

## #13 Resource Developments and Climate Change: A Gap Analysis

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Climate change is an important issue in the north. Some researchers have suggested that increased resource development is because of warmer temperatures, easier access, and increased infrastructure (like roads, electric lines, internet services). However, research shows that climate change may actually be making resource development more difficult.



There have been many studies of the “human dimensions” of climate change; however, these studies tend to be general, without details. The human dimensions of climate change include how people’s lives and behaviours have been changed. Further research could help communities predict how they may need to adapt.

In 1988, the United Nations created the Intergovernmental Panel on Climate Change (IPCC). This panel has issued several reports on the impact of climate change. Some of the issues they have found include: sea ice changes, infrastructure problems caused by melting permafrost, coastal erosion, and storm surges.

The Arctic Climate Impact Assessment looked at climate change impacts in the Arctic. They listed many of the same findings as above, but added some positive economic benefits for Arctic communities

including lower heating costs, more opportunities for farming, and better navigation of northern sea routes.

Recent research on climate change and resource development has found more potential drawbacks: storing waste in permafrost sumps will not work if that ground melts, winter roads will become more unpredictable and unreliable, and mine waste may leak more easily in warmer temperatures. Changes to ice structure, extreme weather, and longer summers will likely cause changes to life in the Arctic, including how resource development is done.

**Areas that need further study:**

- ⇒ Most of the resource development in the past has reduced communities' abilities to deal with issues such as climate change. Can we change this so that it can have a positive impact?
- ⇒ Can Arctic communities create a situation where resource development will provide them with the necessary tools to ensure that they are not "vulnerable" to climate change?
- ⇒ Can resource development be used to help communities "adapt" to climate change?
- ⇒ How can resource developments be done in ways that help Arctic communities face potential challenges such as climate change?



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