx, beaver etc. continues in B.C., yet these practices have not received nearly as much media attention. So, it remains unclear to what degree anthropomorphic and charismatic characteristics projected onto grizzly bears by humans influence public opposition to the grizzly bear hunt.

It is also important to remember that lack of widespread outcry to the ban does not signify agreement or support for, nor even apathy towards the ban. We need more data to determine true perspectives on the ban and grizzly bear conservation across the province in order to gain holistic understanding of the public's stances on both, and which interventions they would be willing to support to further grizzly bear conservation in the province.

We do not know what will happen if science and/or public opinion suggests that the ban should be modified or reversed. The history of North American wildlife conservation is replete with examples of hunts opening, being modified, or closing in order to deal with inter-species imbalances deemed to be problematic or undesirable (Kellert et al., 1996; Treves, 2009). B.C. also currently supports a wolf cull in order to attempt regulating predator-prey relationships in parts of the province (Shore, 2019). By the end of this project, however, it was unclear to me whether or not there is room for the grizzly hunt ban to be

modified or reversed in a case where the science deems grizzly population numbers to be growing beyond a sustainable size and/or where human-grizzly interactions are deemed to be increasing in negative ways. Additionally, there are variables posing threats to the grizzly population in B.C. that are not addressed by imposing a hunting ban. For example, there have been recent reports of starving grizzly bears on Vancouver Island due to an inadequate salmon supply (CBC News, 2019). It is interesting to think about what might happen if the hunt of grizzly bears, even if only as a management tool to balance predator/prey populations, needed to be re-instated in B.C.

Public opinion was the main influence on the ban but not in a straightforward way

My findings indicate that public opinion/societal values were the major influences on the decision to enact the ban but that this was based on very limited and specific public input (e.g. via polls and government consultation). Furthermore, both the interviewed experts and the media sample include questions about whether public opinion is an appropriate foundation upon which to make such decisions. Some experts raised questions about the strength of the data presented regarding public opinion. They questioned whether the polls or government consultation were truly representative of B.C. Criticisms included the small number of people polled, the short time frame of the consultation process and the lack of geographical information for the resultant numbers and percentages the government cites as representing the majority of B.C.

Public opinion was presented as the driving force behind the ban by the government and the media, and the experts I interviewed agreed that public opinion/social values informed the ban. **Public opinion as the impetus for the ban implementation is portrayed positively at times, and negatively at others**. Interviewed experts critiqued and questioned the apparent increased influence of public opinion on the ban as concerning since it

represented a departure from scientific management of grizzly bears. This dissatisfaction with the reduced role of science concomitant with an apparent increased emphasis on social values is prominent among those quoted in the media and among interviewees in favour of the hunt. Participant H6 described the frustration felt within their community:

> I think that no matter what the decision is, the facts should prevail. And that's where we kinda failed as hunters and we have for many decades – and not even hunters but just people who value wilderness and wildlife and who are out there in the bush, are the kinda people who put our heads down and don't put our nose in other people's business. And we always go and have arguments based on facts, and this was very difficult. I really saw this go around the hunting community is – you have all the facts on your side, and it doesn't matter.

The data also includes concerns about the politicization of the hunt, with the hunt being framed as a political "stunt" to bolster support for the New Democratic Party (NDP). The NDP included the ban of the trophy hunt as part of their political platform when running for election, making the implementation of the ban a fulfillment of a campaign promise. The politics behind high profile, controversial decisions involve a complex web of interactions between politicians, industry, interest groups, party platforms, mandates, etc. that are beyond the scope of my investigation. It is also difficult to disentangle politics from public opinion. In theory, however, the party in power is supposed to reflect the majority of British Columbians' wishes. While it is easy to cast the Liberal party as "pro-hunt" and NDP as "anti-hunt", the reality is much more complicated. Constituencies associated with candidates from each party have different degrees of connection with the hunt/ban, for instance. The future of the ban after the next election in B.C. might illuminate additional revelations about the role of politics and parties in grizzly bear management related decisions. For now, however, claims about politics cannot easily be investigated in a meaningful way. The discourse about grizzly bear hunt management continues to include discussions of politics on multiple sides.

Integration of the public should be improved

Regardless of how the inclusion of public opinion is perceived by the media or by the experts I interviewed, the participation of the public, and **the inclusion of social and cultural values in the formation of wildlife management policy is something that has been broadly called for by conservation scholars and practitioners** (Artelle et al., 2018; Fox & Bekoff, 2011; Housty et al., 2014; Madden, 2004; Riley et al., 2002; Vernon et al., 2016). In the case of the grizzly bear hunt ban in B.C., it could be that decision-makers were responding to such recommendations. The public consultation process, although certainly imperfect, indicates that the government is attempting to include factors outside of natural science when formulating wildlife management policy.

While it is impossible to satisfy all members of the public when engaging with a controversial practice (i.e. the grizzly bear hunt), the government could take steps to address decisions viewed as contentious by some. Increasing both transparency and stakeholder participation during public consultation processes could alleviate sentiments of distrust in the process (Artelle et al., 2018). The consultation in this case was very limited and occurred in very specific and targeted ways, rather than inviting broader participation over a longer period of time. Several interview participants, especially those who were anti-ban, expressed frustration with the lack of involvement or consultation they experienced in the decision-making process. Keeping in mind that I interviewed people closely connected with the hunt, it seems odd that even these individuals indicated dissatisfaction with participation opportunities.

Another step that government could take to improve consultation and transparency is to better represent the geographies of opinions and the diversity of opinions collected. Government (and media) tend to reduce the true complexity of opinions shared in a process

once a clear majority is reached, disregarding the opinions of those groups in the minority (Ascher, 2014). Taking steps to ensure the voices and participation of stakeholders with opinions that are in contrast to the majority (in this case guide outfitters and hunters interested in harvesting grizzly bears) would help to legitimize the consultation process (Boulé & Mason, 2019), and to better represent the true range of public opinion. Improved openness about participation data and the full range of opinions would also help government to identify groups that were underrepresented, and to work towards improved inclusion. Improved inclusion might reduce suspicions about such processes and outcomes.

The urban/rural divide and other key geographies

The theme of urban/rural divide is an important part of my findings and discussion. Consistent with other studies, geographic divides related to region of residence (rural vs. urban) are apparent in both the media sample I analyzed and my analysis of the interview data (Kellert et al., 1996; Manfredo et al., 2003). A purported rural/urban divide with respect to opinions on the hunt and ban was also expected due to the geographic distribution of human populations and grizzly bear populations within British Columbia. Grizzly bears have been extirpated from urban centers in the province. Therefore, only rural residents must share habitat and coexist with grizzlies on an everyday basis.

In the media, portrayals of hunting and hunters is largely associated with rural communities. One such example states, "Many hunters, however, say that the trophy hunt is important to B.C.'s wildlife management strategy, and is largely misunderstood by people in urban areas" (CBC News, 2013). Interestingly, the experts that I interviewed drew less of a connection between hunting and living in a rural community. Many participants admitted to living in more urban areas, or the "lower mainland", but still identified as being hunters. This challenges the prevailing urban/rural divide expected with regards to wildlife and hunting

perceptions. It also reveals different types of hunting and connections to the outdoors/wilderness across regions of B.C., reminding us that geographies of leisure, recreation, and hunting are intricate, dynamic and not determined by one's residential address**. Nevertheless, we see the power of the urban/rural divide as a discourse for framing wildlife and other resource-related discussions in that interview participants and government processes did employ terms such as "urban" (or "lower mainland", "Vancouver", etc.) and "rural" (or "remote" etc.) to describe a split in public opinion on the ban.** This element of discourse and framing of the hunt (as well as other conservation issues) is problematic because it does not allow for people who have multiple wildlife-related identities (e.g. conservationist and hunter) or whose address does not have the "correct" association (e.g. urban hunters; rural-dwelling people opposed to the hunt). This reveals some of the normative aspects and flawed assumptions built into such discussions, and again provides a strong rationale for investigating complex patterns within public opinions of conservation and wildlife management, across the entire province.

The power of the urban/rural discourse also influences how experts frame those against the hunt. Some interviewees, including urban hunters themselves, suggested that the majority of the public are against grizzly hunting due to the fact that a majority of the population live in urban centers. To explain the influence of the urban/rural divide, interviewed experts often forwarded the idea that people who live in urban centers were too far removed from grizzly bear habitat. Participant H2 explained it this way: "so people in Vancouver if you lived on Cordova Street, you probably wouldn't see a bear in your lifetime". Others equated urban living with being misinformed: "they're so far removed that they believe any of the propaganda that was put forth in the media" (participant H7). Others still blamed misguided views of grizzlies on lack of experience with the bears due to

geographic distance from them: “they view grizzly bears as these cute, cuddly animals as opposed to actually dealing with them coming into their backyards” (participant S5). This ignores or obscures urban hunters and recreationalists, and falsely assumes guaranteed closer connections between rural people and wildlife.

During my analysis, an alternative framing of the urban/rural divide also emerged. The government, the media, and interviewees suggested that the urban/rural split with respect to opinions and attitudes towards wildlife and hunting may be softening or weakening. They suggested that geographical places of residence are beginning to play less of a role in public attitudes towards wildlife. For example, government announcements focused on the unity of public opposition to the hunt. Interviewees who denied much of a split between urban and rural opinions pointed to the polls in the media. I had not anticipated finding this suggested weakening of questioning of the urban/rural divide, but this adds to the (limited) literature that suggests place of residence as having a diminishing influence on the formation of certain opinions (Dwyer & Childs, 2004; Huddart-Kennedy et al., 2009). For example, Kaczensky et al. (2003) found that geographic location of residence did not have an apparent impact on public opinions towards brown bears in Slovenia. However, the authors speculate that this could be due to the small size of Slovenia (Slovenia is just over half the size of Vancouver Island). They also acknowledge that their findings are in contrast to most literature available on the influence of urban and rural geographies on attitudes towards large carnivores.

Another study by Dwyer and Childs (2004) claims that in the case of adaptive forestry management “the differences between what has traditionally been considered urban and rural are tending to blur over time” as people move from urban centers to rural locations. Additional research on geographies of opinions and perceptions of grizzly bears in B.C. is

needed to better understand connections between beliefs and places of residence. This changing urban/rural dynamic is another interesting aspect to watch, particularly since B.C., Canada, and the world are increasingly urban, but urban/rural tensions remain alongside different potential exposure to wildlife in situ.

While access to experiences with grizzly bears has a specific geography, the public's interactions with bears is complex and varied. People do not need to live near bears to interact with them. People living in B.C. cities would typically have to travel outside of urban centers to encounter grizzly bears. Since grizzlies can be encountered in a number of ways, hunting (of any species), camping, hiking, and other forms of outdoor recreation are activities that can lead to urban dwellers crossing paths with a grizzly. All of those activities are accessible to people in many different places in B.C., and are not solely carried out by rural residents. Conversely, some rural residents have little to no exposure to local wildlife. It is interesting to note, however, that the bear viewing industry is growing in the province (Elmeligi & Shultis, 2015). This relatively new addition to B.C. ecotourism could increase urbanite exposure to grizzly bears (it could increase rural exposure as well, with travel to viewing sites). The literature suggests this type of exposure fosters inclinations towards conservation of the species (Belicia & Islam, 2018) but such claims are also hard to prove and verify. It would be interesting to know the numbers of urban B.C. and Canadian residents who have visited B.C. bear viewing outfits over the past several years, since wildlife encounters that occur within safe parameters has been shown to increase affinity towards certain species (especially charismatic megafauna) in past studies (Penteriani et al., 2017). Bear viewing brings urbanites "closer" to grizzlies, working against assumptions about exposure and encounters, but it also represents a different type of encounter.

Competition for resources and nuisance encounters are among the main ways that BC residents interact with bears, and this occurs more in some places than others. For example, in places like Prince George, urban encounters with black bears are quite common (Booth & Ryan, 2016). Urban encounters with grizzly bears are less common because of the more remote spaces they tend to occupy but they can occur. The urban/rural divide here is real in the sense that in most B.C. cities, urban residents are much less likely to have their daily lives altered or inconvenienced due to grizzly bears. They have less experiences with "problem" grizzlies in human-bear conflict. Further, they do not have any grizzly-related constraints imposed on them—they do not need to adhere to bear-safe practices such as ensuring garbage is stored properly or fallen fruit is removed from their property. Such daily factors inform sets of social and environmental norms, and have the potential to contribute to urban/rural divides about coexisting with large carnivores such as grizzly bears even if grizzlies are not present (Thornton & Quinn, 2009).

Demographics also influence perceptions of wildlife. Certain demographic factors known to influence perceptions of wildlife might be more or less prevalent in urban or rural areas. For example, there might be differences between overall patterns of education levels, socioeconomic statuses, or exposure to wildlife and hunting, between urban and rural areas (Manfredo et al., 2003; Thornton & Quinn, 2009). Migration and travel between urban and rural areas, as well as increases in urbanization or amenity migration to rural areas can also affect the urban/rural divide or perceptions of it. As Manfredo et al. (2003) suggest:

> Factors that have been linked to value shift in modern developed countries include the growth of affluence and education, expanding urbanization, and increased mobility. We would infer that the increase of these factors in North America since the 1950s has spawned a gradual shift away from traditional wildlife value orientations, a trend similar to what Dunlap (2002) has observed in the growth of environmental protection values (p.301).

The traditional value orientations referenced by Manfredo et al. include utilitarian views, as well as hunting. All of this suggests that further investigation into how such factors are influencing public interactions with and understandings of wildlife would help to address my second research question: whether or not we are in the midst of a significant change in public attitudes and policy regarding the grizzly bear hunt.

Positive interactions with and/or opinions of grizzly bears featured in the expert interviews also affect perceptions of grizzly bears. Personal experience with a species is a known factor that influences perceptions of wildlife (Kellert et al., 1996), and the experts interviewed all had overall positive opinions of the species. Even responses that included stories of mauling, destruction of personal property, or fear for one's life, presented a generally favourable view of grizzly bears. This fits with the literature that recognizes personal experiences with a species as contributing to positive perceptions of that species (Kellert et al., 1996; Peterson & Messmer, 2010).

Public acceptance of hunter motivations

Portrayals of hunters in the media sample focused on exaggerated caricatures and assumptions about motivations. The three main portrayals of hunters that I found were: 1) unflattering portrayals of trophy hunters; 2) more generous portrayals of subsistence hunters; and 3) conflated and confused characterisations of hunters. These dominant framings reveal normative aspects of how hunting is conceptualized in B.C. Portrayals of hunter types also vary in the media. At times, there is a clear designation of "trophy" hunter in media coverage. One article quotes BC Green MLA Andrew Weaver differentiating between trophy hunters and subsistence hunters, even placing the latter in the same category as environmentalists by saying, "95 percent of hunters are opposed to killing unless you eat it. And urban environmentalists are the same. They also support hunting by

and large, but believe you should eat what you kill" (CBC Radio, 2015) Other times, the media does not discern between those who hunt for trophy purposes and those who are motivated by sustenance, conflating the two through use of the general term "hunter". An example seen in one *CBC* article reads, "Some B.C. hunters say the province's move this week to ban trophy grizzly hunting is 'wasteful' and misinformed — with one hunter saying he received death threats for admitting he shot a grizzly" (Brend, 2017). This homogenization of hunters is problematic because assumptions about the motivation of hunters seems to play a large role in public opinion of them.

Perceptions of hunting also seemed to be linked to exposure to or experience with hunting. Experts with personal trophy hunting experience defended the practice, but bemoaned the negative public opinions of those who participate in it. Participant H6 went as far as to say, "The premier of the province saying that what I do for a living is something socially unacceptable. So, okay… but in the same class is a friggin child molester." Experts with little to no first-hand trophy hunting experience were primarily critical of the practice, or sometimes indifferent. Participant S1 explained, "yes, our hunt was sustainable. 99% of it was a trophy hunt. So, my job has nothing to do with ethics, personal beliefs, whatever, right? It was a sustainable hunt in most our region so that's why it was open." Details about opinions on hunting were related to me by participants as drawing a line between personal ethics and the science about the hunt. Participant G3 displayed such indifference:

> As long as it's sustainable I was okay with it. But you know, I've seen a lot of grizzly bears I've never had any desire to shoot one and have it taxidermied at all. But again, it's a personal choice but, for me it was not something I'd ever considered doing.

Many experts in science and government made a clear delineation between their occupational opinion of trophy hunting and their personal views on the practice, whereas interviewed

guide/outfitters, First Nations interviewees and members of NGOs did not emphasize such distinctions.

Archetypal framings of hunters permeated my interviews. Interview participants in favour of the grizzly hunt frequently mentioned themes of being misunderstood or villainized by non-hunters. My findings from the media survey suggest that this perception is warranted and grounded in truth. **When searching for portrayals of hunters in the media, the mention sport/trophy hunters and their motivations (i.e. ego, bragging rights, etc.) are disproportionately present.** Consumptive use or sustenance hunters are much less discussed. References to sport/trophy hunters occur almost three times as frequently in my media survey (215 mentions versus 74). These results support recent research by Boulé and Mason (2019), which point to the role of media in the portrayal of sport hunters.

Hunters themselves, as understood via self-explanation captured in the media and in my interviews, perceive themselves quite differently than some of the more dominant portrayals circulating in society. Hunters' opinions in the media (op-eds written by hunters; quotes from hunters interviewed), as well as interviewees who identified as hunters, frame hunters as having a deep connection to wildlife and the land. They also often suggest that this connection makes hunters more likely to respect and desire to protect related resources (bears; bear habitat) than non-hunters. There is some literature that supports these ideas (Boulé & Mason, 2019; Gunn, 2001; Robbins, 2006). Also, revenues generated through the sale of special hunting-related licenses (both hunting and vehicular), etc. do indeed fund certain research and conservation initiatives (Loo, 2011). However, the idea of the hunter as a conservationist, or steward/protector of wildlife has also been heavily contested in much of the literature discussing animal welfare and wildlife management (Foran, 2018; Preece & Chamberlain, 2009).

The theme of hunters as being misunderstood or viewed in a negative light by the media also extended to the government consultation process. **Both the media survey and interview responses captured concerns about inadequate inclusion of hunters in the decision-making process.** Government lack of understanding and inclusion of hunters can prove to be quite problematic. Political ecologists have studied how exclusion or inadequate inclusion can impact marginalized groups. Exclusion in decision-making processes can contribute to distrust and disrespect to government and government interventions. It can also negatively impact local livelihoods, communities, etc. This is especially true in reference to decisions made concerning land and/or resources that belong to the public (Richie et al., 2012).

The grizzly hunt – a debate about existence vs. utility

The trophy hunting of grizzly bears raises moral considerations about animal welfare and humans' roles in nature as it involves the harvesting of an animal for glory and bragging rights rather than food. Trophy hunting perpetuates the designation of individual animals as resources, with little value ascribed to them other than providing beauty, entertainment, and ultimately, pleasing the hunter (Gunn, 2001; Preece & Chamberlain, 2009). **However, anti-trophy hunt arguments rarely directly address the hunt in terms of concerns about individual bears suffering.** Most of the arguments against the hunt instead center around the hunt as a threat to the overall species, or focus on criticisms of humans participating in such "sport", as well as questioning what continued acceptance of trophy hunting suggests about society. Arguments against the trophy hunt in the media and in the interviews often perpetuate the belief that humans have *dominion over* wildlife. This anthropocentric view most often raises questions of what trophy hunting reflects about *human* society, versus bears' inherent existence values and rights to life.

Moral considerations about killing an animal for pleasure, to feed one's ego, or to assert some type of masculine dominance over a large, dangerous predator are a large part of the outrage featured in both the media and the expert interviews by those opposed to the trophy hunt. Questioning where "we" (humans) are as a society is a big part of this argument as well. What are the implications of allowing the use of wildlife/game as a resource for leisure and pleasure, and what does it say of our place in the hierarchy, and our views of wildlife management? Participant S3 illustrated these concerns by stating:

> some trophy hunters were actually regarding the trophy as the Instagram or Facebook photo - not the skull, not the hide, not the baculum, not the claws - the photograph. You want to talk about repugnant, right? At least, the old days they took that thing and yeah, they did the swizzle stick with the baculum and I'm horrified by that. But you want to make me angry, kill a bear for a photograph. *That's* disgusting. So that was advancing as a motive for trophy hunting. Concurrently, with the controversy surrounding just the idea that… you don't need it, so why do it?

The media and the interview data addressing the moral and ethical debate on trophy hunting focus on the societal implications for humans rather than welfare concerns for grizzly bears.

Only one question about bear welfare received some limited attention—it was about the potential impacts of bear-viewing (so called non-consumptive use) on bears**. In the media sample, the theme of bear viewing is only really presented as an ethical and profitable alternative to the hunt. However, experts I interviewed were more vocal about the ethical concerns connected to this "non-consumptive" use of grizzlies.** Potential resulting impacts and a lack of regulation of bear viewing outfits came up frequently when I asked interviewees how hypothetical funds for grizzly bear management should be applied. For example, Participant G7 stated, "I would put money towards a study around the impacts of commercial bear viewing on grizzly bears". Potential negative impacts (i.e. habituation to humans, altered feeding times and locations, etc.) resulting from grizzly viewing operations and the lack of regulations have been the subject of recent research (Elmeligi & Shultis,

2015; Penteriani et al., 2017). The Auditor General report also makes brief mention of the need to regulate bear viewing (listed after grizzly bear hunting, reducing illegal activities, reducing grizzly bear/human conflicts) when addressing "managing human threats" (p 7).

Homogenization of First Nations:

The data that I collected suggest that the media failed to adequately explore differences among First Nations in terms of support and opposition to the grizzly bear hunt ban. Although this topic does not directly answer either of my research questions, I do believe it is an important theme that emerged from the analysis. First Nations should also be considered as distinct from other stakeholder groups due to the fact that they hold rights and title to their territories and have shared the land with grizzly bears from time immemorial. These underlying rights and titles should distinguish First Nations from merely having a stake in policy decisions such as the grizzly hunt ban (Tipa & Welch, 2006; von der Porten, 2013). They should be afforded distinct primary consultation, participation, and decision-making power that better represents their ties to the land and wildlife, past and present.

The media coverage that included Indigenous perspectives of the hunt was heavily biased towards First Nations who framed the grizzly hunt as offensive and deserving of being banned long ago. Much of the coverage highlighted the Coastal First Nations, which is likely due to their prominence in the media dating back to the formation of the Great Bear Rainforest. They also had an independent ban on grizzly bear hunting on their territories that was implemented yet unrecognized by the government of B.C. in 2012 (Cashore, 2014; Page, 2014). Another reason for the prevalence of Coastal First Nations views as opposed to those of other First Nations could be the influence gained through partnerships with environmental groups (also in part a result of the formation of the GBR) (Page, 2014).

The interviewees who participated in my research portrayed an alternative side to the theme of First Nations being unanimously and staunchly against the hunt of grizzly bears. In addition to the pro-ban First Nation perspective that permeated the media, seven out of 30 interviewees were either members of, or aware of nations holding different opinions including opposing the ban. While many other actor sets are homogenized at times by the media (e.g. the conflation of trophy and subsistence hunters), media representation of First Nations' opinions on the ban is the most egregiously incomplete.

Limitations of my project

As with all academic projects, I have learned a lot along the way and there are elements of the project that I understand better now than at the start of my research. First, my proposal preparation suggested to me that I could expect some limitations related to the collection and analysis of data. For example, I knew it would be impossible for me to review every piece of media produced about the grizzly bear hunt ban during the timeframe of the case study (2000 - present). I also knew that not everyone I wanted to interview would be willing and/or able to participate, representing limits to recruitment.

I was similarly aware that using phone interviews instead of face-to-face meetings/interviews would impose certain limitations to my interactions with experts and what I could glean from these. I knew from the literature that phone interviews could be difficult as I would be limited to only having voice-based interactions—there would be no social cues or body language available to me to let me know how an interview was going or whether an interviewee had finished a response or was simply pausing (Christmann, 2009). I tried to maintain a good pace while conducting phone interviews, and to allow for follow-up opportunities to compensate for such limitations. Generally, they went quite well and I did not encounter any major problems. I did, however, have an interview that did not record as

planned. To compensate for this, I ended up writing notes immediately after the call ended since no verbatim transcript would be available. Because I noticed this failed recording immediately following the interview, I believe the notes capture the main content of the interview well.

In addition to expected limitations, I also encountered new challenges and limitations during data collection and analysis. In searching for online articles from publications, I knew I would not likely be able to access articles as far back as 1990, since some outlets and sites might not yet be archived online. What I did not anticipate, however, was that I would at times encounter portions of missing text in some of the online articles that I had downloaded during data collection. For example, some articles that I had saved from *The Globe and Mail* website were missing a small amount of text due to issues related to pop-up ads in online versions. I attempted to resolve this by using database searches of the news publications via the UNBC Geoffrey R. Weller Library website for full versions of these articles.

I was able to find many of these articles through database searches, but in some instances other discrepancies occurred or the database searches were unsuccessful. For example, in some database searches, I would find the exact same text/content, under a different title and publication date, making it unclear where one article ended and another began, and how the article should be referenced. At other times, I was unable to find a complete version of an online article on the database at all. If I could not find the article on the database, I decided to simply code the online version I had even if it was evident that a small portion of text was missing. While I may have lost some text in such articles, the sheer number of articles I surveyed and the frequent overlap between articles suggest that information potentially lost from one article was likely represented in another.

Another unexpected issue was the high degree of overlap between some articles due to current practices with respect to sharing or purchasing articles. I had to decide when an article was distinct enough to be included in my sample. Sometimes, very similar articles with minimal alterations would appear in different sources. For example, I encountered articles labeled "UPDATE" but that contained largely the same contents as earlier versions of the article, with minimal new lines of text. This led to new considerations with respect to counting and coding articles (e.g. How does the common practice of newspapers buying content from information clearinghouses impact distinctions between online articles? What constitutes a new article?). Ultimately, and with the help of my committee, I decided that one of my interests was the frequencies with which the media present bear and ban-related theme, and how likely readers are to encounter them. For this reason, multiple versions of articles, even when very similar, were coded as individual entries since they at once represent both distinct and repeated messaging, and since readers might be exposed to several versions.

If I were going to begin this project again, there are some things I would approach differently. First, I would control for my media data more strictly. I would only use databases to search media articles, instead of publication websites. I would also consider separating opinion pieces from the general media coverage. I decided in this project to include such pieces because they were part of the messaging the public received from the media. However, limiting inclusion to those articles covered by journalists and excluding op-eds and opinion pieces might yield different results. Alternatively, it could also be of interest to look solely at personal opinions captured in the media and therefore only include opinion pieces and editorials in a media survey. These, no doubt, represent extreme viewpoints along the spectrum of public perceptions.

Chapter 6 – Conclusion

Grizzly bears have been extirpated from the vast majority of the lower United States and much of southcentral and northeastern Canada. British Columbia is home to habitat for the largest percentage of grizzly bears within Canada. This places a global spotlight on B.C. for the management of the species (COSEWIC, 2012; Dempsey, 2010). Thus, the province is in a unique position to shape the future of grizzly bears in B.C. and elsewhere (COSEWIC, 2012; Dempsey, 2010). With regard to my first research question, the research presented in this thesis supports the idea that public opinion and social values did influence the decision to enact the 2017 B.C. grizzly bear hunt ban, in spite of scientific evidence supporting the conservation/management status quo.

My findings suggest that science is the accepted and appropriate basis for wildlife management. Post-ban, the science that informs grizzly bear management will have to focus on managing the species in terms of objectives for population numbers in different areas, rather than focusing on sustainable harvest numbers for a hunt. The findings presented here indicate that inclusion of but not deference to other types of information such as public opinion is key to future grizzly bear management in B.C. However, transparency in decision processes and a more comprehensive consultation process (including greater attention to geographical factors) by Government would be beneficial for successful integration of public opinion. Finally, while the data suggests that habitat loss is the greatest threat facing grizzly bear populations, no major efforts are being made to conserve habitat. The ban is more agreeable to the majority of British Columbians than policy changes that would affect land use (e.g. restrictions on development or recreation to improve habitat conservation).

An inadequate discussion of habitat within policy documents focused on grizzly bear management speaks to my second research question, on whether B.C. is experiencing a shift

in opinion of the grizzly bear as a species, or the grizzly bear hunt as a practice. Overall, it is difficult to ascertain whether the current perspectives on the management of animal populations are shifting to reflect an increased concern for animal or nonhuman welfare in B.C. Support for this shift within B.C. is suggested by policy decisions such as the grizzly bear hunt ban and the ban of new captive cetaceans in the Vancouver Aquarium (Lindsay, 2018). However, public flare-ups in the ongoing "habitat conservation versus industry" debate contrast with this perspective. For example, recent approval for the expansion of the Trans Mountain Pipeline, and the controversy over the caribou recovery plan for B.C. illustrate the endurance of economic bias in land use decisions, and cases where wildlife receive less consideration than human wants and needs.

In terms of B.C. resident attitudes towards grizzly bears, I did not find evidence of a shift in public opinion. My findings reflect that grizzly bears are generally viewed positively by the public and experts, both as an iconic species and as a resource. I do believe that public opinions of hunters and hunting *may* be changing. This is particularly the case with respect to a growing bifurcation between characterizations of trophy hunters as contrasted with more "ethical" subsistence hunters. Conclusive evidence of such a shift and corresponding influences does not yet exist, as far as I know.

Further research is also necessary to determine the exact nature of hunting in B.C. (e.g. how many hunters are motivated by closeness to nature? How many hunters conserve wildlife to hunt and vice versa?), as well as the characterization of hunters by B.C.'s public and others actors. These are questions that must be addressed in trying to determine what roles hunters play in public opinion, and whether public opinion is indeed becoming more influential in wildlife management decisions. Such work might provide insights into the

political power of hunters and hunting-related groups, and whether this power is waxing, waning, or staying constant as a political influence in B.C. and North America.

If this were a PhD project, I would seek to situate the ban in a more global context in relation to trophy hunting. Images of trophy hunters in the media, some of which are featured on social media accounts, are circulated widely and often are received by the public with hostile outrage. An entire research project could be done on the role of social media in reflecting and influencing public opinion on topics such as the grizzly bear trophy hunt. Scholars have investigated factors that influence public opinion on wildlife and the history of hunting in North America, but the related influences of social media have yet to adequately be explored. What happens to perceptions of wildlife when news apps, Google searches, and other filters tailor information to a person's interests, leanings, and prior searches? We do not know how such online information provision is factoring into public opinion on wildlife-related topics in B.C.

Lastly, and most intriguing to me, is the debate concerning the role of ethics in science. Should scientists embrace taking normative stances? Should they present opinions on certain issues that reflect their personal morals/ethics? If B.C. is going to move towards an interdisciplinary, holistic management that includes social values, cultural considerations and science, what are the roles and consequences for natural scientists who openly inform their recommendations with input from their own values/morals? After all, experts spend their careers studying a certain species, and therefore must form opinions that deserve consideration. Further research on the role of scientists as advocates, and investigations into the changing role of ethics within the scientific community should also be explored.

Scientific management of wildlife and other natural resources will continue to be the framework used in B.C. and North America for the foreseeable future. The involvement of

other factors like traditional ecological knowledge, ethics, and public opinion in policy decisions could be beneficial. However, with increased public involvement in policy formation, the media will continue to be an information source, as well as a major influence. Should public opinion continue to be a key pillar of policy decisions, the conveyance of accurate scientific information to the public, via the media, will remain of utmost importance.

Ultimately, it is the government that is tasked with both representing the will of the people, and managing grizzly bears in a way that ensures the species persists in the province for future generations. Therefore, the ability of scientists to clearly communicate information not only to decision makers, but to the public through media outlets, is crucial to developing a well-informed public, which might in turn be critical to future grizzly bear management in B.C. By the same token, sound contemporary wildlife management in B.C. should also include investing in truly analyzing and understanding public perceptions of wildlife, wildlife management policy, and processes. Without this, conflicts, unsubstantiated characterizations, and exaggerated claims about the public stand to dominate rather than the true perspectives of the public, their needs, and factors that endanger the future of "Super, Natural B.C." and its wildlife.

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Appendix A – Government Website (PDF Version)

BRITISH COLUMBIA

Grizzly Bear

Grizzly bears are an integral part of maintaining ecosystems in B.C. – having a healthy population makes the province better able to sustain many other species. They also play an important role in First Nations culture as well as many tourism and recreation activities.

The province has made an environmental commitment to sustaining the grizzly bear population and habitat. A great deal of effort and research is invested in managing the population using scientific information and data.

- Check out grizzly bear population status

Get an overview of the planning and funding used for grizzly bear population inventory and monitoring across the province:

- Grizzly Bear Population Inventory & Monitoring Strategy for B.C. (PDF, 6MB)

Strategy

The province's grizzly bear strategy outlines science-based harvest management practices used to help ensure that B.C. continues to be home to some of the healthiest grizzly bear populations in the world.

- Grizzly Bear Conservation Strategy: A Future for the Grizzly – 1995 (PDF, 2 MB)
- Conservation of Grizzly Bears in B.C.: Background Report – 1995 (PDF, 6.5 MB)
- Grizzly Bears in B.C. – Ecology, Conservation and Management (PDF)

Managing the Population

Currently in B.C., targeted harvesting of grizzlies bears is allowed – only with a specific hunting licence. This approach contributes to a healthy population by:

- Helping to control / manage grizzly bear numbers in certain areas
- Funding conservation activities via the money from hunting licences

Here are a few facts about grizzly bear hunting in B.C.:

- Approximately 35% of the province is closed to Grizzly hunting
- Historically, hunters have killed around 300 grizzly bears a year out of an estimated population of 15,000 (2% harvest rate)
- The grizzly bear hunt is the most intensively managed hunt of any species in the province

Read more about how hunting is used to control grizzly bear populations:

- Grizzly Bear Hunting – Frequently Asked Questions (PDF)
- Grizzly Bear Harvest Management Procedure - 2007 (PDF)

Recovery planning for at risk populations: Part of the province's management strategy includes planning and research dedicated to recovering and protecting grizzly bear diversity and the ecosystems they depend on.

Currently, 11 grizzly bear populations are designated as "threatened."

- Map of British Columbia Grizzly Bear Population Units (JPEG)

A plan of action was created to focus recovery efforts on the North Cascades population – its small size and isolated location made it the highest conservation priority.

- Recovery Plan for Grizzly Bears in the North Cascades of B.C. (PDF, 1.4 MB)
- Socio-Economic Assessment of the Recovery Plan for Grizzly Bears in the North Cascades of B.C. (PDF, 1 MB)

What Do Scientists Say?

Scientists regularly review and monitor the province's approach to grizzly bear management. Using the best available science, they refine population estimates to make sure that harvest levels are not a conservation threat.

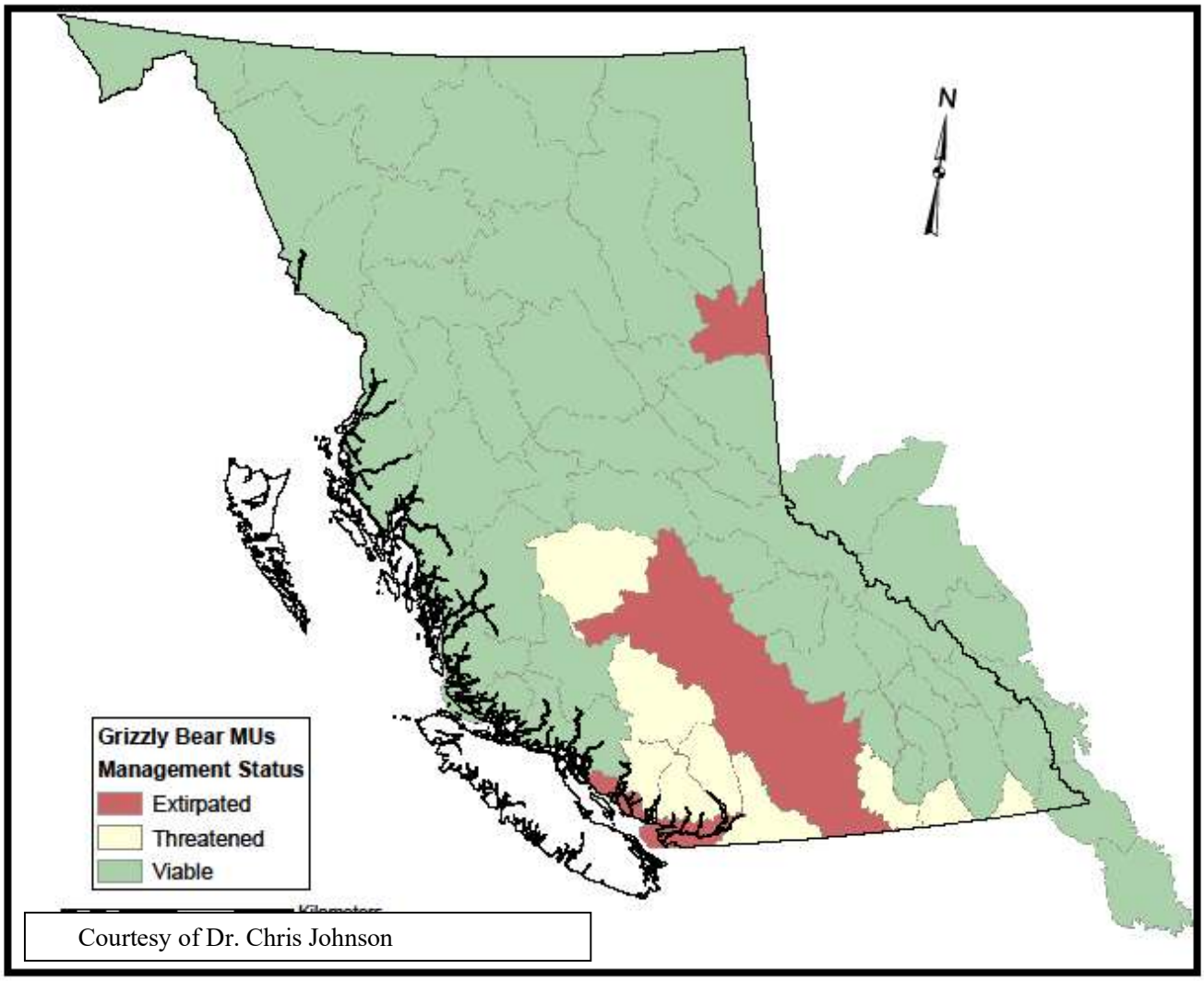
- Predicting Grizzly Bear Density in Western North America
- Review of Grizzly Bear Harvest Management in B.C. (PDF)
- Management of Grizzly Bears in B.C.: A Review by an Independent Scientific Panel (PDF)
- Non-Detriment Report Regarding the Export of Grizzly Bears from B.C., 2002 (PDF)

Bear Smart

Learn how your community can become "Bear Smart." This will help increase safety and reduce the number of bears that have to be destroyed in the province.

- Find out how to be Bear Smart

Appendix B – Map of Grizzly Bear Management Units



Courtesy of Dr. Chris Johnson

Appendix C – Procedural manual for the grizzly bear hunt prepared by the Ministry of Water, Land and Air Protection (B.C. government website)

Biodiversity Branch, Ministry of Water, Land and Air Protection.
"Total Human-Caused Mortality" - means all known, and an estimate of unknown, grizzly bear deaths that can be attributed to human causes, either intended or accidental.

"Translocations" - means grizzly bears removed live from a GBPU, and released in a different GBPU.

"Unknown Human-Caused Mortality" - means the human-caused mortalities of grizzly bears that are not known by wildlife management staff and that are not recorded in a provincial database.

Procedures:

1 Principles

1.1 Total human-caused mortality of grizzly bear populations will be managed to meet approved population objectives (see section 6) of a) permitting an increase in the grizzly bear population, b) maintaining a stable grizzly bear population or c) reducing the grizzly bear population. In the absence of an approved population objective the default approach for hunted populations will be to maintain a stable population size.

1.2 Grizzly bear harvest management decisions will be based on the best available scientific information.

1.3 GBPUs where the current population estimate is <50% of estimated habitat capability will be designated as "Threatened" and will be closed to grizzly bear hunting where they are below the GBPU's population objective (see Section 6).

1.4 In the absence of an approved population objective, GBPUs that have total population estimates of 100 grizzly bears or more will normally have harvests. GBPUs that have total population estimates of less than 100 grizzly bears, will not be harvested.

Appendix D - Procedural manual for the grizzly bear hunt prepared by the Ministry of Environment (B.C. government website)

2.2 Formal management objectives, developed by regional and headquarters staff and recommended to the director, may be set to allow total human-caused mortality in a GBPU to be managed for:

- increases in the grizzly bear population, or
- reductions in the grizzly bear population.

The process of setting formal management objectives for hunted GBPUs should consider:

- the current population estimate;
- habitat capability, habitat suitability, habitat effectiveness, and resulting estimates of current carrying capacity;
- the threats (if any) to the population and to adjacent populations;
- known or perceived trends in the population or habitat supply;
- the history of grizzly bear-human conflicts in the area;
- the degree of certainty in any of these factors;
- other issues of interest to First Nations, stakeholders, and the general public.

3 Harvest Strategy

3.1 Population Assessment

3.1.1 Population estimates will be calculated for each GBPU or sub-GBPU using the best available scientific information. Resulting density estimates will be applied to smaller spatial units (e.g. MUs, LEH zones, guide outfitter territories) as needed to implement harvest management strategies.

3.1.2 If possible, population estimates will be based on an inventory of the GBPU. Otherwise, a multiple regression or similar approach for extrapolating grizzly bear densities from known densities in other areas should be used.

3.1.3 If the approach in 3.1.2 is not possible or is considered to be inappropriate, a habitat-based method that modifies habitat capability in a series of step-downs to account for perceived or known human impacts should be used.

3.1.4 Population estimates, developed for the purpose of harvest management, will:

- Include grizzly bears of all ages; and
- Not include the number of grizzly bears in areas >100 km^2 that are indefinitely closed to grizzly bear hunting.

Harvest Management Rules

3.2.1 In general, GBPUs will be managed so as not to exceed the cumulative annual allowable mortality (AAM) or female AAM over the course of an allocation period.

Appendix E – Research Ethics Board Approval Letter

UNBC UNIVERSITY OF NORTHERN BRITISH COLUMBIA

RESEARCH ETHICS BOARD

MEMORANDUM

To: Zoë Meletis
CC: Bridget Kinsley

From: Henry Harder, Chair
Research Ethics Board

Date: July 16, 2018

Re: **E2018.0606.061.00**
Investigating Scientific, Social, and Other Influences on the 2017 British Columbia Grizzly Bear Hunt Bans

Thank you for submitting revisions to the Research Ethics Board (REB) regarding the above-noted proposal. Your revisions have been approved.

We are pleased to issue approval for the above named study for a period of 12 months from the date of this letter. Continuation beyond that date will require further review and renewal of REB approval. Any changes or amendments to the protocol or consent form must be approved by the REB.

Good luck with your research.

Sincerely,

Dr. Henry Harder
Chair, Research Ethics Board

3333 University Way, Prince George, BC, V2N 4Z9, Telephone (250) 960-6735

Appendix F – Interview Guide

PROJECT INTRODUCTION

Let me start out by thanking you for agreeing to meet/talk with me today. My name is Bridget Kinsley and although I am from the east coast of the US, I am currently a graduate student at UNBC in the Geography stream of the Natural Resource and Environmental Studies program. I am writing my thesis about the recent grizzly bear hunt bans in BC, and the history that preceded these bans. My research involves a policy document review, media analysis and interviews with actors involved, either directly or indirectly, with the decision making surrounding the bans. I am interested to know how these bans came about, and how those near and far from the related processes see and understand the bans. I plan to share the information resulting from this project with academic, applied, and general public audiences. This project is funded by UNBC and a Real Estate Board grant, but is an independent project.

I have approximately 10 questions about the recent grizzly bear hunt bans here in BC, so depending on your answer length, the interview should take about half an hour. One we get started, the first thing that I will ask is for your oral consent to participate. I will record that you have consented, and the interview will begin. I have also sent you (*or will send you*) a copy of the Project Information Letter, that contains all of the information about this project, as well as contact information.

This interview is completely voluntary and you can skip any question you like, and stop at any time. If you decide to stop your participation, I will destroy your data and thank you for your time. The data will be stored in a secure, password protected computers and drives, and the hard copies will be stored in locked offices at UNBC. Only approved members of the research team for this project will have access to the data. Any identifiers collected (e.g. your email address) will be stored separately from the data). Alphanumeric identifiers will be

used rather than participant names, to keep data anonymous. The data will be used in written reports and publications, academic teaching, and oral presentations. This is a low risk research project approved by the UNBC Research Ethics Board. The potential benefits of this project are that it will result in new data and new documents to inform discussions of grizzly bears and their management in BC, and beyond. We will not pay you for participating in this project, but we greatly appreciate your input.

If you have any questions after we get started, please ask me. If you have questions after the interview, please contact me at bkinsley@unbc.ca or +1.732.939.2505. If you have any questions for my research supervisor, please contact Dr. Zoë Meletis, at zoe.meletis@unbc.ca or 250-640-1260 (cell). If you have any concerns or complaints about this research, please contact the UNBC Office of Research at research@unbc.ca or 250-960-5852.

CONSENT

Taking part in this study is entirely up to you. You have the right to refuse to participate. As mentioned, you can also stop at any time, skip any questions, and remove your participation at any time, without any negative impact on you. If you agree to consent, I will record that you have consented, along with the date and time. Consenting to participate also means that I have read this introduction to you and sent you a Project Information letter. If an interview is completed, it will be considered proof of consent, along with my recording of your consent at the start.

Do you consent or agree to participate in this research project?

If yes: Thank you very much for agreeing to participate in this project. Your answers will contribute to greater discussions of the recent bans.

If no: Thank you very much for considering participating. If you would like to participate at a later time, please contact me at: bkinsley@unbc.ca or +1.732.939.2505.

Consent was obtained? Y _____ N _____ Date and time: _____

QUESTIONS

1) How would you describe your involvement – directly or indirectly – in the decision making surrounding the grizzly hunt bans (initial trophy hunt ban in September; total ban in November 2017)?

2) Can you describe the decision-making process for the two recent grizzly hunt bans, as you view it?

Additional prompts:

a. Can you tell us about some positive aspects of the process? Some negative ones?

b. If you were to go through the process again, is there anything you would change about the process?

3A) The minister of MFLNRORD, the Honorable Doug Donaldson was quoted as saying that the grizzly hunt Is "not a socially acceptable practice in 2017". In your opinion, i*s* the majority of BC's population for or against the bans? B) What more would you like to say about public opinion?

4) Do you think that most grizzly-related professionals support the current ban in BC? Why/why not?

5A) This study is looking at the influences that science, public opinion, politics, etc. have had on the policy decision to enact the ban. B) Can you tell me the type of information that you think received the greatest emphasis or attention during this process?

Additional prompts:

a. Can you tell me how **you** would weigh different influences - which ones, in your opinion, deserve the most or least consideration?

b. Was there any information that you wish had been available or included in the process, but was not?

6) My research project is intended to be its own study, but it will also inform a larger project looking at the attitudes of BC residents concerning grizzlies, and the hunt bans. So, we are curious about individual perspectives on grizzly bears. I was wondering if you could tell me your personal experience with or any connections you have with grizzly bears or bears more generally. This could include your childhood, non-professional or professional areas of your life.

Prompt:

a. How would you describe your personal opinion of grizzlies based on these experiences?

7) Do you currently live in an area that is considered bear habitat (in general, not only grizzlies) or where the grizzly bear hunt has taken place, or have you in the past?

Additional prompts:

b. Do/did you live in the southern, central, or northern region of the province?

c. If so, did you witness any changes within the community during the season?

8) Hypothetically, if the MFLNRORD and ME were given $2 million dollars to invest in grizzly bear management, where, or how do you think that money would be best spent, and why?

9) Is there anything else that you wanted to add?

10) Do you have any recommendations of other people or groups that I should speak with as part of this project? And if so, do you have contact information for them?

Thank you very much for your time. The information and insights that you provided will be very useful to this project and to discussions that come from it. I appreciate you speaking with me today. Please do not hesitate to contact me if you have any additional questions or concerns, or would like to recommend someone else who might like to participate. Please feel free to share my contact details with other interested people as well.

Appendix G – News release from government website

British Columbia News

B.C. government ends grizzly bear hunt

https://news.gov.bc.ca/16072
Monday, December 18, 2017 9:30 AM

Victoria - The British Columbia government is bringing an end to the hunting of grizzly bears throughout the province, Doug Donaldson, Minister of Forests, Lands, Natural Resource Operations and Rural Development, and George Heyman, Minister of Environment and Climate Change Strategy, announced today.

"Through consultations this past fall, we have listened to what British Columbians have to say on this issue and it is abundantly clear that the grizzly hunt is not in line with their values," Donaldson said. "Our government continues to support hunting in this province and recognizes our hunting heritage is of great importance to many British Columbians."

The spring grizzly bear hunt was scheduled to open on April 1, 2018, but the ban on hunting for resident and non-resident hunters takes effect immediately.

"Our government is committed to improving wildlife management in B.C., and today's announcement, along with a focused grizzly bear management plan, are the first steps in protecting one of our most iconic species," Heyman said. "We also want to promote the healthy grizzly bear viewing economy in B.C. and give everyone the tremendous opportunity to see these incredible animals in their natural habitat."

"After years of work on this file, my colleagues and I are absolutely overjoyed this decision has finally been made," said Adam Olsen, Green MLA for Saanich North and the Islands. "The results of the consultation were clear and government has listened. We couldn't be more thrilled."

In August 2017, government announced that, effective Nov. 30, 2017, it would end trophy hunting of grizzly bears and stop all hunting of grizzly bears in the Great Bear Rainforest. Government also announced it would launch a consultation process on regulations to support a sustenance hunt, while ending the trophy hunt.

Through the consultation process with First Nations, stakeholder groups and the public, 78% of respondents recommended the hunt be stopped entirely.

First Nations will still be able to harvest grizzly bears pursuant to Aboriginal rights for food, social, or ceremonial purposes, or treaty rights.

There are an estimated 15,000 grizzly bears in British Columbia.

Provincial government staff will be implementing recommendations from the recent Auditor General report on grizzly bear management. The government will also be moving forward with a broader consultation process on a renewed wildlife management strategy for the province in the new year.

A backgrounder follows.

Media Contacts

Media Relations
Ministry of Forests, Lands,
Natural Resource Operations
and Rural Development
250 356-7506

Media Relations

Ministry of Environment
and Climate Change Strategy
250 953-3834

Backgrounders

Summary of grizzly bear engagement process

In August 2017, the Government of British Columbia made a public commitment to close the grizzly bear hunt in the Great Bear Rainforest and end grizzly bear trophy hunting in the remainder of the province after the 2017 fall grizzly bear hunt concluded on Nov. 30, 2017.

Two policy intent papers were developed and made available to key stakeholder groups and First Nations for their input, and several meetings were held. A total of 4,180 emails were received. Very few respondents simply supported the ban on the trophy hunt as proposed. The majority of responses were from those requesting that government "ban grizzly bear hunting in all parts of the province".

Emails and letters were also sent to wildlife stakeholders and non-government organizations involved in grizzly bear research and management. Several meetings were held with most of these organizations and some letters were also received. Many of the same issues that were raised during public engagement were also raised by stakeholders.

Emails and letters were also sent to more than 200 First Nations throughout the province regarding the grizzly bear trophy hunting ban. This included 41 First Nations that either overlap or are adjacent to the Great Bear Rainforest. Meetings were also set up with First Nations. Treaty First Nations will continue to be able to harvest grizzly bears and possess all parts of grizzly bears when the harvest is done, pursuant to treaty rights.

Summary of Feedback - The issues raised, in descending order of frequency, included:

- Hunt is no longer appropriate
- Too many loopholes in the proposed regulations
- Wasteful to leave anything behind after an animal is killed
- Lack of significance of the meat hunt for grizzly bears
- Economics of grizzly bear hunting
- Hunting as a management tool
- Population dynamics of grizzly bear
- Need to focus on habitat management of grizzly bear
- Urban/rural split around grizzly bear hunting
- Hunting by First Nations
- Lack of enforcement
- Trophy terminology

A more comprehensive summary report is being prepared for later release.

Appendix H – Statement from B.C. Government

View the printer-friendly version of this release.

BRITISH COLUMBIA

STATEMENT

For Immediate Release
2017FLNR0367-002035
Dec. 8, 2017

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

British Columbians have their say on grizzly bear hunt

VICTORIA – Doug Donaldson, Minister of Forests, Lands, Natural Resource Operations and Rural Development, has made the following statement regarding the grizzly bear hunt:

"In October, we launched a consultation process to help inform regulation development with respect to the future of the grizzly bear hunt in British Columbia.

"The public engagement period was Oct. 2, 2017 until Nov. 2, 2017. First Nations throughout the province were engaged, and 15 meetings with key stakeholder groups were held. Approximately 4,200 written responses were received.

"Based on the feedback received, we're assessing all input and will be releasing a consultation report, including any new policy direction, in the near future."

Contact:

Media Relations
Ministry of Forests, Lands, Natural Resource
Operations and Rural Development
250 356-7506

Connect with the Province of B.C. at: news.gov.bc.ca/connect

Appendix I – Government announcement of the 2017 ban

British Columbia News

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First Nations will still be able to harvest grizzly bears pursuant to Aboriginal rights for food, social, or ceremonial purposes, or treaty rights.

There are an estimated 15,000 grizzly bears in British Columbia.

Provincial government staff will be implementing recommendations from the recent Auditor General report on grizzly bear management. The government will also be moving forward with a broader consultation process on a renewed wildlife management strategy for the province in the new year.

A backgrounder follows.

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