



Inuvialuit Settlement Region Aklat/Akhaq (Grizzly Bear) Co-Management Plan

2022

Inuvialuit Settlement Region Aklat/Akhaq (Grizzly Bear) Management Plan

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Table of Contents

Preface	5
Acknowledgements	6
Abbreviations	7
Glossary of Terms	8
Executive Summary	11
Introduction	13
Background	13
Why develop a new management plan?	14
Scope of the plan	15
Inuvialuit Final Agreement	17
Planning process and participants	18
Management principle	19
Aklat / Akhaq species information	19
Species at risk status	20
Habitat and biological needs	21
Population and distribution	23
Behaviour	26
Management System	27
Applicable jurisdictions, laws, and documents	27
Co-Management under the IFA	28
Inuvialuit Game Council	28
Wildlife Management Advisory Council (Northwest Territories) & Wildlife Management Advisory Council (North Slope)	30
Inuvialuit Hunters and Trappers Committees	30
Government of the Northwest Territories	31
Government of Yukon	31
Government of Canada	31
Inuvialuit Perspectives	32
On the mainland	32
On Victoria and Banks Islands	33

By community	34
Aklavik	34
Inuvik	35
Tuktoyaktuk	36
Paulatuk	37
Ulukhaktok	37
Sachs Harbour	38
Threats & mitigations	38
Changes in human-caused mortality	38
Waste Management	39
Development	39
Development leading to loss of habitat	39
Knowledge gaps	40
Current Management	41
Harvest management	41
Quota administration and adjustments	44
Reserve tag system	45
Harvest Reporting	45
Bear-human interactions	46
Research & monitoring	47
Habitat conservation	47
Yukon North Slope Management	51
Recommended Management	51
Management goal	51
Management objectives & approaches	51
Management Actions	60
Implementation & measuring progress	60
References	61
Appendix 1. Planning Process Participants	64
Appendix 2. Community-Based Management Actions	66

List of Figures

Figure 1 - Historic range of grizzly bears in the ISR	15
Figure 2 - Inuvialuit Settlement Region and bordering land claim, territorial and state jurisdictions	16
Figure 3 - Yukon North Slope Aklat / Akhaq / grizzly bear	19
Figure 4 - Grizzly bear habitat overview in the Yukon North Slope	22
Figure 5 - Study area for Tuktoyaktuk Peninsula and Richards Island DNA mark - recapture	26
Figure 6 - Inuvialuit and co-management organizations established by the Inuvialuit Final Agreement	29
Figure 7 - Grizzly bear harvesting zones in ISR with their associated 2021-22 quotas	44
Figure 8 - Grizzly bear habitat identified in the 6 Community Conservation Plans	49
Figure 9 - Conservation areas on the Yukon North Slope and surrounding regions	50

List of Tables

Table 1 - Inuvialuktun terms for grizzly bear	8
Table 2 - Grizzly bear assessments and listings applicable to the ISR	20
Table 3 - Grizzly bear population and density estimates in the ISR	25
Table 4 - Grizzly bear quotas and harvest within each zone in the ISR between 1992 and 2020.	43
Table 5 - Community and Council meetings, workshops, and online survey for initial feedback and verification	64
Table 6 - Aklavik Community-Based Management Actions	66
Table 7 - Inuvik Community-based Management Actions	68
Table 8 - Paulatuk Community-Based Management Actions	70
Table 9 - Sachs Harbour Community-Based Management Actions	72
Table 10 - Tuktoyaktuk Community-Based Management Actions	73
Table 11 - Ulukhaktok Community-Based Management Actions	75

Preface

On behalf of the Wildlife Management Advisory Council (Northwest Territories) (WMAC ((NWT)) and Wildlife Management Advisory Council (North Slope) (WMAC (NS)), we are pleased to present the 2022 *Inuvialuit Settlement Region Aklat/Akhaq (Grizzly Bear) Co-Management Plan*. This update was a collaboration initiated by our two Councils, who share responsibility for grizzly bear management in the Inuvialuit Settlement Region (ISR) alongside the Government of the Northwest Territories and the Yukon Government. The planning process involved strong support and advice from the Inuvialuit Game Council (IGC), all six Inuvialuit communities, and each community's Hunters and Trappers Committee (HTC). We are grateful for all the partnerships involved in updating this Plan, and we are proud to present this collaborative effort.

The importance of, and responsibility for, grizzly bears is defined in the Inuvialuit Final Agreement (IFA), which also identifies grizzly bears in almost all of the ISR as an exclusive species harvested by Inuvialuit. Grizzly bears are important to Inuvialuit and Inuvialuit on the mainland and Qikiqtaruk have lived with bears since time immemorial.

We began the process to update the Plan in 2020. The previous *Co-management Plan for Grizzly Bears in the Inuvialuit Settlement Region, Yukon Territory, and Northwest Territories*, recommended in 1998, required an update, and our initial review of the previous Plan indicated that distribution of grizzly bears in the ISR had changed greatly over the last two decades. A major change, for example, is the observations of grizzly bears on Victoria and Banks Island, which are far outside the bears' known historical range. Following initial community consultations, we recognized that this update to the Plan must be based on the principle that approaches to grizzly bear management can differ greatly between the various regions of the ISR.

This Management Plan is unique in that it did not arise as a requirement under the federal or territorial *Species at Risk Act* or *Species at Risk (NWT) Act*. Because of the unique situation in the North and the ISR, with many local observations of grizzly bear populations thriving and expanding, grizzly bears are not listed under the *Species at Risk (NWT) Act*. Nationally, the grizzly bear (Western population) was listed as Special Concern under the federal *Species at Risk Act* in 2018. Inuvialuit perspectives are clear that grizzly bears in the ISR are in a unique position compared to the rest of the country.

We welcome you to read the information contained in this Management Plan as representative of the priorities and knowledge regarding grizzly bears in the ISR. Following the publication of this Management Plan, co-management partners will continue to work closely together to develop an Implementation Table of management actions to track our progress. Thank you for your interest in grizzly bear management in the ISR.



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Acknowledgements

We thank the Inuvialuit Hunters and Trappers Committees community members and knowledge holders for their participation in the two rounds of community meetings which guided the drafting of the Aklat/Akhaq (Grizzly Bear) Co-Management Plan. We also thank everyone who participated in the online surveys.

Thank you to the following reviewers for their comments on the draft plan and to those who participated on the working group: Joseph Haluksit, Hans Lennie, Allison Thompson, Marsha Branigan, Rosemin Nathoo, Kaitlin Wilson, Laurence Carter, Leanne Gordon, Édouard Bélanger, Tom Jung, Mike Sutor, Jodie Pongracz, and Steven Baryluk.

We thank Peter Mather for the cover picture. We thank Rob Gau for providing pictures for the Plan.

Abbreviations

CMA - Conference of Management Authorities

SARC - Species at Risk Committee

COSEWIC - Committee for the Status of Endangered Wildlife in Canada

IFA - Inuvialuit Final Agreement

HTC - Hunters and Trappers Committee

WMAC(NWT) - Wildlife Management Advisory Council (Northwest Territories)

WMAC(NS) - Wildlife Management Advisory Council (North Slope)

IGC - Inuvialuit Game Council

EISC - Environmental Impact Screening Committee

EIRB - Environmental Impact Review Board

SARA - *Species At Risk Act*

SAR(NWT) - *Species At Risk (NWT) Act*

DLP - Defense of Life and Property Kill

GNWT - Government of Northwest Territories

MACA - Department of Municipal and Community Affairs

ENR - Department of Environment and Natural Resources

Glossary of Terms

Table 1 - Inuvialuktun terms for grizzly bear

Term	Meaning	Dialect	Source
Aklaq	a (one) grizzly bear	Uummarmiutun	ICC et al. 2006; WMAC (NS) & Aklavik HTC 2008
Aklak	two grizzly bears	Sallirmiutun and Uummarmiutun	ICC et al. 2006; WMAC (NS) & Aklavik HTC 2008
Aklat	three or more grizzly bears	Sallirmiutun and Uummarmiutun	ICC et al. 2006; WMAC (NS) & Aklavik HTC 2008
Akhaq	grizzly bear	Kangiryuarmitun	Inuvialuit Joint Secretariat and Species at Risk Secretariat 2011
Aghak	brown bear	Kangiryuarmitun	Inuvialuit Joint Secretariat and Species at Risk Secretariat 2011
Akłak	brown bear	Sallirmiutun	Inuvialuit Joint Secretariat and Species at Risk Secretariat 2011
Akłaaluuq	an old male grizzly bear		WMAC (NS) & Aklavik HTC 2008
Angnuhalluq	male grizzly bear, either young or old		WMAC (NS) & Aklavik HTC 2008
Akłaiyaaq	a young bear, either male or female		WMAC (NS) & Aklavik HTC 2008
Piatyaliq	mother with one or more cubs		WMAC (NS) & Aklavik HTC 2008

Traditional and Local Knowledge

Traditional and local knowledge is a systematic way of thinking and knowing that is elaborated and applied to phenomena across biological, physical, cultural, and linguistic systems. Traditional knowledge is owned by the holders of that knowledge, often collectively, and includes knowledge that is uniquely expressed and transmitted through Indigenous languages. It is a body of knowledge generated through cultural practices, lived experiences including extensive and multi-generational observations, lessons and skills. It has been developed and verified over millennia and is still developing in a living process, including knowledge acquired today and in the future, as it is passed on from generation to generation. Inuvialuit traditional and local knowledge is a dynamic body of information that is continuously being used, revised, and updated to take into consideration new knowledge.

Delta

The term 'Delta' refers to the Mackenzie Delta, the alluvial floodplain at the end of the Mackenzie River. The Delta extends 210km north from Point Separation (northwest of Tsiigehtchic) to the Beaufort Sea, and ranges from 50-80km east to west. Aklavik is on the west side of the central Delta, and Inuvik on the east side.

Adaptive management

The term 'adaptive management' as it is used within this Plan, and in Objective 2, refers to the process of monitoring and responding to change and uncertainty in wildlife management. It also means learning from management actions and changing our monitoring and management accordingly. Adaptive management requires flexible co-management which responds to changes on the land, in grizzly bear populations and health, in human-bear interactions, and to the effects of management actions. Consistent monitoring from Inuvialuit traditional and local knowledge and scientific knowledge must inform changes to the management system in a timely and effective manner.

Preferential right to harvest

"preferential right to harvest", with respect to the Inuvialuit includes the right to harvest wildlife for subsistence usage and to be allocated, subject to conservation, quantities of wildlife sufficient to fulfil Inuvialuit requirements for subsistence usage before there is any allocation for other purposes in areas where the Inuvialuit will have harvesting rights (IFA, 1984).

Exclusive right to harvest

"exclusive right to harvest" means the sole right to harvest the wildlife referred to in paragraphs 12(24)(5) and (c) and 14(6)(b) to (d) to be allocated the total allowable harvest and to permit non-Inuvialuit to harvest any such wildlife (IFA, 1984)

Subsistence usage

"subsistence usage," as defined by the IFA, means: (a) with respect to wildlife other than migratory game birds, migratory non-game birds and migratory insectivorous birds, subject to international conventions, the taking of wildlife by Inuvialuit for their personal use for food and clothing and includes the taking of wildlife for the purpose of trade, barter and subject to section 12 sale among Inuvialuit and trade, barter and sale to any person of the non-edible by-products of wildlife that are incidental to the taking of wildlife by Inuvialuit for their personal use; [...](IFA, 1984)

Western Arctic Region

"Western Arctic Region" means the portion of the Inuvialuit Settlement Region other than the Yukon (IFA, 1984).

Yukon North Slope

"Yukon North Slope" refers to the land between the jurisdictional boundaries of Alaska and the Northwest Territories in the Yukon, north of the height of land dividing the watersheds of the Porcupine River and the Beaufort Sea and including adjacent nearshore and offshore waters and islands (IFA, 1984).

Aullaviat/Aunguniarvik (Eastern Yukon North Slope)

The area of the Yukon North Slope that falls within the withdrawal order under the IFA.

Special concern

Species that are designated of 'special concern' may become threatened or endangered because of a combination of biological characteristics and identified threats (SARA, 2002).

Executive Summary

Human and Aklat / Akhaq / grizzly bear interactions have been ongoing in the Inuvialuit Settlement Region (ISR) for as long as Inuvialuit have occupied the area. The mainland communities of Aklavik, Inuvik, Tuktoyaktuk and Paulatuk have always harvested aklat for their meat, fat, and hides. More recently, aklat have been harvested under quota and in specific zones. Inuvialuit have a direct interest in managing animals and the land in good ways, as they interact with and rely on both.

Since the establishment of the *Inuvialuit Final Agreement* (IFA), these interactions have been guided by a co-management framework where science and Inuvialuit traditional and local knowledge are used to inform decision-making.

The first formal grizzly bear management plan for the ISR was developed and recommended in 1998 by the Wildlife Management Advisory Councils (North Slope and Northwest Territories). For over 20 years, that plan has guided the co-management of grizzly bear in the ISR, with harvest quotas in place on the mainland, and mandatory harvest reporting throughout.

Inuvialuit are seeing more bears around their communities and on the land, and grizzly bears are becoming more common in areas where they were only rarely seen historically, including Banks and Victoria Islands. As Inuvialuit uses of aklat change, so do harvesting practices and relationships among people and aklat. The management of akhaq must also respond to these changes, as well as the listing of grizzly bears as Special Concern under the federal *Species at Risk Act* in 2018.

This plan will guide grizzly bear management in the ISR into the future, and represent the unique nature of grizzly bears and grizzly bear co-management in the ISR on the regional and national scale. It was developed with extensive community input and feedback, to acknowledge existing and evolving relationships between aklat/akhaq and Inuvialuit, as well as the Principles of the IFA. Community members and Hunters and Trappers Committees in each of the six ISR communities, as well as the regional Inuvialuit and co-management organizations established by the IFA, contributed to the plan's development.

This plan allows those with management responsibilities in the ISR to manage grizzly bears in a regionally and culturally-appropriate way. The plan is ISR-wide but includes a community lens for each of the six ISR communities. Banks and Victoria Islands are considered separately from the mainland ISR because of significant differences in the historic presence of grizzly bears there.

The **management goal** is:

To ensure long-term sustainable populations of healthy grizzly bears in their historic range, maintain or enhance Inuvialuit traditional use, and promote human safety.

There are seven **management objectives**:

1. Ensure management decisions are informed by the best available information by promoting knowledge collection and exchange.
Documenting and sharing knowledge about grizzly bears is key to good management.
2. Adaptively co-manage grizzly bear populations in accordance with the best available information to meet management objectives.
As we learn more and as grizzly bear conditions change, we will adapt our actions to meet regional objectives for grizzly bear populations.
3. Maintain current areas of grizzly bear habitat in the ISR amidst change.
Bears need space to roam: we will maintain current areas of grizzly bear habitat.
4. Promote human safety by minimizing negative human-grizzly bear interactions and defence of life and property kills.
Human safety is a priority: we all have a responsibility when it comes to being bear-safe.
5. Work with all co-management partners, governments, communities, and others as needed to address concerns with waste management and negative human-grizzly bear interactions.
We need to work together to keep bears out of our garbage.
6. Maintain and promote Inuvialuit traditional use of aklat/akhaq.
7. Manage aklat/akhaq populations on Banks and Victoria Islands to meet the unique management objectives for the region.
There is a unique set of priorities for aklat/akhaq management on Banks and Victoria Islands.

Introduction

Background

Inuvialuit people are conservationist at heart because we rely on these animals for generations... When you change the management regime, there are long tentacles that change everything associated with it. All management has a rippling effect, a butterfly effect. It's so complicated, but when you live with and rely on the animals, you know how attached things are... it's not just about preserving another 50 bears. Everything is a brick, building on each other.
Darrel Nasogaluak, Tuktoyaktuk Hunters and Trappers Committee, 2021

Aklat / Akhaq / Grizzly bears are an important species in the Inuvialuit Settlement Region (ISR). Human and grizzly bear interactions have been ongoing for as long as Inuvialuit have occupied the area. Since the 1980s and the establishment of the *Inuvialuit Final Agreement* (IFA), these interactions have been guided by a co-management framework where science and Inuvialuit traditional and local knowledge are used to inform decision-making. Co-management bodies are comprised of Inuvialuit and government representatives (IFA, 1984). The first formal grizzly bear management plan for the ISR was developed and recommended in 1999 by the Wildlife Management Advisory Councils (North Slope and Northwest Territories, respectively WMAC[NS] and WMAC[NWT]) (Nagy & Branigan, 1998) to clearly describe management goals and actions in this vast and jurisdictionally complex geographical area. For over 20 years, that plan has guided the co-management of grizzly bear in the ISR, with harvest quotas in place on the mainland, and mandatory harvest reporting throughout. The previous plan also enabled several research projects that have advanced the collective understanding about grizzly bears in the ISR.

Inuvialuit describe themselves as natural conservationists (Nasogaluak, D. 2021). They have a direct interest in managing animals and the land in good ways, as they interact with and rely on both. As Inuvialuit uses of aklat change, so do harvesting practices and relationships among people and aklat (Ruben, R., 2021). The management of akhaq must also respond to these changes (Aklavik HTC Member, 2021; Oliktoak, J., 2021). This Plan was developed with extensive community input and feedback, to acknowledge these existing and evolving relationships between aklat/akhaq and Inuvialuit, as well as the Principles of the IFA (IFA, 1984, s.1).

Historic range

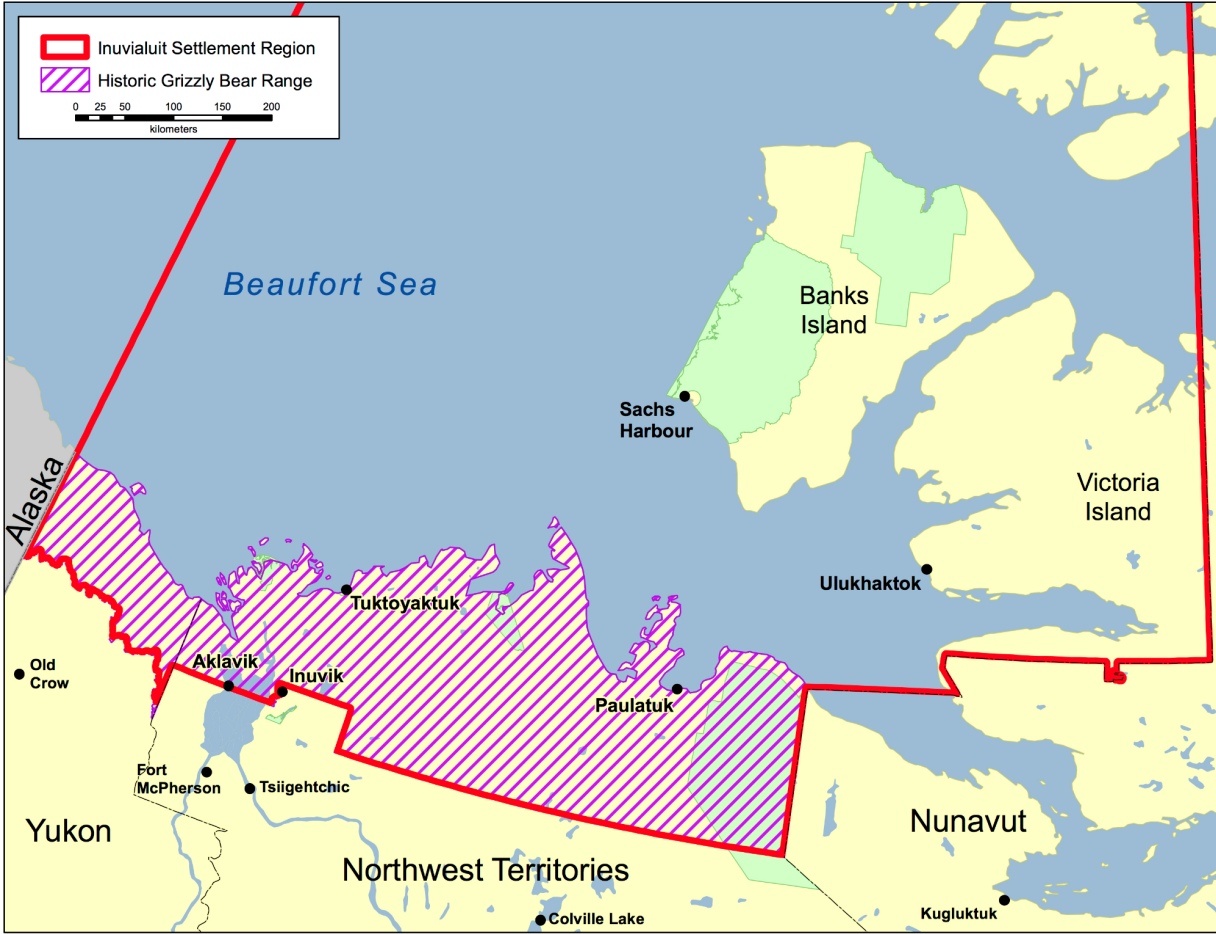
The historic range of grizzly bears used within this plan, and in the management goal, is defined as the mainland ISR (see Figure 1). This is supported by observations from Inuvialuit in Aklavik, Inuvik, Tuktoyaktuk, and Paulatuk, who have observed grizzly bears around their communities throughout their lifetimes and in generational memory. Even in places where there have always been grizzly bears, an increase in observations of bears has been noted in recent decades (i.e., in Paulatuk). Inuvialuit in Sachs Harbour and Ulukhaktok have described how grizzly bears were never or very infrequently observed on Victoria and Banks Islands. Grizzly bears are still uncommon on Banks Island, but the frequency of sightings and subsequent harvests has increased. On Victoria Island, there has been a recent and rapid increase in grizzly bear observations and harvests, and bears are known to be denning there since at least the winter of 2020-21 (WMAc(NWT) & WMAc(NS), 2022a).

Scientific documentation also indicates that grizzly bears' range has not historically extended to Banks and Victoria Islands in the ISR (Doupé et al., 2007). There were no recorded grizzly bear harvests in the ISR on Banks or Victoria Islands from 1992 until the 2008-09 season (ENR, unpublished data). Since then, there has been at least one grizzly bear harvested on the Islands in most years (ENR, unpublished data). In the 2012 Grizzly Bear status report (COSEWIC, 2012), Banks and Victoria Islands are considered to be within grizzly bears' 'expanding' range.

Why develop a new management plan?

Inuvialuit are observing more grizzly bears across the mainland ISR, and grizzly bears are becoming more common in areas where they were only rarely seen historically, including Banks and Victoria Islands. These changes, as well as the listing of grizzly bears as Special Concern under the federal *Species at Risk Act* (SARA, 2002) in 2018, and the subsequent need to develop a national management plan, led the Inuvialuit wildlife co-management organizations to develop a new management plan for grizzly bears. This plan will guide grizzly bear management in the ISR into the future, and represent the unique nature of grizzly bears and grizzly bear co-management in the ISR on the regional and national scale. The ISR Aklat/Akhaq (Grizzly Bear) Co-Management Plan will be used to inform the federal grizzly bear management plan.

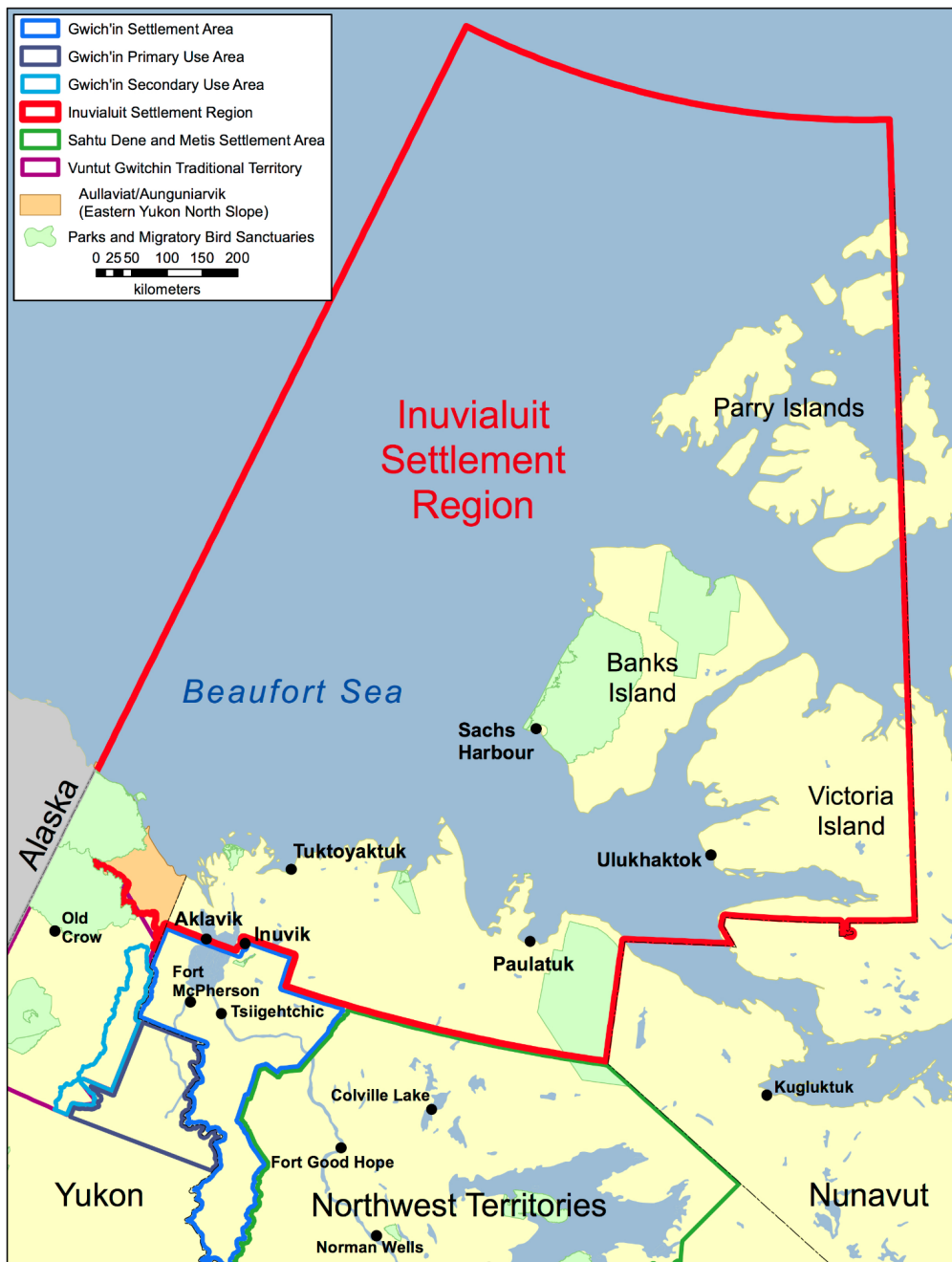
Figure 1 - Historic range of grizzly bears in the ISR



Scope of the plan

The management needs for grizzly bears in the ISR are distinct from most other areas in Canada. The co-management regime established by the IFA, along with recent grizzly bear population increase and range expansion in the ISR, and the relatively low level of human development in the region leads to unique management needs. This plan applies to the ISR (Figure 2), which was established in 1984 by the IFA. Wildlife in the ISR is managed through a co-management regime, explained in the section **(Co)management under the IFA**.

Figure 2 - Inuvialuit Settlement Region and bordering land claim, territorial and state jurisdictions



This plan allows those with management responsibilities in the ISR to co-manage grizzly bears in a regionally and culturally-appropriate way. The plan is ISR-wide but includes a community lens for each of the six ISR communities. Banks and Victoria Islands are considered separately from the mainland ISR because of significant differences in the historic presence of grizzly bears there.

Inuvialuit Final Agreement

The IFA is the comprehensive land claim signed by the Inuvialuit and Canada in 1984. There are three goals identified in the IFA:

1. (a) to preserve Inuvialuit cultural identity and values within a changing northern society;
- (b) to enable Inuvialuit to be equal and meaningful participants in the northern and national economy and society: and
- (c) to protect and preserve the Arctic wildlife, environment and biological productivity.

Wildlife management in the ISR, identified as a priority in goal 1(c), is further governed by the following 5 principles:

14. (1) a basic goal of the Inuvialuit Land Rights Settlement is to protect and preserve the Arctic wildlife, environment and biological productivity through the application of conservation principles and practices.
14. (2) In order to achieve effective protection of the ecosystems in the Inuvialuit Settlement Region, there should be an integrated wildlife and land management regime, to be attained through various means, including the coordination of legislative authorities.
14. (3) It is recognized that in the future it may be desirable to apply special protective measures under laws from time to time in force, to lands determined to be important from the standpoint of wildlife, research or harvesting. The appropriate ministers shall consult with the Inuvialuit Game Council from time to time on the application of such legislation.
14. (4) It is recognized that one of the means of protecting and preserving the Arctic wildlife, environment and biological productivity is to ensure the effective integration of the Inuvialuit into all bodies, functions and decisions pertaining to wildlife management and land management in the Inuvialuit Settlement Region.
14. (5) The relevant knowledge and experience of both the Inuvialuit and the scientific communities should be employed in order to achieve conservation.

The IFA describes a special conservation regime for the area of the ISR within the Yukon, known as the Yukon North Slope (see Figure 2):

12. (2) The Yukon North Slope shall fall under a special conservation regime whose dominant purpose is the conservation of wildlife, habitat and traditional native use.

Inuvialuit rights to harvest grizzly bears are established under the IFA, and vary in the Northwest Territories (NWT) and Yukon:

Northwest Territories	Yukon North Slope
14.(6)(b) the <i>exclusive</i> right to harvest furbearers, including black and grizzly bears, throughout the Western Arctic Region	12. (24) (a) ... the <i>preferential</i> right to harvest all species of wildlife, except migratory non-game birds and migratory insectivorous birds, for subsistence usage throughout the Yukon North Slope; 12. (24) (c) “the <i>exclusive</i> right to harvest game within the National Park, the Territorial Park and adjacent islands.”

Italics added for emphasis

The IFA provides the guiding framework and principles for all wildlife management in the ISR, including grizzly bear.

Planning process and participants

In order to effectively capture Inuvialuit perspectives on grizzly bears throughout the ISR, the development process for this plan included engagement with community members and Hunters and Trappers Committees (HTCs) in each of the six ISR communities, as well as the regional Inuvialuit and co-management organizations established by the IFA. A guiding principle in the development of the plan was to preserve the integrity and spirit of community feedback, recognizing that this is a co-management plan that serves multiple communities.

The WMAC(NWT) and the WMAC(NS) led the development of the plan, provided direction, and reviewed drafts. The Inuvialuit Game Council (IGC) provided feedback throughout plan development. A Community Engagement report was produced as a result of initial meetings with organizations and community members, online surveys, and verifications (WMAC(NWT) & WMAC(NS), 2022a).

In order to address comments on the first draft, a working group was established with members from WMAC(NWT), WMAC(NS), IGC, Yukon Government, Government of Northwest Territories, and Parks Canada to advance the Plan to a second draft. The working group sought further direction from HTCs when necessary. More detailed results of this engagement can be found in the companion document *Community Engagement Report for the Inuvialuit Settlement Region Aklat/Akhaq (Grizzly Bear) Co-Management Plan* (WMAC(NWT) & WMAC(NS), 2022a). Summary tables of who was involved in the plan development process are available in **Appendix 1. Planning Process Participants**.

Management principle

In addition to the guiding principles from the IFA, management of Aklat /Akhaq /grizzly bear in the ISR is guided by the following principle:

Management partners at all jurisdictional levels acknowledge and promote the unique and varying nature of grizzly bear status, cultural importance, and ecological roles within different regions of the ISR, and manage them accordingly.

Figure 3 - Yukon North Slope Aklat / Akhaq / grizzly bear



Aklat / Akhaq species information

Inuvialuktun species name: *Aklat* (plural; Uummarmiutun & Sallirmiutun), *Akhaq* (Kangiryuarmiutun)

Grizzly bears are large bears with a distinctive hump, long glossy coats, and long claws. These animals eat both plants and animals, hibernate through the winter, and occupy large home ranges where they use a variety of habitats to meet their needs. Bears may be brown, blonde, or even red. Their hairs are lighter on the end, giving them a distinctive appearance. They have a good sense of smell and a recognizable gait similar to a wolverine.

Species at risk status

Grizzly bear conservation status varies throughout Canada, including in the jurisdictions that overlap the ISR.

Table 2 - Grizzly bear assessments and listings applicable to the ISR

Region and Act	Assessment (date)	Listing (date)
Canada (western population) <i>Species at Risk Act</i>	Special Concern (2012)	Special Concern (2018)
Northwest Territories <i>Species at Risk (NWT) Act</i>	Special Concern (2017)	Not listed (2018)
Yukon N/A	N/A	N/A

Grizzly bears (Western population) were assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in 2012 (COSEWIC, 2012) and listed as Special Concern by the federal government in 2018. Special Concern under the SARA is defined as a “species which may become threatened or endangered because of a combination of biological characteristics and identified threats” (SARA, 2002). WMAC(NWT), WMAC(NS), and IGC are considered Wildlife Management Boards in the federal assessment process. The Councils review Status Reports and provide comments to COSEWIC. They do not have an active role in COSEWIC meetings where decisions on assessments are made, but can attend as observers. The Councils are also consulted by the federal government when a species listing is being considered.

WMAC(NWT), through their participation on the Conference of Management Authorities (CMA), supported the decision not to list grizzly bears in the NWT. Inuvialuit knowledge and perspectives are solicited by WMAC(NWT) for each Species at Risk recommendation through the annual WMAC(NWT) tour to the six ISR communities. Assessments, scientific and traditional and local knowledge, and potential listings are discussed in each community. The NWT Consensus Management Agreement for Grizzly Bears specifies why they are not listed as Special Concern: “While the CMA recognizes that grizzly bears display a number of limiting biological characteristics (e.g. delayed age at maturity, long-lived, low reproductive output, and small population), there doesn’t seem to be a firm connection to any clear, present threats to grizzly bears that could result in declines at the population level” (CMA, 2018, p. 6).

While there is no formal process for assessing grizzly bear species at risk status specifically in the ISR, the WMACs regularly review the best available information from traditional and local knowledge and science, to make conservation-based recommendations regarding all terrestrial species, including grizzly bear. To update this plan, community meetings, an online survey, and discussions with Inuvialuit and co-management organizations were

conducted in 2020-2021. This engagement suggests that the status in the ISR appears to be 'not at risk', consistent with the non-listing by the CMA.

There is no Species at Risk legislation in the Yukon, which means that grizzly bears have not been assessed or listed in the Territory. There is a management plan for grizzly bears in the Yukon which does not apply to the ISR or National Parks within the Yukon.

Habitat and biological needs

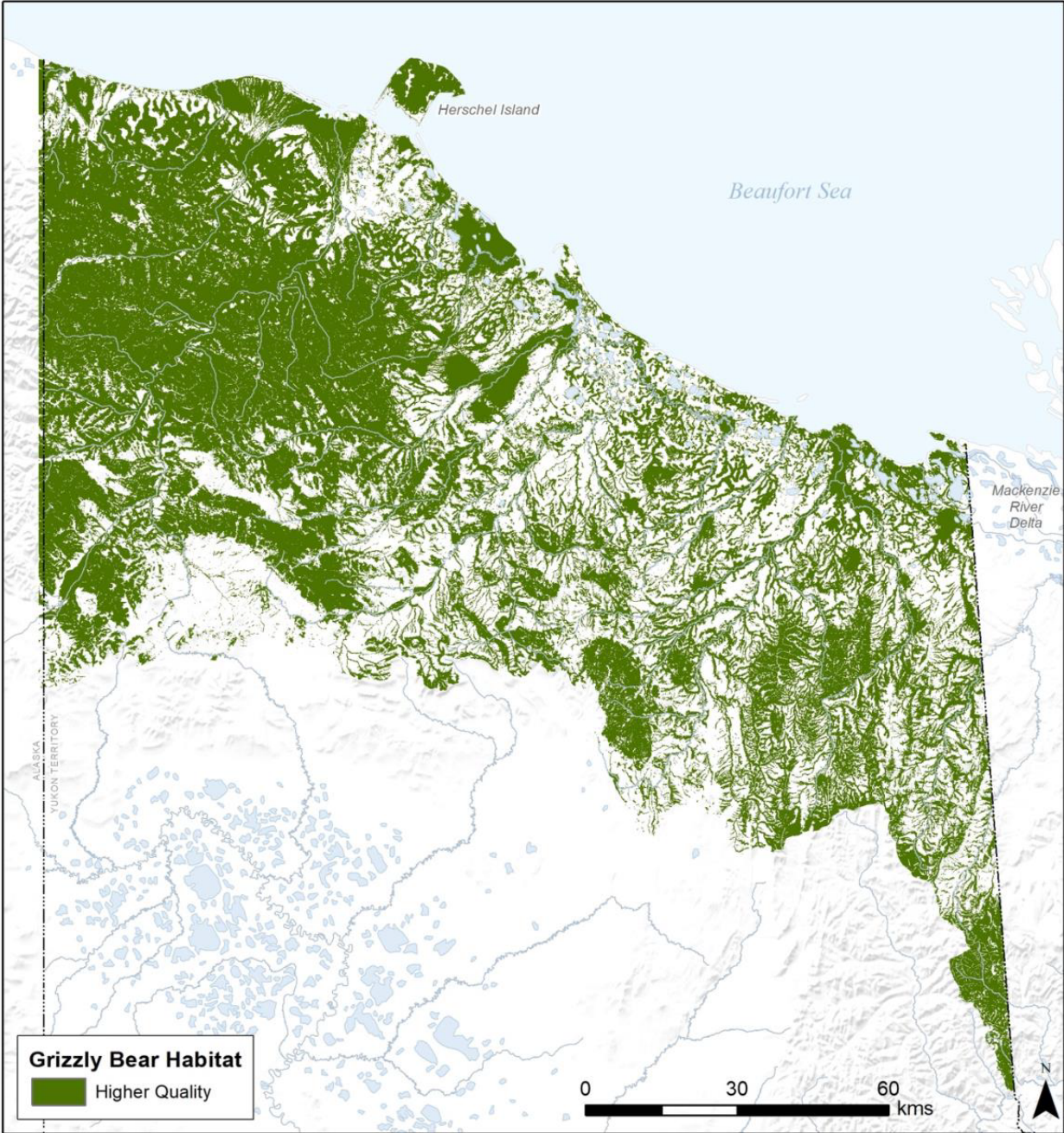
Grizzly bears in the ISR occupy several different habitats, including the tundra or barren-ground, mountainous areas, the coastal plain in the Yukon, and the Mackenzie Delta. On the Yukon North Slope, grizzly bears use all parts of the landscape at different times of the year to meet different needs (WMAC(NS) & Aklavik HTC, 2008; WMAC(NS), 2022b). Similarly, grizzly bears in the Mackenzie Delta and Tuktoyaktuk peninsula have large home ranges that allow them to move across the landscape to access food that is available at different times of the year (Edwards, 2010).

Home ranges of grizzly bears in the ISR are large and variable, ranging from an average of 585 km² (females) to 3,368 km² (males) on the Yukon North Slope (Triska & Heinemeyer, 2020), and from an average of 1,200km² (females) to 2,875km² (males) in the Mackenzie Delta and east towards Husky and Sitidgi Lakes (Edwards, 2010).

Food sources are seasonally and geographically dependant (Nagy & Branigan, 1998). Primary foods for grizzly bears include over-wintered and fresh berries, ground squirrels, mushoo [Inuvialuktun] or bear root (*Hedysarum alpinum*), grasses, herbaceous plants, eggs, carcasses, and animals such as seals, caribou, and other ungulates (Nagy & Branigan, 1998; WMAC(NS) & Aklavik HTC, 2008; WMAC(NS), 2022b).

More information on grizzly bear ecology on the Yukon North Slope can be found in the Wildlife Conservation & Management Plan and supporting documents (WMAC(NS), 2022a; WMAC(NS), 2022b). More information on grizzly bears in the Mackenzie Delta area can be found in resources in the Annotated Research Compendium (WMAC(NWT) & WMAC(NS), 2022b). There is currently no documented information on the habitat and biological needs of bears around Paulatuk or Banks and Victoria Island.

Figure 4 - Grizzly bear habitat overview in the Yukon North Slope



The map above shows moderate and high value habitats, mapped from habitat models based on traditional knowledge, locations of collared bears, and den surveys. This map displays habitat rated as high value by males or females during a minimum of one season or denning. It combines the results from seasonal habitat models in Triska and Heinemeyer (2020). Note that white areas in the Yukon North Slope do not equate to non-habitat but indicate lower quality habitat.

Population and distribution

The majority of the ISR has not had scientific grizzly bear population or density surveys since the 1990s. The exceptions are the Yukon North Slope and the area included in the Inuvik-Tuktoyaktuk Highway grizzly bear DNA hair snag survey (Figure 5). Traditional and local knowledge of grizzly bears has not been systematically documented in most of the ISR since the early 2000s. Range expansion has been observed by community members in Ulukhaktok and Sachs Harbour and reported in the scientific literature as well (Doupé et al., 2007; Pongracz et al., 2019; WMAC(NWT) & WMAC(NS), 2022a).

Traditional and local knowledge

Traditional and local knowledge shared at community meetings for the development of this plan and through the grizzly bear quota management process indicates that people are seeing more bears around their communities and on the land. Observations relating to population density vary by community (WMAC(NWT) & WMAC(NS), 2022a):

Aklavik: Harvesters emphasize that they are seeing a lot of small bears when they are out on the land. They have seen up to 20 bears at fish and whale camps near the coast, as well as a group of 5 bears in the Delta by helicopter in the spring. There is some speculation as to whether bears are moving further north because they are over their carrying capacity in the southern part of the ISR. In the online survey, most participants from Aklavik reported seeing more bears compared to 10 years ago.

Inuvik: Participants at the community meeting shared the perspective that the grizzly bear population has been increasing since the harvest quota went into place in the 1990s. Over half of online survey participants from Inuvik reported seeing or hearing that people were seeing more bears than 10 years ago.

Tuktoyaktuk: Participants at the community meeting discussed seeing more bears than in the past. They attributed this increase in sightings as a population increase due to the implementation of harvest quotas.

Paulatuk: People reported that they are not surprised to see a grizzly bear anywhere out on the land, including places they were not seen in the past. Meeting participants agreed that the numbers of grizzly bears are increasing and that the number is too high. There was speculation as to whether the bears are moving north because of forest fires or development in the south.

Ulukhaktok: Grizzly bears are not native to Victoria Island, and community members have limited information about their ecology, diet, and behaviour in their area. It is clear that bears are coming more frequently and in higher numbers to Victoria Island. Harvesters reported seeing tracks of 11-12 bears following the Dolphin & Union Caribou herd during their spring migration in 2020, and seeing bears and tracks often when they are hunting and fishing on the island at other times of the year. Some bears have denned on the island in recent years.

Sachs Harbour: Grizzly bears are seen infrequently, and are almost immediately harvested once they are spotted. Harvests have been increasing in frequency from once every ~15 years, to once every few years.

Scientific information

Grizzly bear population densities are expected to vary widely within the ISR, as the productivity and carrying capacity varies among habitat types.

The population density of bears on the Tuktoyaktuk Peninsula and Richards Island appears to have increased from the 1970s to 2013-14 from about 4 to about 10 bears / 1000km², however the methodology and study areas differed so this difference may not be statistically significant. Results from the 2019-20 study, when available, will add to the scientific understanding of population trends in this area.

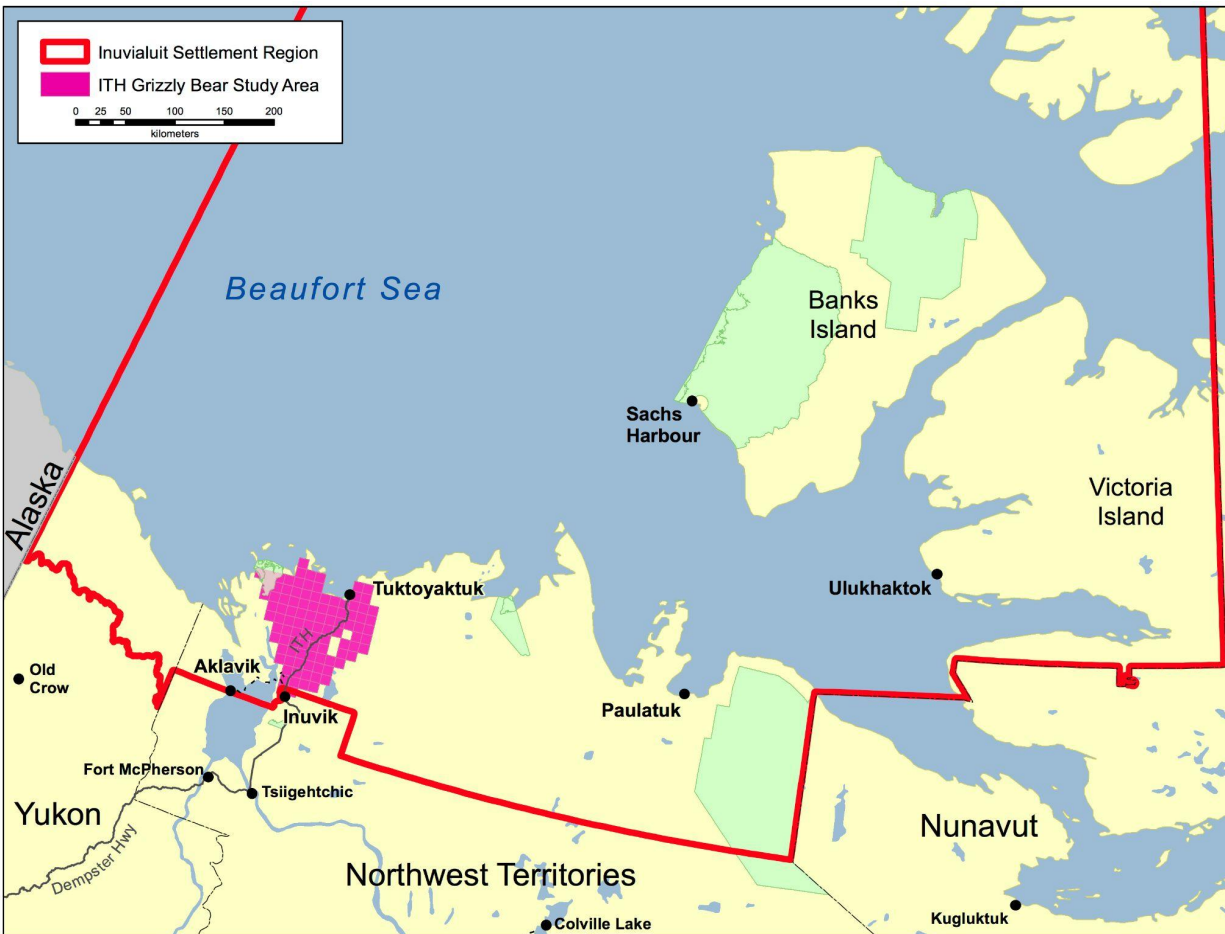
On the Yukon North Slope, most grizzly bears live in the mountains, and estimated bear density is highest in the British Mountains in Ivvavik National Park (~43-54 bears/1,000km²), followed by the Barn Mountains (~10-18 bears/1000 km²), and then the Coastal Plain (~10-12 bears/1000km²) (Yukon Fish and Wildlife Branch Report, 2016). At the time of the 2006-2007 study, the Yukon North Slope grizzly bear population was believed to be stable or at carrying capacity (Yukon Fish and Wildlife Branch Report, 2016).

While there have been no population density estimates produced for Banks and Victoria Islands, there are several published and unpublished records of bears observed and harvested on these islands, and even further north. Doupé et al. (2007) presented records of grizzly bear sightings (and harvests) dating as far back as 1951 on Banks Island and 1986 on Victoria Island, and recorded a sighting of a grizzly bear as far north as Melville Island in 2003. In 2001, a grizzly bear denned on Victoria Island, near Cambridge Bay, Nunavut (Doupé et al., 2007), and harvesters have reported continued denning of bears on the island in the winters of 2019-20 and 2020-21 (WMAC(NWT) & WMAC(NS), 2022a, 2021; WMAC(NWT), 2019, 2020). Early sightings and harvests of grizzly bears on the islands were predominantly male, but more recently, females and females with cubs have been seen and harvested (GNWT, unpublished data). Observations indicate that the frequency of sightings (Banks Island) and number (Victoria Island) of grizzly bears on the islands are increasing over time (WMAC(NWT) & WMAC(NS), 2022a).

Table 3 - Grizzly bear population and density estimates in the ISR

Region	Density (rounded)	Year Data (Report)	Methodology Comments
Yukon North Slope	British mountains (Ivvavik): 43-54 / 1000km ² Barn Mountains: 10-18 / 1000km ² Coastal Plain: 10-12 / 1000km ²	2004-10 (Yukon Fish and Wildlife Branch Report, 2016)	DNA mark-recapture Population believed to be stable or at carrying capacity (Yukon Fish and Wildlife Branch Report, 2016)
Tuktoyaktuk Peninsula and Richards Island	4 / 1000km ²	1973-78 (Nagy et al., 1983)	Capture & marking of all individuals (collaring)
Tuktoyaktuk Peninsula and Richards Island	10 (7-14) / 1000km ²	2013-14 (Boulanger & Branigan, 2020)	DNA mark-recapture
Tuktoyaktuk Peninsula and Richards Island	N/A	2019-20	DNA mark-recapture Field report only, no analysis available yet.
Anderson-Horton River	8 / 1000km ²	1987-89 (ENR, unpublished report)	Mark-recapture
Richardson Mountains	19 / 1000km ²	1992-93 (ENR, unpublished report)	Mark-recapture
Brock-Hornaday	6 / 1000km ²	1992-93 (ENR, unpublished report)	Mark-recapture
Mackenzie Delta	N/A	N/A	No estimate available.
Banks Island	N/A	N/A	No estimate available.
Victoria Island	N/A	N/A	No estimate available.

Figure 5 - Study area for Tuktoyaktuk Peninsula and Richards Island DNA mark - recapture



DNA Mark-Recapture study done 2013-14 & 2019-20

Behaviour

Aklat in the ISR hibernate through the winters, typically entering their dens in October and emerging anywhere from March to June, depending on conditions (Nagy & Branigan, 1998; SARC, 2017). Bears tend to den within their home ranges and on south-facing slopes, although there is some variability in the different regions of the ISR. Dens are often dug in soil, or sometimes snow, and usually collapse in the springtime (Nagy & Branigan, 1998). Inuvialuit from Aklavik remarked on how bears seem to den wherever they find themselves, and that bears appear to be denning later and coming out earlier, though the reason for this was unclear (WMAC(NS) & Aklavik HTC, 2008).

Pregnant females give birth in their dens and emerge with their cubs in the springtime. Cubs spend 2-3 years with their mothers before they live on their own (SARC, 2017). Males and females are reproductively mature at about 5 years old, but many females may not reproduce until they are up to 8 years old (SARC, 2017). Grizzly bears from Spring to Fall when they are outside their dens, although the implantation of the embryo is delayed until October and is dependent on whether the female has gained enough fat to support giving birth to cubs (SARC, 2017).

Inuvialuit observe grizzly bears in a variety of situations when they are out on the land. These observations provide a rich understanding of grizzly bear behaviour. For example, Inuvialuit describe how bears move across the landscape on the Yukon North Slope to find particular food sources at certain times of the year (WMAC(NS) & Aklavik HTC, 2008).

Some bear behaviours appear to be changing: for example, participants at the Paulatuk community meeting described novel bear behaviour, like stalking caribou (WMAC(NWT) & WMAC(NS), 2022a). Many Inuvialuit are concerned about bear behaviour around humans, and report that bears seem to be getting more aggressive in their interactions with humans and camps (SARC, 2017; WMAC(NWT) & WMAC(NS), 2022a). Tuktoyaktuk, Inuvik and Aklavik reported high numbers of camp break-ins by grizzly bears in recent years. People in Aklavik and Paulatuk also raised concerns that bears that have been handled or deterred with bear deterrents may act more aggressively towards humans, based on their observations. WMAC(NWT) and IGC members, as well as community meeting participants, raised concerns about grizzly bears becoming habituated to solid waste facilities in Aklavik, Inuvik, and Paulatuk, and mothers teaching their young to seek food at these sites (WMAC(NWT) & WMAC(NS), 2022a).

Management System

Applicable jurisdictions, laws, and documents

Grizzly bears are managed under a number of jurisdictions, laws, and guiding documents in the ISR:

- *Inuvialuit Final Agreement*
- *Yukon Wildlife Act*
- *NWT Wildlife Act*
- *Species at Risk (NWT) Act*
- *Federal Species at Risk Act*
- *Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*
- *Canada Parks Act* (Ivvavik and Tuktut Nogait National Parks)
- *Yukon Parks Act* (Qikiqtaruk Territorial Park)
- *ISR Community Conservation Plans*
- *Yukon North Slope Wildlife Conservation and Management Plan*

Managing grizzly bears on a population basis, as per the IFA, means considering and collaborating with other jurisdictions. Those conducting research must also be cognizant of the shared nature of these populations. This involves coordination with many jurisdictions that border the ISR (see Figure 2) and the co-management structures that exist within them: Alaska (State of Alaska, the Inupiat - North Slope Borough, US Fish and Wildlife Service), the Vuntut Gwitchin First Nation in the Yukon, the Gwich'in and Sahtú in the NWT (including the Gwich'in and Sahtú Renewable Resources Boards), and the Kitikmeot Region of Nunavut (including the Nunavut Wildlife Management Board).

Within the ISR, NWT, and Yukon have different regulatory frameworks under each Territory's Wildlife Act, with a Wildlife Management Advisory Council supporting each region (Figure 6). When relevant, this Plan will specify which management regime is implicated.

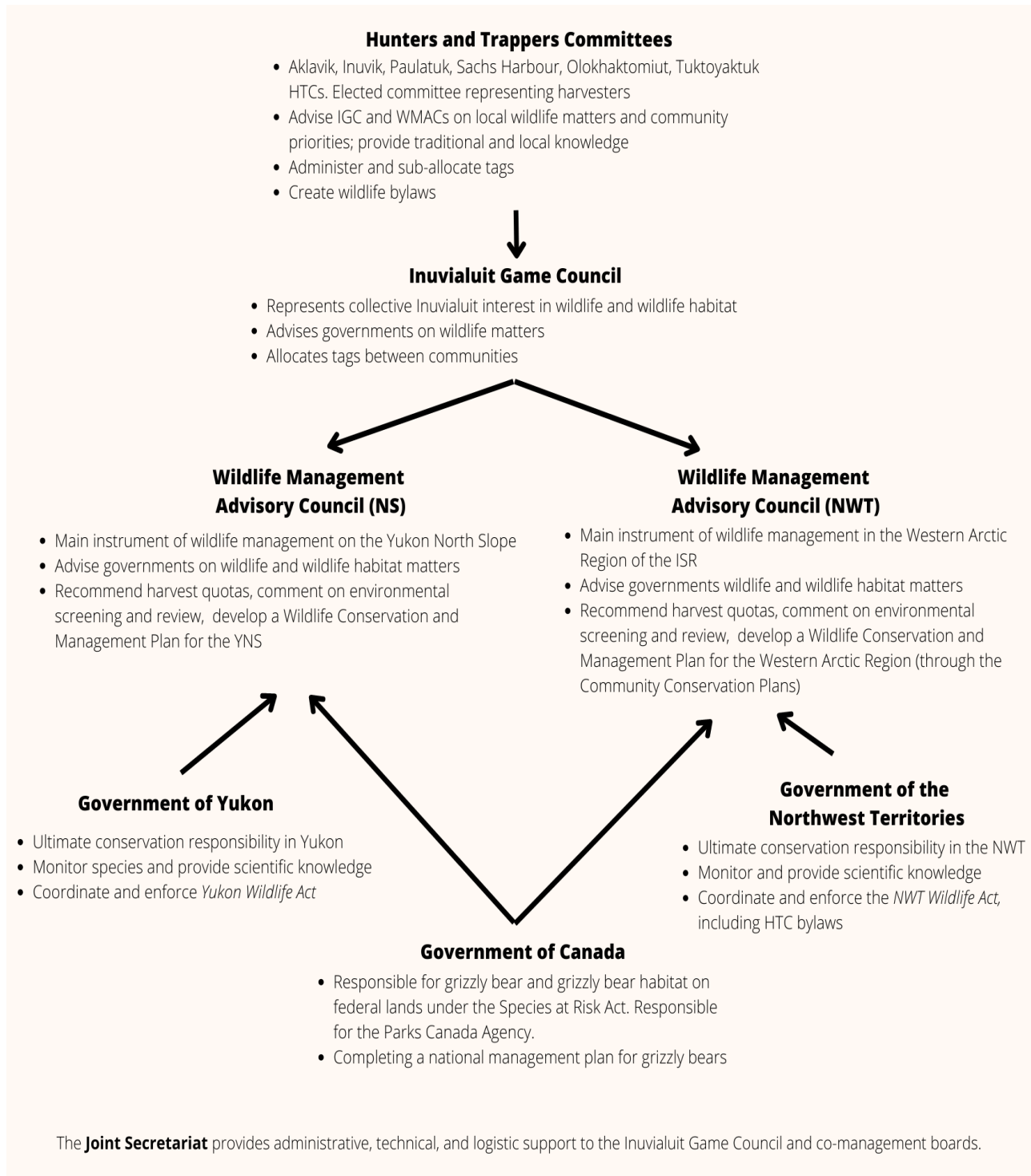
Co-Management under the IFA

Under the IFA, Inuvialuit have exclusive rights to harvest grizzly bears in the ISR, with the exception of Aullaviat/Aunguniarvik (Eastern Yukon North Slope) where those rights are preferential. Inuvialuit and Inuvialuit traditional and local knowledge plays a meaningful and central role in the management of all wildlife in the ISR (IFA, 1984, s.14(5)). Figure 6 shows the Inuvialuit and co-management organizations established by the IFA that play a role in grizzly bear management, and their compositions of Inuvialuit and government members. The role of each organization is detailed below.

Inuvialuit Game Council

The IGC represents the collective Inuvialuit interest in all wildlife and wildlife habitat matters. Federally, the IGC reviews and advises the federal government on any proposed Canadian position for international purposes that affects wildlife in the ISR, and appoints members whenever possible or appropriate for any Canadian delegation that deals with international matters affecting wildlife harvesting by the Inuvialuit. Within the ISR, the IGC allocates wildlife quotas among the communities, and assigns community hunting and trapping areas.

Figure 6 - Inuvialuit and co-management organizations established by the Inuvialuit Final Agreement



Wildlife Management Advisory Council (Northwest Territories) & Wildlife Management Advisory Council (North Slope)

The WMAC(NWT) and WMAC(NS) are the main instruments of wildlife management in the Western Arctic Region of the NWT and the Yukon North Slope respectively. The WMACs advise the federal and territorial governments on wildlife policy, management, regulation, and administration of wildlife, habitat and harvesting in the ISR (IFA, 1984, s.14 and s.12 respectively). The recommendations of these joint management groups provide the foundation for grizzly bear management in the ISR. These recommendations are based on best available information including traditional and local knowledge and science. The WMACs work collaboratively with the IGC, HTC, and governments in research, monitoring and management of grizzly bears and their habitat. The WMACs consult regularly with IGC and HTCs, and these groups assist the WMACs in carrying out their functions. The WMACs recommend appropriate quotas for Inuvialuit wildlife harvesting, including quotas for grizzly bears where zones exist. They also provide comments during environmental screening and review processes regarding the monitoring and mitigation of impacts of development on grizzly bears and their habitat.

Each WMAC is responsible for preparing a wildlife conservation and management plan for the region (IFA, 1984, s.12.(56)(b) & s.14.(60)(b)). WMAC(NWT) has worked with the HTCs to produce and update a series of Community Conservation Plans in 2016, one for each of the six communities in the ISR, which identify key management actions and specific areas that are important habitat during different parts of animals' lifecycles. Grizzly bears are one species that is considered directly in these plans. WMAC(NS) produced the Yukon North Slope Wildlife Conservation and Management Plan (WMAC(NS), 2022a). Grizzly bears are a key species within this plan, and Companion Report 7 (WMAC(NS), 2022b) addresses conservation of the species directly.

Inuvialuit Hunters and Trappers Committees

The community HTCs advise the IGC and WMACs on local wildlife matters and sub-allocate subsistence quotas and other regulated harvesting within the community. They make wildlife bylaws governing the exercise of Inuvialuit exclusive and preferential harvesting rights that can be made enforceable under territorial (NWT) and federal legislation. The HTCs work with other organizations in each community to develop Community Conservation Plans, which provide guidance on the conservation and management of natural resources and lands within the ISR.

HTCs bring forth their members' concerns and perspectives to the regional Councils, and are key participants in adjusting the management system to ensure it is locally effective and tailored to each community. Their role in the management system is particularly important for species where the biological status of the species and the way Inuvialuit relate to the species vary throughout the ISR, as in the case of grizzly bear.

Government of the Northwest Territories

The Government of the Northwest Territories (GNWT), represented by the Minister of Environment and Natural Resources (ENR), has ultimate responsibility for the conservation and management of grizzly bears and their habitat in the NWT, in accordance with the IFA. ENR takes a lead role in grizzly bear monitoring and in coordinating and enforcing harvest management outlined in the HTC by-laws. These are written into regulation under the *NWT Wildlife Act*. Decisions on grizzly bear listing and management plans made under the *Species at Risk (NWT) Act* are made jointly with the WMAC(NWT) and other co-management boards through the NWT CMA process (www.nwtspeciesatrisk.ca).

In 2018, while the Species At Risk Committee (SARC) assessed grizzly bears as Special Concern largely based on biological characteristics, the CMA decided not to list grizzly bear in the NWT. As the species was not listed, there is no requirement for a management plan in the NWT.

Government of Yukon

The Government of Yukon, represented by the Minister of Environment, has ultimate responsibility for the conservation and management of grizzly bears and their habitat in the Yukon, in accordance with the IFA. Yukon Government manages and protects grizzly bears and their habitat, and coordinates harvest management within Yukon through regulations in the *Yukon Wildlife Act*. YG actively engages in multi-jurisdictional species at risk recovery planning efforts to ensure sound management and recovery principles are developed that can be applied within Yukon.

Yukon Government collaborated with the Yukon Fish and Wildlife Management Board to develop a Conservation Plan for Grizzly Bears in Yukon (2019). This plan does not apply to the areas of Yukon that are within the ISR: Ivvavik National Park, Herschel Island-Qikiqtaruk Territorial Park, and the Aullaviat/Aunguniarvik (eastern Yukon North Slope).

Government of Canada

Under the federal SARA, Environment and Climate Change Canada is responsible for completing a national management plan for grizzly bears. The Government of Canada is responsible for managing grizzly bears and their habitat on federal lands under the jurisdiction of the federal Minister of Environment and Climate Change (e.g., National Wildlife Areas and Migratory Bird Sanctuaries) and Minister responsible for the Parks Canada Agency (National Parks, National Park Reserves and National Historic Sites). The Government of Canada signs international agreements on behalf of all jurisdictions and has responsibilities to coordinate international management actions for grizzly bears, with the advice of the joint management boards and jurisdictions.

Grizzly bears were last assessed as Special Concern by the COSEWIC in 2012. In 2018, they were listed under the federal *SARA* as Special Concern, which triggered the legal requirement for a national management plan, expected to be completed in 2022.

There are two large National Parks within grizzly bear range in the ISR; Ivvavik National Park on the Yukon North Slope, and Tuktut Nogait National Park near Paulatuk. National Parks are managed by Parks Canada, under federal jurisdiction. The Management Plans for both Parks include the conservation of grizzly bears and grizzly bear habitat.

Inuvialuit Perspectives

Uses of aklat and akhaq and perceptions related to grizzly bear management vary widely among communities in the ISR. There are some broad similarities among the mainland communities of Aklavik, Inuvik, Tuktoyaktuk, and Paulatuk, as well as similarities between the communities of Sachs Harbour and Ulukhaktok on Banks and Victoria Islands. These regions will be considered separately in this section. It should also be noted that Paulatuk shares similarities with both the mainland communities and Sachs Harbour and Ulukhaktok. Each community's perspectives, as documented during the community engagement phase of planning, are presented individually in recognition of local and regional differences.

On the mainland

The mainland communities of Aklavik, Inuvik, Tuktoyaktuk, and Paulatuk have always harvested aklat for their meat, fat, and hides (WMAC(NS) & Aklavik HTC, 2008). Hides were used for warm bedding, and the lard was used in food preparation, for lamps, and for treating skins. Meat was consumed, especially when other meat was scarce, and people particularly enjoyed the paws (WMAC(NS) & Aklavik HTC, 2008). Some meat is still taken and eaten, but not as much as in the past (WMAC(NS) & Aklavik HTC, 2008; WMAC(NWT) & WMAC(NS), 2022a).

More recently, aklat have been harvested under quota and in specific zones. Aklat are currently harvested almost exclusively for their hides, which are often sold to buyers in southern Canada directly, though some are sold in auctions through the Mackenzie Valley Fur Program or used locally. The market for aklat hides has decreased significantly in recent years (WMAC(NWT) & WMAC(NS), 2022a). There are also Inuvialuit big game outfitters who offer guided grizzly bear hunts to non-Inuvialuit hunters. The perceived economic importance of aklat to Inuvialuit varies based on individual experience and use of aklat (WMAC(NS) & Aklavik HTC, 2008; WMAC(NWT) & WMAC(NS), 2022a).

During the engagement process, Inuvialuit community members and harvesters reported a variety of reasons why aklat were important to them and to the ecosystem around their community. Inuvialuit on the mainland generally view aklat as part of the lifecycle of other animals and as predators, recognizing that they live in grizzly bear country. Most Inuvialuit enjoy seeing bears on the land, whether they harvest them or not.

Inuvialuit on the mainland want to see healthy populations of aklat on the land, and feel that the current management system results in a sustainable harvest. However, many participants at plan engagement meetings brought up that the number of grizzly bears is increasing and this is not desirable (WMAC(NWT) & WMAC(NS), 2022a). All mainland

communities are concerned that there is not enough information about aklat populations, and recommended that population surveys be conducted as soon as possible. Inuvialuit traditional and local knowledge also needs to be valued more highly in managing aklat, with additional resources being dedicated to using this knowledge in research and management. In the eyes of communities, better systems of knowledge collection and sharing are needed.

Mainland communities highlighted several concerns to be addressed in this Plan, including:

- potential threat to human safety at camps and in town
- break-ins and damage to camps
- the impact of grizzly bear predation on caribou in the northern and eastern parts of mainland ISR (WMAC(NWT) & WMAC(NS), 2022a)

In Aklavik, Inuvik, and Paulatuk, participants at the community meetings described concerns about bears at solid waste facilities. The management of solid waste facilities must be community-specific and community-informed, as each community has unique situations and needs (WMAC(NWT) & WMAC(NS), 2022a).

On Victoria and Banks Islands

Aklat/akhaq were not seen or used on Banks or Victoria Island in the early to mid 1900s (WMAC(NWT) & WMAC(NS), 2022a). The frequency of sightings and harvests on Banks Island has increased since the first aklat harvest occurred in 1951 (WMAC(NWT) & WMAC(NS), 2022a). Aklat are usually harvested as soon as community members hear about them being on either island, which happens every few years.

There's a decline in our subsistence wildlife, the ones that really matter for us. We should look for funding for hunters to harvest more grizzly bears. There should be incentives and support for hunters for gas and supply money. We need a predator control program [...]. We need to drop the pressure on other animals, because grizzly bear can overhunt them. We recognize that people from other parts of the ISR and Canada may not want to hear that though.

Patrick Klengenber, Olokhaktomiut Hunters and Trappers Committee & Inuvialuit Game Council, 2021

On Victoria Island, changes noted by harvesters include:

- seeing many akhaq tracks following the Dolphin & Union caribou herd that migrates from the mainland to the island
- harvesting akhaq in the springtime
- seeing akhaq when they are out hunting and fishing throughout the year
- akhaq denning on the island in the winters of 2019-20 and 2020-21
- akhaq are more commonly seen on the land and ice (WMAC(NWT) & WMAC(NS), 2022a)

Community members in both communities are very concerned about the impacts bears may be having on important subsistence species, including caribou, muskox, char, geese, and seals, as well as grizzly bear interactions with polar bears. They want to harvest all grizzly bears on Banks and Victoria Islands, and have incentives for grizzly bear harvest to deter the populations of akhaq/aklat on Victoria and Banks Islands from establishing or increasing.

By community

Aklavik

Participants in the Aklavik meeting expressed that they are generally happy with the management system for grizzly bears that is in place. They remarked that people know and follow the management system, and Aklavik harvests have been consistently meeting or exceeding the recommended 2:1 male:female ratio. They did not feel that grizzly bears are at risk in the Delta and the Yukon North Slope, and discussed how harvesters are seeing many small bears that they are choosing not to harvest, which means that harvest numbers below the quotas do not indicate a lower number of bears on the landscape. Participants expressed concerns that there has never been a population survey done in the Delta. There were many suggestions about how to address this knowledge gap and conduct a survey in the Delta.

The biggest concern expressed was around the large number of bears coming into the community and to the solid waste facility and how this impacts human safety. Participants expressed that they need to continue ongoing management of bears in the community, and they would like to implement non-lethal methods of removing bears from the solid waste facility and the community. Relocating bears could be paired with collaring the bears from the solid waste facility to provide information on where these bears are coming into the community from (the Delta or the mountains).

Meeting participants discussed that bears in the Delta were commonly aggressive. They also discussed whether bears handled for research may be more aggressive, based on their observations in the past. They also commented that the market for grizzly bear hides has been significantly reduced, and buyers in British Columbia are no longer buying bear hides.

Research on bears on the Yukon North Slope is much more extensive than in other areas of the ISR, and there are several studies with recent (<15 years old) traditional and local knowledge on grizzly bears, including:

- Aklavik Local and Traditional Knowledge about Grizzly Bears of the Yukon North Slope (WMAC(NS) & Aklavik HTC, 2008)
- Yukon North Slope Wildlife Conservation and Management Plan (WMAC(NS), 2022a)
- Yukon North Slope Wildlife Conservation and Management Plan Companion Report 7: Grizzly Bear / Aklaq (WMAC(NS), 2022b)
- Yukon North Slope Traditional Use Study (WMAC(NS) & Aklavik HTC, 2018)

Online survey participants from Aklavik were almost evenly split on whether they agreed with having zones, leaning slightly towards agreement, and most agreed with having a quota. Most survey participants had concerns about grizzly bears at the solid waste facility, and just over half supported electric fencing as a measure to manage bears there. More generally, all participants agreed that grizzly bears are an important natural part of the ecosystem, and most agreed that they were predators of subsistence species. Most participants also agreed that they enjoyed seeing grizzly bears on the land, and that grizzly bears are an important part of the economy in the ISR.

Inuvik

Participants at the Inuvik community meeting primarily discussed the current management system and the lack of information on grizzly bears. A population survey was the highest-priority management action discussed at both meetings in Inuvik. Some participants expressed that there cannot be an updated grizzly bear management plan without updated population information. One key suggestion from meeting participants was to collect more information on grizzly bears, on an ongoing basis, and include science and traditional knowledge in all research and monitoring. Participants also raised the importance of having Inuvialuit involved in and leading studies and management of grizzly bears, including population surveys.

Inuvik meeting participants, like those in other communities, did not agree with the federal listing of grizzly bears as Special Concern: they are not at risk in the ISR. Participants reported hearing from other areas of the ISR that the grizzly bear range is expanding, and have observed population increases around Inuvik, especially since quotas were implemented in the 1990s. Participants were clear that they want there to be healthy numbers of bears on the land, and that there is an effective management system in place to ensure that their numbers stay robust.

Concerns about grizzly bears included their role as predators of caribou and moose, about human safety and property damage at camps, and regarding managing the high number of grizzly bears at the Inuvik solid waste facility. Another concern was the decrease in the grizzly bear economic market due to restrictions in where hides can be sold: they can't be sold in British Columbia or the US, and possibly Alberta. Participants noted that a Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) permit is required to export at all. There were also concerns regarding the process for measuring hides.

Inuvik had the highest participation in the online survey, with 32 participants. Regarding the management system, participants were split almost evenly between agreeing and disagreeing with having zones for grizzly bear harvest in the ISR, with a slight lean towards disagreement. About two-thirds of participants agreed with the quotas. Almost all participants were concerned about grizzly bears at the Inuvik solid waste facility, and were split on whether electric fencing is an appropriate solution. In terms of grizzly bear roles more generally, many participants see grizzly bears as a natural part of the ecosystem,

although about a third of participants did not agree with this statement. Most participants enjoy seeing grizzly bears on the land, and think that they are an important part of the economy in the ISR (WMAC(NWT) & WMAC(NS), 2022a).

Tuktoyaktuk

Participants in the Tuktoyaktuk community meeting shared a variety of views on the current management system and on recommended management actions to implement. Participants shared that the current grizzly bear management system is working, and the majority of people understand and accept the system. Specifically, participants supported continuing to use traditional knowledge to update quotas, especially in the absence of scientific population information. The group also discussed the need for more education from ENR (GNWT) on the current regulations for harvesting grizzly bears, and a better system of documenting and sharing observations from harvesters and big game hunters with management decision-makers.

Tuktoyaktuk participants, like others, discussed increased observations of grizzly bears, and suggested that this is a population increase, and that it has been happening since the quota was introduced in the 1990s. Some people expressed that there are too many grizzly bears now, and people are not able to keep them under control as they used to. Further, participants do not believe that grizzly bears are at risk in the ISR, and they are concerned about the discrepancy between the federal assessment and the regional status of grizzly bears, especially as no updated population information from the ISR was used in the most recent (2012) COSEWIC assessment.

Grizzly bears are known to be predators of caribou, muskox, and moose, especially during calving. This can have significant impacts on caribou, and the group discussed how to address predation concerns, with one participant commenting that caribou are more important than grizzly bears and their protection should come before grizzly bear protection. There are also concerns about the impact of increasing populations of aklat on char in rivers and creeks, and geese in the Anderson River Migratory Bird Sanctuary. There are traditional and local knowledge observations that grizzly bears cleaned out all the nests in the Migratory Bird Sanctuary three years in a row, and the numbers of nesting birds have decreased (Jim Elias, personal communication, October 2021).

Some participants shared how the use of and relationship with aklat has changed over time. Many people no longer eat the meat, which is partly because of the use of tranquilizer drugs for collaring and concerns about eating the meat when this drug may be present. It is not a preferred food source anymore, and this changes how much people are harvesting and interacting with aklat. There are concerns about how reductions in harvest exacerbate the population growth that is being observed. The group also noted that there have been more break-ins at camps in recent years, which is something the Tuktoyaktuk HTC has taken action on already, by purchasing electric fences for some HTC members. Younger grizzly bears are known to cause trouble as they learn to be on their own.

Paulatuk

Participants at the community meeting in Paulatuk explained how their observations of grizzly bears have changed over the years. Now, harvesters are not surprised to see a bear anywhere out on the land, and they are being seen in situations they have not been seen before (e.g., stalking caribou). Sightings of grizzly bears have increased over the years. People described a clear pattern in aklat movement: the bears are around the community in mid-June, go away when the caribou come, and then come back for some time in August before leaving again.

Participants agree with other communities that grizzly bears in the ISR are not at risk, and they have been increasing in numbers around Paulatuk. They are moving north and their numbers are considered to be too high. Participants also shared that Elders are saying it is time to reduce the bear numbers, because they are not integral to Inuvialuit subsistence, and are detrimental to species that Inuvialuit rely on for food, such as caribou.

Participants clarified that not reaching their quotas did not mean that they are seeing fewer grizzly bears on the land or that numbers are decreasing. They raised concerns about the impacts of the listing of grizzly bears on the economic market for hides, stating that there are now too few buyers for grizzly bear hides. They stated that grizzly bears have an economic benefit sometimes.

Several specific questions were raised about grizzly bear behaviour and the use of deterrents, as well as how best to manage the bears at the Paulatuk solid waste facility. There are many bears frequenting the solid waste facility and this is an area of concern for Paulatuk community members. Participants asserted that waste management solutions must be community-specific, as practices that work in one community may not be well-suited for other communities. Human safety was the number one priority for participants at the Paulatuk meeting. Participants in the meetings in Paulatuk brought up that Inuvialuit traditional and local knowledge has immense value, and it must be at the forefront of informing management.

Ulukhaktok

Participants at the Ulukhaktok community meeting were unanimous and clear about their opinion on grizzly bears in the region: they are moving to the region in greater numbers, and their expansion is undesirable and affecting the ecosystem in unknown ways. Ulukhaktok community members are very concerned about how these bears will affect other species that Inuvialuit rely on for subsistence harvest (i.e., caribou, muskox, char, trout, seal, polar bear, etc.). These other species are more important to Inuvialuit in Ulukhaktok as they rely on them for their livelihoods. Grizzly bears are also perceived as dangerous to humans.

Meeting participants identified a number of desired management actions to better understand the impact of grizzly bears and to address their threat as known predators of caribou and likely predators of other subsistence species.

Sachs Harbour

Participants at the community meeting in Sachs Harbour shared that grizzly bear sightings are fairly infrequent on Banks Island, but that the frequency of bear sightings and harvest is increasing. The first grizzly bear was harvested on Banks Island in the 1950s, and harvests were about every 15 years after that. Recently, however, grizzly bears are being seen and harvested every 3-5 years. Participants agreed that bears are not at risk in the ISR.

People on Banks Island see grizzly bears as aggressive and dangerous. They are also concerned about the unknown but potentially very large negative impact that grizzly bear predation may have on goose colonies on the island. Sachs Harbour HTC members expressed their main priority is to keep aklat from establishing themselves on the island. Management actions to achieve this objective include killing all bears that are seen on the island, including mothers and cubs. This is currently prohibited by *NWT Wildlife Act* Regulations, and there is a desire to change this. Meeting participants were supportive of a predator control program aligned with recommendations from Ulukhaktok.

Threats & mitigations

Currently, grizzly bears do not face extensive threats in the ISR. Many threats for grizzly bears at the national level are more pronounced in areas where the human population is greater and there is more overlap between human and bear use areas (see COSEWIC, 2012). At the regional ISR scale, these threats are not likely to impact the sustainability of grizzly bear populations (CMA, 2018; WMAC(NWT) & WMAC(NS), 2022a). As part of the species assessment under the *Species at Risk Act (NWT)*, SARC completed and published a threats assessment (2017). Threats were also discussed in the engagement process to develop this plan (WMAC(NWT) & WMAC(NS), 2022a). Threats and mitigations relevant to the ISR population are described below.

Changes in human-caused mortality

Human-caused mortality is a threat identified in the 2017 SARC Assessment of grizzly bears in the NWT, as it can have significant impacts on the population and distribution of grizzly bears. However, total mortality is accounted for and regulated within the harvest management system in the ISR, including defence of life and property kills (DLP). The harvest management system recommends a 2:1 male:female harvest ratio, which has only been exceeded twice for the ISR as a whole since quotas were implemented in multiple communities in 1992 (GNWT, unpublished data). Additionally, there are prohibitions against killing mothers with cubs, cubs, and denning bears in *NWT & Yukon Wildlife Acts*, which further reduces the potential impact of harvest on bear populations. These regulations acknowledge the slow reproductive rate and delayed age of maturity in grizzly bears.

Community meeting participants also identified interactions with humans resulting in DLP as the biggest potential threat to grizzly bears in the ISR (WMAC(NWT) & WMAC(NS), 2022a). These interactions happen primarily at camps and solid waste facilities. Several actions exist and are recommended to mitigate this threat. HTCs require or recommend

that researchers hire wildlife monitors, through commenting on license applications through the Aurora Research Institute. Education on reducing attractants at camps and bear safety is ongoing, and is described under **Current Management**. The reduction of negative human-bear interactions and DLP is further addressed by Management Objective 4 in this Plan.

Waste Management

Current waste management practices in the ISR result in many bears that are attracted to solid waste facilities in the region, especially in Aklavik, Inuvik, and Paulatuk (WMAC(NWT) & WMAC(NS), 2022a). Eating garbage is not healthy for bears, and bears that become acclimatized to humans often need to be destroyed. Additionally, there is a significant human safety risk that exists when habituated bears are attracted into communities. Bear densities may also be higher around solid waste facilities because of the artificial input of food into the system, compounding the risks to human and bear safety. Mitigations to this threat are discussed in the *Waste Management* section under **Current Management**.

Development

Development, including roads and helicopter use, has been identified as a threat to bears through disturbance: bears may be scared away by noise and be stressed by their attempts to get away from these disturbances (SARC, 2017; WMAC(NWT) & WMAC(NS), 2022a). There is also the risk of direct mortality due to accidents with motor vehicles or other equipment on roads or industrial sites.

HTCs and co-management bodies are aware of these threats to bears, and recommend higher flight elevations for helicopters used in research, exploration and development, tourism, and other industries, to mitigate the impacts of this disturbance. The impacts of the new Inuvik-Tuktoyaktuk Highway completed in 2017 are being monitored by the Wildlife Effects Monitoring Plan and mitigated by the Wildlife and Wildlife Habitat Protection Plan. All developments within the ISR are subject to screening by the Environmental Impact and Screening Committee (EISC), and possible review by the Environmental Impact Review Board (EIRB), where threats to wildlife and mitigating actions are identified. Road and other development densities remain very low in the ISR.

Development leading to loss of habitat

In the ISR, levels of development are currently low and grizzly bear habitat loss is minimal. The SARC report (2017) identified development leading to loss of habitat as a threat to grizzly bears. SARC identifies that greater than 12% of grizzly bear habitat in the NWT is within protected areas, which is among the highest for any Canadian province or territory. In the CMA Management Agreement for grizzly bears, the CMA (2018) determined that this threat is not likely to have a significant impact on grizzly bear populations in the NWT, leading to the decision to not list grizzly bears in the territory.

In the ISR, the EISC, and EIRB evaluate whether development will have a significant environmental impact. Several resources exist which provide guidance to these IFA boards

and others when it comes to grizzly bear habitat, including Community Conservation Plans, National and Territorial Park Management Plans, the Yukon North Slope Wildlife Conservation and Management Plan (WMA NS, 2022a) and the IFA, particularly (s. 12 (4) IFA, 1984) regarding the withdrawal order for the eastern Yukon North Slope.

Climate change

Climate change is disrupting ecological systems worldwide. The ISR and other parts of the north are experiencing these changes at an accelerated rate. Some of these changes are likely impacting grizzly bears. However, there have been few research studies completed, and “identifying the influence of climate change on projected grizzly bear numbers (or prey and habitat) is not possible at this time” (SARC, 2017, p. 13). Traditional and local knowledge and scientific sources both speculate that some changes are likely to be beneficial for aklat, while others may have negative impacts on individuals or the population as a whole.

Possible impacts of climate change on grizzly bears include: increases in forest and tundra fires (Hu et al., 2015; Wang et al., 2015) affecting habitat use and quality, as well as movement across the landscape (WMA(NWT) & WMA(NS), 2022a); “shrubification” which may impact bears’ ability to travel as well as food availability (SARC, 2017); positive or negative changes to the availability of forage and prey species (COSEWIC, 2012; SARC, 2017); the timing of denning - bears have already been observed to be going into dens later and coming out earlier (WMA(NS) & Aklavik HTC, 2018); possible decrease in denning habitat availability as permafrost thaw increases (COSEWIC, 2012; WMA(NS) & Aklavik HTC, 2018); and extension of the mating season as bears den later (SARC, 2017).

Climate change is suspected to have already altered habitat and conditions enough to make northward range expansion possible. Associated changes in behaviour, including hybridization and competition with polar bears, have been observed and documented (Aklavik HTC et al., 2016; Doupe et al, 2007; Miller et al., 2015; Pongracz et al, 2019; WMA(NWT) & WMA(NS), 2022a). Climate change, and its related uncertainty, will impact how grizzly bears in the ISR are managed in the future, especially as the impacts are better understood and experienced.

Knowledge gaps

There are numerous knowledge gaps that have been identified by SARC, CMA, Inuvialuit community members, and co-management Council members and staff. This is not a comprehensive or prioritized list of knowledge gaps in the region, but includes all those that came up during the development of the Plan. The source of each knowledge gap is listed in parentheses below. Addressing these knowledge gaps through the Management Objectives and Approaches in this Plan, especially Objective 1, will result in more effective grizzly bear management:

1. Comprehensive traditional and local knowledge documentation on an ongoing basis (CMA, 2018; SARC, 2017; WMA(NWT) & WMA(NS), 2022a)

2. Population and other monitoring studies (CMA, 2018; SARC, 2017; WMAC(NWT) & WMAC(NS), 2022a)
3. Research on grizzly bear diets, predation & competition, impact on other species: caribou, muskox, char, seals, polar bear (WMAC(NWT) & WMAC(NS), 2022a)
4. Grizzly bear movements in areas where they are expanding their range (WMAC(NWT) & WMAC(NS), 2022a)
5. Grizzly bear movements in areas where they are frequently visiting communities and waste management sites (WMAC(NWT) & WMAC(NS), 2022a)
6. Role of grizzly bear in the ecosystems where they are expanding their range (WMAC(NWT) & WMAC(NS), 2022a)
7. Behaviour of handled bears and bears that have been deterred (WMAC(NWT) & WMAC(NS), 2022a)
8. Effects of climate change (SARC, 2017; WMAC(NWT) & WMAC(NS), 2022a)

Current Management

Management of aklat in the ISR is ongoing, guided by the 1998 Co-Management Plan for Grizzly Bears in the Inuvialuit Settlement Region, Yukon Territory and Northwest Territories (Nagy & Branigan, 1998). It is primarily focused on harvest management, although there are several ongoing initiatives related to human-bear interactions and habitat conservation, and practices around waste management are in ongoing development. This section describes the history and current status of ISR co-management.

Harvest management

Grizzly bear harvest in parts of the ISR has been co-managed through HTC by-laws and a quota system since the 1990s. The quota was implemented at the request of communities, partially in response to concerns about potential over-harvest (Nagy & Branigan, 1998). There are six zones in the NWT portion of the ISR (Figure 8), each with their own quota that is allocated by the community HTC, or in one case (I/GB/02), shared among two community HTCs. In Yukon, there are two additional zones managed by the Aklavik HTC (Figure 4). DLP were counted in the quotas at the end of the season until 2021, when a Reserve Tag System was implemented for DLP (see section below). There is a recommended 2:1 male:female harvest ratio. Harvest numbers, including harvest from the adjacent Gwich'in Settlement Area, are reviewed annually by the WMACs and IGC to ensure the quotas and ratios are not being exceeded. While occasionally the percent female is above 33% of the quota for an individual zone or year, the long-term ISR-wide percent female take has never exceeded 33%. Table 4 shows the quotas and average harvest since 1992 for all zones as of the 2021-22 season. Areas outside these zones (Banks and Victoria Islands) do not have quotas, and the harvest of grizzly bears by Inuvialuit has no restrictions except those in the *NWT Wildlife Act* (see below).

In the NWT, Inuvialuit can transfer their exclusive rights to other harvesters for guided hunts. Each HTC determines how many of the quota tags are allocated to each type of harvest: subsistence harvesting and Inuvialuit guided hunts (up to maximum of 50% of each community's total quota). In Yukon, Inuvialuit have the preferential or exclusive right

to harvest grizzly bear, depending where in the Yukon they are, and there is currently no sport hunting. Inuvialuit have the exclusive right to harvest grizzly bears in Ivvavik National Park and Herschel Island-Qikiqtaruk Territorial Park, but there are no provisions for sport hunting in these parks. In Aullaviat/Aunguniarvik (eastern Yukon North Slope), Inuvialuit have the preferential right to harvest grizzly bears.

Territorial Wildlife Act Regulations

<i>Northwest Territories Wildlife Act</i>	<i>Yukon Wildlife Act</i>
<ul style="list-style-type: none">● No harvest of cubs (<1.4m length)● No harvest of mothers with cubs● No harvest of denning bears● Illegal to waste pelt & meat (must use at least one)	<ul style="list-style-type: none">● No harvest of cubs (less than 3 years)● No harvest of mothers with cubs● Illegal to waste pelt or meat● No baiting of bears

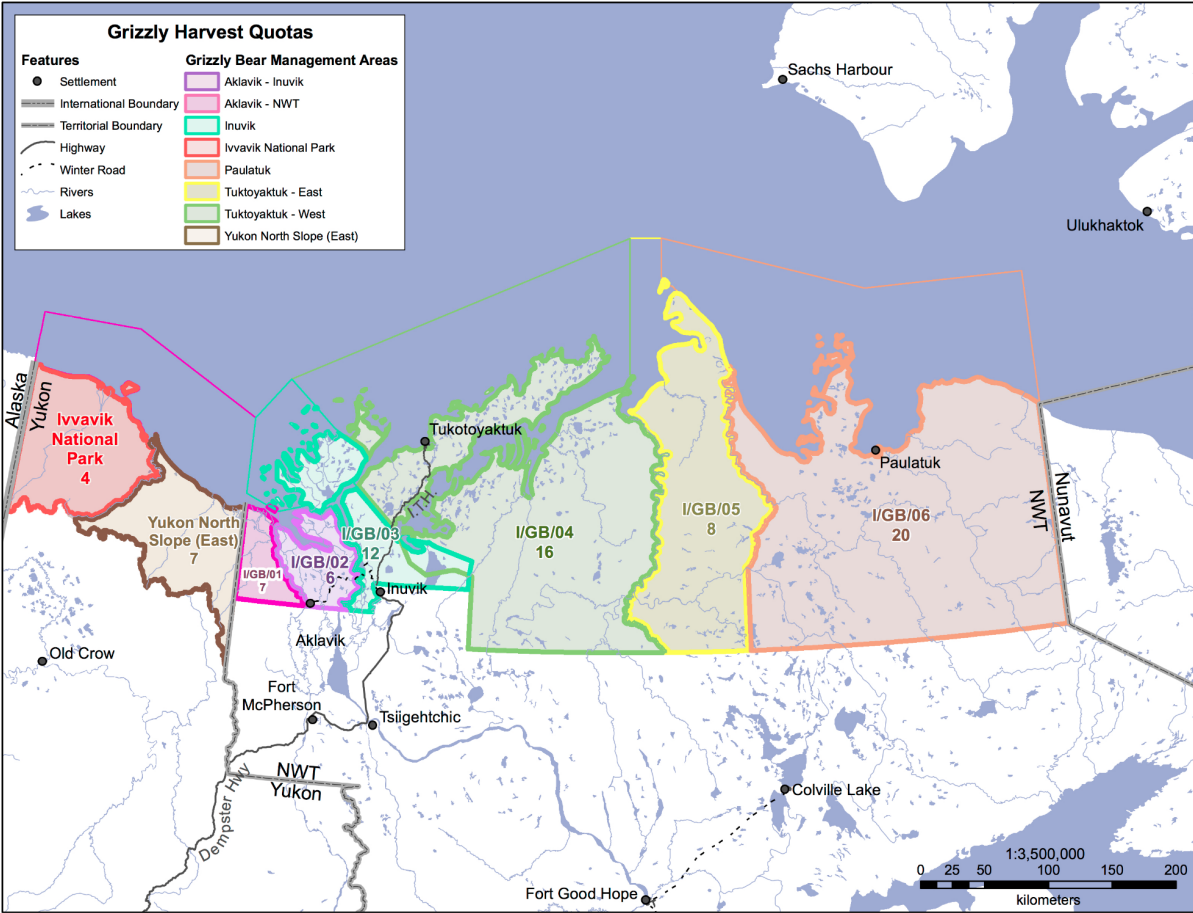


Table 4 - Grizzly bear quotas and harvest within each zone in the ISR between 1992 and 2020.

The harvest Range represents the minimum and maximum number of grizzly bears harvested within a given year. Female tag and harvest are indicated in parenthesis.

Zone	HTC	Number of tags Total (females)	Harvest Range (females) Average (females)
<i>Yukon</i>			
Ivvavik National Park & Qikiqtaruk Territorial Park	Aklavik HTC	4 (1)	0-3 (0-1) 1(0)
Eastern Yukon North Slope	Aklavik HTC	7 (2)	0-7 (0-2) 4(0)
<i>Northwest Territories</i>			
I/GB/01	Aklavik HTC	7 (2)	0-8 (0-3) 3(1)
I/GB/02	Aklavik HTC	3 (1)	0-4 (0-2) 0(0)
I/GB/02	Inuvik HTC	3 (1)	
I/GB/03	Inuvik HTC	12 (4)	0-9 (0-3) 4(1)
I/GB/04	Tuktoyaktuk HTC	16 (5)	3-13 (0-5) 8(2)
I/GB/05	Tuktoyaktuk HTC	8 (2)	0-7 (0-5) 4(1)
I/GB/06	Paulatuk HTC	20 (6)	0-13 (0-5) 6(1)
Islands	N/A	N/A	0-6 (0-3) 1(0)

Figure 7 - Grizzly bear harvesting zones in ISR with their associated 2021-22 quotas



Quota administration and adjustments

Quotas are recommended by WMAC(NWT) and WMAC(NS) to the respective Territorial Ministers. The IGC distributes quotas among the HTC and the HTC distribute quotas among their membership, administer the tags, and regulate harvest through their HTC bylaws. Yukon Environment and ENR (GNWT) enforce regulations.

When grizzly bear quotas in the ISR were initially established, the WMACs recommended numbers based on the best available scientific information. This was a harvest rate of 3% of bears older than 2, using the population estimates that were obtained in the 1980s and 1990s (Nagy & Branigan, 1998). These quotas were based on a target 2:1 male:female harvest ratio.

Quotas may be adjusted at the request of the HTC, WMAC(NWT), WMAC(NS), or the NWT or Yukon governments. In the NWT, there is a Memorandum of Understanding that describes a 12-step process of discussion and approvals by the HTC, WMAC(NWT), and ENR (GNWT) for bylaw changes. Although quotas are no longer written into the bylaws, this process of approvals is still used to adjust quotas. Traditional and local knowledge provided by Inuvialuit has been and continues to be used as evidence for quota changes.

Updated scientific information is also used, when it exists. The Yukon North Slope and Inuvik-Tuktoyaktuk Highway corridor are currently the only areas that have recent (<15 years old) scientific population information that could inform harvest quotas. To set Yukon North Slope quotas, WMAC(NS), WMAC(NWT), and the Aklavik HTC have held workshops to discuss scientific and traditional knowledge and community needs in order to come to agreement about the quota (WMAC(NS), 2016). Quotas have been increased in all zones in the ISR since their initial implementation in the 1990s, based on traditional and local knowledge provided by HTCs.

Reserve tag system

A system for reconciling unused tags from the previous season for DLP was implemented in 2021. Prior to this system's implementation, tags for all kills within a zone (DLP and subsistence) came out of that year's quota. This system was introduced following concerns that high numbers of DLP could limit Inuvialuit subsistence harvest in certain harvesting zones, and that people may hesitate to kill a bear that is threatening human safety or property in order to not impact the tags available for subsistence harvesters.

Starting in the 2020/2021 season, unused tags from the previous year become reserve tags to be used for DLP in the same zone in the following year. These reserve tags reset annually. Tags can be applied to adjacent harvesting zones if a certain zone has depleted its reserve tags, and if there all subsistence and reserve tags are depleted, the tag will come off the next year's quota in the zone where the DLP was taken. All co-management partners continue to review the harvest of grizzly bears to ensure a 2:1 male:female harvest ratio.

Harvest Reporting

In both Territories, samples and information must be submitted to the Territorial Government following a harvest. This information is provided in the tag kits that the HTCs hand out to their membership. ENR (GNWT) in the NWT provides and collects the tag kits for both territories. The reporting requirements are shown in Box 3, below. Harvesters receive payments for sample submissions, up to \$160 in both territories.

Harvest reporting requirements in NWT & Yukon:

<p><i>Mandatory</i></p> <ul style="list-style-type: none">● Name● Tag number● Date and location of kill● Lower jaw or undamaged post-canine tooth, lip tattoos & ear tags (if present)● Baculum (penis bone)● Any other information required by officer or designate <p><i>Voluntary</i></p> <ul style="list-style-type: none">● Fat● Uterus/ovaries● Hide with hair● Bone <p><i>Timeline</i></p> <ul style="list-style-type: none">● As soon as is practicable

Total mortality harvest reporting

All bears that are killed in the ISR are reported. DLP must be reported under the NWT and Yukon *Wildlife Acts*, and are counted in the relevant zone's quota. Reporting DLP bears includes all the requirements for harvest reporting (as above), as well as turning over the skull and hide with claws. After the investigation is complete, the hides from DLP bears are returned to the HTC that manages the tags for the zone the bear was taken from.

Bear-human interactions

HTCs and community members share bear safety precautions and how to keep camps clean, as this is a primary way to keep bears away from people on the land and reduce the likelihood of DLP, human harm, or other negative interactions (WMA(NS) & Aklavik HTC, 2008; WMA(NWT) & WMA(NS), 2022a).

The Yukon and NWT governments have bear safety information on their websites and pamphlets. There are also wildlife emergency hotlines and reporting processes in each territory.

Qikiqtaruk Territorial Park has a Bear Strategy Plan (2016) that includes actions for Park Rangers and visitors to decrease negative bear-human interactions and maintain human safety in the park. The strategy also outlines communication and decision pathways, which involve the local Park Rangers, Aklavik HTC, and Yukon Government. Parks Canada has bear safety information on their website for Ivvavik National Park, and holds bear safety briefings for visitors.

Waste Management

Solid waste sites are disposal sites for residential and commercial waste from ISR communities (commonly referred to as dumps or landfills). They are a growing concern for human safety and the health and safety of grizzly bears in the ISR. Waste management in the ISR is a complex issue that requires the coordination of multiple management partners, including municipal governments, wildlife co-management boards, HTC's, Gwich'in Renewable Resource Councils, Municipal and Community Affairs and ENR departments of GNWT, land and water boards, and others. Each community in the ISR may have unique challenges and desires for solid waste facility management; there is no 'one size fits all' approach (WMAC(NWT) & WMAC(NS), 2022a). A NWT Waste Resource Management Strategy and Implementation Plan was developed in 2019 (ENR & MACA, 2019). As in 2022, All partners are currently working together to develop and implement a set of *Best Management Practices to Address Wildlife Issues at Northwest Territories Solid Waste Facilities*.

WMAC(NWT), IGC, and community HTC's continue to highlight concerns regarding waste management and wildlife, primarily with aklat, and attend meetings with all waste management stakeholders. Objective 5 of this Plan outlines approaches that are in progress or recommended to improve waste management in the ISR.

Research & monitoring

Research and monitoring of grizzly bears is ongoing across the ISR. Some areas have had more recent abundance studies completed than others (see Table 3), notably the Yukon North Slope, Tuktoyaktuk Peninsula and Richards Island. Most of the ISR has little or no recent traditional and local knowledge documented, with the exception of the Yukon North Slope (WMAC(NS) & Aklavik HTC, 2008; WMAC(NS) & Aklavik HTC, 2018, WMAC(NS), 2022b). There have been few scientific studies on specific components of grizzly bear ecology, including diet and habitat use in the ISR, and those that have taken place are limited in temporal and spatial scope. A comprehensive list of research and monitoring of grizzly bears in the ISR is available in the *Inuvialuit Settlement Region Aklat/Akhaq (Grizzly Bear) Research Compendium* (WMAC(NWT) & WMAC(NS), 2022b).

Habitat conservation

The WMAC(NWT) and WMAC(NS) play significant roles in the identification and management of important grizzly bear habitat in the ISR. The ISR is jurisdictionally complex; co-management boards bridge the interests and legal responsibilities of multiple organizations in support of effective wildlife management, including for grizzly bears.

The EISC and EIRB are bodies established by the IFA. The EISC has the mandate to "determine if the proposed development could have a significant negative environmental impact" (IFA, 1984, s.11.(13)). The EIRB "shall recommend whether or not the development should proceed and, if it should, what terms and conditions, including mitigative and remedial measures are required" (IFA, 1984, s.11(24)).

The EISC reviews research, tourism, development, and other activities in the ISR to determine whether there is potential for a significant negative environmental impact. Projects that are deemed to potentially have a significant negative environmental impact are referred to the EIRB for a full environmental assessment; other projects may be approved by the EISC with conditions for mitigations, as needed. All co-management boards, as well as the IGC, HTC, and the public, have the opportunity to comment on the environmental screening process and participate in the environmental review process. The WMACs regularly review and comment on screening proposals for potential impact to grizzly bears and recommend appropriate mitigation measures. The habitat areas identified in the Community Conservation Plans (Figure 9) and Yukon North Slope Wildlife Conservation and Management Plan (WMAC(NS), 2022a) are taken into consideration by EISC and EIRB.

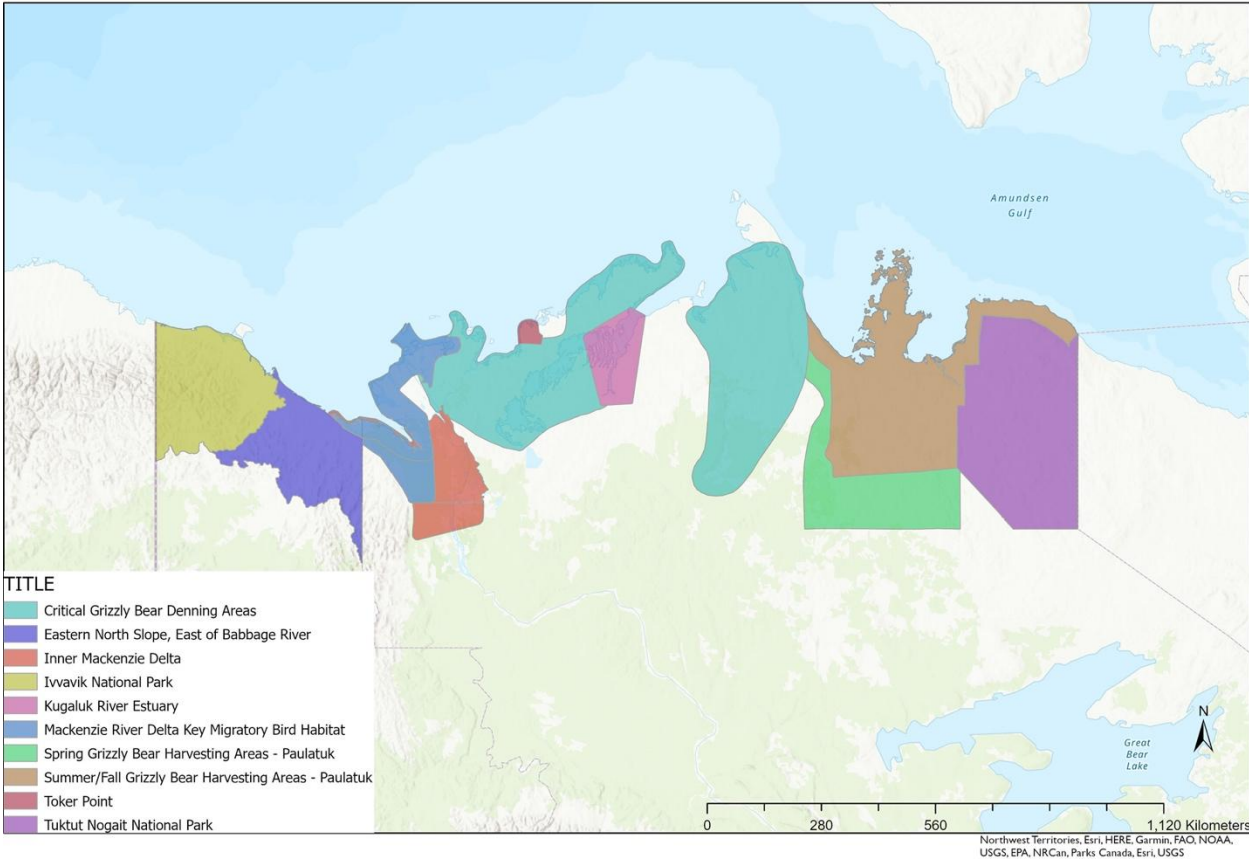
Northwest Territories

WMAC(NWT) has developed Community Conservation Plans for the 6 ISR communities, and the following areas are identified as important grizzly bear habitat: Richardson Mountains, Richard's Island, Mackenzie River Delta, major river drainages, eskers, and southerly slopes for denning (Figure 9). One of the conservation measures for grizzly bears is to identify and protect important habitat from disruptive land uses. EISC refers to the Community Conservation Plans in their review process.

Yukon

On the Yukon North Slope, habitat is currently protected in Ivvavik National Park and Herschel Island - Qikiqtaruk Territorial Park (WMAC(NS), 2022b) and through the withdrawal order for Aullaviat/Aunguniarvik (Eastern Yukon North Slope) (IFA, 1984). The Yukon North Slope Wildlife Conservation and Management Plan (WMAC(NS), 2022a) identifies specific conservation requirements for grizzly bear habitat, which are considered separately in the **Yukon North Slope Management** section.

Figure 8 - Grizzly bear habitat identified in the 6 Community Conservation Plans

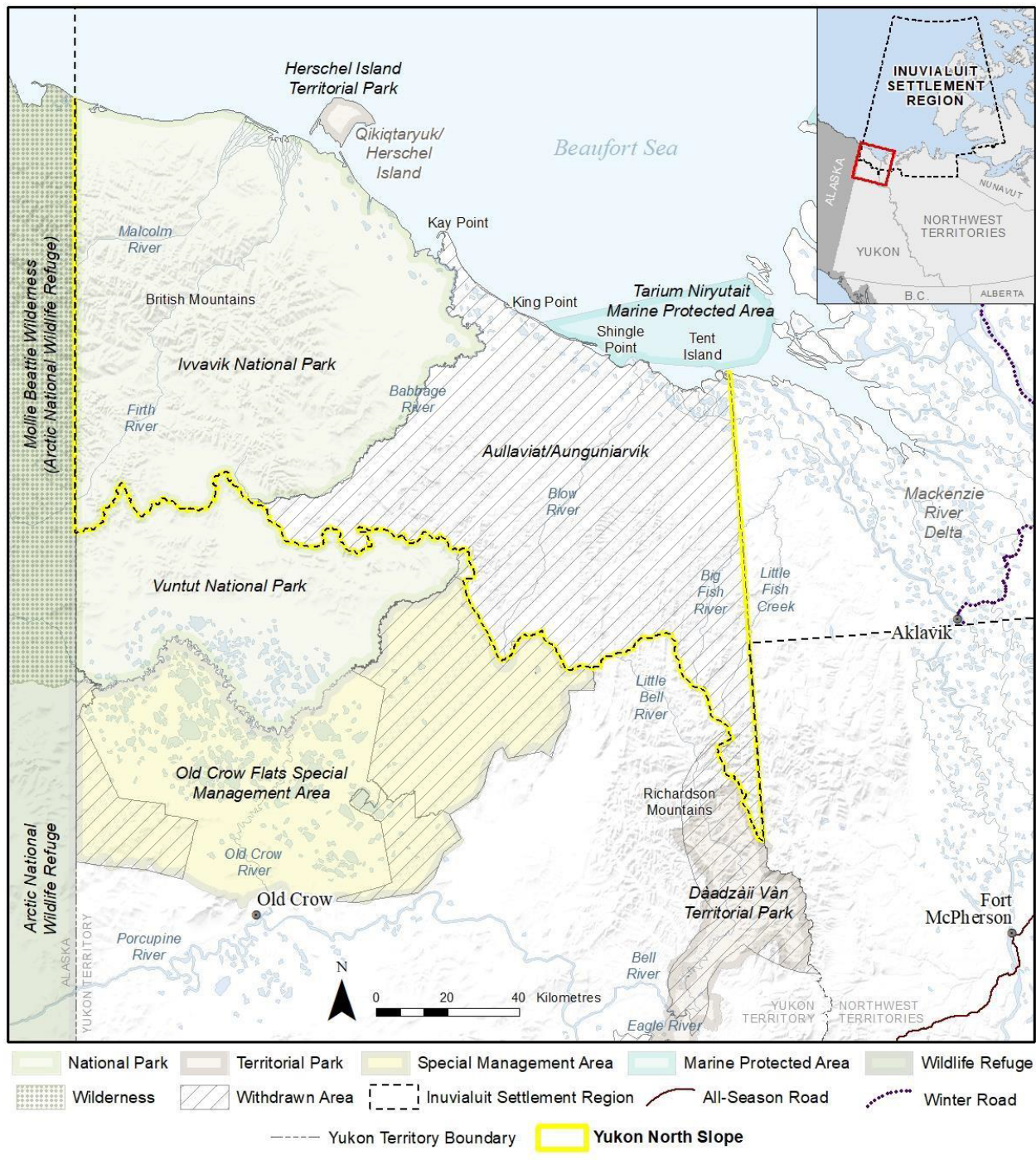


National Parks

There are two large National Parks within grizzly bear range in the ISR; Ivvavik National Park on the Yukon North Slope, and Tuktut Nogait National Park near Paulatuk (Figure 1). National Parks are managed by Parks Canada, part of the federal government.

In the Ivvavik National Park Management Plan (Parks Canada, 2018), grizzly bears are considered as one of the natural resources in the Park and their conservation is addressed by “Strategy #1: Understanding and conserving the natural and cultural resources of Ivvavik National Park”, which is directly informed by the IFA. In the Tuktut Nogait National Park Management Plan (Parks Canada, 2007), one of the objectives directly addresses the conservation of grizzly bear habitat within the Park: “Endeavour to maintain the current population level of grizzly bears in Tuktut Nogait by ensuring that grizzly bear habitat is maintained and that the total number of bears removed from the population is sustainable (p.23).”

Figure 9 - Conservation areas on the Yukon North Slope and surrounding regions



Yukon North Slope Management

Management of grizzly bears on the Yukon North Slope is guided by the Yukon North Slope Wildlife Conservation and Management Plan (WMA(NS), 2022a). A set of conservation requirements was developed through the planning process, based on available Inuvialuit traditional and local knowledge and science knowledge of grizzly bears. The conservation requirements, as presented in the plan, are:

1. Conservation of multiple ecosystem types relied upon by grizzly bears, and unimpeded passage
2. Identification and protection of denning sites
3. Non-harvest mortality kept to a minimum

These recommendations recognize the large home ranges and diverse habitat needs of grizzly bears, including their increased sensitivity during the denning period. They also acknowledge the role of people in grizzly bear population management, particularly regarding DLP and attractant management. In addition to these recommendations, strategies that target other aspects of Yukon North Slope conservation are likely to benefit the maintenance of a healthy grizzly bear population in the region. For example, the plan prioritizes understanding the effects of climate change on wildlife in the coming years. Another strategy recommends expanding the existing conservation framework to include an Inuvialuit-led conservation area in Aullaviat/Aunguniarvik. While these and other strategies do not address grizzly bear needs directly, their implementation will undoubtedly have tangible benefits for bears and other species.

Recommended Management

Management goal

The overall management goal is:

To ensure long-term sustainable populations of healthy grizzly bears in their historic range, maintain or enhance Inuvialuit traditional use, and promote human safety.

*Historic range of aklat in the ISR is defined in the **Introduction** (see Figure 1).*

Management objectives & approaches

The following objectives, and the approaches required to achieve them, are recommended for the management of aklat/akhaq/grizzly bear in the ISR. Due to the difference in grizzly bear status and desired management approaches between the Banks and Victoria Islands and the Mainland ISR, there is a separate section for aklat/akhaq management on these Islands (Objective 7). These objectives and associated approaches are not in order of priority. Each objective and approach may be associated with one or several actions, which may vary by community, and are identified in the Implementation Framework that accompanies this plan. Several of the actions to achieve these objectives are completed, ongoing, or in progress.

Management objectives

1. Ensure management decisions are informed by the best available information by promoting knowledge collection and exchange.

Documenting and sharing knowledge about grizzly bears is key to good management.

2. Adaptively co-manage grizzly bear populations in accordance with the best available information to meet management objectives.

As we learn more and as grizzly bear conditions change, we will adapt our actions to meet regional objectives for grizzly bear populations

3. Maintain current areas of grizzly bear habitat in the ISR amidst change.

Bears need space to roam: we will maintain current areas of grizzly bear habitat.

4. Promote human safety by minimizing negative human-grizzly bear interactions and defence of life and property kills.

Human safety is a priority: we all have a responsibility when it comes to being bear-safe.

5. Work with all co-management partners, governments, communities, and others as needed to address concerns with waste management and negative human-grizzly bear interactions.

We need to work together to keep bears out of our garbage.

6. Maintain and promote Inuvialuit traditional use of aklat/akhaq.

7. Manage aklat/akhaq populations on Banks and Victoria Islands to meet the unique management objectives for the region.

There is a unique set of priorities for aklat/akhaq management on Banks and Victoria Island.

Objective 1. Ensure management decisions are informed by the best available information by promoting knowledge collection and exchange.

Documenting and sharing knowledge about grizzly bears is key to good management.

This Objective was informed by community feedback, discussions with co-management boards, the IFA, and recommendations from SARC and CMA. Grizzly bear is not a data-rich species in the ISR. More knowledge, especially on populations, will inform the development and adjustment of management actions, especially as conditions are rapidly changing. It is both essential and stated in the IFA that knowledge from multiple sources, including Inuvialuit traditional and local knowledge, is collected and used in management. Sharing knowledge collected in the ISR with other jurisdictions will ensure that all partners value the unique status of grizzly bears in the ISR.

- 1.1 Improve collection and sharing of harvester observations and Inuvialuit traditional and local knowledge and ensure this information is accessible to Inuvialuit & co-management organizations for decision-making.
- 1.2 Increase our knowledge of grizzly bear ecology by promoting and seeking funding for research that is inclusive of traditional and local knowledge and science, (co)directed by Inuvialuit, and seeks to address identified knowledge gaps. A primary knowledge gap identified by communities at the time of writing is relative grizzly bear abundance throughout the ISR.
- 1.3 Ensure that management decisions and study results are shared with communities and other stakeholders in a timely and meaningful way.
- 1.4 Establish a table of monitoring indicators and a schedule for collecting specific information.
- 1.5 Share ISR-specific information from both knowledge systems (traditional and local knowledge & scientific knowledge) with all management partners.

Objective 2. Adaptively co-manage grizzly bear populations in accordance with the best available information to meet management objectives.

As we learn more and as conditions change, we will adapt our actions to meet regional objectives for grizzly bear populations.

All community participants strongly expressed the need for flexibility and adaptability in managing grizzly bears in the ISR. As environmental, social, and economic conditions change and bears respond to these changes, management practices must also respond. There are different management requirements for different regions of the ISR. All sources of information collected through the approaches under Objective 1 will inform how, when, and why the management system must adapt. It is imperative that the responses of the management system are timely in order to be effective. The ISR borders several other jurisdictions, and bears do not stop at these lines on a map; aklat/akhaq management must involve collaboration with our neighbours.

- 2.1 Work with community HTC's to develop management actions that are responsive to the changing needs of Inuvialuit and grizzly bears in different regions of the ISR.
 - 2.1a Maintain Aklat population densities within historic and sustainable ranges on mainland ISR.
 - 2.1b Maintain historic akhaq range by halting, if possible, or slowing the ongoing range expansion to Victoria and Banks Islands.
- 2.2 Consider adjacent grizzly bear populations and other jurisdictions' management objectives and systems when making management decisions for the ISR that fall within the scope of this plan.
- 2.3 Regularly re-evaluate and adjust the harvest management system to ensure that it is responsive to changing grizzly bear populations and community management objectives.
- 2.4 Explore conservation concerns about the effects of grizzly bears on caribou and other subsistence species.
- 2.5 Increase education on the current harvest management system.

Objective 3. Maintain current areas of grizzly bear habitat in the ISR amidst change.

Bears need space to roam: we will maintain current areas of grizzly bear habitat.

Grizzly bears require vast stretches of accessible habitat to meet their needs. The ISR has a low level of disturbance from human development, and bears are found in many different habitats. Climate change is affecting the ISR, and possibly bears too. Understanding how bears are using the landscape, and how it is changing, will better inform management to meet regional objectives for population management. The impacts of development in the ISR on grizzly bears must be acknowledged and mitigated in order to be sustainable.

- 3.1 Ensure that grizzly bear habitat in the ISR is managed to maintain accessibility to bears and allow for bear movement, based on the objectives and tools within the Community Conservation Plans, Yukon North Slope Wildlife Conservation and Management Plan, and Yukon Parks and Parks Canada management plans.
- 3.2 Promote research to understand the impacts of climate change on habitat and grizzly bears in the ISR.
- 3.3 Consider the habitat requirements of Aklat and develop mitigation strategies when planning sustainable development in the ISR.

Objective 4. Promote human safety by minimizing negative human-grizzly bear interactions and defence of life and property kills.

Human safety is a priority: we all have a responsibility when it comes to being bear-safe.

Human safety is a priority for all communities in the ISR, and for managers as well. Humans and bears share the same territory, and humans must act in ways that reduce the risk of negative interactions between humans and bears, including killing bears in DLP. Sharing knowledge about how to be safe around bears, and how to keep bears away from camps, other property, and people, is one way to protect humans and bears. There needs to be clear guidelines for responses if and when bears do end up near communities or individuals. The HTC's have specific procedures that should be followed for human and aklat/akhaq safety; visitors to the ISR need to be made aware of these protocols.

- 4.1 Share knowledge on bear behaviour, safety, managing attractants and bear deterrents.
- 4.2 Manage attractants in all places that people inhabit (i.e., communities and camps).
- 4.3 Work with all co-management partners to ensure coordinated responses to negative human-grizzly bear interactions, accessible information for community members, and collaboratively address any challenges as they arise.
- 4.4 Ensure that researchers and industry are aware of the requirements to work with HTC's to mitigate negative human-bear interactions in the ISR, including hiring wildlife monitors.
- 4.5 Encourage visitors to be aware of and engaged in the established practices to maintain safe and positive interactions between humans and bears in the ISR, and to communicate with HTC's about their guidelines and procedures.

Objective 5. Work with all co-management partners, governments, communities, and others as needed to address concerns with waste management and negative human-grizzly bear interactions.

We need to work together to keep bears out of our garbage.

Solid waste sites are a main attractant for grizzly bears in the ISR, and a concern for many ISR communities. Updated waste management strategies and solid waste facilities are required to reduce the number of bears at solid waste sites and the interactions between humans and bears that result, including DLP. Numerous organizations have responsibilities around waste management in the ISR. Co-management organizations will work with all other Parties to ensure waste management strategies and solid waste sites are effective and well-suited for each community.

- 5.1 Communicate concerns about bears at solid waste facilities to all involved parties and continue to prioritize and work towards effective solutions that share responsibility.
- 5.2 Work with all partners in waste management to acknowledge different situations and objectives in each ISR community and develop community-specific actions for managing bears and solid waste sites.
- 5.3 Increase education on waste management strategies for solid waste sites.
- 5.4 Develop strategies to manage bears that are habituated to solid waste sites.

Objective 6. Maintain and promote Inuvialuit traditional use of aklat/akhaq.

Inuvialuit throughout the ISR have relationships with aklat/akhaq that are informed by their history of living on the same land and using the animals in a variety of ways. Maintaining relationships among Inuvialuit and aklat/akhaq is an important objective of this plan. Relationships with aklat/akhaq differ between individual Inuvialuit and Inuvialuit communities, and are changing over time. Most Inuvialuit live in 'grizzly bear country,' and are taught from a young age how to coexist with and live around bears. Certain bear safety practices, like keeping a clean camp, are just part of life on the land. Some aspects of aklat/akhaq management are rooted in traditional use, while other parts of management are more difficult to reconcile with traditional use and relationships. Traditional and local knowledge are rooted in and related to traditional use, adding an extra layer of emphasis to the importance of maintaining and promoting Inuvialuit traditional use. There are formal and informal ways to achieve this objective; it is important that it is largely led by Inuvialuit and supported by other co-management partners.

- 6.1 Work with all co-management partners to ensure that aklat/akhaq management in the ISR supports, promotes, and maintains Inuvialuit traditional use of aklat/akhaq.
- 6.2 Promote and support knowledge-sharing among Inuvialuit, including skills (e.g. skinning bears) and traditional practices (e.g. eating bear meat, keeping a clean camp, ways of living safely with bears).
- 6.3 Support and promote Inuvialuit harvest of aklat/akhaq.
- 6.4 Support Inuvialuit access to tools and knowledge to coexist safely with aklat/akhaq while traveling, harvesting, and living out on the land.
- 6.5 Maintain respectful relationships between Inuvialuit and aklat/akhaq.
- 6.6 Reduce the negative effects of current management practices on Inuvialuit traditional use of aklat/akhaq.
- 6.7 Align management with Inuvialuit traditional use by including traditional practices in policies, bylaws, planning, and overall management of aklat/akhaq.

Objective 7. Manage aklat/akhaq populations on Banks and Victoria Islands to meet the unique management objectives for the region.

There is a unique set of priorities for aklat/akhaq management on Banks and Victoria Islands.

Aklat/akhaq have not been present on Victoria and Banks Islands for very long. It is only in the past few decades that akhaq have been seen more frequently, and only within the past few years that bears have been denning on Victoria Island. This range expansion is undesirable to local Inuvialuit. People are primarily concerned about human safety and the uncertain, likely negative, effects of akhaq on other subsistence species (e.g. caribou, muskox, and char), which Inuvialuit rely upon and value more highly than the encroaching aklat/akhaq. A specific set of approaches are required to address the growing population of aklat/akhaq and mitigate the impacts to more important subsistence species on Banks and Victoria Islands.

- 7.1 Maintain historic aklat/akhaq range by halting, if possible, or slowing the ongoing range expansion to Victoria and Banks Islands.
- 7.2 Address the knowledge gap: how do aklat/akhaq affect the surrounding ecosystem and subsistence species on Victoria and Banks Islands?
- 7.3 Communicate and coordinate with the Kitikmeot Region of Nunavut when making management decisions for managing akhaq on Victoria Island.

Management Actions

Specific management actions to achieve the objectives outlined above are not presented in this Plan, but in the accompanying Implementation Framework. The Implementation Framework identifies the relevant co-management organizations involved, leads, timeframe, and priority of each action, as well as the current status of actions. The Implementation Framework will be developed in the upcoming years.

The grizzly bear management system in the ISR allows for different management actions among communities, based on the status of the population and management desires of each community. Through the community engagement process, each community has identified specific management goals and actions for their community, which are presented in **Appendix 2. Community-Based Management Actions** and are included in the Implementation Framework. Coordination between each community HTC, the regional co-management organizations (WMACs & IGC), and territorial and federal governments is required to implement these management actions. In some cases, coordination among community HTCs may also be necessary.

Implementation & measuring progress

Management will be considered successful if the overall goal is achieved: that is, there are long-term sustainable populations of healthy grizzly bears in their historic range, the range expansion of grizzly bears to Banks and Victoria Islands is slowed or halted, Inuvialuit traditional use is maintained, and human safety is prioritized. A strong focus of management strategies for aklat/akhaq in the ISR is to ensure that the system is flexible and adapts to changing conditions; management success will be re-evaluated continuously as the Implementation Framework is reviewed and actions are initiated, maintained, and completed. The Implementation Framework will be reviewed by co-management partners every two years.

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Appendix 1. Planning Process Participants

Table 5 - Community and Council meetings, workshops, and online survey for initial feedback and verification

Community / Organizations	Type of engagement	Date
Aklavik	Initial meeting (in-person)	February 25, 2021
	Online survey (8 respondents)	
	Verification meeting (in-person)	September 8, 2021
Inuvik	Initial meeting (in-person)	November 25, 2020
	Online survey (32 respondents)	
	Verification meeting	September 27, 2021
Paulatuk	Initial meeting (via Zoom)	February 22, 2021
	Online survey (1 respondent)	
	Verification meeting (via Zoom)	October 26, 2021
Sachs Harbour	Initial meeting (via Zoom)	March 1, 2021
	Online survey (2 respondents)	
	Verification meeting (via Zoom)	December 16, 2021

Tuktoyaktuk	Initial meeting (in-person)	February 18, 2021
	Online survey (3 respondents)	
	Verification meeting (in-person)	September 16, 2021
Ulukhaktok	Initial meeting (via Zoom)	February 2, 2021
	Online survey (1 participant)	
	Verification meeting (via Zoom)	September 29, 2021
	Community verification surveys (50)	September-October 2021
WMAC(NWT), WMAC(NS), IGC (Objectives Workshop)	Zoom workshop	July 6, 2021

Appendix 2. Community-Based Management Actions

Community-based management actions identified during initial and verification meetings with the HTC and communities are listed below. These actions will be used to develop the Implementation Framework for the Plan.

Table 6 - Aklavik Community-Based Management Actions

Management Objective	Management Action
Address knowledge gap: Population count	Conduct population survey in the Delta AND/OR discuss best ways to collect population information about bears in the Delta: <ul style="list-style-type: none"> ● Work with Gwich'in ● Distinguish small and large bears in count ● Inuvialuit need to be involved ● Least-invasive methods used ● Camp owners could be involved (hair snags & game cameras) ● Fall or springtime best ● Action (whether survey or other action) be feasible and inform the quota system
Human safety: Ongoing management of bears in town.	Pursue program to relocate and track bears from solid waste facility. <ul style="list-style-type: none"> ● Use least-invasive methods possible for tracking. Change management actions so that situations where several bears are killed all at once, as in 2019, are less likely to happen.
Address knowledge gap: where do bears go (Delta or mountains) after visiting Aklavik or solid waste facility?	Pursue program to relocate and track bears from solid waste facility. <ul style="list-style-type: none"> ● Use least-invasive methods possible for tracking.

<p>Address knowledge gap: Improve data on grizzly bear observations from harvesters and Inuvialuit on the land.</p>	<p>Implement a system to collect observations from harvesters when they return a bear tag.</p> <ul style="list-style-type: none"> ● How many bears did you see? ● Male, female, cubs, family? ● Locations? ● Photos? <p>Involve camp owners - DNA hair snags, game cameras.</p>
<p>Improve the current harvest management system.</p>	<p>Ensure Yukon and NWT sample prices are the same. Completed</p>
<p>Education: Increase education among co-management partners and community members.</p>	<p>Inuvialuit co-management and GNWT discuss baiting bears in the Delta.</p> <p>Use DLP for skinning workshops.</p>
<p>Ensure accurate assessment and listing for the ISR.</p>	<p>Not identified.</p>
<p>Address knowledge gap: Bear behaviour</p>	<p>Obtain more information (ie. conduct research study or literature review) on the impact of handling on bear behaviour.</p>
<p>Improve Inuvialuit involvement in management, including research.</p>	<p>Not identified.</p>
<p>Support and promote Inuvialuit harvest of aklat/akhaq by reducing barriers to harvest.</p>	<p>Establish a system where a tag in-hand is not needed to harvest - ie. hunters can reserve a tag and pick it up when they come back from a successful hunt.</p>

Table 7 - Inuvik Community-Based Management Actions

Management Goal	Management Action
Ensure assessment and listing are accurate for the ISR	Work with co-management partners to ensure that information (scientific and traditional and local knowledge) from the ISR is used by COSEWIC in the assessment process.
Address knowledge gap: Population & other grizzly bear monitoring metrics	Work with co-management partners to conduct population surveys. Suggested 10 years between population surveys, ongoing traditional and local knowledge data collection, and studies on bear health metrics.
Increase availability of Inuvialuit traditional and local knowledge for management decision-making.	Work with co-management and research partners to ensure that all studies include traditional and local knowledge, and Inuvialuit are involved in directing and conducting research.
Improve the current harvest management system.	<p>Work with co-management partners to separate DLP and subsistence quotas.</p> <p>Work with co-management partners to consider the possibility of not having zones or tags specific to communities, but an ISR-wide quota.</p> <p>Work with co-management partners (ENR) to ensure that exact measurements of hides are taken (by ENR staff or the harvester), and this data is provided to buyers and used to inform management.</p> <p>Harvest data shared among Gwich'in and Inuvialuit</p> <p>Information on compensation for hides damaged by research to be provided to harvesters.</p>

Collect, document, and share traditional and local knowledge, harvester observations, scientific knowledge and other monitoring information in a timely manner to inform management decisions.	Work with co-management partners (i.e., ENR) to ensure that data from harvesters kill reports is used by management and shared back to community HTC and members.
Address waste management concerns	Work with all co-management partners and managers of the Inuvik solid waste facility to discuss management of bears.
Assess and address impacts to Inuvialuit livelihoods resulting from listing of grizzly bears as Special Concern.	Work with co-management partners (especially IGC) to discuss Inuvialuit response to NGOs and mitigate the impact on Inuvialuit livelihoods following the federal listing of grizzly bears and changes to the grizzly bear market.
Address knowledge gaps.	Survey of bear dens.
Promote human safety on the land.	Re-establish a program that provides free bear fences for Inuvialuit camps.

Table 8 - Paulatuk Community-Based Management Actions

Management Goal	Management Action
Protect human safety.	Reduce the number of bears coming into the community by controlling the bear population and creating flexibility within the quota system (ie. being able to harvest a bear bothering at a camp even if don't have a tag on-hand)
Address knowledge gap: Population	Work with co-management partners to conduct a population survey in the Paulatuk region.
Address waste management concerns at solid waste facility	Work with co-management partners to establish a tracking / identification program for bears at the solid waste facility. Create a 'boneyard' for animal waste that is further away from the community than the current solid waste facility.
Access to information, education on management information	Work with the community to ensure Grizzly Bear Management Plan is well-understood and endorsed.
Address knowledge gap: grizzly bear ecological role in areas of range expansion	Pursue funding for a study on grizzly bear predation of caribou and grizzly bear diets.
Improve the current harvest management system.	Collaborate with co-management partners, including the Tuktoyaktuk HTC, to establish a sharing agreement across grizzly bear zones that benefits both communities by increasing harvest in the Paulatuk zone and allowing Tuktoyaktuk harvesters access to more tags (in the Paulatuk zone).
Address possible impacts to Inuvialuit livelihoods because of reductions in markets for grizzly bear hides after the federal listing as 'Special Concern'	Work with co-management partners to identify grizzly bears harvested in the ISR as "ISR bears" to increase market.

Increased education on grizzly bears.	Work with co-management partners to get more information on non-lethal bear deterrents - what is available, limitations, etc, and present this information to the community.
Ensure assessment and listing are accurate for the ISR	None identified.
Promote respectful relationships with grizzly bears.	Increase knowledge about grizzly bears and their roles in Inuvialuit culture and history in a way that promotes respect for the animal. Promote harvest and consumption of grizzly bears.

Table 9 - Sachs Harbour Community-Based Management Actions

Management Goal	Management Action
Deter the establishment of grizzly bears on Banks Island.	<p>Work with co-management partners to ensure that community members can harvest all grizzly bears that are seen on Banks Island.</p> <p>Address the NWT Wildlife Act regulation prohibiting killing mothers with cubs.</p> <p>Work with co-management partners to ensure that grizzly bear sample kits are available to the SHHTC to distribute to harvesters.</p> <p>Work with co-management partners to ensure that tags are available immediately after harvest; hides should never be seized.</p> <p>Ensure that there is no quota established for grizzly bears on Banks Island.</p>
Ensure assessment and listing are accurate for the ISR	Not identified.
Address concerns for human safety	<p>Work with ENR and others to ensure any information about grizzly bear observations (ie. during surveys) are reported to the SHHTC immediately.</p> <p>Education on bear deterrents (tools and actions)</p>
Address concerns about grizzly bear predation and impacts on geese, caribou, and muskox	Work with Olokhaktomiut HTC and other co-management partners to seek funding and support for a predator control program.
Increase education regarding the current management system and grizzly bears more generally.	Work with co-management partners to increase education to SHHTC and community members on the <i>Wildlife Act Regulations, Big Game Hunting Regulations</i> , and identifying grizzly bear vs polar bear tracks.

Table 10 - Tuktoyaktuk Community-Based Management Actions

Management Objective	Management Action
Collect, document, and share traditional and local knowledge, harvester observations, scientific knowledge and other monitoring information in a timely manner to inform management decisions.	Work with co-management partners to develop a system of documenting and sharing observations (with management decision-makers) made by harvesters and land users: <ul style="list-style-type: none"> ● big game hunt reports ● creating a way for subsistence harvesters to report on unsuccessful hunts
Address the increasing population of grizzly bears in the region.	Pursue a moderate increase to the quota for Richards Island (through existing structures and processes).
Ensure assessment and listing are accurate for the ISR	Work with co-management partners to ensure that the new population survey results (2013-14 & 2019-20) are used by COSEWIC, and that the ISR is considered a different assessment unit from the rest of the Canadian population.
Address concerns regarding bears causing damage to camps.	Current management action: purchasing electric fences for members' cabins.
Address concerns for human safety.	Pursue & support changes to DLP system: rolling tag system where unused tags from last 3 years and other areas of ISR are made available. Change requirement to have a tag in hand to harvest a bear (be able to reserve an available tag at HTC without picking it up immediately).
Increased education regarding the current management system.	Work with co-management partners to provide more education to young harvesters: ENR does presentations in schools, and that comprehensive information is provided when harvesters pick up grizzly bear tags.

Improve the current harvest management system.

Work with co-management partners and other HTC's to address tensions between communities regarding hunting zones (Inuvik & Tuktoyaktuk).
Increase flexibility for harvesters by implementing a system to call the HTC and reserve a tag instead of having to have the physical tag on-hand to harvest a grizzly bear.

Table 11 - Ulukhaktok Community-Based Management Actions

Management Goal	Management Action
Address concerns of grizzly bear predation on caribou by reducing the number of grizzly bears in the ecosystems around Ulukhaktok.	<p>Maintain current management system with no quota or protection for grizzly bears around Ulukhaktok.</p> <p>Seek funding and support to establish a predator control program.</p>
Address knowledge gap: grizzly bear role in ecosystem	<p>Plan and conduct Inuvialuit-led research to learn how grizzly bears are affecting other species in the region (i.e., caribou, muskox, char, trout, polar bears).</p> <p>Implement grizzly bear tagging/collaring program to follow movements and see how they link up to caribou and other prey movements.</p>
Address knowledge gap: grizzly bear diet	Pursue funding and establish a grizzly bear sampling program to determine diet.
Address knowledge gap: grizzly bear range expansion	Establish research study to determine what's pushing bears north.
Address knowledge gaps (general)	<p>Inuvialuit have an active role in directing and developing research.</p> <p>Funding must prioritize Inuvialuit priorities.</p> <p>Discuss how to find out more about the population of akhaq on Victoria Island.</p>
Address Inuvialuit concerns regarding access to subsistence species (i.e., caribou): IFA establishes Inuvialuit rights to exclusive harvest of bears, caribou, and of access to wildlife and compensation if access is compromised.	Determine process for assessing impact of grizzly bear on Inuvialuit subsistence.

<p>Increase communication among co-management partners and community.</p>	<p>Increase public engagement: have an open meeting, announce on radio, or do a household questionnaire for the development of the Akhaq Management Plan.</p> <p>Completed</p> <p>Education on current Regulations.</p>
<p>Ensure assessment and listing are accurate for the ISR</p>	<p>Not identified.</p>
<p>Deter the establishment of grizzly bears on Victoria Island.</p>	<p>Address the NWT Wildlife Act regulation prohibiting killing mothers with cubs.</p> <p>Work with co-management partners to ensure that tags are available immediately after harvest; hides should never be seized.</p>

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