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POND INLET, NUNAVUT

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Results of a community
survey on environmental
forecasting uses and needs
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DECEMBER 2023
ᑎᑲᑲᑲ 2023

SMARTICE

LOCAL RESEARCH COORDINATORS:
ANDREW ARREAK
NATASHA SIMONEE
IVAN KOONOO

Full Inuktitut/English bilingual report will be
available in February 2024 at:
<https://straightupnorth.ca/community-wwic-uses-and-needs/>

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REPORT PREPARED BY:
NATALIE CARTER, CHARLOTTE BUTTLE,
GITA LJUBICIC, REGENA SINCLAIR EMMELIE PAQUETTE



46

Mittimatalingmiut Participated

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Photo: Gita Ljubicic

Thank
you!

የጊኑ ደንብ

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ArcticNet
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Crown-Indigenous Relations and Northern Affairs Canada



20 CANADA RESEARCH CHAIRS
CHAIRES DE RECHERCHE DU CANADA



Environment and Climate Change Canada



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Environment and Climate Change Canada

Thank you!

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We wish to acknowledge the 46 **Mittimatalingmiut** who participated in this survey between September 2021 and May 2022. Thanks to everyone for their time and sharing their experiences.

Brian Kasarnak
Christopher Mutch
Ivan Koonoo
James Simonee
John Ringrose
Jonathan Pitseolak
Simeonie Aksarjuk
Trevor Arreak
Tyson Angnetsiak

And 37 Mittimatalingmiut who asked to remain anonymous.

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



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TABLE OF CONTENTS

- | | | | |
|-----------|--|-----------|--|
| 01 | About this Project | 21 | Weather, Water, Ice and Other Environmental Conditions Checked Before Travel |
| 02 | Partner Communities | 25 | Information Sources Used for Travel |
| 03 | Key Project Activities | 26 | Contacting Community Information Sources |
| 04 | Survey Timeline during the COVID-19 Pandemic | 28 | Contacting Others for Help |
| 05 | Survey Facilitation by Local Research Coordinators | 29 | Sharing Observations |
| 06 | Key Messages for Service Providers and Communities | 33 | Community Monitoring Programs |
| 08 | Understanding the Numbers in this Report | 36 | Products and Accessing Environmental Forecasts |
| 11 | Understanding the Maps in this Report | 40 | Challenges Accessing Products |
| 12 | Overview of Mittimatalingmiut Participant Demographics | 41 | Interest in Long-Term Environmental Changes |
| 15 | Travel Habits | 43 | Training Topics Mittimatalingmiut Respondents are interested in |



Photo: Andrew Arreak

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)

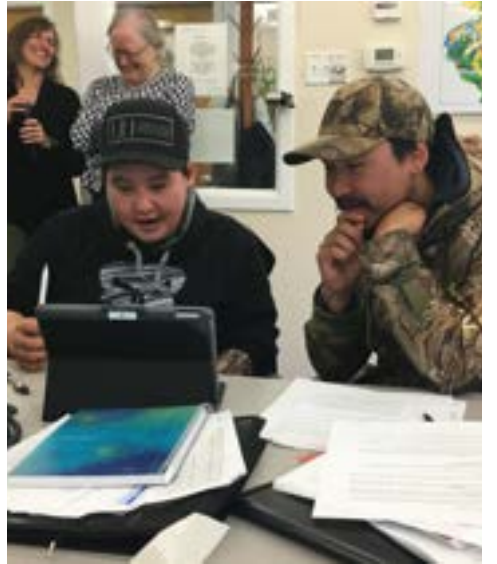
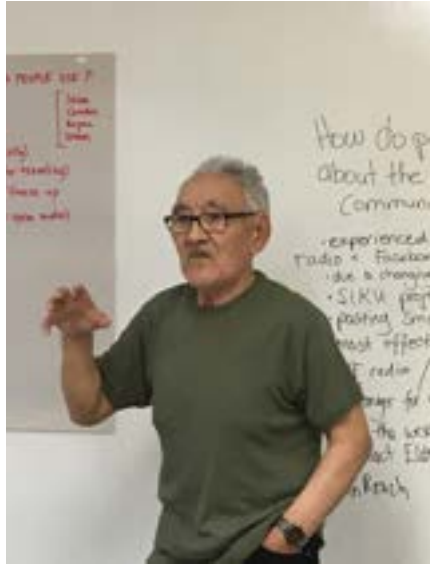
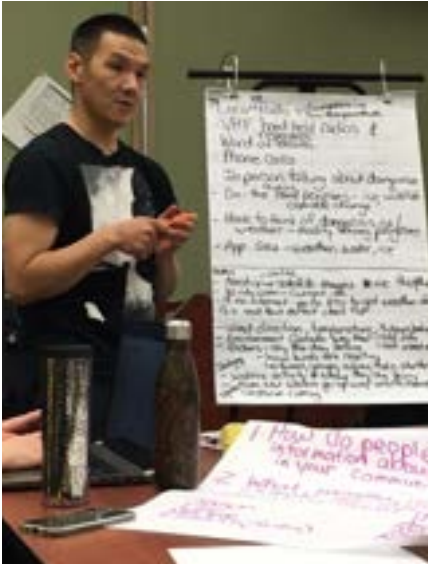
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PARTNER COMMUNITIES

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





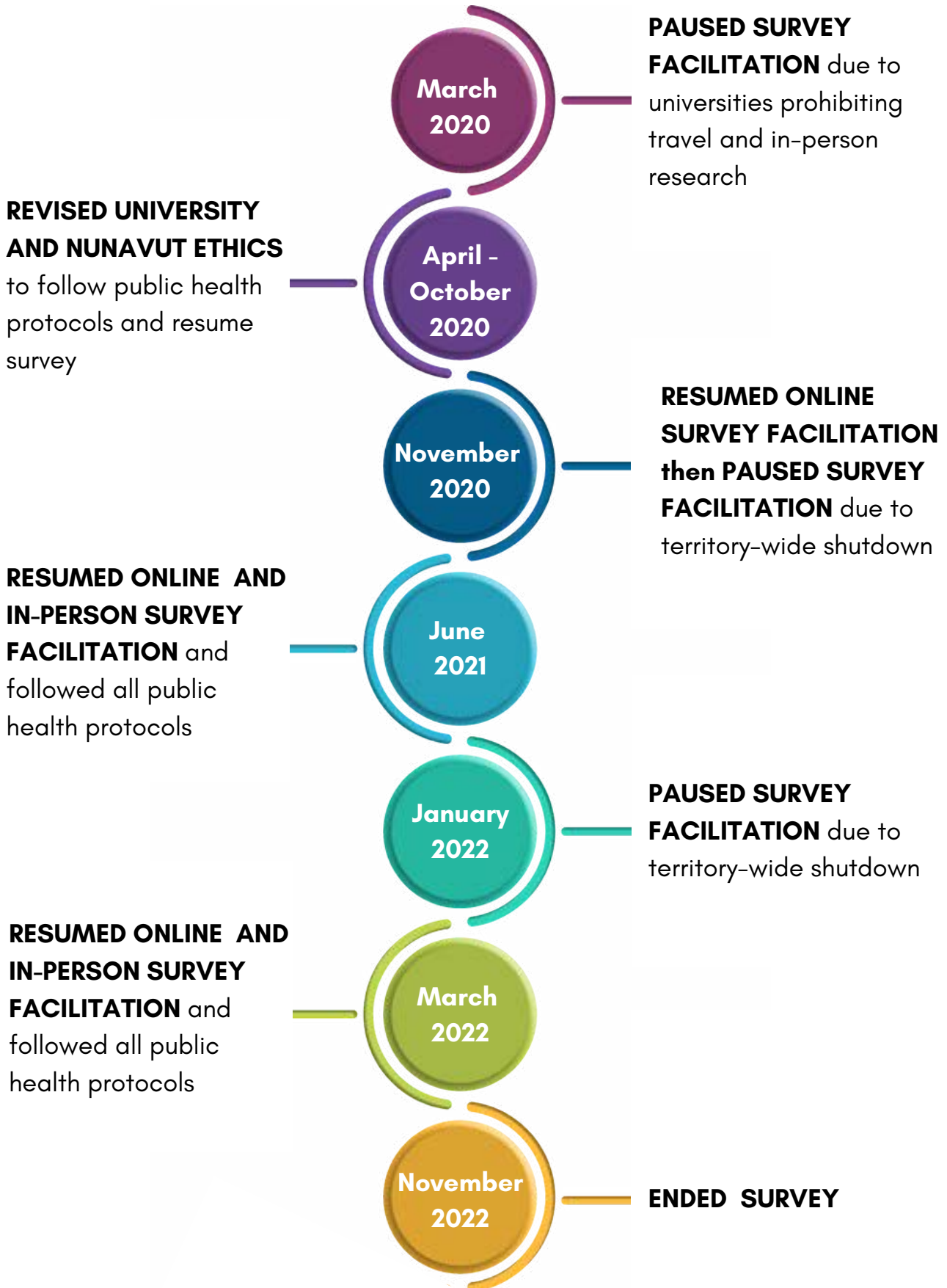
Photos: Natalie Carter and Gita Ljubicic

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

KEY PROJECT ACTIVITIES (2018 - 2022)

| Timeline | Activities |
|----------------------------|---|
| December 2018 | <ul style="list-style-type: none"> • collaborative project planning meeting at ArcticNet conference in Ottawa, Ontario |
| January - November 2019 | <ul style="list-style-type: none"> • collaborative survey development (involving our project proposal team, Local Research Coordinators, and a number of external reviewers) <ul style="list-style-type: none"> ◦ 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 | <ul style="list-style-type: none"> • training sessions with Local Research Coordinators near Montreal, Quebec and in Iqaluit, Nunavut |
| December 2019 - March 2020 | <ul style="list-style-type: none"> • Local Research Coordinators facilitated surveys in their home communities |
| March 2020 | <ul style="list-style-type: none"> • surveys put on hold due to the COVID-19 pandemic (see page 4. for more details) <ul style="list-style-type: none"> ◦ we started working together on a plan for how to safely continue the project |
| June 2021 | <ul style="list-style-type: none"> • Local Research Coordinators restarted survey facilitation <ul style="list-style-type: none"> ◦ 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 | <ul style="list-style-type: none"> • collaborative analysis workshop in Arviat, Nunavut |
| November 2022 | <ul style="list-style-type: none"> • Local Research Coordinators stopped facilitating surveys in their home communities |
| December 2022 | <ul style="list-style-type: none"> • collaborative analysis workshop in Paris, Ontario, • presentations of refined results at ArcticNet conference in Toronto, Ontario |

SURVEY TIMELINE DURING THE COVID-19 PANDEMIC



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 Inuktitut 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.

For this report, we present the results based on survey answers from a total of 46 Mittimatalingmiut = 100%.

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

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

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

מפתח להגברת הפעילות במסגרת תוכנית


מטרת התוכנית לשנת 2022 היא להגביר את הפעילות במסגרת התוכנית ולהגביר את המודעות לתוכנית בקרב הציבור הרחב. מטרת התוכנית היא להגביר את המודעות לתוכנית בקרב הציבור הרחב. מטרת התוכנית היא להגביר את המודעות לתוכנית בקרב הציבור הרחב.


 אמצעי התקשורת המונים ופלטפורמות דיגיטליות (רשתות חברתיות, אתרים, בלוגים, וידאו) הם אמצעי התקשורת המרכזי להגברת הפעילות במסגרת התוכנית.

 יצירת תוכן ייחודי ומעניין, שיגייס תשומת לב ויגרום לרשתות חברתיות לשתף אותו. יצירת תוכן ייחודי ומעניין, שיגייס תשומת לב ויגרום לרשתות חברתיות לשתף אותו.


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מפתח להגברת הפעילות במסגרת תוכנית


 אמצעי התקשורת המונים ופלטפורמות דיגיטליות (רשתות חברתיות, אתרים, בלוגים, וידאו) הם אמצעי התקשורת המרכזי להגברת הפעילות במסגרת התוכנית.

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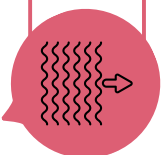
 אמצעי התקשורת המונים ופלטפורמות דיגיטליות (רשתות חברתיות, אתרים, בלוגים, וידאו) הם אמצעי התקשורת המרכזי להגברת הפעילות במסגרת התוכנית.

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KEY MESSAGES FOR SERVICE PROVIDERS

At the 2021 and 2022 collaborative analysis workshops, Local Research Coordinators developed twelve key messages for service providers:

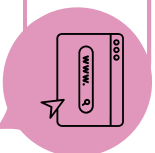
Provide more tide information that is specific to communities



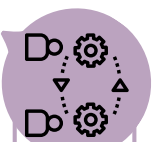
Create colour-coded visuals for ease of interpretation



Reduce number of pages and sites to go to when accessing online environmental products



Need more real time weather information (update more often)



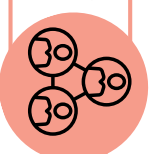
Need more weather stations in key hunting areas



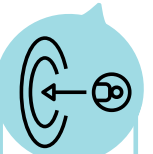
Faster and more affordable internet (address cost and subsidize northern InReach/SPOT subscriptions)



Expand support for community programs and leadership



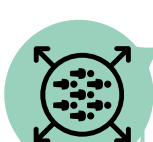
Continue to work on accuracy (short term forecast and more detailed wind information), leads to trust in products



Create forecast products that are easy to interpret and use (colour coded visuals)



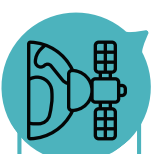
Increase awareness of local services and programs



Increase the number of VHF repeaters and cell towers (address calling for help)



Make ice charts and satellite images simpler to use (add links for tutorials)



KEY MESSAGES FOR SERVICE PROVIDERS

KEY MESSAGES FOR COMMUNITIES

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

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/VHF channels, specific social media options)

www.straightupnorth.ca

UNDERSTANDING THE NUMBERS IN THIS REPORT

PERCENT

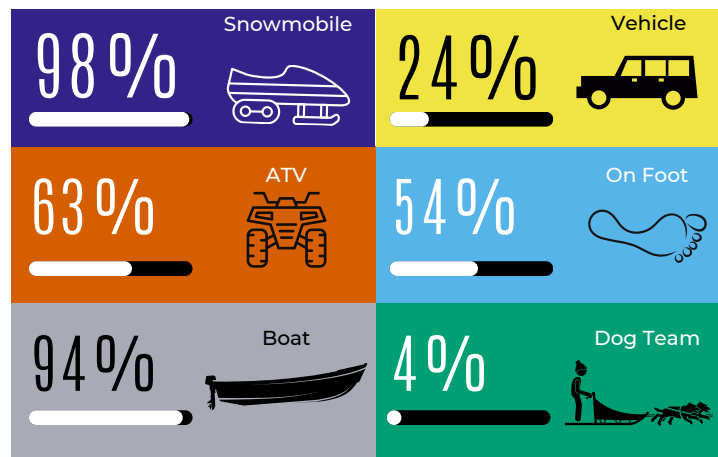
100% = all 46 participants

Most of the survey results in this report are shown as % (percent) where 100% means all 46 participants in Pond Inlet who completed the survey.

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

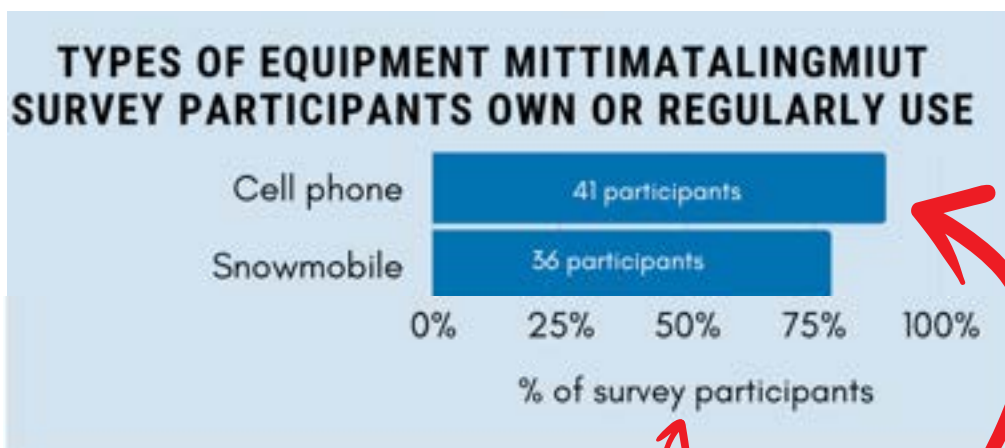
In this example **from p. 13**, participants could choose more than one method of transportation.

METHODS OF TRANSPORTATION SURVEY PARTICIPANTS USE TO TRAVEL ON THE LAND



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** cell phones are owned or regularly used by 89% of participants (41 participants).

UNDERSTANDING THE NUMBERS IN THIS REPORT (CONTINUED)

PARTICIPANTS

Participants = everyone (all 46 people) who did this survey in Pond Inlet

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.

CONTACTING OTHERS FOR HELP

In this example **from p. 26**, 87% of the participants said "yes I can call for help if I get stranded on the land".



If Mittimatalingmiut participants get stranded or have an accident on the land, 87% (out of a total of 46) can call for help.

Of the 40 **respondents** who can call for help, most would call a **family member** (93%), or a **friend** (67%), and some would call **local search and rescue** (33%) for help.

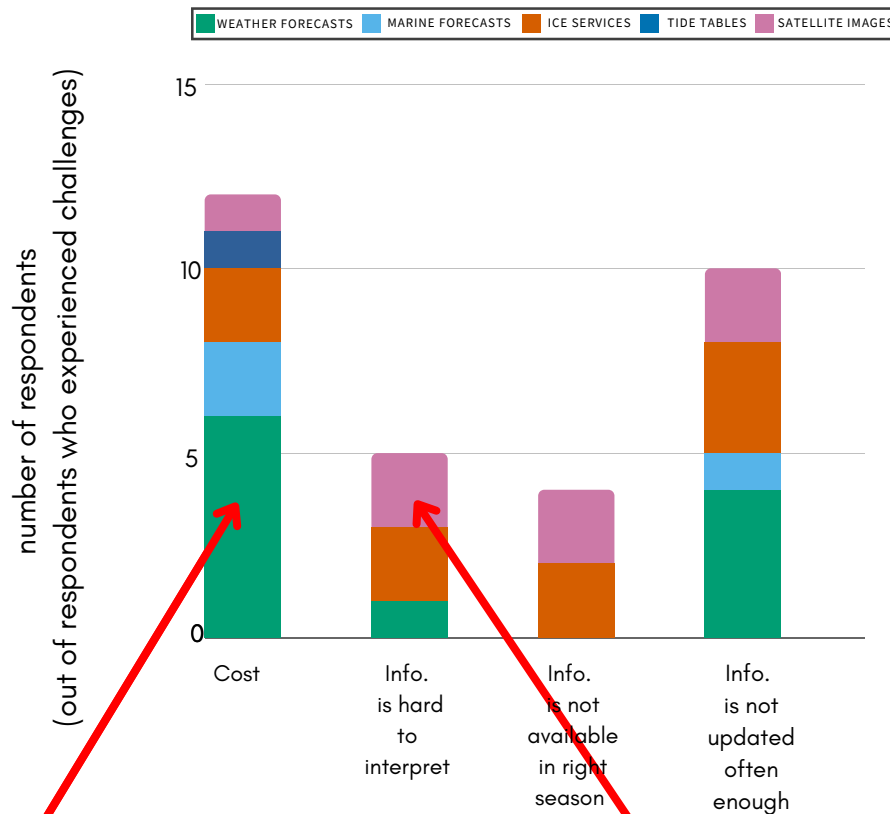
Only the participants who said "Yes, I can call for help", were asked the follow-up question, "Who, can you call for help?" This smaller group of participants who answered the follow-up question are called **respondents**. So the percent shown for respondents are out of the total who answered the question, and not the total of participants.

UNDERSTANDING THE NUMBERS IN THIS REPORT (CONTINUED)

RESPONDENTS

Respondents = only the participants who use forecasting products

REASONS WHY ENVIRONMENTAL FORECASTING INFORMATION IS DIFFICULT FOR MITTIMATALINGMIUT RESPONDENTS TO ACCESS

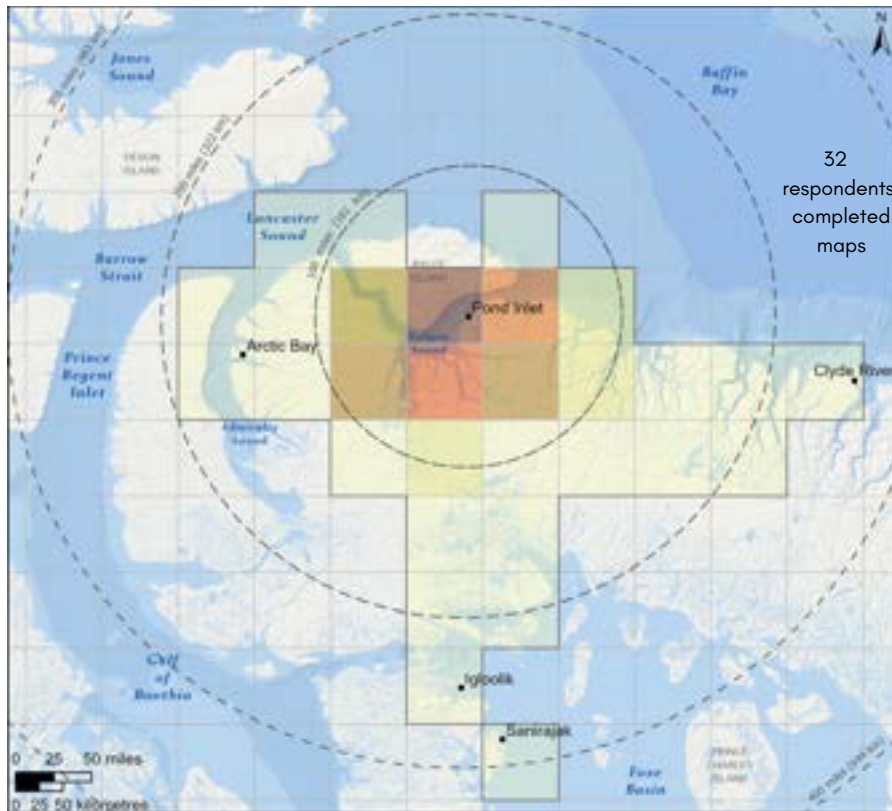


Some participants did not use every type of environmental forecasting information (i.e. weather forecasts, marine forecasts, ice services, tide tables, satellite images).

In this example from **p. 38**, of the respondents who said "Yes, I experience challenges when accessing weather forecasts", 6 of them experience challenges due to cost. Of the respondents who said "Yes, I experience challenges when accessing satellite images", 2 of them experience challenges because the information is hard to interpret.

UNDERSTANDING THE MAPS IN THIS REPORT

TOTAL TRAVEL



32
respondents
completed
maps



Number of respondents who travelled in the selected area

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).

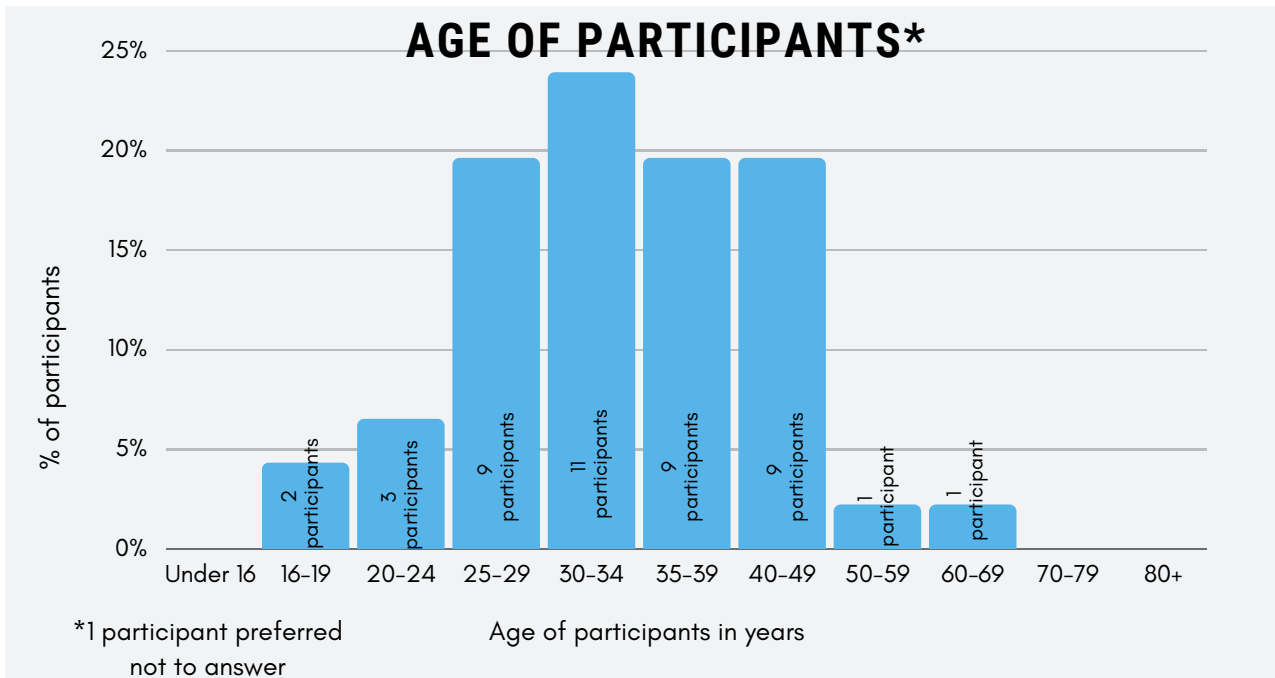
Darker/brighter colours = more respondents went there.

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.

MITTIMATALINGMIUT SURVEY PARTICIPANT DEMOGRAPHICS



Survey participants ranged in age from 16 to 69 years, with the highest proportion being between 30-34 years old (24%). No one under the age of 16 or 70 years and older, participated in the survey.



80% of participants identify as male

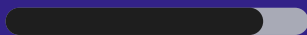


20% of participants identify as female

Most participants identify as male (80%), and 20% identify as female.

85%

of participants identify as an Indigenous person



100%

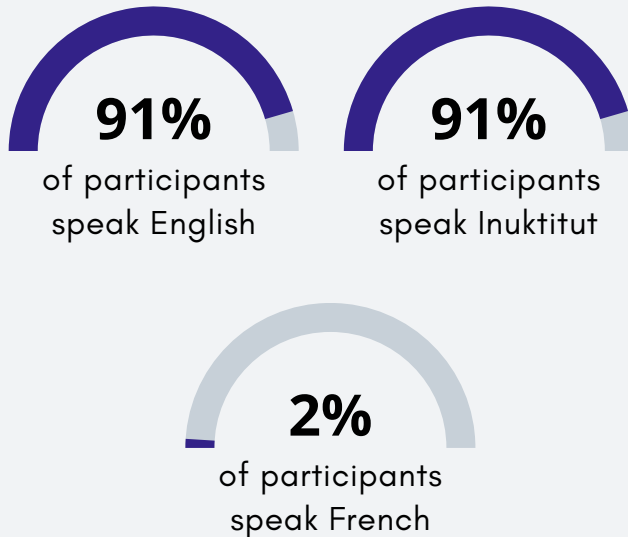
of Indigenous respondents identify as Inuit



Nearly all participants identify as an Indigenous person (85%), and all Indigenous respondents identified as Inuit.

MITTIMATALINGMIUT PARTICIPANT DEMOGRAPHICS (CONTINUED)

LANGUAGES SPOKEN*



*Participants could choose multiple languages

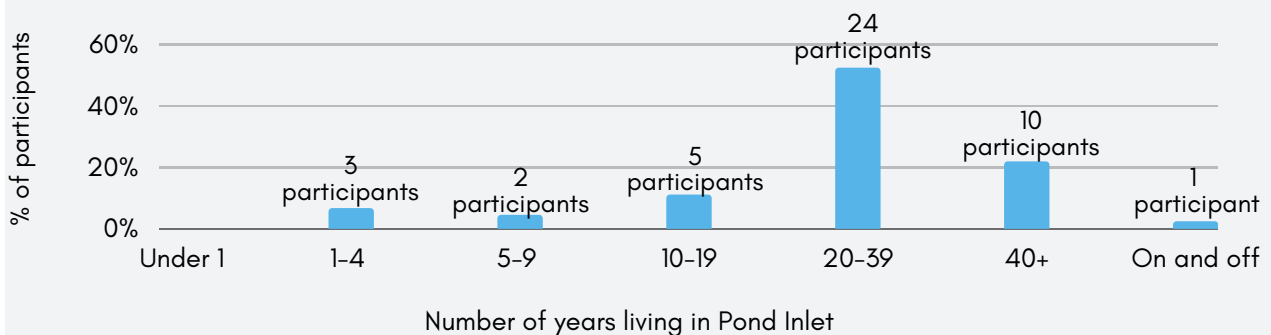
Participants were asked about which languages they speak.

Most participants speak English (91%) and most speak Inuktitut (91%). Very few, speak French (2%).

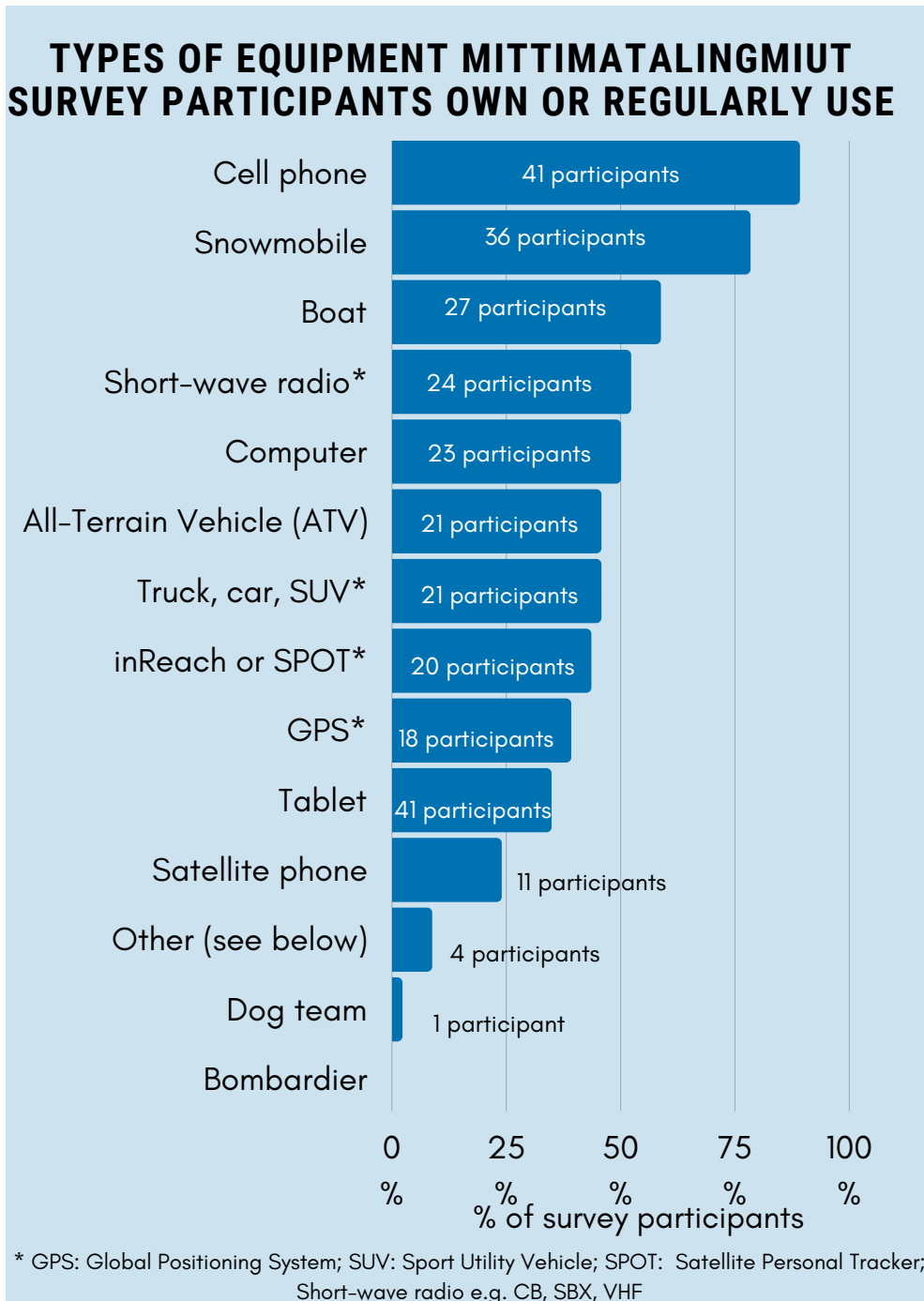
It is important to understand how long participants have lived in Pond Inlet as this relates to (although does not necessarily determine) how much experience they have with travel on the land, water, or ice.

Most participants (74%) have lived in Pond Inlet for 20 or more years.

LENGTH OF TIME SURVEY PARTICIPANTS HAVE LIVED IN THE COMMUNITY



TRAVEL EQUIPMENT



BOAT SIZES RANGED FROM

17 - 24
FEET

100%

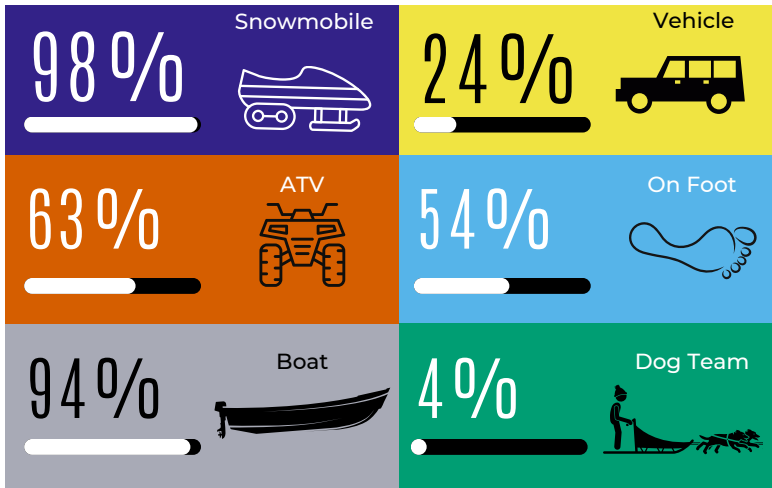
OF PARTICIPANTS HAVE
ACCESS TO THE INTERNET
IN THEIR HOME

Cell phones and snowmobiles are the types of equipment most often owned or regularly used by participants, followed by boats and short-wave radios. Participants who answered "Other" also use rifles and Zoleo.

All participants have access to the internet in their home. This is important to know because it affects what kinds of information they might be able to access.

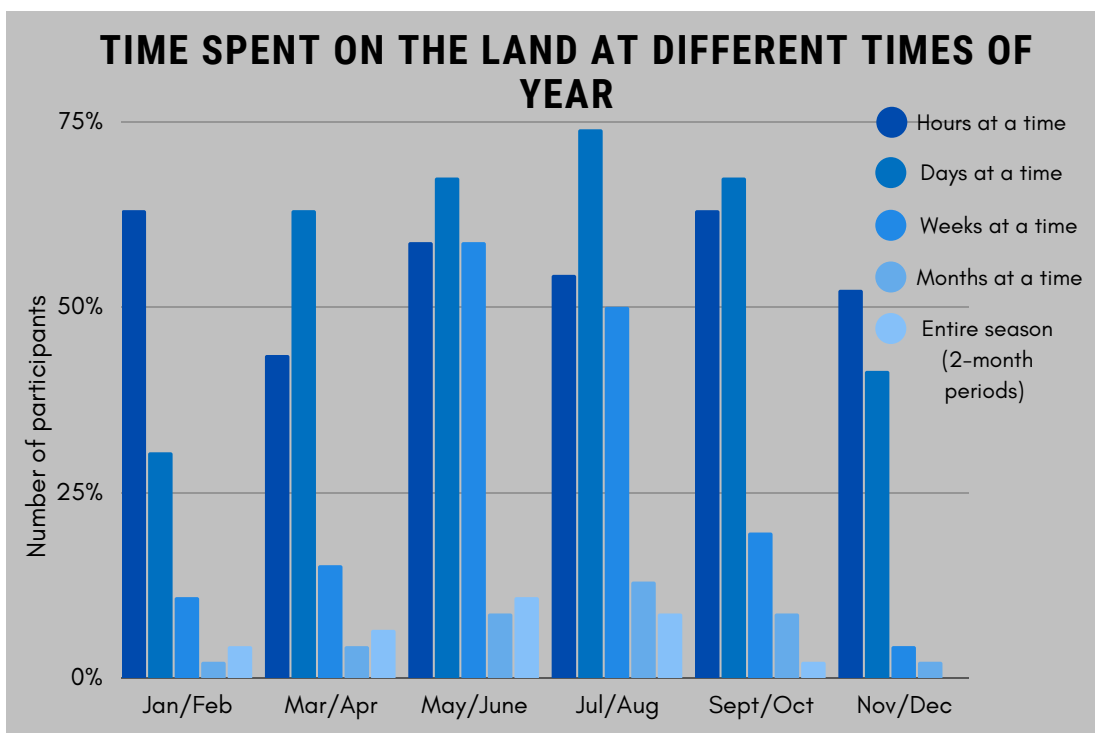
TRAVEL HABITS

METHODS OF TRANSPORTATION SURVEY PARTICIPANTS USE TO TRAVEL ON THE LAND



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

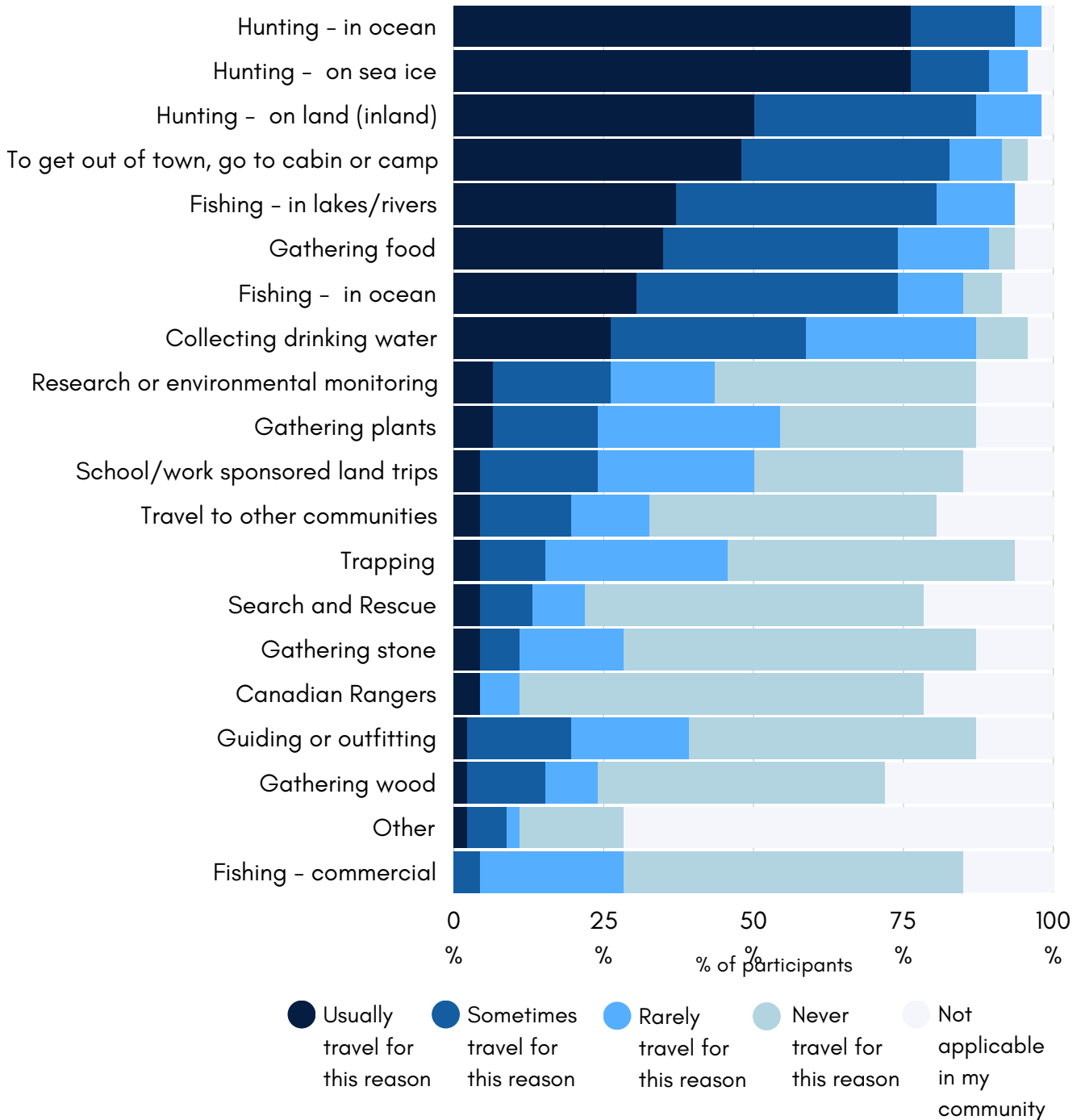
Survey participants use different types of transportation at different times of year. All year people travel by ATV, vehicle, and on foot. Snowmobiles are mostly used from November to July, and boats from July to November.



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

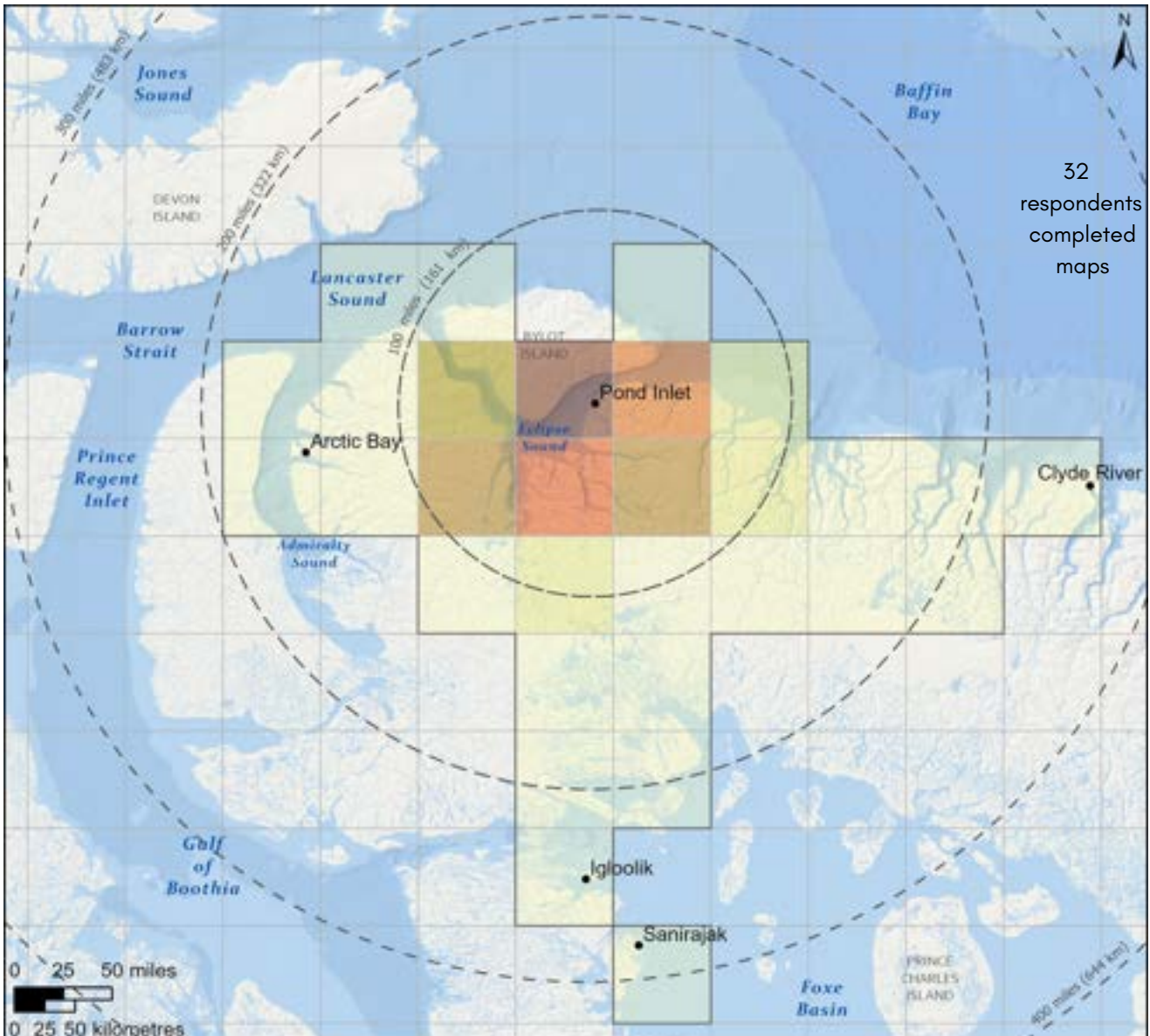
REASONS MITTIMATALINGMIUT USUALLY TRAVEL ON THE LAND



Survey participants travel on the land, water, and ice for many reasons. Most often they travel to hunt in the ocean, on sea ice, or on land (inland), or to get out of town/go to a cabin or camp. Participants who answered "Other" said they travel to go boating, camp with their family, help drop things off at a camp or cabin, Parks Canada, or to go out hunting alone.

WHERE MITTIMATALINGMIUT TRAVEL

TOTAL TRAVEL



32 respondents completed maps



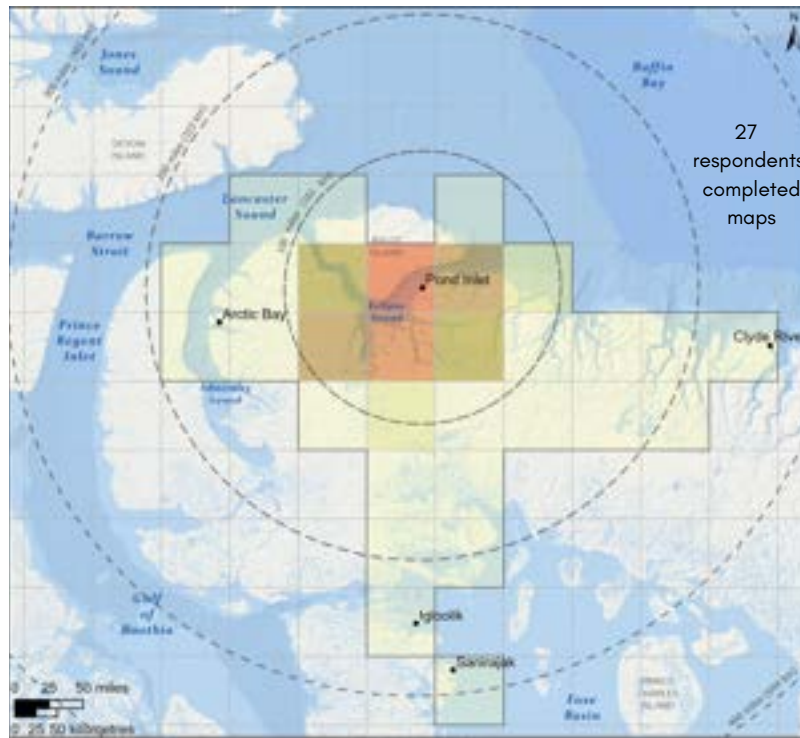
Number of respondents who travelled in the selected area

To access full-page maps visit

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

WHERE MITTIMATALINGMIUT MEN AND WOMEN RESPONDENTS, TRAVEL

TRAVEL BY MEN



TRAVEL BY WOMEN



Number of respondents who travelled in the selected area

WHERE MITTIMATALINGMIUT RESPONDENTS TRAVEL (BY AGE)

AGES 16 TO 24 TRAVEL



AGES 25 TO 34 TRAVEL



AGES 35 TO 49 TRAVEL



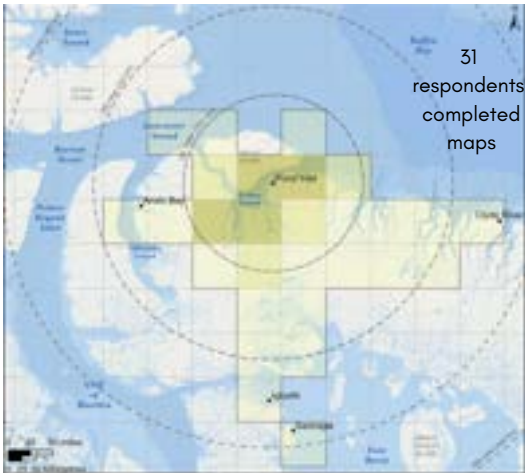
AGES 50 TO 69 TRAVEL



Number of respondents who travelled in the selected area

WHERE MITTIMATALINGMIUT RESPONDENTS TRAVEL (BY MODE OF TRAVEL)

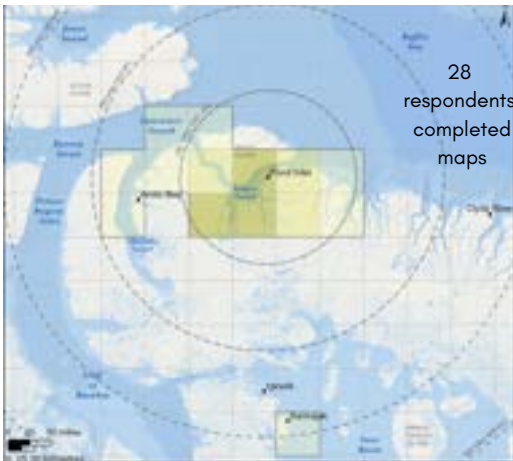
SNOWMOBILE TRAVEL



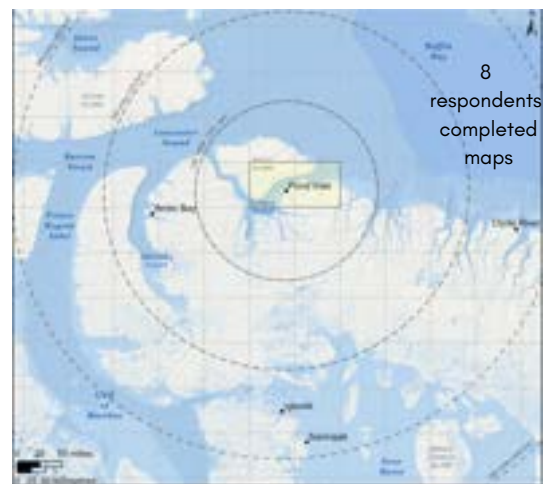
ATV TRAVEL



BOAT TRAVEL



VEHICLE TRAVEL



DOG TEAM TRAVEL

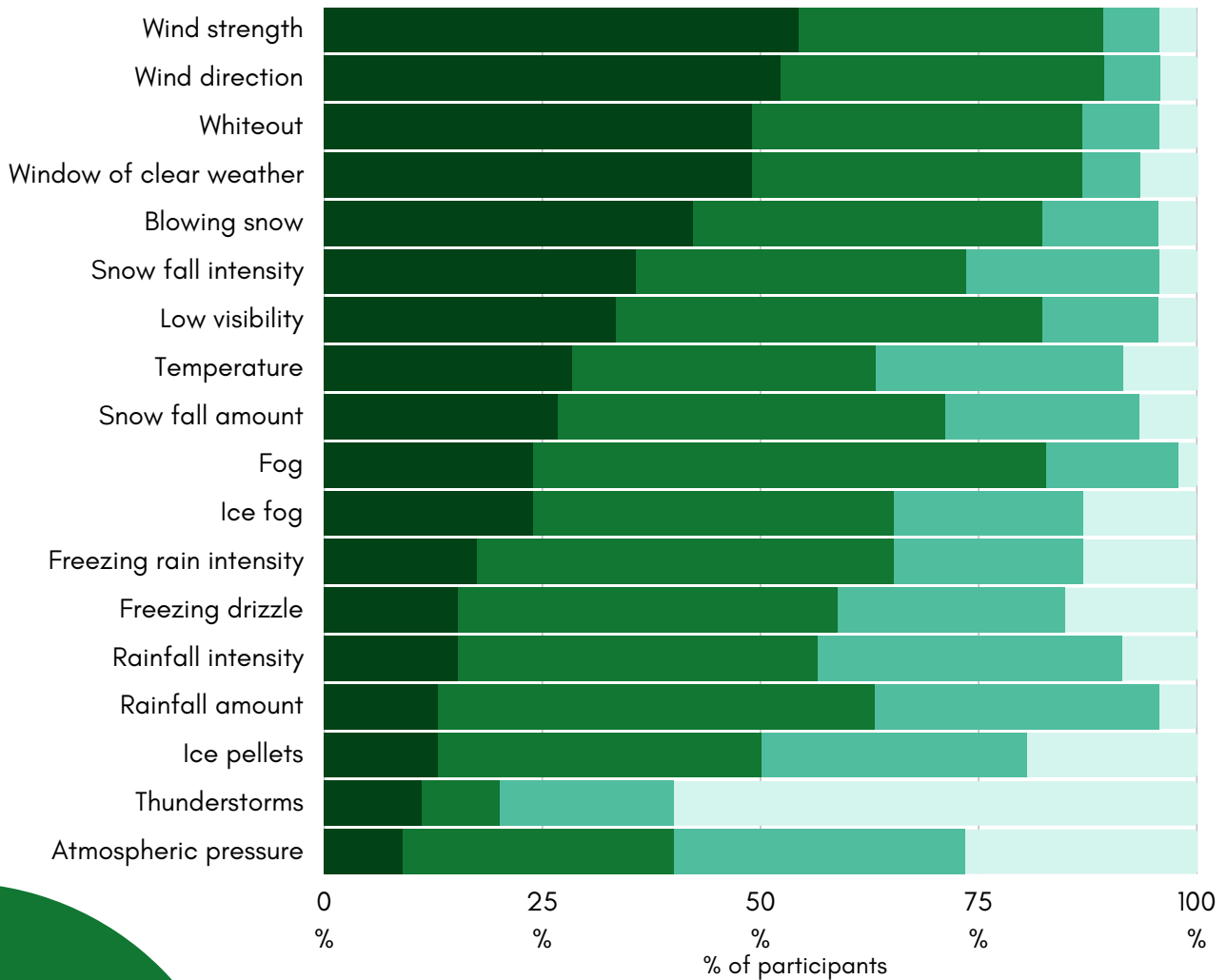


ON FOOT TRAVEL



Number of respondents who travelled in the selected area

WEATHER CONDITIONS MITTIMATALINGMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL



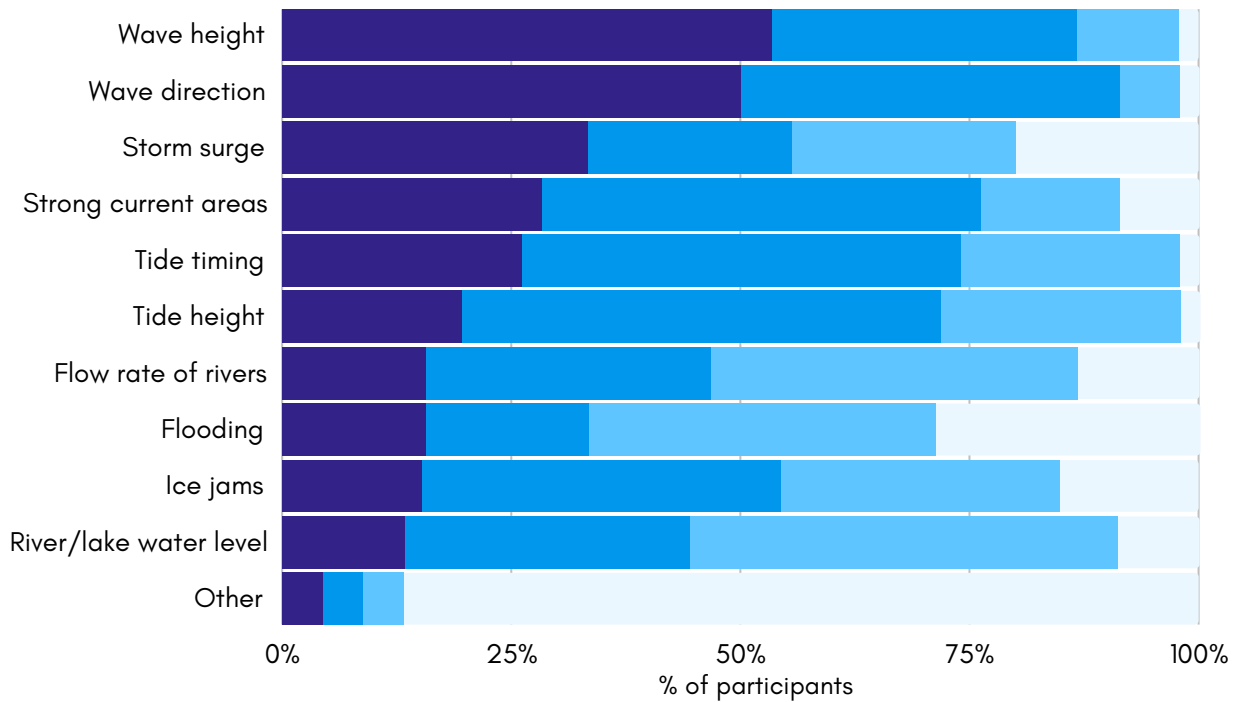
- **Necessary:**
I would not travel without knowing about this condition
- **Good to know:**
It is helpful to know about this condition, it informs travel decisions
- **Don't consider:**
I don't consider this condition to make travel decisions
- **Not applicable:**
This condition is not applicable in my community

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



WEATHER

WATER CONDITIONS MITTIMATALINGMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL

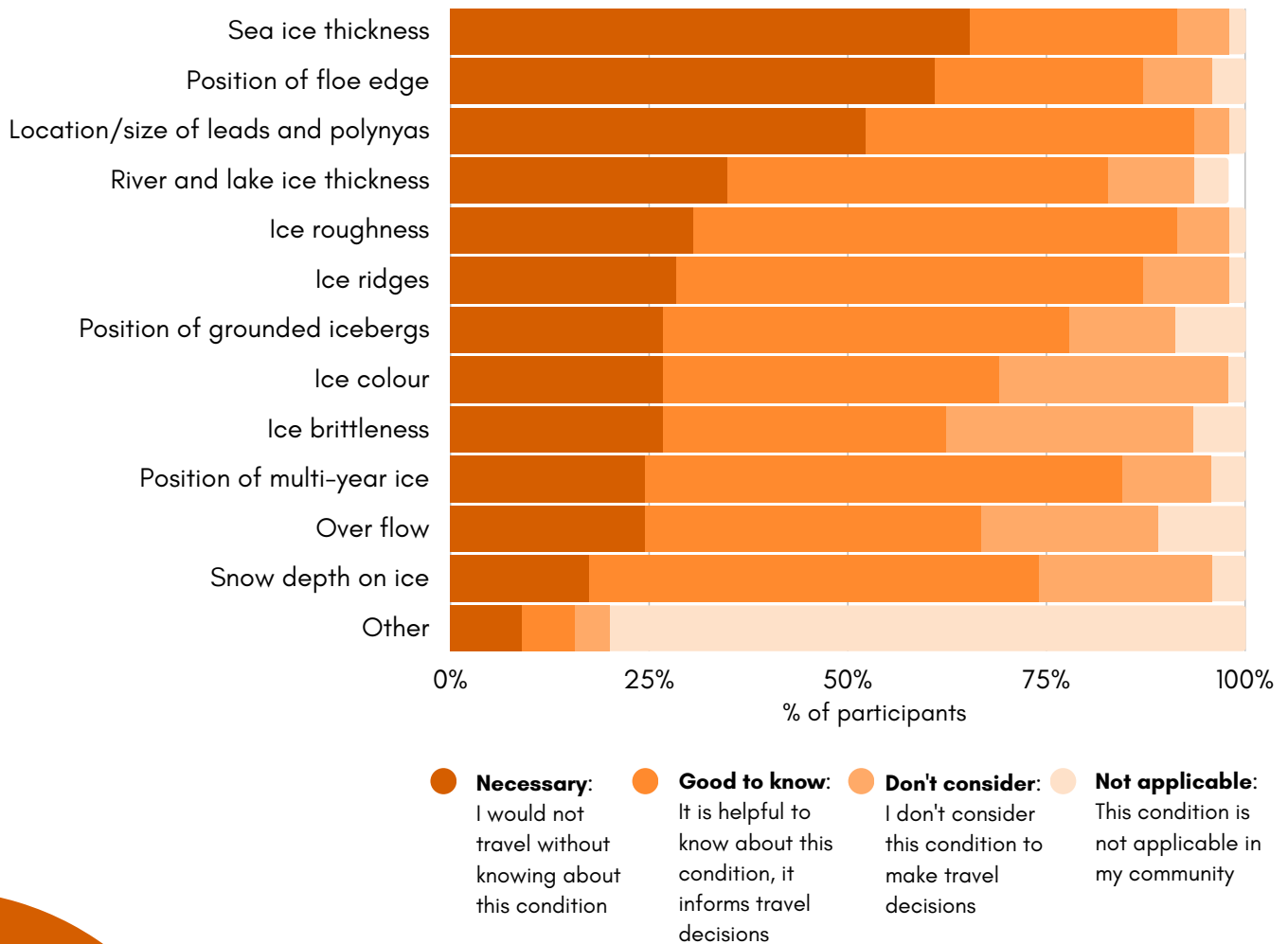


- **Necessary:**
I would not travel without knowing about this condition
- **Good to know:**
It is helpful to know about this condition, it informs travel decisions
- **Don't consider:**
I don't consider this condition to make travel decisions
- **Not applicable:**
This condition is not applicable in my community

Mittimatalingmiut participants check many types of water conditions before they travel on the water. Wave height, wave direction, storm surge, and strong current areas are the water conditions most commonly considered necessary to check before travelling. Participants who said "Other" also check currents and salinity levels.

WATER

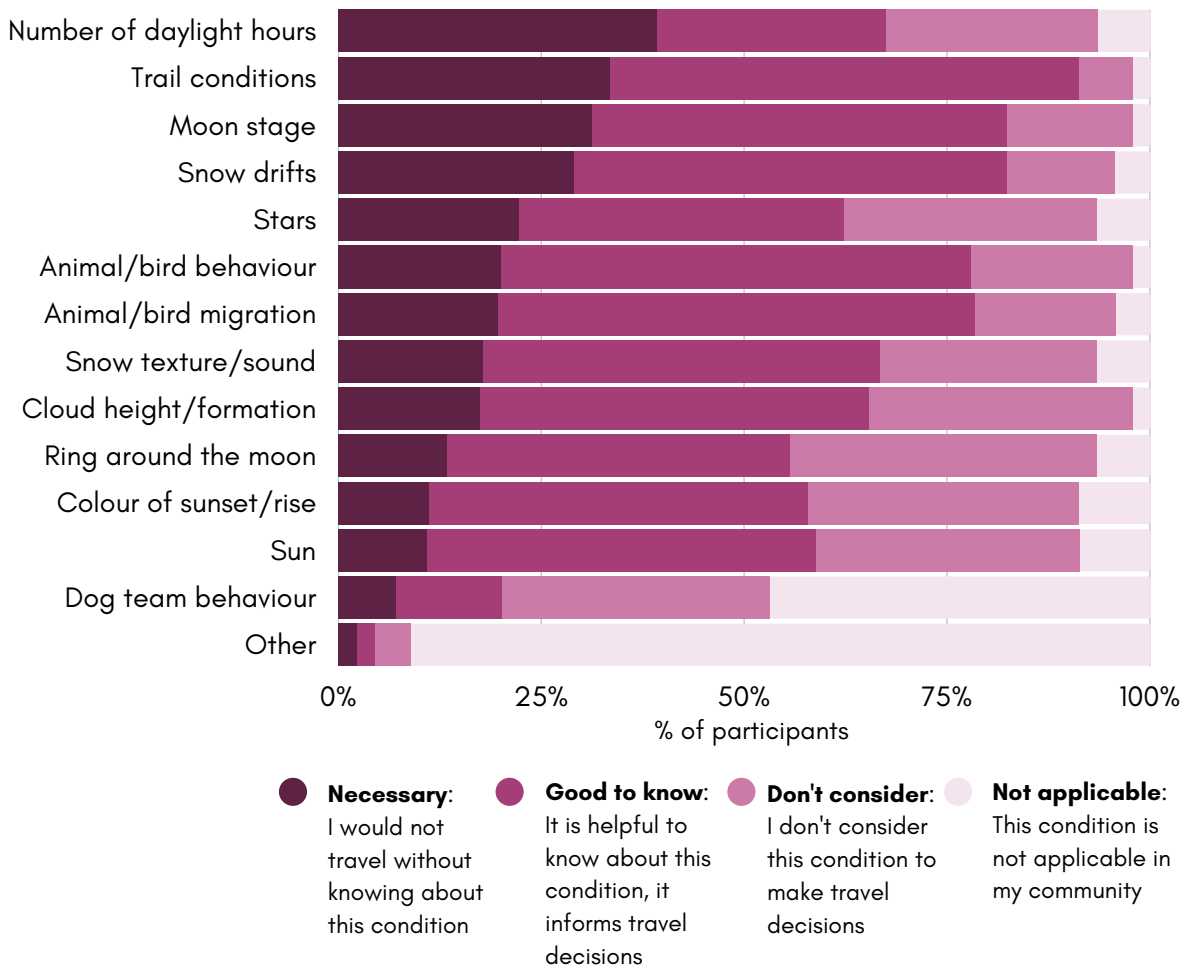
ICE CONDITIONS MITTIMATALINGMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL



Mittimatalingmiut check many types of ice conditions before they travel on the land. Sea ice thickness, position of the floe edge, location and size of leads and polynyas are the ice conditions most commonly considered necessary to check before travelling. Those who said "Other" also check the solidity of Ice (i.e. slushy, moisture).

ICE

OTHER ENVIRONMENTAL CONDITIONS MITTIMATALINGMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL

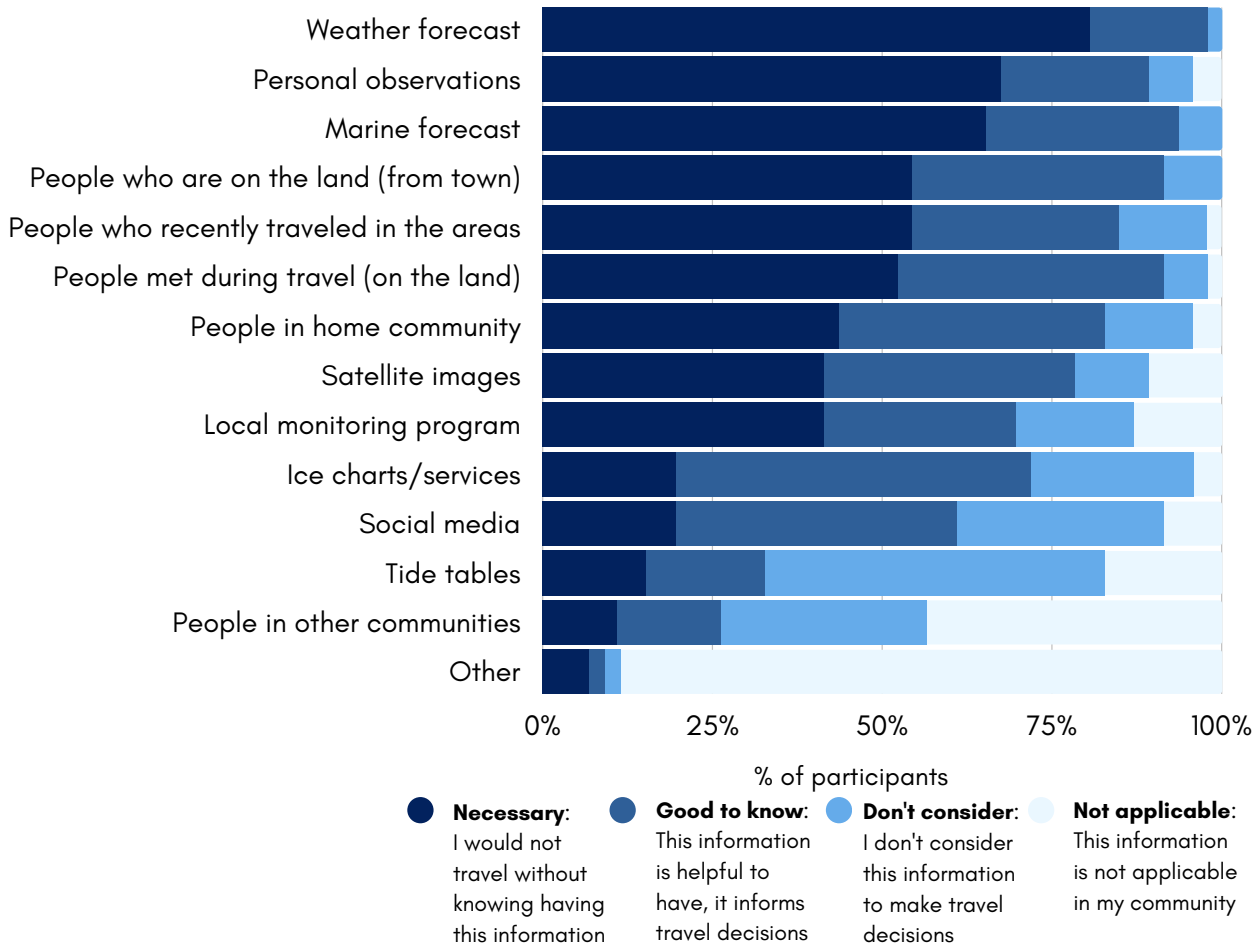


Mittimatalingmiut check many other environmental conditions before they travel on the land. Number of daylight hours, trail conditions, moon stage, and snow drifts are the most important environmental conditions to check before travelling. Those who said "Other" also check the lunar cycle, and earths axis.

OTHER



INFORMATION SOURCES MITTIMATALINGMIUT PARTICIPANTS USE WHEN PLANNING A TRIP

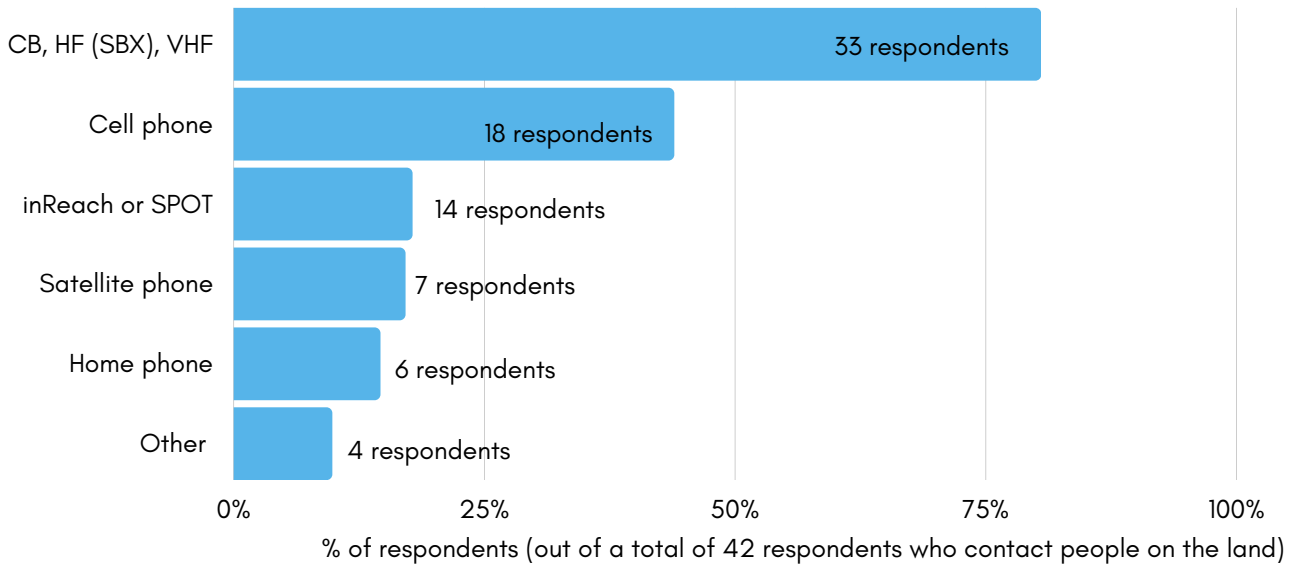


When planning a trip, Mittimatalingmiut participants access many sources of information before they travel on the land. Weather forecast, personal observations, marine forecast, people who are on the land, people who recently travelled in the area, and people met during travel on the land are information sources that participants most often consider necessary to check. A few (10%) of participants consider it necessary to contact people in Arctic Bay, Clyde River, Igloodik, Hall Beach, and Tununirusirmmiut, before they travel.

While on the land and when deciding to return home personal observations, people who are on the land, people who recently travelled in the area, people met during travel on the land, people in Pond Inlet and weather forecast are the information sources that are used most by Mittimatalingmiut participants.

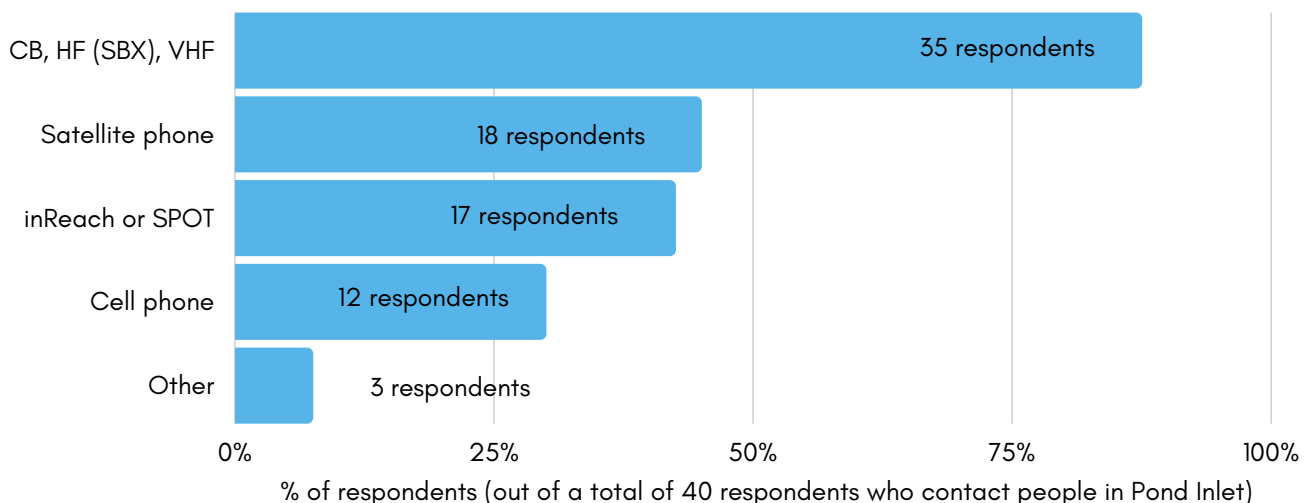
CONTACTING COMMUNITY INFORMATION SOURCES

Contacting people on the land while in Pond Inlet



Respondents who contact people on the land to ask about environmental conditions while they themselves are in Pond Inlet mostly use short-wave radios (CB, HF(SBX), VHF), and cell phones. Those who answered "Other", also use Zoleo, Facebook, and talk face-to-face.

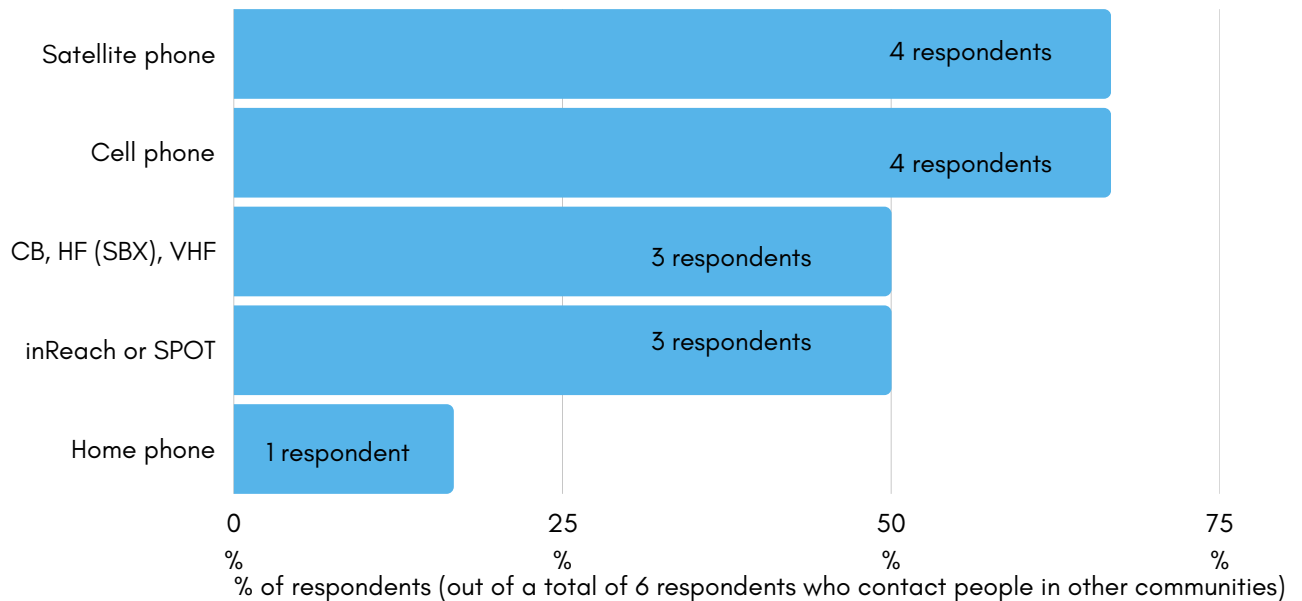
Contacting people in Pond Inlet while on the land



Respondents who contact people in Pond Inlet to ask about environmental conditions while they themselves are on the land mostly use short-wave radios (CB, HF(SBX), VHF). Those how answered "Other" also use Zoleo and social media.

CONTACTING COMMUNITY INFORMATION SOURCES (CONTINUED)

Contacting people in other communities

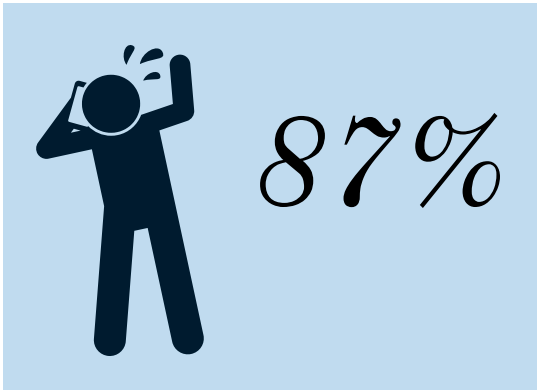


Respondents who contact people in other communities to ask about environmental conditions mostly use cell phones and satellite phones to contact them.

The other communities most commonly contacted are: Arctic Bay, Clyde River, Hall Beach, Igloolik, and Tununirusirmmiut.



CONTACTING OTHERS FOR HELP



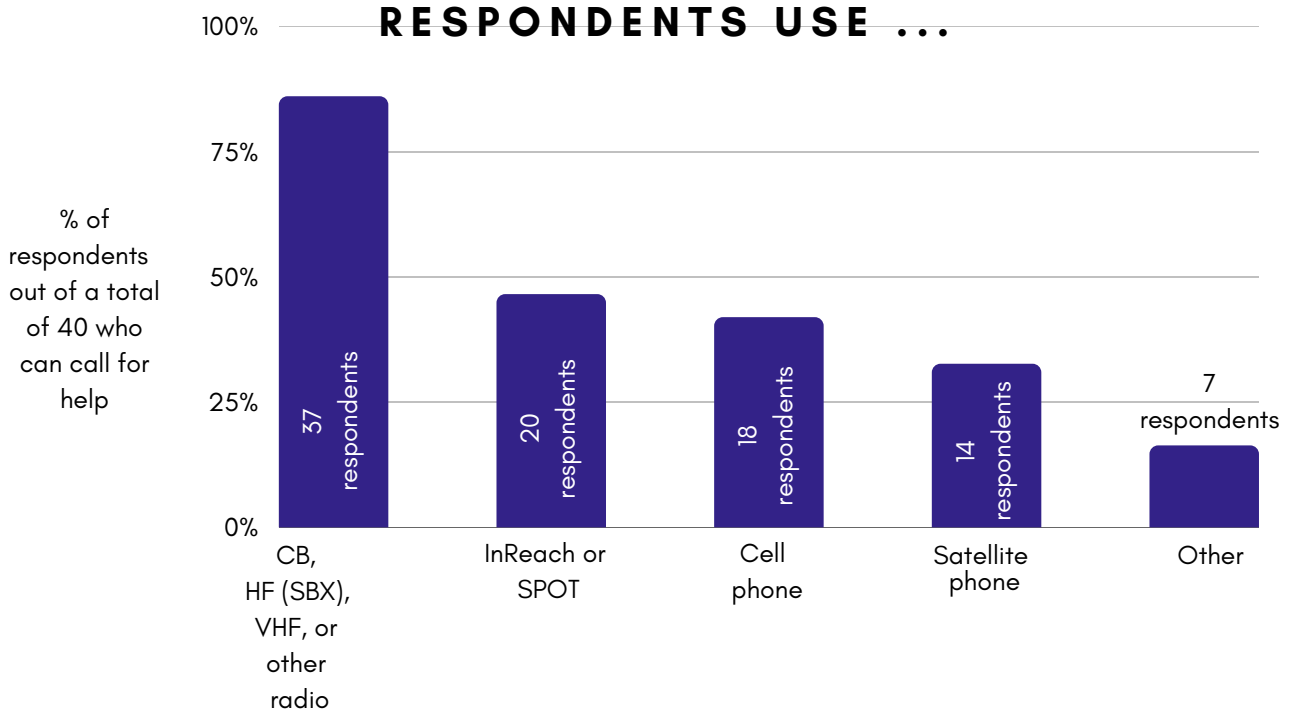
If Mittimatalingmiut participants get stranded or have an accident on the land, 87% (out of a total of 46) can call for help.

Of the 40 respondents who can call for help, most would call a **family member** (93%), or a **friend** (67%), and some would call **local search and rescue** (33%) for help.

Respondents would also call the **Hunters and Trappers Association** (2%) and **Nunavut Emergency Management** (2%).

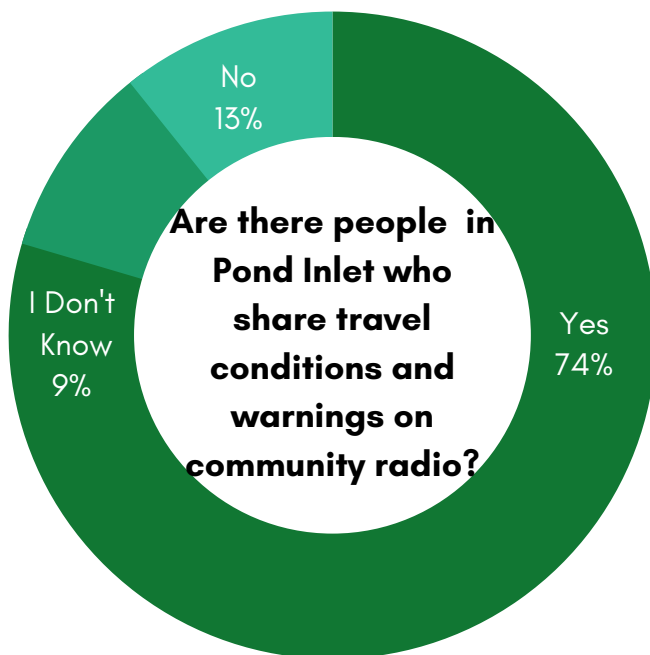
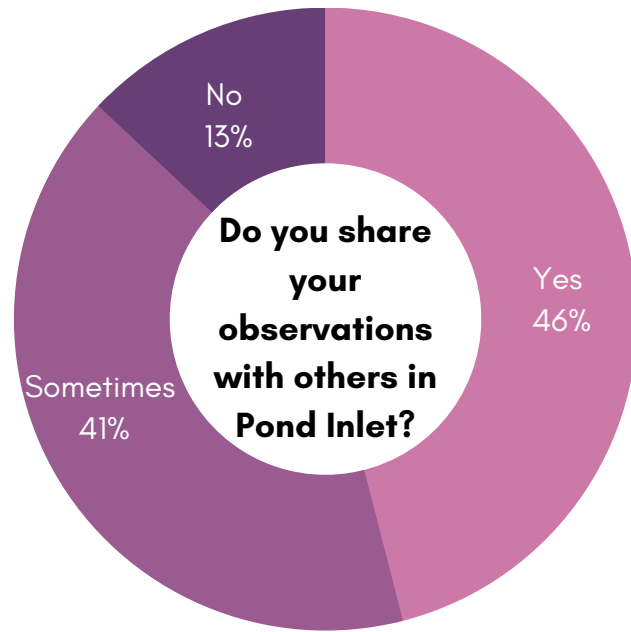
Of the respondents who can call for help, most use short-wave radios (86%). They also use inReach or SPOT, cell phones, or satellite phones. Those who answered "Other" also use Zoleo.

TO CALL FOR HELP MITTIMATALINGMIUT RESPONDENTS USE ...



SHARING OBSERVATIONS OF WEATHER, WATER, ICE, OR SNOW CONDITIONS WITH OTHERS IN POND INLET

The majority (87%) of the participants share their observations of weather, water, ice, or snow conditions with others in Pond Inlet.



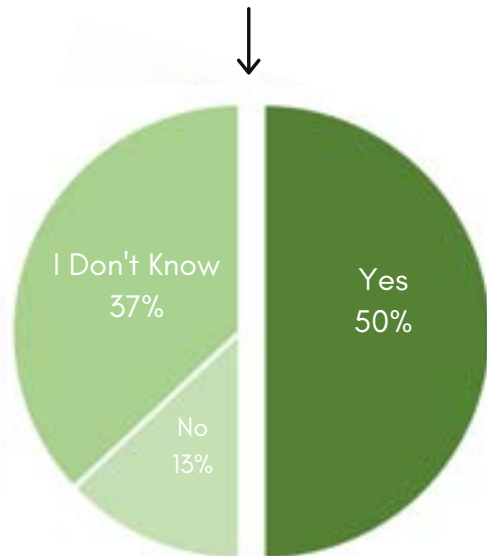
*4% prefer not to answer

Most (74%) participants said there are people regularly going on community radio in Pond Inlet, or CB/HF(SBX)/VHF radio, to share warnings or provide advice about weather, water, or ice conditions.

A few participants (9%) did not know if people regularly go on community radio in Pond Inlet, 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 POND INLET

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



Of the 23 participants who answered "yes there are places"

74%

go to these places to listen or ask for advice

83%

go to share observations or advice

Half of the 46 participants said there are places in Pond Inlet where people tend to meet and talk about recent travel conditions, or weather, water, ice and other environmental conditions. Of the 50% of participants who said there are places where people meet, most go to those places to listen or ask for advice (74%), and most go to those places to share observations or advice (83%).

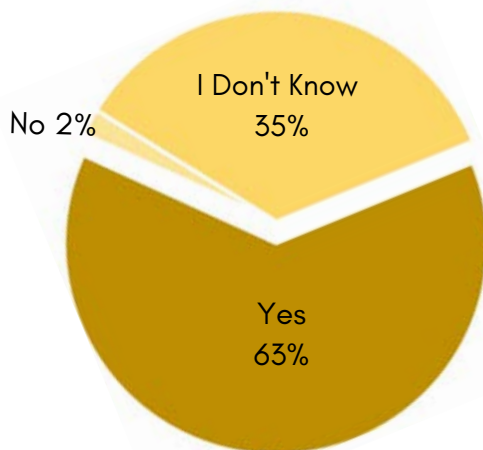
PLACES MITTIMATALINGMIUT GATHER TO TALK ABOUT TRAVEL CONDITIONS

- Anywhere people meet
- Cabins
- Tununiq Sauniq Co-op restaurant
- Coffee shops
- Community hall
- Hamlet office
- Hunters and Trappers Organization
- Local radio station
- On route to a destination
- On the ice, or beach
- On the land, hunting or camping
- Schools
- Stores (inside and outside)
- Visiting family and friends
- Wildlife Office
- Workplace



SOCIAL MEDIA MITTIMATALINGMIUT USE TO SHARE TRAVEL CONDITIONS

**Do Mittimatalingmiut
use social media to talk about
travel conditions?**



There were 29 Mittimatalingmiut participants who identified being aware of social media pages or groups where people share observations or advice about weather, water, and ice conditions.

Of the 29 respondents
who said "yes"

25 (86%)

use the information
shared over social
media

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

SOCIAL MEDIA MITTIMATALINGMIUT USE TO SHARE TRAVEL CONDITIONS

Commonly used social media

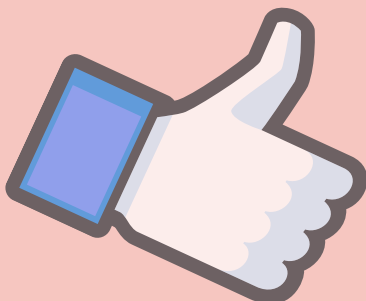
Email

Facebook

- Nunavut hunting stories of the day
- Pond Inlet Hunters information page
- Inuit hunting stories of the day
- Mittimatalik hunting information page
- News
- Pond Inlet News

SIKU app

SmartICE

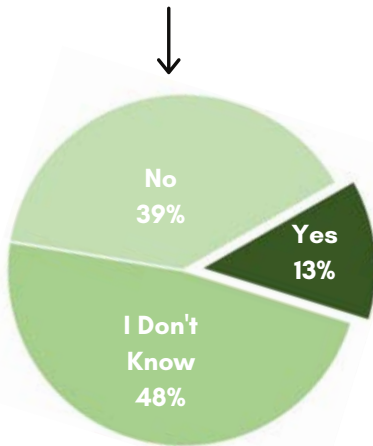


Topics, descriptions, and photos include

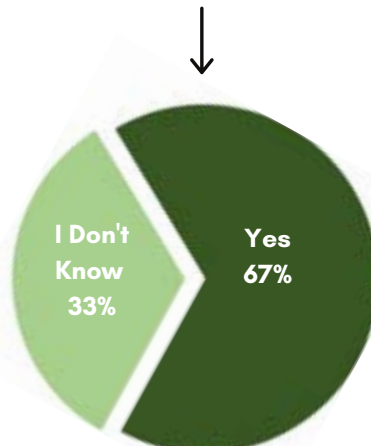
- Animal locations
- Snow, wet slushy areas, safe travel routes
- Dangerous areas/hazards to avoid
- Floe edge conditions and closures
- Food sharing
- Good and poor hunting spots
- Land and sea conditions
- Hunting information
- Trails, pictures, catches
- Ice observations, conditions, thickness
- Looking for vehicle parts
- Lost and found
- New form ice
- Existing conditions observed
- Photos, real-time satellite images
- Predictions of conditions in the surrounding area
- Safe places to travel to
- Service products
- Successes, animals caught, where, when
- Thin ice, new ice leads, wet ice
- Trails, better routes
- Travel conditions
- Updates on good equipment
- Weather conditions (ice, water, wind direction, moon phases)

COMMUNITY MONITORING PROGRAMS

Are there local weather stations in Pond Inlet?



Is the local weather station information available to the community?



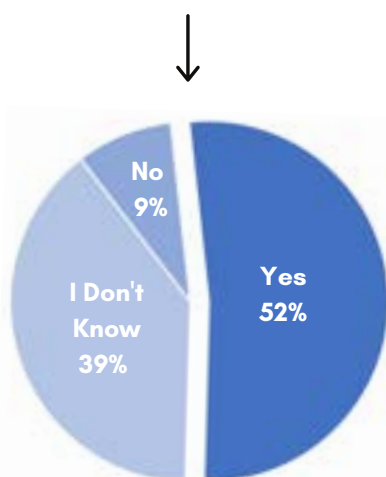
Do you use the local weather station information?

Of 4 respondents who answered "yes the info. is available to the community"

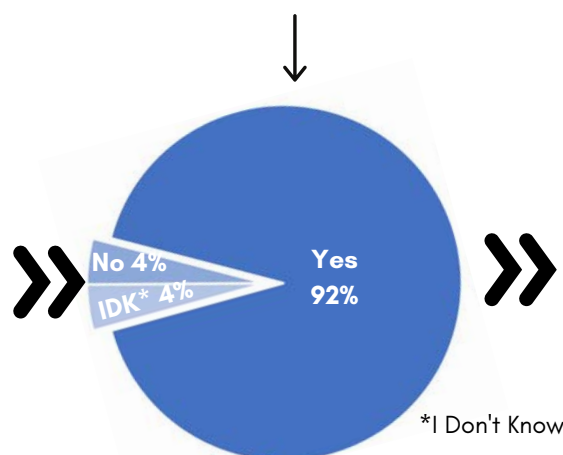
3 (75%) use the local weather station information

When asked about local weather stations it is notable that 22 participants said that they do not know if there are local weather stations and 24 said that local weather stations do or do not exist. Of the 6 participants who said there are local weather stations, 4 said the information is available in Pond Inlet, and 3 said they use the information.

Are there local water/ice monitoring programs in Pond Inlet?



Is the water/ice monitoring information available to the community?



Do you use the local water/ice information?

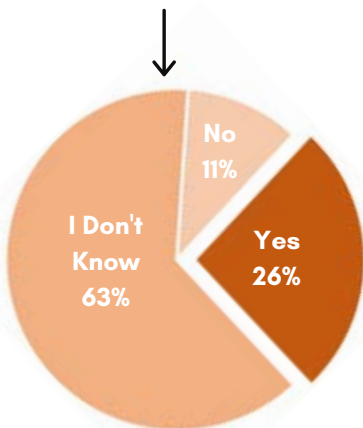
Of 22 respondents who answered "yes the info. is available to the community"

19 (86%) use the local water/ice information

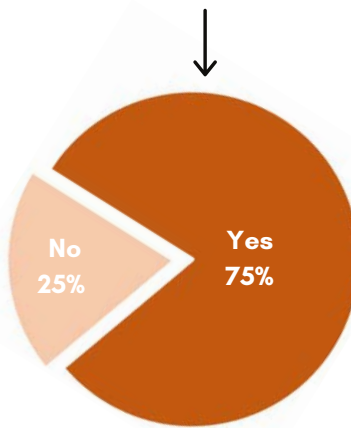
When asked about local water and ice monitoring programs it is notable that 24 participants said that local programs exist, and 22 participants did not know. Of the 24 participants who said there are local water/ice monitoring programs, 22 said the information is available in Pond Inlet, and 19 said they use the information.

COMMUNITY MONITORING PROGRAMS (CONTINUED)

Are there remote cameras recording environmental conditions in Pond Inlet?



Is the remote camera information available to the community?



Do you use the remote camera information?



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. A built-in timer is set to take a photo at noon each day.

When asked about remote cameras, it is notable that 29 participants said that they do not know if there are remote cameras and 17 participants said they do or do not exist. Of the 12 participants who said that there are remote cameras, 9 said the remote camera information is available in Pond Inlet, and all 9 said that they use the remote camera information.

SmartICE is a partner in this project, and through them we know there are local monitoring programs in Pond Inlet, including SIKU and SmartICE. 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)

Mittimatalingmiut participants identified several community-based monitoring programs that are run by a number of organizations. A wide range of conditions are monitored related to weather, water, and ice.

| LOCAL WEATHER STATIONS | PROGRAM PROVIDER | WHAT IS MONITORED |
|------------------------|----------------------------|---|
| Airport | Ivan Koonoo, Andrew Arreak | Wind |
| Local Co-op Channel | Local Co-op | Temperature, forecast, weather, humidity, wind and wind direction |

| LOCAL WATER/ICE PROGRAMS | PROGRAM PROVIDER | WHAT IS MONITORED |
|--------------------------|---|--|
| SmartICE | Andrew Arreak SmartICE, SIKU Non-profit organization - local people run the enterprise Qikiqtani Inuit Association Federal government | Ice conditions around Pond Inlet Ice thickness, age, motion Current Safe/dangerous travel areas Sea ice Formation, development Open water (polynya or floe edge) Cracks Water temperature Rough ice areas |

| LOCAL REMOTE CAMERAS | PROGRAM PROVIDER | WHAT IS MONITORED |
|----------------------|--|--|
| Floe edge camera | Hunters and Trappers Organization Oceans North | Ice and water conditions |
| Remote camera | Unknown | Camera on top of Mount Herodier facing east and west |
| Remote camera | From Baffinland (to Hunters and Trappers Organization) | Timing of when ice breaks off |
| SmartICE | Andrew Arreak | Ice conditions, temperature |

PRODUCTS AND ACCESSING ENVIRONMENTAL FORECASTS

Along with community sources of information, to decide if it is safe to travel, Mittimatalingmiut respondents use a wide range of weather and marine forecasts, and tide tables available. There may be other information sources available beyond those mentioned by respondents.

WEATHER FORECAST PRODUCTS USED

- CBC Igalaaq
- Environment Canada (<https://weather.gc.ca>)
- Google
- Polar View (<https://polarview.org>)
- PredictWind (app and <https://www.predictwind.com>)
- SIKU app
- SmartICE data
- The weather network and app
- Weather office online
- Windy (app and www.windy.com)

MARINE FORECAST PRODUCTS USED

- Environment Canada (<https://weather.gc.ca/marine>)
- PredictWind (<https://www.predictwind.com>)
- Fisheries and Oceans Canada (www.tides.gc.ca/en/tides-currents-and-water-levels)
- Windy (app and www.windy.com)

TIDE TABLE PRODUCTS USED

- Fisheries and Oceans Canada (www.tides.gc.ca/en/tides-currents-and-water-levels)
- Google
- VHF Radio
- Weather office
- Windy (www.windy.com)

PRODUCTS AND ACCESSING ENVIRONMENTAL FORECASTS (CONTINUED)

Along with community sources of information, to decide if it is safe to travel, Mittimatalingmiut respondents use a wide range of ice charts/services, and satellite image products from polar service providers.

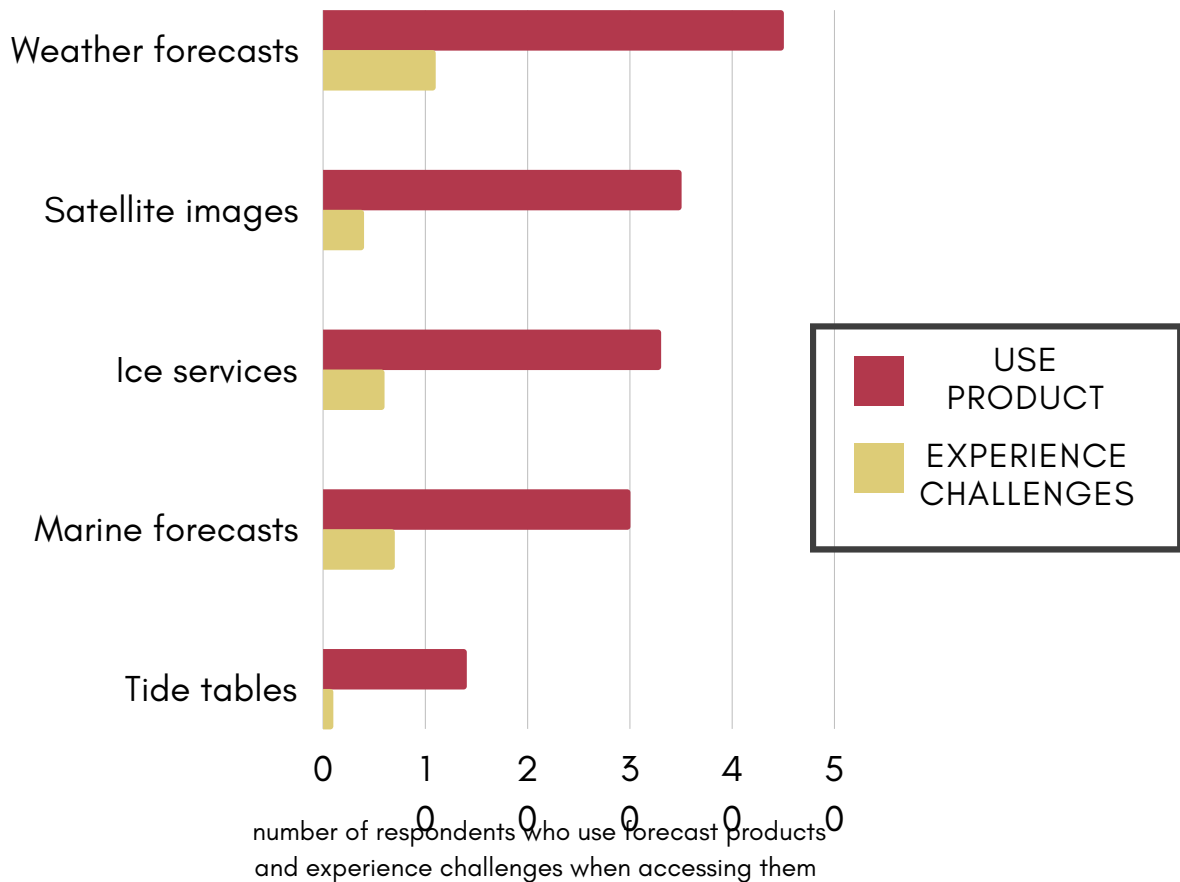
ICE CHARTS/SERVICES USED

- Environment Canada (<https://weather.gc.ca>)
- EOSDIS Worldview (NASA) (<https://worldview.earthdata.nasa.gov>)
- Global image system
- Ice Service - cameras
- MODIS (NASA) (<https://modis.gsfc.nasa.gov>)
- Polar View (<https://polarview.org>)
- Satellite images
- SIKU, SIKU app
- SmartICE
- Windy (<https://www.windy.com>)
- Zoom Earth (<https://zoom.earth>)

SATELLITE IMAGE PRODUCTS USED

- Environment Canada satellite imagery
- EOSDIS Worldview (NASA) (<https://worldview.earthdata.nasa.gov>)
- Friends who share current satellite photos on Facebook
- Google Image, Google Earth, Google maps
- Modis, sentinel, radarsat
- Polar View (<https://polarview.org>)
- SIKU app (maps), www.SIKU.org
- SmartICE
- Zoom Earth (<https://zoom.earth>)

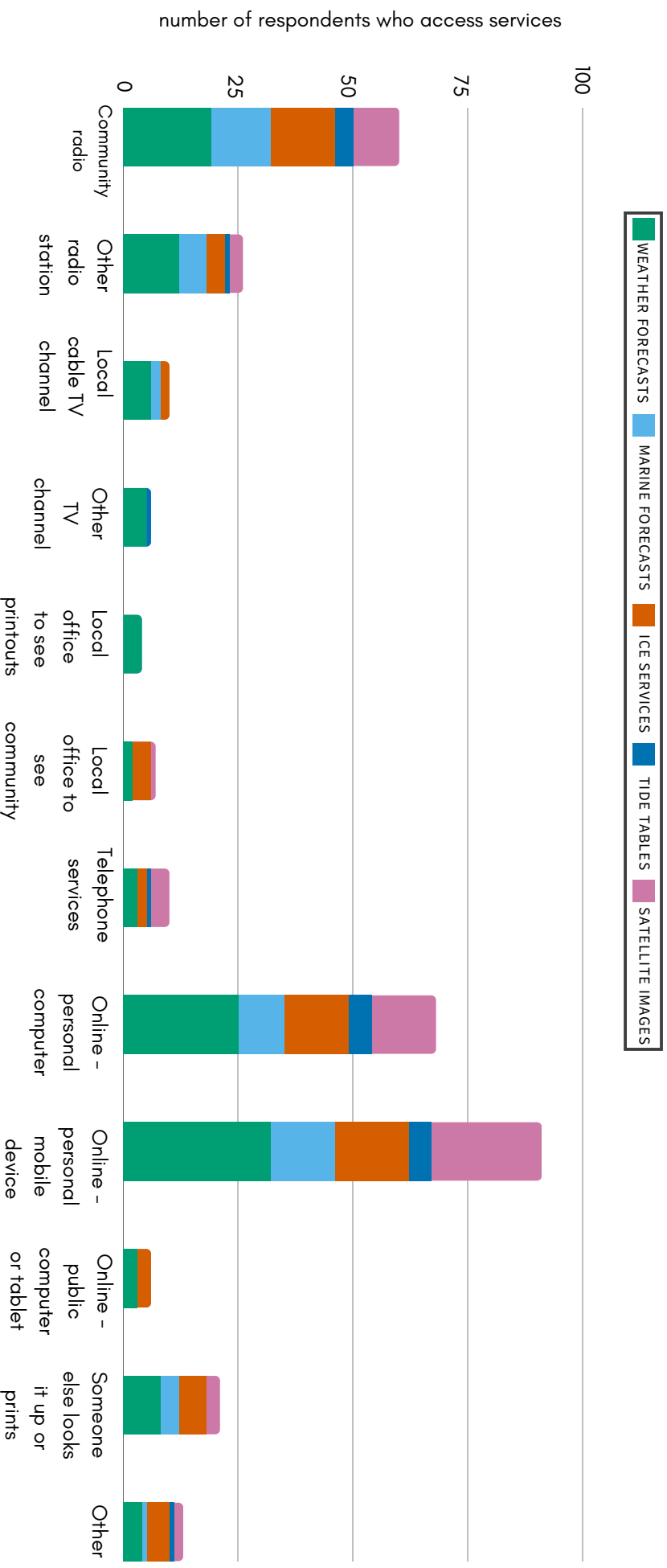
PRODUCTS AND ACCESSING ENVIRONMENTAL FORECASTS (CONTINUED)



Of the forecasting products used, respondents most often rely on weather forecasts, followed by satellite images, ice services, and marine forecasts, with tide tables used less often.

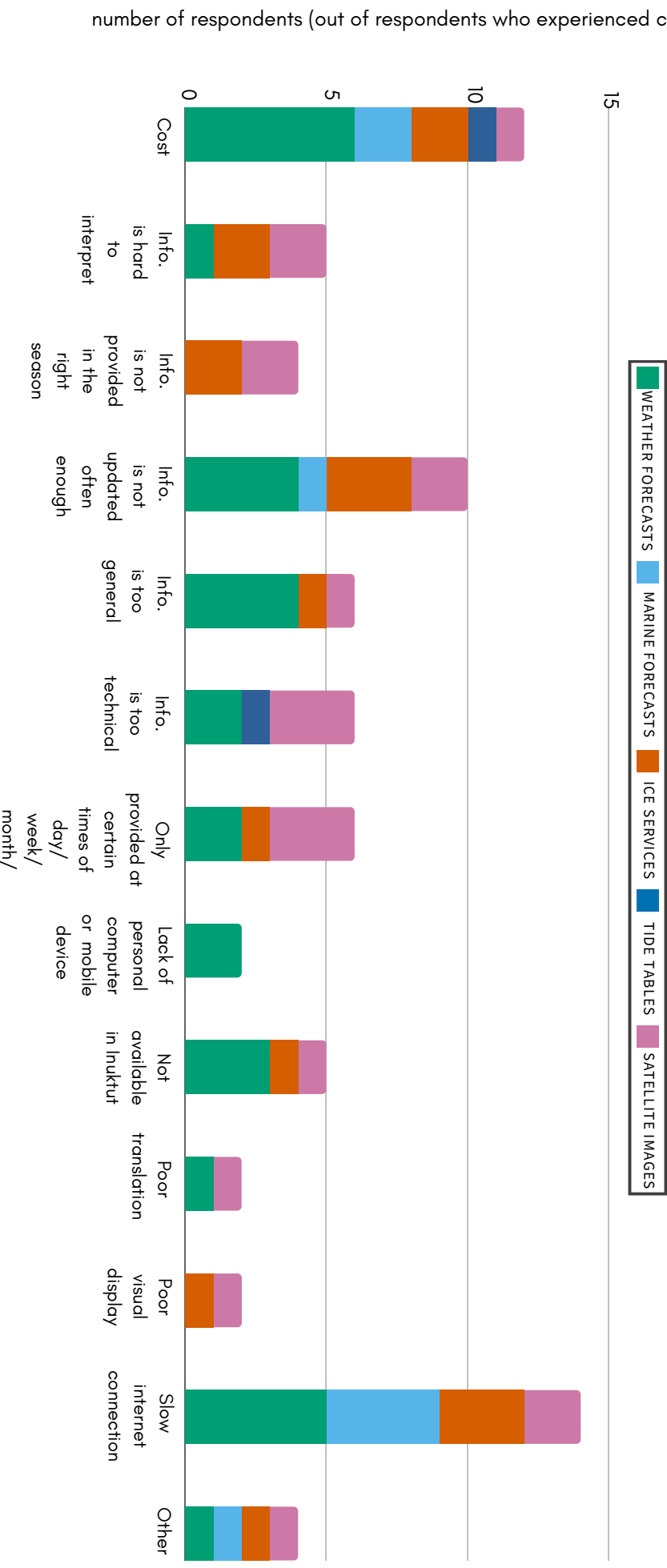
Of the 98% of participants who use **weather forecasts**, 24% experience challenges when accessing them. **Satellite images** were used by 76% of participants, 11% of whom experience challenges when accessing them. **Ice services** were used by 72% of participants and of these, 18% experience challenges when accessing them. Of the 65% of participants who use **marine forecasts**, 23% experienced challenges when accessing them. **Tide tables** were used by 30% of participants and of these, 7% experienced challenges.

WAYS THAT MITTIMATALINGMIUT RESPONDENTS ACCESS POLAR SERVICES



Mittimatalingmiut respondents access environmental forecast products in a range of ways, and mostly by going online using a personal mobile device or personal computer. Respondents who said "Other" noted they access the marine forecast using the Weather Network app, or look it up on a website then take printed information with them, or ask their grandchild to look it up for them. They said they accessing ice services using a Facebook page, or by speaking to other hunters, They access tide tables by looking it up on their phone or laptop and taking printed information with them. They access satellite images using Facebook (other people's posts), or with help from their grandchild.

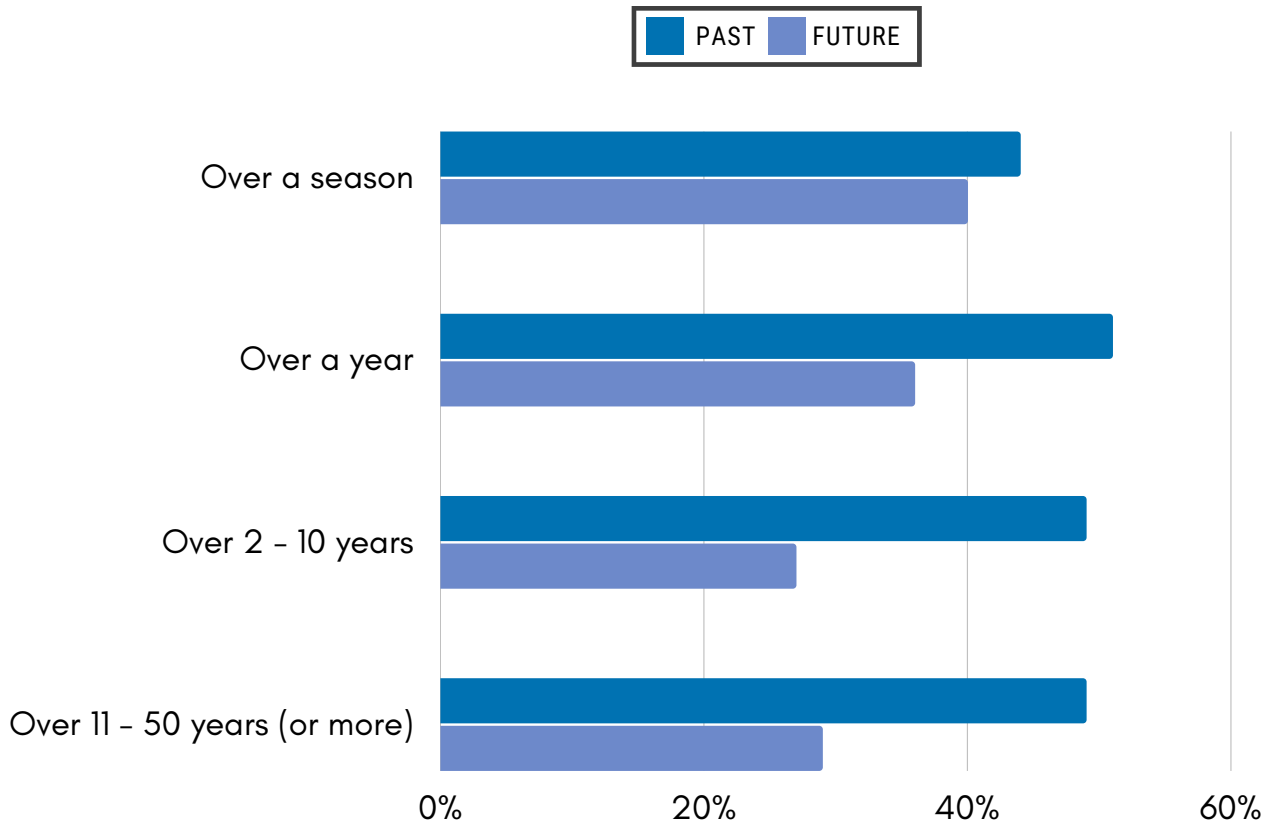
REASONS WHY ENVIRONMENTAL FORECASTING INFORMATION IS DIFFICULT FOR MITTIMATALINGMIUT RESPONDENTS TO ACCESS



Mittimatalingmiut respondents identified a number of reasons why information is difficult to access. To summarize the main challenges:

- **Slow internet connection** creates a challenge for accessing all online products (except tide tables).
- **Cost** creates a challenge for accessing all online products, in particular weather forecasts.
- **Information that is not updated often enough** creates a challenge for accessing all online products (except tide tables) especially weather forecasts and ice services. Respondents who said "Other" said they do not know how to access weather forecast information, and they need help from young people. Respondents who said "Other" also noted that the lack of internet connection when far from Pond Inlet is a challenge when accessing marine forecasts, ice charts/services, and satellite images. These survey results do not necessarily mean that there are no challenges in other areas.

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

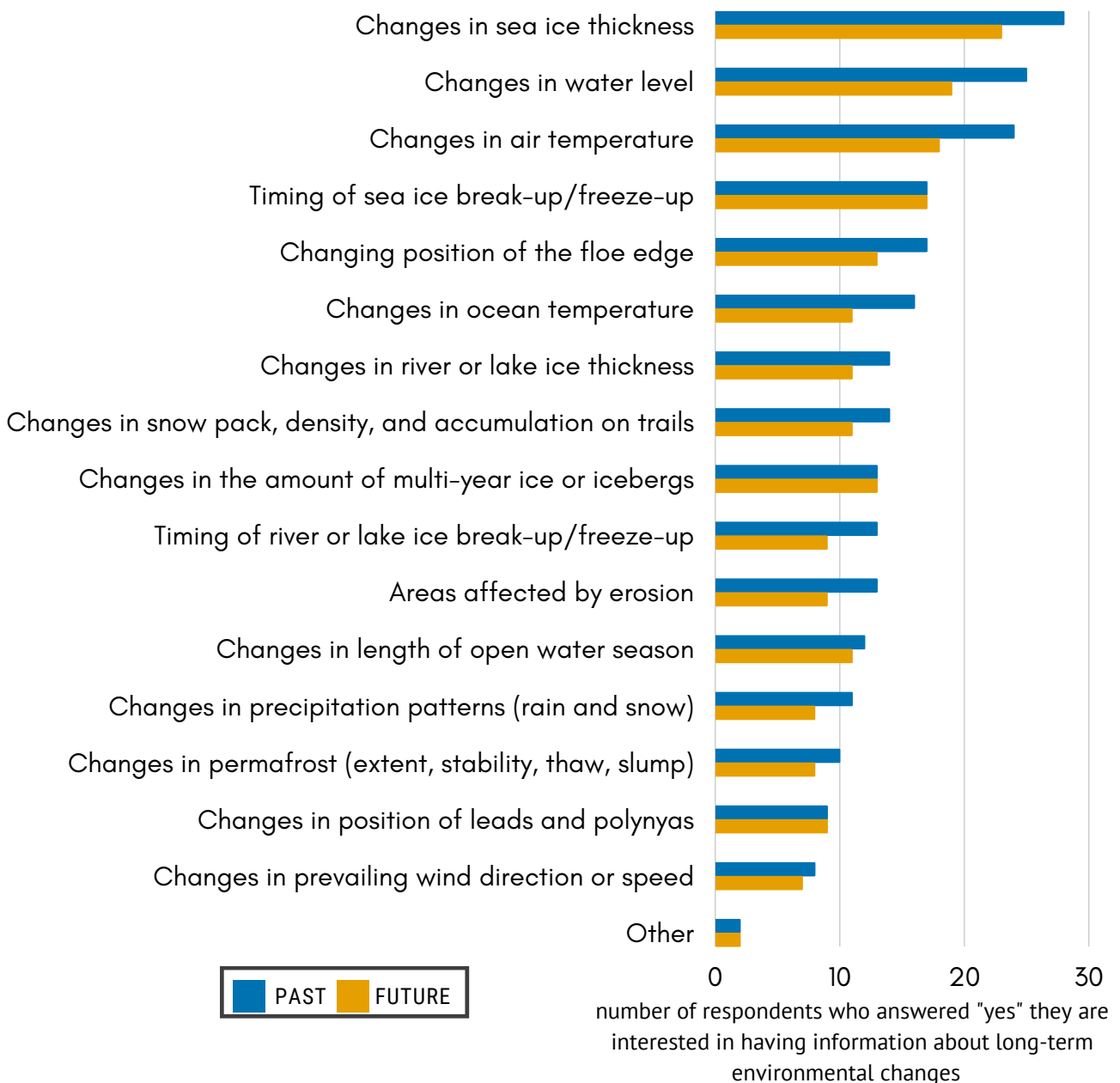
More participants are interested in information about past changes to weather, water or ice conditions (related to climate change) than are interested in forecasting or predictions.

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

However, slightly fewer participants are interested in information about the next year, 2-10 years, or 11-50 years or more than about the next season.

INTEREST IN LONG-TERM ENVIRONMENTAL CHANGES

INFORMATION ABOUT PAST OR PRESENT CHANGES FOR MAKING DECISIONS



More respondents are interested in having information about past environmental changes than are interested in predictions of change. Common topics of interest include changes in sea ice thickness, air temperature, and floe edge position. Respondents who answered "Other" said past changes in ocean currents, magnetic fields around the North Pole, and changes in the atmosphere and other layers around the earth. They also expressed interest in past and future changes in tide levels.

INTEREST IN TRAINING

Respondents who said they were interested in receiving training on survival skills and navigating the land (24 participants), observing and understanding environmental conditions (26 participants), local environmental monitoring programs (24 participants), and accessing or using social media pages or groups (14 participants), 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 to group them into similar topics.



Improving Navigation Skills

- Navigating using moon and stars, and snow.



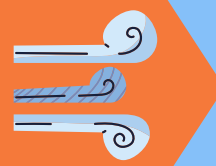
Connecting to Local Programs and Services

- Learning from Elders, hunters, guides, or other people with experience on the land



Gaining Familiarity with Technology

- GFA (Graphic Area Forecast time adjusted weather charts)
- GPS
- Ice charts
- inReach device
- Marine forecast
- METAR weather report
- Satellite images
- SIKU app
- SmartICE
- Using personal devices
- Windy



Increasing Knowledge of Environmental Conditions

- Weather observations, patterns, and predictions (e.g. clouds, wind, conditions)
- Elders' knowledge of weather and environmental conditions
- High current locations and the conditions they are prone to
- Ice conditions
- Stars
- Tides



Strengthening Hunting and Inuit Cultural Practices and Skills

- Hunting fish with kakivak
- Traditional first aid and medicine
- Traditional living and skills on the land



Developing Safety and Survival Skills

- Iglu building, emergency shelter
- Emergency small engine repair
- Search and Rescue
- Survival skills
- (Wilderness) first aid, and what to have in a first aid kit

