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Simulating food sharing in Sheshatshiu, Labrador: Modelling household versus community level cooperation

Large-scale events, such as intensified resource extraction and climate change, are affecting the traditional, locally-based livelihoods of Northern communities. The ability to share locally acquired foods such as caribou meat, is an important adaptive mechanism that helps promote community well-being in the face of growing political, ecological, economic, and social changes. Cooperation, in the face of these changes, has more often been framed as a macro-level phenomenon under the purview of international bodies such as the Arctic Council. However, we aim to illustrate the importance of cooperation at the meso- (community) and micro- (household) levels in Arctic resiliency.

To better understand the capacity of Northern communities to cooperate in local food sharing economies, we developed an Agent-Based Model to simulate the effects that participation in household-level versus community-level sharing might have on a caribou meat distribution system. This model is based on the findings from data gathered at the Innu community of Sheshatshiu, Labrador. The preliminary objective of this study is to examine how the relative contributions of household-level versus community-level sharing of caribou affect the uniformity of caribou meat amongst the population. The preliminary results from the application of the ABM approach have shown that the agents operating at the higher scale of the community-level tend to distribute the meat more evenly. This indicates that policies promoting large-scale (or up-scaling) of cooperation may also increase the capacity of Northern communities to build healthy food sharing economies.