Improving NWS communication of seasonal to subseasonal (S2S) sea ice information to rural Alaska communities

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UNIVERSITY OF ALASKA FAIRBANKS

ACCAP Alaska Center for Climate Assessment and Policy
a NOAA CAP/RISA Team

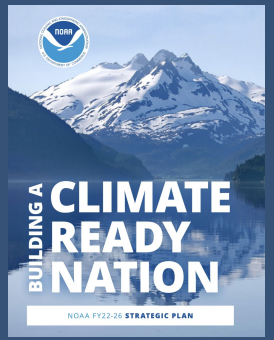
AAOKH ALASKA ARCTIC OBSERVATORY AND KNOWLEDGE HUB

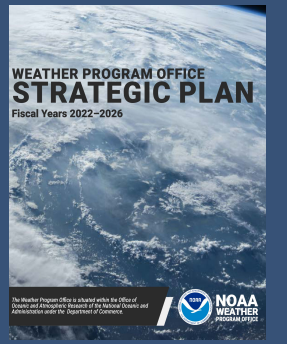
Experimental Arctic Prediction Initiative

NATIONAL WEATHER SERVICE

Photo: Guy Omnik, Tikiġaq (Point Hope)

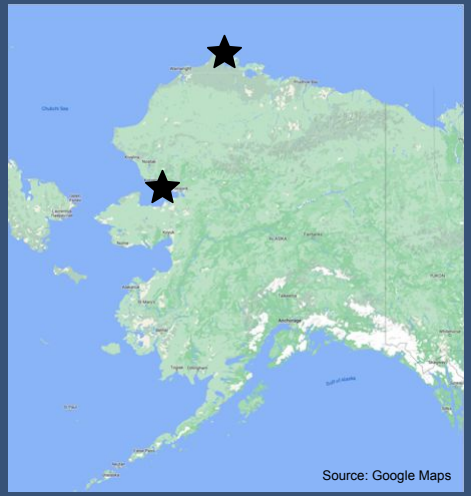
Background and context





- Rapid environmental change in the Arctic
- Challenges in providing climate services
- Intersection of equity, user needs, state of the science, and operational capabilities
- Increasing usability through iterative engagement

Project approach



Archival analysis

- Document analysis
- Review AAOKH observations

Interviews and focus groups (n=17)

Iterative engagement (ongoing)

- Community priorities vs. state of science

Archival analysis

review AAOKH observations

Sea ice types:

- Rough, slush, young ice, >1.5 feet thick, young ice formed at edge of older ice, multi-year ice

Conditions:

- Ice breakout events, opening/closing leads, channel ice

"Very **flat ice** everywhere. The southerly winds have made the water level rise as you can see a crack and the wet snow reveals the dangers of rising waters. **Ullit means rising waters and qaamit is the revelation of the wet snow and water on top of the ice through concealed cracks**. Please **take caution** during this time if you should be on the ice."

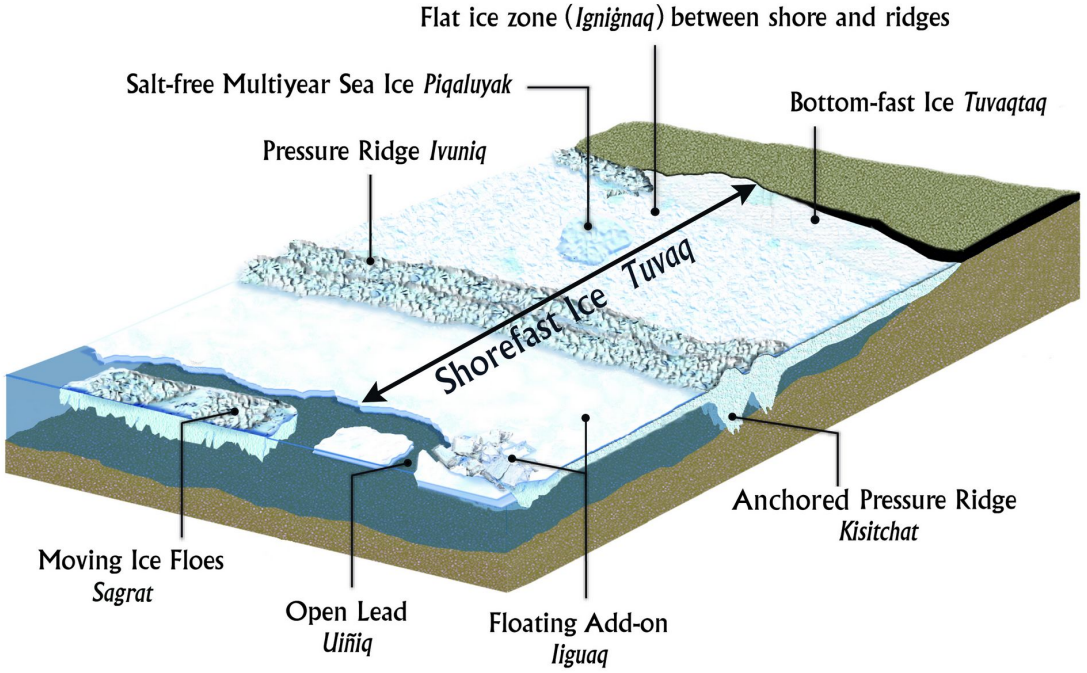
-Billy Adams, Utqiaġvik, 11/9/21

Interviews & focus groups

Community activities and decisions

Interviews & focus groups

Local observations



Source: Project Jukebox (2023)

Interviews & focus groups

Local observations

***If I could have one thing on a day**, if somebody could give me one useful piece of information for today and for tomorrow and for the next day, **it's wind**…because that controls everything. That controls how we make decisions…There's nothing more important than wind for figuring out whether you leave town or not.* (Kotzebue 4)

Photo by B. Adams

Interviews & focus groups

- Think more holistically when developing products

  I think ***leaving out the inland or near shore lake ice and near coastal rivers out of this conversation, we're doing ourselves a disservice...****being knowledgeable of both realms of ice, fresh water and salt water is important.* (Utqiaġvik 1)

- Focus on key areas

  Find out *from them their* ***key bottlenecks where people travel. Certain areas are really more important than others****…* ***Focus on the strips that hit those hotspots where people go*** (Utqiaġvik *3)*

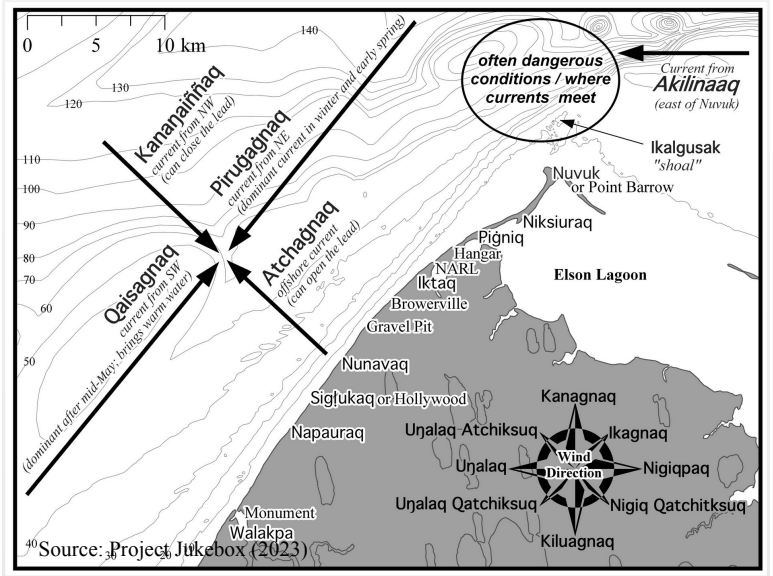
- Monitoring conditions throughout the year

Photo: Isabelle Mendenhall

Interviews & focus groups

- Use local radio stations or Facebook to share
- Use local and Indigenous place names

"important for the NWS to learn these terminologies…That would be huge." (Utqiaġvik hunter).



Source: Project Jukebox (2023)

Iterative engagement

- Assess community priorities vs. state of the science
  - 10- day wind forecast
- Follow-up community engagement

arctic-aok.org/storymap-arctic-insights

Thank you

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