Ს∿Ր∿⊃Ს∧ッ,౨๔≫⊂ CLYDE RIVER, NUNAVUT





Full Inuktitut/English bilingual report will be available in February 2024 at: https://straightupnorth.ca/community-wwicuses-and-needs/ R\[®]PrL ל ספר ש ס∧ [®]לח& σ ⊂ ספר ש פרש לח& σ ⊂ ספר ש Results of a community survey on environmental forecasting uses and needs

یمح∽ح ٹکک¦ن ⊃۲کام∿۵۲۵۰ دلک∽ ∆°ک°ک LOCAL RESEARCH COORDINATOR: MARLENE IQAQRIALU

rt will be t: <u>ity-wwic-</u> GITA LJUBICIC, REGENA SINCLAIR EMMELIE PAQUETTE



م^یک⊂م™: LÞć° ∆b°∿á Photo: Marlene Iqaqrialu





ArcticNet



Environment and Climate Change Canada

Crown-Indigenous Relations and Northern Affairs Canada



ͳϷͺͼͺϐϷϟϞ΅ϔͼϷϟͽϤʹϪϧϟͽϹϷϭϥϷϥͽϞϤͺϤϷͽϺͼϲ, ϹͽϥϥϲϲϒʹͺϤϞϒϲͼͼϭϥͽϲͺϚͼͽϦϲ ϷϒϷͽϹͽϽͿϲͺϹϣϞϷͶϹͿϲ (CIRNAC), ϤͰͺϤ≪ͶͿϲͺϞϲϷ·ͺͻͺϤϞϒϹͼͼϭϞυͽϲϧͼϹϹ (ECCC) ϐϷϟϞͽͶϲͺϞͽϒϹϷϭϲϲϥϯͽϲʹͻͺͶϲϲͺϐϫϧͺϪϐϟͽϲϧϲͻϲͺϹϲϧϷϲʹϿϲͺϤ;ϥϷϲ ͼϲϷϲϲϫͿϲ



ᢓᡰ᠆ᠳᢕ

Ihankı You! Qujannamiik

We wish to acknowledge the **14 Kangiqtugaapingmiut** who participated in this survey between September and December 2021: Gregory Joanas and 13 Kangiqtugaapingmiut who asked to remain anonymous. Thanks to everyone for their time and sharing their experiences.

This project was funded by <u>ArcticNet</u>, the <u>Climate Change Preparedness in the North Program</u> (CIRNAC), the <u>Canada Research Chairs</u> program, and <u>Environment and Climate Change</u> <u>Canada (ECCC) Science and Technology Branch</u>. This project was also endorsed as part of the <u>Year of Polar Prediction</u>.





CANADA RESEARCH CHAIRS CHAIRES DE RECHERCHE DU CANADA





Crown-Indigenous Relations and Northern Affairs Canada YOPP YEAR OF POLAR PREDICTION

Environment and Climate Change Canada

We received tremendous support from our research partners at <u>SmartICE</u>, <u>Arctic Eider</u> <u>Society</u>, <u>Ittaq Heritage and Research Centre</u>, <u>Environment and Climate Change Canada</u>, <u>Carleton University</u>, <u>Memorial University of Newfoundland</u>, and <u>University of Ottawa</u>. We would especially like to thank <u>Aqqiumavvik Society</u> staff in Arviat for their support in coordinating survey activities across Nunavut.



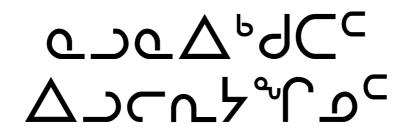


- 15 ⊲⊳יב™רנילרי⊂ ⊿ר™טרי

- <u>02</u> Ს⊃⁺⊁℆∩୭⁻ ⊅∿ᠸ⁻
- **01** ∧৮৬১⊂⊲৬ᠯ[<] Γ৬৾৸৹^ϲ

9

- 36 AC'L'YDN'YC ALLGYDYC 6'T"DUA'TD2 PUNTJC
- **33** ኣ^ቈዮርϷჾժ^ϲ ላዛሬ ጋ Δረናሥራም ፈ≪በኆᡅ᠈ᡶᡗ᠑^ϲ ᡆᡄϷ^ϲĊアበϷϟϿ^ϲ
- 27 ▷²²°៉៶<u>~</u>ኦኦґL⊀σ ጋኣኈበናበፈሥσኈ
- 26 ጋԿ⊾⊲®ℰՐ՟೨Ր՟ ՉՐՈ՟ ՃԵł®Ը⊳վĽ՟೨ჾ
- 25 ጋካಒ⊲⁵ልˤ ዾዾႠឞΓ ϽዮሪϷͿ᠈ᢣᡘᡅ᠌ᢩᢧᠶ᠕᠋ᡷልᡗᡃᠶϷϟᢆᢑᡃ
- 24 JPrd>L'tAnut A & UPrd>L'tAnut A & UPrd>L'tAnut A & UPrd>L'tAnut A & UPrd A & UPrdAnut A & UPrdAnutA & UPrdAnut A & UPrdAnut A & UPrd
- 20 20 Δ<[©]dl[°]T^Δ[°]C² ^ΔC[©]dl[°]T^Δ[°]C² ^ΔC[©]d[°]C² ^ΔC⁰C² ^ΔC² ^ΔC²





20 About this Project **Environmental Conditions** Checked Before Travel Information Sources Used for Partner Communities Travel Contacting Community 25 **Key Project Activities** Information Sources Contacting Others for Help 26 Survey Timeline during the COVID-19 Pandemic Survey Facilitation by Local Sharing Observations 05 Research Coordinators Community Monitoring Key Messages for Service 06 Providers and Communities Programs Products and Accessing 08 Understanding the Numbers in 33 Environmental Forecasts this Report 11 Understanding the Maps in Interest in Long-Term 36 this Report Environmental Changes Overview of 12 **Training Topics** 38 Kangiqtugaapingmiut Participant Demographics Kangiqtuqaapingmiut Respondents are interested in 15 **Travel Habits**

Photo: Marlene Iqaqrialu

Weather, Water, Ice and Other

שלילס^ג ም୮ናንΔσ^ቈ ሀገው ትር כבער איגעל, שפאר^כ (ሥጋለሲ 2021, אילרלי: רך כלארי)

Ϫϟ·ϲͺͺϤͿ·ͻ, ϭͺͺϷͿͿϷͿϚͺϚͽϘϹʹϓ ϷͺϐϷϟϳʹΔϧϟϪϭϥ·ͺϹ Α;ϥϲϿϥͿͼͽϤϽΔ·ͼϷͶϚͶϳϭ·Ϥ Δ; Δ;ϥϲϿϥϷ;ϲͼ;Ϸ; ϤϽͶϐ·ͼʹͼϧϷ;ͼͼʹͺϹ; Δϧϥͼϥϲϧͺ Δϧ;ͼϥϫϲϲ



ᠴᡆ᠋᠆᠊ᡃᠣ᠋ᡣ᠋ᡗᢣ᠋᠂ᡗᠴ^ᡄ.

ΠΡ·ͼϟϤʹͽϹϘϾϷͼͺΛϷϟΓάϚϟ·ͻϹϾϽϔϒϷͺͰϞϨϺϞϚͺϤϽΔ·ͼϷϟϾͺϷ·ϟϲͺͰͽϚ,ͺϤϟϪϲ· ʹϐͽ·ͻͺϽ·ϭϲϧϷϭʹ·ϧͺͽͼϲϷϟͽϾϷϨϷʹͽϹʹͽϽϹʹϚʹϷϽͽϛ;ͺϹͺͰ·ͼͺϷϚϥͶͼ͵ϔ·ϟϥ ΠΡ·ͼϟϤϾʹͽͺͺϞʹϷʹϷϲϽϾͺϤϹʹͽϟͶϲϥϹϷ·ͽͼϲϲϧϭͼ·ϽϞϚϟϤϨϹ·ͻϹͺͽͼϷʹ ΔͻϤϭϾϽϭϷ;ͺϤϹʹͽϟͶϲͺϤϷϾʹϧͼϧϷ·ͻͶ·ϧϽͻϞϐͶʹϐ·ͽϘͶ·ϹϹͺΔͼ·ϭ·ͺΔϲϷϟϭͼ ʹϐϷϟϞʹϿϟͿϾʹͽͼϲͼϭͺϤϟϓϭ·ͻ͵ͺϤϞϹϘʹͽͺϹϹͿͼϥͼʹϞϹʹϤϨͶϽϾͺϒϷϚͶϷϹ ϤϽΔ·ͼϷͶϾͶϳͼʹͺϪͽϪϾͺͶϹ;ϤϺʹϒϾʹͺϤϞϹͻͺϷϷϷʹʹ

⁶ δρλλ⁶ Π^Δ⁶ δ² δ³ δ², δρο⁶ δ² δ² δ², δρο⁶ δ², δ² δ² δ² δ², δ² δ², δ² δ², δ²

∧৮৬५⊂⊲ి∀ं< ୮৬ൎ১এc

ABOUT THIS PROJECT

Our research team includes Inuit, northern, and southern researchers who have worked together for many years in Nunavut communities. Over the years we have heard from Nunavummiut (people of Nunavut) that services providing information on weather, water, and ice conditions are not easy to use, access, or understand. We have also heard that the information is not always accurate for local conditions. This, along with increasingly unpredictable weather, and changing sea ice conditions, has made it harder and riskier for Nunavummiut to hunt and travel safely. We developed this project to learn how Nunavummiut are using environmental information to make decisions about safe travel on the land (including water and ice).

Our goal is to help improve the information that is available, and how it is communicated in northern communities. To accomplish this goal, we created a survey to get feedback from communities across Nunavut. Survey questions were developed together with input from all team members, as well as from environmental service providers, Inuit organizations, and northern governments and research organizations.

We work together according to the Aajiiqatigingniq research framework,

outlined by the Aqqiumavvik Society working with Elders from across Nunavut. This framework guides how we make decisions, and build consensus on our research approach and results. Surveys were facilitated by Local Research Coordinators working in their home communities. We also worked together in two collaborative analysis workshops to interpret survey results and decide on key messages for service providers and for Nunavut communities.

Ultimately, we hope that the results of this project will help service providers and decision-makers make their information more relevant and accurate for Nunavummiut, in support of safe travel.



Collaborative analysis workshop in Arviat, Nunavut (October 2021, photo: Gita Ljubicic)

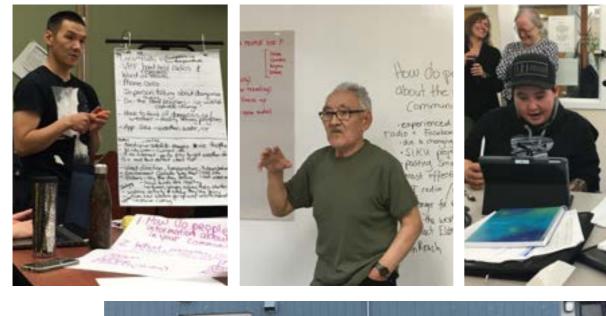
bンシ>らつの っしつ PARTNER COMMUNITIES

Ϸ໑ ΛϧϧϞϲϧͽϲ ΔϲϴϲϷͽϽͽ ͶϞϹϷϞͽϽͼͼ **(8)** ໑໑ϲͼͼͼ ໑໑ͽϹ**·:** Ϥͼϭϥϲ, ΔϐͻͽϽϲͶϥͽ, ϐϧϹͽϽϳͶͽ, ϒϲϲϲ, ϷͽϞͽϽͽ, ΔϐͻΔϲ, ϹϲͿϹϲͼ ϤϹͻ Ϟͼዮͻϭͽ.

Our project involved 8 communities in Nunavut: Arviat, Cambridge Bay, <u>Clyde River, Coral Harbour, Gjoa Haven, Iqaluit, Pond Inlet, and Sanikiluaq.</u>



02









Photos: Natalie Carter and Gita Ljubicic

Training and collaborative analysis workshops with Local Research Coordinators, Elder mentors, and project partners between October 2019 and December 2022.

⊲⊃∩≟^ݛ ∧۶º५⊂⊲Г^ݛ ∧┌ݛ⊲º५⊳ל^ݛ (2018 - 2022)

⊳⊦⊃ೖესა	∧۶℠ℸ⊂⊲ᡅ۶⊳ℴℲ ^ϲ				
∩r'∧ ⊾ 2018	• ၆ጋ [፣] ትምህር ጭጋ ^ና ምትምምትግር የመድረጉ የባይ የውይ የስት				
,եշ⊃⊲ռ - ೨&∧ռ 2019	 Եን՚ኦჾჾս՞ ላ/ ՟՝/ՈԿ՟՟ Կ௳ኦኦ ペ՟ Ⴀ ჃჾჀ (Ճ ֊ ՟՝ ՟՝ ՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟				
⊳⁵ጋ∧⊾ - ೨ል∧⊾ 2019	• ለሩሢኣሏኇና ሬበĽናር॰ኇዯና ወዺኆኇ ጜኦትኣ፞ጏና ጋየጏዻኈበንዎና ጜኇቦንኇ ቯኊኦ፦, ╛<৽ ኆሢናርኦኈ Δጜኌፚና, ቃኣፇ፟Γ				
∩ґ∧ ∟ 2019 - Լ՛ ≀ 2020	•				
L'ነት 2020	 				
ર્ચσ 2021	 ១৩୯-՟ም ֎۵₽ϟ⅃՟ ጋԲ⅃ⅆ℩ՈծՋ՟ ՈՐⅆԵ՞ም՞ՎՈՒ				
⊳⊳⊃∧ ∟ 2021	• ၆ጋ ^ኦ ትσ ^ᢑ Ძ ^Ⴀ 'ዦℾናፖሏσ ^ኈ Ხበσ ^ᢐ Ს ር∆Ხσ ዻ'ል⊲ ^ϲ , ೨৫ጵ՛୮ ^ϲ				
_۵&∧ ⊾ 2022	•				
በረለ ~ 2022	 Եጋንትዔበሱ॰☞ካሪና ምርናዖჾ֊ጋና ԵበLበCኦσኈ ርΔԵჾ <ሲ, ጳ॰በላሲፈር ኦምካሪካራ ዲጦ ጳኈዖቦላኈረር ኣኈዖჾሪና ኦዖኦጐርኈጋና ჾዮሎረኮሪ ሀበレჾላቃና ጋና॰ጋቦ, ጳ৽በላሲፈ 				

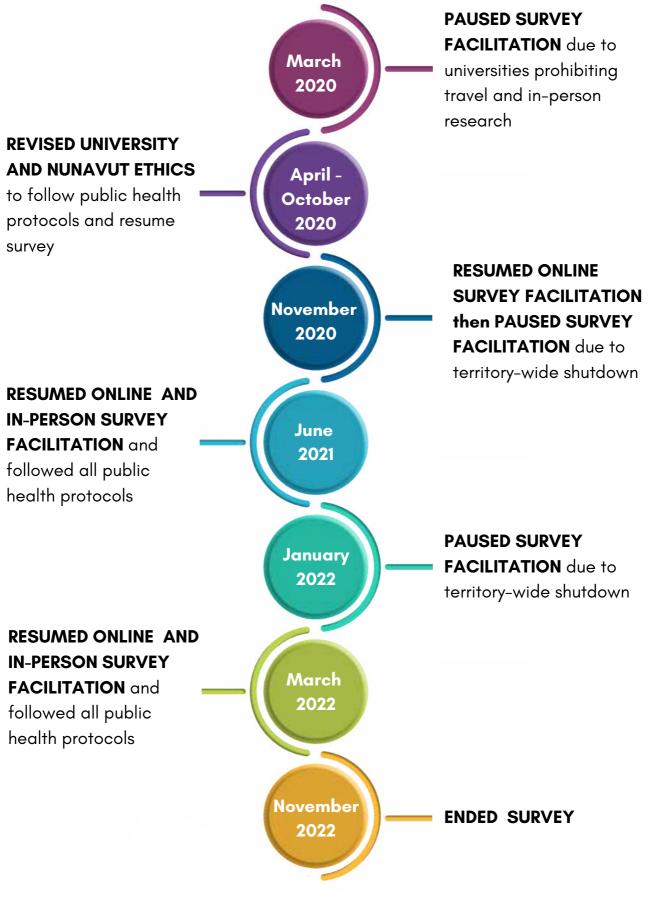
KEY PROJECT ACTIVITIES (2018 - 2022)

Timeline	Activities			
December 2018	 collaborative project planning meeting at ArcticNet conference in Ottawa, Ontario 			
January – November 2019	 collaborative survey development (involving our project proposal team, Local Research Coordinators, and a number of external reviewers) this led to survey questions, wording, and options that were much more clear, relevant, and accessible for Nunavummiut it also means results can be more meaningful and impactful to researchers, northerners, and policy-makers 			
October – November 2019	 training sessions with Local Research Coordinators near Montreal, Quebec and in Iqaluit, Nunavut 			
December 2019 - March 2020	 Local Research Coordinators facilitated surveys in their home communities 			
March 2020	 surveys put on hold due to the COVID-19 pandemic (see page 4. for more details) we started working together on a plan for how to safely continue the project 			
June 2021	 Local Research Coordinators restarted survey facilitation this could only happen after public health and research license/ethics restrictions allowed it, and with local community organizations' support Local Research Coordinators also followed up with some earlier participants to clarify answers 			
October 2021	• collaborative analysis workshop in Arviat, Nunavut			
November 2022	 Local Research Coordinators stopped facilitating surveys in their home communities 			
December 2022	 collaborative analysis workshop in Paris, Ontario, presentations of refined results at ArcticNet conference in Toronto, Ontario 			



ירכ™רכ∧ ירי∩וטיבי⊲ ירשיקארטיליל⊲טי ירבייכיפי **ווי**רייירעייראייניי

SURVEY TIMELINE DURING THE COVID-19 PANDEMIC



https://straightupnorth.ca/community-wwic-uses-and-needs/

^ͻ·϶ͼͺϽʹϓϷͺϪͳϷͺϧͼʹϿϐ·ϿͼʹͽϾʹϿϐϲͿϧϒϹͶ ϶·ϽϧϧͼϹͺͻϹͷϨͼϷϥϪͺϒͼϭͺʹͽͽϓʹͶϗϳͼϭ

つPr/「マPNヮ゚[▶] へ[▶]┗[▶]ヮPLJ&^C CLDLϷ[<] Þヮ[▶]Ġ┌ d^CC Г[▶]┪ヮ^c d^LLう[▶]ゥ^c d[®]Րヮ[®]Կ[®] dへ[®]i¹∩┌ d⋗^c つհ⊾ d⊾^C: i[†]┌ Cし[®], d[®]PÞL&[▶] パムヶ^N[®]し, i<u>nukpaujaq@gmail.com</u> ¿C┌ ╘Þつ, L[▶]L[↓]つ r^L^cつ[®]५[®]&^{*}td[®]し, <u>carten7@mcmaster.ca</u> ГС コオヘr[▶], L[▶]L[↓]つ r^L^Cつ[®]५[®]&^{*}td[®]し, <u>gita.ljubicic@mcmaster.ca</u>

>>>>>>>><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><<p><

ϼͼϲ·ͼ ʹϐϷϟϞͺͿϚͺϽΡͺͿϥϷͶϟϘϚͺϤϹͺϷʹϤϨͼϧϲͿϹ;ͺϽϹ;ϤϤͼϧϲϧϲͺ ΔϼϧͶϽ;·ϿͼϛϲͺΓϲϧϞͿͺͰϷϧϷϛͺϥϽͻͿϯϹͺϷͺϐϷϟͼ;ͺϥϽϲϧϧͺϤϲϧϧϧϧϧϧϧϧ Ϥϥ;ϽͲϧͺϤϒϧϧϥϥϗϷϷͿϹϧͺϷϧϷϭ;ϲϥϟϛͺϽϣϥϧͺϲϲϭϿϽͺϧϹϗϧϥϽϲͺϽͰͿϥͲ;Ͽʹ Ϥϒ;ϽͲϧͺϤϒϧϥϫϿϷϤϧϷϧϲϲϲϥϟϛͺϽϣϥϧͺϲϲϭϿϽͺϧϹϗϧϥϽϲͺϽͰͿϥͲ;Ͽʹ ϤϒͼϒϥͺϒͺϤϒͼϒϥϗϷϽϤϧϷϧϲϲϲϥϟϛͺϽϣϥϧͺϲϲϭϿϽͺϧϹϧ;ϥϽϷ ϭϒϧϞϥϚϼϫϲϲ ΔϿϤ;ϧͼϫϲϲϫ;ϳϹͺϤϒͺͽϟϥϹͺϘϲϧͺϹͺϘͽϘϛͺϘ;ϹϥͼϧͺϽϲͺϹϲϧϧϽ ΔϿϤ;ϒͼϫϲϫ;;ϳϹͺϤϒͺͽϟϥϹͺϘϲϧͺϹͺϿͽϘϛͺϘ;Ͱϧϥϲ Ϲϲϧϲϧϲ Δϲϧϲ ΔϧϲϧϲϿͿϧͺϒϐϗͼͶϲͿϲϫϿϲͺϤϒͼϧϲϧͳϲͺϾϧϥϥͺϷϧϧϒͼͶϲͺΓϲͺϤϐϧϳϧͺϲϫ ϲϔϒϧϲϿͺϤϧϲͿϤͼϧϧϲϘͺϒϲϭϲϧͼͶϲϲϧͼ

רישר אישראכר רישר אישראכ ריקר אישרא יפריילרי¢רט⊂ רטיילסטי

SURVEY FACILITATION BY LOCAL RESEARCH COORDINATORS

In total, **19 Local Research Coordinators** were involved in the project, and they completed **360 surveys** across **8 communities** in Nunavut.

Local Research Coordinators invited community members to participate based on certain criteria. Specifically, we wanted to learn about uses and needs of weather, water, ice, and climate information and services from community members who were actively travelling on the land (including water and ice) in the last three years (since 2017). This included men and women of all ages and experience levels, and they could be experienced hunters, seasonal travellers, or people who just like to get out on the land.

Local Research Coordinators facilitated the surveys in English or Inuktut based on participant preference. They used Qualtrics survey software to enter responses on iPads. They facilitated the survey in a community office or in participants' homes, based on individual comfort level. Some participants did the survey on their own using an online survey link, when COVID-19 pandemic public health restrictions prevented in-person surveys. Participants were compensated for their time. We obtained research ethics and license approvals before we started the survey.

۵ペ۶ ۵۶^۰ ۵۲^۰, ۵۵۹ ۵۶^۰ ۵۳^۰ ۵۵^۰ ۵۸^۰ ۵۸^۰ ۱۹ ۹۵^۰ ۵۶^۰ ۵۹ ۱<u>۹ ۹^۰ ۲۵^۰ ۸۰</u>۲۵^۰

For more information about this report and the larger study please contact:

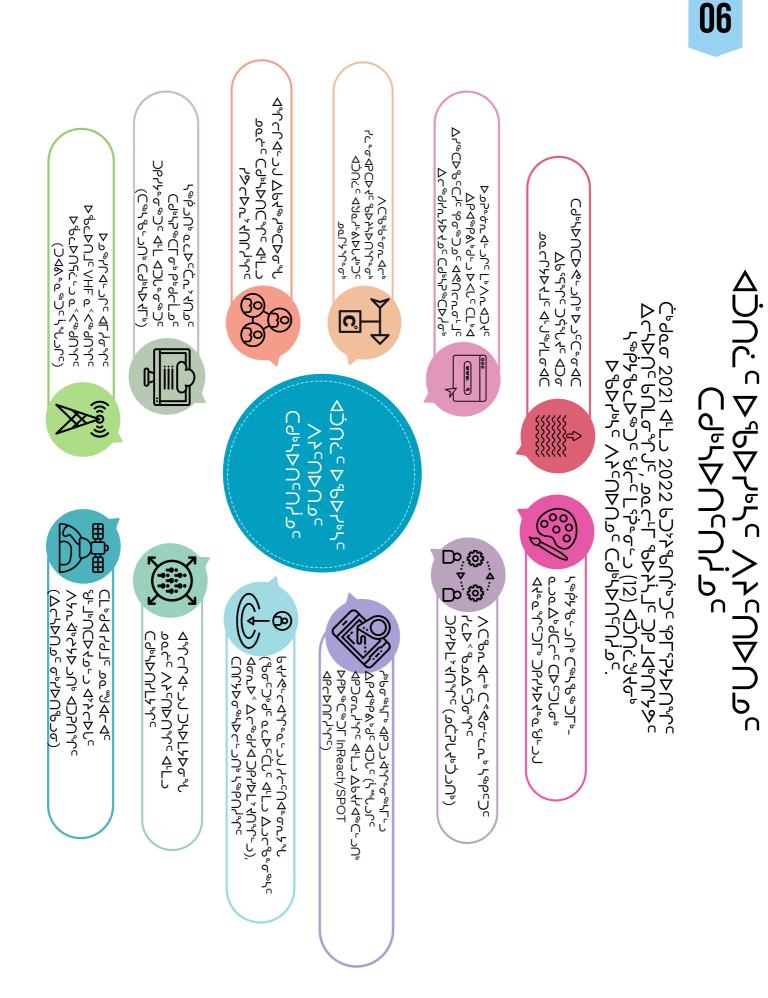
Shirley Tagalik, Aqqiumavvik Society, 204–218–0866, inukpaujaq@gmail.com

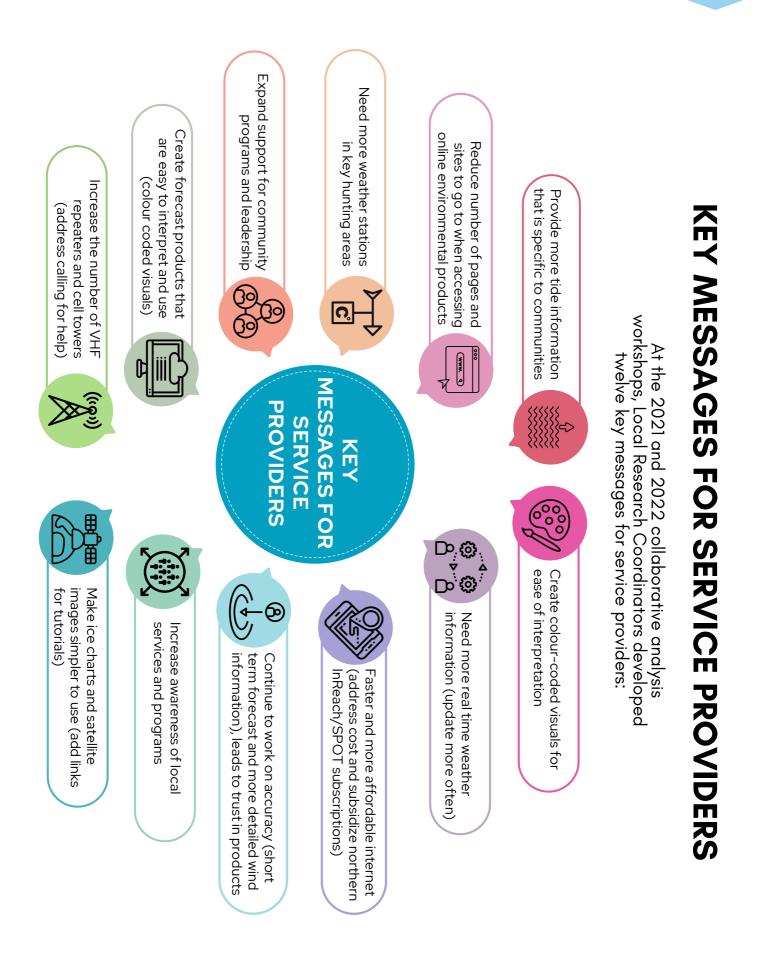
Natalie Carter, McMaster University, <u>carten7@mcmaster.ca</u>

Gita Ljubicic, McMaster University, <u>gita.ljubicic@mcmaster.ca</u>

To access a Nunavut-wide report, and other community reports, please visit:

https://straightupnorth.ca/community-wwic-uses-and-needs/





ᢀ᠋ᢕᡄ᠋᠆ᢂ᠖᠕᠆᠕᠆᠘᠖᠘᠘᠘

2022 ᲡጋንኦዔበሶᲮጋና ዦርጉኦኦቦበዮና ᠘᠆ᢣኦቦቦና ᲡᲘLჾ⊲Jና, ഛ֊୮ ቴኦኦኣጋና ጋቦጋላኮበዮኦጵና ኣዮዮኦቴሬኦዮጋና ፈኛልჾcႪ ጳርኦዠናኌ (ፖ) ላጋበሬ ଅלჾᲮ ኦቴኦሥኣჾᲮ Ե৬ፊ৬Ს ഛ֊ና በՐሄበዮ՞ጋና:



KEY MESSAGES FOR COMMUNITIES

At the 2022 collaborative analysis workshop, Local Research Coordinators developed seven key messages for community organizations:

77/
Key messages for communities
Develop training programs to meet community needs (e.g. land skills, traditional forecasting, apps, devices, mapping)
Raise awareness about available training programs (for all community members, hunters and non-hunters)
Develop a list of useable/reliable sites and apps to help make the best decisions in travel
Create a list of reliable community sources (who to learn from)
Share more information in communities about environmental conditions and hazards
Always travel with an inReach or SPOT device
Raise awareness about ways to share and access information (local radio, CB/VHFchannels, specific social media options)

UNDERSTANDING THE NUMBERS IN THIS REPORT

PERCENT

100% = all 14 participants

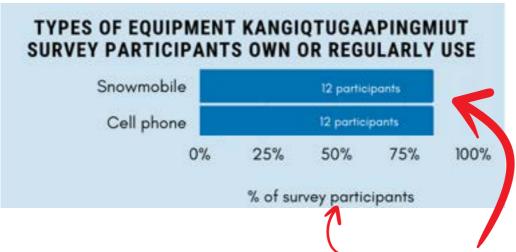
Most of the survey results in this report are shown as % (percent) where 100% means all 14 participants in Clyde River who completed the survey.

Sometimes participants could choose more than one answer, so totals in some figures don't add to 100%.

In this example **from p. 13**, participants could choose more than one method of transportation.

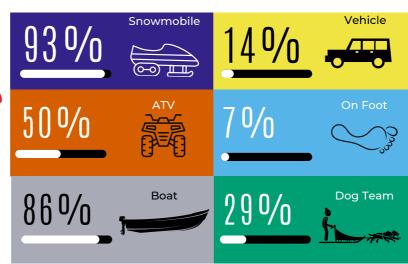
COUNTS

Count = the number of participants giving that answer



Some of the charts show the results in percent and the **count** (actual number) of participants who gave that answer. In this example **from p. 12**, snowmobiles are owned or regularly used by 86% of participants (12 participants).

METHODS OF TRANSPORTATION SURVEY PARTICIPANTS USE TO TRAVEL ON THE LAND



UNDERSTANDING THE NUMBERS IN THIS REPORT (CONTINUED)

PARTICIPANTS

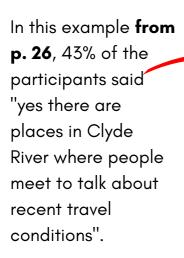
Participants = everyone (all 14 people) who did this survey in Clyde River RESPONDENTS

Respondents = only the participants who answered follow-up questions

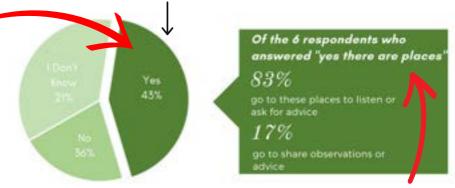
There are some questions in the survey that not everyone answered. Participants who answered "no" to a question would skip to the next section. But participants who answered "yes" to the same question would be asked some *related follow-up questions*. When we show the results to follow-up questions, we call this group of participants "**respondents**", because they were the ones who answered the question.

Respondents = only the participants who completed maps

Some participants did not complete travel maps (due to technical issues and other reasons). When we show the maps, we call this group of participants "**respondents**", because they were the ones who completed maps.



Are there places in Clyde River where people tend to meet and talk about recent travel conditions?



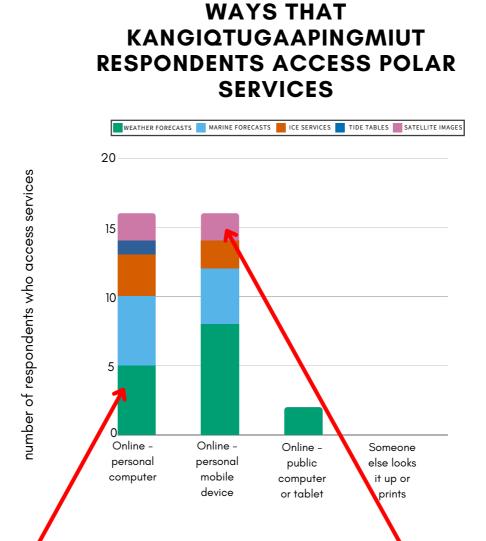
Of the 6 **respondents** who said "yes there are places", 83% go to these places to listen or ask for advice and 17% go to share observations or advice.

Only the participants who said "Yes, there are place", were asked the followup question, "Do you got to these places to listen or ask for advice?" This smaller group of participants who answered the follow-up question are called **respondents**. So the percent shown for respondents are out of the total who answered the question, and not the total of participants.

UNDERSTANDING THE NUMBERS IN THIS REPORT (CONTINUED)

RESPONDENTS

Respondents = only the participants who use forecasting products



Some participants did not use every type of environmental forecasting information (i.e. weather forecasts, marine forecasts, ice services, tide tables, satellite images).

In this example from **p. 33**, of the respondents who access weather forecasts, 5 of them go on online using a personal computer to access weather forecasts. Of the respondents who access satellite images, 2 of them access satellite images online using a personal mobile device.

UNDERSTANDING THE MAPS IN THIS REPORT

TOTAL TRAVEL

Image: constrained of the selectedImage: constrained of the selected

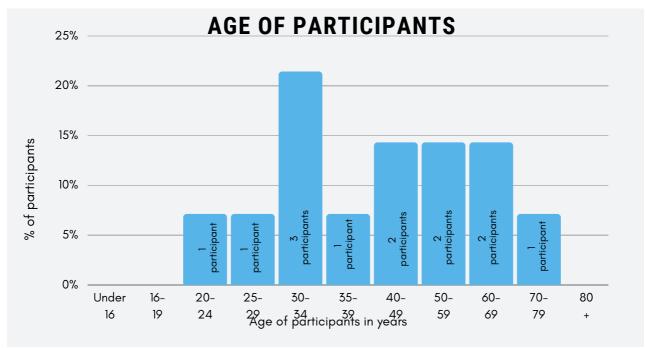
MAP COLOURS AND LEGENDS

Each coloured box on the maps represents a certain number of respondents who travelled to that area, and all of the types of transportation they used to travel there (e.g. if a respondent went to an area by ATV and by snowmobile, it is counted as having travelled to the area twice).

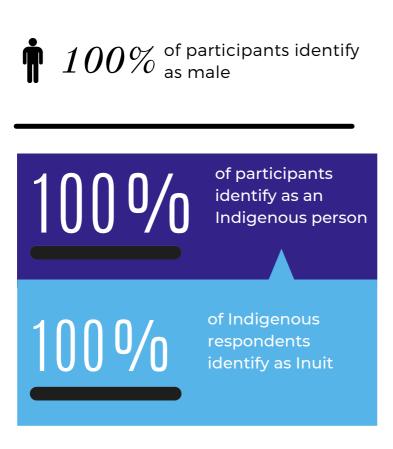
Darker/brighter colours = more respondents went there. Lighter colours = less respondents went there.

Respondents = only the participants who completed maps Some participants did not complete travel maps (due to technical issues and other reasons). When we show the maps, we call this group of participants "respondents", because they were the ones who completed maps.

KANGIQTUGAAPINGMIUT SURVEY PARTICIPANT DEMOGRAPHICS



Survey participants ranged in age from 20 to 79 years, with the highest proportion (21%) being between 30–34 years old. No one under the age of 20 or 80 years and older, participated in the survey.



All participants identify as male.

All participants identify as an Indigenous person, and as Inuit.

KANGIQTUGAAPINGMIUT PARTICIPANT DEMOGRAPHICS (CONTINUED)



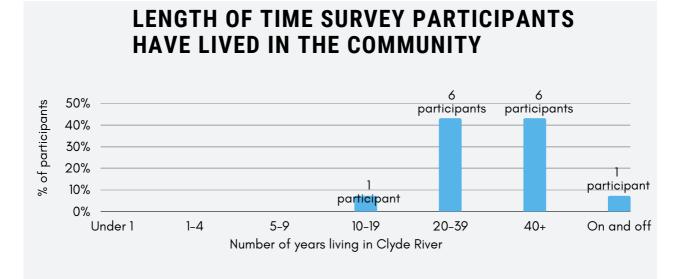
*Participants could choose multiple languages

Participants were asked about which languages they speak.

Most participants speak English (79%) and all speak Inuktitut.

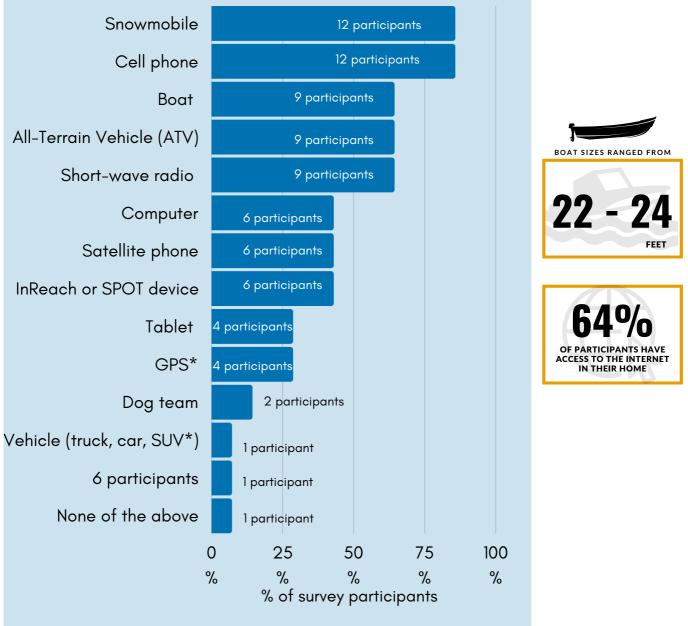
It is important to understand how long participants have lived in Clyde River as this relates to (although does not necessarily determine) how much experience they have with travel on the land, water, or ice.

Most participants (86%) have lived in Clyde River for 20 or more years.



TRAVEL EQUIPMENT

TYPES OF EQUIPMENT KANGIQTUGAAPINGMIUT SURVEY PARTICIPANTS OWN OR REGULARLY USE



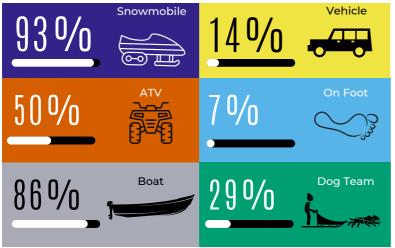
* GPS: Global Positioning System; SUV: Sport Utility Vehicle; SPOT: Satellite Personal Tracker; Short-wave radio e.g. CB, SBX, VHF

Snowmobiles and cell phones are the types of equipment most often owned or regularly used by participants, followed by boats, AAVTS, and short-wave radios (CB, SBX, VHF).

Many (64%) participants have access to the internet in their home. This is important to know because it affects what kinds of environmental forecast information they might be able to access.

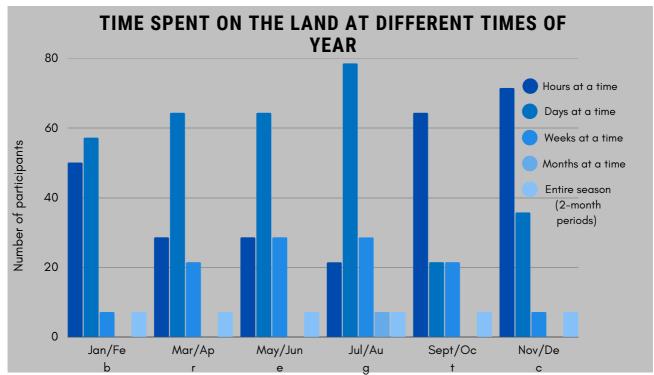
TRAVEL HABITS

METHODS OF TRANSPORTATION SURVEY PARTICIPANTS USE TO TRAVEL ON THE LAND



When survey participants travel on the land, water, and sea ice, snowmobile is the most common method of transportation used, followed by boat and ATV. Participants also travel by vehicle, dog team, and on foot.

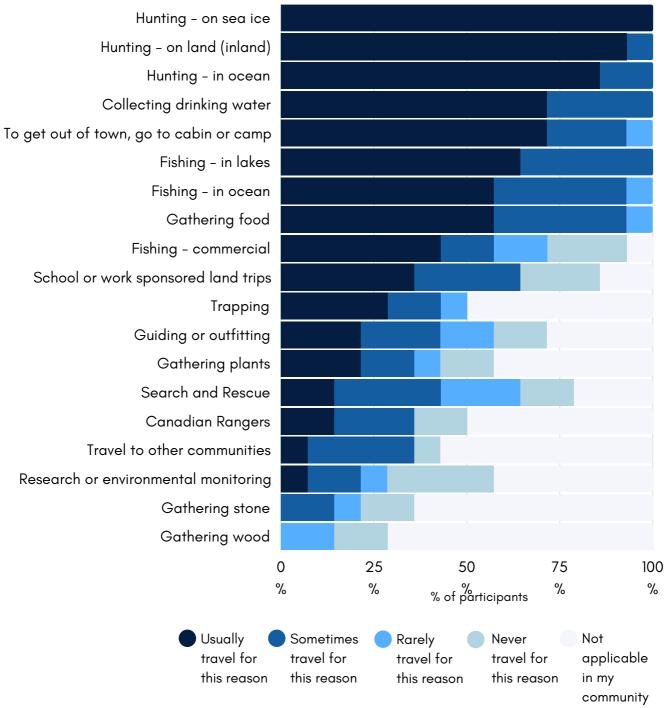
Survey participants use different types of transportation at different times of year. Snowmobiles are used all through the year. ATVs are used from March through December. Boats are used from May through December.



In different times of year, survey participants spend different lengths of time on the land. Most commonly, participants are on the land for hours or days at a time. In May through August the number of participants that are out on the land for weeks at a time, increases. Some travel for longer periods of time.

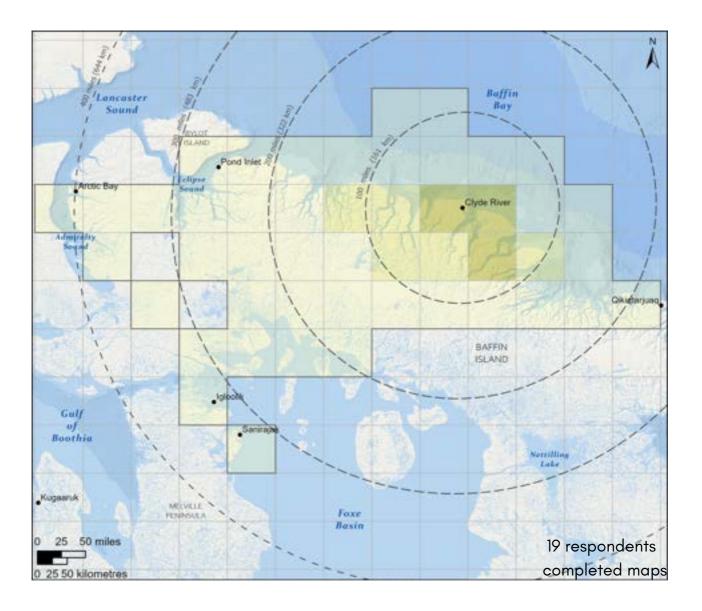
TRAVEL HABITS

REASONS KANGIQTUGAAPINGMIUT PARTICIPANTS USUALLY TRAVEL ON THE LAND



Survey participants travel on the land, water, and ice for many reasons. Most often they travel to hunt on sea ice, hunt on land (inland), andhunt in the ocean. 10

WHERE KANGIQTUGAAPINGMIUT RESPONDENTS TRAVEL (TOTAL TRAVEL)



1 - 10	11 - 20	21 - 30	31 - 40	41 - 50	51 - 60	61 - 70
71 - 80	81 - 90	91 - 100	101 -	150 151	L - 200	201 - 249

Number of respondents who travelled in the selected area

To access full page maps visit <u>https://straightupnorth.ca/community-wwic-uses-and-needs/</u>

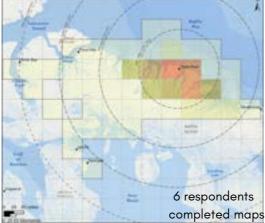
 \mathcal{C}

WHERE KANGIQTUGAAPINGMIUT RESPONDENTS TRAVEL (BY AGE)

AGES 16 TO 24 TRAVEL



AGES 35 TO 49 TRAVEL



AGES 70 AND ABOVE TRAVEL

1 - 10 11 - 20 21 - 30 31 - 40 41 - 50 51 - 60 61 - 70 71 - 80 81 - 90 91 - 100 101 - 150 151 - 200 201 - 249

Number of respondents who travelled in the selected area



AGES 50 TO 69 TRAVEL

AGES 25 TO 34 TRAVEL

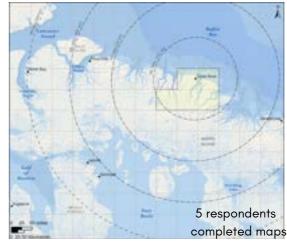


Geographic Coordinate System: GCS WGS 1984; Projection: Lambert Azimuthal Equal Area; Maps created by Regena Sinclair, June 28, 2023; Service Layer Credits: HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

WHERE KANGIQTUGAAPINGMIUT **RESPONDENTS TRAVEL (BY MODE OF TRAVEL**) SNOWMOBILE TRAVEL



ATV TRAVEL

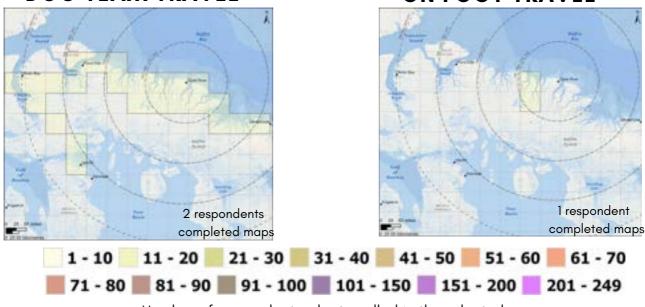


BOAT TRAVEL



DOG TEAM TRAVEL

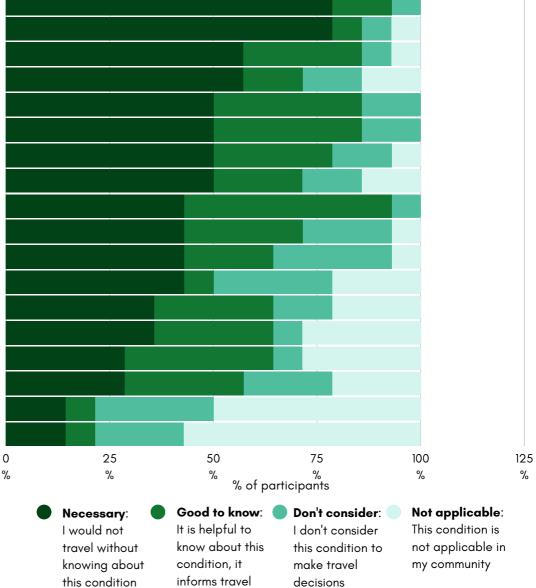
ON FOOT TRAVEL



Number of respondents who travelled in the selected area

WEATHER CONDITIONS KANGIQTUGAAPINGMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL

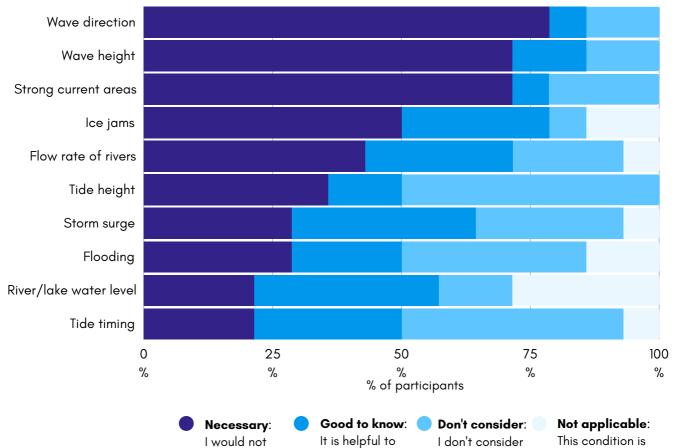
Wind strength Wind direction Blowing snow Window of clear weather Fog Whiteout Snow fall amount Snow fall intensity Low visibility Freezing drizzle Ice fog Ice pellets Freezing rain intensity Rainfall intensity Rainfall amount Temperature Atmospheric pressure Thunderstorms



Kangiqtugaapingmiut participants check many types of weather conditions before they travel on the land, water, sea ice, and snow. Wind strength, wind direction, blowing snow, and window of clear weather are the weather conditions most commonly considered necessary to check before travelling.

decisions

WATER CONDITIONS KANGIQTUGAAPINGMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL



know about this

condition, it

decisions

informs travel

travel without

knowing about this condition This condition is not applicable in my community

WATER

Kangiqtugaapingmiut participants check many types of water conditions before they travel on the land. Wave direction, wave height, and strong current areas are the water conditions most commonly considered necessary to check before travelling.

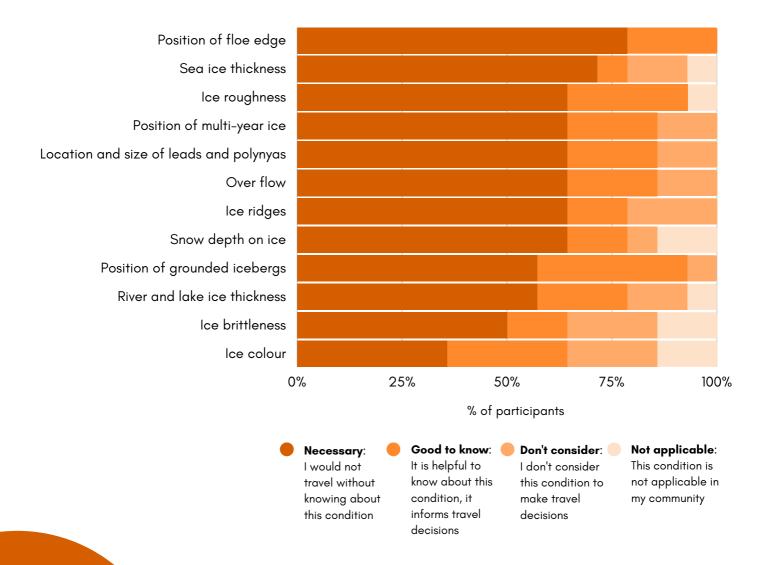
this condition to

make travel

decisions

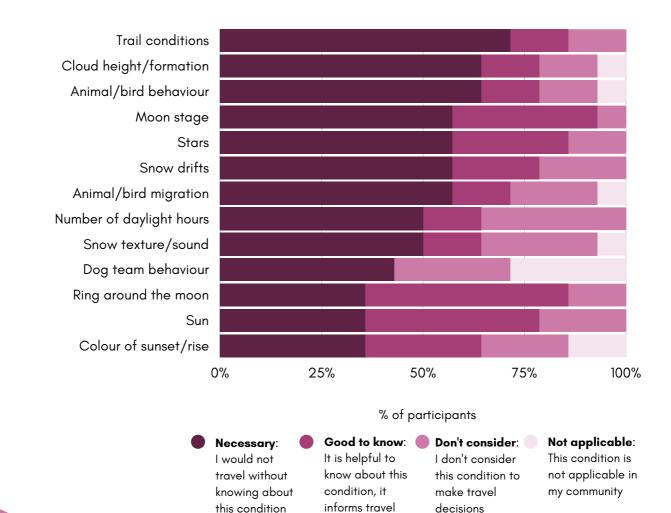
21

ICE CONDITIONS KANGIQTUGAAPINGMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL



Kangiqtugaapingmiut participants check many types of ice conditions before they travel on the land. Position of the floe edge, and sea ice thickness, ice roughness, position of multi-year ice, location and size of leads and polynyas, over flow, ice ridges, snow depth on ice, position of grounded icebergs, and river and lake ice thickness are the ice conditions most commonly considered necessary to check before travelling.

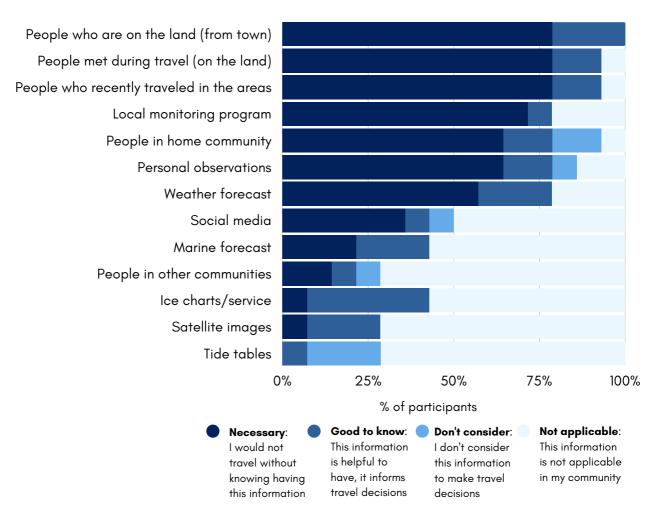
OTHER ENVIRONMENTAL CONDITIONS KANGIQTUGAAPINGMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL



decisions

Kangiqtugaapingmiut participants check many other environmental conditions before they travel on the land. Trail conditions, cloud height/formation, animal/bird behaviour, moon stage, stars, snow drifts, and animal/bird migration are the other environmental conditions most often considered necessary to check before travelling.

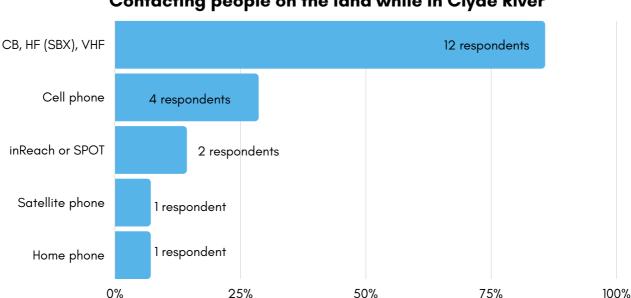
INFORMATION SOURCES KANGIQTUGAAPINGMIUT PARTICIPANTS USE WHEN PLANNING A TRIP



When planning a trip, Kangiqtugaapingmiut participants access many sources of environmental information before they travel on the land. People who are on the land, people met during travel (on the land), and people who recently travelled in the area are information sources that participants most often consider necessary to check before travelling.

While on the land and when deciding to return home talking to people met during travel on the land, talking to people who have recently taken the route or been close to the area respondents are going to, and talking to people in their home community are the information sources used most by Kangiqtugaapingmiut.

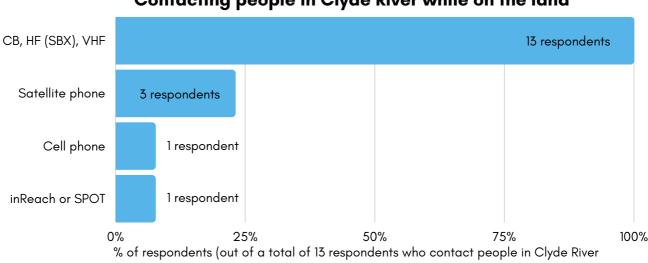
CONTACTING COMMUNITY **INFORMATION SOURCES**



Contacting people on the land while in Clyde River

% of respondents (out of a total of 14 respondents who contact people on the land)

Respondents who contact people on the land to ask about environmental conditions while they themselves are in Clyde River mostly use short-wave radios (CB, HF(SBX), VHF) or cell phones to contact them.



Contacting people in Clyde River while on the land

Respondents who contact people in Clyde River to ask about environmental conditions while they themselves are on the land mostly use short-wave radios (CB, HF(SBX), VHF.

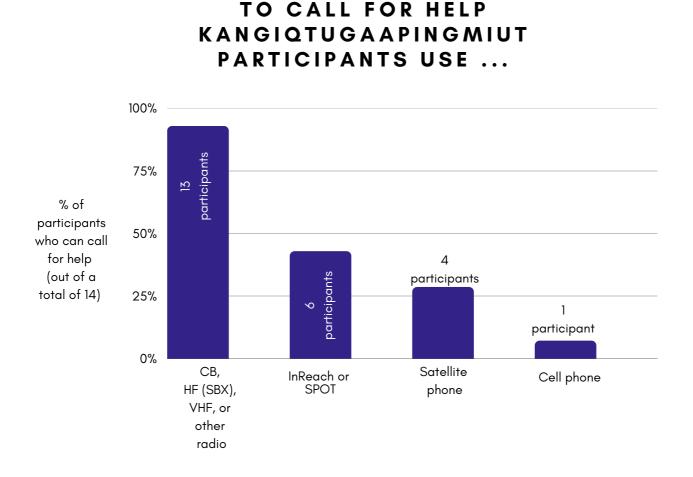
CONTACTING OTHERS FOR HELP



If Kangiqtugaapingmiut participants get stranded or have an accident on the land, 100% (out of a total of 14 can call for help.

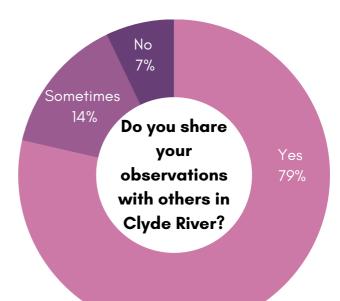
Most participants would call a **family member** (79%), a **friend** (64%), or **local search and rescue** (57%) for help. Respondents would also call **Hunters and Trappers Association** (7%) and **Nunavut Emergency Management** (7%).

To call for help, most participants use a **short-wave radio (CB, HF(SBX), VHF)** (93%). They also use **inReach or SPOT** (43%), **satellite phone** (29%), or **cell phone** (7%).



SHARING OBSERVATIONS OF WEATHER, WATER, ICE, OR SNOW CONDITIONS WITH OTHERS IN CLYDE RIVER

The majority (79%) of participants share their observations of weather, water, ice, or snow conditions with others in Clyde River.

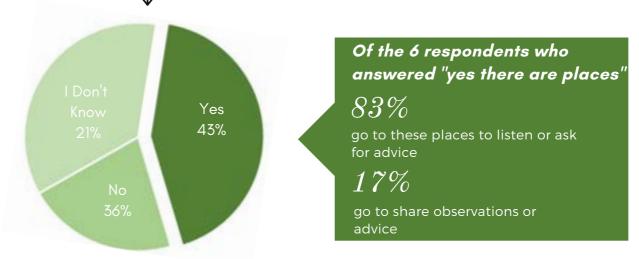


No 21% Are there people in Clyde River who share travel conditions and warnings on community radio?

Most (72%) participants said there are people regularly going on community radio in Clyde River, or CB/HF(SBX)/VHF radio, to share warnings or provide advice about weather, water, or ice conditions. A few (7%) participants did not know if people regularly go on community radio in Clyde River, or CB/HF(SBX)/VHF radio, to share warnings or provide advice about weather, water, or ice conditions.

GATHERING TO TALK ABOUT TRAVEL CONDITIONS WITH OTHERS IN CLYDE RIVER

Are there places in Clyde River where people tend to meet and talk about recent travel conditions?



Just less than half (43%) of participants said there are places in Clyde River where people tend to meet and talk about recent travel conditions, or weather, water, ice and other environmental conditions. Of the 6 respondents who said there are places where people meet, most (83%) go to those places to listen or ask for advice, and a few (17%) go to those places to share observations or advice.

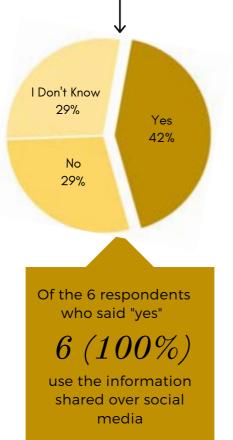
PLACES KANGIQTUGAAPINGMIUT GATHER TO TALK ABOUT TRAVEL CONDITIONS

- Dock
- Ilisaqsivik
- Nunami
- On the land
- Outside



SOCIAL MEDIA KANGIQTUGAAPINGMIUT USE TO SHARE TRAVEL CONDITIONS

Do Kangiqtugaapingmiut use social media to talk about travel conditions?



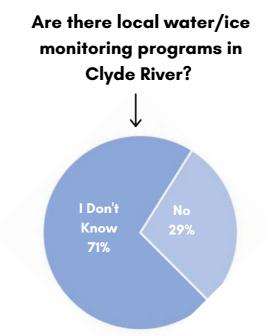
There were 6 Kangiqtugaapingmiut participants who identified being aware of Facebook pages where people share observations or advice about weather, water, and ice conditions 29

It is important to note that some respondents have their own knowledge of the weather, water, ice, and snow conditions so they do not check social media for this information.

Commonly used
social mediaTopics, descriptions,
and photos includeFacebook (personal pages)• Hunting stories
• Trip descriptions and pictures
• Weather conditions

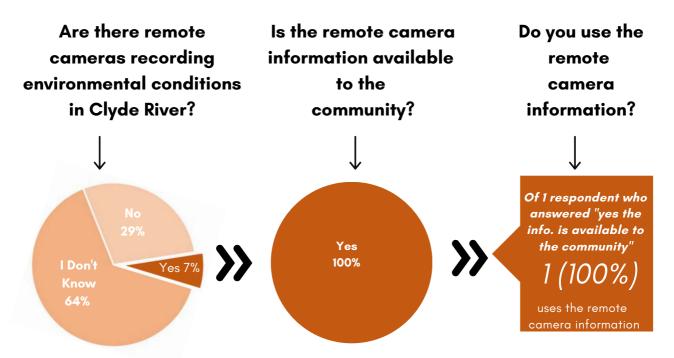
COMMUNITY MONITORING PROGRAMS Are there local Is the local weather station Do you use the local information available to the weather stations in weather station information? **Clyde River?** community? Of 7 respondents who answered "yes the info. is available Yes to the community' l Don'i Yes 100% 50% 100% 43% use the local weather station

When asked about local weather stations, it is notable that nearly as many participants said that they do not know if there are local weather stations as said that local weather stations exist. Of the 7participants who said there are local weather stations in Clyde River, all of them said the weather station information is available in Clyde River, and all of them said that they use the information.



When asked about local water and ice monitoring programs, 10 participants said that they do not know if there are local water and ice monitoring programs, and 4 said local water and ice monitoring programs do not exist.

COMMUNITY MONITORING PROGRAMS (CONTINUED)



Remote cameras are cameras placed in areas where a photographer cannot be at the camera to take photos. Remote cameras often have a self-timer built into the camera so photos can be taken at specific times. An example is a remote camera mounted somewhere near a floe edge, with a built-in timer that is set to take a photo at noon each day.

When asked about remote cameras, it is notable that more participants said that they do not know if there are remote cameras than said that remote cameras do or do not exist. Of the 5 participants who said there are remote cameras, 4 said the remote camera information is available in Arviat, and all fof them said they use the remote camera information.

Ittaq is a partner in this project, and through them we know there are local monitoring programs in Clyde River, including the Kangiqtugaapik (Clyde River) Weather Station Network, and Angunasuktiit. However, survey responses suggest that community members are not widely aware of these programs, or they did not associate them with the way the questions were asked in the survey.

COMMUNITY MONITORING PROGRAMS (CONTINUED)

Kangiqtugaapingmiut participants identified one community-based monitoring program run by a local organization. A wide range of conditions are monitored related to weather.

LOCAL WEATHER STATIONS	PROGRAM PROVIDER	WHAT IS MONITORED
------------------------	------------------	-------------------

Kangiqtugaapik (Clyde River) Weather Station Network – includes current weather at Akuliaqattak, Silasiutitalik, Ailaktalik, Nattiqsujuq, Qajaakuviup qikiqtanga, and Kangiqtugaapik Airport. lttaq Heritage and Research Centre Sky condition, air temperature, wind direction, wind speed, maximum wind gust, relative humidity, pressure, barometer, and ground temperature

PRODUCTS AND ACCESSING ENVIRONMENTAL FORECASTS

Along with community sources of information to decide if it is safe to travel, Kangiqtugaapingmiut respondents use a wide range of weather forecasts, marine forecasts, icecharts/services and satellite images available. There may be other information sources available beyond those mentioned by respondents.

WEATHER FORECAST PRODUCTS USED

- Environment Canada (www.weather.gc.ca)
- Kangiqtugaapik (Clyde River) Weather Station Network (https://clyderiverweather.org)
- Radio
- Weather Network (https://www.theweathernetwork.com/ca/weather/nunavut/clyderiver)
- Windy (www.windy.com)

MARINE FORECAST PRODUCTS USED

- Environment Canada marine forecast (www.weather.gc.ca/marine)
- Kangiqtugaapik (Clyde River) Weather Station Network (https://clyderiverweather.org)
- Radio

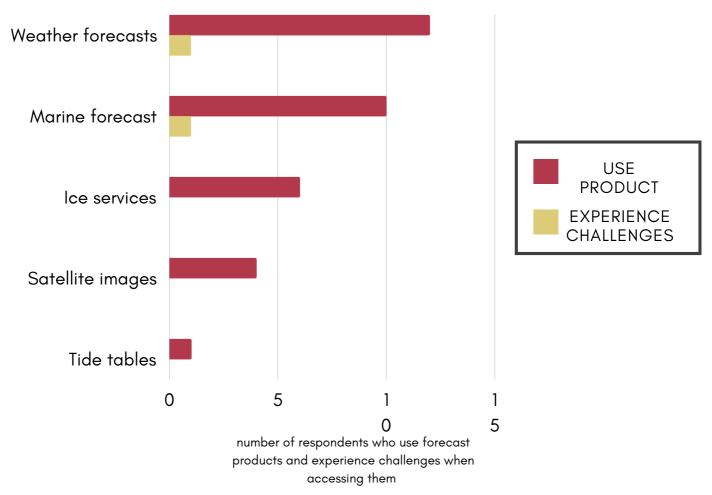
ICE CHARTS/SERVICES USED

- Canadian Ice Service (https://www.canada.ca/en/environmentclimate-change/services/ice-forecasts-observations/latestconditions.html)
- Environment Canada (www.weather.gc.ca)
- NASA EOSDIS worldview (https://worldview.earthdata.nasa.gov)

SATELLITE IMAGE PRODUCTS USED

• NASA EOSDIS Worldview (https://worldview.earthdata.nasa.gov)

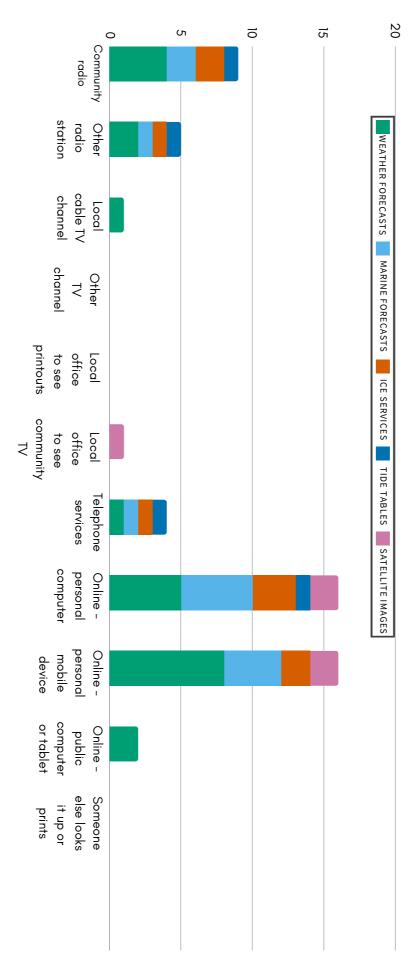
PRODUCTS AND ACCESSING ENVIRONMENTAL FORECASTS (CONTINUED)



Of the forecasting products used, respondents most often rely on weather forecasts, and the other services are less often used.

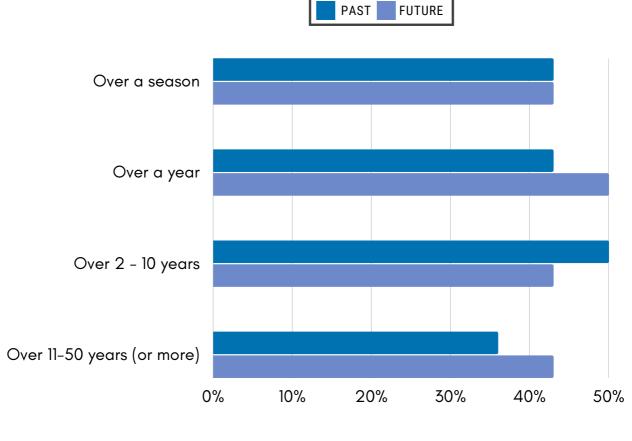
Of the 86% of participants who use **weather forecasts**, 8% experience challenges when accessing them. Of the 71% of participants who use marine forecasts, 8% experience challenges when accessing them. **Ice services** were used by 43% of participants and of these, 8% experience challenges when accessing them. Those who experience challenges accessing those service said they challenge occurs when the internet is down. **Satellite images** were used by 29% of participants, and none of them experience challenges when accessing them. Tide tables were used by 7% of participants and none of them experience challenges when accessing them.

RESPONDENTS ACCESS POLAR SERVICES WAYS THAT KANGIQTUGAAPINGMIUT



community radio. mostly by going online using a personal mobile device or personal computer, or listening to Kangiqtugaapingmiut respondents access environmental forecast products in a range of ways, and

INTEREST IN INFORMATION ABOUT PAST AND FUTURE ENVIRONMENTAL CHANGES



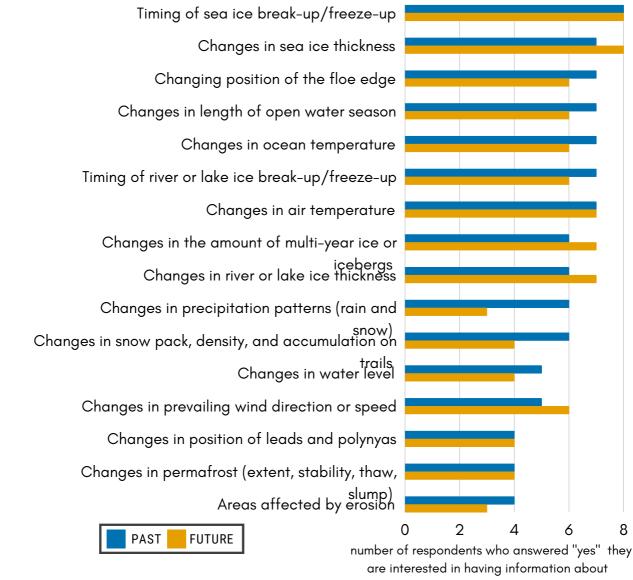
% of participants who said "yes" they are interested in having information about long-term environmental changes

Participants are interested in information about past changes to weather, water or ice conditions (related to climate change), as well as forecasting or predictions.

Slightly more participants are interested in information about changes over a year and over 2-10 years, than over a season, or 11-50 years, or more.

INTEREST IN LONG-TERM ENVIRONMENTAL CHANGES

INFORMATION ABOUT PAST OR FUTURE CHANGES FOR MAKING DECISIONS



environmental changes

More respondents are interested in having information about past environmental changes than about future changes. Common topics of interest included changes in timing of sea ice break-up/freeze-up, and sea ice thickness.

INTEREST IN TRAINING

Respondents who said they were interested in receiving training on survival skills and navigating the land (8 participants), observing and understanding environmental conditions (7 participants), local environmental monitoring programs (8 participants), and accessing or using social media pages or groups (8participants), were invited to describe the kinds of training they are interested in. Respondents were also asked to share about who they would like to learn from, and environmental conditions they would like to learn more about. The points below were organized by report writers to group them into similar topics.



- How to use GPS



Strengthening Hunting and Inuit **Cultural Practices** and Skills

Learn more about hunting and helping other hunters

_{6°}∩^₅DŪ∧⁵, 으ュタ^c Clyde River, Nunavut



۲۵۹٬۵۵۲ ،۵۵۵٬۹۵۲ ،۲۱٬۹۹۶ ۲۲٬۹۹۶ مکامه ۲۵۵۰ مرکم ۱۲۹۹۶

Results of a community survey on environmental forecasting uses and needs