



*Photo by: Agnew::Beck*

# Promoting Coastal Resilience and Adaptation in Coastal Arctic Alaska

A collaborative project sponsored by three Alaska Landscape Conservation Cooperatives and Aleutian Pribilof Islands Association.

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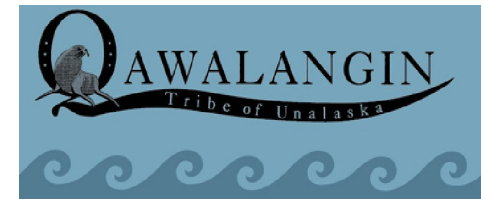
# Partnerships



*Western Alaska LCC*



**Arctic  
Landscape  
Conservation  
Cooperative**



# Aleutian Pribilof Islands Association (APIA)

Our Mission: to provide self-sufficiency and independence of the Unangan by advocacy, training, technical assistance and economic enhancement



## Tribes

- Akutan
- Atka
- Belkofski
- False Pass
- King Cove
- Nelson Lagoon
- Nikolski
- Pauloff Harbor
- Sand Point
- St George
- St. Paul
- Unalaska
- Unga

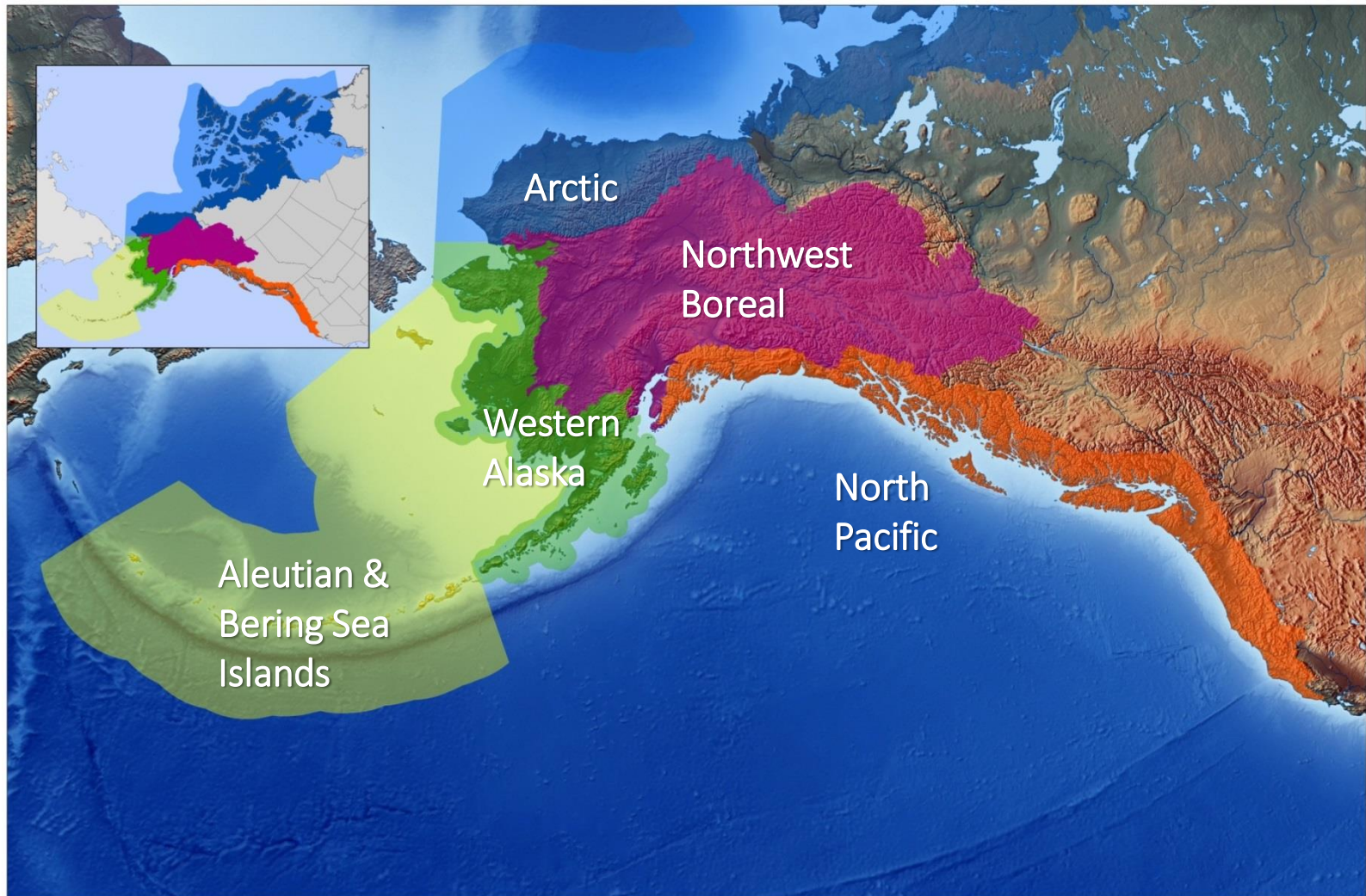
# What is a Landscape Conservation Cooperative or “LCC”?

- Public-Private partnerships focused on conservation
- Tackling BIG issues like climate change that are too large for any one entity to handle alone
- Largely funded by the U.S. Fish and Wildlife Service
- Over 130 member organizations including agencies, Tribes, NGOs, and universities participating in the 5 LCCs in Alaska





# Alaska's 5 LCCs



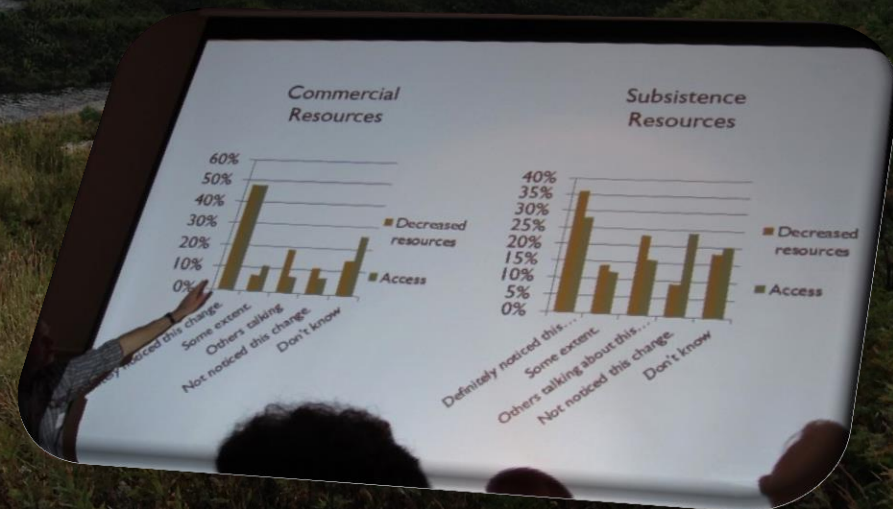
# Workshops: A 2-Way Dialogue



- Bering Strait Region, Nome: May 10-11, 2016
- Aleutian Life Forum, Unalaska: Aug 13-20, 2016
- Bristol Bay Region, King Salmon: Sep 21-22, 2016
- Northwest Arctic Region, Kotzebue: Dec 7-8, 2016



# Engaging Managers & Stakeholders in Unalaska in 2014...



# What is Changing In Alaska?





# What do we care about?

- Fish and Commercial Fisheries
- Marine Mammals
- Seabirds
- Community Sustainability
- Subsistence
- Cultural Resources
- The extreme productivity of the region...



# Integrated Impacts of Change

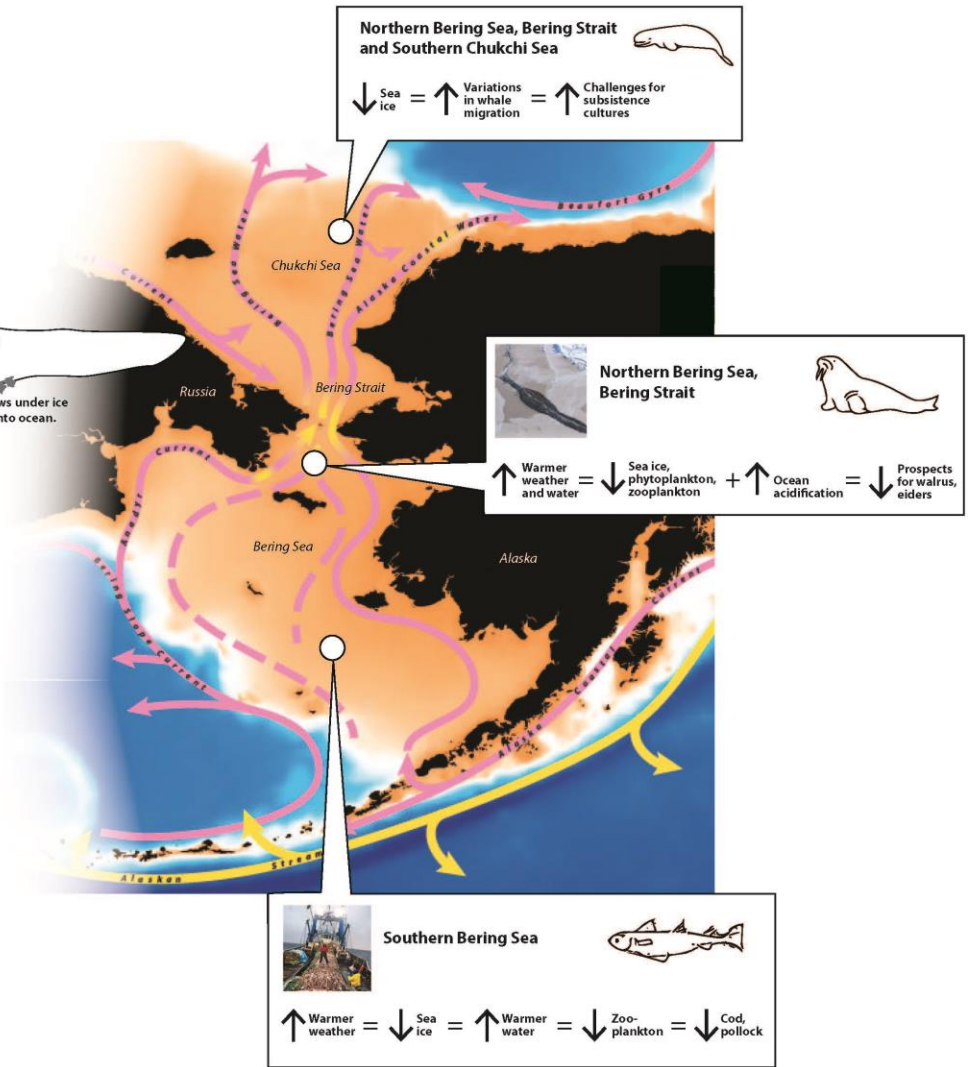
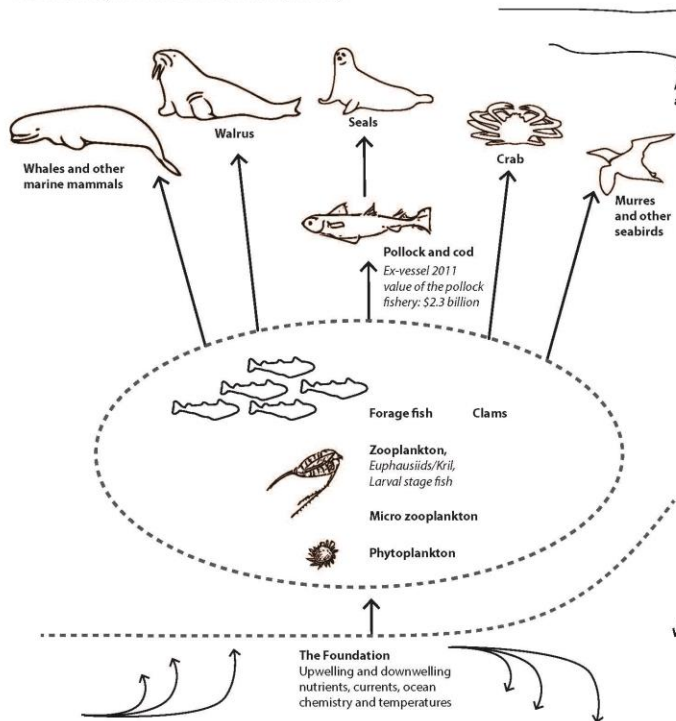
## Climate Change in Western Arctic Alaska: Poster 1

### Marine Environments

The Bering Sea/Bering Strait and Chukchi Sea form one of the richest, most pristine and biologically productive ocean systems on the planet. The same unique characteristics that support this area's productivity – particularly the annual variations in sea ice – make this region especially vulnerable to the impacts of climate change.

### Complex (and Vulnerable) Ecosystem Building Blocks

The abundant life in the Bering Sea region emerges from a complex web of physical, chemical and biological "building blocks". Climate change is altering the structure of this system. This in turn could dramatically change what the ecosystem provides, including subsistence food on the table and the basis for this region's robust commercial fishing industry.



Citations and sources will be included.

# Resilience + Adaptation Strategies

Response is critical - this project aims for more than talk:

- **Friday:** think about and commit to resilience actions:
  - a) individual action
  - b) action by local community, tribes, state and federal agencies, nonprofits, etc.
- **Saturday morning:** focus on how to work together to make these actions happen.





# Overall Project Goal

Provide regional residents and resource managers with the information and tools they need to better respond to coastal climate change challenges, and to support healthy habitats and resilient communities.



# Project Objectives

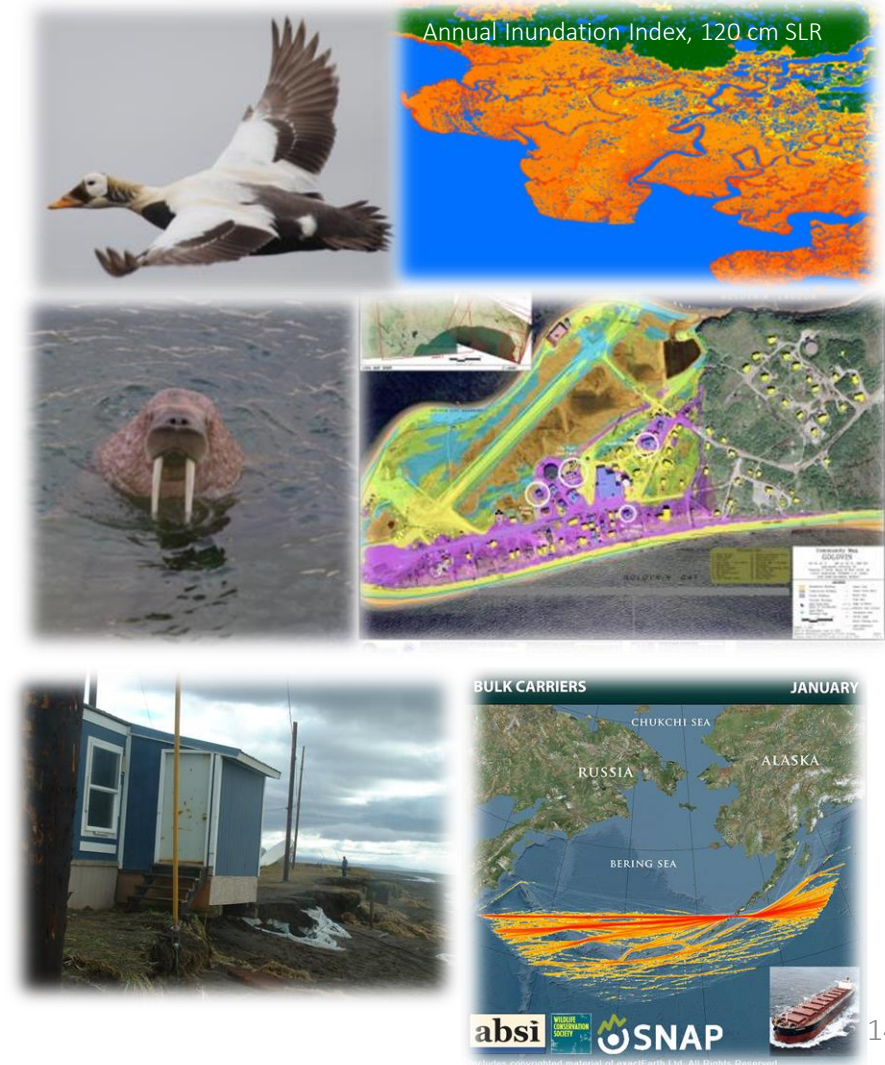
- Establish a network of community and agency professionals working on climate change responses.
- Keep two-way information exchange going regionally and statewide.
- Work together to leverage resources and complete actions.
- Document efforts in a useful, meaningful way; don't just add to the pile!





# Deliverable: “Toolbox” for Adaptation

- links to information sources on the changes expected
- Posters that illustrate what changes mean in term of impacts to communities and habitats
- Case studies of local and regional action strategies that promote resilience



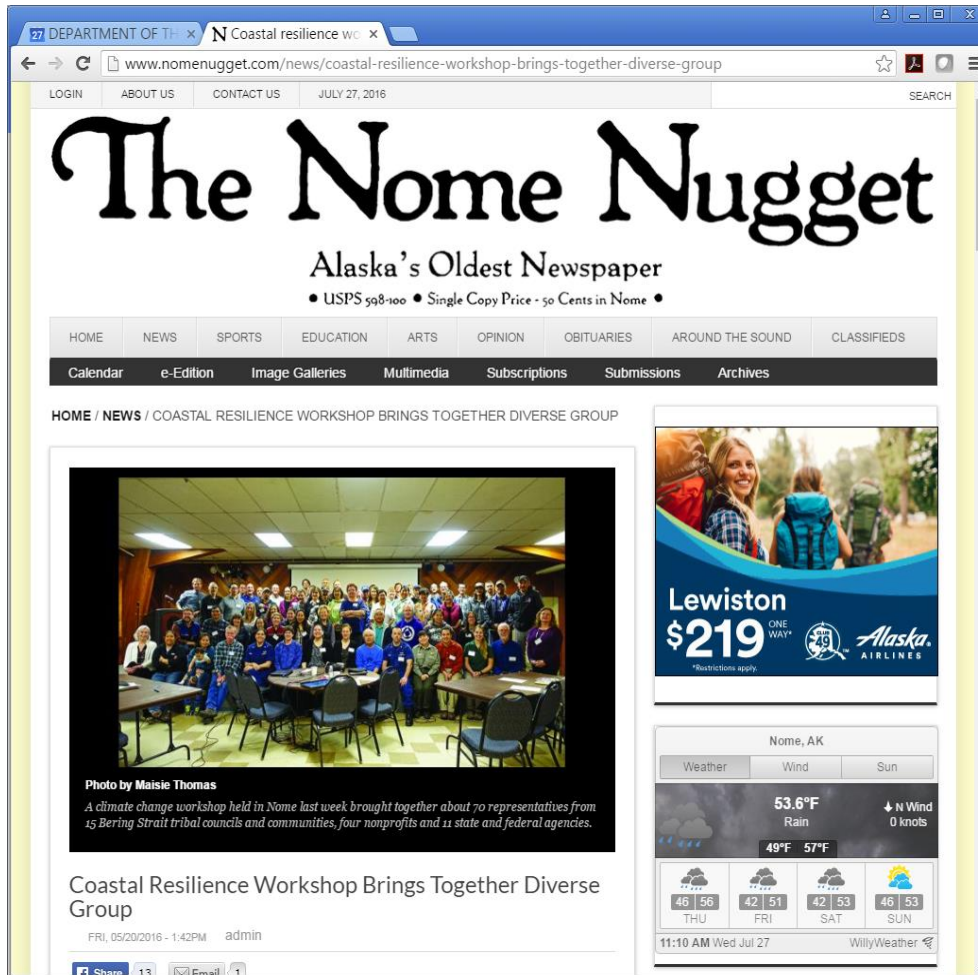


# Additional Capacity...

- The **BIA Climate Science Liaison** will help integrate:
  - what we learn from this project,
  - similar workshops around the state and
  - current Climate Adaptation Planning efforts.
  - *Aiming to create a Climate Adaptation Working Group.*
- A Regional Coalition?
  - of tribes, cities, state and federal agencies, etc.
  - Next steps to sustain this coalition?



# Promoting Coastal Resilience and Adaptation in the Bering Strait Region



The screenshot shows the homepage of The Nome Nugget, Alaska's oldest newspaper. The main headline is "Coastal Resilience Workshop Brings Together Diverse Group". The article includes a photo of a large group of people at a workshop and a caption: "A climate change workshop held in Nome last week brought together about 70 representatives from 15 Bering Strait tribal councils and communities, four nonprofits and 11 state and federal agencies." The article is dated Friday, 05/20/2016 at 1:42 PM. The website also features a navigation menu, a search bar, and a weather widget for Nome, AK.

- May 6 & 7<sup>th</sup>
- Awesome local hosts!
- 70 + participants
- 16 Tribal Communities
- 11 Federal and State Agencies
- Non-governmental organizations

# Workshop Approach: what we heard

- **Climate Drivers of change**
  - Temp, precip, change in freshwater dynamics, sea ice melt, permafrost thaw, fire
- **Impacts of climate change**
  - Erosion, flooding, species shifts, dangerous ice travel
- **Adaptation actions**
  - Bering Watch program, Bering Sea Response Teaching Tool, erosion monitoring



See: [www.northernlatitudes.org](http://www.northernlatitudes.org)



# Bering Strait Workshop continued

- Bering Strait, **Aleutians & Pribilofs**, Bristol Bay, Northwest Arctic
- Audience of land & resource managers, Tribes, other decision makers
- Reference “Toolbox” finalized in 2017
- Networking, sharing, learning
- Outreach to experts on issues raised



# What is changing...

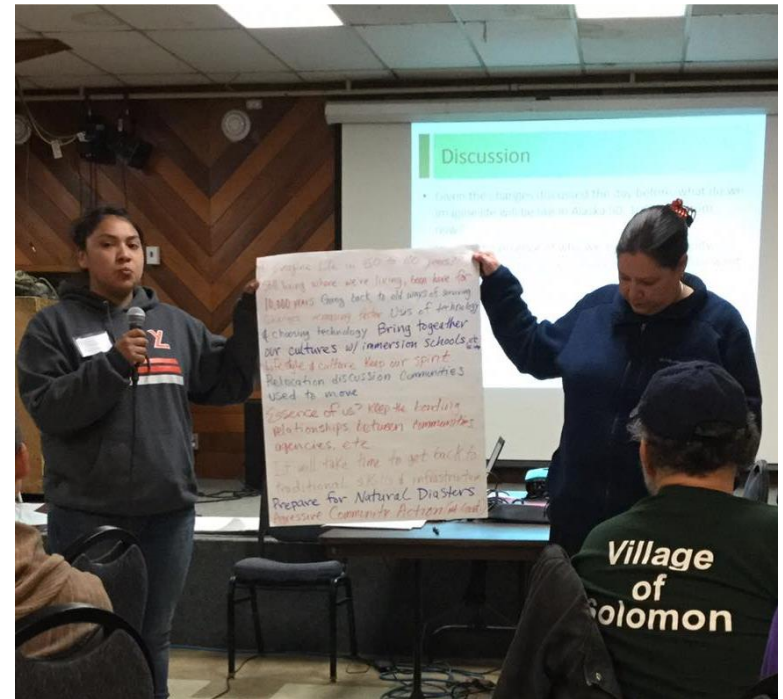
- Midwinter rain melts nearshore ice, making it less stable for travel, and contributing to earlier breakup
- Ice is forming later and has been going out early
- Floods have increased in number and magnitude--“five 100-year events in the last 10 years”



*“...for us, it’s like someone moved the calendar by a month and nobody told us. We wonder what it must be like for the animals, plants and fish.”*

# Adaptation Ideas from Nome...

- Give communities a **stronger voice at the local level** and be more flexible about regulations and land exchanges
- Build mold-resistant, energy-neutral houses that can withstand the weather and be moved if necessary
- **Participants urged agencies to coordinate efforts**, creating network(s) with fewer points of contact
- **Centralized communication network** that allows sharing of traditional knowledge, local community observations, data collection, and research



*"People know how ocean conditions affect the food web; animals have to eat. The animals are adapting and we are having to catch up."*



# Key Take-homes from Nome...

- Sustain health of and powerful link to place, to culture, to tradition.
- Tell our story: expand recognition and respect for validity and value of subsistence and traditional life.
- Manage changing landscapes and resources to keep up with environmental changes.
- Maintain and expand economy; create new job opportunities.
- Expand local power/voice in management and in research with Greater coproduction of knowledge
- Synthesize the outcomes of individual ‘scientific’ research projects, and between ‘science’ and local observation – tell the integrated story—the “so what”

# Sharing the Conversation Beyond Nome... [facebook.com/northlatitudes](https://facebook.com/northlatitudes)

 **Northern Latitudes**  
Published by Crystal Leonetti [?] · [May 11](#) · 

Lucy Olanna and her daughter Alice's lives are affected by climate change in Brevig Mission, including subsistence foods being gathered at odd times of the year, worrying about her relatives out hunting on the strange unpredictable ice, and rain in the middle of winter. [#ActOnClimate](#) [#LocalKnowledgeAK](#) [#ThisArcticLife](#)



599 people reached [Boost Post](#)

# Looking at ahead...

- LCCs and project partners will continue this discussion throughout the project and after hub workshops
  - 2016: Alaska Tribal Conference on Environmental Management
  - 2016: BIA Providers' Conference
  - 2017: Alaska Forum on the Environment
- More workshops?
  - e.g., in Utqiagvik (Barrow), Bethel





# Thank You

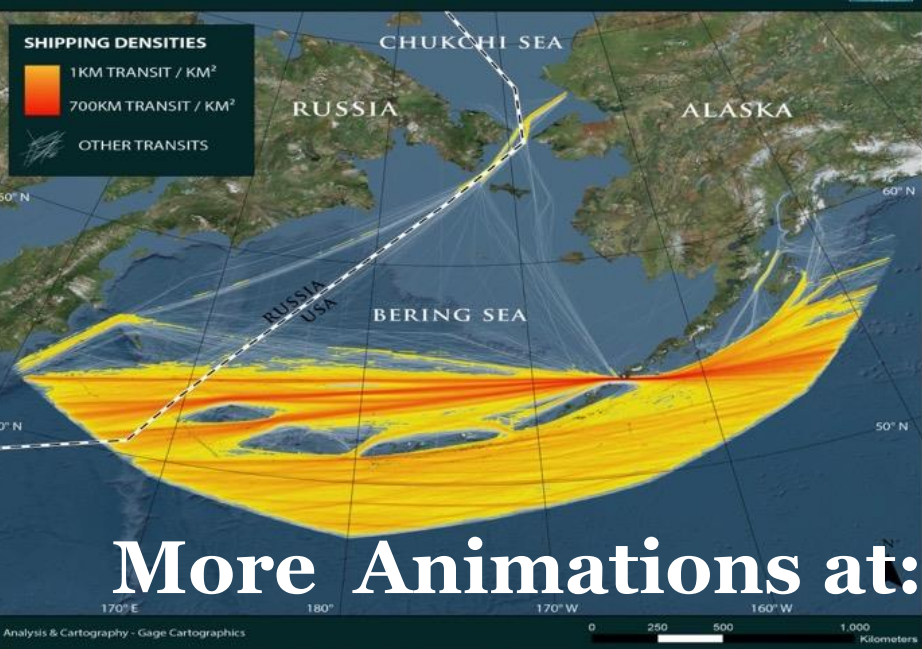
Ideas or questions? Contact us.

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# BULK CARRIERS



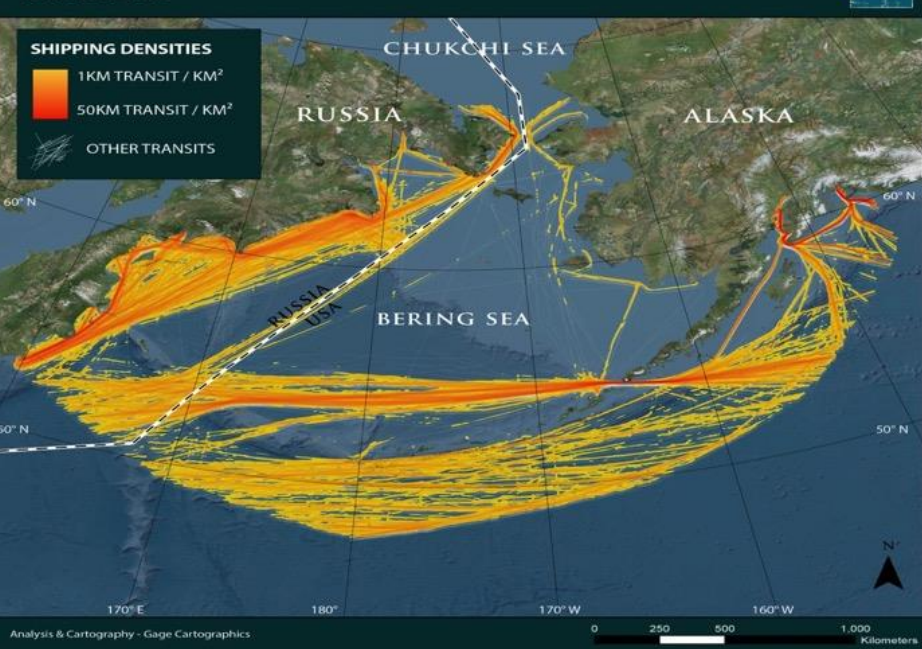
# DRY GOODS



More Animations at:

[ABSILCC.org](http://ABSILCC.org)

# TANKERS



# FISHING

