

1. Summary of Proposed Research:

Defining Canada's future forest: Stakeholder perceptions of assisted colonization

Canada's tree species may expand northward in response to climate change, potentially bringing tremendous economic benefits; but, ecologists have warned that their migration may not match the rate of change. To address this mismatch, some scientists and managers propose that we need to move trees further north, a process known as Assisted Colonization (AC). In so doing, we would be actively defining the character of Canada's future forests, but given the diverse priorities that Canadians place on forests, from wilderness to forestry, AC will likely prove to be contentious. This research program on stakeholder perceptions of AC will inform theoretical discussions about the shifting conception of forests, nature, and wilderness in the face of climate change, while providing practical input into discussions about when we should practice AC.

Scientific debate on AC has generally followed one of two avenues, with some suggesting that it is a necessary strategy to prevent climate change-induced extinctions and others arguing that we have insufficient knowledge to predict the consequences of AC. This academic debate has expanded to include diverse stakeholders who are considering AC in forest management as the effects of climate change increasingly threaten valued species. Conservationists, for example, wonder whether AC will expand the range of rare species or promote the spread of invasive ones, and foresters wonder whether it will increase profits or facilitate the spread of disease.

With this research, my students and I will investigate stakeholder perceptions of AC using key informant interviews and Q method. We will examine the diverse potential of AC for Canadians in the context of the importance of forests to our identity. The research will extend across the country, including West-Central British Columbia (B.C.), to examine the potential role of AC in regions recently denuded by the Mountain Pine Beetle; Northern B.C., to study its contribution to the proposed Yellowstone-to-Yukon wilderness corridor; Southern Ontario, to evaluate its role in the conservation of rare and endangered species; and Northern Ontario, to investigate its use in a region focused on the economic potential of forests. Together, these case studies will capture a range of circumstances under which AC may be applied, and this cross-section of stakeholder values will allow us to contribute to theories about people's perception of their role in nature and its malleability in response to climate change. Moreover, the work will lay the groundwork for a robust and inclusive public discussion of AC, which will be critical for proactively managing ecosystems to adapt to a changing climate.

AC is an option that will become increasingly important and contentious with continued climatic change and the redefinition of what our forests mean to us. The inclusion of diverse stakeholders in early discussions about it will be invaluable, so numerous organizations have expressed their in-kind support for this research. The research program will investigate how stakeholders respond to ideas surrounding AC to: 1) Contribute to the theoretical literature in terms of how Canadians reconcile AC as a climate change adaptation strategy with the long-standing and diverse ideas of nature they currently hold; 2) Better understand the feedbacks between science, society, and management practices; 3) Provide broad-scale and context-specific knowledge of stakeholder values to inform decision-making and communication concerning AC policy and implementation; and 4) Contribute to training the next generation of scholars (specifically five graduate students) to provide expertise for resolving similar issues at the evolving interface of climate change, forestry, and society.