

## **ABSTRACT**

### **THE IMPACTS OF CLIMATE CHANGE ON THE AVAILABILITY OF GRANULAR RESOURCES IN THE INUVIALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES**

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Physical community infrastructure is vulnerable to changes in permafrost regimes resulting from warming in Arctic environments. The vulnerability of community infrastructure is greatly exacerbated by factors related to the accessibility of aggregates that are used to insulate built form from the active layer of the permafrost. The ability of communities to address stresses brought about by melting permafrost is a function of access to aggregates, the ability to transport them, and competition for gravel between users. In the Inuvialuit Settlement Region readily accessible aggregate is in short supply, and concerns about resource allocation pre-date current prognoses about the impact of global warming. The prospect is that while demand for gravel will increase as permafrost is degraded, competition from new activities along with degradation of winter roads may further stress supplies.

This research project examines the manner in which institutional arrangements, the geography of aggregate distribution, transportation, and competition from emerging new activities exacerbate vulnerabilities associated with permafrost melt in the Inuvialuit Settlement Region.