How can research better serve Nunavummiut?
Assessing research trends in Nunavut (2004-2019)

BACKGROUND

The Nunavut Research Institute (NRI) has been developing, facilitating, and promoting scientific research in Nunavut since 1994. Any scientist who wishes to carry out research in Nunavut related to health, natural, and social sciences (including traditional knowledge) must first receive a license from the NRI, as required under Nunavut's *Scientists Act*. The NRI is responsible for making sure that research does not harm or interfere with the natural or social environment in Nunavut, and that research results are returned to Nunavut.

Information on all of the licenses issued by NRI since 2004 is stored in a digital database. The goal of this project was to conduct the first systematic review and analysis of the NRI research licensing database. This project was funded by a SSHRC Partnership Engage Grant, as a partnership between Jamal Shirley and Mary Ellen Thomas of the NRI and Gita Ljubicic of Carleton University (now at McMaster University). We worked together to:

1. update the NRI licensing database technology to improve operational efficiency;
2. edit records to ensure completeness and consistency; and,
3. assess trends in research over 15 years (2004-19) related to research teams, locations, timeframes, and topical focus.

In all aspects of the project we shared leadership, decision-making, and supervision of students.

WHAT WE DID

With help from everyone in our research team (see section on "Who was involved"), we:

a) imported the existing NRI licensing database into the Nunaliit platform to update and customize database structure, search functions, and link to mapping features;
b) reviewed (editing as needed) all license records for completeness and accuracy, cross-checking information in project applications, licenses, and compendium entries;
c) located remote field sites and developed a framework for mapping research locations;
d) developed a coding structure to identify research topics in the physical, social, and health science licenses; and,
e) reviewed project summaries for all licensed projects to identify trends in research topics, methods, and reporting over time.

WHAT WE LEARNED

Our preliminary analyses show that:
- **natural/physical sciences continue to dominate research activities in Nunavut** with 52% (1152) of all licensed projects, followed by 841 (38%) social and 206 (<10%) health sciences;
- **there has been a general increase in research licenses** with an annual range from a low of 122 (in 2011, 6% of all research licenses) to a high of 203 (in 2018, 9% of all research licenses);
- **research is most intensely focused in the Qikiqtani (Baffin) region**, with 1565 (59%) of all licensed research projects;
- **social science and Inuit knowledge research in Nunavut is represented in a total of 841 licensed research projects that are based in communities** (with 2734 licensed research activities, i.e. occurring in multiple communities); 11% of social science research is conducted in Iqaluit (309 activities) followed by Pond Inlet (5.8%, 159 activities), Pangnirtung (5.5%, 157), and Arviat (5.2%, 143), with little in Coral Harbour (2.4%, 66), Grise Fiord (2.3%, 62), and Whale Cove (1.8%, 49);
- **research in Nunavut is predominantly led by southern universities** (1200 (54% of all licensed projects), with the Government of Canada (329, 15%) and industry and consultants (219, 10%) also playing large roles, while Nunavut-based organizations lead less than 5% (67) of licensed projects;
- **Inuit-led and other small Nunavut organizations receive a large number of requests from NRI to review research applications:** Institutes of Public Government, Hamlets, and Hunters and Trappers Organizations collectively receive 66% of license applications to review (11,247 review requests);
- **certain communities experience a disproportionately high number of review requests**, in particular the Hamlets of Resolute Bay (population 225) and Grise Fiord (population 170) received a combined 838 license reviews (21% of all Nunavut Hamlet reviews) because they are the closest communities to important field research sites in the High Arctic;
- **the majority of projects across all disciplines receive an annual (single year) research license**, long-term projects (over 5 years) are not common;
- **many projects are interdisciplinary (meaning that they involve different types of research)**, but this is not reflected well in the current licensing structure that requires different application forms for natural, social and health research projects;
- **the most common health research topics include:**
  - Wellbeing
  - Public health and health promotion
  - Epidemiology
  - Health systems and monitoring
  - Community wellness
- **the most common social science/traditional knowledge research topics include:**
  - Culture and society
  - Inuit Qaujimajatuqangit
  - Land use and traditional activities
  - Education
  - Policy and governance

- **the most common natural/physical science research topics include:**
  - Climate change
  - Marine
  - Climate and weather
  - Fish
  - Plants
- **the most common community-based research methods include:** interviews, surveys, research/training workshops, and focus groups;
- **the most common field research methods include:** water sampling, sediment sampling, rock sampling, ground truthing for remote sensing and aerial surveys, and vegetation/soil sampling
- **research reporting is still dominated by academic forms of reporting** (journal articles, student theses, reports, conference presentations), but forms of community reporting are increasing (results summaries, community presentations, radio presentations, websites)
- **community-connected research has increased over the years**, while community research partnerships (community engagement and leadership throughout all research phases) has remained relatively low
- **Nunavut Arctic College is most involved with social science and natural/physical science research**, but still with a relatively low number of projects compared to total licensed research

We continue to work on refining our analyses, and we plan to develop a summary report along with community-specific reports to share results across Nunavut. We are also working on publications to share this work with academic and decision-making audiences.

NEXT STEPS

Our analysis of research licensing is a first step towards identifying ways to improve Inuit engagement in research, make research results more accessible to Nunavummiut, reduce community research fatigue, and encourage research on issues that are priorities for Inuit. This project has contributed the NRI's ability to review and track research licenses, as well as to help align their work with Nunavut's research needs. The NRI will use these results to inform a possible future review of Nunavut's *Scientists Act* and other changes to research policy in Canada's North.

Through this licensing review and first analysis of research trends in Nunavut, we identified some shortcomings of the current licensing process related to research fatigue, gaps, review burden, and lack of transparency. We have already secured new funding through a SSHRC Insight Grant to undertake a broad consultation across Nunavut to address some of these challenges. Over the next four years we will work through an expanded partnership to help inform a Nunavut-specific approach to implementing the National Inuit Strategy on Research. Ultimately our goals are to contribute to improving research engagement, capacity, and outcomes across Nunavut.

WHO WAS INVOLVED

Name	Role	Affiliation
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https://straightupnorth.ca/research-trends-in-nunavut/