Inuvialuit Settlement Region Aklat/Akhaq (Grizzly Bear) Research Compendium

Originally Prepared by Chanda Turner

Edited by Édouard Bélanger and Rosemin Nathoo September 2022







Preface

This document was produced to support the development of the Inuvialuit Settlement Region Aklat/Akhaq (Grizzly Bear) Co-Management Plan.

Most items on this list are about research conducted within the Inuvialuit Settlement Region (ISR), or other resources related to aklat in the ISR, including meeting minutes and policies. Correspondences among ISR co-management Councils and co-management partners are not included on this list.

The exceptions to the list being ISR-specific are some research articles on grizzly bears and climate change that were conducted elsewhere, which may inform what will happen in the ISR, as no ISR-specific studies have been done on this topic. A comprehensive list of resources used by ECCC to consider the impacts of climate change to grizzly bears in the north is included separately, from pp. 22-34.

This list is not annotated except where an annotation has been pulled from an existing publication.

Research Compendium

- Aklavik Grizzly Bear Quota History. (2016). *Aklavik Grizzly Bear Quota History* [PowerPoint slides]. Wildlife Management Advisory Council (North Slope), Whitehorse, YT.
- Aklavik HTC & Yukon Government. (2004). Qikiqtaruk Herschel Island Territorial Park Bear Strategy Plan. 9 pp.
- Aklavik HTC, Aklavik Community Corporation, WMAC (NWT), FJMC, & Joint Secretariat. (2016). Aklavik Inuvialuit Community Conservation Plan Akaqvikmiut Nunamikini Nunutailivikautinich. Joint Secretariat, Inuvik, NT. 195 pp.
- Aklavik HTC. (2009). Harvesting of Grizzly Bears in the Aklavik Grizzly Bear Management Area: Policies and Procedures. Aklavik HTC, Aklavik, NT. 9 pp.
- Albrecht, J., Bartoń, K. A., Selva, N., Sommer, R. S., Swenson, J. E., & Bischof, R. (2017). Humans and climate change drove the Holocene decline of the brown bear. *Scientific Reports* 2017 7:1, 7(1), 1–11. https://doi.org/10.1038/s41598-017-10772-6
 - Cited in ECCC's climate change literature review.
- Alunik, I., Kolausok, E.D., & Morrison, D. (2003). *Across time and tundra: The Inuvialuit of the Western Arctic.* Co-published with the Canadian Museum of Civilization. Vancouver: Raincoast Books.
 - From WMAC (NS) & Aklavik HTC (2008): Presents an overview of Inuvialuit history from prehistoric to current times. The focus is on describing how Inuvialuit lifestyles have been and are being affected by contact with outside people and the changing dynamic in the North. A story about grizzly bear harvesting is told. A section on grizzly bear hunting describes techniques, beliefs, rituals, and trading.
- Anderson, M., McLellan, B. N., & Serrouya, R. (2018). Moose response to high-elevation forestry: Implications for apparent competition with endangered caribou. *The Journal of Wildlife Management*, 82(2), 299–309. https://doi.org/10.1002/JWMG.21380
- Arthur, S. M., & Del Vecchio, P. A. (2017). Effects of grizzly bear predation on muskoxen in northeastern Alaska. *Ursus*, 28(1), 81–91. https://doi.org/10.2192/URSUS-D-16-00023.1
- Barber, Q. E., Parisien, M.-A. E., Whitman, E., Stralberg, D., Johnson, C. J., St-Laurent, M.-H., Delancey, E. R., Price, D. T., Arseneault, D., Wang, X., Flannigan, M. D., Barber, Q. E., Parisien, M.-A., Whitman, E., Stralberg, D., Johnson, C. J., St-Laurent, M.-H., Delancey, E. R., Price, D. T., ... Flannigan, M. D. (2018). *Potential impacts of climate change on the habitat of boreal woodland caribou*. https://doi.org/10.1002/ecs2.2472
- Barker, O. E., & Derocher, A. E. (2010). Habitat selection by arctic ground squirrels (Spermophilus parryii). *Journal of Mammalogy*, *91*(5), 1251–1260. https://doi.org/10.1644/10-MAMM-A-030.1
- Barker, O. E., Derocher, A. E., & Edwards, M. A. (2015). Use of Arctic ground squirrels (Urocitellus parryii) by brown bears (Ursus arctos). *Polar Biology*, *38*(3), 369-379.

- Barnas, A. F., Iles, D. T., Stechmann, T. J., Wampole, E. M., Koons, D. N., Rockwell, R. F., & Ellis-Felege, S. N. (2020a). A phenological comparison of grizzly (Ursus arctos) and polar bears (Ursus maritimus) as waterfowl nest predators in Wapusk National Park. Polar Biology, 43(5), 457–465. https://doi.org/10.1007/s00300-020-02647-w
 - Cited in ECCC's climate change literature review.
- Baron, R. (2014). *Grizzly Bear Denning Survey Field Report, June 2014*. Environment and Natural Resources, Inuvik Region.
 - IGC has a copy of this report.
- Berman, E. E., Coops, N. C., Kearney, S. P., & Stenhouse, G. B. (2019). *Grizzly bear response to fine spatial and temporal scale spring snow cover in Western Alberta*. PLoS ONE, 14(4), e0215243. https://doi.org/10.1371/journal.pone.0215243
 - Cited in ECCC's climate change literature review.
- Binder, L.N., & Hanbidge, B. (1993). *Aboriginal people and resource co-management. Traditional ecological knowledge, concepts and cases.* Ottawa: International Development Research Centre.
 - From WMAC (NS) & Aklavik HTC (2008): Begins with a general discussion of what the term co-management means, then focuses on the specifics of Inuvialuit co-management bodies. Each co-managed resource is discussed (bowhead whales, polar and grizzly bears, char, etc.) and the techniques and reasons for management explored. The section on grizzly bears details the quota system and the reasons for its development.
- Black, S., & Fehr, A. (ed.). (2002). *Natural history of the Western Arctic.* Inuvik: Western Arctic Handbook Committee.
 - From WMAC (NS) & Aklavik HTC (2008): Published as an addendum to the book Canada's Western Arctic: Including the Dempster Highway, it contains natural history information on a variety of plant and animal species, as well as descriptions of landforms and ecofeatures. The section on grizzlies is largely concerned with what food sources are utilized by grizzlies and how diet changes are linked to seasonal change.
- Boulanger, J. & Branigan, M. (2020). *Inuvik-Tuktoyaktuk Highway 2013 and 2014 Grizzly Bear DNA Inventory: Estimates And Density Surface Modeling.* [Manuscript Report No. 288]. Integrated Ecological Research & Environmental and Natural Resources, Government of the Northwest Territories. Nelson, BC & Inuvik, NT. 50 + vii pp.
- Boyce, M. S., Stenhouse, G. B. & Roever, C. L. (2008). Grizzly bears and forestry: II: Grizzly bear habitat selection and conflicts with road placement. *Forest Ecology and Management*. https://doi.org/10.1016/j.foreco.2008.06.006
 - Cited in ECCC's climate change literature review.
- Branigan, M. (2015). Summary report on Collar Damage Grizzly Bear Harvested 2014. Environment and Natural Resources, Inuvik Region.
 - IGC has a copy of this report.

- Bullock, S. J. (1987). *Questionnaire summary: traditional use of grizzly bear in the Richardson Mountains*. NWT Department of Renewable Resources ,GNWT. Unpublished Report. 11 pp.
- Bunnell, F. L., & Tait, D. E. N. (1985). Mortality rates of North American bears. *Arctic*, 38(4), 318–323. https://doi.org/10.14430/arctic2151
- Canadian Endangered Species Conservation Council. (2016). *Wild Species 2015: The General Status of Species in Canada*. National General Status Working Group. Electronic copy (http://www.wildspecies.ca); data summary, raw data, and downloadable report. Retrieved from https://www.wildspecies.ca/reports
- Case, R. L., & Buckland, L. (1998). Reproductive characteristics of grizzly bears in the Kugluktuk area, Northwest Territories, Canada. *Ursus*, 41-47.
- Chen, Y., Romps, D. M., Seeley, J. T., Veraverbeke, S., Riley, W. J., Mekonnen, Z. A., & Randerson, J. T. (2021). Future increases in Arctic lightning and fire risk for permafrost carbon. *Nature Climate Change*, *11*(5), 404–410. https://doi.org/10.1038/s41558-021-01011-y
- Clark, D. A., Brook, R., Oliphant-Reskanski, C., Laforge, M. P., Olson, K., & Rivet, D. (2019). Novel range overlap of three ursids in the Canadian subarctic. *Arctic Science*, *5*(1), 62–70. https://doi.org/10.1139/as-2018-0013
 - Cited in ECCC's climate change literature review.
- Clark, D. A., & Slocombe, S. (2011). Adaptive co-management and grizzly bear-human conflicts in two northern Canadian Aboriginal communities. *Human Ecology*, 39(5), 627–640. https://doi.org/10.1007/s10745-011-9423-x
- Clarkson, P. L., & Liepins, I. S. (1989a). *Inuvialuit Wildlife Studies: grizzly bear research progress report 1987-1988.* Department of Renewable Resources, GNWT. Technical Report No. 3. Inuvik, NT. 47 pp.
- Clarkson, P. L., & Liepins, I. S. (1989b). *Inuvialuit Wildlife Studies: grizzly bear research progress report 1988-1989*. Department of Renewable Resources, GNWT. Technical Report No. 8. Inuvik, NT. 25 pp.
- Clarkson, P. L., & Liepins, I. S. (1992). *Inuvialuit Wildlife Studies: grizzly bear research progress report 1989-1991*. Department of Renewable Resources, GNWT. Manuscript Report 53. 26 pp.
- Clarkson, P.L. & Liepins, I. S. (1993). Grizzly bear, Ursus arctos, predation on Muskox, *Ovibos moschatus*, calves near the Horton River, Northwest Territories. *Canadian Field-Naturalist* 107(1):100-102.
- Clarkson, P. L., & Liepins, I. S. (1994). Grizzly bear population estimate and characteristics in the Anderson and Horton Rivers area, Northwest Territories, 1987-89. *Bears: Their Biology and Management*, 213-221.
- Clarkson, P., Liepins, I. & Kutny, L. (1988). *Brown bear research on Richards Island*. Department of Renewable Resources, GNWT. Inuvik, NWT Unpublished Report. 89 pp.

- Cockney, C. (1997). Kitigaaryuit oral traditions research project 1997: English translations and transcriptions of interview tapes 1-16. Inuvik: Inuvialuit Social Development Program.
 - From WMAC (NS) & Aklavik HTC (2008): The Inuvialuit Social Development Program (ISDP) sought to document the significance of Kitigaaryuit, the largest Inuvialuit traditional gathering place, a National Historic Site. Included are descriptions and inventory of cultural/archaeological features. Elders were flown to Kitigaaryuit and interviewed on site. Tape 7B discusses use of grizzly bears.
- Collings, P., Pearce, T., & Kann, J. (2018). "We don't know anything about whales": Ecological knowledge and ways of knowing in Ulukhaktok, Northwest Territories, Canada. *Arctic Science*, *4*(3), 223–241. https://doi.org/10.1139/as-2017-0030
 - Reference to not wanting to speak about bears directly.
- Collins, G. H., Kovach, S. D., & Hinkes, M. T. (2005). Home range and movements of female brown bears in southwestern Alaska. *Ursus*, *16*(2), 181–189. https://doi.org/10.2192/1537-6176(2005)016[0181:HRAMOF]2.0.CO;2
- Committee for the Status of Endangered Wildlife in Canada. (2012). COSEWIC assessment and status report on the Grizzly Bear Ursus arctos in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. 84 + xiv pp. (www.registrelep-sararegistry.gc.ca/default-e.cfm).
- Community of Aklavik, Nickels, S., Furgal, C., Castleden, J., Armstrong, B., Buell, M., et al. (2005). *Unikkaaqatigiit: Putting the human face on climate change. Perspectives from Aklavik, Inuvialuit Settlement Region*. Ottawa: Joint publication of Inuit Tapiriit Kanatami, Nasivvik Centre for Inuit Health and Changing Environments at Université Laval, and the Ajunnginiq Centre at the National Aboriginal Health Organization.
 - From WMAC (NS) & Aklavik HTC (2008): This report summarizes a climate change workshop that took place in Aklavik in January 2002. It was one of five workshops that took place in various arctic communities in an effort to collect local observations of environmental change, discuss the impacts of these changes on the Inuvialuit, and determine what research could be undertaken to monitor and help people adapt to these changes. An increase in the number of problem bear encounters is discussed as one of the effects of environmental change.
- Conference of Management Authorities. (2018). *Consensus Agreement on Listing (Grizzly Bear)*. Conferences of Management Authorities, Yellowknife, NT. 18 pp.
- Coogan, S. C. P., Raubenheimer, D., Stenhouse, G. B., & Nielsen, S. E. (2014). Macronutrient Optimization and Seasonal Diet Mixing in a Large Omnivore, the Grizzly Bear: A Geometric Analysis. *PLOS ONE*, *9*(5), e97968. https://doi.org/10.1371/JOURNAL.PONE.0097968.
 - Cited in ECCC's climate change literature review.
- Cross, P. C., van Manen, F. T., Viana, M., Almberg, E. S., Bachen, D., Brandell, E. E., Haroldson, M. A., Hudson, P. J., Stahler, D. R., & Smith, D. W. (2018). Estimating distemper virus dynamics among wolves and grizzly bears using serology and Bayesian state-space models. *Ecology and Evolution*, *8*(17), 8726–8735. https://doi.org/10.1002/ece3.4396

- Cited in ECCC's climate change literature review.
- Deacy, W. W., Armstrong, J. B., Leacock, W. B., Robbins, C. T., Gustine, D. D., Ward, E. J., Erlenbach, J. A., & Stanford, J. A. (2017). Phenological synchronization disrupts trophic interactions between Kodiak brown bears and salmon. *Proceedings of the National Academy of Sciences of the United States of America*, 114(39), 10432–10437. https://doi.org/10.1073/PNAS.1705248114
 - Cited in ECCC's climate change literature review.
- Department of Resources Wildlife and Economic Development. (2004). *Background Information on Compensation for Research Related Bear Issues*. Department of Resources Wildlife and Economic Development, Inuvik Region.
 - IGC has a copy of this report.
- Doupé, J., England, J., Furze, M., & Paetkau, D. (2007). Most Northerly Observation of a Grizzly Bear (Ursus arctos) in Canada: Photographic and DNA Evidence from Melville Island, Northwest Territories. *Arctic, 60*(3), 271-276. http://www.jstor.org/stable/40512895
- DRWED-Inuvik Region. In preparation. *Grizzly bear population estimate and characteristics for the Richardson Mountains, Northwest Territories and Yukon Territories, 1992-93.*Vegetation/land cover map of the northern Richardson Mountains Yukon/NWT. Department of Renewable Resources. YG, Whitehorse.
- DRWED-Inuvik Region. In preparation. *Grizzly bear population estimate and characteristics for the Anderson- Horton rivers area, Northwest Territories, 1987-89.*
- DRWED-Inuvik Region. In preparation. Female productivity and cub survival of grizzlybears in the Anderson- Horton rivers area, Northwest Territories, 1987-95.
- DRWED-Inuvik Region. In preparation. *Grizzly bear population estimate and characteristics for the Brock- Hornaday rivers area, Northwest Territories, 1992-93.*
 - The four preceding reports were cited as in preparation in the 1999 Co-management plan for grizzly bears. Final versions may be available from ENR.
- DRWED. (2000). *Proceedings: Grizzly Bear Research and Management Workshop Ingamo Hall, Inuvik*. Draft. Department of Resources Wildlife and Economic Development, Inuvik Region. 76 pp.
- Dumon, M., Boulanger, J., & Paetkau, D. (2015). The estimation of grizzly bear density through hair-snagging techniques about the treeline. *Wildlife Society Bulletin* 39(2), 390-402.
- Edwards, M. A. (2005). *Ecology of grizzly bears (*Ursus arctos) *in the Mackenzie Delta Oil and Gas Development Area: 2004 Annual Report* (p. 29). University of Alberta.
- Edwards, M. A. (2006). Ecology of grizzly bears (Ursus arctos) in the Mackenzie Delta Oil and Gas Development Area: 2005 Annual Report (p. 23). University of Alberta.
- Edwards, M. A. (2009). Habitat and Movement Ecology of Grizzly Bears in the Mackenzie Delta, NWT. *Arctic*, 59(4), 453–456. https://doi.org/10.14430/arctic304

- Edwards, M. A. (2010). Spatial ecology of grizzly bears, Ursus arctos, in the Mackenzie Delta, Northwest Territories, Canada. Library and Archives Canada.
- Edwards, M. A., Derocher, A. E., Hobson, K. A., Branigan, M., & Nagy, J. A. (2011). Fast carnivores and slow herbivores: Differential foraging strategies among grizzly bears in the Canadian Arctic. Oecologia, 165(4), 877–889. https://doi.org/10.1007/s00442-010-1869-9
- Edwards, Mark A. (2005). Ecology of grizzly bears (Ursus arctos) in the Mackenzie Delta Oil and Gas Development Area: 2004 Annual Report (p. 29). University of Alberta.
- ENR. (Updated annually). Summary of Harvest Data for Species Under Quota in the Inuvialuit Settlement Region. Department of Environment and Natural Resources, Inuvik Region, Government of the Northwest Territories.
 - From WMAC (NS) & Aklavik HTC (2008): Annual status report for all species under quota in the ISR that helps inform quota allocations for the upcoming year. These species include grizzly bears, polar bears, Bluenose caribou, Peary caribou, Porcupine caribou, and muskox. The report lists the number of used and unused tags per community per hunting area as well as types of kills. It also contains information on population status and, specifically for grizzly bears, how quotas are calculated.
- Environment and Natural Resources & Municipal and Community Affairs. (2019). Northwest Territories Waste Resource Management Strategy And Implementation Plan. ENR & MACA, Yellowknife, NT. 34 + vi pp.
- Environment and Natural Resources & Municipal and Community Affairs. (2022). Best Management Practices to Address Wildlife Issues at Northwest Territories Solid Waste Facilities. Draft. 9 pp.
- Environment and Natural Resources. (2003). *Grizzly and Black Bear Local Knowledge Summary Report: All Communities*. Department of Environment and Natural Resources, Inuvik Region, Government of the Northwest Territories. 145 pp.
 - Modified from WMAC (NS) & AHTC (2008): The report is a summary of interviews carried out in 1998/99 with residents of Aklavik, Inuvik, Paulatuk, and Tuktoyaktuk. This report was produced to address a perceived deficiency in documented local knowledge and to develop objective methods of using local knowledge to make recommendations about grizzly quotas. It contains detailed information on the locations of camps, travel routes to camps, bear problems, harvesting, sightings, dens, and observed dead or sick bears. The methodology used is more quantitative than qualitative. It may provide an important baseline, especially for human-bear interactions on the land.
- Fabijan, M.F., Snow, N., Nagy, J., & Graf, L. (1993). *Inuvialuit harvest study atlas of wildlife species harvest locations reported from July 1987 to December 1992.* Inuvik: Prepared for the Joint Secretariat, Inuvialuit Renewable Resource Committees.
 - From WMAC (NS) & Aklavik HTC (2008): This atlas provides location information for harvest activities in the Inuvialuit Settlement Region from the summer of 1987 to the winter of 1992.
- Fawcett, D., Pearce, T., Notaina, R., Ford, J. D., & Collings, P. (2018). Inuit adaptability to changing environmental conditions over an 11-year period in Ulukhaktok, Northwest Territories. *Polar Record*, *54*(2), 119–132. https://doi.org/10.1017/S003224741800027X

Fisher, J. T., Wheatley, M., & Mackenzie, D. (2014). Spatial patterns of breeding success of grizzly bears derived from hierarchical multistate models. *Conservation Biology*, 28(5), 1249–1259. https://doi.org/10.1111/cobi.12302

Cited in ECCC's climate change literature review.

Freeman, M. (ed.). (1976). *Inuit land use and occupancy project (v.1-3)*. Ottawa: Department of Indian and Northern Affairs.

From WMAC (NS) & Aklavik HTC (2008): Research was undertaken in 1973 to determine Inuit land use and occupancy in the Northwest Territories. Yearly cycle of land use for Inuit west of Hudson Bay is described including methods used to minimize loss of fall harvest animals to bears over the winter (volume 2). Additionally, hunting systems and grizzly bears in myths are described (volume 2); and maps of grizzly bear hunting areas are provided for three different periods in areas around Aklavik, Inuvik, Tuktoyaktuk, Paulatuk, Sachs Harbour, and Holman (volume 3).

Gau, R. J., Case, R., Penner, D. F., & McLoughlin, P. D. (2002). Feeding patterns of barrenground grizzly bears in the central Canadian Arctic. *Arctic*, *55*(4), 339–344. https://doi.org/10.14430/ARCTIC717

Cited in ECCC's climate change literature review.

- Gau, R. J., Mulders, R., Ciarniello, L. M., Heard, D. C., Chetkiewicz, C. L. B., Boyce, M., ... & Parker, K. L. (2004). Uncontrolled field performance of Televilt GPS-SimplexTM collars on grizzly bears in western and northern Canada. *Wildlife Society Bulletin*, 32(3), 693-701
- Government of Nunavut. (2019). *Nunavut Grizzly Bear Co-Management Plan*. Nunavut Department of Environment.
- Graves, T. A., Kendall, K. C., Royle, J. A., Stetz, J. B., & Macleod, A. C. (2011). Linking landscape characteristics to local grizzly bear abundance using multiple detection methods in a hierarchical model. *Animal Conservation*, *14*(6), 652–664. https://doi.org/10.1111/j.1469-1795.2011.00471.x

Cited in ECCC's climate change literature review.

- Grizzly Bear Quota Assessment. (2016). Grizzly Bear Quota Assessment [PowerPoint slides]. Wildlife Management Advisory Council (North Slope), Whitehorse, YT.
- Gwich'in Renewable Resource Board. (1997). *Nánh' Kak Geenjit Gwich'in Ginjik: Gwich'in words about the land*. Inuvik: Gwich'in Renewable Resource Board.

From WMAC (NS) & Aklavik HTC (2008): This book is the result of the Gwich'in Environmental Knowledge Project, which was designed to gather local Gwich'in traditional ecological knowledge. Information was gathered through interviews with elders and other land users, and through archival research. It contains 19 detailed chapters on animals important to the Gwich'in, including the grizzly bear. Each chapter contains detailed life histories as well as stories and maps of where the animals have traditionally been harvested.

- Harding, L.E. 1976. Den-site characteristics of arctic coastal grizzly bears (Ursus arctos L.) on Richards Island, Northwest Territories, Canada. *Canadian Journal of Zoology, 54*: 1357-1363.
- Harding, L., & Nagy, J. A. (1980). Responses of grizzly bears to hydrocarbon exploration on Richards Island, Northwest Territories, Canada. *Bears: Their Biology and Management*, 277-280.
- Hertel, A. G., Bischof, R., Langval, O., Mysterud, A., Kindberg, J., Swenson, J. E., & Zedrosser, A. (2018). Berry production drives bottom—up effects on body mass and reproductive success in an omnivore. *Oikos*, *127*(2), 197–207. https://doi.org/10.1111/OIK.04515
 - Cited in ECCC's climate change literature review. The study takes place in Sweden.
- Hilderbrand, Schwartz, Robbins, Jacoby, Hanley, Arthur, and Servheen. (1999). The importance of meat, particularly salmon, to body size, population productivity, and conservation of North American brown bears. Canadian Journal of Zoology. 77(1): 132-138. https://doi.org/10.1139/z98-195
- Hilderbrand, G. V., Gustine, D. D., Mangipane, B. A., Joly, K., Leacock, W., Mangipane, L. S., Erlenbach, J., Sorum, M. S., Cameron, M. D., Belant, J. L., & Cambier, T. (2018). Body size and lean mass of brown bears across and within four diverse ecosystems. *Journal of Zoology*, 305(1), 53–62. https://doi.org/10.1111/jzo.12536
- Hilderbrand, G. v, Joly, K., Sorum, M. S., Cameron, M. D., & Gustine, D. D. (2019). Brown bear (Ursus arctos) body size, condition, and productivity in the Arctic, 1977-2016. *Polar Biology*, 42, 1125–1130. https://doi.org/10.1007/s00300-019-02501-8
- Hobson, K. (2011). Fast carnivores and slow herbivores: differential foraging strategies among grizzly bears in the Canadian Arctic. *Oecologia*. https://doi.org/10.1007/s00442-010-1869-9
- Horler, A. (2002). *ISR grizzly bear workshop*. Common Ground: Bulletin of the Joint Secretariat. Volume 3-1.
 - From WMAC(NS) & AHTC (2008): This article summarizes a workshop held in Inuvik in October 2002. The history of the grizzly bear quota system in the Inuvialuit Settlement Region, concerns over problem bears, and current concerns with the quota system are discussed.
- Hu, F. S., Higuera, P. E., Duffy, P., Chipman, M. L., Rocha, A. V., Young, A. M., Kelly, R., & Dietze, M. C. (2015). Arctic tundra fires: Natural variability and responses to climate change. Frontiers in Ecology and the Environment, 13(7), 369–377. https://doi.org/10.1890/150063
- Inuvialuit Final Agreement (Western Arctic (Inuvialuit) Land Claims Settlement Act) S.C. c. 24 (1984). https://laws-lois.justice.gc.ca/eng/acts/W-6.7/page-1.html
- Inuvialuit Harvest Study. (2003). *Inuvialuit Harvest Study: Data and Methods Report 1988-1997*. Inuvik, Northwest Territories: The Joint Secretariat.
- Inuvik HTC, Inuvik Community Corporation, WMAC (NWT), FJMC, & Joint Secretariat. (2016). *Inuvik Inuvialuit Community Conservation Plan Inuuvium Angalatchivingit Niryutinik*. Joint Secretariat, Inuvik, NT. 192 pp.

- IRC. (2017). *Inuvialuit Harvest Study: Annual Newsletter January-December 2016 (Issue #02, Spring 2017)*. Inuvialuit Regional Corporation.
- IRC. (2018). *Inuvialuit Harvest Study: Annual Newsletter January-December 2017 (Issue #03, Spring 2018)*. Inuvialuit Regional Corporation.
- IRC. (2019). Inuvialuit Harvest Study 2018 Partner Report. Inuvialuit Regional Corporation.
- Jenness, D. (1913-1916). *Part B: Eskimo string figures.* Report of the Canadian Arctic Expedition: 1913-1918. Volume 13: Southern Party, 90 pp.
 - From WMAC(NS) & AHTC (2008): This report presents detailed descriptions and diagrams of string figures from the "cats cradle" game. The report describes different figures encountered throughout the Arctic. Figures collected in the Mackenzie Delta region included several that were named after grizzlies. One series of figures describes two bears emerging from a den under a cliff.
- Joint Secretariat. 2017. *Inuvialuit Settlement Region Polar Bear Joint Management Plan.* Joint Secretariat, Inuvialuit Settlement Region. vii + 66 pp.
- Kaglik, D. (1983, June 20). *A long time ago.* Committee for Original People's Entitlement. Inuvik: Canadian Broadcasting Corporation, Northern Service.
 - From WMAC(NS) & AHTC (2008): This recording is in Inuvialuktun. The Prince of Wales Centre database provides this description: "Mr. Kaglik relates the legend of a brown bear which married a human and had a son."
- Kappi, L. (ed.). (1977). Inuit legends. Yellowknife: Government of Northwest Territories, Department of Education.
 - From WMAC(NS) & AHTC (2008): This book presents a collection of traditional stories in both English and Inuvialuktun. It contains the story Mother Bear and Two Sons: a story of a wife who dresses herself and her sons as grizzlies to revenge herself on a husband who abandoned her.
- Kingsley, M. C. S., Nagy, J. A & Reynolds, H. V. (1988). Growth in length and weight of northern brown bears: differences between sexes and populations. *Canadian Journal of Zoology*, 66:981-986.
- Kirby, R.M. (1989). *Aklaiyara tantungitpiung?; (Have you seen my grizzly bear cubs?).* Inuvik: Government of Northwest Territories, Department of Education.
 - From WMAC(NS) & AHTC (2008): The Inuvialuit Cultural Resource Centre database describes this as a teaching resource for young children.
- Lambart, H.F.J. (1919, October). Harvesting the barren ground grizzly on the shores of the Arctic. *The Canadian Field-Naturalist*, 33.
 - From WMAC(NS) & AHTC (2008): This article describes the collection, for the Ottawa museum, of an "Alaskan Boundary Grizzly" by a member of a survey team working on the Alaska/Yukon border in July 1912. A highly detailed account of the terrain, flora, and

- circumstances surrounding the collection are included, as well as detailed measurements of the specimen.
- Lambert Koizumi, C., & Derocher, A. E. (2019). Predation risk and space use of a declining Dall sheep (Ovis dalli dalli) population. *PLoS ONE*, *14*(4), 1–16. https://doi.org/10.1371/journal.pone.0215519
- Larter, N. C., Forbes, L. B., Elkin, B. T., & Allaire, D. G. (2011). Prevalence of Trichinella spp. in black bears, grizzly bears, and wolves in the Dehcho Region, Northwest Territories, Canada, including the first report of T. nativa in a grizzly bear from Canada. *Journal of wildlife diseases*, *47*(3), 745-749.
- Lenart, E. A. (2015). Units 25A, 25B, 25D, 26B and 26C brown bear. In P. Harper & L. A. McCarthy (Eds.), *Brown bear management report of survey and inventory activities 1 July 2012 30June 2014* (Species Ma, p. 23). Juneau, Alaska, USA: Alaska Deartment of Fish and Game.
- Lyons, A. L., Gaines, W. L., Singleton, P. H., Kasworm, W. F., Proctor, M. F., & Begley, J. (2018). Spatially explicit carrying capacity estimates to inform species specific recovery objectives: Grizzly bear (Ursus arctos) recovery in the North Cascades. Biological Conservation, 222, 21–32. https://doi.org/10.1016/j.biocon.2018.03.027
 - Cited in ECCC's climate change literature review.
- MacHutchon, A.G. (1996). *Grizzly bear habitat use study, Ivvavik National Park, Yukon.* Final report. Inuvik: Parks Canada, Western Arctic District.
 - From WMAC(NS) & AHTC (2008): The final report for a multiyear study on grizzly habitat use in Ivvavik Park. Contains detailed information on habitat and life history of grizzly bear. Section 7 of the report summarizes a set of interviews carried out with area bear harvesters. Harvesters were asked about their experiences with bears, knowledge of grizzly behaviour and biology, traditional beliefs concerning bears, and their travels in Ivvavik Park.
- Machutchon, A. G. (2001). Grizzly bear activity budget and pattern in the Firth River valley, Yukon. *Ursus*, *12*(2001), 189–198.
 - From WMAC(NS) & AHTC (2008): This article describes the activity of five bears radio-collared in the Firth River Valley, Yukon, between 1994 and 1995. The bears' feeding habits, comparisons to bears in southern populations, and the impact of human disturbance are discussed.
- MacHutchon, A. G., & Wellwood, D. W. (2003). Grizzly bear food habits in the northern Yukon, Canada. *Ursus*, 14(2), 225–235. https://doi.org/10.2307/3873022
- Mackenzie, W., & MacHutchon, A. G. (1996). *Grizzly Bear Habitat Classification for the Firth River Corridor, Ivvavik National Park*. Inuvik, Northwest Territories, Canada.
- Mattson, D. J. (1990). Human Impacts on Bear Habitat. *Bears: Their Biology and Management*, 8, 33–56.
- Mattson, D. J. (2001). Myrmecophagy by Yellowstone grizzly bears. *Canadian Journal of Zoology*, 79(5), 779–793. https://doi.org/10.1139/CJZ-79-5-779

- Cited in ECCC's climate change literature review.
- McLellan, B. N. (1990). Relationships between Human Industrial Activity and Grizzly Bears. *Bears: Their Biology and Management*, 8, 57–64.
- McLoughlin, P. D., Case, R. L., Gau, R. J., Cluff, D. H., Mulders, R., & Messier, F. (2002). Hierarchical habitat selection by barren-ground grizzly bears in the central Canadian Arctic. *Oecologia*, 132(1), 102-108.
- McLoughlin, P. D., Case, R. L., Gau, R. J., Ferguson, S. H., & Messier, F. (1999). Annual and seasonal movement patterns of barren-ground grizzly bears in the central Northwest Territories. *Ursus*, 79-86.
- McLoughlin, P. D., Cluff, H. D., Gau, R. J., Mulders, R., Case, R. L., & Messier, F. (2003). Effect of spatial differences in habitat on home ranges of grizzly bears. *Ecoscience*, *10*(1), 11–16. https://doi.org/10.1080/11956860.2003.11682744
- McLoughlin, P. D., Taylor, M. K., Cluff, H. D., Gau, R. J., Mulders, R., Case, R. L., & Messier, F. (2003). Population viability of barren-ground grizzly bears in Nunavut and the Northwest Territories. *Arctic*, 185-190.
- Michiel, G. (2015). *Grizzly Bear Denning Survey Field Report, October 2015.* Environment and Natural Resources, Inuvik Region.
 - IGC has a copy of this report.
- Miller, S., Wilder, J., & Wilson, R. R. (2015). Polar bear-grizzly bear interactions during the autumn open-water period in Alaska. *Journal of Mammalogy*, 96(6), 1317–1325. https://doi.org/10.1093/jmammal/gyv140
- Mowat, G., & Heard, D. C. (2006). Major components of grizzly bear diet across North America. *Canadian Journal of Zoology*, *84*(3), 473–489. https://doi.org/10.1139/Z06-016
 - Cited in ECCC's climate change literature review.
- Nagy, J. A. (1990). *Biology and Management of Grizzly Bear on the Yukon North Slope*. Whitehorse, Yukon, Canada.
 - From WMAC(NS) & AHTC (2008): This report starts with a review of population characteristics of Northern Yukon grizzly bears, followed by a section on data deficiencies. The final sections provide estimates of harvestable surpluses for bears in the Inuvialuit Settlement Region using a model, as well as recommendations for monitoring and regulating annual harvest.
- Nagy, J.A. 1984. Relationship of weight to chest girth in the grizzly bear. *Journal of Wildlife Management 48*(4):1439-1440.
- Nagy, J. A. & Branigan, M. (1998). Co-Management Plan for Grizzly Bears in the Inuvialuit Settlement Region, Yukon Territory and Northwest Territories. DRWED, Inuvik, NT. 63 + v pp.
- Nagy, J. A., & Haroldson, M. A. (1990). Comparisons of Some Home Range and Population Parameters among Four Grizzly Bear Populations in Canada. In *Bears: Their Biology and*

- Management, Vol. 8, A Selection of Papers from the Eighth International Conference on Bear Research and Management, Victoria, British Columbia, Canada, February 1989 (pp. 227–235).
- Nagy, J. A., Russell, R. H., Pearson, A.M., Kingsley, M.C.S. & Larson, C.B. (1983a). *Ecological studies of grizzly bears in the Arctic Mountains, Northern Yukon Territory, 1972-75.*Canadian Wildlife Service, Edmonton, AB. 102 pp.
- Nagy, J. A., Russell, R. H., Pearson, A.M., Kingsley, M.C.S. & Larson, C.B. (1983b). *A study of grizzly bears on the barren grounds of Tuktoyaktuk Peninsula and Richards Island, Northwest Territories, 1974 to 1978.* Canadian Wildlife Service, Edmonton, AB. 136 pp.
- Nagy, M. (1992). *Index to 1990-1991 interviews from Qikiqtaruk and Yukon North Slope: Inuvialuit oral history project.* Whitehorse: Parks Canada.
 - From WMAC(NS) & AHTC (2008): An index to interviews done with Inuvialuit elders in 1990 and 1991 during the Qikiqtaruk and Yukon North Slope Oral History Project. The following interviews reference grizzly bears: 90-08B, 90-20B, 91-04B, 91-18B, 91-25A.
- Nagy, M. (ed.). (1994). Yukon North Slope cultural resources survey: English translations and transcriptions of interviews 1 to 29. Inuvik: Inuvialuit Social Development Program.
 - From WMAC(NS) & AHTC (2008): Interviews with Inuvialuit elders were conducted in 1991 to document post-contact aboriginal land use as recorded in historic habituation sites, graves, resource extraction areas, and place names along the Yukon North Slope. Results of these interviews helped shape the interpretative programs for Ivvavik National Park and historic resource management policies. Tape 4B discusses grizzly bear hunting.
- Nagy, M. I. (1994). *Yukon North Slope Inuvialuit Oral History* (Occasional Papers in Yukon History No. 1). Government of the Yukon, Heritage Branch.
- Nagy, M. (ed.). (1999a). Aulavik oral history project: English translations and transcriptions of interviews 3 to 30. Inuvik: Inuvialuit Social Development Program.
 - From WMAC(NS) & AHTC (2008): The Inuvialuit Social Development Program undertook this oral history project to document Inuvialuit land use and knowledge of Banks Island. Interviews with elders from Banks Island, Aklavik, Holman, Inuvik, Sachs Harbour, and Tuktoyaktuk were focused on seasons of occupation, means of subsistence, habitation structures, trapping and trading activities, and social life. Tape 21B discusses hunting denning grizzly bears and hunting areas.
- Nagy, M. (ed.). (1999b). Aulavik oral history project: English translations of archival tapes [interviews 73-78, N89-N92, and Peter Usher tape]. Inuvik: Inuvialuit Social Development Program.
 - From WMAC(NS) & AHTC (2008): The Inuvialuit Social Development Program undertook this oral history project to document Inuvialuit land use and knowledge of Banks Island. Interviews with elders from Banks Island, Aklavik, Holman, Inuvik, Sachs Harbour, and Tuktoyaktuk were focused on seasons of occupation, means of subsistence, habitation structures, trapping and trading activities, and social life. Interview N92-253-368B describes grizzly bear hunting.

- NatureServe. (n.d.). Conservation Status Assessment. <u>https://www.natureserve.org/conservation-tools/conservation-status-assessment</u>
- Obst, J., J. E. Hines, J.-F. Dufour, P. F. Woodard, and R.G. Bromley. (2013). *Habitat Conditions, Grizzly Bear Predation of Nests, and Spring Use of the Anderson River Delta by Lesser Snow Geese and Brant, 2005–2006*. Technical Report Series No. 523, Canadian Wildlife Service, Yellowknife, NT.
- Olokhaktomiut HTC, Ulukhaktok Community Corporation, WMAC (NWT), FJMC, & Joint Secretariat. (2016). *Olokhaktomiut Inuvialuit Community Conservation Plan Ulukhaqtuum Angalatchivingit Niryutinik*. Joint Secretariat, Inuvik, NT. 166 pp.
- Paetkau, D., Waits, L. P., Clarkson, P. L., Craighead, L., Vyse, E., Ward, R., & Strobeck, C. (1998). Variation in Genetic Diversity across the Range of North American Brown Bears. *Conservation Biology, 12*(2), 418–429.
- Parks Canada. (1999). *Ivvavik National Park wildlife cards mammal observations*. Unpublished raw data. Inuvik: Parks Canada.
 - From WMAC(NS) & AHTC (2008): A collection of all reported mammal sightings in Ivvavik National Park from 1986 to 1999. There are no records from 1995, 1996 or 1997. The total number of sightings for a range of mammal species, of which grizzly bears are included, are recorded on an annual basis.
- Parks Canada. (2004a). *Incidental grizzly bear observations Western Arctic Field Unit*. Unpublished raw data. Inuvik: Parks Canada.
 - From WMAC(NS) & AHTC (2008): A collection of the 2003–2004 grizzly sightings in Ivvavik National Park. The data compiled by Parks Canada, includes details on date, time, number of bears seen, bear activity, distance from group, bear reaction to group, and comments on the specifics of the sighting.
- Parks Canada. (2004b). *Paulatuuq oral history project: Inuvialuit elders share their stories.* Inuvik: Parks Canada, Western Arctic Field Unit.
 - From WMAC(NS) & AHTC (2008): This project was initiated to identify traditional knowledge of the physical, biological, and cultural resources of Tuktut Nogait National Park. This project has two components: 1) interviews with Father Dehurtevent, a Catholic priest who served Paulatuuq for 40 years [see (Cockney, 2002)] and 2) interviews with Inuvialuit elders who live or have lived in Paulatuuq. Tape 4A discusses grizzly bears.
- Parks Canada. (2007). *Tuktut Nogait National Park Of Canada Management Plan.* Parks Canada, Ottawa, ON. 74 + viii pp.
- Parks Canada. (2018). *Ivvavik National Park Of Canada Management Plan.* Parks Canada, Inuvik, NT. 15 + x pp.
- Parks Canada & Yukon Government. (2014). Yukon North Slope Grizzly Bear Population Estimation and Demographic Analysis. Whitehorse, Yukon, Canada.
- Paulatuk HTC, Paulatuk Community Corporation, WMAC (NWT), FJMC, & Joint Secretariat. (2016). *Paulatuk Inuvialuit Community Conservation Plan Paulatuum Angalatchivingit Niryutinik*. Joint Secretariat, Inuvik, NT. 188 pp.

- Pengelly, I., & Hamer, D. (2006). Grizzly bear use of pink hedysarum roots following shrubland fire in Banff National Park, Alberta. *Ursus*, 17(2).
 - Cited in ECCC's climate change literature review.
- Pigeon, K. E., Stenhouse, G., & Côté, S. D. (2016). Drivers of hibernation: linking food and weather to denning behaviour of grizzly bears. Behavioral Ecology and Sociobiology, 70. https://doi.org/10.1007/s00265-016-2180-5
 - Cited in ECCC's climate change literature review.
- Pinard, C. (2017). Aklavik Hunters and Trappers Committee Grizzly Bear and Polar Bear bylaws and enforcement on the Yukon North Slope. Wildlife Management Advisory Council (North Slope). Whitehorse, YT. 45 pp.
- Pongracz, J., Paetkau, D., Branigan, M., & Richardson, E. (2017). Recent Hybridization between a Polar Bear and Grizzly Bears in the Canadian Arctic. *Arctic, 70*(2), 151-160. http://www.jstor.org/stable/26379758
- Proctor, M. F., McLellan, B. N., Stenhouse, G. B., Mowat, G., Lamb, C. T., & Boyce, M. S. (2020). Effects of roads and motorized human access on grizzly bear populations in British Columbia and Alberta, Canada. *Ursus*, 2019(30e2), 16–39. https://doi.org/10.2192/URSUS-D-18-00016.2
 - Cited in ECCC's climate change literature review.
- Ransom, J. I., Krosby, M., & Lyons, A. L. (2018). Climate Change Implications for Grizzly Bears (*Ursus arctos*) in the North Cascades Ecosystem. In *Natural Resource Report NPS/NOCA/NRR*.
 - Cited in ECCC's climate change literature review.
- Reynolds, H. V., & Hechtel, J. L. (1987). *Grizzly bear population ecology in the western Brooks Range, Alaska.* Anchorage, Alaska, USA.
- Reynolds, Harry. (1976). *North Slope Grizzly Bear Studies*. Juneau, Alaska: Alaska Department of Fish and Game.
- Ripple, W. J., Beschta, R. L., Fortin, J. K., & Robbins, C. T. (2013). *Trophic cascades from wolves to grizzly bears in Yellowstone*. https://doi.org/10.1111/1365-2656.12123
 - Cited in ECCC's climate change literature review.
- Robbins, C. T., Woodford, N. L., Goolsby Clyde, G., Minor, C., Nelson, O. L., Brewer, M. M., Khalife, P. H., & Hawley, J. R. (2018). Salmon poisoning disease in grizzly bears with population recovery implications. *The Journal of Wildlife Management*, 82(7), 1396–1402. https://doi.org/10.1002/JWMG.21502
 - Cited in ECCC's climate change literature review.

- Roberts, D. R., Nielsen, S. E., & Stenhouse, G. B. (2014). Idiosyncratic responses of grizzly bear habitat to climate change based on projected food resource changes. *Ecological Applications: A Publication of the Ecological Society of America*, 24(5), 1144–1154. https://doi.org/10.1890/13-0829.1
 - Cited in ECCC's climate change literature review.
- Rockwell, R., Gormezano, L., & Hedman, D. (2008). Grizzly Bears, *Ursus arctos*, in Wapusk National Park, Northeastern Manitoba. *Canadian Field-Naturalist*, 122(4), 323–326. https://doi.org/10.22621/cfn.v122i4.639
 - Cited in ECCC's climate change literature review.
- Rodríguez, C., Naves, J., Fernández-Gil, A., Obeso, J. R., & Delibes, M. (2007). Long-term trends in food habits of a relict brown bear population in northern Spain: The influence of climate and local factors. *Environmental Conservation*, *34*(1), 36–44. https://doi.org/10.1017/S0376892906003535
 - Cited in ECCC's climate change literature review.
- Sachs Harbour HTC, Sachs Harbour Community Corporation, WMAC (NWT), FJMC, & Joint Secretariat. (2016). Sachs Harbour Inuvialuit Community Conservation Plan Sachs Harbour Angalatchivingit Niryutinik. Joint Secretariat, Inuvik, NT. 133 pp.
- Schwartz, C. C., Haroldson, M. A., & White, G. C. (2010). Hazards Affecting Grizzly Bear Survival in the Greater Yellowstone Ecosystem. *The Journal of Wildlife Management*, 74(4), 654–667. https://doi.org/10.2193/2009-206
 - Cited in ECCC's climate change literature review.
- Schwarz, H. (1970). *Elik and other stories of the Mackenzie Eskimos*. Toronto: McClelland and Stewart Limited.
 - From WMAC(NS) & AHTC (2008): A collection of eight traditional Inuvialuit stories, related by storytellers from throughout the Mackenzie Delta. Stories include: The Northern Lights People; Elik; Elik, the Far Seeing One; Akaluk and the Stolen Soul of Ugpik; The Origin of the White Whale; The Whale Harvest; and the Great Eskimo Rally at Fort McPherson. The Origin of the White Whale describes the transformation of a boy into a brown bear.
- Searing, G.F. (1987). The natural and cultural resources of Northern Yukon National Park and adjacent areas: a summary of the literature and annotated bibliography. Winnipeg: Parks Canada Prairie and Northern Region.
 - From WMAC (NS) & AHTC (2008): This report identifies sources of information available for the Northern Yukon National Park (Ivvavik and Vuntut areas) and information gaps. It discusses climatology, hydrology, geology, geomorphology, pedology, vegetation, wildlife fish, invertebrates, cultural resources, paleoecology, ecological land classification, ecological relationships and processes, and natural resource management in the region. There is a 5 page summary of grizzly bear knowledge for the region.
- Slater, G. J., Figueirido, B., Louis, L., Yang, P., & van Valkenburgh, B. (2010). Biomechanical consequences of rapid evolution in the polar bear lineage. *PLoS ONE*, *5*(11), 1–7. https://doi.org/10.1371/journal.pone.0013870

- Smereka, C. A., Edwards, M. A., Pongracz, J., Branigan, M., Pilfold, N. W., & Derocher, A. E. (2017). Den selection by barren-ground grizzly bears, Mackenzie Delta, Northwest Territories. *Polar Biology*, *40*(3), 503-516.
- Smith, B. (1991). *Hunt wisely: A guide to male-selective grizzly bear hunting.* Extension Report. Whitehorse: Yukon Government, Fish and Wildlife Branch.
 - From WMAC(NS) & AHTC (2008): A technical report written with hunters, naturalists, and biologists in mind. It presents the results of 12 years of investigations into the relationship between hunters and grizzly bears in the Yukon.
- Smith, B. (2003). *Typical spring bear harvest day with estimates of typical numbers of other wildlife sign seen.* Interviewee A, D, E, G, I March 2003. Unpublished raw data. Aklavik: Aklavik Hunters and Trappers Committee.
 - From WMAC(NS) & AHTC (2008): Unpublished interview notes on the details of what occurs during a typical day on a spring grizzly bear harvest. Cannot be viewed without the permission of the Aklavik Hunters and Trappers Committee.
- Souliere, C. M., Coogan, S. C. P., Stenhouse, G. B., & Nielsen, S. E. (2020). Harvested forests as a surrogate to wildfires in relation to grizzly bear food-supply in west-central Alberta. Forest Ecology and Management, 456, 117685. https://doi.org/10.1016/J.FORECO.2019.117685
 Cited in ECCC's climate change literature review.
- Species at Risk Act (NWT) S.N.W.T. c.16 (2010). https://www.nwtspeciesatrisk.ca/LegislationPrograms
- Species At Risk Act, S.C. c. 29 (Section 2) (2002). https://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html
- Species At Risk Committee. (2017). Species Status Report for Grizzly Bear (Ursus arctos) in the Northwest Territories. Species at Risk Committee, Yellowknife, NT. 153 pp.
- Stenset, N. E., Lutnæs, P. N., Bjarnadóttir, V., Dahle, B., Fossum, K. H., Jigsved, P., Johansen, T., Neumann, W., Opseth, O., Rønning, O., Steyaert, S. M. J. G., Zedrosser, A., Brunberg, S., & Swenson, J. E. (2016). Seasonal and annual variation in the diet of brown bears Ursus arctos in the boreal forest of south-central Sweden. *Wildlife Biology*, 22(3), 107–116. https://doi.org/10.2981/WLB.00194
 - Cited in ECCC's climate change literature review.
- Tetso, J. (1970). *Trapping is my life*. Toronto: Peter Martin Associates.
 - From WMAC(NS) & AHTC (2008): A collection of stories told by John Tetso, a Slavey trapper who lived and worked around the confluence of the Liard and Mackenzie rivers. The stories describe his interactions with wildlife and his experiences on the land during his time as a trapper. One story details a problematic encounter he and a friend had with a bear (species not identified) while away from his cabin.
- Triska, M., & Heinemeyer, K. (2020). *Yukon North Slope Grizzly Bear Seasonal Habitat Models*. Round River Conservation Studies.

- Tuktoyaktuk HTC, Tuktoyaktuk Community Corporation, WMAC (NWT), FJMC, & Joint Secretariat. (2016). *Tuktoyaktuk Inuvialuit Community Conservation Plan Tuktuuyaqtuum Angalatchivingit Niryutinik*. Joint Secretariat, Inuvik, NT. 227 pp.
- Vuntut Gwitchin Government, & Yukon Government. (2009). *North Yukon Regional Land Use Plan*.
- Wang, X., Thompson, D. K., Marshall, G. A., Tymstra, C., Carr, R., & Flannigan, M. D. (2015). Increasing frequency of extreme fire weather in Canada with climate change. *Climatic Change*, 130(4), 573–586. https://doi.org/10.1007/s10584-015-1375-5
- Wilcox, K. & Cote-Germain, C. (2021). Literature Review for assessing threats to Grizzly Bear: Climate Change. Yukon, Northwest Territories and Nunavut. Confidential Draft. Environment and Climate Change Canada.
- Wildlife Act Inuvialuit Settlement Region Aklavik Hunters And Trappers Committee Regulations R-031-93. (2019). https://www.enr.gov.nt.ca/en/services/legislation-and-regulations
- Wildlife Act Inuvialuit Settlement Region Inuvik Hunters And Trappers Committee Regulations R-033-93. (2020). https://www.enr.gov.nt.ca/en/services/legislation-and-regulations
- Wildlife Act Inuvialuit Settlement Region Olokhaktomiut Hunters And Trappers Committee Regulations R-032-93; R-027-94,s.2; R-031-2009,s.2; R-044-2015,s.2. (2019). https://www.enr.gov.nt.ca/en/services/legislation-and-regulations
- Wildlife Act Inuvialuit Settlement Region Paulatuk Hunters And Trappers Committee Regulations R-034-93. (2019). https://www.enr.gov.nt.ca/en/services/legislation-and-regulations
- Wildlife Act Inuvialuit Settlement Region Sachs Harbour Hunters And Trappers Committee Regulations R-035-93. (2019). https://www.enr.gov.nt.ca/en/services/legislation-and-regulations
- Wildlife Act Inuvialuit Settlement Region Tuktoyaktuk Hunters And Trappers Committee Regulations R-036-93. (2019). https://www.enr.gov.nt.ca/en/services/legislation-and-regulations
- Wildlife Act S.N.W.T. c.30 (2014). https://www.enr.gov.nt.ca/en/services/legislation-and-regulations
- Wildlife Management Advisory Council (North Slope) & the Aklavik Hunters and Trappers Committee. (2003). Aklavik Inuvialuit describe the status of certain birds and animals on the Yukon North Slope, March, 2003. Final Report. Wildlife Management Advisory Council (North Slope), Whitehorse, Yukon.
 - From WMAC(NS) & AHTC (2008): This report summarizes information gathered from 10 interviews done with Aklavik land users in March and April of 2003. The interviews were conducted to ascertain the current status of certain plants and animals including the grizzly bear on the Yukon North Slope and western Mackenzie Delta.
- Wildlife Management Advisory Council (North Slope). (2016). *Grizzly Bear Harvest Workshop*. Unpublished report. Wildlife Management Advisory Council (North Slope), Whitehorse, Yukon. 7 pp.

- Wildlife Management Advisory Council (North Slope). (2022a). *Yukon North Slope Wildlife Conservation and Management Plan.* Wildlife Management Advisory Council (North Slope), Whitehorse, Yukon.
- Wildlife Management Advisory Council (North Slope). (2022b). Yukon North Slope Wildlife Conservation and Management Plan:Companion Report 7: Grizzly Bear / Akłaq . Wildlife Management Advisory Council (North Slope), Whitehorse, Yukon.
- Wildlife Management Advisory Council (Northwest Territories) & Wildlife Management Advisory Council (North Slope). (2022). 2020-22 ISR Grizzly Bear Management Plan Update: Community & Council Engagement Report. Wildlife Management Advisory Council (Northwest Territories) & Wildlife Management Advisory Council (North Slope), Inuvik, NT.
 - This report contains feedback from ISR communities, HTCs, IGC, and co-management Councils that was used to develop the 2022 ISR Aklat/Akhaq (Grizzly Bear) Co-Management Plan.
- Wildlife Management Advisory Council (Northwest Territories). (2019). *Dolphin & Union Caribou User-to-User Meeting. May 7-8, 2019 Visitor Centre, Kugluktuk, NU.* Unpublished meeting minutes.
- Wildlife Management Advisory Council (Northwest Territories). (2019). *Dolphin & Union Teleconference*. *July* 3, 2020. Unpublished meeting minutes.
- WMAC (NS), & Aklavik HTC. (2008). Aklavik Local and Traditional Knowledge about Grizzly Bears of the Yukon North Slope: Final Report. Whitehorse, YT: Wildlife Management Advisory Council (North Slope).
- WMAC (NS), & Aklavik HTC. (2018a). *Inuvialuit Traditional Knowledge of Wildlife Habitat,* Yukon North Slope. Whitehorse, YT: Wildlife Management Advisory Council (North Slope).
- WMAC (NS), & Aklavik HTC. (2018b). *Yukon North Slope Inuvialuit Traditional Use Study*. Whitehorse, YT: Wildlife Management Advisory Council (North Slope).
- WMAC (NS), Yukon Environment, Aklavik HTC, & Parks Canada. (2008). Yukon North Slope Grizzly Bear Population Study (Mid-Term Project Report).
- WMAC (NS). (2020). Yukon North Slope Wildlife Conservation and Management Plan WORKING PLAN July 22 2019 version.
- Yukon Environment, Parks Canada, WMAC (NS), & Aklavik HTC. (2008). Yukon North Slope Grizzly Bear Research Project Newsletter Volume 5-Winter 2008: Yukon North Slope Grizzly Bear.
- Yukon Fish and Wildlife Branch Report, (2016). *Yukon North Slope grizzly bear population estimation and demographic analysis*. Yukon Fish and Wildlife Branch Report TR-16-01, Whitehorse, Yukon, Canada. 63 + vi pp.
- Yukon Grizzly Bear Conservation and Management Plan Working Group. (2019). *A conservation plan for grizzly bears (Ursus arctos) in Yukon.* Government of Yukon, Department of Environment. Whitehorse, Yukon.

- Yukon Grizzly Bear Conservation and Management Plan Working Group. (2019). *Developing a Conservation Plan for Grizzly Bears (Ursus arctos) in Yukon: Supporting Information*. Whitehorse, Yukon: Government of Yukon, Department of Environment.
- Yukon. (2020). Yukon Wildlife: Grizzly Bear. Retrieved April 20, 2020, from https://yukon.ca/en/grizzly-bear

References from Environment and Climate Change Canada Literature Review

Most of the following references do not apply to grizzly bears in the ISR directly but may provide information on the ecosystems they are within.

- Albrecht, J., Bartoń, K. A., Selva, N., Sommer, R. S., Swenson, J. E., & Bischof, R. (2017). Humans and climate change drove the Holocene decline of the brown bear. *Scientific Reports* 2017 7:1, 7(1), 1–11. https://doi.org/10.1038/s41598-017-10772-6
- Anderson, M., McLellan, B. N., & Serrouya, R. (2018). Moose response to high-elevation forestry: Implications for apparent competition with endangered caribou. *The Journal of Wildlife Management*, 82(2), 299–309. https://doi.org/10.1002/JWMG.21380
- Barber, Q. E., Parisien, M.-A. E., Whitman, E., Stralberg, D., Johnson, C. J., St-Laurent, M.-H., Delancey, E. R., Price, D. T., Arseneault, D., Wang, X., Flannigan, M. D., Barber, Q. E., Parisien, M.-A., Whitman, E., Stralberg, D., Johnson, C. J., St-Laurent, M.-H., Delancey, E. R., Price, D. T., ... Flannigan, M. D. (2018). *Potential impacts of climate change on the habitat of boreal woodland caribou*. https://doi.org/10.1002/ecs2.2472
- Barker, O. E., & Derocher, A. E. (2010). Habitat selection by arctic ground squirrels (Spermophilus parryii). *Journal of Mammalogy*, 91(5), 1251–1260. https://doi.org/10.1644/10-MAMM-A-030.1
- Barker, O. E., Derocher, A. E., & Edwards, M. A. (2015). Use of Arctic ground squirrels (*Urocitellus parryii*) by brown bears (*Ursus arctos*). *Polar Biology*, 38(3), 369–379. https://doi.org/10.1007/s00300-014-1593-8
- Barnas, A. F., Iles, D. T., Stechmann, T. J., Wampole, E. M., Koons, D. N., Rockwell, R. F., & Ellis-Felege, S. N. (2020). A phenological comparison of grizzly (*Ursus arctos*) and polar bears (*Ursus maritimus*) as waterfowl nest predators in Wapusk National Park. *Polar Biology*, 43(5), 457–465. https://doi.org/10.1007/s00300-020-02647-w
- Bauduin, S., McIntire, E., St-Laurent, M. H., & Cumming, S. G. (2018). Compensatory conservation measures for an endangered caribou population under climate change. *Scientific Reports*, 8(1), 1–10. https://doi.org/10.1038/s41598-018-34822-9
- Berman, E. E., Coops, N. C., Kearney, S. P., & Stenhouse, G. B. (2019). Grizzly bear response to fine spatial and temporal scale spring snow cover in Western Alberta. *PLoS ONE*, *14*(4), e0215243. https://doi.org/10.1371/journal.pone.0215243
- Berner, L., Janz, P., Tape, K., & Goetz, S. (2018). Tundra plant above-ground biomass and shrub dominance mapped across the North Slope of Alaska. *Environmental Research Letters*, *13*. https://iopscience.iop.org/article/10.1088/1748-9326/aaaa9a/pdf

- Berner, L. T., Massey, R., Jantz, P., Forbes, B. C., Macias-Fauria, M., Myers-Smith, I., Kumpula, T., Gauthier, G., Andreu-Hayles, L., Gaglioti, B. v., Burns, P., Zetterberg, P., D'Arrigo, R., & Goetz, S. J. (2020). Summer warming explains widespread but not uniform greening in the Arctic tundra biome. *Nature Communications*, *11*(1). https://doi.org/10.1038/S41467-020-18479-5
- Bilous, M., & Dunmall, K. (2020). Atlantic salmon in the Canadian Arctic: potential dispersal, establishment, and interaction with Arctic char. *Reviews in Fish Biology and Fisheries*, 30(3), 463–483. https://doi.org/10.1007/S11160-020-09610-2
- Bokhorst, S., Bjerke, J. W., Street, L. E., Callaghan, T. v., & Phoenix, G. K. (2011). Impacts of multiple extreme winter warming events on sub-Arctic heathland: phenology, reproduction, growth, and CO2 flux responses. *Global Change Biology*, *17*(9), 2817–2830. https://doi.org/10.1111/J.1365-2486.2011.02424.X
- Boucher, D., Gauthier, S., Thiffault, N., Marchand, W., Girardin, M., & Urli, M. (2020). How climate change might affect tree regeneration following fire at northern latitudes: a review. *New Forests*, *51*(4), 543–571. https://doi.org/10.1007/S11056-019-09745-6
- Bowerman, T., Keefer, M. L., & Caudill, C. C. (Pacific Salmon Prespawn Mortality: Patterns, Methods, and Study Design Considerations. *Fisheries*, *41*(12), 738–749. https://doi.org/10.1080/03632415.2016.1245993
- Boyce, M. S., Stenhouse, G. B. & Roever, C. L. (2008). Grizzly bears and forestry: II: Grizzly bear habitat selection and conflicts with road placement. *Forest Ecology and Management*. https://doi.org/10.1016/j.foreco.2008.06.006
- Brabets, T., Wang, B., & Meade, R. H. (2000). *Environmental and Hydrologic Overview of the Yukon River Basin, Alaska and Canada*. https://pubs.usgs.gov/wri/wri994204/#pdf
- Bush, E., & Lemmen, D. S. (2019). *Canada's Changing Climate Report*. https://publications.gc.ca/collections/collection_2019/eccc/En4-368-2019-eng.pdf
- Butler, D. R. (2012). The impact of climate change on patterns of zoogeomorphological influence: Examples from the Rocky Mountains of the Western U.S.A. *Geomorphology*, 157–158, 183–191. https://doi.org/10.1016/J.GEOMORPH.2011.10.019
- Cameron, E. A., & Lantz, T. C. (2016). Drivers of tall shrub proliferation adjacent to the Dempster Highway, Northwest Territories, Canada. *Environmental Research Letters*, *11*(4), 045006. https://doi.org/10.1088/1748-9326/11/4/045006
- Canada Gazette. (2017). Canada Gazette, Part II. 151(9). http://www.parl.gc.ca.
- Clark, D. A., Brook, R., Oliphant-Reskanski, C., Laforge, M. P., Olson, K., & Rivet, D. (2019). Novel range overlap of three ursids in the Canadian subarctic. *Arctic Science*, *5*(1), 62–70. https://doi.org/10.1139/as-2018-0013
- Coogan, S. C. P., Raubenheimer, D., Stenhouse, G. B., & Nielsen, S. E. (2014). Macronutrient Optimization and Seasonal Diet Mixing in a Large Omnivore, the Grizzly Bear: A Geometric Analysis. *PLOS ONE*, 9(5), e97968. https://doi.org/10.1371/JOURNAL.PONE.0097968

- COSEWIC. (2010). COSEWIC assessment and status report on the Dolly Varden Salvelinus malma malma (Western Arctic populations) in Canada.

 www.sararegistry.gc.ca/status/status e.cfm
- COSEWIC. (2012). COSEWIC assessment and status report on the Grizzly Bear Ursus arctos in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiv + 84 pp. (www.registrelepsararegistry.gc.ca/default e.cfm)
- COSEWIC. (2016). COSEWIC Assessment and Status Report on the Caribou Rangifer tarandus. http://www.registrelep-sararegistry.gc.ca/default.asp?lang=en&n=24F7211B-1
- Crossin, G. T., Hinch, S. G., Cooke, S. J., Welch, D. W., Patterson, D. A., Jones, S. R. M., Lotto, A. G., Leggatt, R. A., Mathes, M. T., Shrimpton, J. M., van der Kraak, G., & Farrell, A. P. (2008). Exposure to high temperature influences the behaviour, physiology, and survival of sockeye salmon during spawning migration. *Canadian Journal of Zoology*, 86(2), 127–140. https://doi.org/10.1139/Z07-122
- Cross, P. C., van Manen, F. T., Viana, M., Almberg, E. S., Bachen, D., Brandell, E. E., Haroldson, M. A., Hudson, P. J., Stahler, D. R., & Smith, D. W. (2018). Estimating distemper virus dynamics among wolves and grizzly bears using serology and Bayesian state-space models. *Ecology and Evolution*, *8*(17), 8726–8735. https://doi.org/10.1002/ece3.4396
- Danby, R. K., & Hik, D. S. (2007). Evidence of recent treeline dynamics in southwest Yukon from aerial photographs. *ARCTIC*, *60*(4), 411–420. https://doi.org/10.7939/R3QV3CF2G
- Deacy, W. W., Armstrong, J. B., Leacock, W. B., Robbins, C. T., Gustine, D. D., Ward, E. J., Erlenbach, J. A., & Stanford, J. A. (2017). Phenological synchronization disrupts trophic interactions between Kodiak brown bears and salmon. *Proceedings of the National Academy of Sciences of the United States of America*, 114(39), 10432–10437. https://doi.org/10.1073/PNAS.1705248114
- Derksen, C., Burgess, D., Duguay, C., Howell, S., Mudryk, L., Smith, S., Thackeray, C., & Kirchmeier-Young, M. (2019). *Changes in snow, ice, and permafrost across Canada; Chapter 5 in Canada's Changing Climate Report.*
- Doupe, J., England, J., Furze, M., & Paetkau, D. (2007). Most Northerly Observation of a Grizzly Bear (Ursus arctos) in Canada: Photographic and DNA Evidence from Melville Island, Northwest Territories . *Arctic*, 60(3). https://www.jstor.org/stable/40512895
- Dunmall, K., McNicholl, D., & Reist, J. (2018). Community-based Monitoring Demonstrates Increasing Occurrences and Abundances of Pacific Salmon in the Canadian Arctic from 2000 to 2017. North Pacific Anadromous Fish Commission. Technical Report, 11. https://doi.org/10.23849/NPAFCTR11/87.90
- Dunmall, K. M., Reist, J. D., Carmack, E. C., Babaluk, J. A., Heide-Jørgensen, M. P., & Docker, M. F. (2013). Pacific Salmon in the Arctic: Harbingers of Change. *Alaska Sea Grant*. https://doi.org/10.4027/ramecc.2013.07
- Fisher, J. T., Wheatley, M., & Mackenzie, D. (2014). Spatial patterns of breeding success of grizzly bears derived from hierarchical multistate models. *Conservation Biology*, 28(5), 1249–1259. https://doi.org/10.1111/cobi.12302

- Fisher, J. T., & Wilkinson, L. (2005). The response of mammals to forest fire and timber harvest in the North American boreal forest. *Mammal Review*, *35*(1), 51–81.
- Furgal, C. M., & Prowse, T. D. (2008). *Northern Canada;* in From Impacts to Adaptation. https://www.researchgate.net/publication/285017588_Northern_Canada_in_From_Impacts_to_Adaptation
- Gau, R. J., Case, R., Penner, D. F., & McLoughlin, P. D. (2002). Feeding patterns of barrenground grizzly bears in the central Canadian Arctic. *Arctic*, *55*(4), 339–344. https://doi.org/10.14430/ARCTIC717
- Government of Nunavut, 2017. Nunavut Grizzly Bear Co-Management Plan. In consultation with Nunavut Communities, Hunters and Trappers Organizations, Kitikmeot Regional Wildlife Board and Kivalliq Wildlife Board.
- Graves, T. A., Kendall, K. C., Royle, J. A., Stetz, J. B., & Macleod, A. C. (2011). Linking landscape characteristics to local grizzly bear abundance using multiple detection methods in a hierarchical model. *Animal Conservation*, *14*(6), 652–664. https://doi.org/10.1111/j.1469-1795.2011.00471.x
- Harding, R., Kuhry, P., Christensen, T., Sykes, M., Dankers, R., & van der Linden, S. (2002). Climate feedbacks at the tundra-taiga interface. *Ambio*, *12*, 47–55. https://pubmed.ncbi.nlm.nih.gov/12374059/
- Harwood, L. A., Sandstrom, S., & Linn, E. (2009). Status of anadromous Dolly Varden (Salvelinus malma) of the Rat River, Northwest Territories, as assessed through sampling of the subsistence fishery (1995-2007).
- Henry, G. H. R., Harper, K. A., Chen, W., Deslippe, J. R., Grant, R. F., Lafleur, P. M., Lévesque, E., Siciliano, S. D., Simard, S. W., Henry, G. H. R., Harper, K. A., Chen, W., Deslippe, J. R., Simard, S. W., & Grant, R. F. (2012). Effects of observed and experimental climate change on terrestrial ecosystems in northern Canada: results from the Canadian IPY program. *Climactic Change*, 115(1). https://doi.org/10.1007/s10584-012-0587-1
- Hertel, A. G., Bischof, R., Langval, O., Mysterud, A., Kindberg, J., Swenson, J. E., & Zedrosser, A. (2018). Berry production drives bottom—up effects on body mass and reproductive success in an omnivore. *Oikos*, *127*(2), 197–207. https://doi.org/10.1111/OIK.04515
- Hilderbrand, Schwartz, Robbins, Jacoby, Hanley, Arthur, and Servheen. 1999. The importance of meat, particularly salmon, to body size, population productivity, and conservation of North American brown bears. Canadian Journal of Zoology. 77(1): 132-138. https://doi.org/10.1139/z98-195
- Hilderbrand, Grant & Gustine, D. & Mangipane, B. & Joly, Kyle & Leacock, William & Mangipane, L. & Erlenbach, Joy & Sorum, M. & Cameron, M. & Belant, Jerry & Cambier, T.. (2018). Body size and lean mass of brown bears across and within four diverse ecosystems. Journal of Zoology. 305. 10.1111/jzo.12536.
- Hilderbrand, G. v, Joly, K., Sorum, M. S., Cameron, M. D., & Gustine, D. D. (2019). Brown bear (Ursus arctos) body size, condition, and productivity in the Arctic, 1977-2016. *Polar Biology*, 42, 1125–1130. https://doi.org/10.1007/s00300-019-02501-8

- Hinch, S. G., Cooke, S. J., Farrell, A. P., Miller, K. M., Lapointe, M., & Patterson, D. A. (2012). Dead fish swimming: a review of research on the early migration and high premature mortality in adult Fraser River sockeye salmon Oncorhynchus nerka. *Journal of Fish Biology*, *81*(2), 576–599. https://doi.org/10.1111/J.1095-8649.2012.03360.X
- Hoar, B. M., Ruckstuhl, K., & Kutz, S. (2012). Development and availability of the free-living stages of Ostertagia gruehneri, an abomasal parasite of barrenground caribou (Rangifer tarandus groenlandicus), on the Canadian tundra. *Parasitology*, *139*(8), 1093–1100. https://doi.org/10.1017/S003118201200042X
- Hobson, K. (2011). Fast carnivores and slow herbivores: differential foraging strategies among grizzly bears in the Canadian Arctic. *Oecologia*. https://doi.org/10.1007/s00442-010-1869-9
- Honda, T., & Kozakai, C. (2020). Mechanisms of human-black bear conflicts in Japan: In preparation for climate change. *Science of The Total Environment*, 739, 140028. https://doi.org/10.1016/J.SCITOTENV.2020.140028
- Hudson, J. M. G., & Henry, G. H. R. (2009). Increased plant biomass in a High Arctic heath community from 1981 to 2008. *Ecology*, 90(10), 2657–2663. www.climate.weatheroffice.ec.gc.cai
- Hueffer, K., Parkinson, A. J., Gerlach, R., & Berner, J. (2013). International Journal of Circumpolar Health Zoonotic infections in Alaska: disease prevalence, potential impact of climate change and recommended actions for earlier disease detection, research, prevention and control. *Circumpolar Health*, 72(1). https://doi.org/10.3402/ijch.v72i0.19562
- Hu, F. S., Higuera, P. E., Duffy, P., Chipman, M. L., Rocha, A. v, Young, A. M., Kelly, R., & Dietze, M. C. (2015). Arctic tundra fires: natural variability and responses to climate change. Frontiers in Ecology and the Environment, 13(7), 369–377. https://doi.org/10.1890/150063
- Humphries, M. M., Thomas, D. W., & Speakman, J. R. (2002). Climate-mediated energetic constraints on the distribution of hibernating mammals. *Nature*, *418*(6895), 313–316. https://doi.org/10.1038/nature00828
- Inouye, D. W., Barr, B., Armitage, K. B., & Inouye, B. D. (2000). Climate change is affecting altitudinal migrants and hibernating species. *Proceedings of the National Academy of Sciences of the United States of America*, 97(4), 1630. https://doi.org/10.1073/PNAS.97.4.1630
- IPCC. (2014). Climate Change 2014: Synthesis Report. . In *Kristin Seyboth (USA)*. Gian-Kasper Plattner. http://www.ipcc.ch.
- Jenkins, D. A., Lecomte, N., Schaefer, J. A., Olsen, S. M., Swingedouw, D., Côté, S. D., Pellissier, L., & Yannic, G. (2016). Loss of connectivity among island-dwelling Peary caribou following sea ice decline. *Biology Letters*, *12*(9), 3–7. https://doi.org/10.1098/rsbl.2016.0235
- JTC. (2021). Yukon River salmon 2020 season summary and 2021 season outlook. https://www.adfg.alaska.gov/FedAidPDFs/RIR.3A.2021.01.pdf

- Keefer, M. L., Peery, C. A., & Heinrich, M. J. (2008). Temperature-mediated en route migration mortality and travel rates of endangered Snake River sockeye salmon. *Ecology of Freshwater Fish*, 17(1), 136–145. https://doi.org/10.1111/J.1600-0633.2007.00267.X
- Kitagawa, R., Masumoto, S., Nishizawa, K., Kaneko, R., Osono, T., Hasegawa, M., Uchida, M., & Mori, A. S. (2020). Positive interaction facilitates landscape homogenization by shrub expansion in the forest–tundra ecotone. *Journal of Vegetation Science*, *31*(2), 234–244. https://doi.org/10.1111/jvs.12818
- Korosi, J. B., Thienpont, J. R., Pisaric, M. F. J., Demontigny, P., Perreault, J. T., McDonald, J., Simpson, M. J., Armstrong, T., Kokelj, S. V., Smol, J. P., & Blais, J. M. (2017). Broad-scale lake expansion and flooding inundates essential wood bison habitat. *Nature Communications*, 8, 14510. https://doi.org/10.1038/ncomms14510
- Krebs, C. J., Boonstra, R., Cowcill, K., & Kenney, A. J. (2009). Climatic determinants of berry crops in the boreal forest of the southwestern Yukon. *Botany*, 87(4), 401–408. https://doi.org/10.1139/B09-013
- Kutz, S. J., Hoberg, E. P., Nagy, J., Polley, L., & Elkin, B. (2004). "Emerging" Parasitic Infections in Arctic Ungulates. *Integrative and Comparative Biology*, *44*(2), 109–118. https://doi.org/10.1093/ICB/44.2.109
- Kutz, S. J., Hoberg, E. P., Polley, L., & Jenkins, E. J. (2005). Global warming is changing the dynamics of Arctic host-parasite systems. *Proceedings of the Royal Society B: Biological Sciences*, 272(1581), 2571–2576. https://doi.org/10.1098/RSPB.2005.3285
- Lane, J. E., Kruuk, L. E. B., Charmantier, A., Murie, J. O., & Dobson, F. S. (2012). Delayed phenology and reduced fitness associated with climate change in a wild hibernator. *Nature*, 489(7417), 554–557. https://doi.org/10.1038/NATURE11335
- Larsen, J. N., Anisimov, O. A., Constable, A., Hollowed, A. B., Maynard, N., Prestrud, P., Prowse, T. D., & Stone, J. M. R. (2014). Polar Regions. In C. B. Field, V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, M. Bilir, T.E. Chatterjee, Y. O. Ebi, K.L.Estrada, R. C. Genova, B. Girma, E. B. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea, & White. L.L. (Eds.), Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (pp. 1567–1612).
- Latham, A. D. M., Latham, M. C., Boyce, M. S., & Boutin, S. (2011). Movement responses by wolves to industrial linear features and their effect on woodland caribou in northeastern Alberta. *Ecological Applications*, 21(8), 2854–2865. https://doi.org/10.1890/11-0666.1
- Lyons, A. L., Gaines, W. L., Singleton, P. H., Kasworm, W. F., Proctor, M. F., & Begley, J. (2018). Spatially explicit carrying capacity estimates to inform species specific recovery objectives: Grizzly bear (*Ursus arctos*) recovery in the North Cascades. *Biological Conservation*, 222, 21–32. https://doi.org/10.1016/j.biocon.2018.03.027
- Machutchon, G. A., & Wellwood, D. W. (2003). Grizzly bear food habits in the northern Yukon, Canada. *Ursus*, *14*(2).

- Mackenzie River Basin Board. (2004). Mackenzie River basin state of the aquatic ecosystem Report. In *Geophysical Research Letters* (Vol. 31, Issue 9). https://doi.org/10.1029/2004GL019492
- Marcogliese, D. J. (2008). The impact of climate change on the parasites and infectious diseases of aquatic animals. *OIE Revue Scientifique et Technique*, 27(2), 467–484. https://doi.org/10.20506/RST.27.2.1820
- Mattson, D. J. (2001). Myrmecophagy by Yellowstone grizzly bears. *Canadian Journal of Zoology*, 79(5), 779–793. https://doi.org/10.1139/CJZ-79-5-779
- McCullough, D. A., Bartholow, J. M., Jager, H. I., Beschta, R. L., Cheslak, E. F., Deas, M. L., Ebersole, J. L., Foott, J. S., Johnson, S. L., Marine, K. R., Mesa, M. G., Petersen, J. H., Souchon, Y., Tiffan, K. F., & Wurtsbaugh, W. A. (2009). Research in Thermal Biology: Burning Questions for Coldwater Stream Fishes. *Reviews in Fisheries Sciences*, *17*(1), 90–115. https://doi.org/10.1080/10641260802590152
- McLoughlin, P., Taylor, M., Cluff, H., Case, R., & Messier, F. (2003). View of Population Viability of Barren-ground Grizzly Bears in Nunavut and the Northwest Territories. *Arctic*, *56*(2), 185–190. https://journalhosting.ucalgary.ca/index.php/arctic/article/view/63673/47609
- Michel, F. A., & van Everdingen, R. O. (1994). Changes in hydrogeologic regimes in permafrost regions due to climatic change. *Permafrost and Periglacial Processes*, *5*(3), 191–195. https://doi.org/10.1002/PPP.3430050308
- Miller, S., Wilder, J., & Wilson, R. R. (2015). Polar bear–grizzly bear interactions during the autumn open-water period in Alaska. *Journal of Mammalogy*, 96(6), 1317–1325. https://doi.org/10.1093/JMAMMAL/GYV140
- Milligan. (2018). Licensed harvest trends in Yukon: 1980 to 2014. https://yukon.ca/sites/yukon.ca/files/env/env-licensed-harvest-trends-yukon.pdf
- Mowat, G., & Heard, D. C. (2006). Major components of grizzly bear diet across North America. *Canadian Journal of Zoology*, *84*(3), 473–489. https://doi.org/10.1139/Z06-016
- Mudryk, L., Santolaria-Otín, M., Krinner, G., Ménégoz, M., Derksen, C., Brutel-Vuilmet, C., Brady, M., & Essery, R. (2020). Historical Northern Hemisphere snow cover trends and projected changes in the CMIP6 multi-model ensemble. *Cryosphere*, *14*(7), 2495–2514. https://doi.org/10.5194/TC-14-2495-2020
- Mumma, M. A., Gillingham, M. P., Parker, K. L., Johnson, C. J., & Watters, M. (2018). Predation risk for boreal woodland caribou in human-modified landscapes: Evidence of wolf spatial responses independent of apparent competition. *Biological Conservation*, 228, 215–223. https://doi.org/10.1016/j.biocon.2018.09.015
- Nasi, R., Dennis, R., Meijaard, E., Applegate, G., & Moore, P. (2002). Forest fire and biological diversity. *Unasylva*, *209*.
- Nelson, J. L., Zavaleta, E. S., Stuart, F., & Iii, C. (2008). Boreal Fire Effects on Subsistence Resources in Alaska and Adjacent Canada. https://doi.org/10.1007/s10021-007-9114-z

- Nielsen, S. E., Cattet, M. R. L., Boulanger, J., Cranston, J., McDermid, G. J., Shafer, A. B. A., & Stenhouse, G. B. (2013). Environmental, biological and anthropogenic effects on grizzly bear body size: Temporal and spatial considerations. *BMC Ecology*, *13*(1), 1–13. https://doi.org/10.1186/1472-6785-13-31/FIGURES/3
- Nielsen, S. E., Stenhouse, G. B., & Boyce, M. S. (2006). A habitat-based framework for grizzly bear conservation in Alberta. *Biological Conservation*. https://doi.org/10.1016/j.biocon.2005.12.016
- Parmesan, C., & Yohe, G. (2003). A globally coherent fingerprint of climate change impacts across natural systems. *Nature*, 421, 37–42. https://doi.org/10.1038/nature01286
- Payette, S., Fortin, M. J., & Gamache, I. (2001). Subarctic Forest–Tundra: The Structure of a Biome in a Changing Climate . *BioScience*, *51*(9). https://academic.oup.com/bioscience/article/51/9/709/288238?login=true
- Pearson, R. G., Phillips, S. J., Loranty, M. M., Beck, P. S. A., Damoulas, T., Knight, S. J., & Goetz, S. J. (2013). Shifts in Arctic vegetation and associated feedbacks under climate change. *Nature Climate Change*, 3. https://doi.org/10.1038/NCLIMATE1858
- Pengelly, I., & Hamer, D. (2006). Grizzly bear use of pink hedysarum roots following shrubland fire in Banff National Park, Alberta. *Ursus*, *17*(2).
- Peters, W., Hebblewhite, M., Decesare, N., Cagnacci, F., Musiani, M., & Peters, W. (2012). Resource separation analysis with moose indicates threats to caribou in human altered landscapes. *Ecography*.
- Pickles, R. S. A., Thornton, D., Feldman, R., Marques, A., & Murray, D. L. (2013). Predicting shifts in parasite distribution with climate change: a multitrophic level approach. *Global Change Biology*, 19. https://doi.org/10.1111/gcb.12255
- Pigeon, K. E., Cardinal, E., Gordon, ·, Stenhouse, B., Steeve, ·, & Côté, D. (2016). Staying cool in a changing landscape: the influence of maximum daily ambient temperature on grizzly bear habitat selection. *Oecologia*, *1*, 1101–1116. https://doi.org/10.1007/s00442-016-3630-5
- Pigeon, K. E., Stenhouse, G., & Côté, S. D. (2016). Drivers of hibernation: linking food and weather to denning behaviour of grizzly bears. *Behavioral Ecology and Sociobiology*, 70. https://doi.org/10.1007/s00265-016-2180-5
- Plessis, K. L. du, Martin, R. O., Hockey, P. A. R., Cunningham, S. J., & Ridley, A. R. (2012). The costs of keeping cool in a warming world: implications of high temperatures for foraging, thermoregulation and body condition of an arid-zone bird. *Global Change Biology*, 18(10), 3063–3070. https://doi.org/10.1111/J.1365-2486.2012.02778.X
- Pongracz, J. D., Paetkau, D., Branigan, M., & Richardson, E. (2017). Recent Hybridization between a Polar Bear and Grizzly Bears in the Canadian Arctic. *Arctic*, 70(2), 151–160.

- Price, D. T., Alfaro, R. I., Brown, K. J., Flannigan, M. D., Fleming, R. A., Hogg, E. H., Girardin, M. P., Lakusta, T., Johnston, M., McKenney, D. W., Pedlar, J. H., Stratton, T., Sturrock, R. N., Thompson, I. D., Trofymow, J. A., & Venier, L. A. (2013). Anticipating the consequences of climate change for Canada's boreal forest ecosystems. *Environmental Reviews*, 21(4), 322–365. https://doi.org/10.1139/er-2013-0042
- Proctor, M. F., McLellan, B. N., Stenhouse, G. B., Mowat, G., Lamb, C. T., & Boyce, M. S. (2020). Effects of roads and motorized human access on grizzly bear populations in British Columbia and Alberta, Canada. *Ursus*, 2019(30e2), 16–39. https://doi.org/10.2192/URSUS-D-18-00016.2
- Prowse, T. D., Furgal, C., Chouinard, R., Melling, H., Milburn, D., & Smith, S. L. (2009). Implications of Climate Change for Economic Development in Northern Canada: Energy, Resource, and Transportation Sectors. *Ambio*, *38*(5). https://doi.org/10.1579/0044-7447-38.5.272
- Ransom, J. I., Krosby, M., & Lyons, A. L. (2018). Climate Change Implications for Grizzly Bears (*Ursus arctos*) in the North Cascades Ecosystem. In *Natural Resource Report NPS/NOCA/NRR*.
- Reist, J., Wrona, F., Prowse, T., Power, M., Dempson, B., Beamish, R., King, J., Carmichael, T., & Sawatzky, C. (2006). General effects of climate change on Arctic fishes and fish populations PubMed. *Ambio*, *35*(7), 370–380. https://pubmed.ncbi.nlm.nih.gov/17256641/
- Rempel, R., & Rempel, R. S. (2011). Effects of climate change on moose populations: a vulnerability analysis for the Clay Belt Ecodistrict (3E-1) in Effects of climate change on moose populations: Exploring the response horizon through biometric and systems models. *Ecological Modelling*, 222, 3355–3365. https://doi.org/10.1016/j.ecolmodel.2011.07.012
- Ripple, W. J., Beschta, R. L., Fortin, J. K., & Robbins, C. T. (2013). *Trophic cascades from wolves to grizzly bears in Yellowstone*. https://doi.org/10.1111/1365-2656.12123
- Robbins, C. T., Woodford, N. L., Goolsby Clyde, G., Minor, C., Nelson, O. L., Brewer, M. M., Khalife, P. H., & Hawley, J. R. (2018). Salmon poisoning disease in grizzly bears with population recovery implications. *The Journal of Wildlife Management*, 82(7), 1396–1402. https://doi.org/10.1002/JWMG.21502
- Roberts, D. R., Nielsen, S. E., & Stenhouse, G. B. (2014). Idiosyncratic responses of grizzly bear habitat to climate change based on projected food resource changes. *Ecological Applications: A Publication of the Ecological Society of America*, 24(5), 1144–1154. https://doi.org/10.1890/13-0829.1
- Rockwell, R., Gormezano, L., & Hedman, D. (2008). Grizzly Bears, *Ursus arctos*, in Wapusk National Park, Northeastern Manitoba. *Canadian Field-Naturalist*, 122(4), 323–326. https://doi.org/10.22621/cfn.v122i4.639
- Rodríguez, C., Naves, J., Fernández-Gil, A., Obeso, J. R., & Delibes, M. (2007). Long-term trends in food habits of a relict brown bear population in northern Spain: The influence of climate and local factors. *Environmental Conservation*, *34*(1), 36–44. https://doi.org/10.1017/S0376892906003535

- Romero-Lankao, P., Smith, J. B., Davidson, D. J., Diffenbaugh, N. S., Kinney, P. L., Kirshen, P., Kovacs, P., & Villers Ruiz, L. (2014). North America. In C. B. Field, V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, M. Bilir, T.E. Chatterjee, Y. O. Ebi, K.L.Estrada, R. C. Genova, B. Girma, E. B. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea, & White. L.L. (Eds.), Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (pp. 1439–1498).
- Rupp, T. S., Olson, M., Adams, L. G., Dale, B. W., Joly, K., Henkelman, J., Collins, W. B., & Starfield, A. M. (2006). Simulating the influences of various fire regimes on caribou winter habitat. *Ecological Applications*, 16(5), 1730–1743. https://doi.org/10.1890/1051-0761(2006)016[1730:STIOVF]2.0.CO;2
- Sawatzky, C., & Reist, J. (2021). *Life History Types and Stages of Northern Form Dolly Varden, Salvelinus malma malma (Walbaum, 1792)*. https://publications.gc.ca/collections/collection_2021/mpo-dfo/Fs97-4-3215-eng.pdf
- Schwartz, C. C., Haroldson, M. A., & White, G. C. (2010). Hazards Affecting Grizzly Bear Survival in the Greater Yellowstone Ecosystem. *The Journal of Wildlife Management*, 74(4), 654–667. https://doi.org/10.2193/2009-206
- Simberloff, D. (1996). Hybridization between native and introduced wildlife species: importance for conservation. *Wildlife Biology*, *2*(3).
- Singer, C., & Lee, C. (2021). *NWT Climate Change Vulnerability Assessment Species at Risk*. https://www.enr.gov.nt.ca/sites/enr/files/resources/297_manuscript.pdf
- Skre, O., Baxter, R., Crawford, R., & Callaghan, T. v. (2002). How will tundra-taiga interface respond to climate change? . *Royal Swedish Academy of Science*, 12. https://www.researchgate.net/publication/11086059
- Slough, B. G., & Jung, T. S. (2020). Little brown bats utilize multiple maternity roosts within foraging areas: Implications for identifying summer habitat. *Journal of Fish and Wildlife Management*, 11(1), 311–320. https://doi.org/10.3996/052019-JFWM-039
- Smith, S. L., & Burgess, M. M. (2004). Sensitivity of permafrost to climate warming in Canada | Request PDF. *Bulletin of the Geological Survey of Canada*, *579*. https://www.researchgate.net/publication/301960248 Sensitivity of permafrost to climate warming in Canada
- Souliere, C. M., Coogan, S. C. P., Stenhouse, G. B., & Nielsen, S. E. (2020). Harvested forests as a surrogate to wildfires in relation to grizzly bear food-supply in west-central Alberta. Forest Ecology and Management, 456, 117685. https://doi.org/10.1016/J.FORECO.2019.117685
- Species at Risk Committee. (2017). Species Status Report for Grizzly Bear (Ursus arctos) in the Northwest Territories. https://www.nwtspeciesatrisk.ca/sites/enr-species-at-risk/files/grizzly bear status report and assessment final apr617.pdf

- Stenset, N. E., Lutnæs, P. N., Bjarnadóttir, V., Dahle, B., Fossum, K. H., Jigsved, P., Johansen, T., Neumann, W., Opseth, O., Rønning, O., Steyaert, S. M. J. G., Zedrosser, A., Brunberg, S., & Swenson, J. E. (2016). Seasonal and annual variation in the diet of brown bears Ursus arctos in the boreal forest of south-central Sweden. *Wildlife Biology*, 22(3), 107–116. https://doi.org/10.2981/WLB.00194
- Stephenson, S. A. (2003). Local and Scientific Observations of Dolly Varden (Salvelinus malma) (W.) in the Big Fish River, Northwest Territories, Canada: 1995-2002 Canadian Manuscript Report of Fisheries and Aquatic Sciences 2644.

 https://www.researchgate.net/publication/266475914 Local and Scientific Observations of Dolly Varden Salvelinus malma W in the Big Fish River Northwest Territories Ca nada 1995
 2002 Canadian Manuscript Report of Fisheries and Aquatic Sciences 2644
- Stern, H. L., & Laidre, K. L. (2016). Sea-ice indicators of polar bear habitat. *Cryosphere*, *10*(5), 2027–2041. https://doi.org/10.5194/tc-10-2027-2016
- Strange, J. S. (2011). Upper Thermal Limits to Migration in Adult Chinook Salmon: Evidence from the Klamath River Basin. *Transactions of the American Fisheries Society*, 139(4), 1091–1108. https://doi.org/10.1577/T09-171.1
- Suzuki, N., & Parker, K. L. (2019). Proactive conservation of high-value habitat for woodland caribou and grizzly bears in the boreal zone of British Columbia, Canada. *Biological Conservation*, 230, 91–103. https://doi.org/10.1016/J.BIOCON.2018.12.013
- Swanson, D. K., Epstein, H. E., Raynolds, M. K., Li, X., & Thenkabail, P. S. (2017). Trends in Greenness and Snow Cover in Alaska's Arctic National Parks, 2000–2016. *Remote Sensing 2017*, Vol. 9, Page 514, 9(6), 514. https://doi.org/10.3390/RS9060514
- Tammeleht, E., Kull, A., & Pärna, K. (2020). Assessing the importance of protected areas in human-dominated lowland for brown bear (*Ursus arctos*) winter denning. *Mammal Research*, 65, 105–115. https://doi.org/10.1007/s13364-019-00447-0
- Tape, K. D., Gustine, D. D., Ruess, R. W., Adams, L. G., & Clark, J. A. (2016). Range Expansion of Moose in Arctic Alaska Linked to Warming and Increased Shrub Habitat. *PLOS ONE*, *11*(4), e0152636. https://doi.org/10.1371/JOURNAL.PONE.0152636
- Thomas, D. C., Barry, S. J., & Alaie, G. (1996). Fire caribou winter range relationships in northern Canada. *Rangifer*, *16*(2), 57–67. https://doi.org/10.7557/2.16.2.1198
- Throop, J., Lewkowicz, A. G., & Smith, S. L. (2012). Climate and ground temperature relations at sites across the continuous and discontinuous permafrost zones, northern Canada 1,2. *Canadian Journal of Earth Science*, 49, 865–876. https://doi.org/10.1139/E11-075
- Timmermann, H. R., & Rodgers, A. R. (2017). The Status And Management Of Moose In North America Circa 2015. *Alces: A Journal Devoted to the Biology and Management of Moose*, 53, 1–22. https://www.alcesjournal.org/index.php/alces/article/view/177
- Timoney, K. P., la Roi, G. H., Zoltai, S. C., & Robinson, A. L. (1992). The High Subarctic Forest-Tundra of Northwestern Canada: Position, Width, and Vegetation Gradients in Relation to Climate. *ARCTIC*, *45*(1), 1–9. https://doi.org/10.14430/ARCTIC1367

- Todd Mathes, M., Hinch, S. G., Cooke, S. J., Crossin, G. T., Patterson, D. A., Lotto, A. G., & Farrell, A. P. (2009). Effect of water temperature, timing, physiological condition, and lake thermal refugia on migrating adult Weaver Creek sockeye salmon (Oncorhynchus nerka). *Canadian Journal of Fisheries and Aquatic Sciences*, 67(1), 70–84. https://doi.org/10.1139/F09-158
- Travers-Smith, H. Z., & Lantz, T. C. (2020). Leading-edge disequilibrium in alder and spruce populations across the forest–tundra ecotone. *Ecosphere*, *11*(7), e03118. https://doi.org/10.1002/ECS2.3118
- von Biela, V. R., Bowen, L., Mccormick, S. D., Carey, M. P., Donnelly, D. S., Waters, S., Regish, A. M., Laske, S. M., Brown, R. J., Larson, S., Zuray, S., & Zimmerman, C. E. (2020). Evidence of prevalent heat stress in Yukon River Chinook salmon. *Canadian Journal of Fisheries and Aquatic Science*, 77, 1878–1892. https://doi.org/10.1139/cjfas-2020-0209
- Vors, L. S., & Boyce, M. S. (2009). Global declines of caribou and reindeer. *Global Change Biology*, *15*(11), 2626–2633. https://doi.org/10.1111/J.1365-2486.2009.01974.X
- Wagner, G. N., Hinch, S. G., Kuchel, L. J., Lotto, A., Jones, S. R. M., Patterson, D. A., Macdonald, U. S., van der Kraak, G., Shrimpton, M., English, K. K., Larsson, S., Cooke, S. J., Healey, M. C., & Farrell, A. P. (2011). Metabolic rates and swimming performance of adult Fraser River sockeye salmon (Oncorhynchus nerka) after a controlled infection with Parvicapsula minibicornis. *Journal of Fisheries and Aquatic Sciences*, 62(9), 2124–2133. https://doi.org/10.1139/F05-126
- Wang, X., Thompson, D. K., Marshall, G. A., Tymstra, C., Carr, R. J., & Flannigan, M. D. (2015). Increasing frequency of extreme fire weather in Canada with climate change. *Climatic Change*, *130*(4), 573–586. https://doi.org/10.1007/S10584-015-1375-5
- Weber, M. G., & Flannigan, M. D. (1997). Canadian boreal forest ecosystem structure and function in a changing climate: impact on fire regimes. *Environ. Rev*, *5*, 145–166.
- Wheeler, H. C., & Hik, D. S. (2013). Arctic ground squirrels Urocitellus parryii as drivers and indicators of change in northern ecosystems. *Mammal Review*, *43*(3), 238–255. https://doi.org/10.1111/J.1365-2907.2012.00220.X