

## How participatory is research in Northern Canada?

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**I**ndigenous peoples have contributed to research in the North for a long time, although much of that work predates the term participatory or the notion of stakeholders and democracy in science. Early examples from the pre-World War II period include research that relied on Indigenous peoples' knowledge of the land for food, shelter, and transportation. These relationships were critical to the survival of Northern researchers and lead to many important discoveries by southern scientists and explorers.

In the post-World War II era, technological advances in flight, ground travel, and remote-sensing allowed many southern-based researchers to bypass

Northern residents. With few, if any, research protocols in place to ensure Indigenous communities were meaningfully involved, a new pattern of Northern research was established over which these communities had little control.

Since the late 1960s, Indigenous peoples have begun to claim control over their knowledge and their role in the research process. Today, researchers must apply for permits, produce reports and educational material for use by local communities, consider the implications of intellectual property rights, and in some cases hire local people to help with their work. Indigenous people are increasingly taking on

leadership roles within the research community, and government grants now require some form of local approval of, or participation in, research projects.

The contemporary emphasis on participatory practices has led many government and academic researchers to claim that participation is central to a new research paradigm in the North. But are these claims credible? Or are they perhaps premature?

In a recent study published in the journal *Ecology and Society*, two researchers (Murray Humphries and Gordon Hickey) and I from McGill University empirically assessed these claims of a new research paradigm in Arctic science.<sup>1</sup> To do so, we evaluated more than 1,100 articles published in the journal *Arctic* from 1965-2010 as well as 60 articles in three other leading polar science journals.

We evaluated each article according to five criteria that helped us measure the extent to which the research was consistent with participatory principles. The criteria included the applicability of the study to local people, the mention and use of local knowledge, levels of authorship and funding (i.e. local, territorial, and university/federal/private), evidence of accountability to local people, and levels of local quality control. We scored each criterion between 1 and 2, with 1 representing low levels of participation and 2 representing high levels. We also noted the organizations to which “first authors” belonged, the region and discipline of the study, and the focus on environmental change. What we found was surprising given these claims of a new research paradigm in the Arctic.

First and foremost, we found that shifts toward local engagement over time have been small and scattered, with very low levels of participation (scores close to 1) still dominating Arctic research to this day. We noted plenty of examples of participatory work going back to the 1960’s and 1970’s when the involvement of Arctic community members is thought to have been at its lowest. Across all years and disciplines, 74 per cent of papers published in *Arctic* had an overall score of 1, 78 per cent made no mention of local knowledge, 80 per cent had one level of authorship and funding (typically university authors with federal funding and no territorial or local involvement), 83 per cent showed no evidence of accountability to local people, and 77 per cent showed no evidence of local quality control. Further, contrary to popular belief, the boom in climate change research over the last two decades — a trend we identified easily — had little to no impact on local engagement, meaning that a focus on environmental change was not an important driver of the small increase in participatory practices we found in

our results.

We did find, however, that the studies we examined with higher overall scores (closer to 2) had a greater involvement of Northern organizations as first authors. Higher levels of participation were also tied to the growth of life sciences research focused on harvested wildlife and social sciences research focused on contemporary cultures and practices. On the other hand, the physical sciences and other life sciences (e.g. entomology and limnology) lagged behind considerably. Clearly, research that both interests and requires local engagement will elicit more participation. We also found that research conducted in Canada and Alaska was more likely to engage local communities. This is not surprising given that regulations are in place in these regions to promote such engagement. Our review of Northern research policy found that Northerners in Russia and Scandinavia do not benefit from similar frameworks.

Overall, local people are becoming more involved in Arctic science, but the nature and level of this involvement remain limited and vary systematically among academic disciplines, organizations, and regions. Can we really call this a paradigm shift? We think not.

Clearly, there is room for more community involvement in Arctic science. As we concluded elsewhere, “[Efforts] to increase community engagement in Arctic science need to recognize the diversity of research interests and approaches in polar science, and to be skeptical of one-size-fits-all solutions.”<sup>2</sup> Community collaboration and partnerships should be encouraged and facilitated for much of the research occurring in the North.

However, we have also noted that “there are likely to remain many situations in which circumpolar research priorities and approaches do not align well with local community priorities and engagement. This is, perhaps, the elephant in the room or, given our Arctic science context, the woolly mammoth in the permafrost.” Many communities want to be part of the research process, and yet some disciplines or topics of great importance may be underrepresented or even excluded if requirements for local participation are met. ●

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#### Endnotes

1. Brunet, N.D., Hickey, G.M. and Humphries, M.M. 2014. “The evolution of local participation and the mode of knowledge production in Arctic research.” *Ecology and Society* 19(2):69
2. Ibid, p.79