



ARCTIC
INSPIRATION PRIZE



Governor General's
Innovation Awards



MOMENTUM
FOR CHANGE



SmartICE: Employing technology and Indigenous knowledge to promote community wellbeing



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SMARTICE





SMART ICE

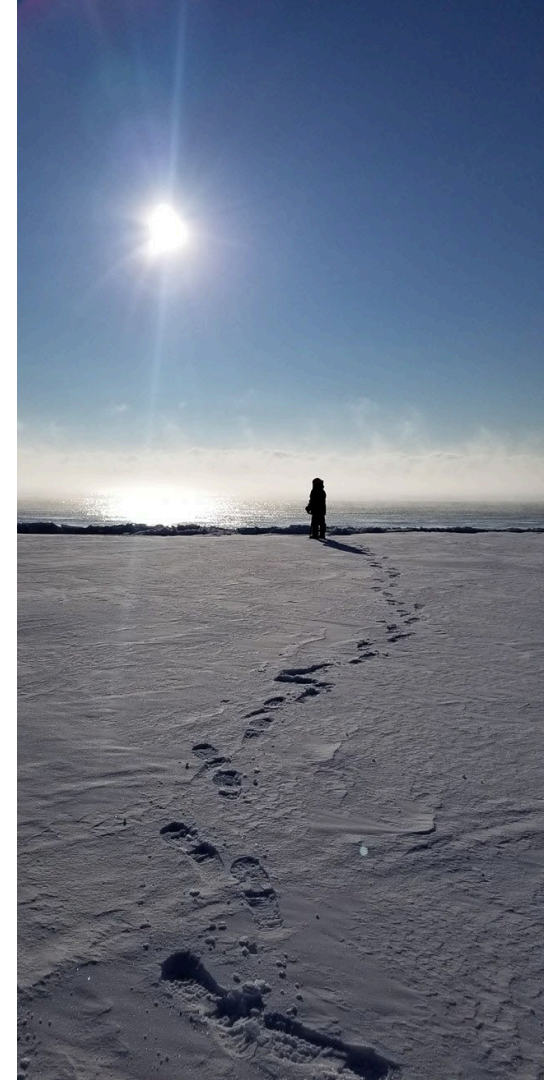
A non-profit, work integration Social Enterprise



Thin ice and deep slush making for unsafe conditions in Iqaluit, warn hunters

Local hunters and trappers association blames under-ice currents and high tides for conditions

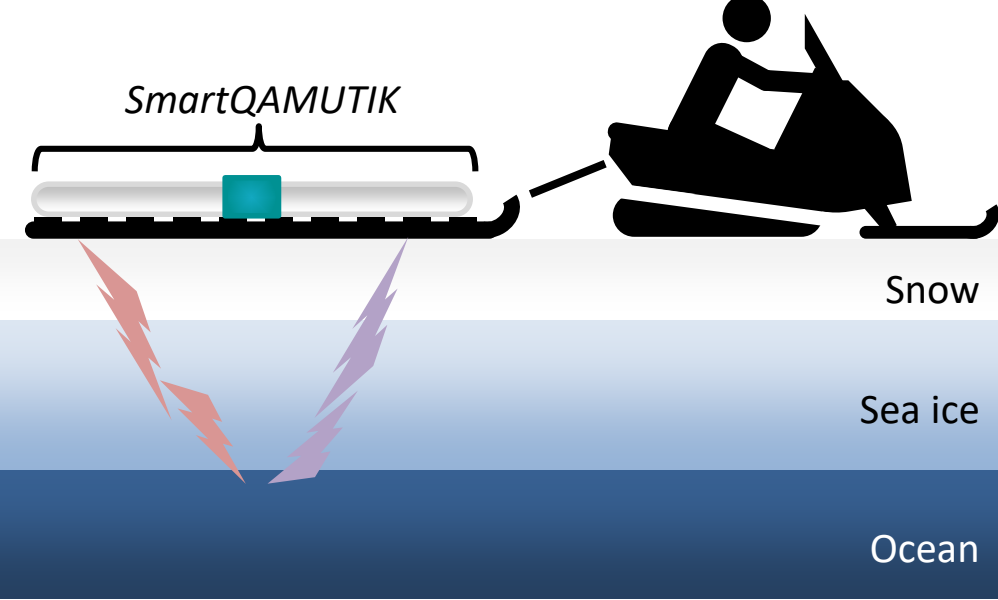
CBC News - Posted: Apr 08, 2019 2:40 PM CT | Last Updated: April 8



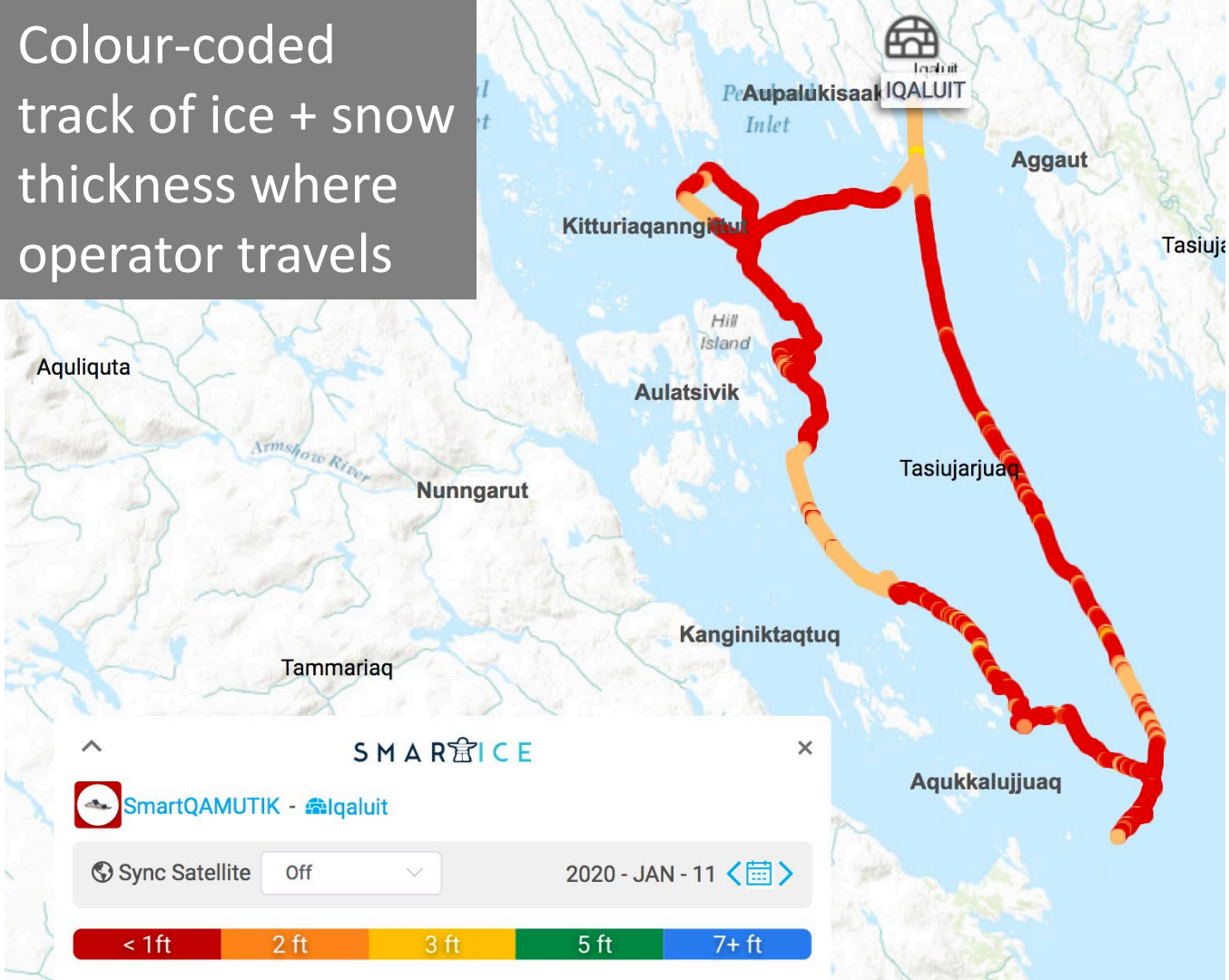
SmartBUOY

stationary snow and ice
thickness sensor





Colour-coded track of ice + snow thickness where operator travels



S I K U



SMARTICE

SmartQAMUTIK - Iqaluit

Sync Satellite Off 2020 - JAN - 11

< 1ft 2 ft 3 ft 5 ft 7+ ft

Inuit Societal Values

A group of Inuit people are gathered outdoors in a snowy, high-altitude environment. They are wearing heavy winter clothing, including parkas with fur-lined hoods and various styles of hats. The background is a clear, bright blue sky. The scene captures a moment of social interaction among the community members.

Maximizing social impact
Creating positive community change



National Inuit Strategy on Research

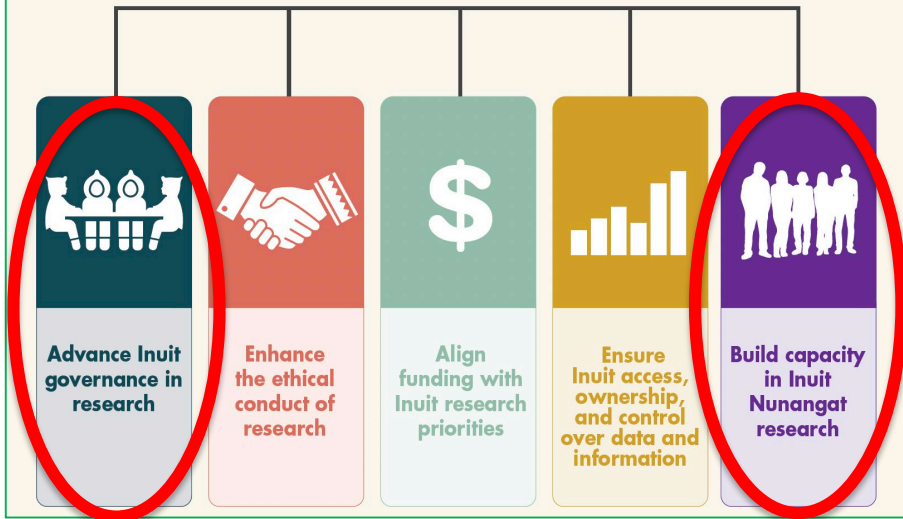
*“Research is a tool for
creating social equity”*

*“Inuit must be partners in
the governance of Inuit
Nunangat research”*

2018
www.itk.ca

RESPECTFUL AND BENEFICIAL RESEARCH FOR ALL INUIT

5 Priority Areas of National Inuit Strategy on Research



For SmartICE it starts in the community...



Training community operators



**Build capacity
in Inuit
Nunangat
research**



Training Inuit trainers

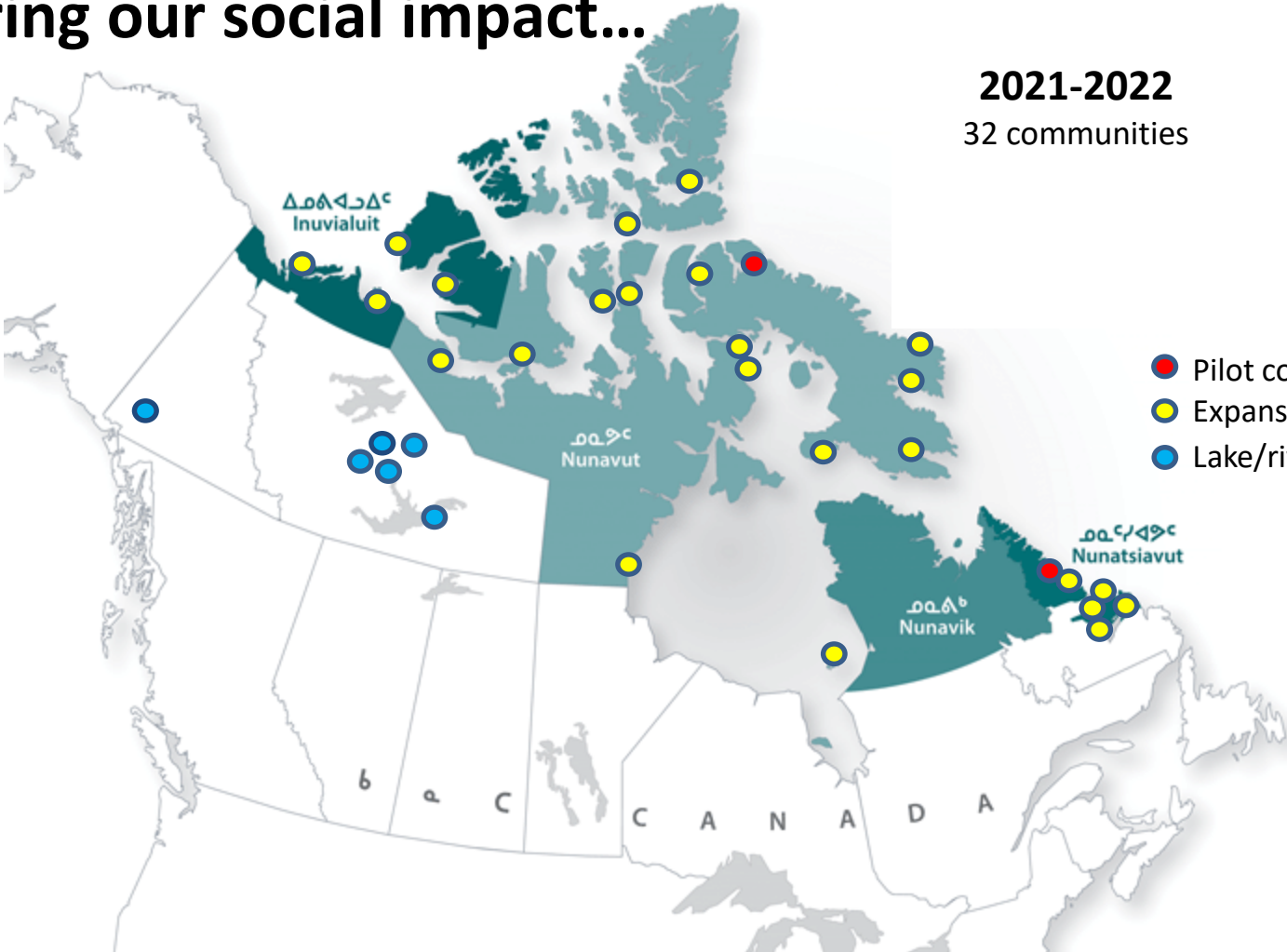


**Build capacity
in Inuit
Nunangat
research**



Measuring our social impact...

2021-2022
32 communities



Smart MOVES IN NUNAVUT 2020-2021

59 Operators
TRAINED

9 Youth
EMPLOYED

11
SmartQAMUTIK
Deployed



SmartQAMUTIK operators in Ojca Haven

8 SmartBUOYs
deployed
off
Nunavut

Each
SmartBUOY
transfers data
to the satellite

1-2
times
a day

50
Elders +
community
members
involved in
community
management

140
Inuktitut
sea-ice
terms
documented
by Elders
+ Youth

0.568 MB
of data
from
SmartBUOYs

78
SmartQAMUTIK
ice surveys

Approximately
5557+
Hours of
Employment

Active in
16 Nunavut
Communities
in **3** Regions

Operational Communities •
Funded Communities •

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Measuring our social impact...



Northern Production Centre



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research**



Employment Readiness Program



**Build capacity
in Inuit
Nunangat
research**



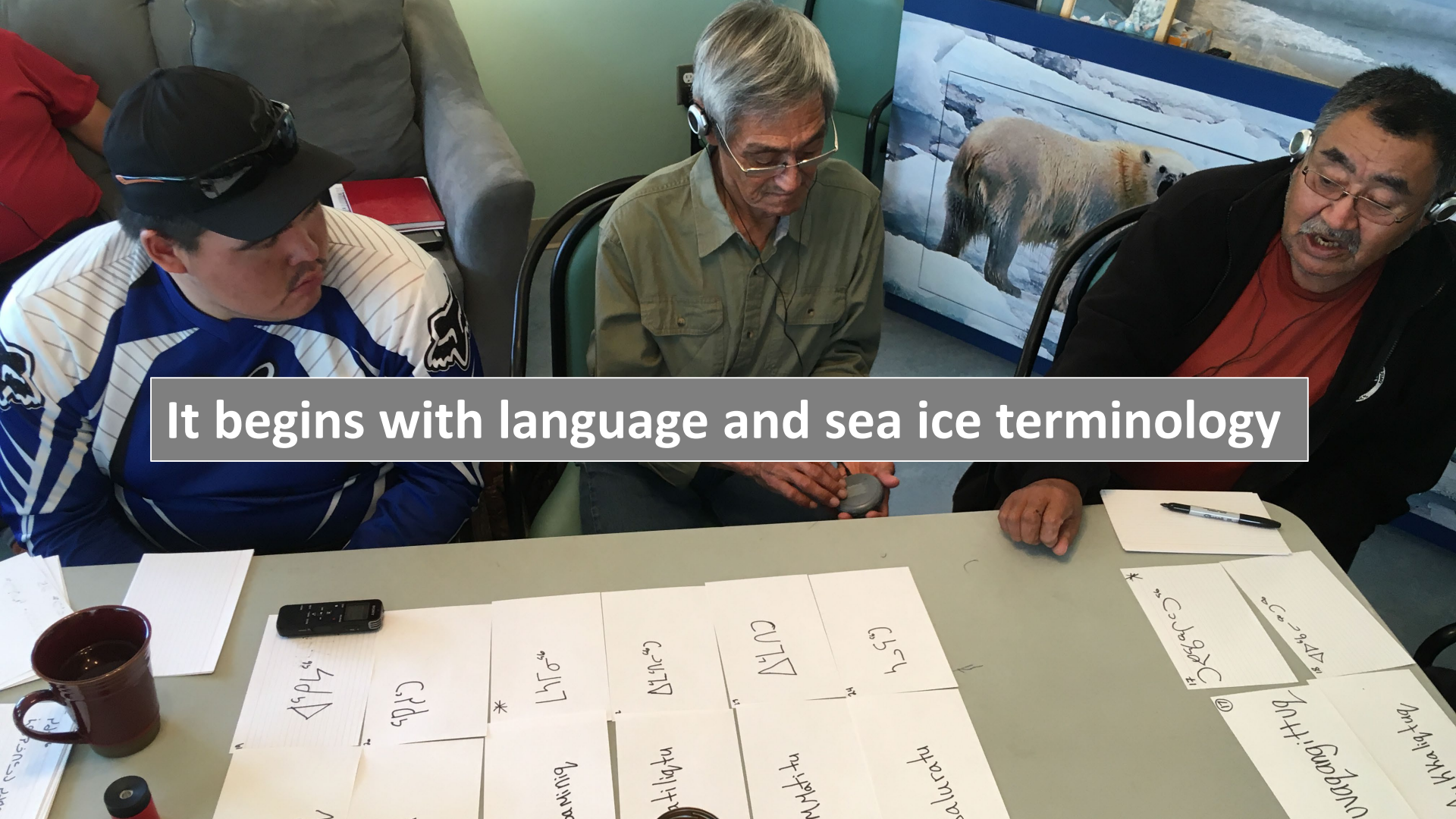
Keeping pace with climate change; e.g., slush mapping, drone mounted sensors





Strengthening Indigenous Knowledge of ice travel

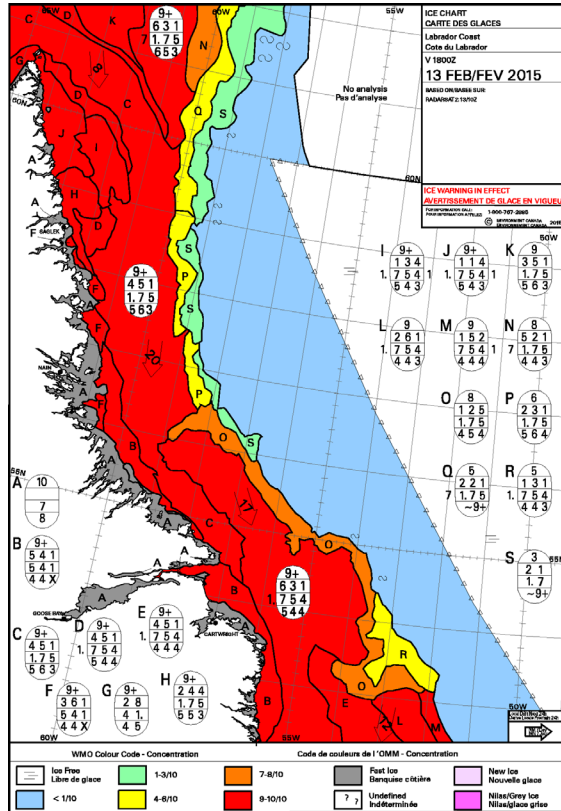
It begins with language and sea ice terminology



Ice Travel Safety Maps *(Sikumik Qaujimajuti)*



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research

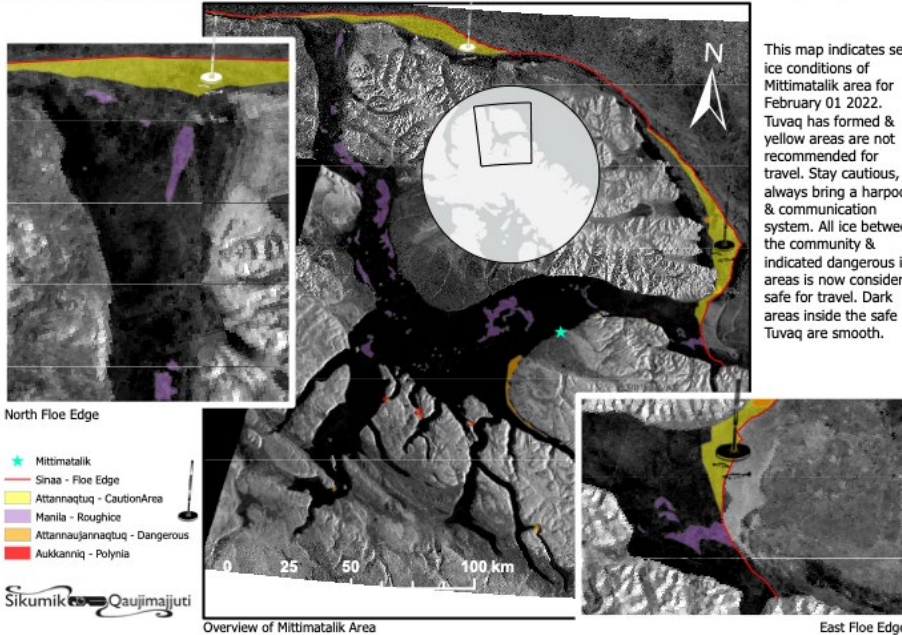


Ice Travel Safety Maps *(Sikumik Qaujimajjuti)*



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S M A R T I C E Sea Ice Safety Map of Mittimatalik Area February 01, 2022



This map indicates sea ice conditions of Mittimatalik area for February 01 2022. Tuvaq has formed & yellow areas are not recommended for travel. Stay cautious, always bring a harpoon & communication system. All ice between the community & indicated dangerous ice areas is now considered safe for travel. Dark areas inside the safe Tuvaq are smooth.

Map is generated as part of the Sikumik Qaujimajjuti project to provide additional sea ice information. Sea ice conditions are mapped through interpretation of radar satellite imagery with good observations & sea ice IQ of Mittimatalik area but please use careful judgement when travelling on the ice. SmartICE is producing safety maps for communities that has SmartICE operates. Cartographer: Andrew Arneak Esri, FAO, NOAA, NRCAN







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