

Boreal Builders: Exploring sustainable housing design in remote First Nation communities through participatory planning and training

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In Northern Manitoba, Canada, First Nations (FN) people are surrounded by abundant natural resources and have a deep understanding of their land, but lack critical infrastructure, and often live in economic poverty without healthy housing, potable water, sanitation, or adequate roads.¹ In the traditional territory of Island Lake the state of substandard, disrepair, and mold damaged housing has reached a crisis level². Like many FN communities, Indigenous people on Island Lake are seeking to re-generate their economies and improve self-sufficiency by building capacity in their communities to sustainably use the resources of their traditional territory to build homes, support energy independence and improve food security.³ Three key assets are central: local resources, people, and knowledge. This presentation provides an overview of the first phase of a six-year long community-led project seeking to address critical housing needs in two remote FN communities on Island Lake, Garden Hill and Wasagamack, through participatory design and project-based skills training. Priority needs and potential opportunities for better housing design are being identified through the knowledge of local community members, participatory planning workshops and evaluation of existing housing in the community. Aligned with this process is a collaborative training program where local students gain knowledge in design and sustainable building techniques along with skills in forestry & milling, carpentry, small engine repair, and building maintenance. In the projects-based component of the project, students develop their skills through maintenance and home-building in the community. The expectation is that in addition to developing better, more sustainable northern FN housing design, the skills training will result in a legacy of certified and credentialed home builders who can continue to maintain, design, build houses and educate future students.

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Learning outcomes:

- *Be able to identify the potential role(s) of educators and researchers in working with communities towards self-sufficiency and independence.*
- *Understand the unique challenges of building in remote, northern FN communities.*
- *Consider the role of participatory design and skills-based education in building sustainable community housing.*

¹ Thompson S., Wiebe, J., Gulruk, A. & Ashram, A. (2012). Analyzing food-related economic development in Indigenous communities in Northern Manitoba for impacts on food sovereignty, food security and sustainable livelihoods. *Canadian Journal of Nonprofit and Social Economy Research*, 3(2), 43-66.

² Puxley, C. (2016). Manitoba First Nation declares state of emergency over suicide epidemic. *The Globe and Mail*.

³ Anderson, R.B., Dana, L-P. & Dana, T.E. (2006). Indigenous land rights, entrepreneurship, and economic development in Canada: 'Opting-In' to the global economy. *Journal of World Business*, 41, 45-55.

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