

Costing adaptation for community housing

The Northern Climate ExChange, Memorial University and International Institute for Sustainable Development are studying the impacts of permafrost thaw on housing and community infrastructure in Arviat, Nunavut and Old Crow, Yukon

Project Overview

Permafrost thaw threatens community infrastructure and is already affecting buildings and houses across the north. The Northern Climate ExChange, Memorial University and International Institute for Sustainable Development are studying the impacts of permafrost thaw on housing and community infrastructure in Arviat, Nunavut and Old Crow, Yukon. We are conducting an economic analysis to reveal the financial costs and benefits of infrastructure adaptation choices in communities.

Our research aims to more fully enable community planning by conveying that most community lands are available for development if adaptation actions are taken. By identifying the adaptation costs related to addressing those vulnerabilities, the results of this project will help community decision-makers in Old Crow, Yukon and Arviat, Nunavut, and ultimately across the Arctic and sub-Arctic, in making effective and sustainable infrastructure choices in the face of climate change.

We are identifying and costing potential housing adaptations based on projected permafrost changes in the two communities, and also identifying the current economic value at risk of community housing without adaptation. Comparing the adaptation scenarios with the baseline scenario will generate financial information that shows the benefits and costs of various adaptation options. With this information, we will generate Cost-of-Adaptation maps and related products that can be used by community planners and decision makers to guide future infrastructure decisions.

Project Team

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