COLLABORATIVE SURVEY DEVELOPMENT AND TRAINING TO UNDERSTAND INUIT USES AND NEEDS FOR WEATHER, WATER, ICE AND CLIMATE INFORMATION

Dr. Natalie Carter, Shirley Tagalik, Dr. Gita Ljubicic,
Canadian Meteorological and Oceanographic Society Congress
June 4, 2020

ArcticNet
OUR TEAM

• **Project Lead: Gita Ljubicic** (McMaster University)

• **Network Investigators:**
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  - Trevor Bell (Memorial University of Newfoundland)
  - David Atkinson (University of Victoria)

Photo: Alison Perrin
OUR TEAM

• **Collaborators:**
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  • Andrew Arreak (SmartICE)
  • Jason Carpenter (Carleton University)
  • Natalie Carter (University of Ottawa)
  • Peter Paul Cookie (Arctic Eider Society)
  • Cassandra Elliott (Inuvialuit Shared Services Unit)
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- **Collaborators Continued:**
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  - Shari Fox (Ittaq Heritage and Research Centre)
  - Joel Heath (Arctic Eider Society)
  - Dominique Henri (Environment and Climate Change Canada)
  - Theo Ikummaq (Independent Researcher, Igloolik)
  - Aupaa Irkok (Aqqiumavvik Society)
OUR TEAM

• **Collaborators Continued:**

• **Frankie Jean-Gagnon** (Nunavik Marine Region Wildlife Board)

• **Annie Kasudluak** (Arctic Eider Society)

• **Pauloosie Kasudluak** (Arctic Eider Society)

• **Charles Klengenberg** (Inuvialuit Regional Corporation)

• **Carolyne Marshall** (Environment and Climate Change Canada)

• **Alexandra Oakes** (McMaster University)
OUR TEAM

• Collaborators Continued:
  • Simon Okpakok (Independent Researcher, Gjoa Haven)
  • Emmelie Paquette (Carleton University)
  • Alison Perrin (Yukon Research Centre)
  • Natasha Simonee (Independent Researcher, Pond Inlet)
  • Regena Sinclair (McMaster University)
  • Shirley Tagalik (Aqqiumavvik Society)

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- **Collaborators Continued:**
- **Katherine Wilson** (Memorial University and Environment and Climate Change Canada)
- **Local Research Coordinators (Nunavut)**
  - **ARVIAT**
    - **Aupaa Irkok** and **Andrew Muckpah** (Aqqiumavvik Society)
  - **CAMBRIDGE BAY**
    - **Candice Pedersen** (Arctic Eider Society) and **Shawn Marriott** (Independent Researcher)

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- **Local Research Coordinators (Nunavut) Continued:**
  - **CLYDE RIVER**
    - Marlene Iqaqrialu (Independent Researcher)
  - **CORAL HARBOUR**
    - Bobbie Saviakjuk (Independent Researcher)
  - **IGLOOLIK**
    - Levy Uttak and Theo Ikummaq (Independent Researchers)

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  - **Jason Carpenter** (Carleton University)
  - GJOA HAVEN
  - **Gibson Porter** and **Simon Okpakok** (Independent Researchers)
  - POND INLET
  - **Andrew Arreak** (SmartICE) and **Natasha Simonee** (Independent Researcher)
OUR TEAM

• **Local Research Coordinators (Nunavut) Continued:**
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  • **Mick Appaqaq** and **Johnny Kudluarok** (Arctic Eider Society)
• **Local Research Coordinators (Nunavik)**
  • TBC
• **Local Research Coordinators (Inuvialuit)**
  • TBC

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OUR TEAM

• **External Reviewers**

• **Jean Allen** (Nunavut Tunngavik Incorporated)

• **Armel Castellan** (Environment and Climate Change Canada)

• **Cassandra Elliott** (Inuvialuit Joint Secretariat)

• **Sara Holzman** (Government of Nunavut Climate Change Secretariat)

• **Samantha Page** (Government of Nunavut Climate Change Secretariat)

• **Liz Pijogge** (Nunatsiavut Government)
OUR TEAM

• External Reviewers Continued:
  • Jamal Shirley (Nunavut Research Institute)
  • Environmental Technology Program Technician (Nunavut Arctic College)
  • Dinos Tikivik (Iqaluit resident)
  • Adrienne Tivy (Environment and Climate Change Canada)
• Increasing variability of weather, water, and ice conditions across Inuit Nunangat creates challenges for travel safety.

• Inuit and northerners have been vocal about weather, water, ice and climate (WWIC) information and services that are not meeting local needs in remote communities.

• We developed a survey to get a wide range of feedback from youth, men, and women of different ages and experience levels across three regions of Inuit Nunangat.
COLLABORATIVE SURVEY DEVELOPMENT

- Planning Meeting (Ottawa) - Dec 2018
- Survey Ver. 2 (ethics submit) - Mar 2019
- LRC Training (Montreal) - June
- Start Surveys! - Sept
- Survey Ver. 3 - Oct
- Survey Ver. 4 (ethics resubmit) - Nov
- LRC Training (Iqaluit) - Dec
- Complete Surveys - March 2020
- COVID-19 restrictions (survey on hold)
COLLABORATIVE SURVEY DESIGN

- Be inclusive
- Use the local Inuktut dialect
- Carefully select who to facilitate the survey
- Use multiple formats to reach a range of people
- Include a seasonal calendar
- Ask relevant & respectful questions
- Support community research capacity
- Have an evaluation component
- Report results to different audiences

Photo: Jason Carpenter
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Photo: Jason Carpenter
AAJIQATIGINGNIQ RESEARCH FRAMEWORK

Working for the common good

Continually planning and preparing for the future

Being respectful of all living things

Maintaining harmony

Maligait visuals: Government of Nunavut Department of Education

Photo: Alison Perrin
AAJIQATIGINGNIQ RESEARCH FRAMEWORK

- Working for the common good
  - Be open to change, adjust
  - Researching for good skills
  - Reflective
  - Understand the outcomes of your work
  - Be passionate
  - Be respectful
  - Be genuine
  - Be consistent, adaptable
  - Prepare to learn from others

- Continually planning and preparing for the future
  - Have a Agenda
  - Don’t just make-up your experiment
  - Be informed
  - Make Environment ready
  - Make clear the context of your research
  - This workshop
  - Getting trained
  - Working out a process
  - Testing the process
  - Communication Network

- Being respectful of all living things
  - Be kind
  - Be honest
  - Understanding the culture, their background
  - Being open-minded about other’s who’s
  - Sharing benefits
  - Understanding local culture
  - Be trustworthy
  - What respect means according to cultural practices
  - Keep your word

- Maintaining harmony
  - Be patient
  - Take care of each other
  - Keep people focused on a common goal
  - Communication
  - Being open-minded on other people’s ideas
  - Respectful listening
  - Working together
  - Sharing your strengths, applying them in your role
  - Good relationships
  - Honouring (recognize) good work, success
  - Emotional maturity

Photo: Alison Perrin
1. BE INCLUSIVE

Photo: Gita Ljubicic
20. Over the last three years, why did you travel on the land?  Rank how often you travel for each reason.

<table>
<thead>
<tr>
<th>Reason</th>
<th>N/A</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Usually</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunting – in ocean</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Hunting – on sea ice</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>Hunting – on land (inland)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>Fishing – in ocean</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Fishing – in lakes/rivers</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Fishing – commercial</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Gathering food (eggs, plants/berries)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Gathering stone (soap stone, other materials)</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Gathering wood</td>
<td>☐</td>
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<tr>
<td>Gathering plants (fuel, bedding, wick materials, etc.)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>Collecting drinking water (ice/water/snow)</td>
<td>☐</td>
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<tr>
<td>For fun (to get out of town, go to cabin or camp)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>Travel to other communities (list: ____________)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Guiding or outfitting</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Research or environmental monitoring</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Canadian Rangers</td>
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<tr>
<td>Search and Rescue</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>School or work sponsored land trips</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Other (list): ____________</td>
<td>☐</td>
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</tr>
</tbody>
</table>
2. USE LOCAL INUKTUT DIALECT

UNDERSTANDING INUIT COMMUNITY USES AND NEEDS FOR WEATHER, WATER, ICE AND CLIMATE INFORMATION AND SERVICES

Thank you for taking the time to respond to our

Project Overview
Our research team includes Inuit, northern, a researchers who have worked together over in Nunavut, Nunavik, and Inuvialuit communities years we have heard that the services that pro information on weather, water, and ice condid easy to access, understand, or use in many cou also heard that the services and were always accurate for local conditions.

The goal of our project is to help improve the relationships that are available, and how it is communicated communities. To accomplish this goal, we dev get feedback from communities across the Inuit Nunangat.

We want to learn what kinds of weather, water information we use to make safe travel-decision survey responses will provide valuable inform service providers and decision-makers make it information more relevant and accurate for Inuit northerners. Ultimately, we hope that the re project will lead to improved services that can travel more safely on the land.

KANGIQIHIAMJ INUIT NUNALIT ATUQPAAGAT UNALU PJUJUJANGIT HAFFUMANI HILA, IMAQ, HIKU UNALU HILA ILITTURVIKHANGIT NALUNAÎKTUTAN UNALU IKJUUÎTÎKANGIT

Quanaqqitit ilaqatuaqimagit kuluhammerjngi hamna naunajainnirnt

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Photo: Natalie Carter
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INUVIALUIT

Havarrjikhâk Tamatkimuaniq
Quaqqaqsaqinajit, uluqikajjut imemak, qalluqikamiut, unnamedoinat qaujijarniq hâwaqajngit, atuqpaagatang, hâwâqajngit, nunavut, nunavik, uqââ Nunavut Nunavik, Nunavut McMasters umminnangit hâwâqajngit ammasiit nunavut. Tullisonqitqatukta hâwâqajngit ilaqatuaqimagit ¬nalunaîtutakta ilaqatuaqimagit

Havaarrjikhaq Tamatkimuaniq
Quaqqaqsaqinajit, uluqikajjut imemak, qalluqikamiut, unnamedoinat qaujijarniq hâwaqajngit, atuqpaagatang, hâwâqajngit, nunavut, nunavik, uqââ Nunavut Nunavik, Nunavut McMasters umminnangit hâwâqajngit ammasiit nunavut. Tullisonqitqatukta hâwâqajngit ilaqatuaqimagit ¬nalunaîtutakta ilaqatuaqimagit

INUVIALUIT

Photo: Gita Ljubicic
10b. For each of the methods of transportation you used over the past three years, rank them based on how often you use each method at different times of year.

Please use the following scale:

<table>
<thead>
<tr>
<th>Method of transport</th>
<th>January/February</th>
<th>March/April</th>
<th>May/June</th>
<th>July/August</th>
<th>September/October</th>
<th>November/December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snow Machine</td>
<td></td>
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<tr>
<td>ATV</td>
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<tr>
<td>Boat</td>
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<tr>
<td>Vehicle (truck, car, SUV)</td>
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<tr>
<td>On Foot</td>
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<tr>
<td>Dog Team</td>
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<tr>
<td>Other (list):</td>
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<td>Other (list):</td>
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<td>Other (list):</td>
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</tbody>
</table>

Pond Inlet Seasonal Cycle
4. SUPPORT LOCAL CAPACITY

Photos: Natalie Carter, Emmelie Paquette, Gita Ljubicic
Thank you!
ncarte3@uottawa.ca

Questions?
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