

# Arctic Observatory & Knowledge Hub (A-OK) Workshop Summary

JULY 23, 2015





# Introduction

In December 2014 the University of Alaska Fairbanks (UAF) along with several other organizations received community service payments made by a corporate defendant convicted of federal environmental and maritime crimes. This support allowed for the creation of the Alaska Observatory and Knowledge Hub (A-OK). A-OK is meant to support information exchange and environmental observations by Iñupiaq experts in coastal communities.

The A-OK planning workshop was hosted by the International Arctic Research Center (IARC) at UAF as the first step in obtaining input and guidance from community and organizational leaders in Alaska's coastal Arctic about what specifically A-OK should focus on. Concerns and ideas identified during the workshop will become the starting point for developing specific goals and objectives for the A-OK project.

Tentative goals of the A-OK project identified prior to the planning workshop included, 1) expanding current community-based observing efforts to further support the integration of local knowledge in climate change observing networks (with changing permafrost, snow and ice as a center of attention) and 2) developing a collaborative framework among communities, organizations, and researchers that link scientific data with local and traditional knowledge in ways that might support North Slope communities in climate change adaptation.

Detailed project objectives of the A-OK project had not been identified prior to the planning workshop in an effort to provide adequate flexibility in shaping the direction and focus on the project to fit the concerns of North Slope communities.

Focus questions for the A-OK planning workshop that guided the discussion and presentations included:

- How can the A-OK project strengthen and sustain an Iñupiaq snow & ice experts observing network?
- What key community concerns or hazards related to changes in snow, sea ice, permafrost or lake & river ice conditions should the A-OK project address such as impact on food security, access to subsistence resources, safety, etc.?
- Which of these identified concerns or hazards can be measured through the deployment of measuring packets to community snow and ice experts and users?
- How can the information that is collected and shared contribute to emergency response and search & rescue efforts?

Photo: Tohru Saito



## Summary of workshop program

Forty participants attended the morning and afternoon sessions of the A-OK planning workshop. The morning session included a series of presentations from the North Slope Borough Department of Wildlife Management (NSB DWM) University of Alaska Fairbanks (UAF) researchers, and from agencies and researchers involved with community based monitoring efforts in the Arctic.

The morning presentations highlighted a range of research efforts and projects where community based observations or local knowledge are an integral part of the information that is produced. These presentations provided a context for the type of efforts that A-OK might be best positioned to expand, partner with or develop. A full transcript of the morning and afternoon presentations and discussions is included in Appendix A.

While initial discussions focused on concerns related to changes in snow, sea ice, permafrost or lake & river ice, it became clear that it was changes in the seasonal cycle that have been the most impactful in maintaining a subsistence way of life for communities. With freeze-up occurring consistently later and ice melting faster and earlier than in the past, the timing of annual events has changed. Several workshop participants noted that by the time they were able to travel on rivers and lakes to access fishing cabins the fish had already spawned. Also noted was sea ice that seems to be thinner each year it has been necessary to seal hunt earlier. Unpredictable ice conditions

have also increased safety concerns for those traveling on the ice.

Understanding what is causing disease and shifting patterns of fish and wildlife important for subsistence was of particular concern. Workshop participants noted that fish mold has appeared in places not

*Freeze up is coming later and melting earlier, in between the ice is more difficult to read.*

HARRY BROWER

### Morning Presentations

**Craig George**, NSB DWM studies and projects

**Robert Suydam**, NSB DWM, Shell Baseline Committee projects

**Qaiyaan Harcharek**, NSB DWM, GPS hunter mapping project

**Mark Johnson**, UAF, Coastal currents in the Northeast Chukchi Sea workshops in Barrow and Wainwright

**Seth Danielson**, UAF, Coastal Community Ocean Observers C2O2

**Mette Kaufman**, UAF, Seasonal Ice Zone Observing Network SIZONet

**Todd Brinkman**, UAF, Nuiqsut hunter project

**Moses Tcheripanoff**, ANTHC, Local Environmental Observer Program

**Becki Heim**, National Weather Service, Sea Ice for Walrus Outlook

**Shari Gearheard**, National Snow and Ice Center, Igliniit Project

**Ken Dunton**, University of Texas, Abundance of lagoon systems from the eastern Beaufort Sea

**Molly McCammon**, Alaska Ocean Observing System

**Don Forbes**, Geological Survey of Canada, Circumpolar Arctic Coastal Communities Observatory Network

seen before, and the caribou that have come through recently have carried carrion beetles and tapeworms. Different insect, fish, and wildlife species have been noticed that have not been seen before and the timing of appearance of animals like the polar bear and insects like the mosquito are shifting. In the Northwest Arctic Borough, without adequate snow cover ringed seals have been seen pupping on the ice, which seems to be linked to increased predation.

Another concern highlighted during the workshop was the increasing number of ice cellars that have collapsed or have been flooded. Identifying locations and construction methods for new ice cellars that are less vulnerable to collapse and flooding as well as strategies that keep existing ice cellars cool, is important for food security for individuals and communities in the region.

Conversations among participants highlighted the importance of A-OK developing research priorities that were responsive to community concerns while being aware of avoiding oversaturation from overlapping research initiatives. This led to discussions that considered how A-OK might better facilitate information sharing between existing research projects rather than developing new research. It was recognized that A-OK's potential role as a knowledge hub needs to enter into the planning from the start. As a hub, A-OK would take guidance from communities on relevant knowledge that should be shared and then works to develop ways in which this sharing can be done effectively. Serving as a hub may not only include serving as a knowledge broker but also as a facilitator to help reduce the burden on communities in dealing with information requests and duplication of research activities.

*Ice is important for Ugruk hunting. The ice was a lot thinner this past year, so it is necessary to hunt earlier and earlier.*

NOAH NAYLOR



Photo: NSIDC

*Can this project find tools that can help us with real problems, what is real about this project? We depend on resources that use the cryosphere, but the cryosphere is too narrow, maybe add something to do with biology?*

HARRY BROWER

## Next Steps

The A-OK planning workshop provided important direction on how the project might focus future efforts. Based on the concerns and suggestions shared during the workshop several project summaries are being developed which will be distributed for feedback and review. The themes currently being developed into project summaries include:

- A seasonal cycle calendar that brings together local observations of change, climate data and other relevant information such as that obtained from remote sensing.
- Ice trails safety project integrating annual measurements of river and lake ice thickness with expanded range of radar imagery.
- Ice cellar information exchange of best practices for building and maintaining ice cellars under different climatic and permafrost conditions.
- Information from community experts and university researchers that can address community concerns on regulation relevant for subsistence harvests.
- Develop an outline of how A-OK would serve as a knowledge hub, gathering and sharing existing knowledge and information that addresses community priorities and concerns
- Changes in the cryosphere and their impact on subsistence species, such as the effects of changing snow conditions on seal health and reproduction.



Photo: Tohru Saito

*Research that could help explain what is causing problems with subsistence animals would be helpful.* BILLY ADAMS

## Acknowledgments

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