

NWT Environmental

Research Bulletin (NERB)



NWT Cumulative Impact Monitoring Program (NWT CIMP)

A source of environmental monitoring and research in the NWT. The program coordinates, conducts and funds the collection, analysis and reporting of information related to environmental conditions in the NWT.

NWT Environmental Research Bulletin (NERB)

A series of brief plain language summaries of various environmental research findings in the Northwest Territories. If you're conducting environmental research in the NWT, consider sharing your information with northern residents in a bulletin. These research summaries are also of use to northern resource decision-makers.

Traditional Knowledge and Cumulative Impact Assessment of Boreal Caribou

Boreal caribou are a culturally important species for Indigenous peoples in the NWT, including Acho Dene Koe First Nation (ADKFN) members. Boreal caribou are listed as a threatened species under federal and territorial species-at-risk legislation due to their small population size and an expected decline in the amount of their secure habitat. Changes to habitat can be caused by human disturbances, such as industrial development, as well as natural disturbances, like wildfires. This project collected traditional knowledge (TK) about boreal caribou and their habitat that can be used by decision-makers, resource managers, and Indigenous governments and organizations.

Why is this research important?

Boreal caribou play an important role in northern ecosystems, and have a high cultural value to ADKFN and other Indigenous peoples in the NWT. Understanding the status of boreal caribou and their habitat through science and TK is important for species management.



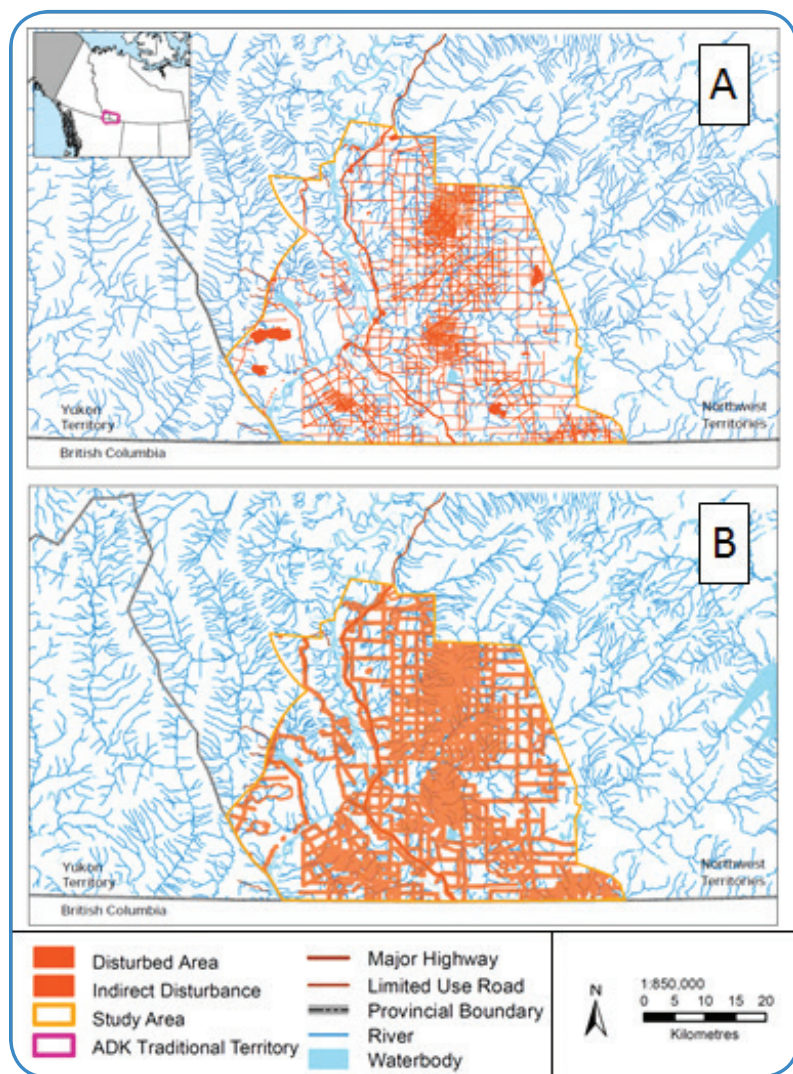
What did we do?

ADKFN conducted interviews with nine of their knowledge holders focusing on TK related to boreal caribou. Caribou movements, behaviours and habitats in ADKFN territory were discussed. Available geospatial datasets of environmental and human development were compiled.

What did we find?

- Interviewees confirmed boreal caribou in their traditional territory; 27 caribou habitat areas, two migration routes and 13 caribou food source areas were identified. Traditional use of caribou was also demonstrated through 33 identified hunting areas, 16 transportation routes, eight habitation/gathering sites and six historic and named places.

- The majority of traditional use sites identified are located in the southeast portion of ADKFN territory, which is an area of historic oil and gas exploration.
- Linear features (like seismic lines and roads) are present in the area. ADKFN members have observed wolves using these lines for hunting caribou.
- Despite these disturbances, interviewees indicated healthy caribou populations exist within their traditional territory.



Direct (A) and indirect (B) disturbance within the study area. (Adapted from: *Landmark Resource Management Ltd. and Acho Dene Koe First Nation. 2018. Acho Dene Koe First Nation Boreal Caribou Traditional Knowledge and Cumulative Impacts Qualitative Assessment, Non-Confidential Final Report. Submitted to NWT CIMP in October 2018.*)

What does this mean?

The study found the level of indirect disturbance (45%) in the study area is comparable to the disturbance threshold (40%) used in the Boreal Caribou Range Planning Framework (2019) for the southern NWT.

What's next?

Northern decision-makers can use this information for future development decisions in the southern NWT. The TK from this project will be used to inform planning in this region during the upcoming boreal range planning process.

What does *direct* and *indirect* disturbance mean?

Direct disturbance refers to land that has been directly changed by human-caused or natural processes (such as cleared pipeline right-of-ways or burned wildfire areas).

Indirect disturbance refers to lands that have not been directly disturbed, but still represent less-than-ideal caribou habitat because of their location near to direct disturbances.

Recommended Reading:

Dyer, S.J., O'Neill, J.P., Wasel, S.M., and Boutin, S. 2001. Avoidance of Industrial Development by Woodland Caribou. *Journal of Wildlife Management*. 65:531-542, DOI 10.2307/3803106.

Government of the Northwest Territories. 2019. A Framework for Boreal Caribou Range Planning. Environment and Natural Resources, Government of the Northwest Territories, Yellowknife, NT. 23 + vi pp.

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