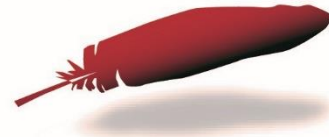


National Indian Health Board



Climate Change and Health in the Arctic: Impacts on Alaska Native Communities and a Spotlight on Efforts to Improve Climate Health

HOST

NATIONAL INDIAN HEALTH BOARD (NIHB)

ANGELICA COLAGRECO, MPH

PUBLIC HEALTH PROJECT COORDINATOR

National Indian Health Board



Mission Statement

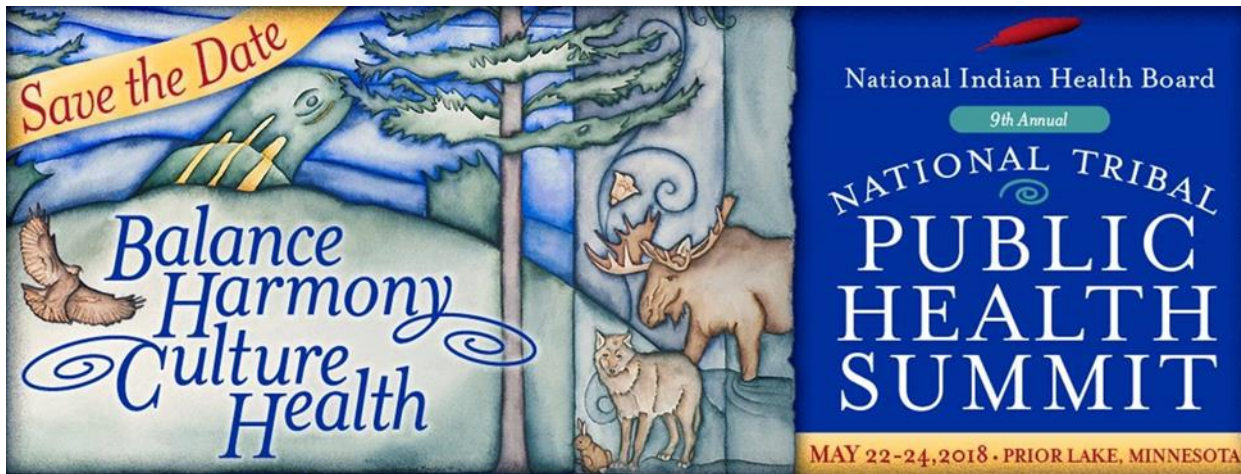
Established by the Tribes to advocate as the united voice of federally recognized American Indian and Alaska Native Tribes, NIOB seeks to reinforce Tribal sovereignty, strengthen Tribal health systems, secure resources, and build capacity to achieve the highest level of health and well-being for our People.

Good *Housekeeping*

- Climate Ready Tribes project
- Recorded and posted online
- Please mute your phone lines
- Questions
 - Dedicated times
 - Use the chat box
- Survey

9th Annual Tribal Public Health Summit

- May 22-24, 2018
- Prior Lake, Minnesota



NIHB Webinar
Climate Change & Health in the Arctic
January 25, 2018



Patricia A.L. Cochran

Alaska Native Science Commission

Bringing together research & science

in partnership with the Native community

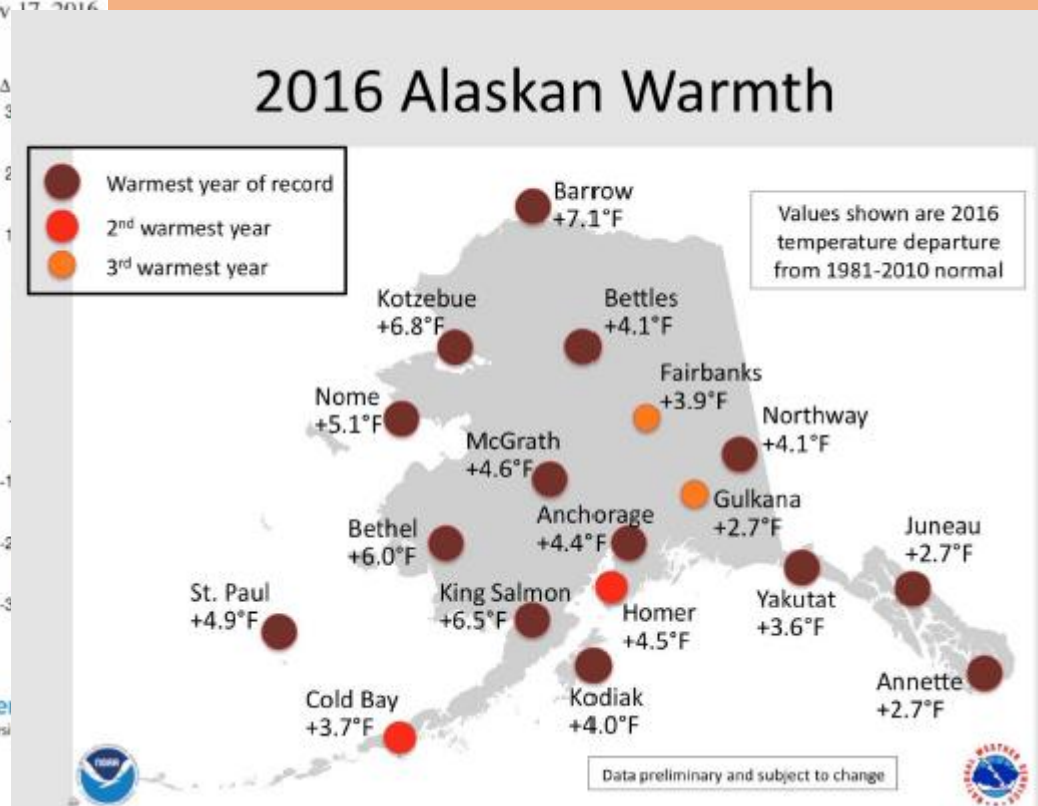
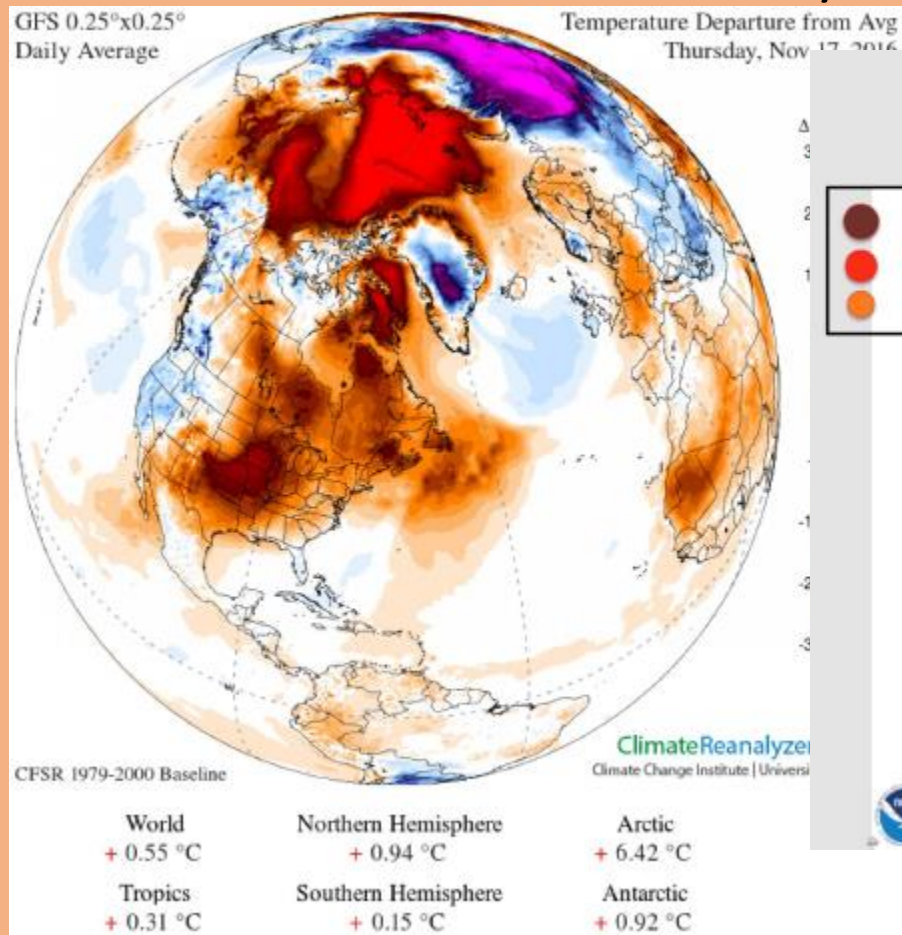
www.nativescience.org

www.nativeknowledge.org



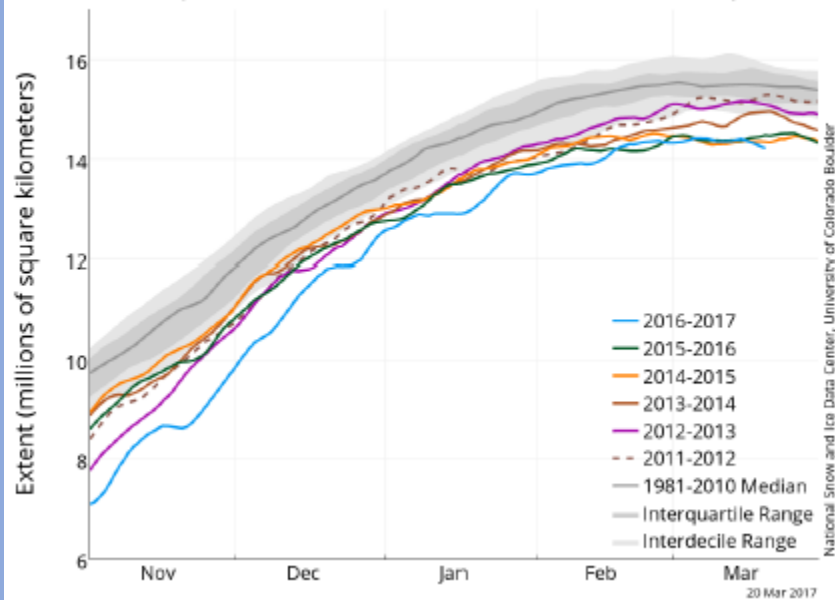
https://www.cia.gov/library/publications/the-world-factbook/reference_maps/arctic.html

Title and Content Layout with List

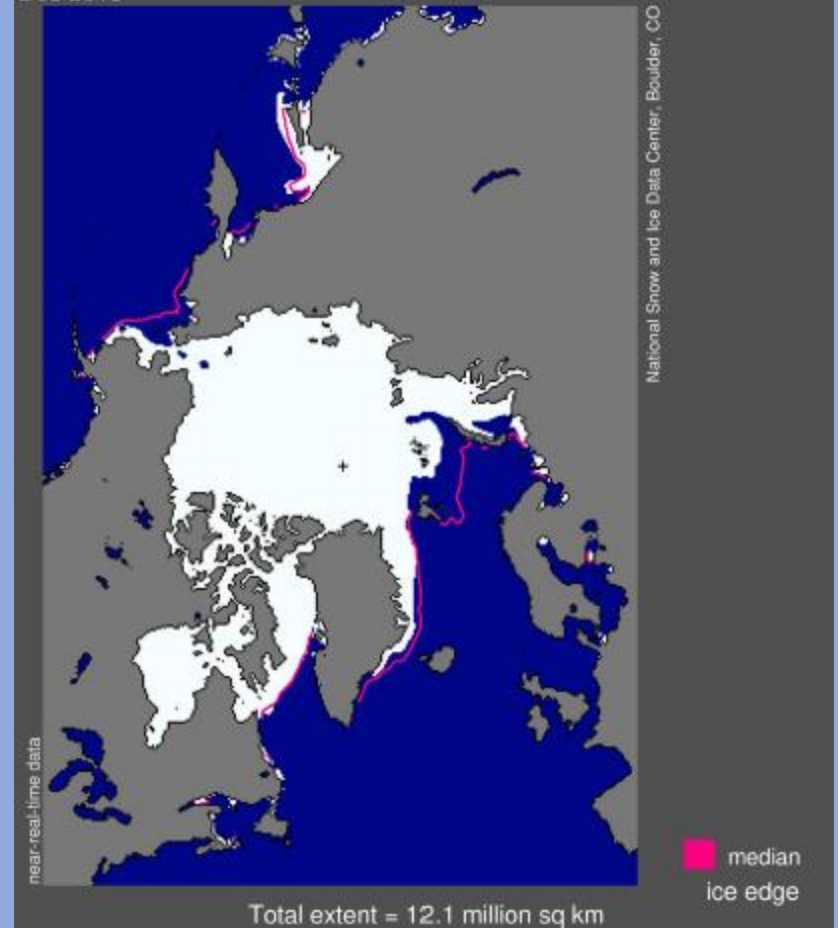


ARCTIC SEA ICE EXTENT

Arctic Sea Ice Extent
(Area of ocean with at least 15% sea ice)



Sea Ice Extent
Dec 2016



National Climate Assessment

Key Messages

Indigenous Peoples, Lands & Resources

Climate change poses particular threats to Indigenous Peoples' health, well-being, and ways of life.



- Threatened access to traditional foods
- Significant decrease in water quality & quantity
- Declining sea ice
- Human health & livelihood hazards
- Infrastructure damage
- Thawing permafrost
- Relocation

Impacts of Climate Change

Health



Sea Ice



Erosion



Permafrost



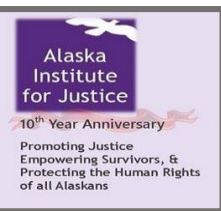


2003 US government report found 3 communities seeking to relocate in Alaska and 184 other communities are being affected by flooding and erosion.

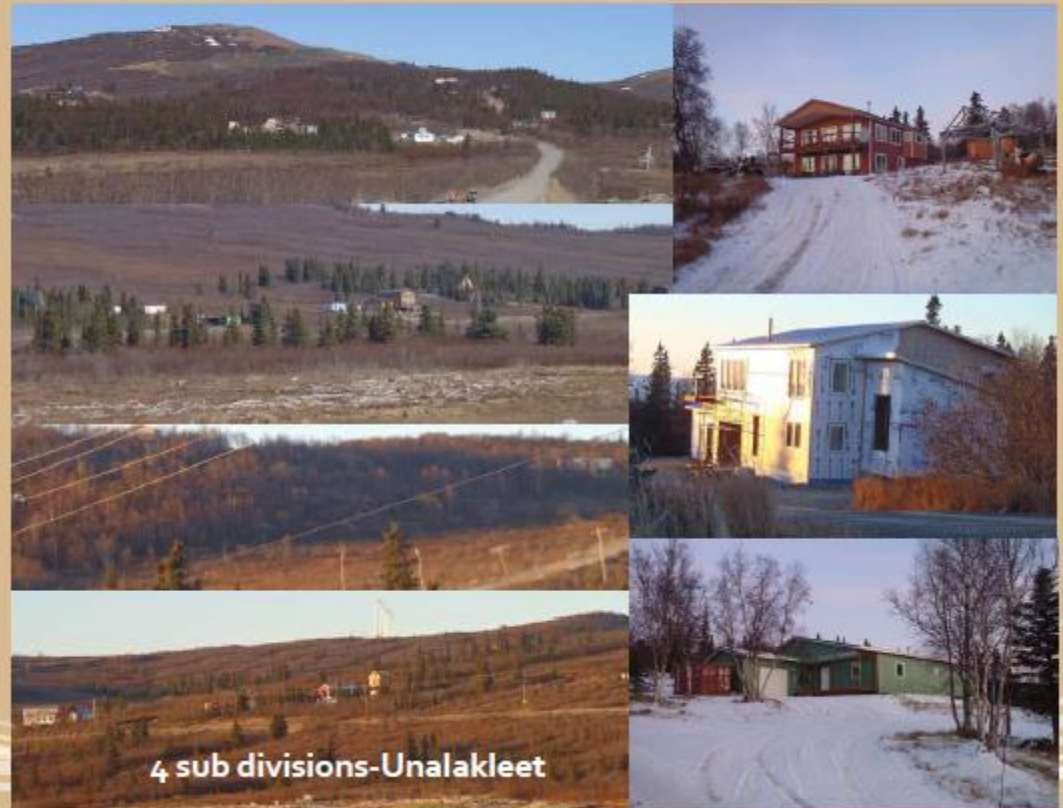
2009 US government report found 12 seeking to relocate. Now more than 30.



Rights, Resilience and Community-Based Adaptation



Community-led Relocation & Migration







Kotlik, AK – STORM SURGE

“In November 2013, Kotlik experienced a **devastating flood** caused by a storm surge in the Bering Sea. The storm surge caused an unprecedented flood event that **destroyed homes**, severed water and sewer lines, demolished the **water system**, damaged the **boardwalk** system and forced hundreds of people to **seek shelter** in the school for an extended period of time.”

Golovin, AK – AIRPORT FLOOD

“We are not looking forward to fall or winter weather. We've had **high tides** as late as November and December. **Earlier rainy** seasons during the winter and spring caused our runway to shut down, either to ice conditions, or mud and slush. Golovin Airport is the only way into and out of our community. We were concerned when airplanes couldn't come in.”

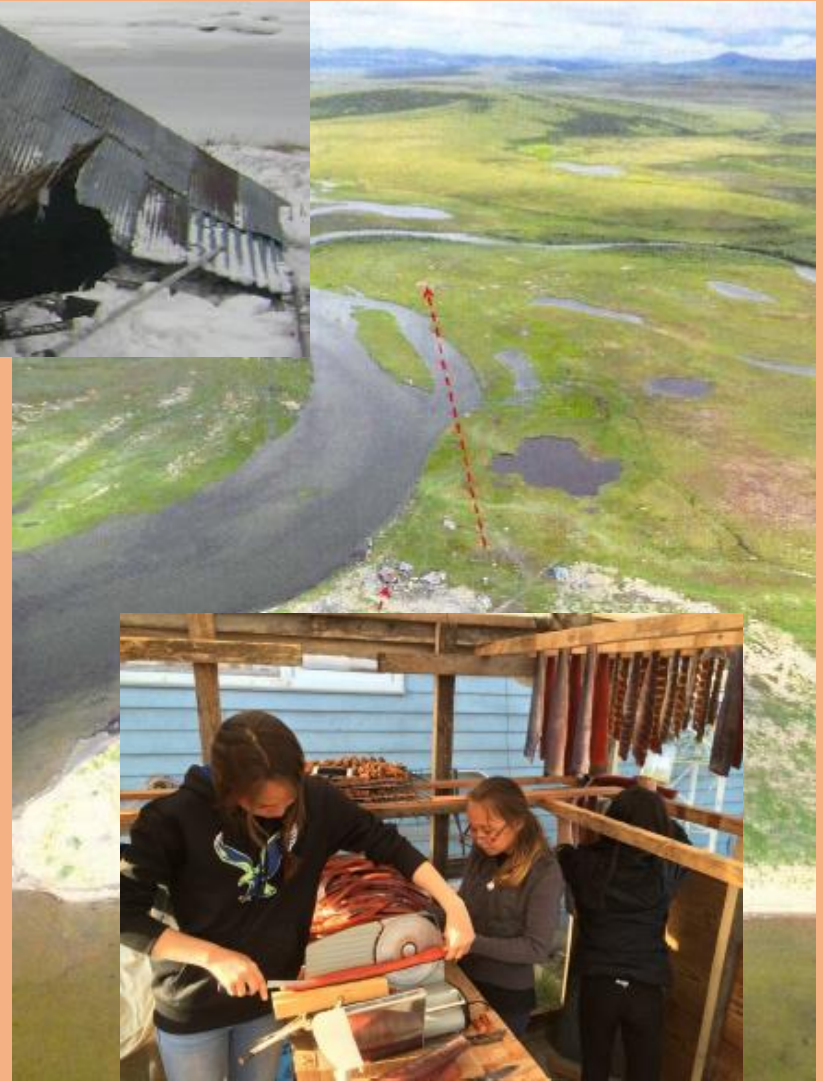




LOSS OF CULTURE

It takes many years to build our fish camps. Floods and ice sliding events have damaged cabins where community members teach the younger generation how to fish. Harvesting traditional foods not only nourishes the community, but it speaks to our identity and our ability to carry on traditions lasting many generations.

-Golovin tribal members



Research Protocols Empowering Indigenous Peoples

Right to self determination – Partnership – Recognition

Research process and result benefits indigenous community (materially, socially, culturally, spiritually)

Traditional knowledges – languages and cultural practices honored

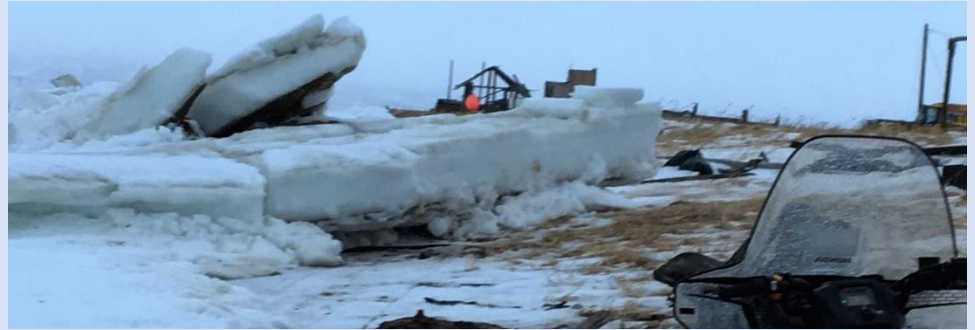
Indigenous partners are compensated for their work

Research materials and results are shared with indigenous community



Language & climate change

- Language tied to environment
- Our people are safer when using our language while out hunting
- As our environment shifts, we see shifts in our languages



Alliviñiq – ice under another piece of ice which may surface due to ocean currents or wake of a boat

Apuqtinniq – ice that has been pushed onto shore

Asitaq – cracked ice made by force of moving ice when it attaches to free-floating ice |

Aunniq – rotten ice

Ayiupaq – ice chipped off by ocean waves

I||igaurlaq – Ice that has begun to melt and although solid is spongy and dangerous

Imuniq – young ice that has been crushed by moving ice

Muḡrak/Puḡrak – slush ice

Qaimḡuq – first shore ice in fall

Qaiqsuaqtat – Smooth ice between areas of rough ice

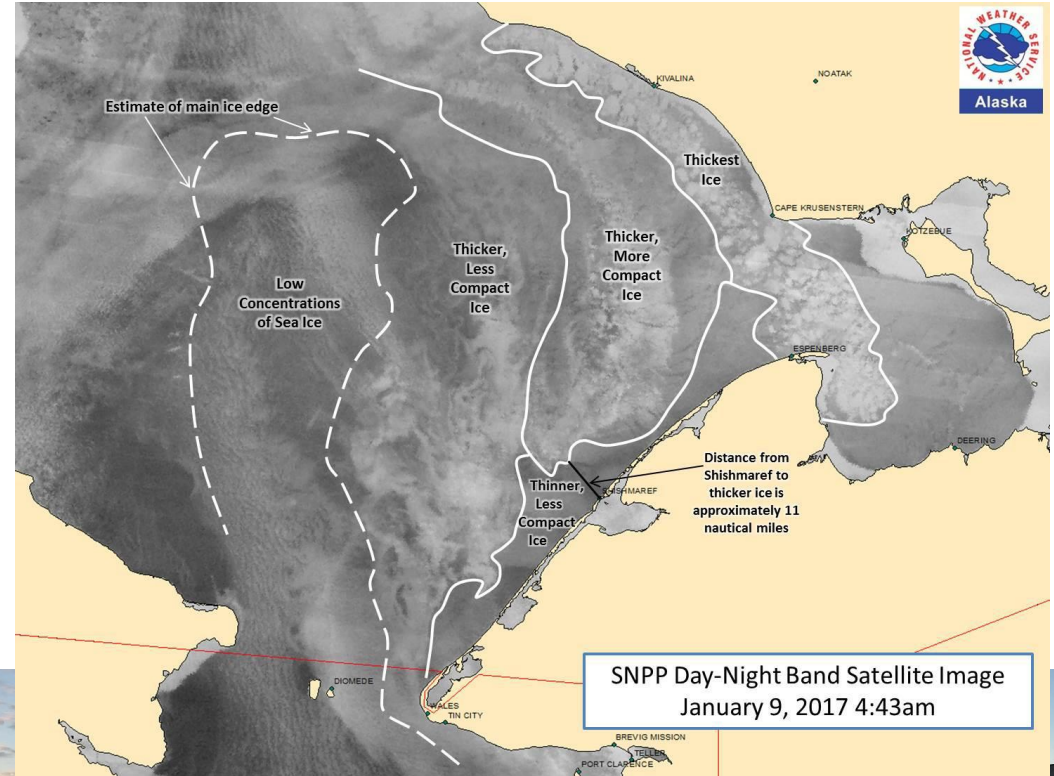
Qimaqtinniq – shore-fast ice that left behind when the ice is carried away by an ocean current

Sikuliḡruaq – ice that is about one and a half feet thick

Sikulluataq – freshwater ice

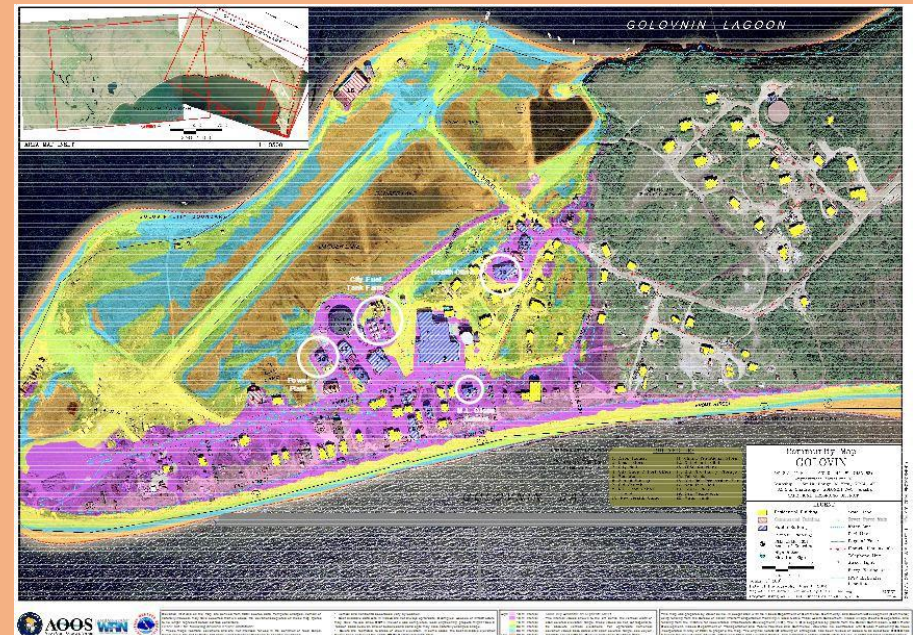
Suḡaiñḡuḡruaq – very large mass of pack ice

Traditional & Western
Knowledges combine
to understand
Shishmaref sea ice
conditions



Golovin color-indexed maps

- Native Village of Golovin
- Alaska Division of Geological Surveys
- National Weather Service



DGGS Erosion Monitoring Programs



Community-Based Black Carbon & Public Health Assessment

- Sponsored by Arctic Council
- Partners: ANSC, Arctic Alliance, Aleut Intl Assn, UAF, UAA, All Russian Research Inst for Nature Protection



PROVING HOPE FOR OUR FUTURE GENERATIONS



Climate Change and Health in the Arctic

A public health view and introduction to resources

Tom Hennessy, MD, MPH

US Centers for Disease Control and Prevention (CDC)

Arctic Investigations Program

Anchorage, Alaska

thennessy@cdc.gov

907 729 3400

Website: <https://www.cdc.gov/ncezid/dpei/aip/index.html>



Disclaimer

The audience should know that...

this presentation represents the conclusions
of the presenter and,
does not necessarily represent the official
position of CDC

Impact of Climate Change on Human Health

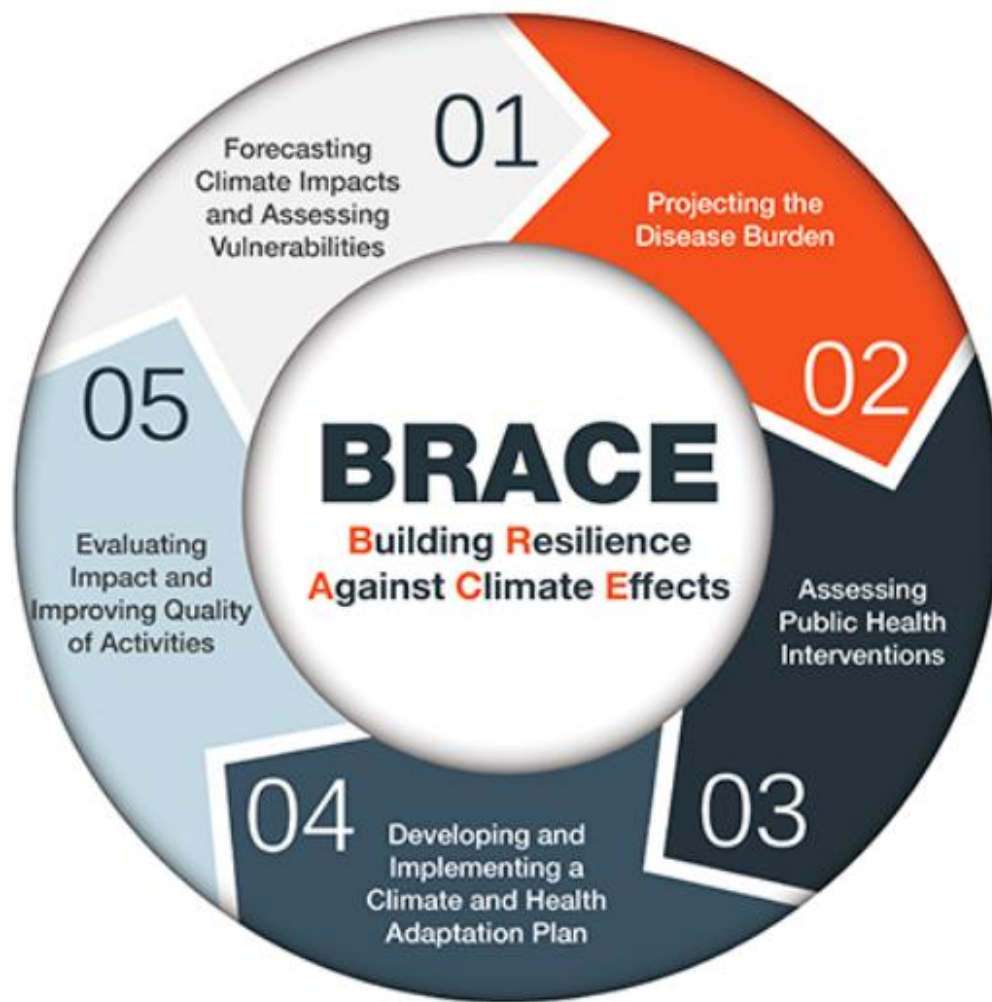


Public Health approach to climate threats

- Being prepared can save lives and reduce suffering
- Provide information on what to expect
- Support climate change adaptation

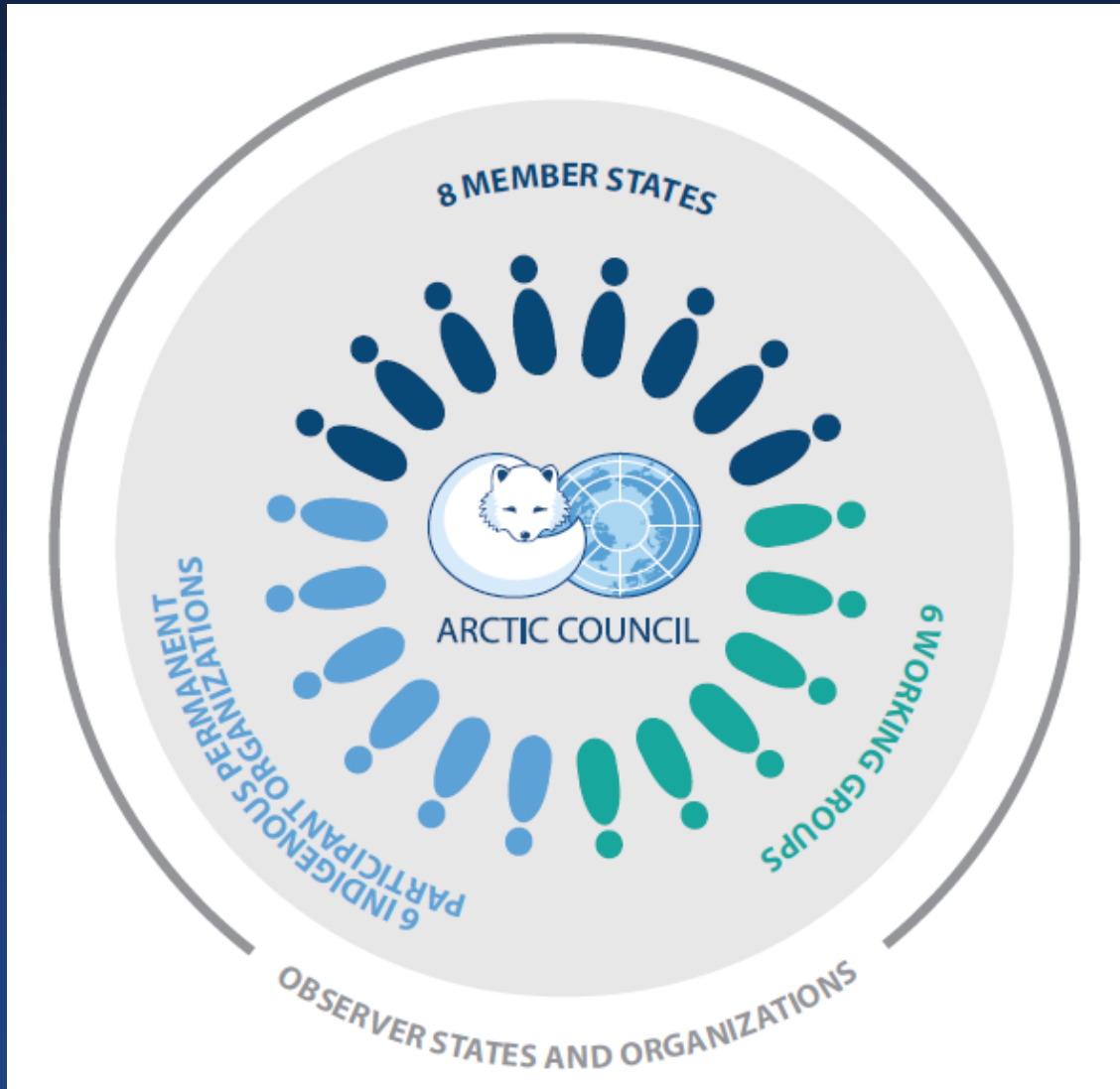
BRACE: **Building Resilience Against Climate Effects**

Building Resilience Against Climate Effects



<https://www.cdc.gov/climateandhealth/BRACE.htm>

Other resources...





ARCTIC COUNCIL

Fairbanks Declaration

Fairbanks, Alaska, U.S.A.
11 May 2017

“Recognizing the rights of Arctic indigenous Peoples and the unique role of the Permanent Participants with the Arctic Council...”

- Aleut International
- Arctic Athabaskan Council
- Gwich'in Council International
- Inuit Circumpolar Council
- Saami Council
- Russian Association of Indigenous Peoples of the North

“...the Arctic is warming at more than twice the rate of the global average, resulting in widespread social, environmental and economic impacts...”

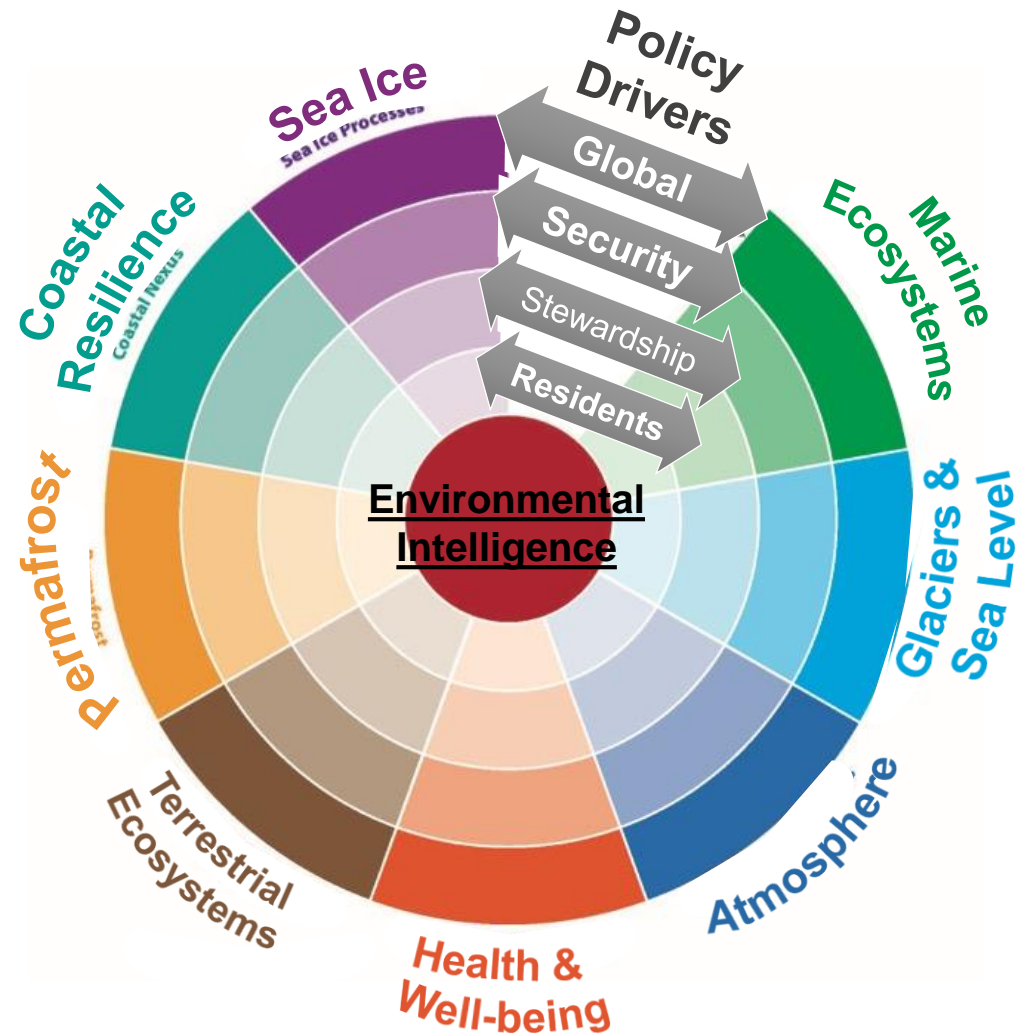
<http://Arctic-council.org>

Interagency Arctic Research Policy Committee



Arctic Research Plan 2017-2021

Policy Drivers and Research Goals



Learn more at:

iarppcollaborations.org

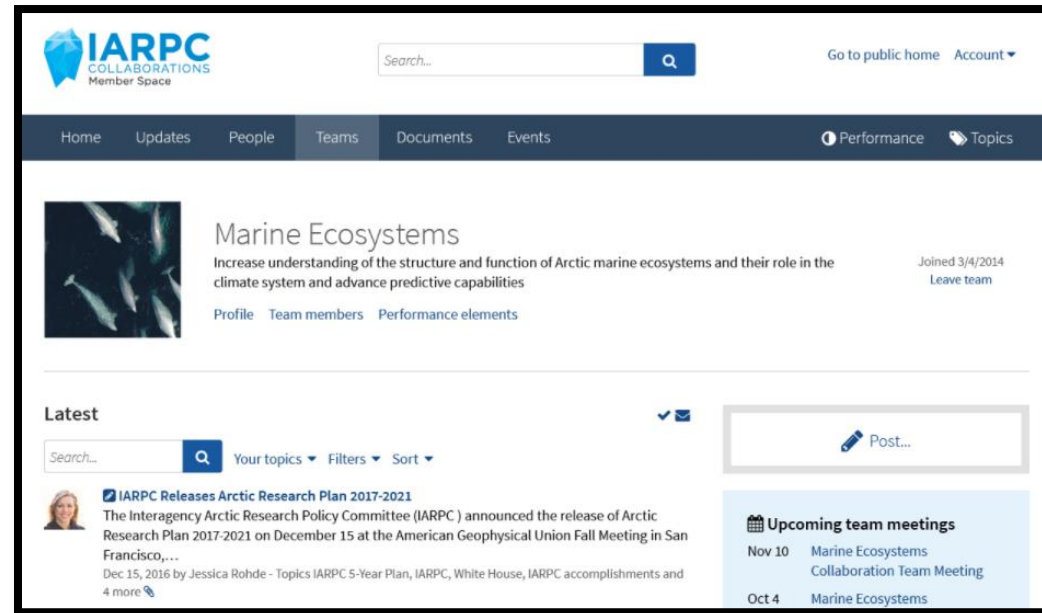
9 Collaboration Teams,
led by...

32 program managers and
Arctic research leaders,
implementing...

122 performance elements,
in collaboration with...

1000 Arctic researchers,
using a website with...

1500 views per month!



Thank you!



Local Strategies for Surveillance of Emerging Climate Health Threats

**Climate Change and Health in the Arctic: Impacts on Alaska Native Communities and a Spotlight on
Efforts to Improve Climate Health - A National Indian Health Board Webinar**

January, 25 2018

Presented by: Mike Brubaker, MS

Director Community Environment and Health

Alaska Native Tribal Health Consortium



**ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM**



BOEM
BUREAU OF OCEAN ENERGY MANAGEMENT



**OUR VISION: Alaska Native
people are the healthiest
people in the world.**



**Air Quality –
Wildfire on
Moose Mountain.**



Land Hazards - Warming is causing thawing and erosion on the North Slope.

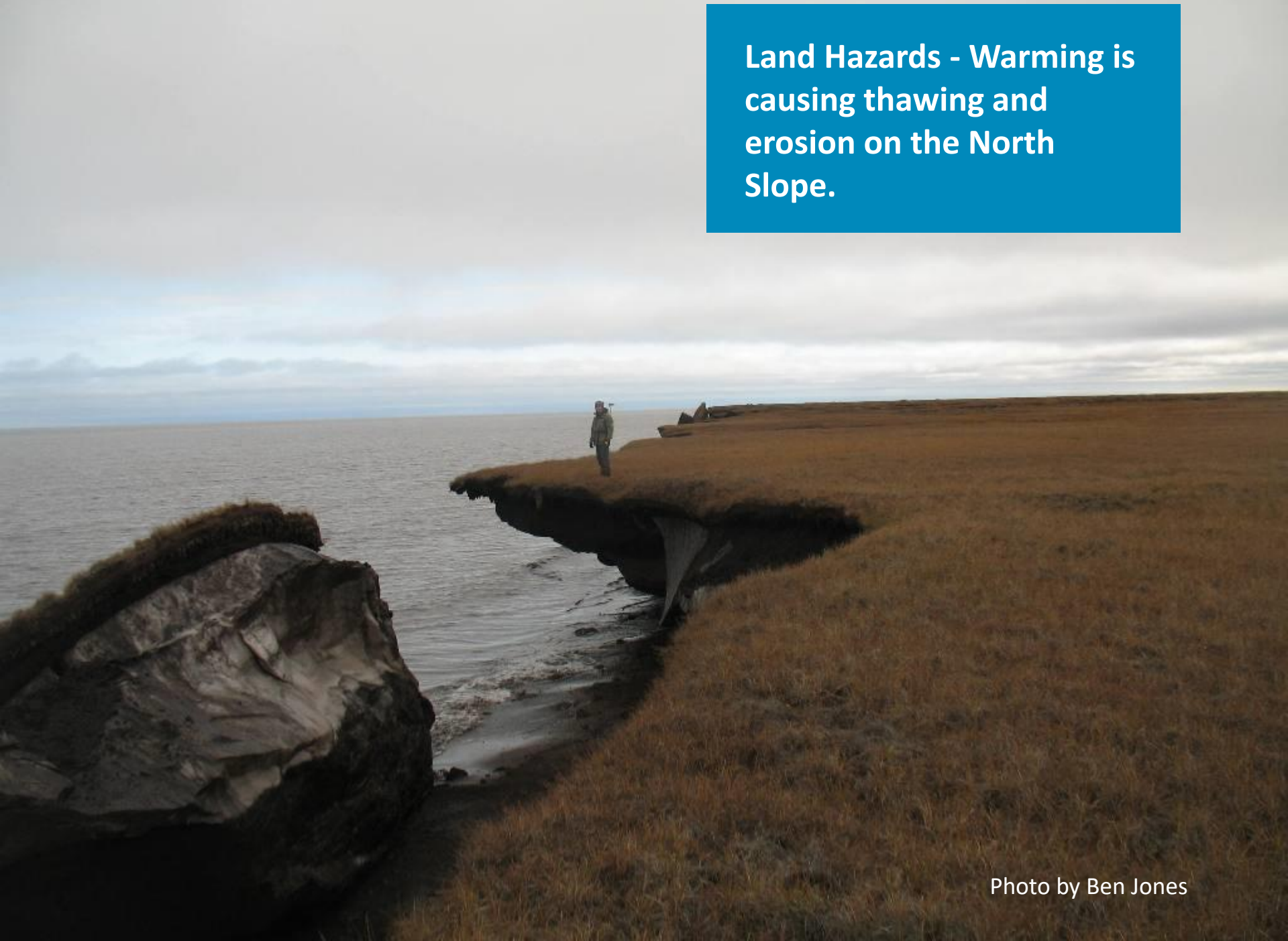


Photo by Ben Jones

**Source water quality - Larger
thaw features can be seen on
many rivers include the Selawik.**



**Drinking Water -Erosion turns
stream water in Golovin the
'color of coffee'.**



Infrastrure - Downstream in the village, thawing permafrost causes damage to infrastructure and disruption of services.



**Food security - Salmon die-off
from stream drying event, the
result of disappearing snowpack.**



Center for Climate and Health

A One Health Approach



Disease



Food Security



Injury



Behavioral Health



Water Security

Connecting the dots between climate change, environmental impacts animal and plant impacts and human health.



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM



CLIMATE

in the Bering Strait Region



Center for Climate and Health





Arctic

Mysterious outbreak killing Arctic Alaska ringed seals

 Author: [Alex DeMarban](#)  Updated: September 27, 2016  Published October 13, 2011

A mysterious and potentially widespread disease is thought to have contributed to the deaths of dozens of ringed seals along Alaska's Arctic coast. Scores more are sickened, some so ill that skin lesions bleed when touched.

The animals are an important subsistence food for Alaska Native hunters and their families, and the [National Oceanic and Atmospheric Administration](#) has proposed listing them as threatened or endangered under the [Endangered Species Act](#).

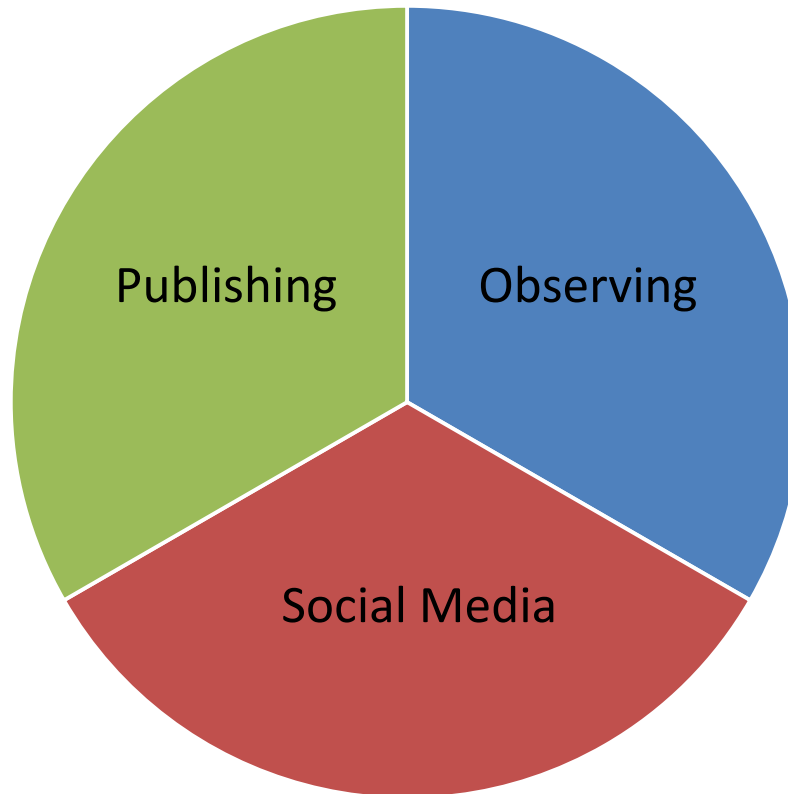
RELATED: [Alaska walrus hauled out on beaches show symptoms similar to ringed seals ailment](#)

In July, biologists with the North Slope Borough's [Department of Wildlife Management](#) began receiving reports of ringed seals hauled out on beaches, an unusual behavior since the animals usually prefer the water or ice. Since then, they've found at least 100 seals with telltale mangy hair and skin lesions, mostly while traveling by four-wheeler along 30 miles of Beaufort and Chukchi sea coastline outside

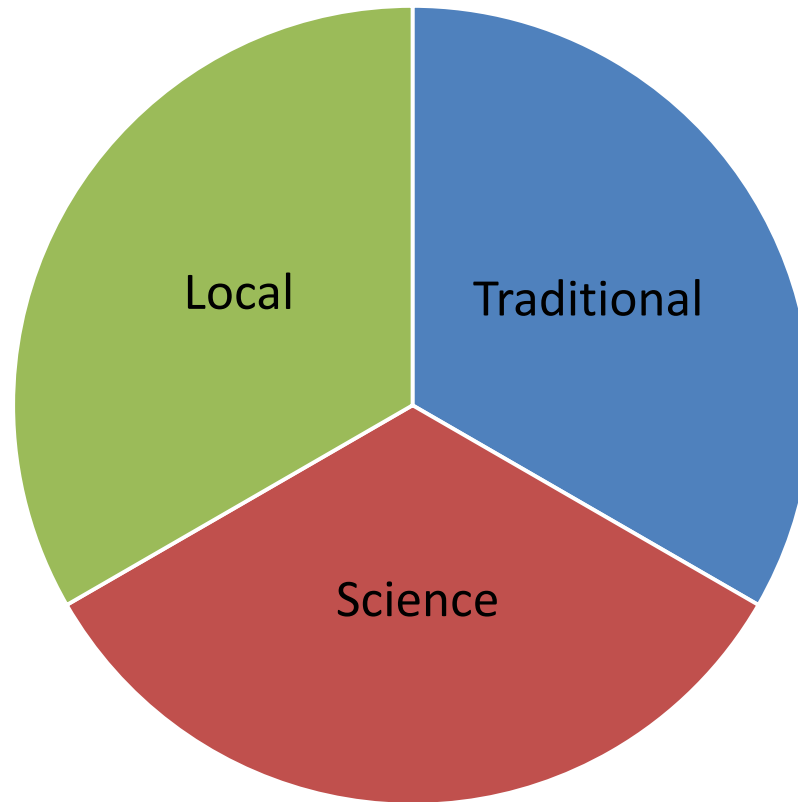


Local Environmental Observer

Three Platforms



Three Knowledge System



Observation System





Alberta Walker

Anvik Alaska United States
Environmental Assistant Anvik Environmental Office
Anvik Tribal Council



Jeramiah Wallace

Toledo Washington United States
Student/Intern Coast Salish Research Center
Northwest Indian College (NWIC)



Mia Wapner

McKinleyville California United States
Environmental Specialist Environmental Program
Yurok Tribe



Paul Williams

Seattle Washington United States
Shellfish Management Policy Advisor
Suquamish Tribe



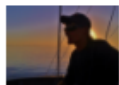
Susan Wilson

Wasilla Alaska United States
President, Co-Founder
Sustainable Futures



Alison York

Fairbanks Alaska United States
Alaska Fire Science Consortium



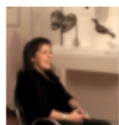
Allan Crow

Sooke British Columbia Canada
director marine naturalist
Victoria Sewage Treatment Alliance



Emily Darling

Canada
Associate Conservation Scientist Marine Program
Wildlife Conservation Society



Michelle Davis

Wasilla Alaska United States
Tribal Coordinator
Environmental Protection Agency - EPA



Jessie DeGrave

Winnipeg Manitoba Canada
Centre for Indigenous Environmental Resources

Basic Knowledge

<input type="checkbox"/> Local Knowledge	1055
<input type="checkbox"/> Scientific Knowledge	510
<input type="checkbox"/> Indigenous Knowledge	411

Community

<input type="checkbox"/> Anchorage, Alaska, United States	208
<input type="checkbox"/> Fairbanks, Alaska, United States	68
<input type="checkbox"/> Ensenada, Baja California, Mexico	30
<input type="checkbox"/> Victoria, British Columbia, Canada	28
<input type="checkbox"/> Vancouver, British Columbia, Canada	25
<input type="checkbox"/> Bellingham, Washington, United States	24
<input type="checkbox"/> Juneau, Alaska, United States	20
<input type="checkbox"/> Seattle, Washington, United States	20
<input type="checkbox"/> Washington D.C., Washington, D.C., United States	17
<input type="checkbox"/> Yellowknife, Northwest Territories, Canada	17

Showing top 10

Primary Organization

<input type="checkbox"/> ANTHC	56
<input type="checkbox"/> Royal Roads University	35
<input type="checkbox"/> UAF, University of Alaska Fairbanks	36
<input type="checkbox"/> Grupo de Ecología y Conservación...	33
<input type="checkbox"/> First Nations Health Authority (FNHA)	28
<input type="checkbox"/> Northwest Indian College (NWIC)	25
<input type="checkbox"/> Environmental Protection Agency - ...	22
<input type="checkbox"/> Alaska Department of Fish and Game	18
<input type="checkbox"/> Government of Northwest Territories	15
<input type="checkbox"/> Alaska Department of Environment...	15

Showing top 10

Affiliate Organization

<input type="checkbox"/> The Biosphere and Sustainability / ...	24
<input type="checkbox"/> GLOBE Program (Global Learning ...	5
<input type="checkbox"/> Northwest Indian College (NWIC)	5
<input type="checkbox"/> BeringWatch	4
<input type="checkbox"/> Local Environmental Observer Net...	4
<input type="checkbox"/> University of Victoria	4
<input type="checkbox"/> ANTHC	3
<input type="checkbox"/> Citizen Science Association (CSA)	3
<input type="checkbox"/> Cornell Lab of Ornithology	3
<input type="checkbox"/> Environmental Protection Agency - ...	3

Showing top 10

Social Network

Lake Drying

Chistochina, Alaska, United States
Fairbanks



200 km
100 mi
Mapbox

Publishing Platform

Contributors

Observer



Wilson Justin
Siana, Alaska, United States

Elder
Native Village of
Chistochina

Consultant



Andrew Bach
Bellingham, Washington...

Professor
Geography/Environment
Studies
Western
Washington

Observation: I wrote decades ago about our dying ponds. This one was a once vibrant lake. In the spring carrying the sounds of swans, ducks, frogs and snipes. When I first came up to this lake about 1996, it still had frogs, and the water was up to the trees. Now it's 3/4 grass. There were no sounds up here this fall and last fall. This spot is a 40 minute walk from the highway up the Mankommen Lake Trail. Wilson Justin

LEO says: Thank you Wilson for your observation. Lake change and lake drying is a phenomena across Alaska, a result of warming temperatures, changes in precipitation, and thawing permafrost. In every [climate change assessment](#) performed over the past decade by ANTHC, lake drying has been described. The impacts for fish, birds and wildlife are only just beginning to be understood. In some areas there are also implications for community water supply, and water security. The following consult by Andrew Bach explores the science behind lake change and provides analysis based on the consult and image provided by Wilson.

[Huxley College of the Environment Consult](#): This observation is showing a pond that has suffered a change in hydrology. There are many possible explanations for this change, among them are:

- less water (rain and runoff) entering the pond due to drought conditions, either temporary (just a few dry years) or more permanent due to climate change.
- increased temperatures causing increased evaporation, more likely attributed to global warming.
- surface water diversion, like a tributary stream was diverted by construction or

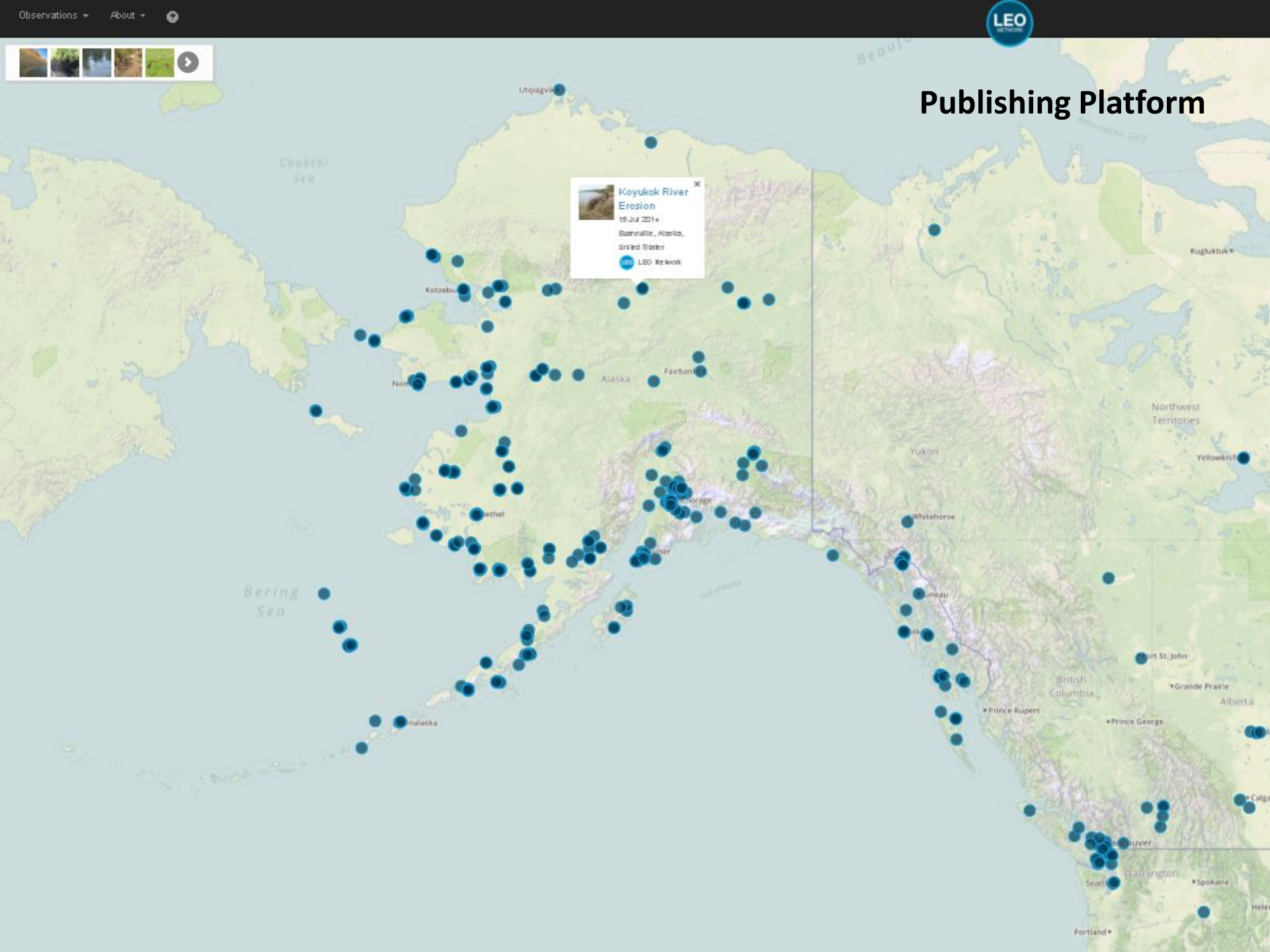


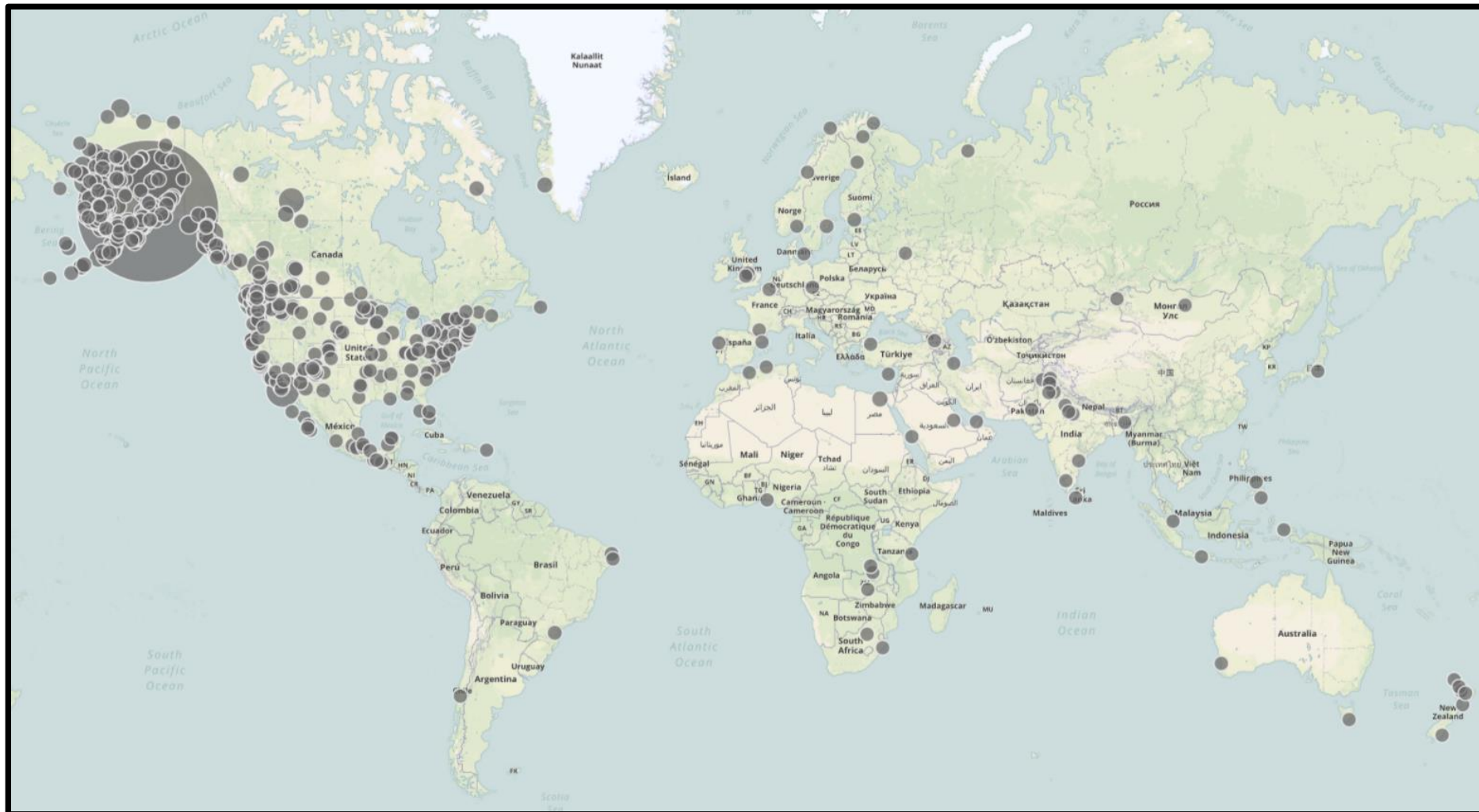
Reference

Justin, Wilson, and Andrew Bach. "Lake Drying." *LEO Network* (leonetwork.org). Observed 12 October 2016. Accessed 12 October 2017.



Publishing Platform





Location of LEO Members

Search

Ice

Search

[Show all](#)

List

Map

Timeline

Stats

Data

Ice

1 - 20 of 167

[Next](#)

Ice of Change - Amid Waterfowl Sightings

Diomedea, Alaska, United States

27 JAN 2017

LEO Network

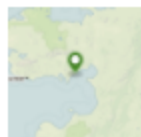


Ice Shelf Off of St George Island

Saint George, Alaska, United States

3 APR 2017

LEO Network

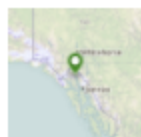


Sea Ice - No Sea Ice!

Elim, Alaska, United States

25 OCT 2016

LEO Network



Heavy Sea Ice

Haines, Alaska, United States

26 JAN 2014

LEO Network



No Sea Ice Yet

Wales, Alaska, United States

13 DEC 2014

LEO Network



Weather shifting ice flow

Unalakleet, Alaska, USA

22 DEC 2012

LEO Network



Trapped on sea ice

Nome, Alaska, USA

FILTER BY

[Clear Filter](#)

Topic

- ☐ Ice and Snow 100
- ☐ Weather 58
- ☐ Ocean/Sea 31
- ☐ Seasons 31
- ☐ Waters 28
- ☐ Sea Mammals 16
- ☐ Land 14
- ☐ Fish 12
- ☐ Infrastructure 11
- ☐ Birds 9
- ☐ Transportation 8
- ☐ Plants 7
- ☐ Air 6
- ☐ Health 6
- ☐ Land Mammals 3
- ☐ Energy 2
- ☐ Insects 1
- ☐ Invertebrates 1
- ☐ Microbes 1
- ☐ Sanitation 1

Show observations with ANY of the selected

Shishmaref

Alaska, United States


[★ Follow](#)

7 LEO Members [View All](#)



Fred Eningowuk
Shishmaref Alaska, Unit...



Anthony Fernandez
Shishmaref Alaska, Unit...



Andrew Kakoona
Shishmaref Alaska, Unit...

Shishmaref
Environmental
Program Assistant
**Native Village of
Shishmaref**

Shishmaref
Environmental
Coordinator
Assistant
**Native Village of
Shishmaref**

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Open Water in Our Ocean

Shishmaref, Alaska, United States

30 DEC 2016

LEO LEO Network



Unusual Spider (*Araneus marmoreus*)?

Shishmaref, Alaska, United States

21 JUL 2016

LEO LEO Network



Unusual Ladybug (*Calvia quatuordecimguttata*)?

Shishmaref, Alaska, United States

7 JUN 2016

LEO LEO Network



Odd Marine Debris

Shishmaref, Alaska, United States

28 AUG 2015

LEO LEO Network



Richard Kuzuguk
Shishmaref Alaska, Unit...

Resident
**Native Village of
Shishmaref**



Sharon Nayokpuk
Shishmaref Alaska, Unit...

Environmental
Department
**Native Village of
Shishmaref**



Ralph Sinnok
Shishmaref Alaska, Unit...



Stanley Tocktoo
Shishmaref Alaska, Unit...



Open Water in Our Ocean

Shishmaref, Alaska, United States

30 DEC 2016

 LEO Network



Unusual Spider (*Araneus marmoreus*)?

Shishmaref, Alaska, United States

21 JUL 2016

 LEO Network



Unusual Ladybug (*Calvia quatuordecimguttata*)?

Shishmaref, Alaska, United States

7 JUN 2016

 LEO Network



Odd Marine Debris

Shishmaref, Alaska, United States

28 AUG 2015

 LEO Network



No Sea Ice

Shishmaref, Alaska, United States

26 FEB 2015

 LEO Network



Bearded Seal (*Erignathus barbatus*) with Hair Loss

Shishmaref, Alaska, United States

18 NOV 2014

 LEO Network



Pacific Sleeper Shark (*Somniosus pacificus*)

Shishmaref, Alaska, United States

20 OCT 2014

 LEO Network



Extreme Shore Erosion

Shishmaref, Alaska, United States

2 JUN 2014

 LEO Network



Hairless Seal

Shishmaref, Alaska, United States

19 OCT 2013



Ice and Snow 4



Sea Mammals 4



Ocean/Sea 3



Land 1



Land Mammals 1



Arachnids 1



Birds 1



Fish 1



Infrastructure 1



Insects 1



Spring 2



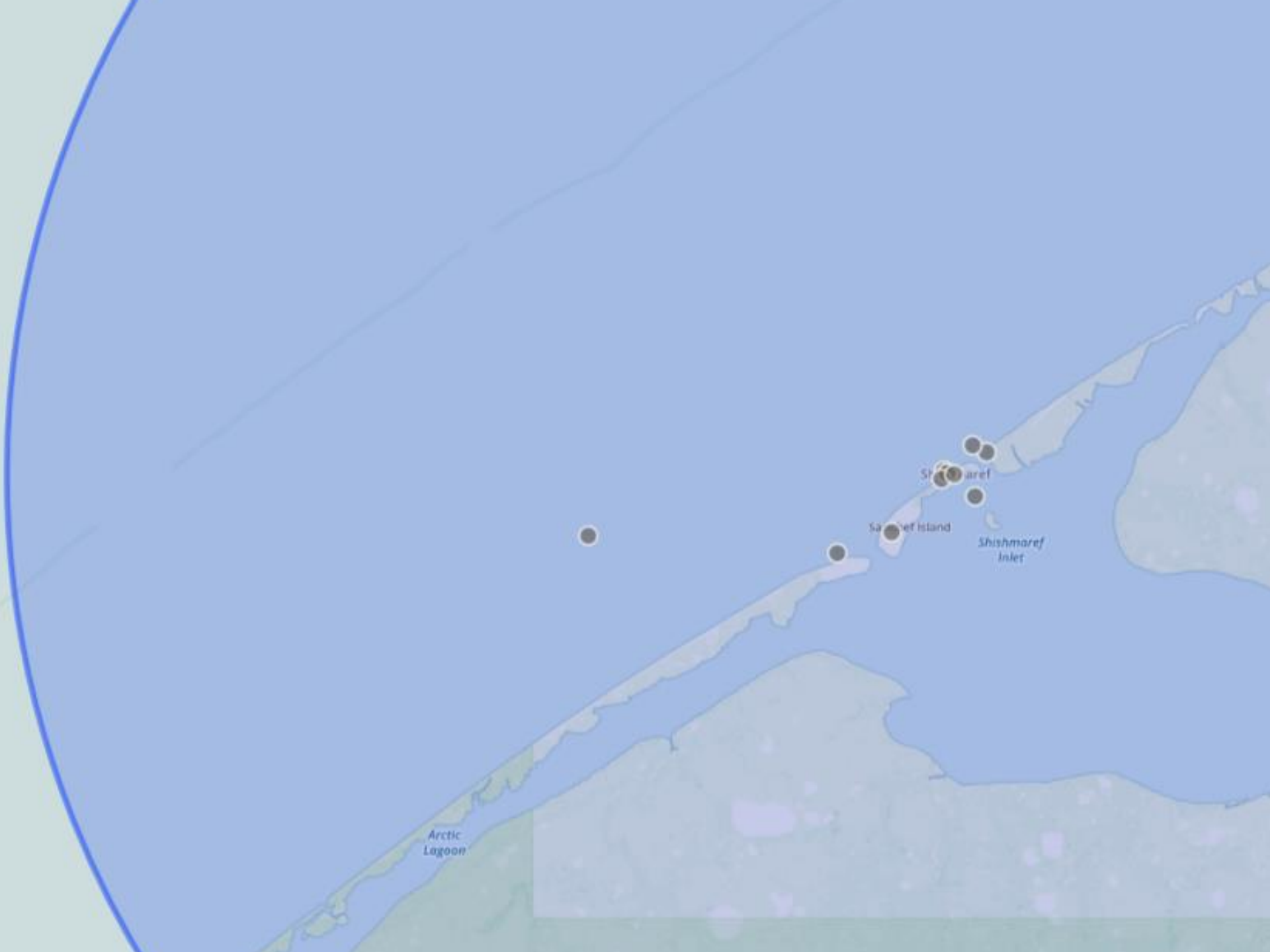
Summer 4



Fall 6



Winter 2





The Northern Climate Observer

The Northern Climate Observer is a compilation of articles and observations about changing environment and climate, and the impacts on Northern communities. It is a LEO Network product, published weekly by the Center for Climate and Health at the Alaska Native Tribal Health Consortium.



Fall storm surge and related erosion.
Cindy Schultz

Autumn storm batters northern coastline

Barrow, Alaska, United States

★ SladyGroue Olier / Arctic Sounder / October 6, 2017

Clean up and recovery from the recent storm that battered the North Slope coastline may carry a price tag exceeding \$10 million.

[Read article on Arctic Sounder](#)



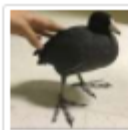
Eye on the Arctic

Investigation into washed up whale's death begins in Alaska

✚ CaseyGroue / Eye on the Arctic / September 28, 2017

The extraordinary sight of a 30-foot long dead humpback whale that washed up on a beach area in Anchorage.

[Read article on Eye on the Arctic](#)



American coot sighting in eastern Arctic pretty unusual says bird expert

🔍 Jane George / Nunatsiag Online / October 6, 2017

That's after the bird apparently lost its way to its usual wintering-over grounds far away to the South.

[Read article on Nunatsiag Online](#)



Stinger jellyfish swarms wipe out farmed salmon in west of Ireland

Environmental change in the circumpolar north.

[Meet the Northern Climate Observer team](#)

[Archive of previous editions at the Alaska Medical Library](#)

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#331

Oct 9, 2017 ➔

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The Northern Climate Observer
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Sep 18, 2017 ➔

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#328

Sep 11, 2017 ➔

The Northern Climate Observer
#327

Sep 5, 2017 ➔

The Northern Climate Observer
#326

Aug 21, 2017 ➔

The Northern Climate Observer
#325

Aug 14, 2017 ➔

The Northern Climate Observer
#324

Jul 31, 2017 ➔

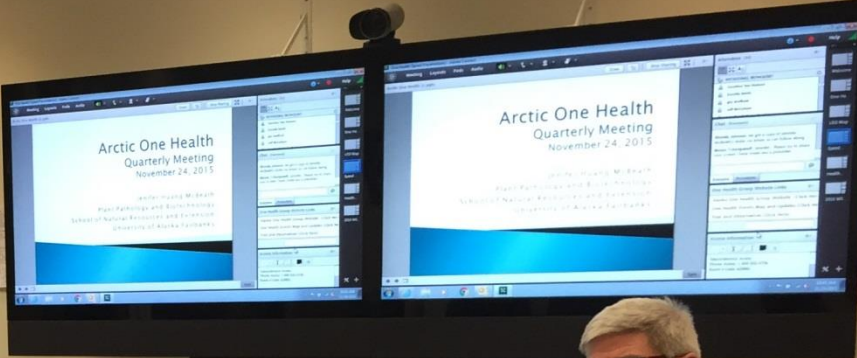
The Northern Climate Observer
#323

Jul 11, 2017 ➔

The Northern Climate Observer
#322

Jul 5, 2017 ➔

The Northern Climate Observer
#321



Identifying health effects of climate change in Alaska

**Allergic
Reactions**



**Travel
Safety**

Mental Health



**Waterborne
Disease**

**Food
Spoilage**



**Respiratory
Health**

**Food
Confidence**



**Ice
Hazards**



**Vessel
Safety**



**Harmful
Algae**



Nutrition



Allergies



**Infrastructure
Damage**



**Food
Security**





ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

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GlobalChange.gov
U.S. Global Change Research Program

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Fourth National Climate Assessment

SHARE



Development of the Fourth National Climate Assessment (NCA4) is currently underway, with anticipated delivery in late 2018. Below you will find information related to Volumes I and II of NCA4, including background information, frequently asked questions, and opportunities to participate in the process.

GCRA Mandate

[About NCA4 Vol. I \(CSSR\)](#)

[About NCA4 Vol. II](#)

[NCA4 Vol. II Engagement](#)

[How to Contribute](#)

[NCA4 Vol. I and II: FAQs](#)

GCRA Mandate

Learn more about USGCRP and the National Climate Assessment, mandated by the [Global Change](#) Research Act (GCRA) of 1990.

[LEARN MORE](#)

NCA4 UPDATE

[A Letter from Our Acting Chair and Executive Director](#)

[Fourth National Climate Assessment Update: June 2017](#)

[Fourth National Climate Assessment Update: April 2017](#)

[Fourth National Climate Assessment Update: February 2017](#)

[Providing the Foundation for the National Climate Assessment](#)


[USGCRP Announces Regional Chapter Leads for Fourth National Climate Assessment](#)

SUSTAINED ASSESSMENT RESOURCES


Open Notices | GlobalCh...Welcome to the USGCRP...

Secure | https://review.globalchange.gov

AppsAdAKACAI/ANANTHCAUSASRBPLogixCAFFCAIANHCAIHCALendarCANHRCANAYCTOSERAIARPCIntraNIMHiRePORTIRINAHITITASMAXMHINmyPayNARCH



GlobalChange.gov
U.S. Global Change Research Program



Thirteen Agencies, One Vision: Empower the Nation with Global Change Science

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If there are no documents for public review available below, the Create New Account link may not be shown.

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Documents Available for Public Review

- Fourth National Climate Assessment: Public Review (Nov. 3-Jan. 31)
- IPCC Special Report on Global Warming of 1.5°C: U.S. Government Review (8 January - 8 February 2018)

U.S. Global Change Research Program, 1800 G Street, NW, Suite 9100, Washington, D.C. 20006 USA
Tel: +1 202 223 6262 | Fax: +1 202 223 3065 | **Contact Us**



- | | |
|------------------------------|------------------------------|
| WAINWRIGHT AREA OF INFLUENCE | NATIONAL PARK & PRESERVE |
| NATIONAL PETROLEUM RESERVE | NATIONAL PRESERVE |
| NATIONAL PARK | NATIONAL WILD & SCENIC RIVER |
| NATIONAL WILDLIFE REFUGE | NATIONAL WILDERNESS AREA |
| NATIONAL MONUMENT | |

**Wainwright Area of Influence was digitized from the Traditional Use Area Conservation Plan Map Book as produced by the Wainwright Traditional Council and The Nature Conservancy, Aug. 18, 2008.



Olgoonik



DISCLAIMER

For informational purposes only, Umiat makes no expressed or implied warranties of merchantability or fitness with regards to character and function of this printed map. All attempts have been made to identify discrepancies among data sources and are provided as is. The user is cautioned against using this map for detailed analysis or interpretations.

Title: **WAINWRIGHT, ALASKA
AREA OF INFLUENCE**

Scale: 0 25 50 75 100 125 Miles

Figure: **16**

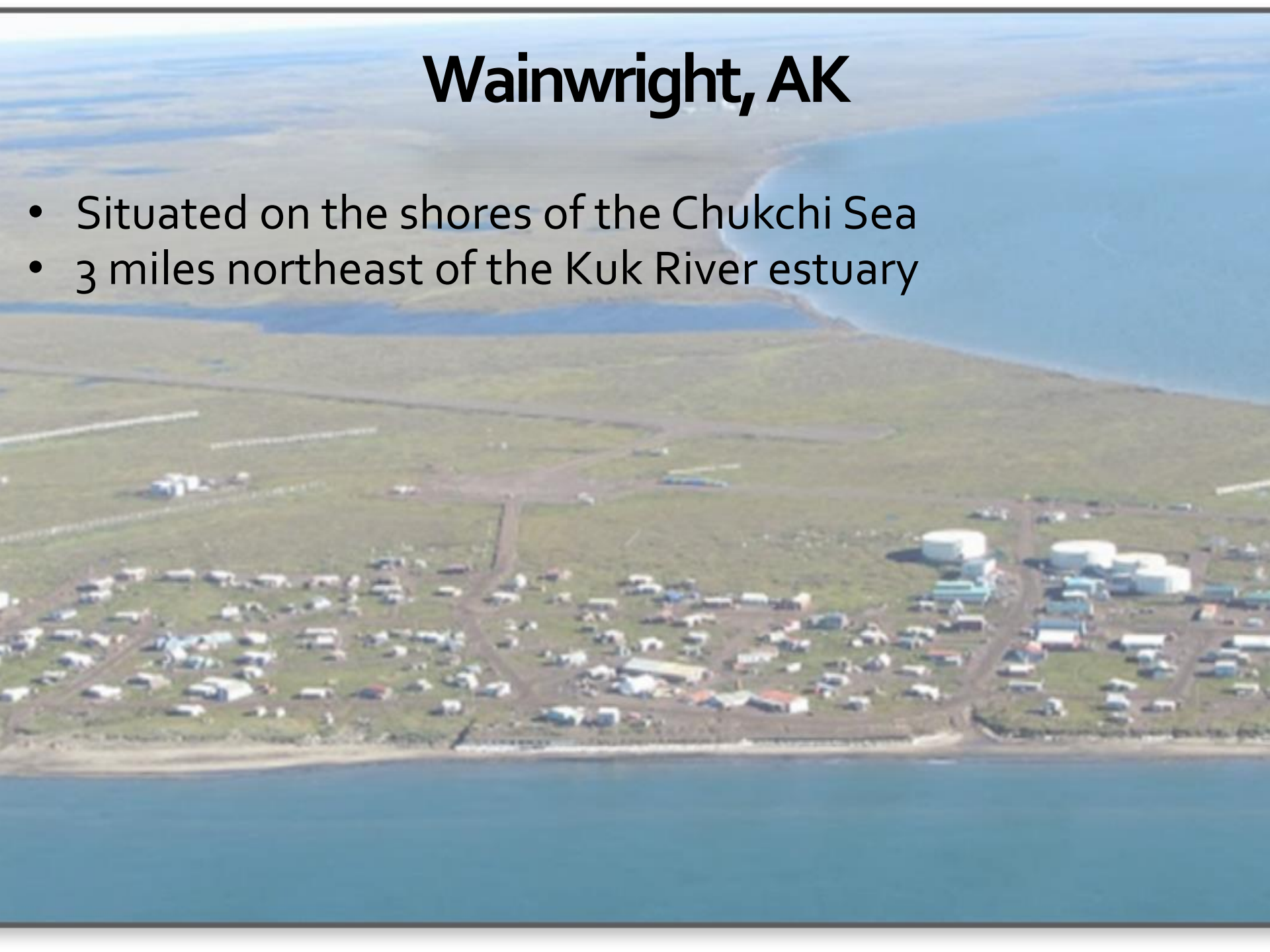


Wainwright, AK



Wainwright, AK

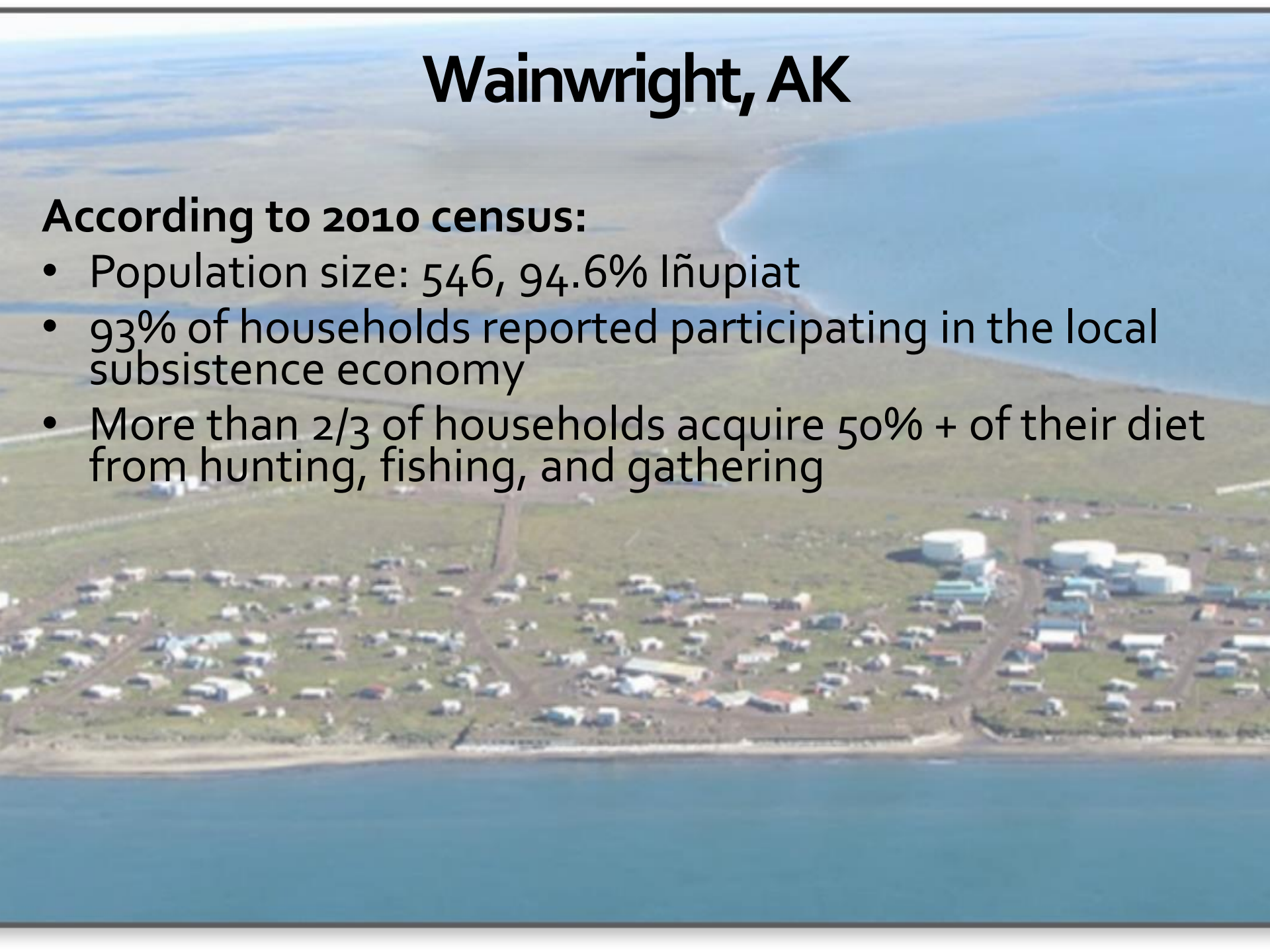
- Situated on the shores of the Chukchi Sea
- 3 miles northeast of the Kuk River estuary



Wainwright, AK

According to 2010 census:

- Population size: 546, 94.6% Iñupiat
- 93% of households reported participating in the local subsistence economy
- More than 2/3 of households acquire 50% + of their diet from hunting, fishing, and gathering



Well-Being & 'Eskimo Soul Food'



Well-Being & 'Eskimo Soul Food'

- Whale meat and other Native foods actually have more nutritional value than store-bought products



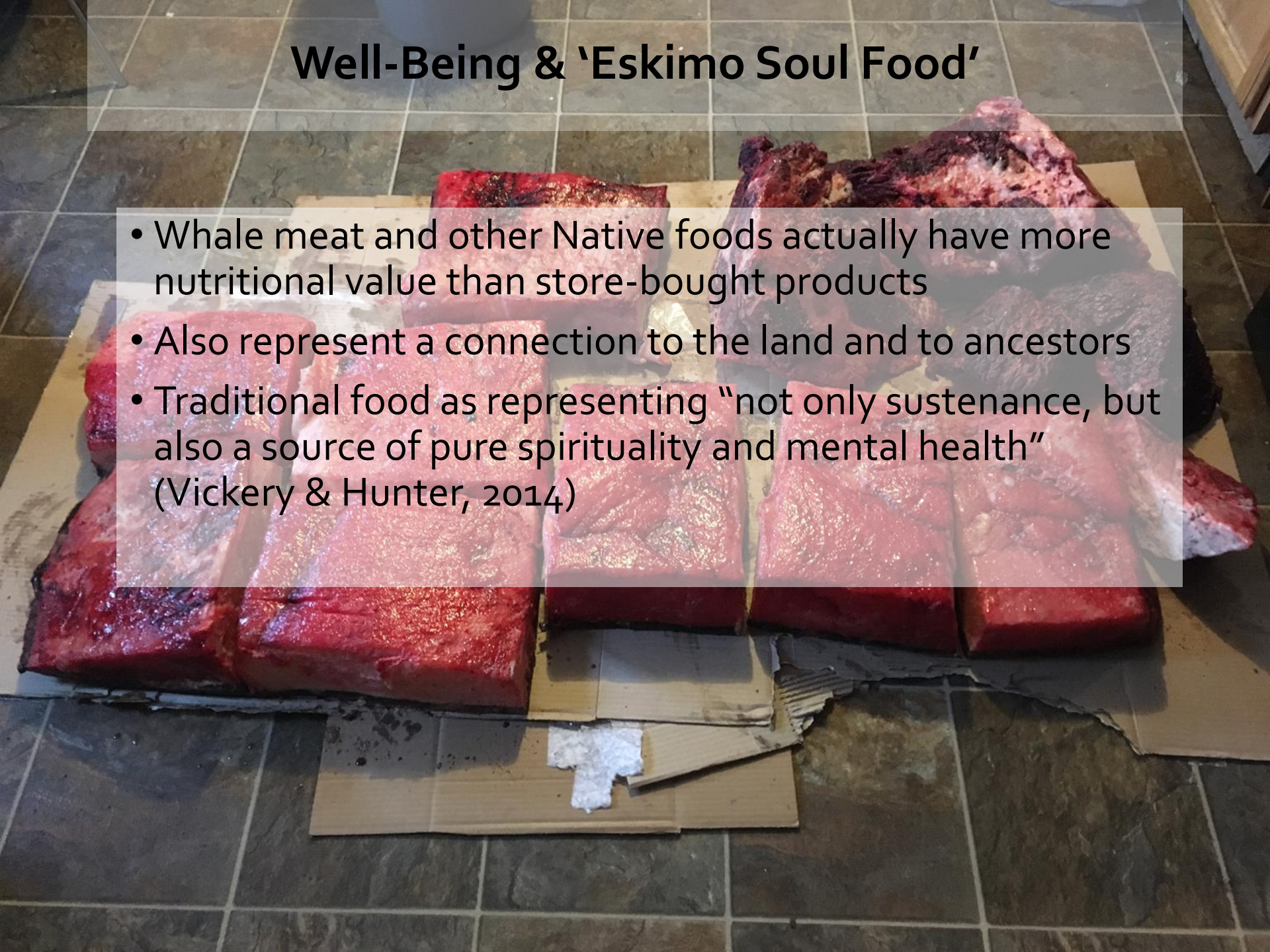
Well-Being & 'Eskimo Soul Food'

- Whale meat and other Native foods actually have more nutritional value than store-bought products
- Also represent a connection to the land and to ancestors



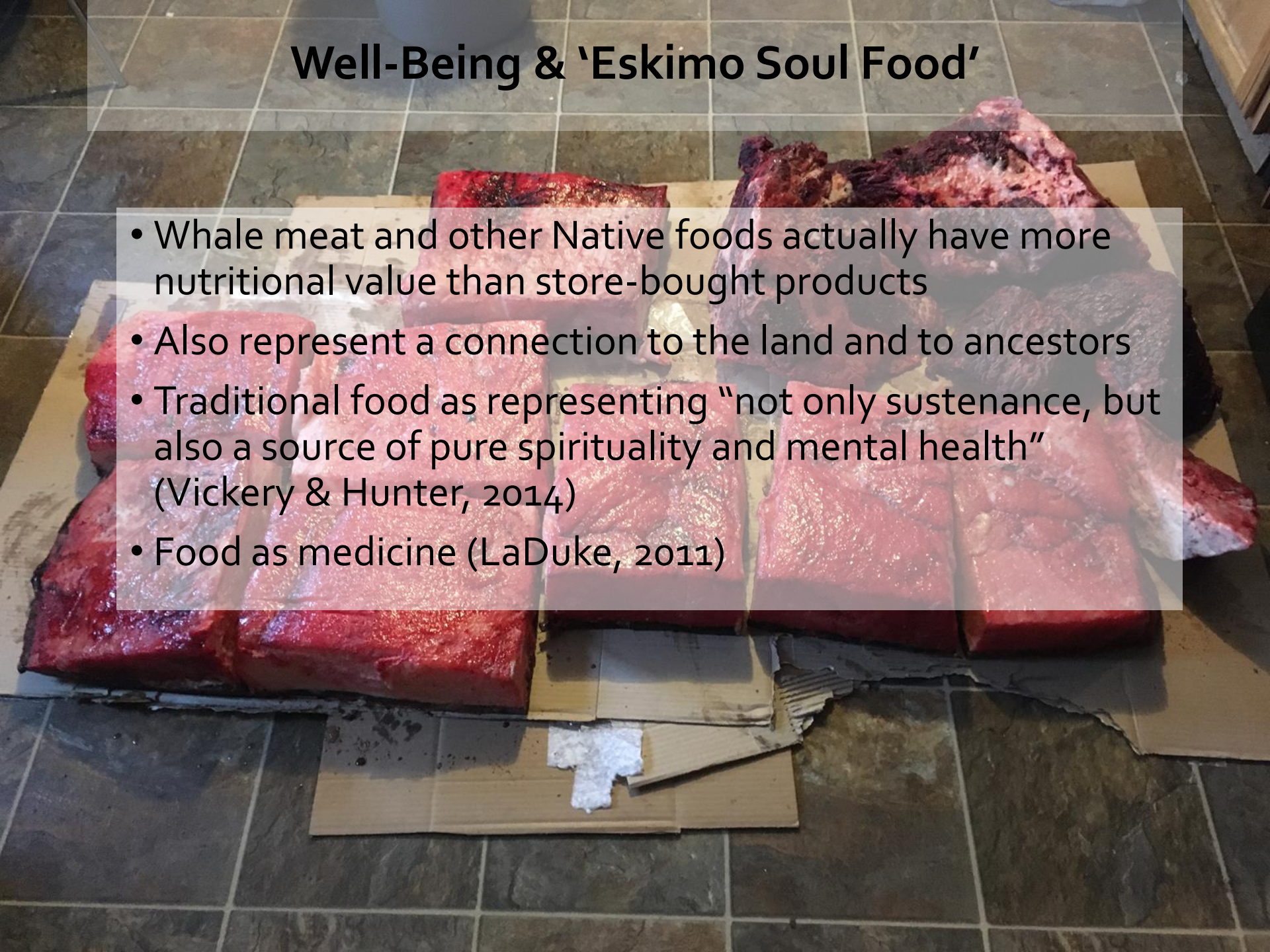
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- Traditional food as representing “not only sustenance, but also a source of pure spirituality and mental health” (Vickery & Hunter, 2014)



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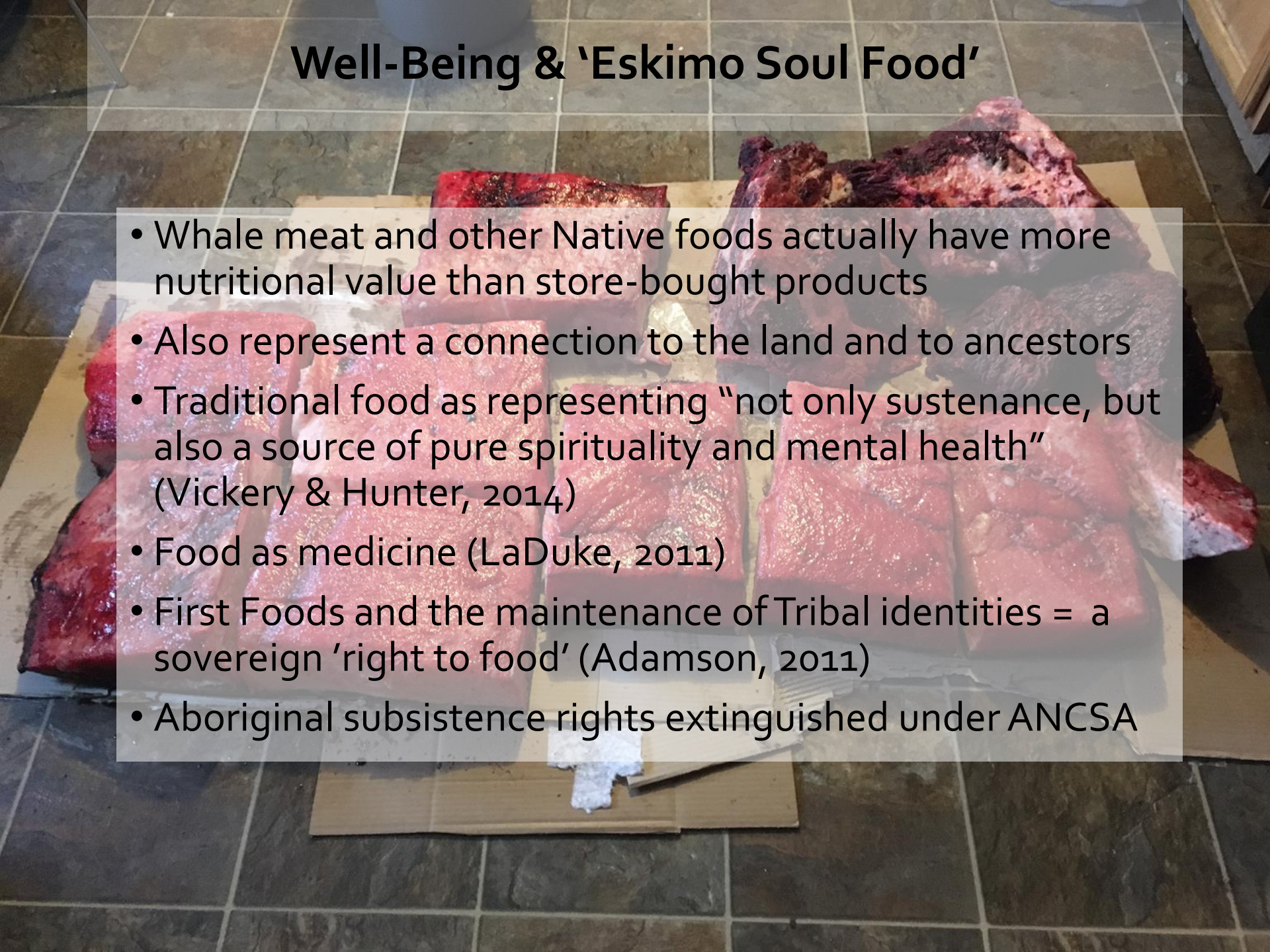
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 - Aboriginal subsistence rights extinguished under ANCSA



(Marinucci et al, 2014)

implement a focused adaption plan
and evaluate its impact on the
health of the community

Promoting Adaptive Capacity with a Geo-Location Device Check-Out Program in Wainwright, Alaska



**Alana Shaw, PhD
Village of Wainwright**

**Micah Hahn, PhD and Rebecca Van Wyck
ICHS, University of Alaska Anchorage**

Data Collection & Project Goals



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- We were able to view North Slope Borough de-identified patient encounter logs and Wainwright weather data collected by NOAA



Data Collection & Project Goals

- We were able to view North Slope Borough de-identified patient encounter logs and Wainwright weather data collected by NOAA
- Wainwright Search & Rescue Rescue Mission Records, Safety Workshop audio recordings, and inReach check-out forms used to measure changes in the frequency of community member use of location technology, dialog on the use of location technology, dialog of safe subsistence travel practices, and unintentional injuries associated with unseasonable weather.



Data Collection & Project Goals

- Success in this project will be viewed as the increased knowledge and use of location technology within the community and an increase in informed risk behavior.



Implementation



Implementation

- On May 26, 2017 a Workshop was held in Wainwright, AK to inform community members of the Search and rescue check-out program and the utilization of PLBs and SENDs



Remote Travel Safety Workshop

When: May 25, 2017, 5:30PM- 9:30PM

Where: Community Center

All Wainwright Hunters and Travelers are
Welcome to Attend

In addition to PLBs, Wainwright Search & Rescue is
launching a new inReach check-out program

Come receive hands-on training with these devices
Please feel free to bring your own inReach, if you have one

Other topics covered will include:

Trip Planning

Proper Equipment

Navigation

Community members are encouraged to attend in order to share their
own knowledge and best practices

Cost of Attendance is Free!

Dinner will be Provided

Door Prizes: \$200 Gas Vouchers

Hosted by Village of Wainwright &
the Institute for Circumpolar Health Studies
in Partnership with
Wainwright Search & Rescue



Village of Wainwright

In Partnership with Wainwright Search & Rescue

With funds from the National Indian Health Board

inReach SE units are now available for check-out at Wainwright SAR base!!



Upon equipment return, individuals will receive an entry into a random prize drawing for their own inReach device. Drawings will be held at the close of the project.

To check-out an inReach unit:

Please contact Wainwright SAR at:
763-0272 or 925-2004

Implementation

- PEF logs were collected spanning from January 2016 through November 2017.



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Implementation

- PEF logs were collected spanning from January 2016 through November 2017.
- NOAA temperature data from Wainwright spans the same time period
- Another helpful metric of hours spent in search and rescue operations was discovered.



Implementation: Challenges

- **As anticipated.....** Remote Travel Safety Workshop and the Weather!!
- **Relatively Low Checkout Rates:**
 - Already working with a small population size, especially when it comes to active hunters and travelers
 - The people who probably need them the most are the ones who think that they are already “prepared”
 - 1 Potential Solution: Hands on Workshop at the School
 - The age old issue with instituting behavioral changes
 - Already made sure to have devices available at the same location where PLBs have always been checked out
 - 1 Potential solution: Equipment delivery service?
- **Use in the field (once they are checked out):**
 - Getting people to bring them and turn them on!!
 - 1 Potential Solution: Another booster workshop on Remote Travel Safety Best Practices

Quyanakpak to our Project Champions!

- Wainwright Search and Rescue
- City of Wainwright and Olgoonik Corporation
- Village of Wainwright Clinic
- National Indian Health Board
- North Slope Borough, Community Health Aide Program
- Bethel Search and Rescue

Resources, Discussion, Q&A

