



M1

Community involvement and co-development of water and wastewater research projects

An example from Nunavik

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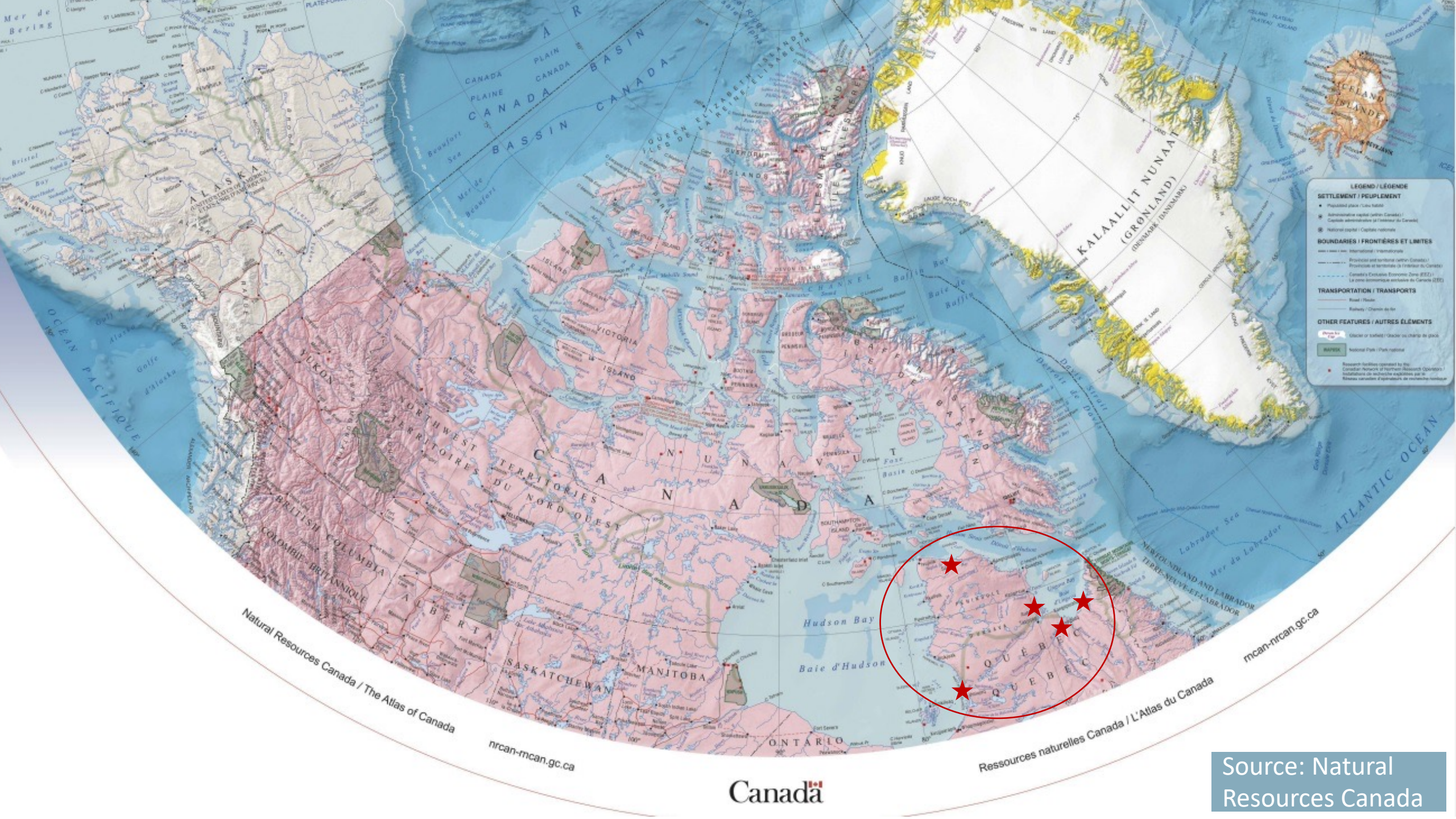


M2

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LEGEND / LÉGENDE

SETTLEMENT / PEUPEMENT

- Populated place / Lieu habité
- Administrative capital (within Canada) / Capitale administrative (à l'intérieur du Canada)
- National capital / Capitale nationale

BOUNDARIES / FRONTIÈRES ET LIMITES

- International / Internationale
- Provincial and territorial (within Canada) / Provinciales et territoriales (à l'intérieur du Canada)
- Canada's Economic Activity Zone (EZC) / La zone économique exclusive du Canada (EEZ)

TRANSPORTATION / TRANSPORTS

- Road / Route
- Railway / Chemin de fer

OTHER FEATURES / AUTRES ÉLÉMENTS

- Glacier or tundra / Glacier ou champ de glace
- National Park / Parc national

Research facilities operated by the Canadian Network of Inupiat Research Operators / Installations de recherche exploitées par le Réseau canadien d'opérateurs de recherche inupiat

Natural Resources Canada / The Atlas of Canada

nrcan-mcan.gc.ca

Ressources naturelles Canada / L'Atlas du Canada

mcan-nrcan.gc.ca



© Centre d'études nordiques

Land area: 444 000 km²
14 villages
Population: 13 000 habitants

@Nunivaat, 2020



Grandmont et al. 2014



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©Air Inuit

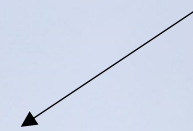


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Water treatment plant



Treated water reservoir



Umiujaq

UV treatment



Umiujaq

Chlorine



Umiujaq

Water truck



Umiujaq

Distribution



Salluit

Water tanks



Tasiujaq



Kangiqsualujjuaq



Salluit

Cl₂



Availability

Average water consumption

Canada

251 L/pers./day

(Environment Canada, 2011)

VS

Nunavik

108 L/pers./day

(Lemieux et al., 2016)

Acceptability

Cl₂

Alternative water source research



Capacity:
1200/1600L

Water storage in tank

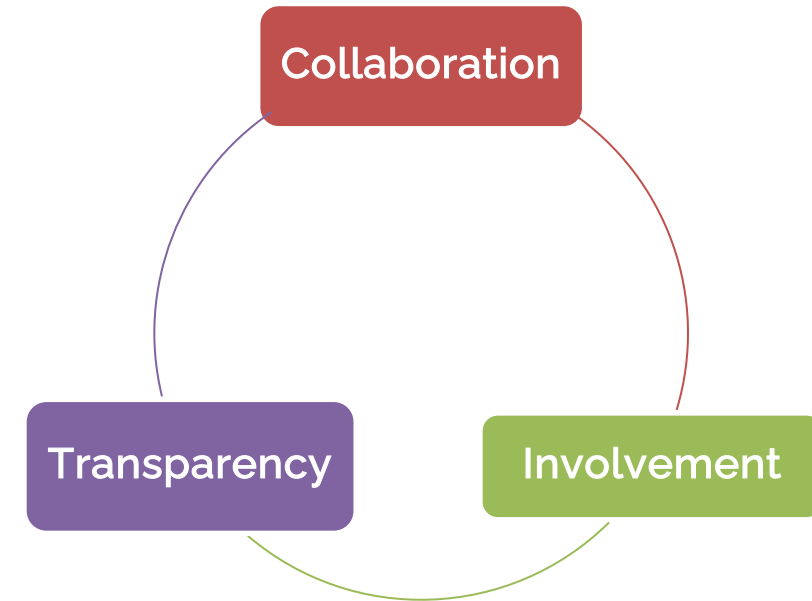
Biofilm

Inclusive research with communities

It is important to collaborate closely with the community and to ensure our proposed research is relevant and has significant benefits for the community.

Examples:

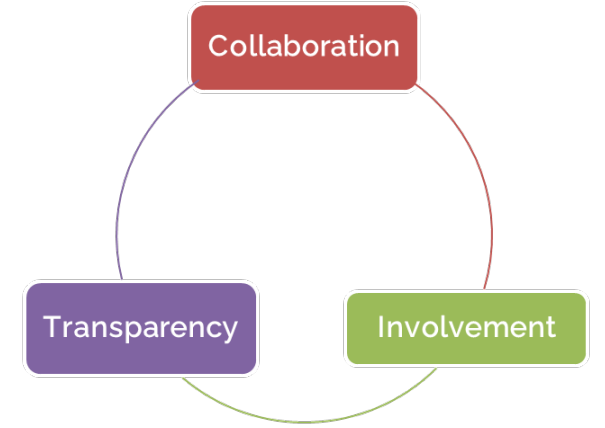
- Ensure the exchange of knowledge and skills;
- Develop the employability of local resources;
- Implement research that will benefit to the communities;
- Minimize your ecological footprint by leaving no waste behind and no equipment that cannot be used by the community members;



Inclusive research with communities

Regional and local level

Gathering water and wastewater stakeholders at the regional level, including stakeholders responsible of :

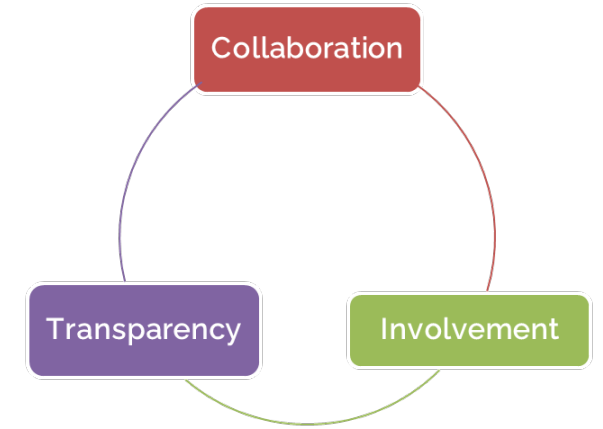


Inclusive research with communities

Regional and local level

Gathering water and wastewater stakeholders at the regional level, including stakeholders responsible of :

- Implementation and maintenance of the water treatment plant or wastewater treatment facilities
- Water and wastewater operations (including, monitoring, distribution, etc.)
- Issuing drinking water advisories, such as boil-water advisories.



Before setting up your own group, look for existing committees/groups/networks that already bring these stakeholders together.

Inclusive research with communities

Water research committee in Nunavik

Members

- Kativik Regional Government
- Nunavik Regional Board of Health and Social services
- Northern Villages



Inclusive research with communities

Water research committee in Nunavik

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Collaboration

- Ensure water and wastewater research meets needs and expectations of Nunavik population
- Exchanges and collaboration between researchers and decision makers
- Make recommendations for projects' development and implementation



Inclusive research with communities



Local involvement

Transparency

Stop at the radio to announce the project - Kangiqsualujjuaq



Poster to announce our visit in public buildings - Kangiqsualujjuaq

 UNIVERSITÉ LAVAL **Water research project**
Kangiqsualujjuaq – Summer 2023  uOttawa

Purpose of the fieldwork

Our research team (two students from University of Ottawa and Université Laval) will visit your village in summer 2023 to study the drinking water supply. The objective of this field trip is to characterize the entire supply process (from the source to the tap).

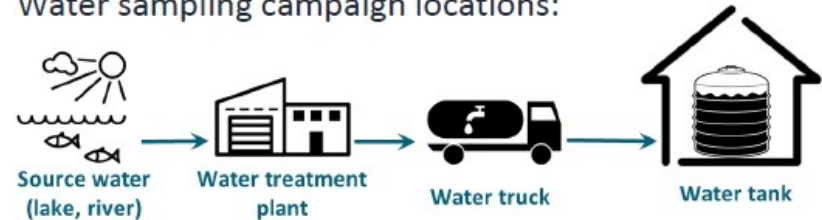


Research team

When? From July 15 to July 24, 2023

Key facts of this fieldwork

- We will announce our arrival on the radio
- All water quality data will be provided to the NV
- Water sampling campaign locations:



Any question? Contact Anna Covey, acove078@uottawa.ca

Thank you for your welcome and precious help!
We are looking forward to meeting you this summer.

Inclusive research with communities

Outcomes and local involvement

- Reports for communities or regional support documents
 - Results are shared to community/regional partners in priority
- Local involvement
 - Monthly sampling campaign made by local water operators
 - Support for the research : Questionnaire, observations and help on the field, students training, etc.

Transparency

Involvement

WATER QUALITY FIELD REPORT - SUMMER 2022 NORTHERN VILLAGE OF KANGIQSUALUJJUAQ

AUTHORS

Jessika PICKFORD (Université Laval), Anna COVEY (University of Ottawa), Manuel J. RODRIGUEZ (Université Laval), Stéphanie GUILHERME (University of Ottawa)



MAY 2023

Results report - Kangiqsualujjuaq

Inclusive research with communities

Outreach activities

Hands-on water activities dedicated to youth
(in person and remotely)

Objectives

- 💧 Awake interest in water science and engineering
- 💧 Encourage youth to become water and wastewater treatment operators.
- 💧 Raise awareness among youth in the community on the importance of water treatment



Approved by Nunavik School board

Inclusive research with communities

Examples of guidelines:

- Assembly of the First Nations of Quebec and Labrador. (2014). Assembly of First Nations of Quebec and Labrador Research Protocol. Wendake.
- Association of Canadian Universities for Northern Studies. (2013) Ethical principles for the Conduct of Research in the North. Ottawa.
- Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada and Social Sciences and Humanities Research Council of Canada. (2014). Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS). Ottawa.
- First Nations Information Governance Centre (2017), The First Nations Principles of OCAP®
- Government of Yukon, Government of Northwest Territories and Government of Nunavut. (2016). A Pan-Northern Approach to Science. Whitehorse.
- Institut nordique du Québec. (2017). Research Guidelines – First Peoples Working Group
- Inuit Tapiriit Kanatami and Nunavut Research Institute (2015). Negotiating Research Relationships with Inuit Communities: A Guide for Researchers. Ottawa and Iqaluit.
- Makivik Corporation. (2015). Guidelines for Research in the Nunavik Region. Saint-Laurent.

Thank you!





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