

Elder's stories of Jean Marie River First Nation: Using Traditional Knowledge to better understand the changes in the boreal caribou habitat

Jean Marie River First Nation (JMRFN), NWT, has been working on climate change related projects since 2010. Climate change is greatly impacting JMRFN's land and their way of life, including food security, and it is important for them to better understand the evolution of their environment and the impacts it has on the community.

This project focuses on the wildlife research chapter which is part of the research plan developed in partnership with the Yukon Research Centre and studies the impact of forest fire and permafrost thaw on the boreal caribou habitat.

Project Overview

Our project aims to demonstrate the cumulative impact of permafrost degradation and forest fire on boreal caribou habitat and how caribou habitat degradation affects the community.

To do this we used a holistic approach integrating Traditional and scientific Knowledge with a larger emphasis on Traditional Knowledge (TK). We collected Traditional Knowledge in one-on-one interviews and scientific knowledge from existing datasets. We analysed the content of the interviews and conducted a spatial analysis that allowed us to identify areas where the quality of boreal caribou habitat has changed.

Our results show that the quality of boreal caribou habitat has decreased in 35% of the areas, remained stable in 64% of the areas and increased in 1% in the areas. Our evaluation of the impact of forest fire and permafrost degradation showed that the latter has a particularly high impact on boreal caribou habitat with 88% of boreal caribou areas affected. Forest fire still has a significant impact with 29% of boreal caribou areas affected.

The cumulative impact of these two factors reveals that the boreal caribou habitat in the Jean Marie River (JMR) area is in a medium state of health and is degrading. This means that boreal caribou could move away from JMRFN's traditional territory and that the herds traveling through it are becoming smaller. For the community, it

translates as increasing difficulty to access caribou meat, which impacts diet and wellness of community members, and also reduces opportunities to practice traditional activities.

Project Team

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