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- 02** ወደጅ ለገረገሪ ልጅ ልጅ
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Photo: James Nanau Tagalik

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 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. We developed this project to learn how Nunavummiut (people of Nunavut) 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 Aqquimavvik 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 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.

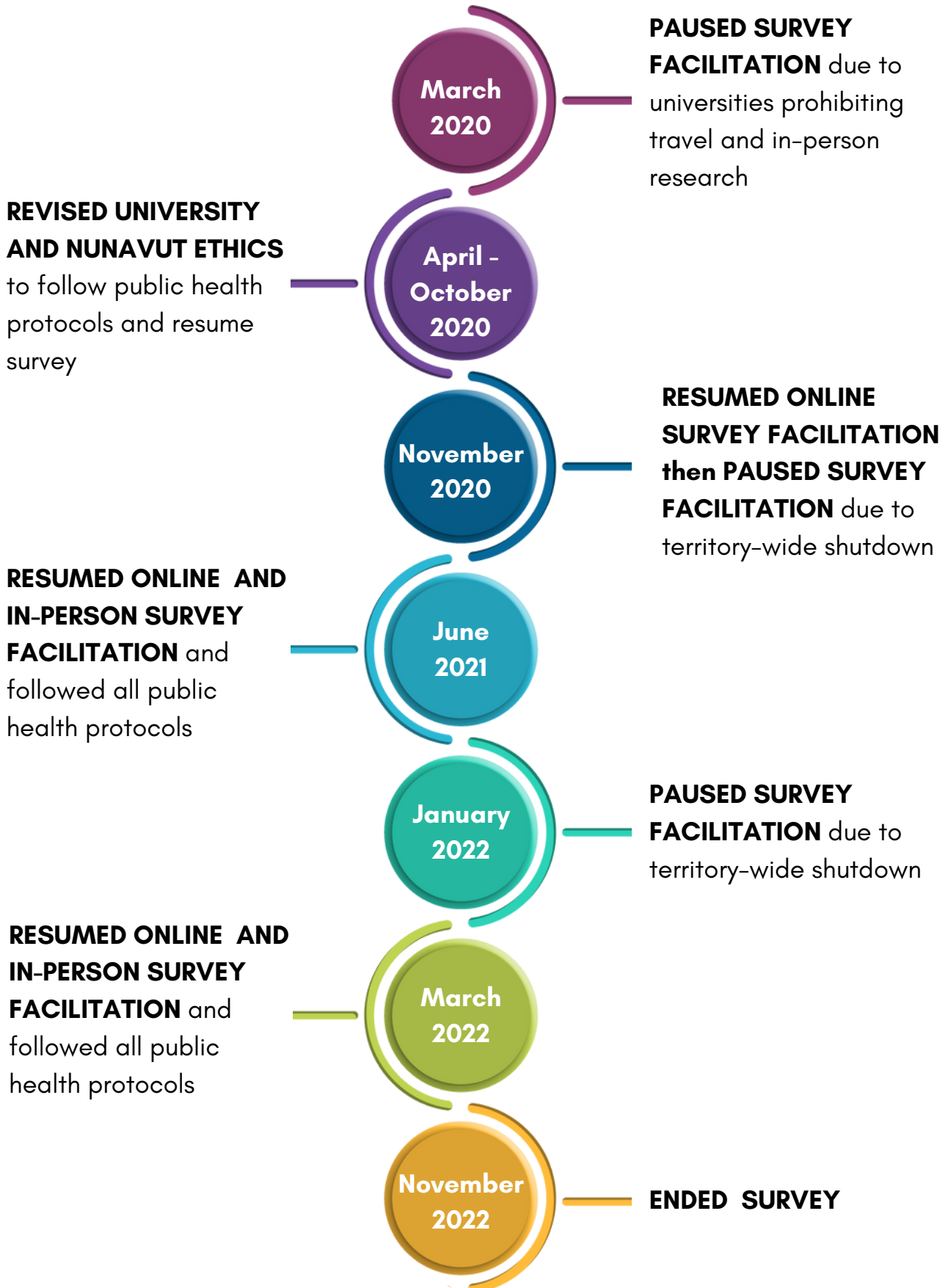


Collaborative analysis workshop in Arviat, Nunavut
(October 2021, photo: Gita Ljubicic)

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 5 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 115 Arviarmiut = 100%.

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

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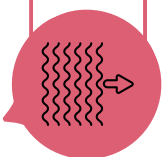
To access a Nunavut-wide report, and other community reports, please visit:

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

KEY MESSAGES FOR SERVICE PROVIDERS

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

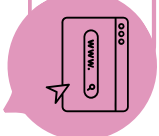
Provide more tide information that is specific to communities



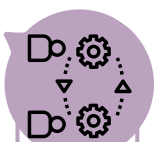
Create colour-coded visuals for ease of interpretation



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



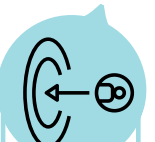
Faster and more affordable internet (address cost and subsidize northern InReach/SPOT subscriptions)



Expand support for community programs and leadership



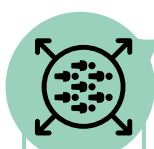
Continue to work on accuracy (short term forecast and more detailed wind information), leads to trust in products



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



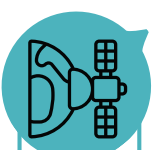
Increase awareness of local services and programs



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

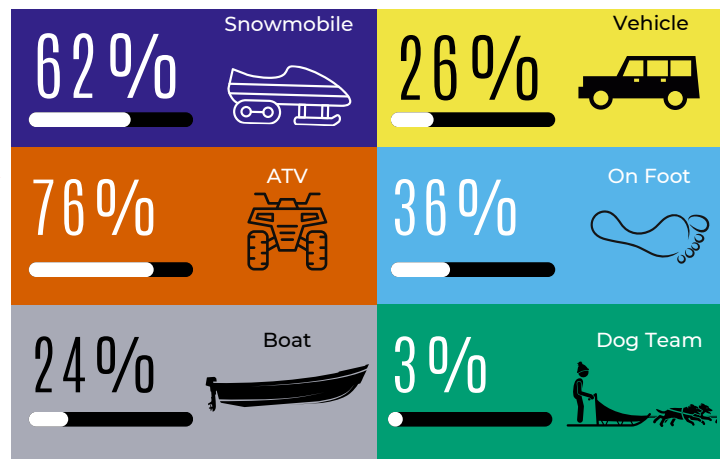
100% = all 115 participants

Most of the survey results in this report are shown as % (percent) where 100% means all 115 participants in Arviat who completed the survey.

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

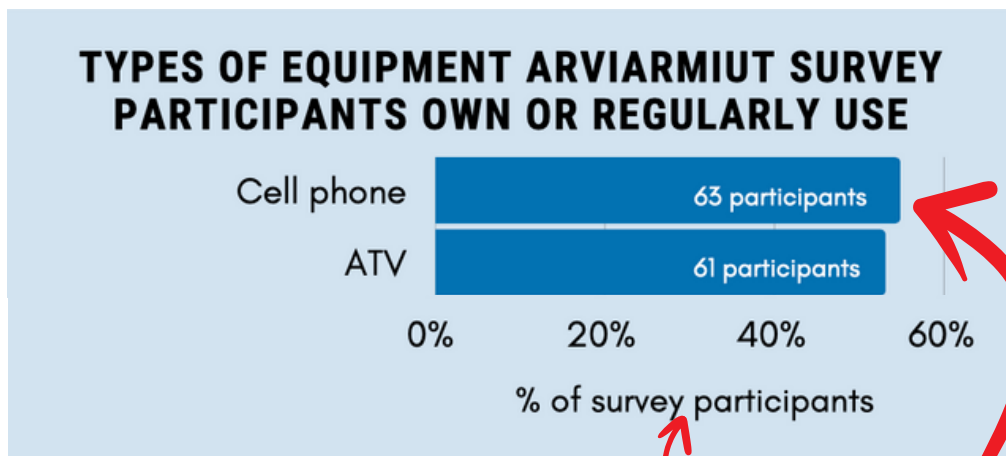
In this example **from p. 16**, participants could choose more than one method of transportation.

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. 15**, cell phones are owned or regularly used by 55% of participants (63 participants).

UNDERSTANDING THE NUMBERS IN THIS REPORT (CONTINUED)

PARTICIPANTS

Participants = everyone (all 115 people) who did this survey in Arviat

RESPONDENTS

Respondents = only the participants who answered follow-up questions

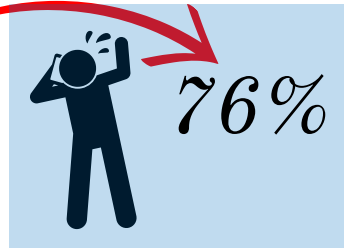
There are some questions in the survey that not everyone answered.

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. 29, 76% of the participants said "yes I can call for help if I get stranded on the land".



If Arviarmiut **participants** get stranded or have an accident on the land, 76% (out of a total of 115) can call for help.

Of the 87 **respondents** who can call for help, most would call a **family member** (91%), or **local search and rescue** (56%), and some would call a **friend** (45%) for help.

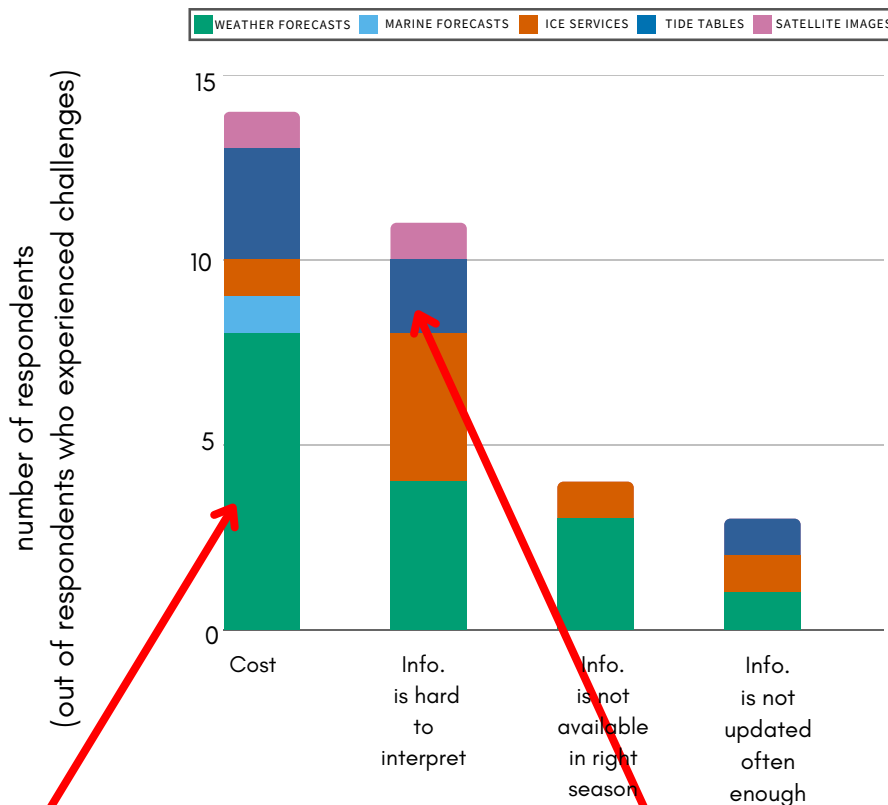
Only the participants who said "Yes, I can call for help", were asked the follow-up question, "Who, can you call for help?" This smaller group of participants who answered the follow-up question are called **respondents**. So the percent shown for respondents are out of the total who answered the question, 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 ARVIARMIUT RESPONDENTS TO ACCESS



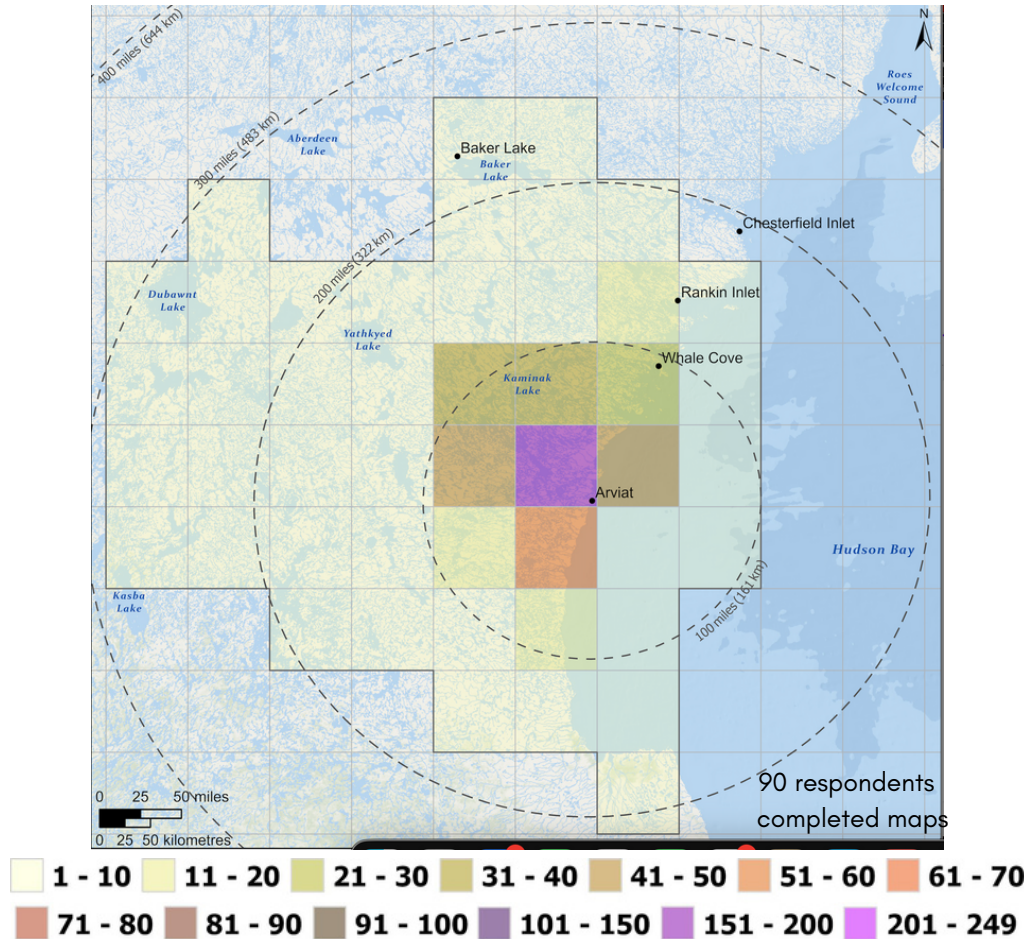
Some participants did not use every type of environmental forecasting information (i.e. weather forecasts, marine forecasts, ice services, tide tables, satellite images).

In this example from **p. 40**, of the respondents who said "Yes, I experience challenges when accessing weather forecasts",

8 of them experience challenges due to cost. Of the respondents who said "Yes, I experience challenges when accessing tide tables", 2 of them experience challenges because the information is hard to interpret.

UNDERSTANDING THE MAPS IN THIS REPORT

TOTAL TRAVEL



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).

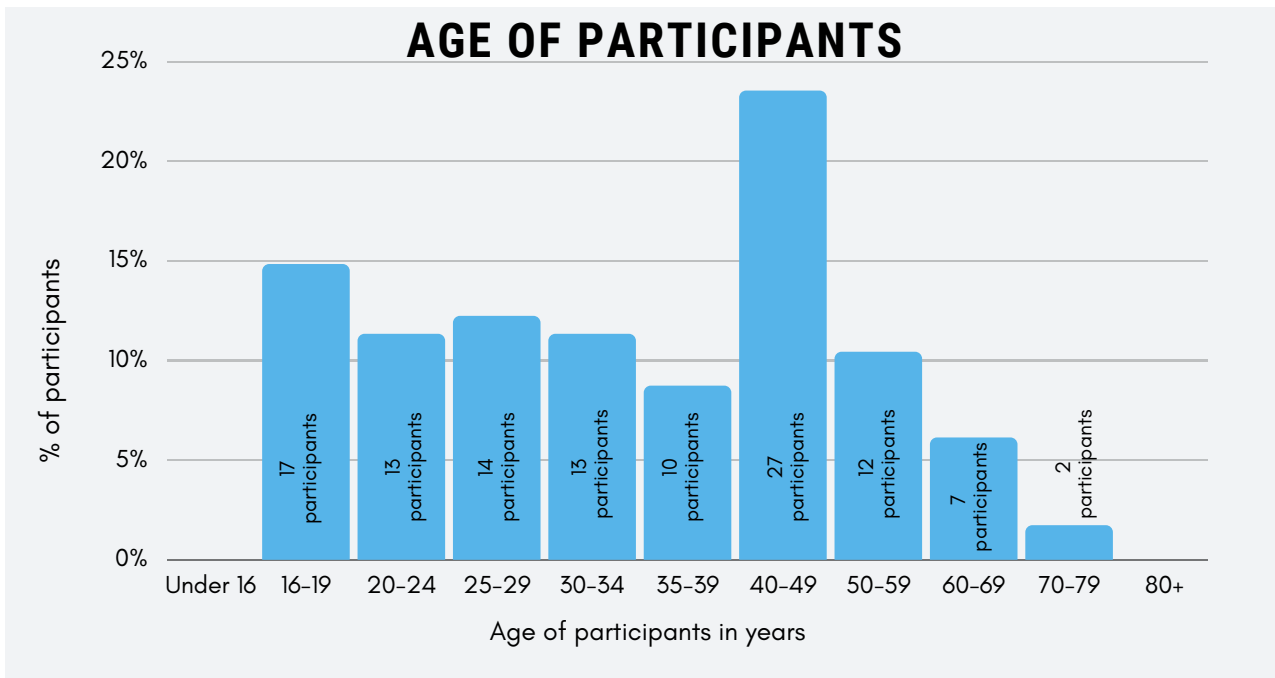
Darker/brighter colours = more respondents went there.

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.

ARVIARMIUT SURVEY PARTICIPANT DEMOGRAPHICS



Survey participants ranged in age from 16 to 79 years, with the highest proportion (24%) being between 40–49 years old. No one under the age of 16 or 80 years and older, participated in the survey.



51%

of participants identify as female



49%

of participants identify as male

Just over half of the participants identify as female (51%), and just less than half identify as male (49%).

97%

of participants identify as an Indigenous person

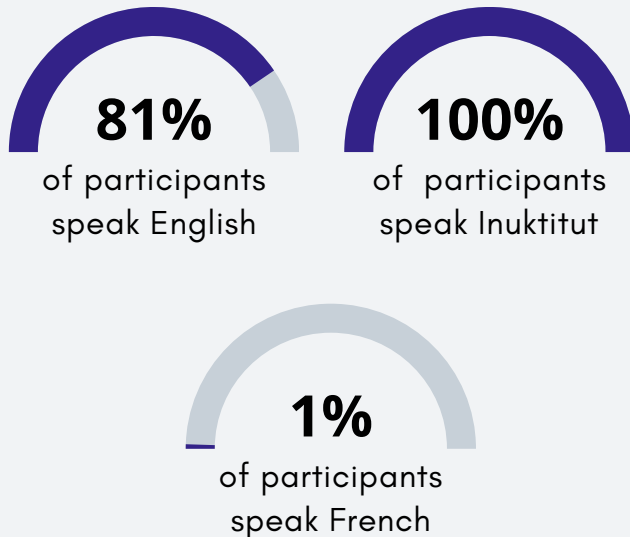
92%

of Indigenous respondents identify as Inuit

Nearly all participants identify as an Indigenous person (97%), and 92% of Indigenous respondents identified as Inuit.

ARVIARMIUT PARTICIPANT DEMOGRAPHICS (CONTINUED)

LANGUAGES SPOKEN*



*Participants could choose multiple languages

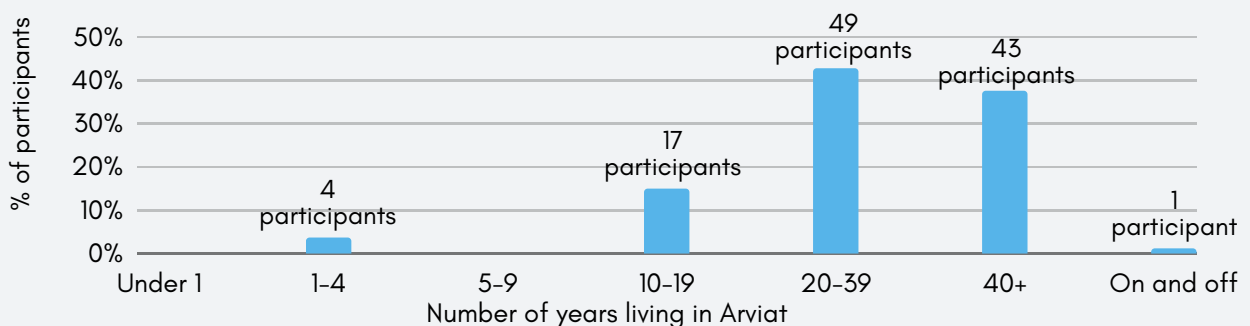
Participants were asked about which languages they speak.

Most participants speak English (81%) and all speak Inuktitut. Very few, speak French (1%).

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

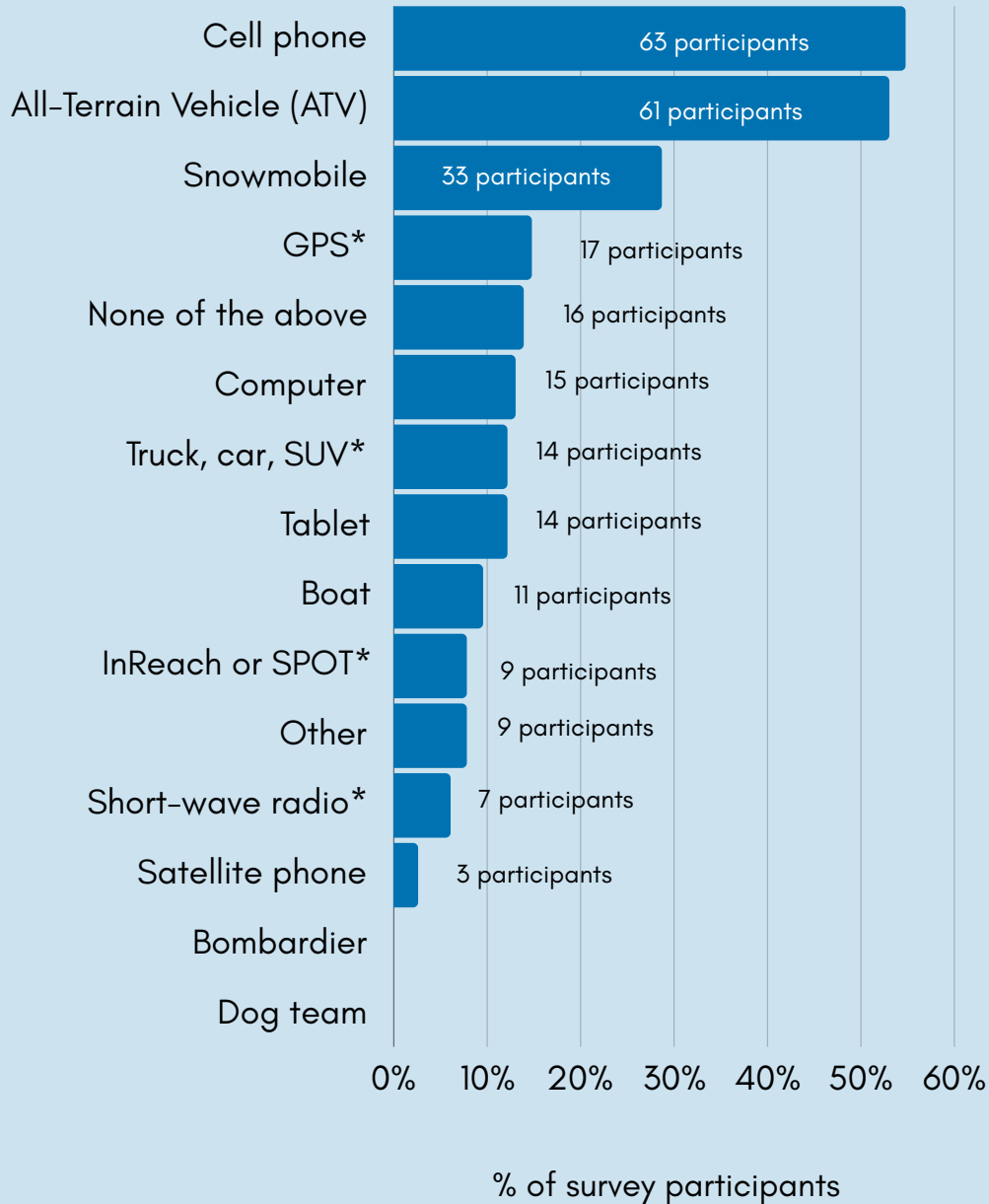
Most participants (80%) have lived in Arviat for 20 or more years.

LENGTH OF TIME SURVEY PARTICIPANTS HAVE LIVED IN THE COMMUNITY



TRAVEL EQUIPMENT

TYPES OF EQUIPMENT ARVIARMIUT SURVEY PARTICIPANTS OWN OR REGULARLY USE



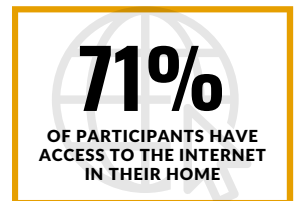
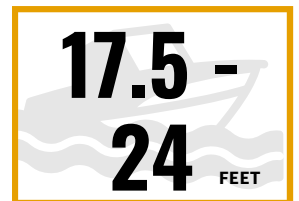
* GPS: Global Positioning System; SUV: Sport Utility Vehicle; SPOT: Satellite Personal Tracker; Short-wave radio e.g. CB, SBX, VHF

Cell phones and ATVs are the types of equipment most often owned or regularly used by participants, followed by snowmobiles. Participants who answered "Other" use a fish finder (Humminbird), maps, mini-side-by-side, scooter, and their legs.

Most (71%) 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.

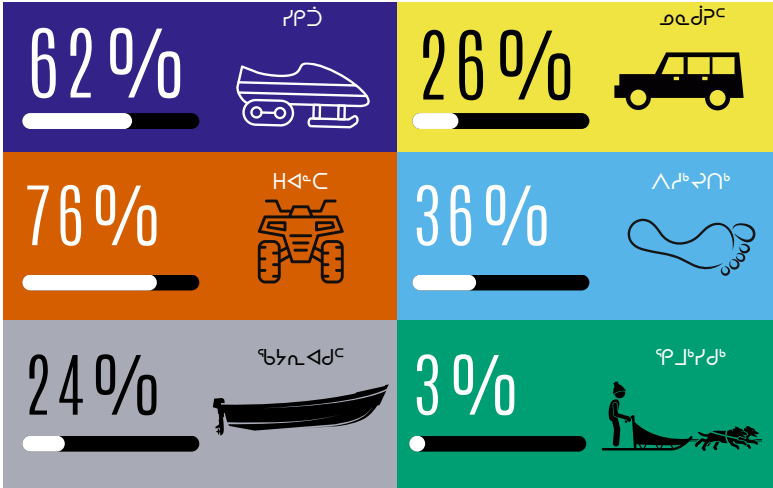


BOAT SIZES RANGED FROM



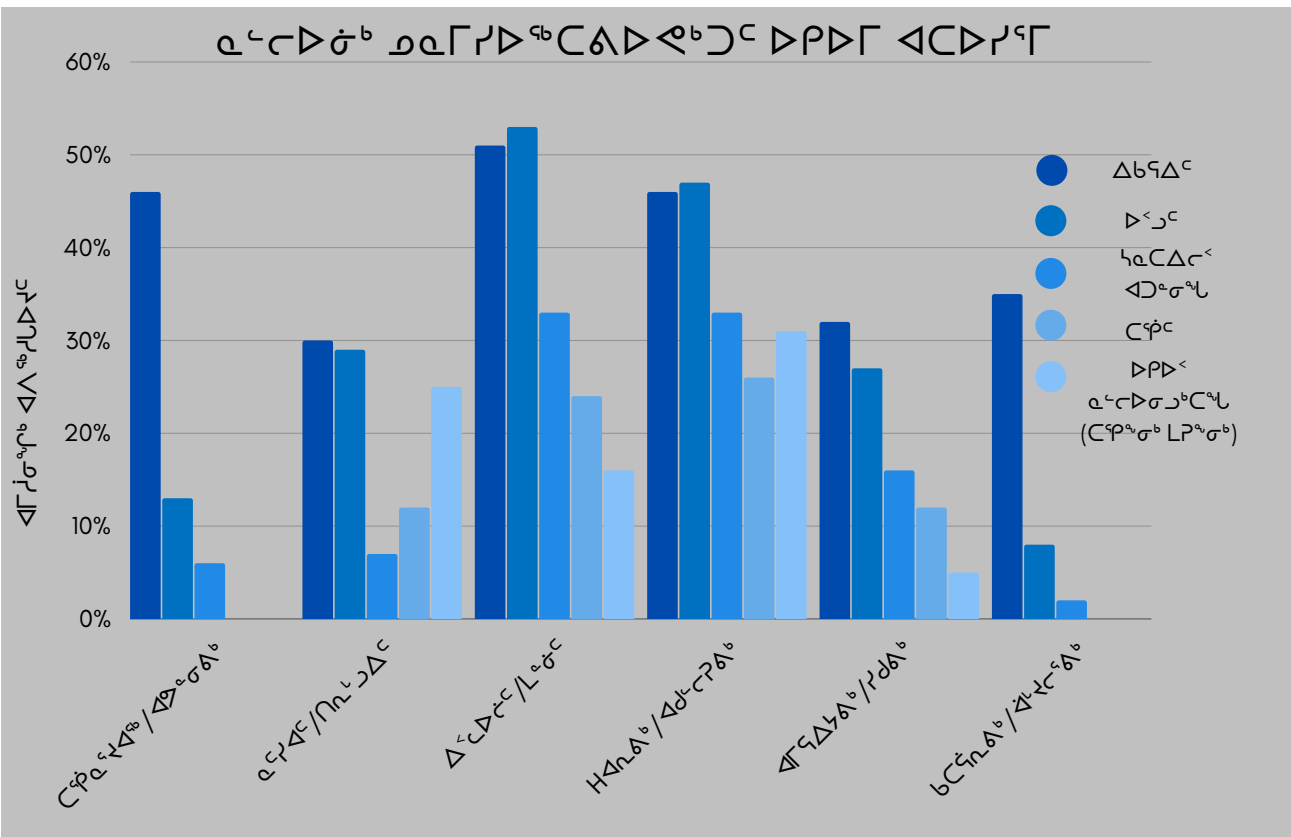
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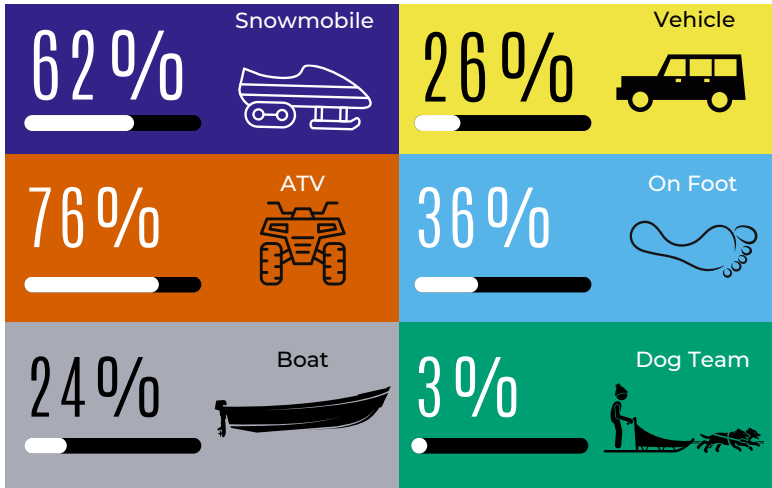
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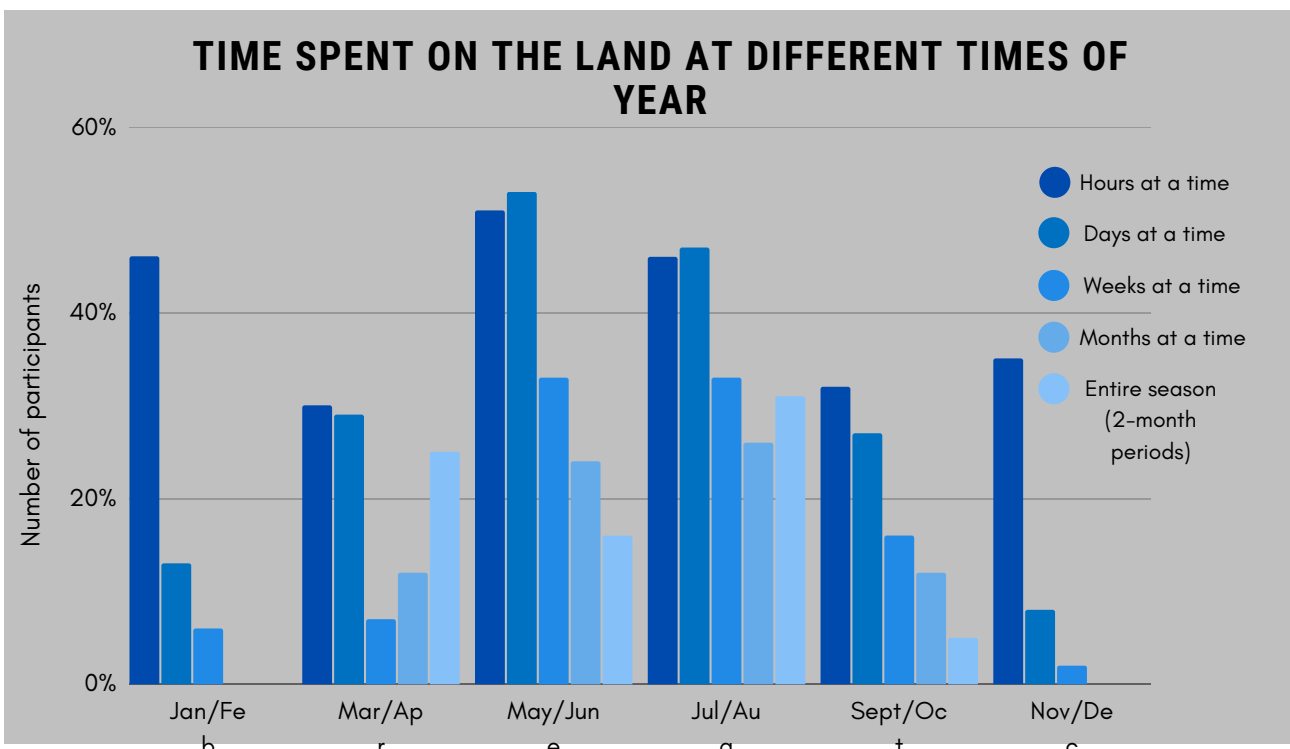
TRAVEL HABITS

METHODS OF TRANSPORTATION SURVEY PARTICIPANTS USE TO TRAVEL ON THE LAND



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

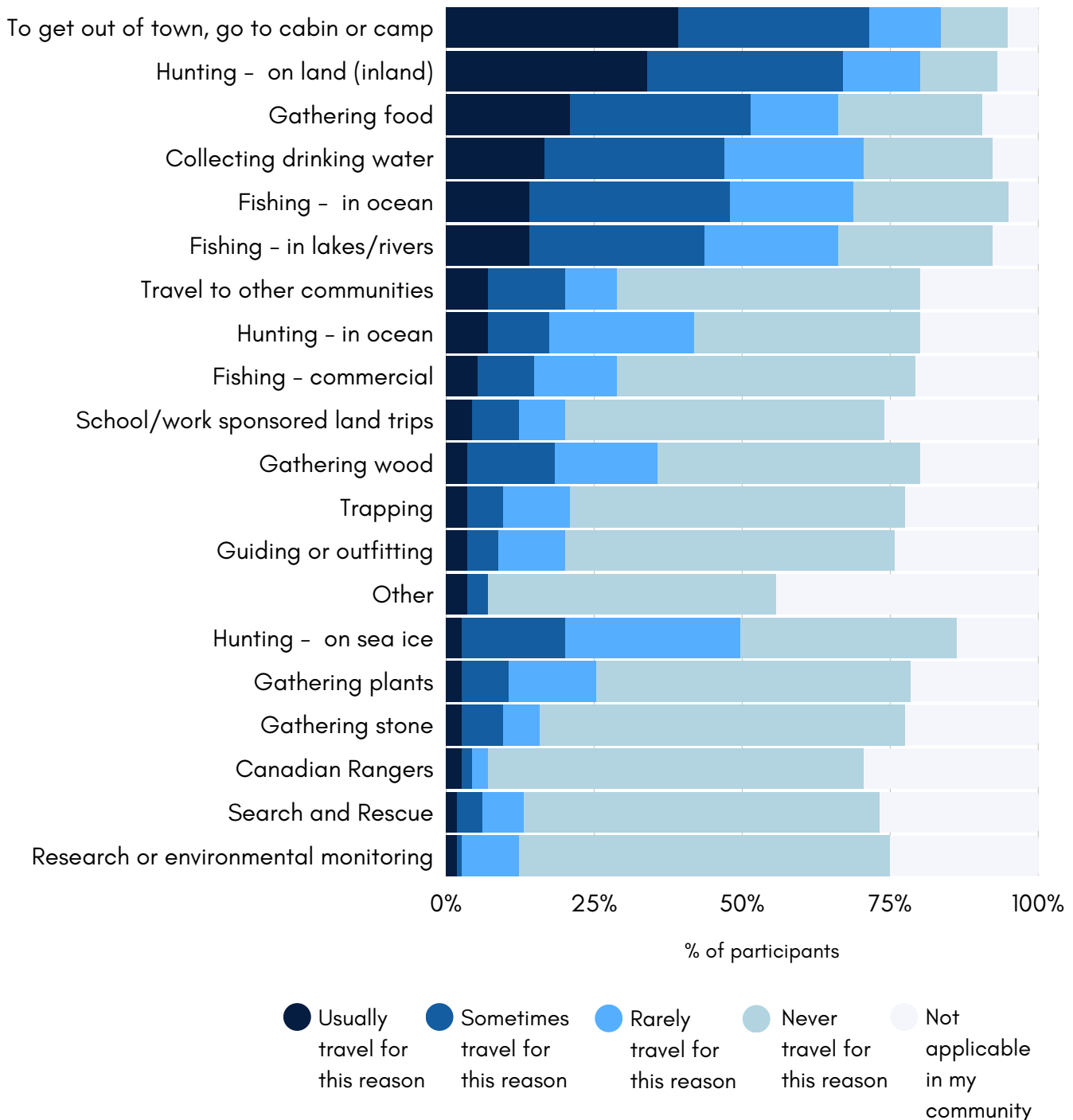
Survey participants use different types of transportation at different times of year. ATVs are used all through the year. Snowmobiles are used from November through June. Boats are used from May through October.



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.

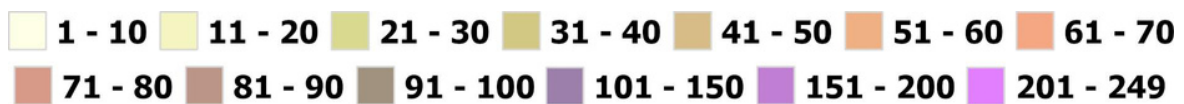
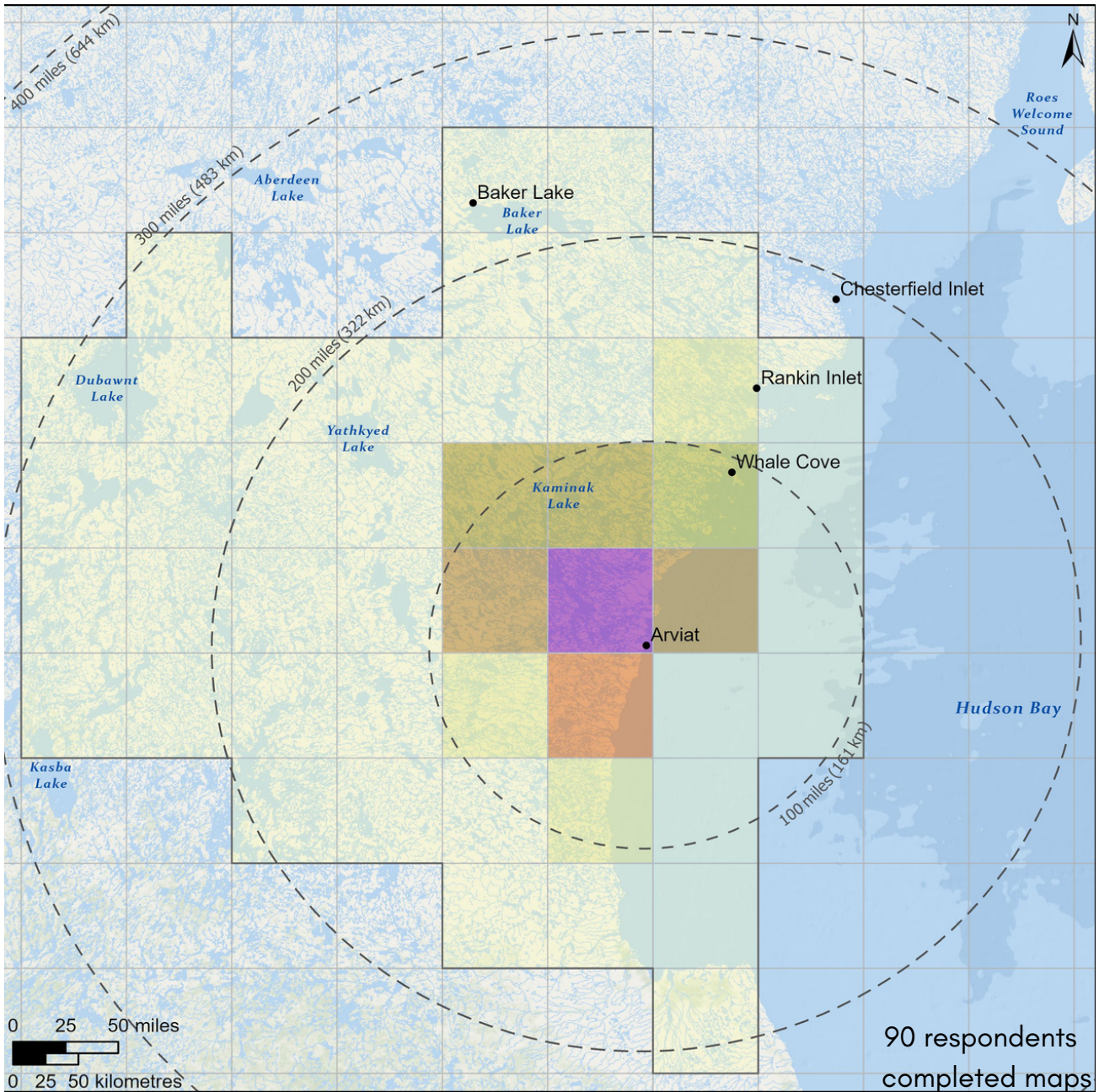
TRAVEL HABITS

REASONS ARVIARMIUT PARTICIPANTS USUALLY TRAVEL ON THE LAND



Survey participants travel on the land, water, and ice for many reasons. Most often they travel to get out of town/go to a cabin or camp, hunt on land (inland), gather food, collect drinking water, fish in the ocean, and fish in lakes and rivers. Participants who answered "Other" said they travel to butcher seals, to cache fuel, for family reunions, sport fishing, wildlife surveys, and church trips.

WHERE ARVIARMIUT RESPONDENTS TRAVEL (TOTAL TRAVEL)



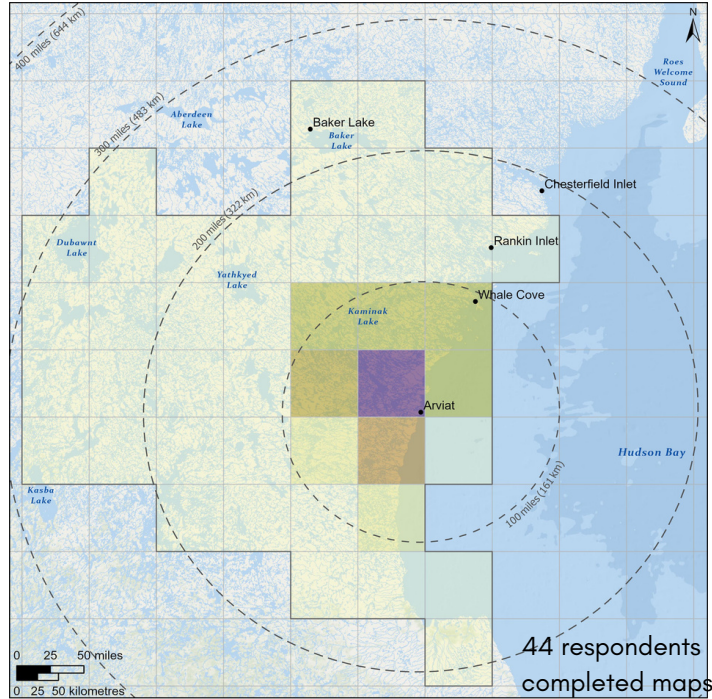
Number of respondents who travelled in the selected area

To access full-page maps visit

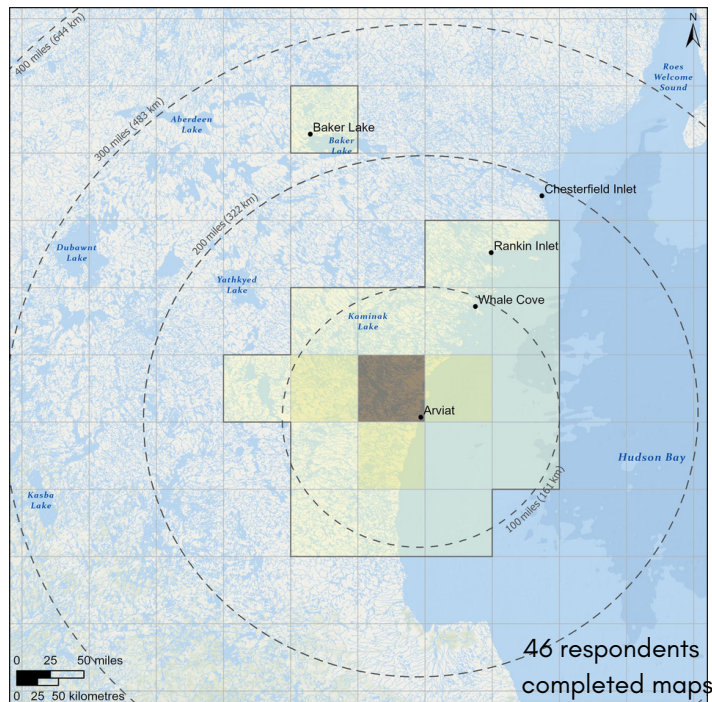
<https://straightupnorth.ca/community-wwic-uses-and-needs/>

WHERE ARVIARMIUT MEN AND WOMEN RESPONDENTS, TRAVEL

TRAVEL BY MEN



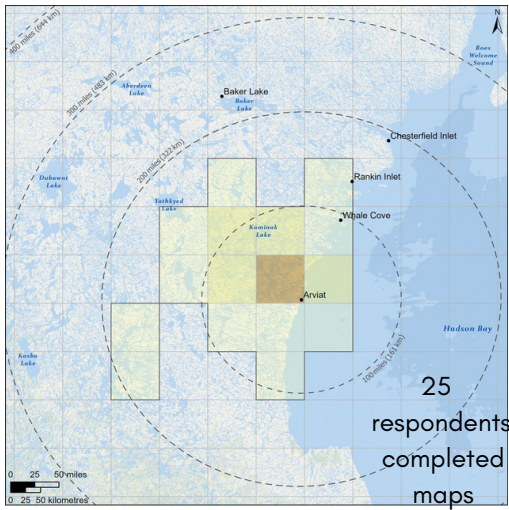
TRAVEL BY WOMEN



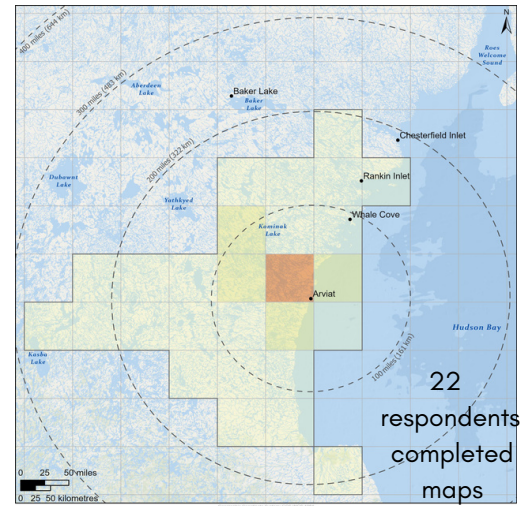
Number of respondents who travelled in the selected area

WHERE ARVIARMIUT RESPONDENTS TRAVEL (BY AGE)

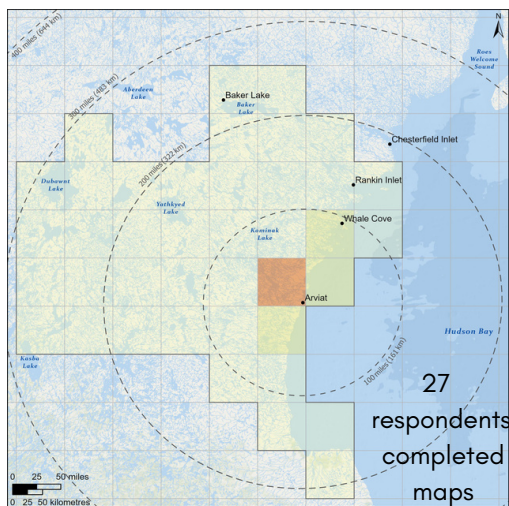
AGES 16 TO 24 TRAVEL



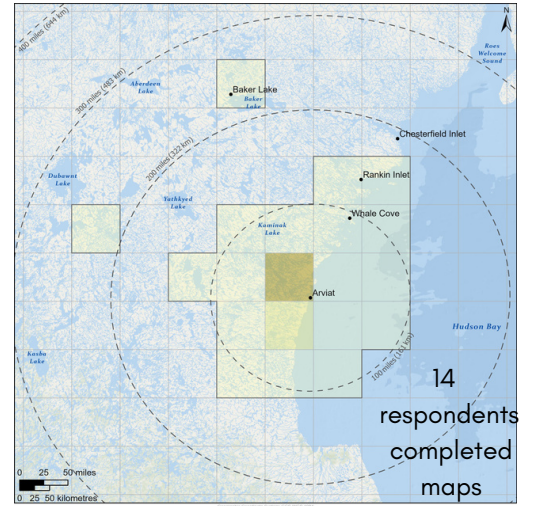
AGES 25 TO 34 TRAVEL



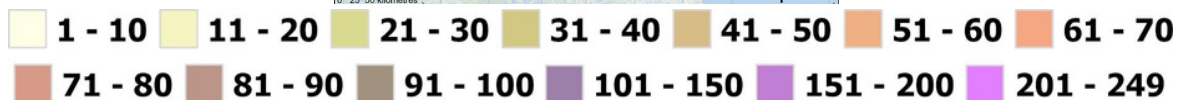
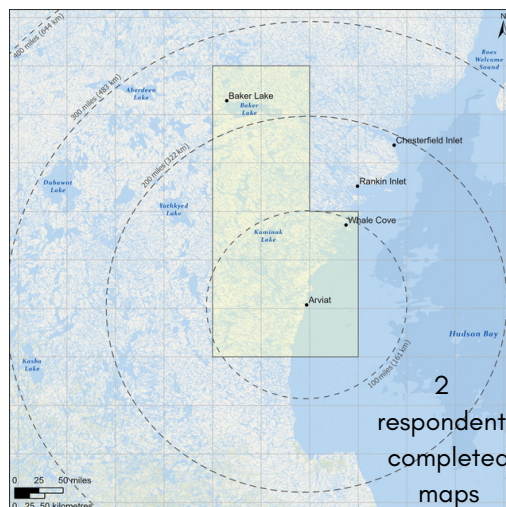
AGES 35 TO 49 TRAVEL



AGES 50 TO 69 TRAVEL



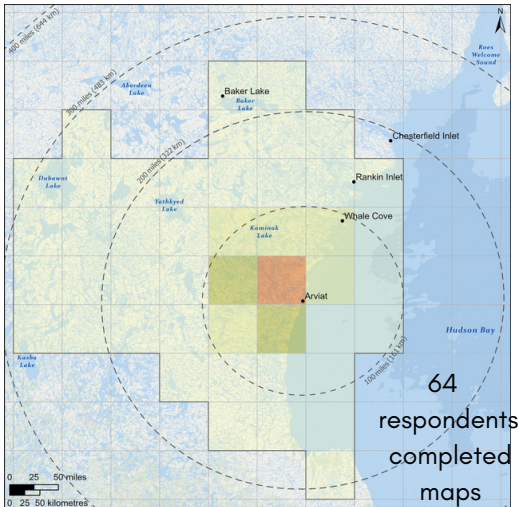
AGES 70 AND ABOVE TRAVEL



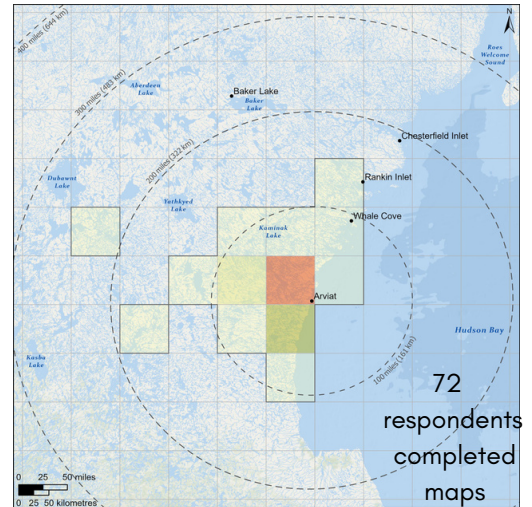
Number of respondents who travelled in the selected area

WHERE ARVIARMIUT RESPONDENTS TRAVEL (BY MODE OF TRAVEL)

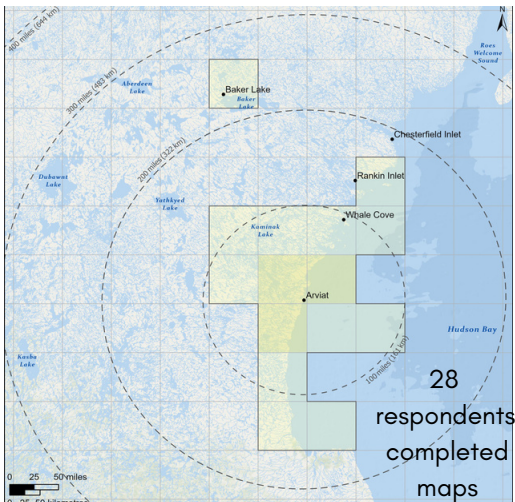
SNOWMOBILE TRAVEL



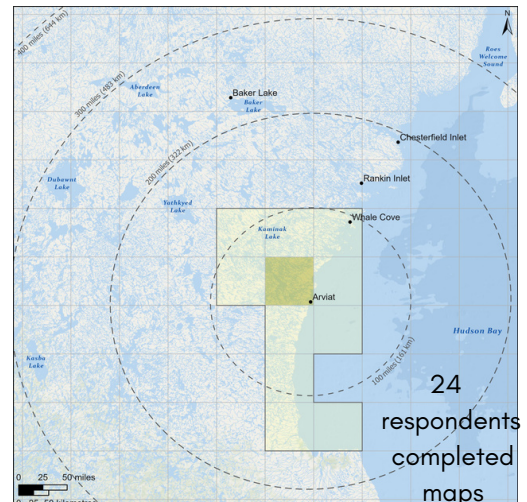
ATV TRAVEL



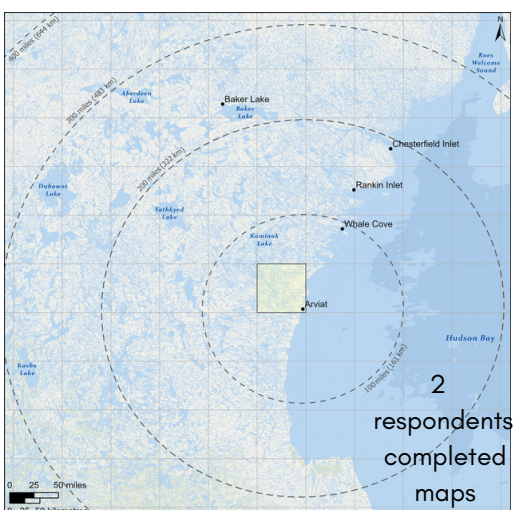
BOAT TRAVEL



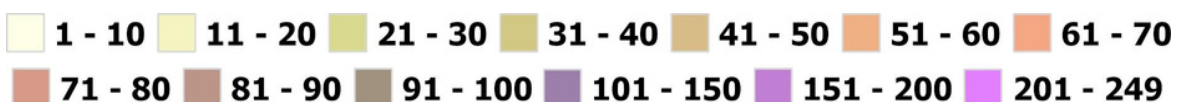
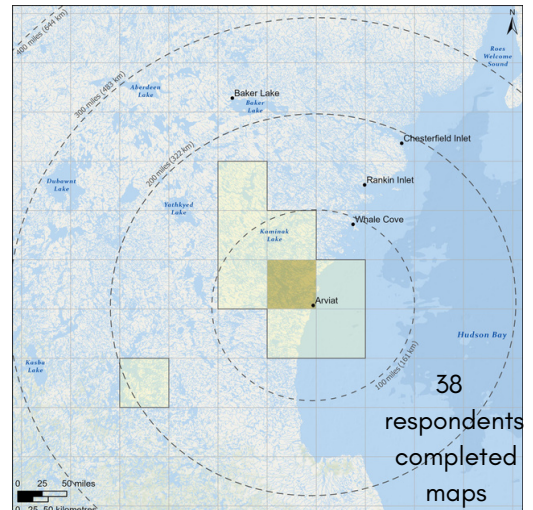
VEHICLE TRAVEL



DOG TEAM TRAVEL

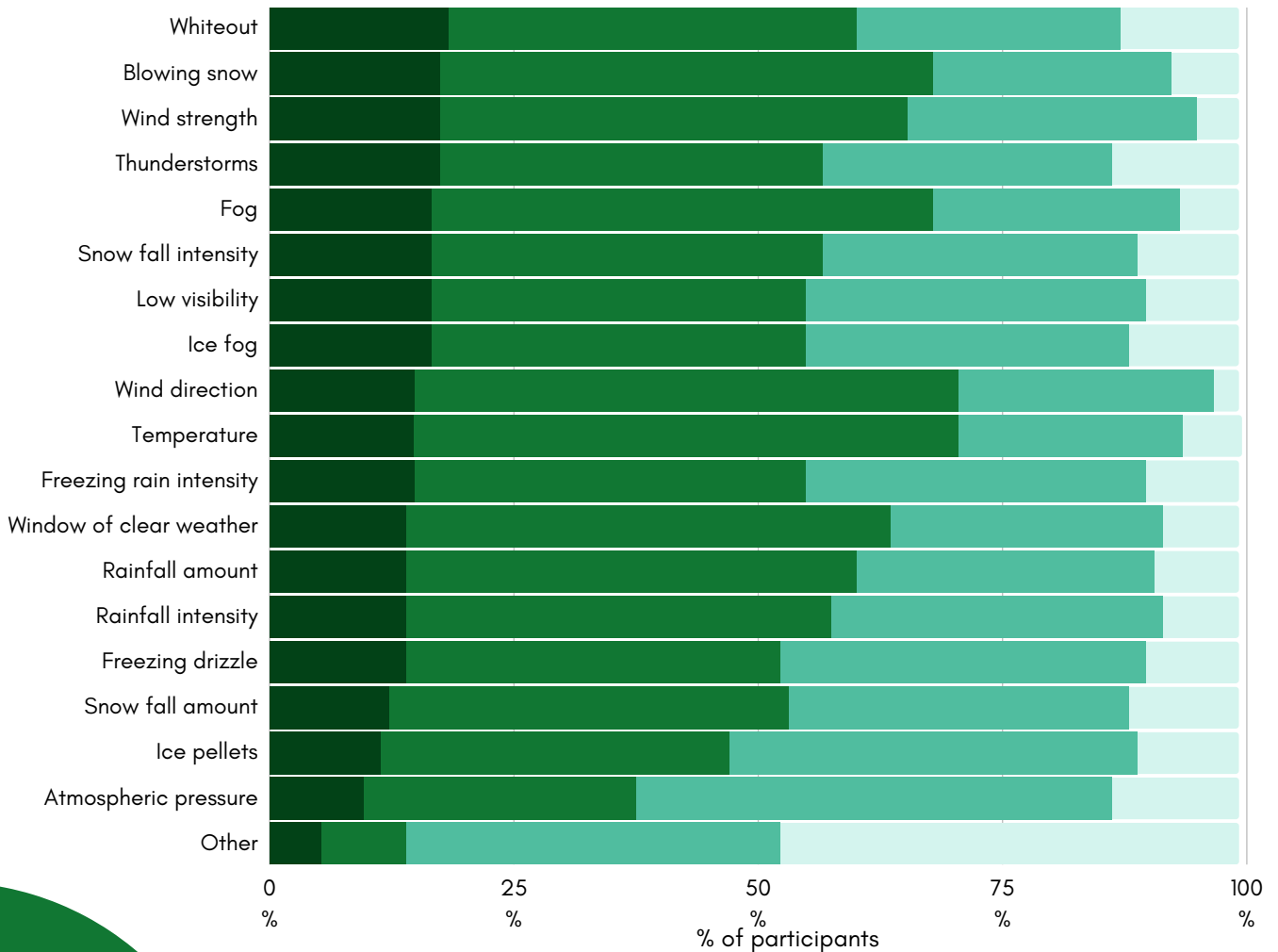


ON FOOT TRAVEL



Number of respondents who travelled in the selected area

WEATHER CONDITIONS ARVIARMIUT 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

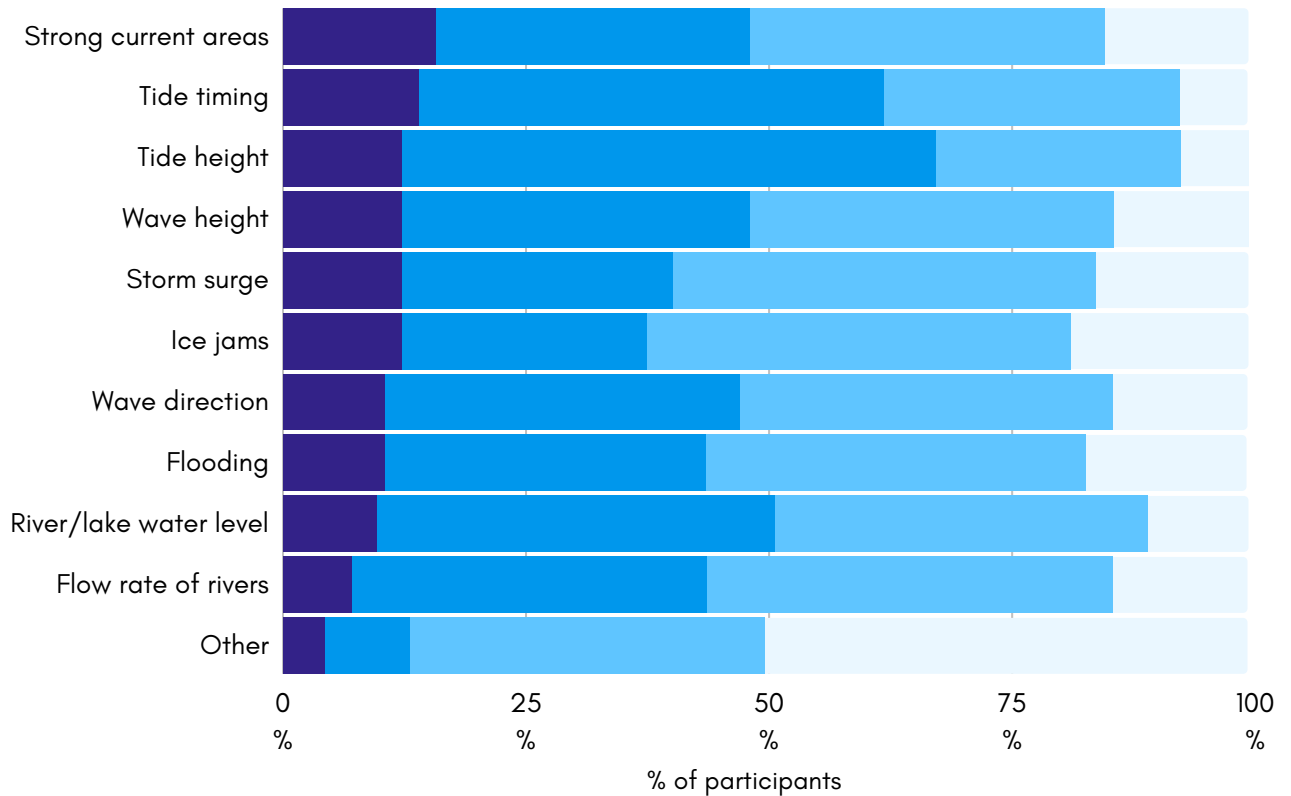
Not applicable:
This condition is not applicable in my community

Arviarmiut participants check many types of weather conditions before they travel on the land, water, sea ice, and snow. Whiteout, blowing snow, wind strength, and thunderstorms are the weather conditions most commonly considered necessary to check before travelling. Those who said "Other" also check for blizzards.



WEATHER

WATER CONDITIONS ARVIARMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL

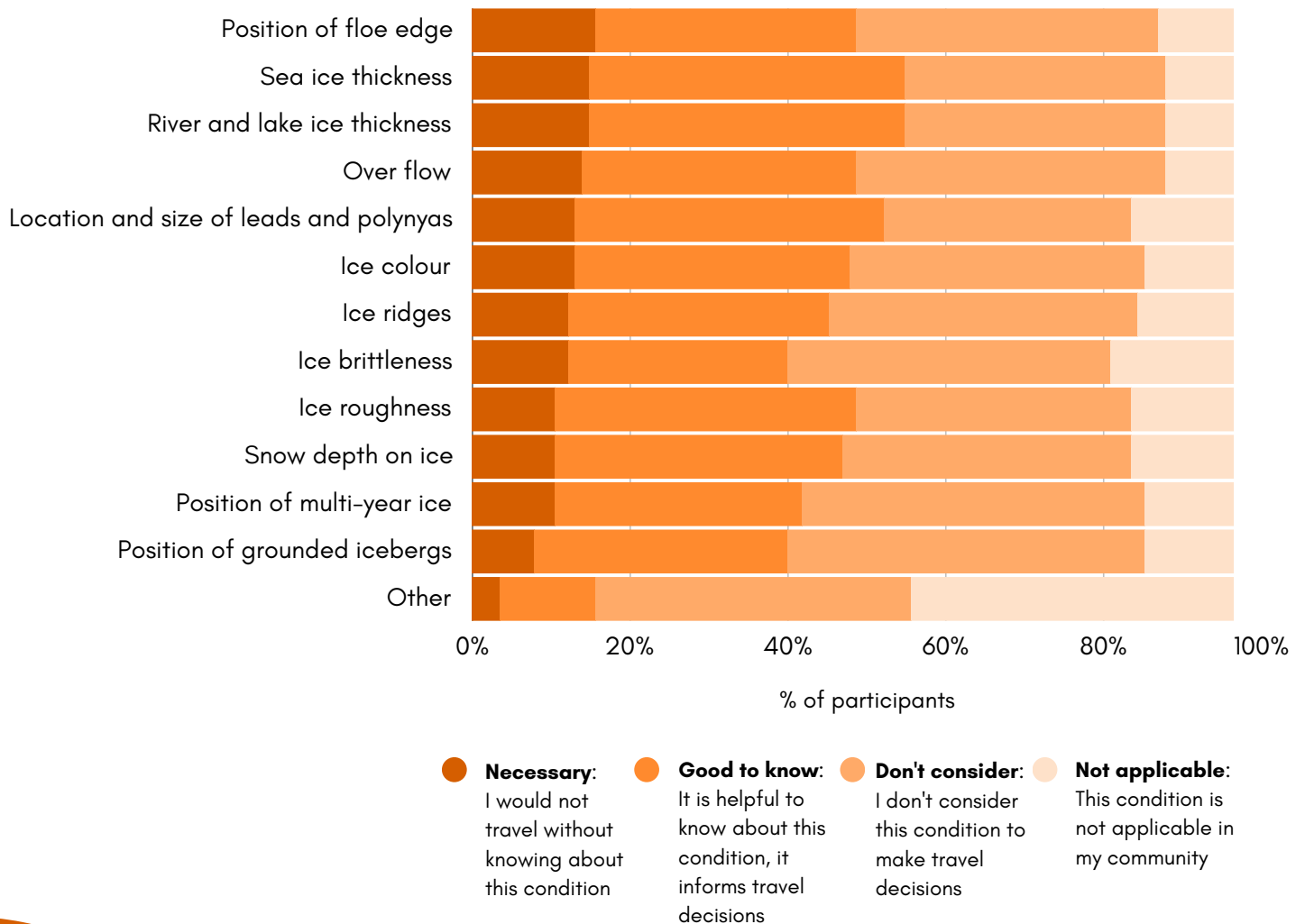


- **Necessary:**
 I would not travel without knowing about this condition
- **Good to know:**
 It is helpful to know about this condition, it informs travel decisions
- **Don't consider:**
 I don't consider this condition to make travel decisions
- **Not applicable:**
 This condition is not applicable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

Arviarmiut participants check many types of water conditions before they travel on the land. Strong current areas, tide timing, wave height, tide height, storm surge, and ice jams are the water conditions most commonly considered necessary to check before travelling.

WATER

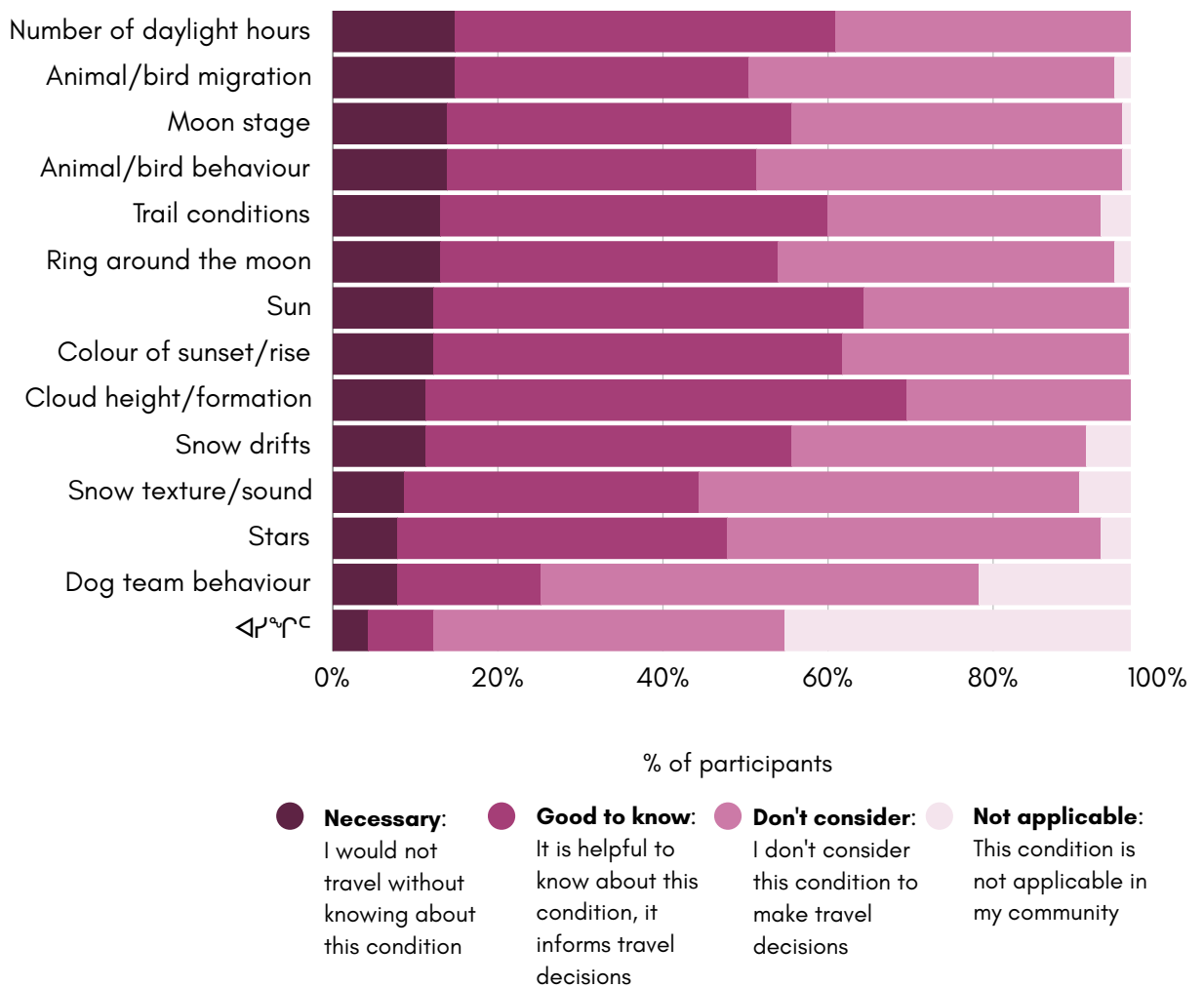
ICE CONDITIONS ARVIARMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL



Arviarmiut participants check many types of ice conditions before they travel on the land. Position of the floe edge, sea ice thickness, river and lake ice thickness, and over flow are the ice conditions most commonly considered necessary to check before travelling. Those who said "other" said blowing snow on ice that can appear to be solid ice, as well as low visibility.

ICE

OTHER ENVIRONMENTAL CONDITIONS ARVIARMIUT PARTICIPANTS CHECK BEFORE THEY TRAVEL

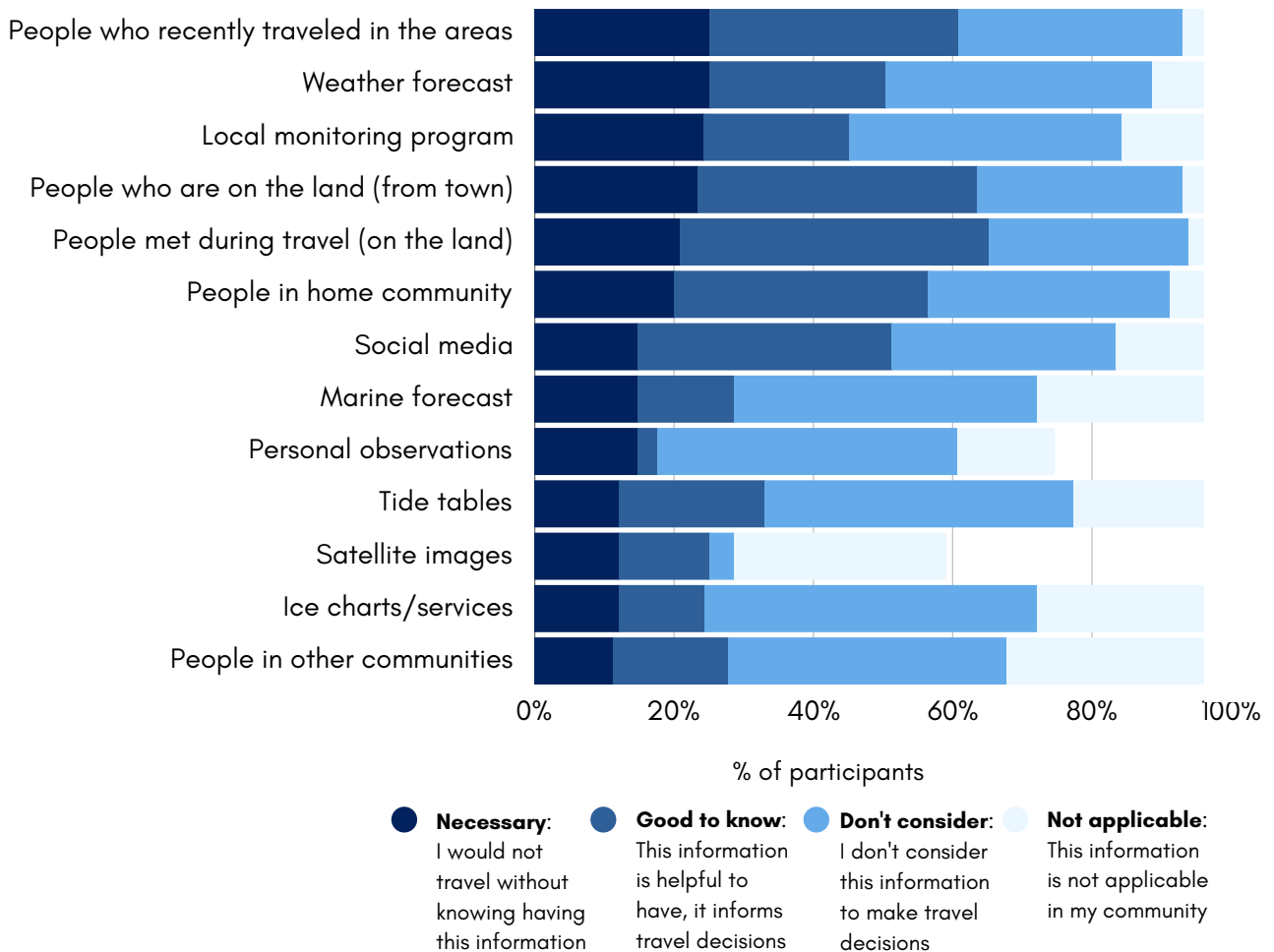


Arviarmiut participants check many other environmental conditions before they travel on the land. Number of daylight hours, animal/bird migration, moon stage, and animal/bird behaviour are the other environmental conditions most often considered necessary to check before travelling. Those who said "other" said dogs and wildlife move in similar ways.

OTHER



INFORMATION SOURCES ARVIARMIUT PARTICIPANTS USE WHEN PLANNING A TRIP

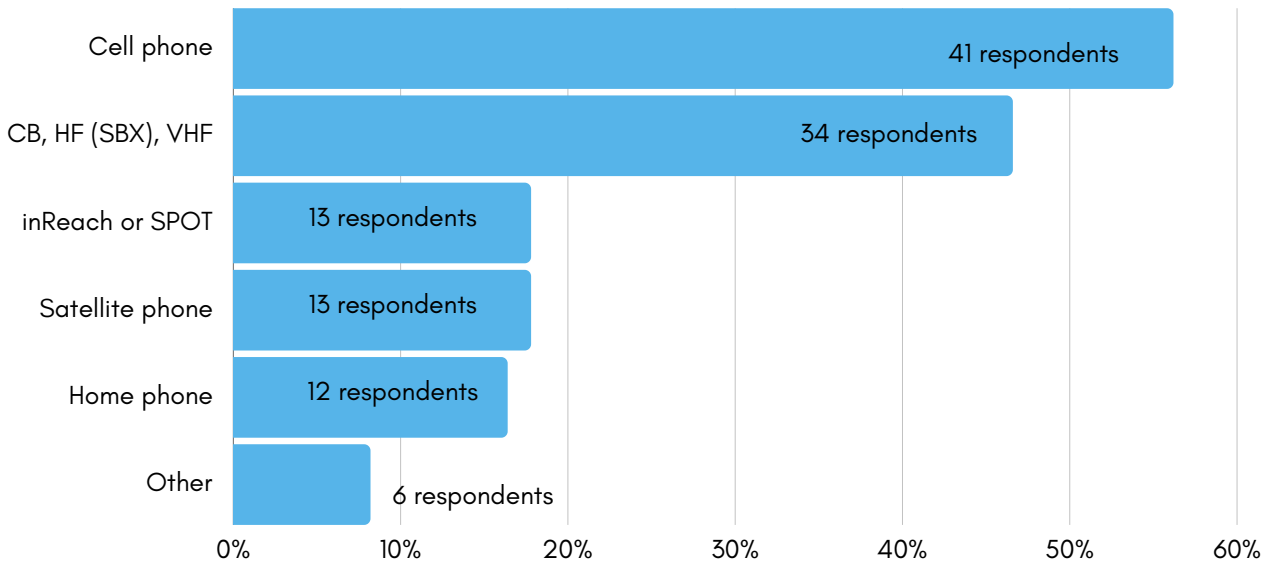


When planning a trip, Arviarmiut participants access many sources of environmental information before they travel on the land. People who recently travelled in the area, the weather forecast, local monitoring programs, and people who are on the land are information sources that participants most often consider necessary to check before travelling.

While on the land and when deciding to return home talking to people who are on the land, and people met during travel on the land are the information sources that are used most by Arviarmiut.

CONTACTING COMMUNITY INFORMATION SOURCES

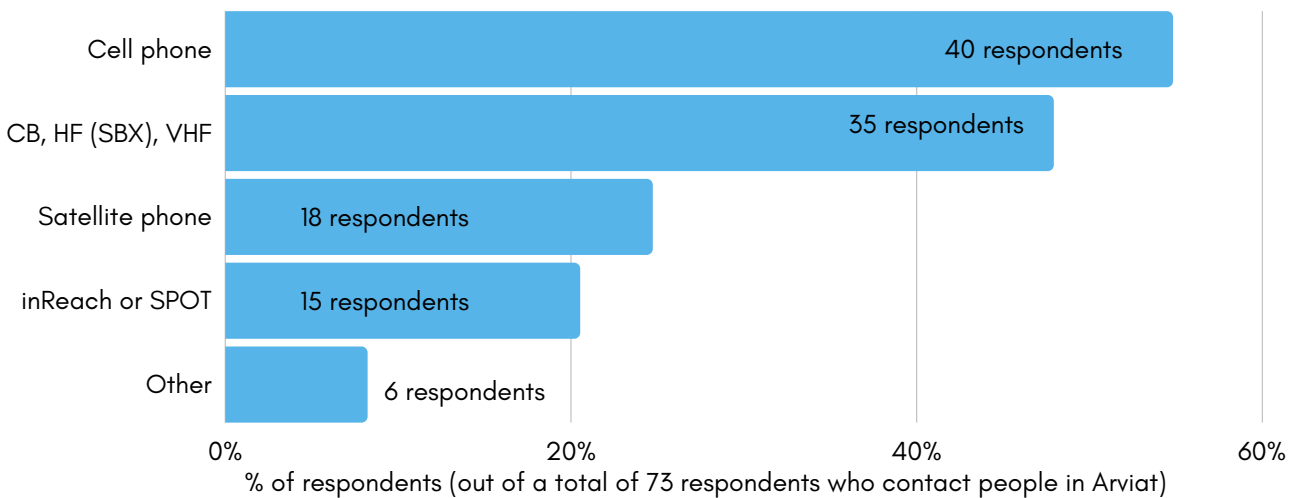
Contacting people on the land while in Arviat



% of respondents (out of a total of 73 respondents who contact people on the land)

Respondents who contact people on the land to ask about environmental conditions while they themselves are in Arviat mostly use cell phones, short-wave radios to contact them. Respondents who answered "Other" meet people in person (go find them, or wait to talk to them).

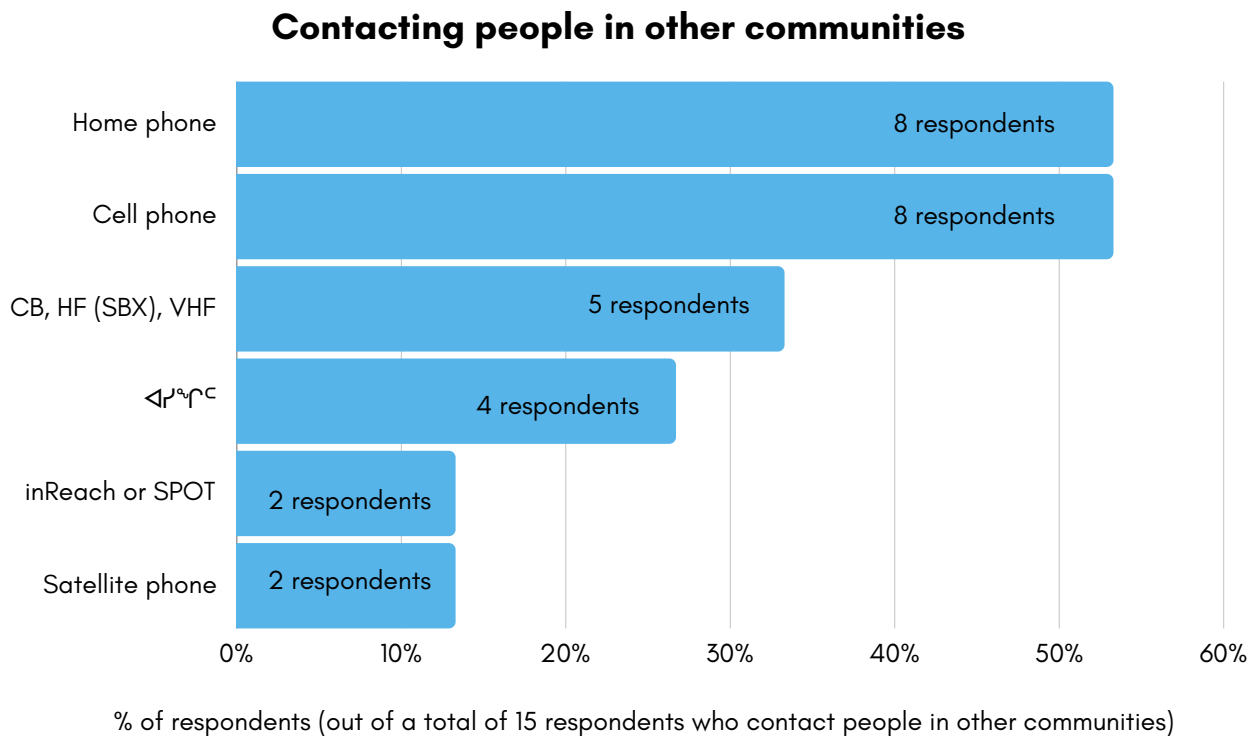
Contacting people in Arviat while on the land



% of respondents (out of a total of 73 respondents who contact people in Arviat)

Respondents who contact people in Arviat to ask about environmental conditions while they themselves are on the land mostly use cell phones or short-wave radios (CB, HF(SBX), VHF). Respondents who answered "Other" also meet people in person.

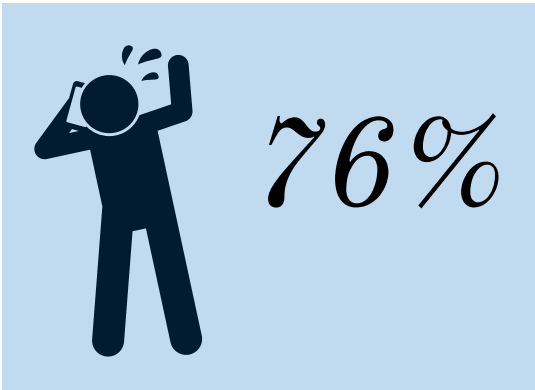
CONTACTING COMMUNITY INFORMATION SOURCES (CONTINUED)



Respondents who contact people in other communities to ask about environmental conditions mostly use home phones and cell phones to contact them. Respondents who answered "Other" said they contact people from other communities when they meet them on the land, and when they get to other communities.

The other communities most commonly contacted are: Baker Lake, Churchill, Rankin Inlet, and Whale Cove.

CONTACTING OTHERS FOR HELP



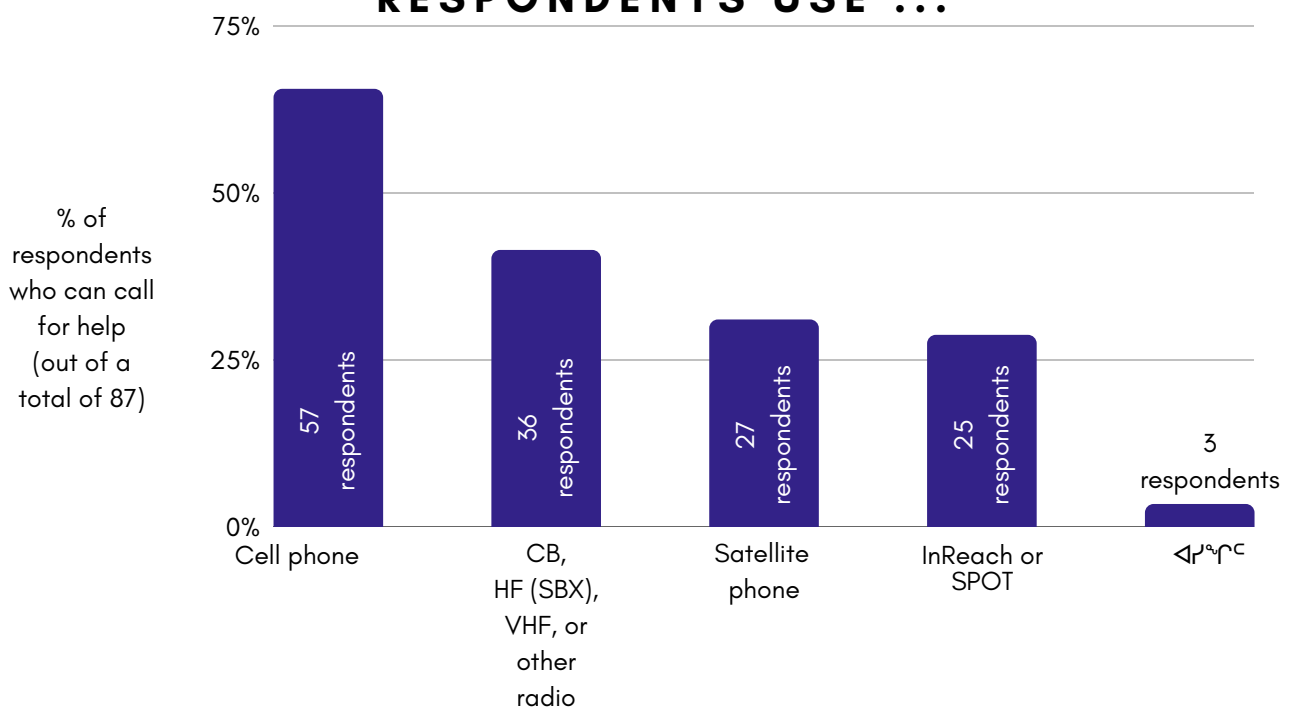
If Arviarmiut participants get stranded or have an accident on the land, 76% (out of a total of 115) can call for help.

Of the 87 respondents who can call for help, most would call a **family member** (91%), or **local search and rescue** (56%), and some would call a **friend** (45%) for help.

Respondents would also call **Hunters and Trappers Association** (26%) and **Nunavut Emergency Management** (2%).

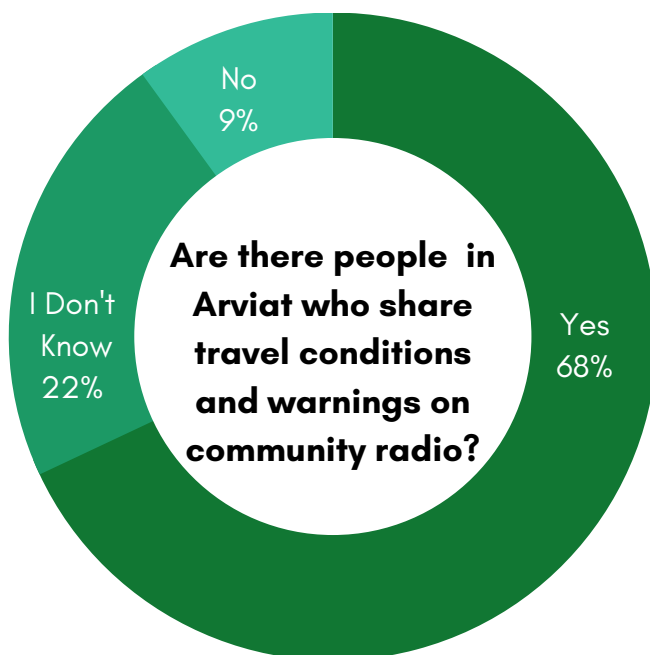
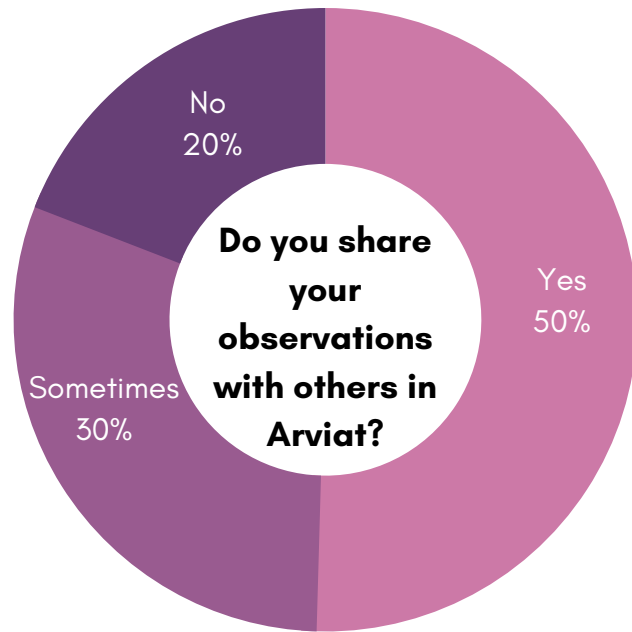
Of the respondents who can call for help, most use a cell phone (66%). They also use short-wave radios, InReach or SPOT, or satellite phones. Respondents who answered "Other" pray, and get help when other hunters approach them.

TO CALL FOR HELP ARVIARMIUT RESPONDENTS USE ...



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

The majority (80%) of participants share their observations of weather, water, ice, or snow conditions with others in Arviat.

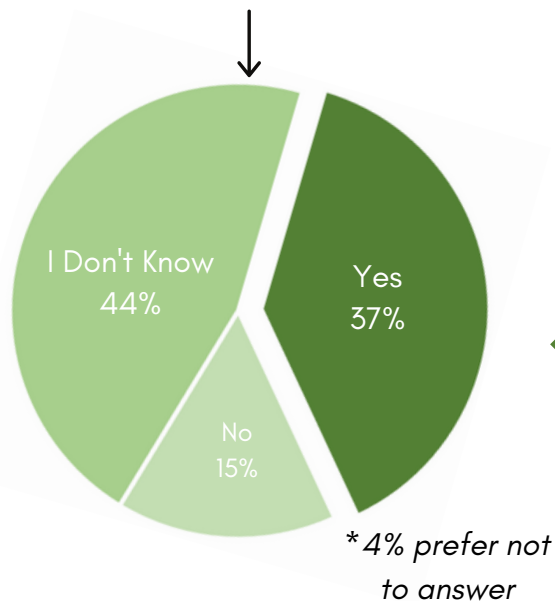


* 1% prefer not to answer

Most (68%) participants said there are people regularly going on community radio in Arviat, or CB/HF(SBX)/VHF radio, to share warnings or provide advice about weather, water, or ice conditions. A few (22%) participants did not know if people regularly go on community radio in Arviat, 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 ARVIAT

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



Of the 43 respondents who answered "yes there are places"

86%

go to these places to listen or ask for advice

86%

go to share observations or advice

Just less than half (44%) of participants said they did not know if there are places in Arviat where people tend to meet and talk about recent travel conditions, or weather, water, ice and other environmental conditions. Of the 37% (43 participants) who said there are places where people meet, most (86%) go to those places to listen or ask for advice or to share observations or advice.

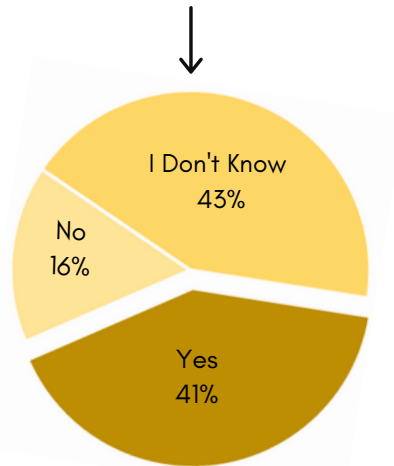
PLACES ARVIARMIUT GATHER TO TALK ABOUT TRAVEL CONDITIONS

- Anywhere we meet
- Community hall
- End of the road
- Hunters and Trappers Organization and other meetings
- Local businesses and schools
- Near the dumps
- On the land
- Outdoor barbecues
- Public places
- Search and rescue
- Shack
- The bridge
- Where you meet people going up the hill
- Wildlife Office
- Work



SOCIAL MEDIA ARVIARMIUT USE TO SHARE TRAVEL CONDITIONS

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



Of the 47 respondents
who said "yes"

30 (64%)

use the information
shared over social
media

There were 47 Arviarmiut participants who identified being aware of social media pages or groups where people share observations or advice about weather, water, and ice conditions mentioned using Facebook.

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 media

Facebook

- Aqqiumavvik Society
- Arviat - everything and anything
- Family and friends
- Arviat Young Hunters
- Nunavut Hunting stories of the day

SIKU app (including for SmartICE)

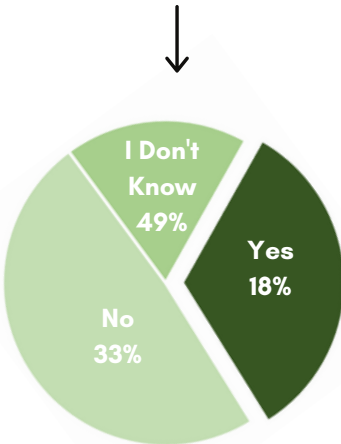


Topics, descriptions, and photos include

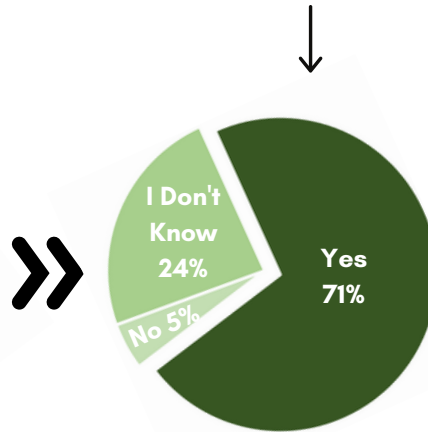
- Cautions for safe travel
- Hunting, trapping, and fishing
- Land and survival skills
- Melting snow and ice
- Rivers
- Safe and dangerous areas
- Sea depth
- Sea ice thickness
- Weather and water conditions
- Wildlife, wildlife harvested

COMMUNITY MONITORING PROGRAMS

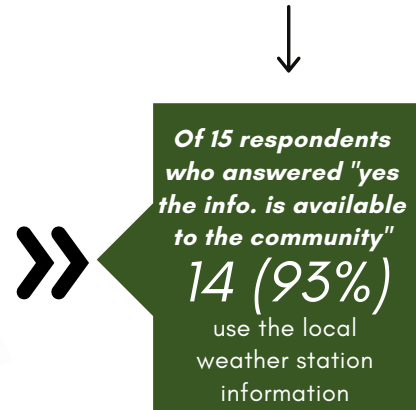
Are there local weather stations in Arviat?



Is the local weather station information available to the community?



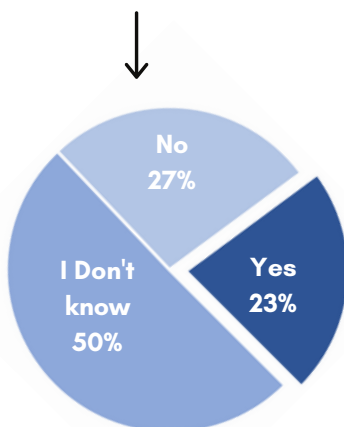
Do you use the local weather station information?



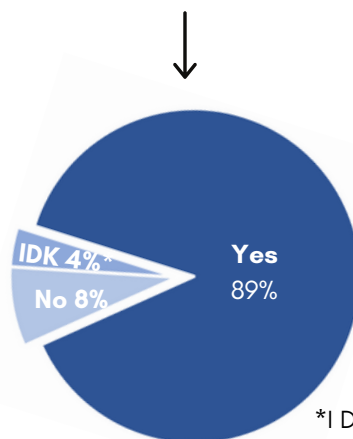
When asked about local weather stations, it is notable that 56 participants said that they do not know if there are local weather stations and 59 participants said that local weather stations do or do not exist.

Of the 21 participants who said there are local weather stations in Arviat, 15 of them said the weather station information is available in Arviat and 14 of them said that they use the information.

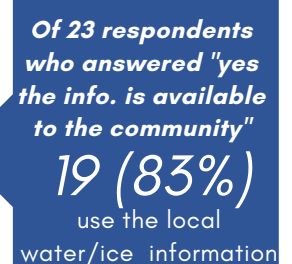
Are there local water/ice monitoring programs in Arviat?



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



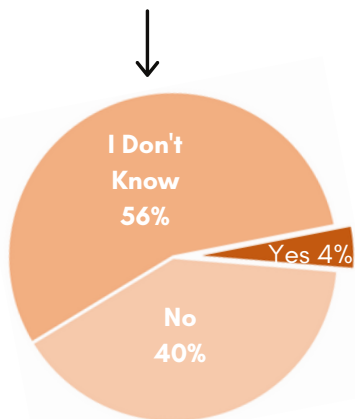
Do you use the local water/ice information?



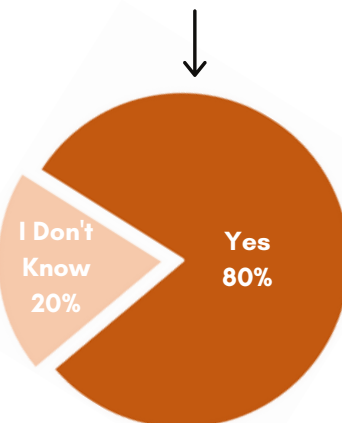
When asked about local water and ice monitoring programs it is notable that the same number of participants said that they do not know if there are local water and ice monitoring programs as said that local programs do or do not exist. There were 26 participants who said there are local water/ice monitoring programs. Of these, 23 respondents said the information is available in Arviat and 19 respondents said that they use the information.

COMMUNITY MONITORING PROGRAMS (CONTINUED)

Are there remote cameras recording environmental conditions in Arviat?



Is the remote camera information available to the community?



Do you use the remote camera information?

Of 4 respondents who answered "yes the info. is available to the community"
4 (100%)
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, 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 of them said they use the remote camera information.

Aqqiumavvik Society is a partner in this project, and through them we know there are local monitoring programs in Arviat, 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)

Arviarmiut 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, ice, and sea depth.

LOCAL WEATHER STATIONS	PROGRAM PROVIDER	WHAT IS MONITORED
(867) 857-4166	Arviat Hamlet Council	Rain, snow, fog, thunder, snow fall, drizzle, warning, sunny, temperature, visibility
Arviat airport	Hamlet of Arviat	Air travel conditions
Inuit hunters	Near the beach	Wind
Weather station at airport	Workers at airport	Weather information

LOCAL WATER/ICE PROGRAMS	PROGRAM PROVIDER	WHAT IS MONITORED
Aqqiumavvik Society	Aqqiumavvik Society	Sea, land, and ice (thickness) seasonally, sea depth and surface
SmartICE	Aqqiumavvik Society	Sea ice thickness, danger zones, ice condition, location of ice breakage, movement
Ujjiqsuiniq	Aqqiumavvik Society	Drinking water quality
Wildlife/Environmental	Government	Ice thickness

PRODUCTS AND ACCESSING ENVIRONMENTAL FORECASTS

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

WEATHER FORECAST PRODUCTS USED

- CBC
- Environment Canada, Government of Canada (www.weather.gc.ca)
- EOSDIS worldview (<https://worldview.earthdata.nasa.gov>)
- Facebook weather information page
- Government of Nunavut forecast
- Home thermometer
- inReach
- Local CB
- Phone 867-857-4166, weather forecast toll free phone
- Public recorded weather forecast
- Radio
- Television
- Weather forecast app
- Windy (www.windy.com)
- Weather Underground, Wunderground (www.wunderground.com)

MARINE FORECAST PRODUCTS USED

- Environment Canada marine forecast (www.weather.gc.ca/marine)
- Facebook
- Marine toll free phone
- Marine forecast on CB radio channel 2
- Phone 867-857-4166
- Windy (www.windy.com)
- Weather Underground, Wunderground (www.wunderground.com)

PRODUCTS AND ACCESSING ENVIRONMENTAL FORECASTS (CONTINUED)

Along with community sources of information to decide if it is safe to travel, Arviarmiut respondents use a wide range of ice charts/services, tide table products, and satellite image products.

ICE CHARTS/SERVICES USED

- Environment Canada
- Government (Uhikataqtiit)
- NASA EOSDIS worldview (<https://worldview.earthdata.nasa.gov>)
- SIKU app
- SmartICE (Aqqiumavvik Society Facebook page)

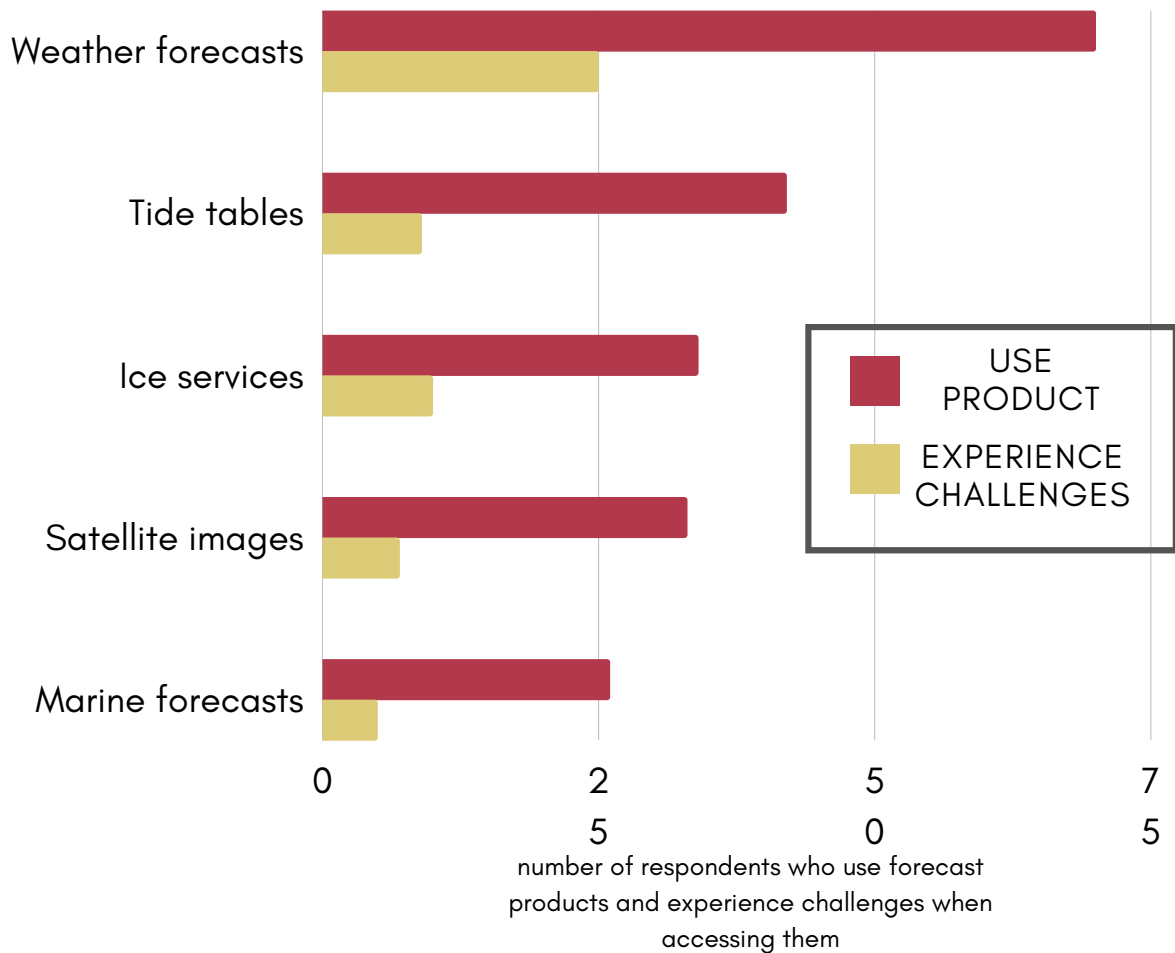
TIDE TABLE PRODUCTS USED

- Aqqiumavvik public page
- Environment Canada (www.weather.gc.ca)
- Environmental marine forecast
- Government (Uhikataqtiit)
- Just by looking at the tides
- Phone 867-857-4166
- Radio broadcast
- Tide-forecast.com
- Weather forecast app
- Windy tide forecast (www.windy.com)

SATELLITE IMAGE PRODUCTS USED

- NASA EOSDIS Worldview (<https://worldview.earthdata.nasa.gov>)
- SIKU app

PRODUCTS AND ACCESSING ENVIRONMENTAL FORECASTS (CONTINUED)

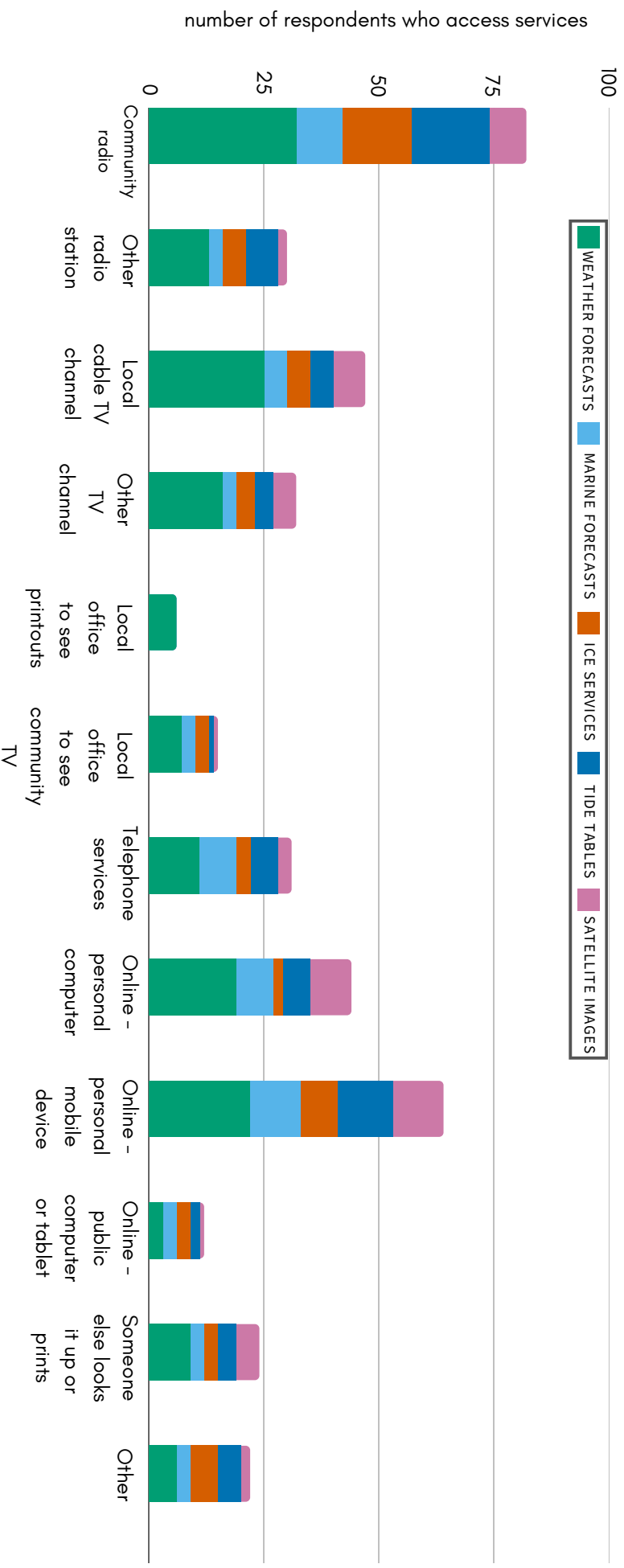


Of the forecasting products used, respondents most often rely on weather forecasts, followed by tide tables, and the other services are less often used.

Of the 61% of participants who use **weather forecasts**, 36% experienced challenges when accessing them. **Tide tables** were used by 37% of participants and of these, 21% experienced challenges.

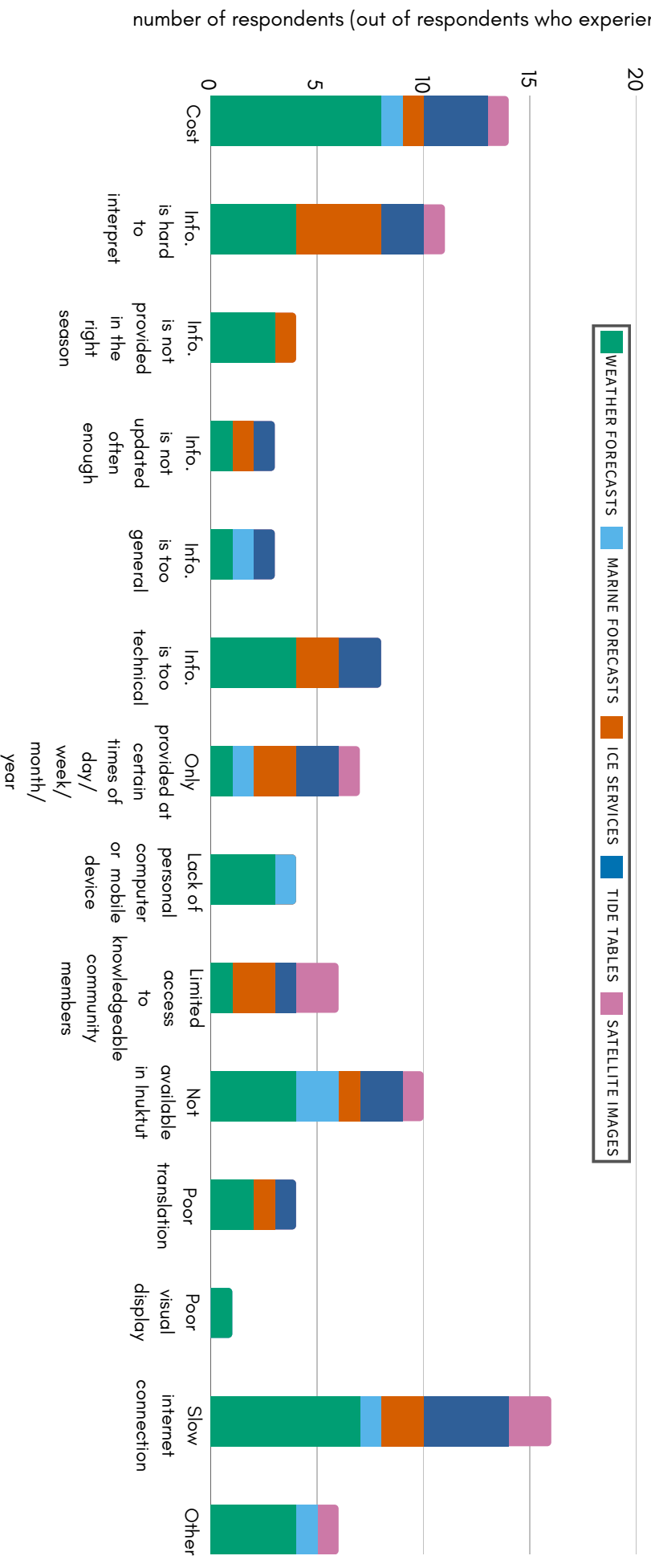
Ice services were used by 30% of participants and of these, 30% experience challenges when accessing them. **Satellite images** were used by 29% of participants, 21% of whom experience challenges when accessing them. Of the 23% of participants who use **marine forecasts**, 19% experienced challenges when accessing them.

WAYS THAT ARVIARMUIT RESPONDENTS ACCESS POLAR SERVICES



Arviarmiut respondents access environmental forecast products in a range of ways, and mostly by listening to community radio, going online using a personal mobile device or personal computer, or watching a local cable TV channel. Those who said "Other" access the weather forecast by talking to Aqquimavik Society staff, and access marine forecasts, ice services, and tide tables by listening to CB radio.

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

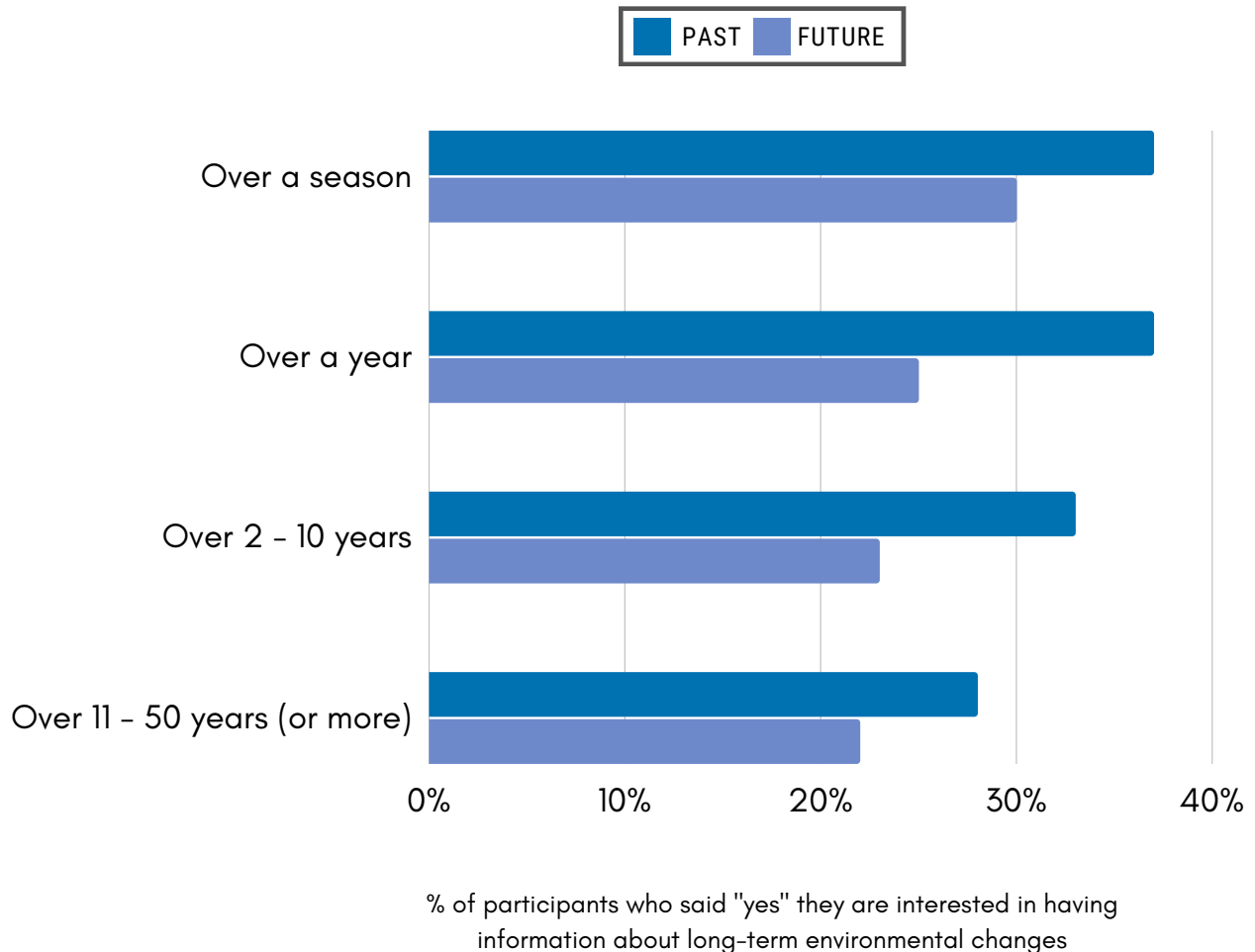


Arviarmiut respondents identified a number of reasons why information is difficult to access. To summarize the main challenges:

- **Cost** creates a challenge for accessing all online products, in particular weather forecasts.
- **Slow internet connection** creates a challenge for accessing all online products, in particular weather forecasts and tide tables.
- **Information that is not available in Inuktitut** creates a challenge for accessing all online products. Those who said "Other" have either no cell phone or no internet, which makes it difficult to access environmental products.

These results do not necessarily mean that there are no challenges in other areas.

INTEREST IN INFORMATION ABOUT PAST AND FUTURE ENVIRONMENTAL CHANGES

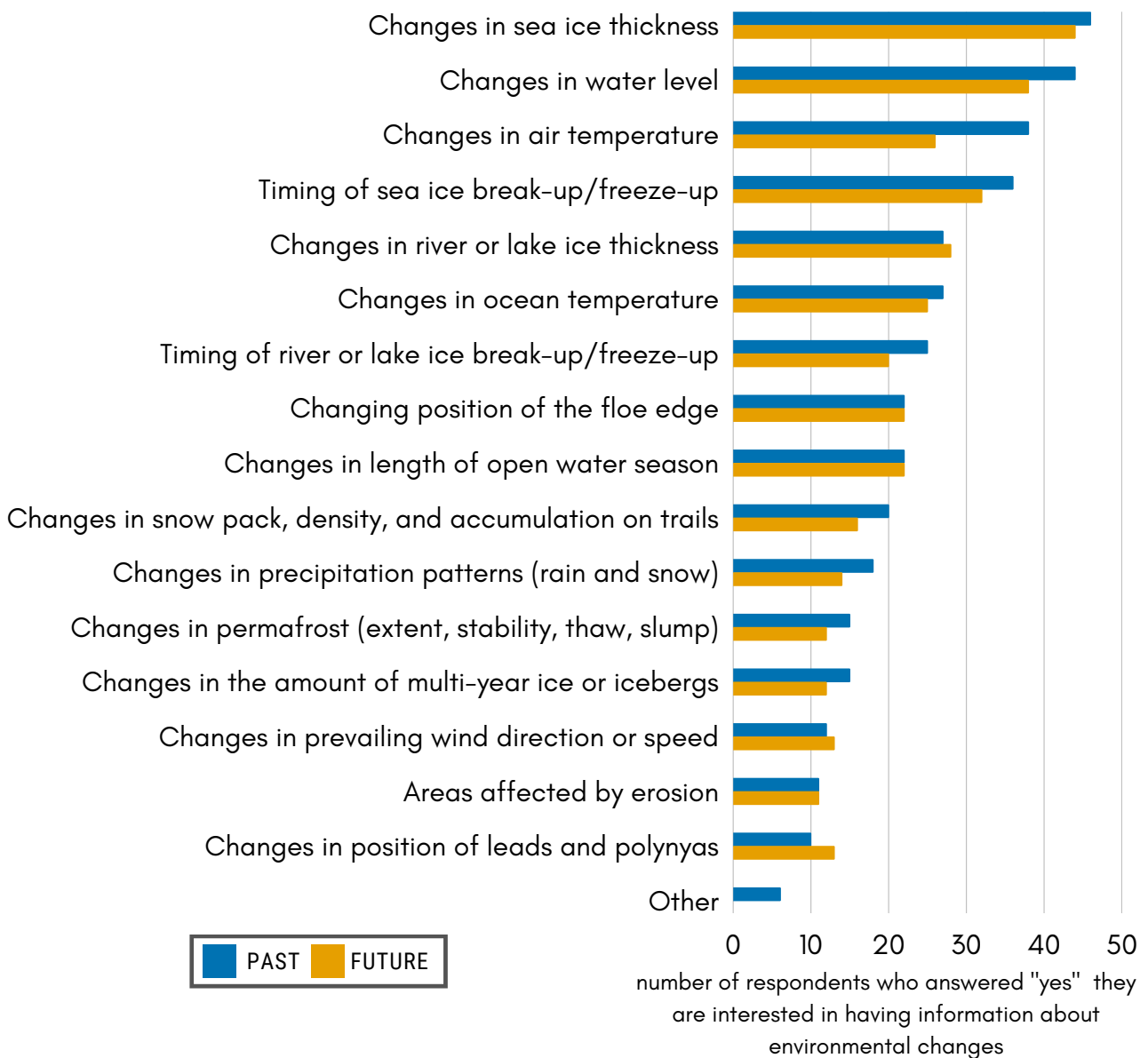


More participants are interested in information about past changes to weather, water or ice conditions (related to climate change) than are interested in forecasting or predictions.

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

INTEREST IN LONG-TERM ENVIRONMENTAL CHANGES

INFORMATION ABOUT PAST OR FUTURE CHANGES FOR MAKING DECISIONS



More respondents are interested in having information about past environmental changes than about future changes. Common topics of interest included changes in sea ice thickness, changes in water level, changes in air temperature, and timing of sea ice break-up/freeze-up. Respondents who answered "Other" are interested in information about past changes to the land and weather.

INTEREST IN TRAINING

Respondents who said they were interested in receiving training on survival skills and navigating the land (64 participants), observing and understanding environmental conditions (59 participants), local environmental monitoring programs (51 participants), and accessing or using social media pages or groups (51 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 by report writers to group them into similar topics.



Improving Navigation Skills on the Land

- Learn to not rely on GPS
- Learn land names, place names
- Learning to go out inland
- Maps
- Short cuts on the coast, land, and river crossings nearby Arviat
- Traveling by sea and land
- Learn about the area's land routes for hunting and animal migrations
- Where people usually go out hunting (taking the right routes and where exactly to go)



Developing Safety and Survival Skills on the Land

- Arctic survival skills
- First aid
- Boating with buddies
- For first time hunters: information about how to survive on the land or make igloos
- Dangerous areas around sea ice and or on the land
- Getting help
- Getting to go out inland alone
- How to adapt to sudden weather changes
- How to prepare, or what to get before going out



Increasing Knowledge of Environmental Conditions

- How climate change affects our weather
- Which conditions to observe/read out on the land and how to do it
- Ice, land, water, and sea conditions
- Learn more about environmental skills: how to respect the environment around me
- Rivers and muds
- Weather conditions, monitoring, forecasting, and (new) skills



Connecting to Local Programs and Services

- Aqqiumavvik Society, Young Hunters Program
- Learn from Elders who are experienced in the land
- Hunting programs about the environment and which area has more animals, ice conditions etc.

INTEREST IN TRAINING (CONTINUED)



Gaining Familiarity with Technology

- Compasses, co-ordinates, and maps
- New technology
- Online marine and weather forecasts
- Proper set up of a Humminbird (fish finder)
- SmartICE
- Social media
- GPS, inReach, and SPOT
- SIKU app
- How to read degrees and Celsius



Strengthening Hunting and Inuit Cultural Practices and Skills

- Learn from Elders and experienced hunters:
 - who know the land, weather and where the good, fresh water is
 - who help people in the community
 - who learned from observing and from new technology and past records of lands conditions
- Learn about:
 - land skills
 - animals, where animals are, how to skin animals (aktuq)
 - traditional sewing and making
 - fishing and hunting caribou
 - how to make dried meat (nipku)
 - how to shoot a gun so I know to protect myself on the land
 - about guns and bullets
 - hunting and trapping
 - how to do seal skin and caribou meat
 - reading weather and ice conditions
 - repairing skidoos and Hondas
 - sewing for kids, hunting clothes, winter clothes
 - travel routes and place names

