

# Welcome

## ARCUS Arctic Research Seminar Series

*“Some things I can’t explain, or, Why more social science studies are needed to understand human-environment interactions in the Arctic”*



**13 September 2016**

Presented by Henry P. Huntington  
Huntington Consulting



#arcuswebinars

A person dressed as a moose stands in a snowy, open landscape. The person is wearing a black jacket, dark pants, and a large moose head mask with blue-tinted eyes. Their hands are raised, and they appear to be gesturing. To the left is a large red sled, and to the right is a snowmobile. The background shows a vast, flat, snow-covered area under a clear blue sky.

Some things I can't explain, *or*,  
Why more social science studies are needed to  
understand human-environment interactions  
in the Arctic

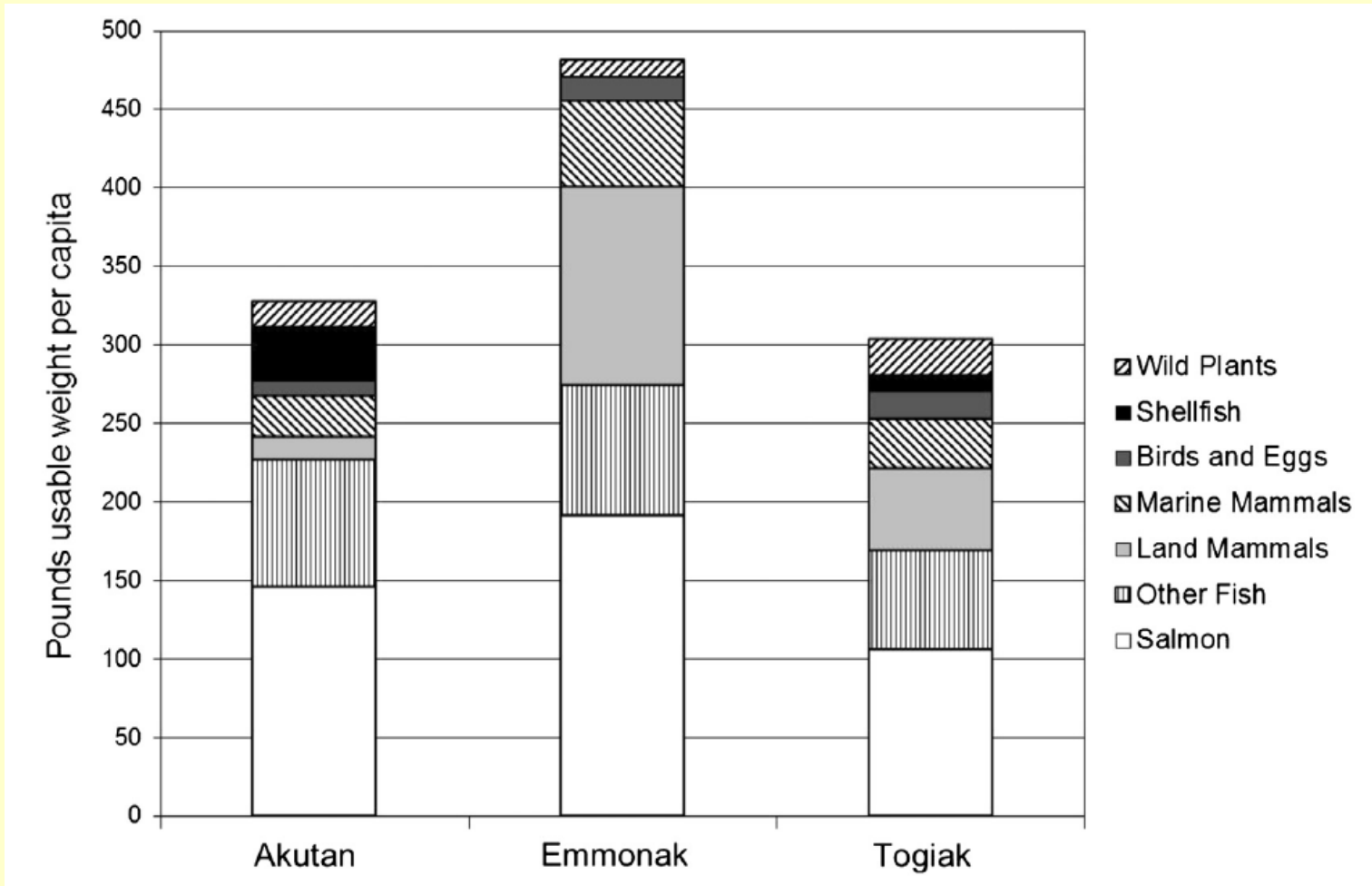
Henry P. Huntington, Eagle River, Alaska  
ARCUS Seminar Series, September 13, 2016



*Caleb Pungowiyi demonstrating netting of birds from a stone blind, St. Lawrence Island*

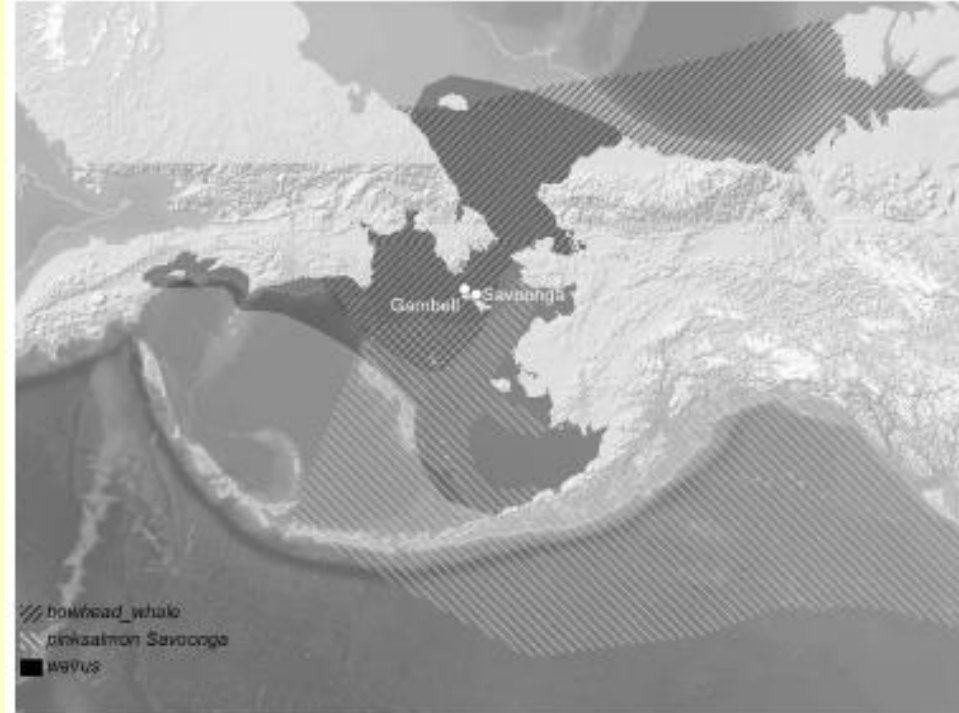
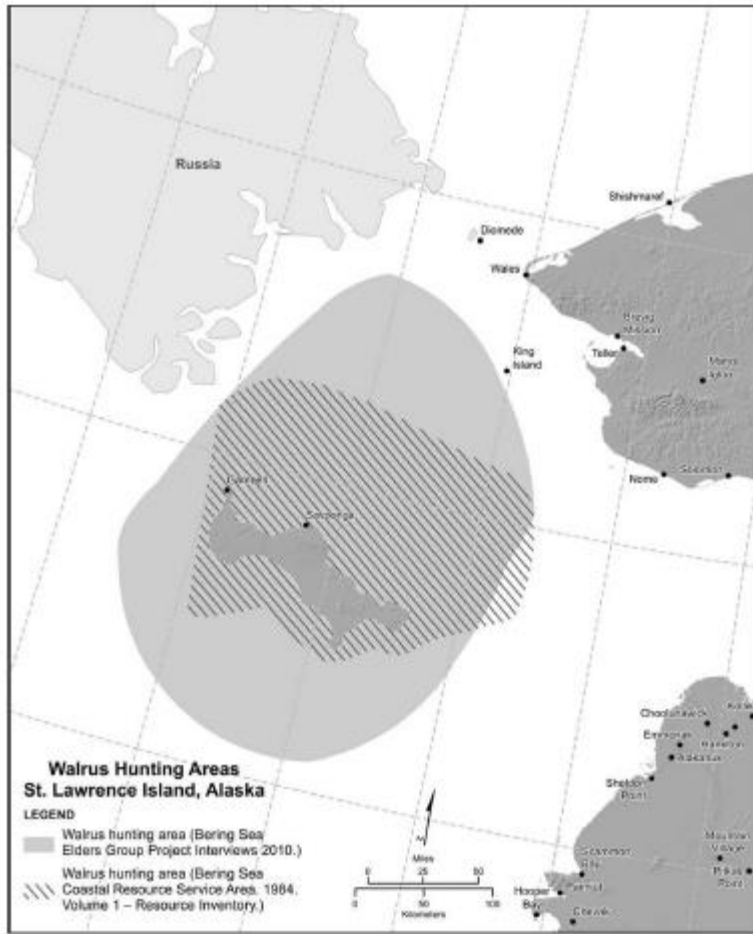
**The standard story:**

**People are closely  
connected to the  
ecosystem**



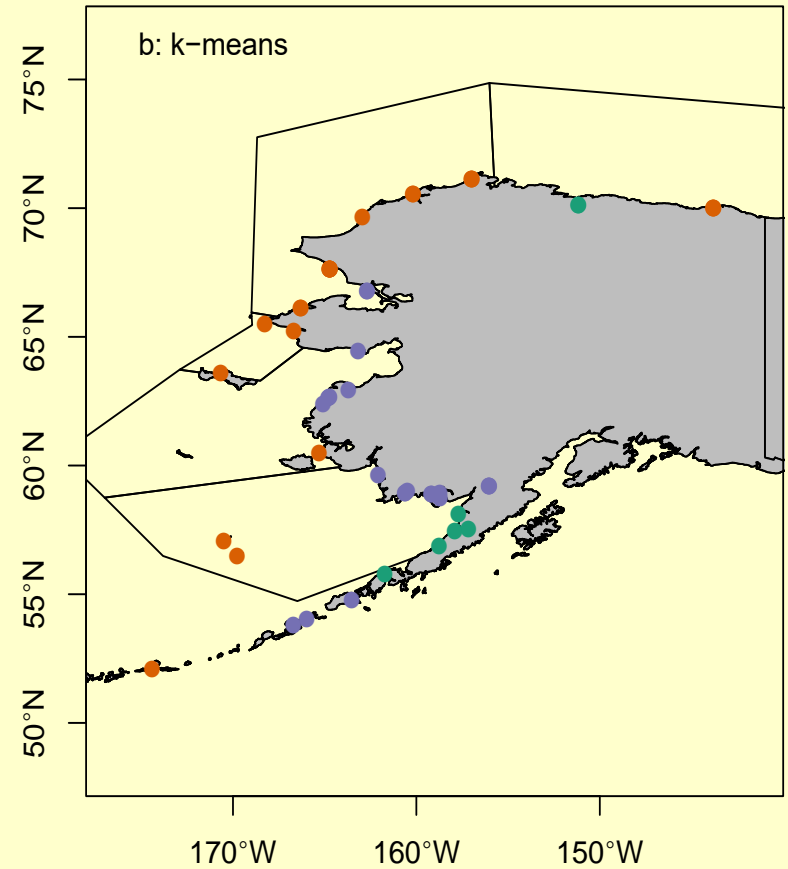
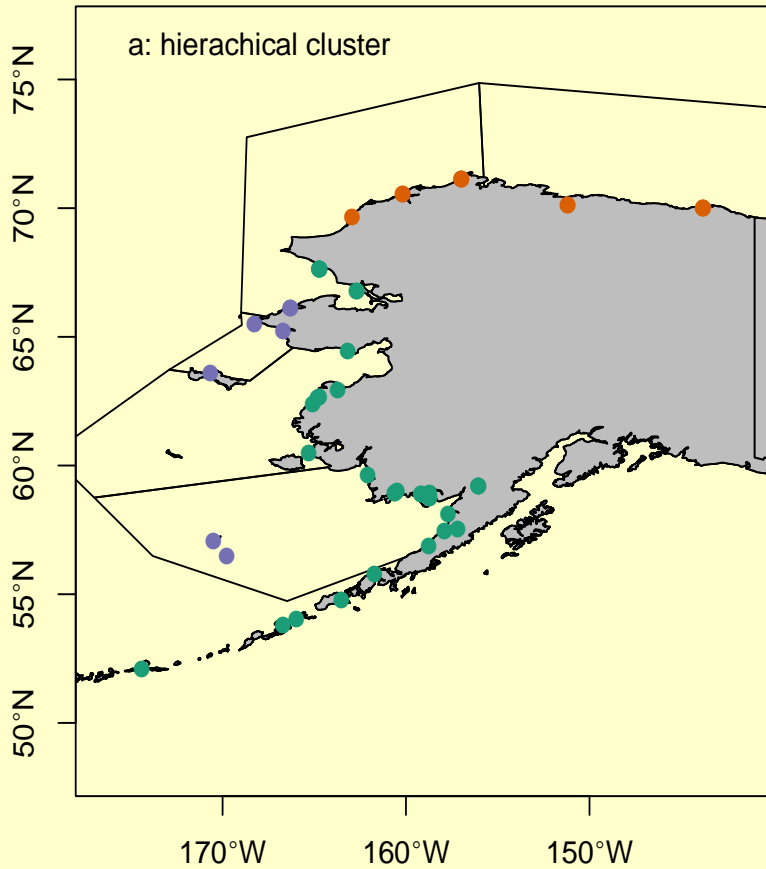
## Subsistence harvests are high

(Fall et al. 2013, DSR II)



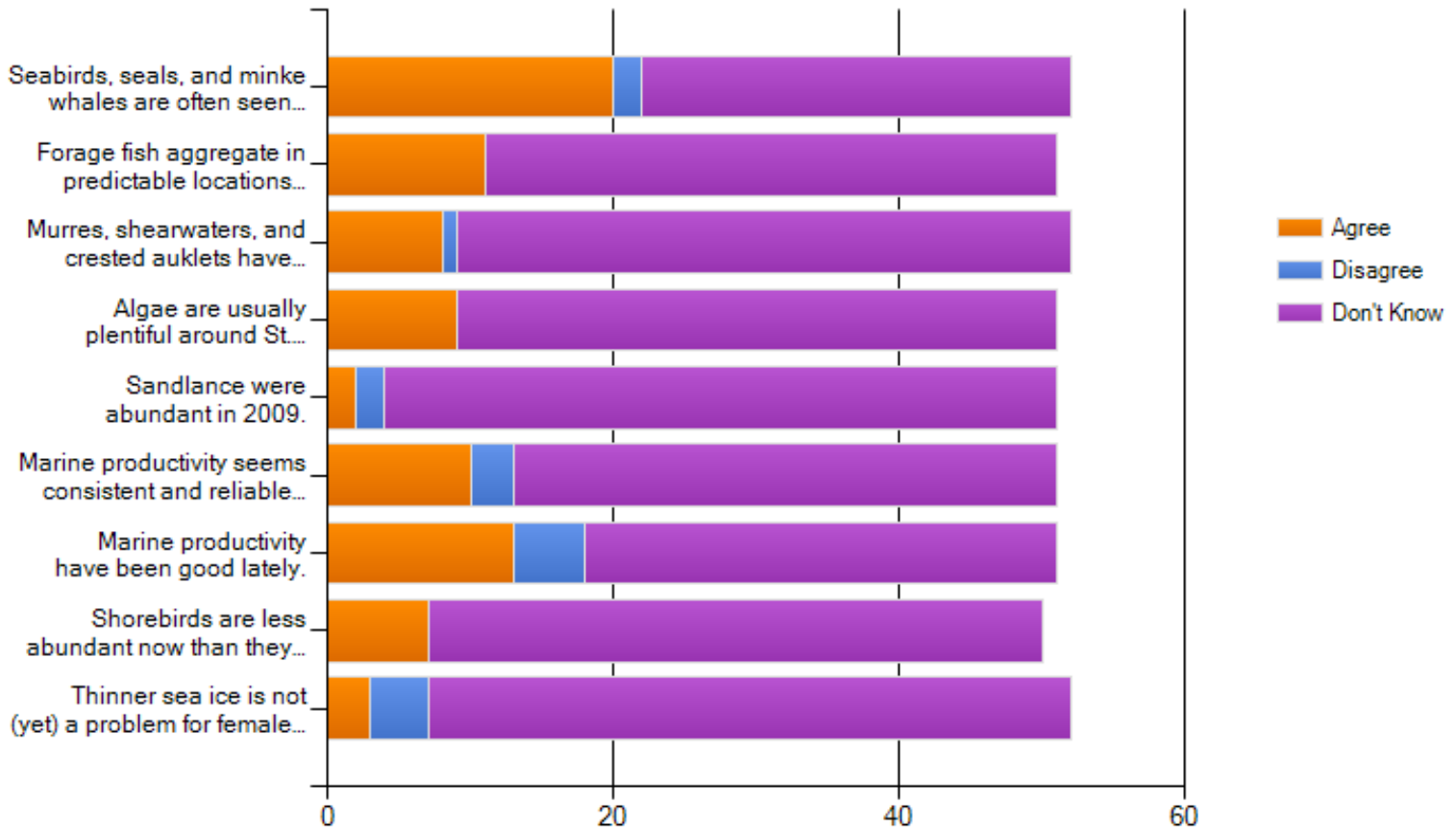
## Use areas are vast

(Huntington et al. 2013, “calorie-sheds”, DSR II)



## Harvests reflect ecology and geography

(Renner & Huntington 2014, DSR II)



## LTK is deep

(Responses by Bering Sea Project researchers to observations by Savoonga hunters)



Variability has  
consequences

Gambell, Alaska: 2012

2013





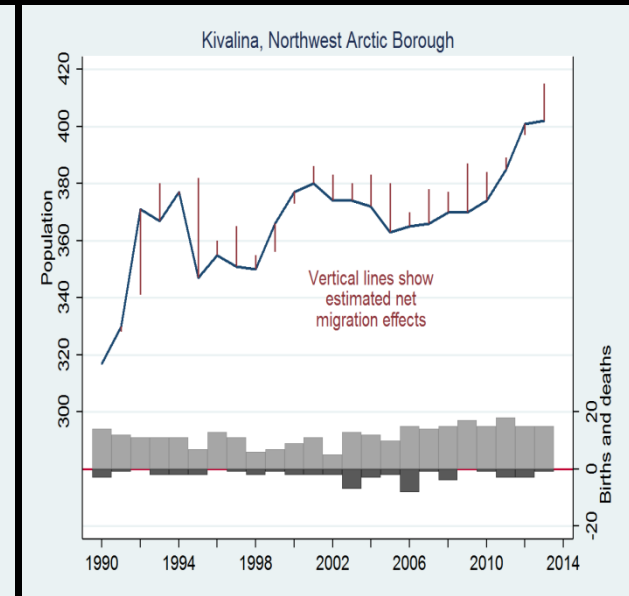
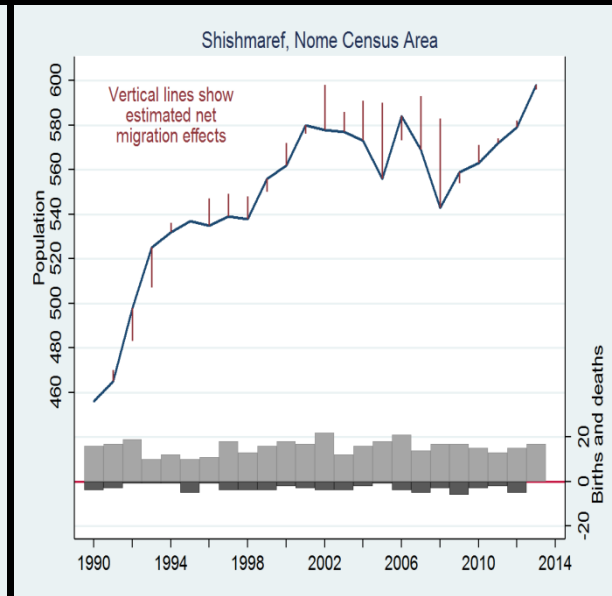
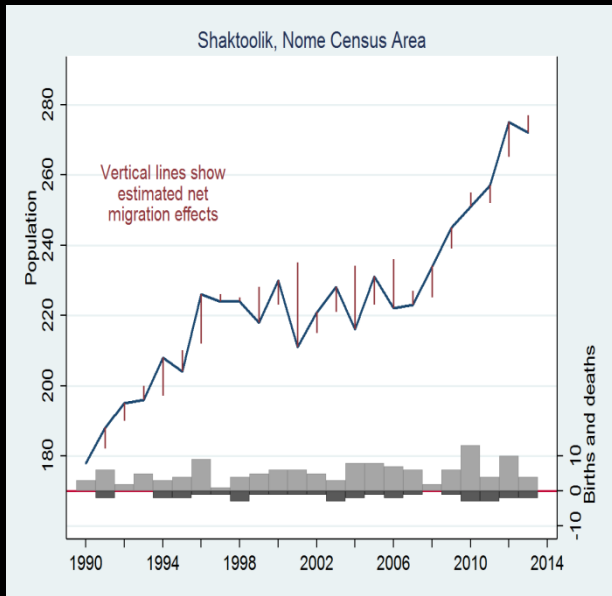
***But:***

**What does “connected” mean, and  
what else matters?**

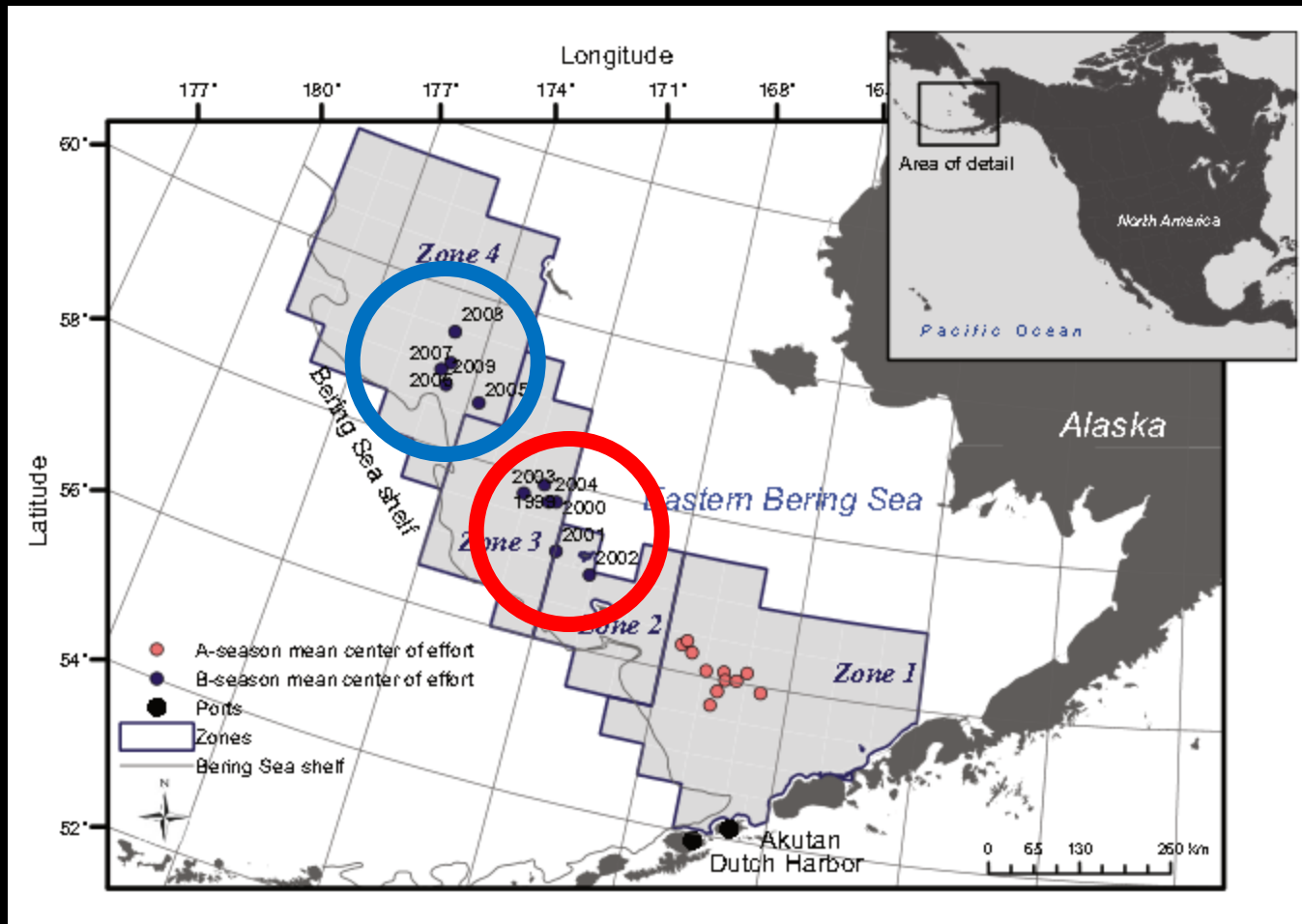


*Whale carcass disposal,  
Savoonga*

# Why are eroding villages growing?



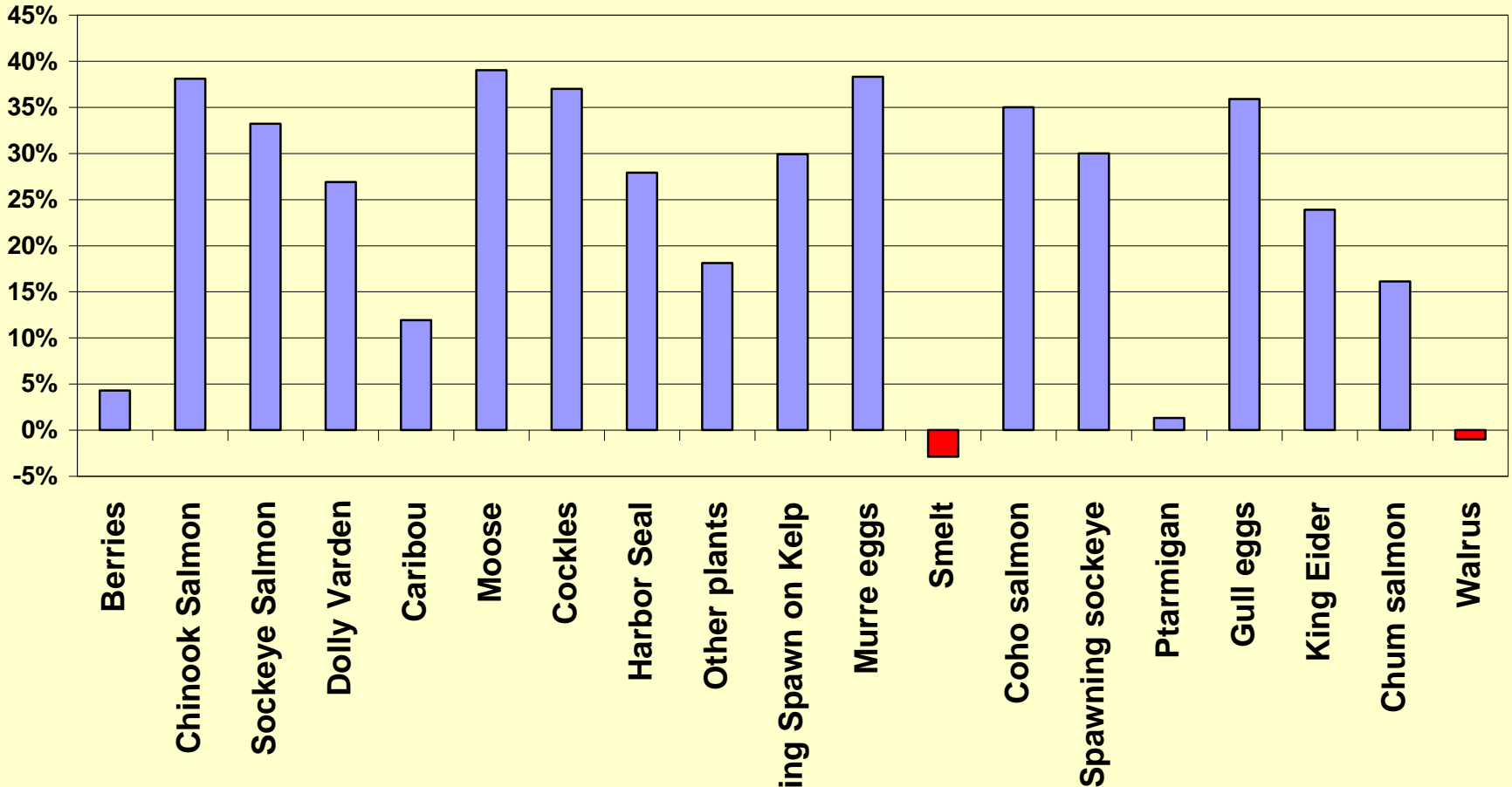
# Why do fishermen go SOUTH in warm years?





# Why are harvests high from an ecosystem described as in trouble?

## Difference in Percentage of Togiak households using resources, 1999 and 2008



Per capita harvest 246 lbs → 303 lbs

Fall et al. 2013, DSR II

# What influences walrus hunting in Savoonga?

(Data from  
Huntington et al.  
2013, “walrus-ice-  
wind”, DSR II)



(Photo courtesy Eskimo  
Heritage Program, Kawerak,  
Inc., Nome, Alaska)

| Model   | Explained Variance | Number of Days Analyzed | Best Single Predictor |
|---|--------------------|-------------------------|-----------------------|
| Harvest at Savoonga, from physical factors only       | 0.18               | 348                     | Wind speed            |
| Effort at Savoonga from physical factors only         | 0.25               | 348                     | Wind speed            |
| Harvest at Savoonga, from effort only                 | 0.63               | 430                     | Effort                |
| Efficiency at Savoonga, from physical factors only    | 0.15               | 197                     | Ice_5                 |
| Harvest at Savoonga, from physical factors and effort | 0.70               | 348                     | Effort                |
| Harvest at Gambell, from physical factors only        | 0.24               | 311                     | Wind speed            |
| Effort at Gambell, from physical factors only         | 0.32               | 311                     | Wind speed            |
| Harvest at Gambell, from effort only                  | 0.59               | 419                     | Effort                |
| Efficiency at Gambell, from physical factors only     | 0.22               | 201                     | Ice_5                 |
| Harvest at Gambell, from physical factors and effort  | 0.66               | 311                     | Effort                |

# What is the role, e.g., of postal subsidies?

- To Savoonga, Alaska: Flat rate, large Priority Mail box: \$18.75

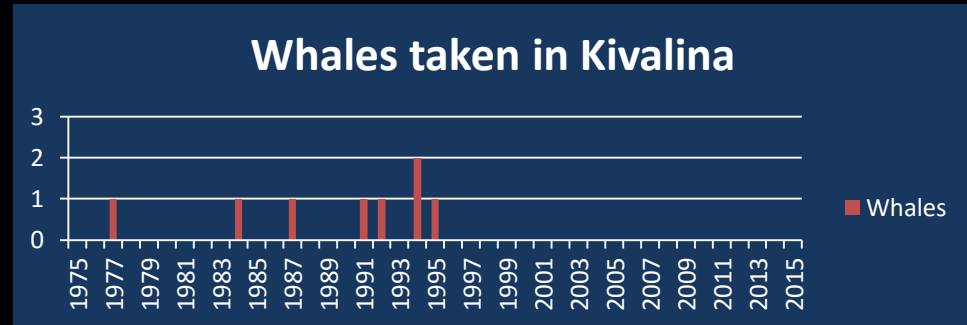
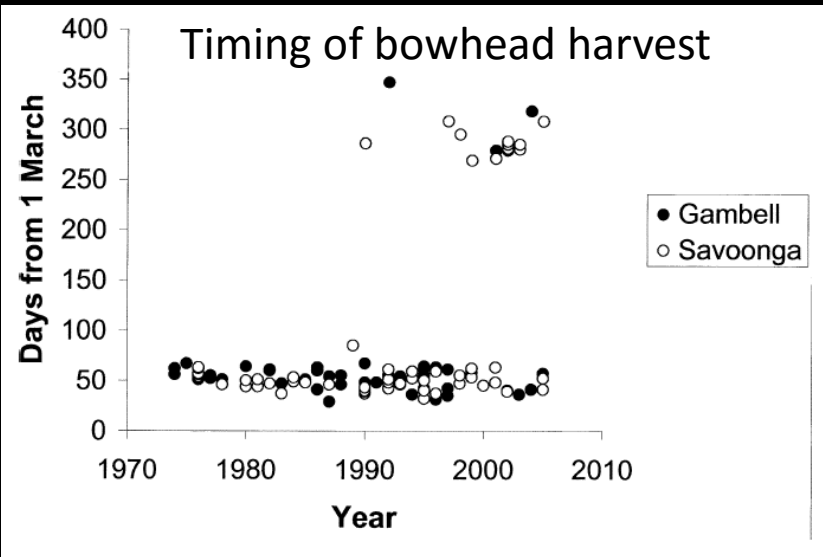
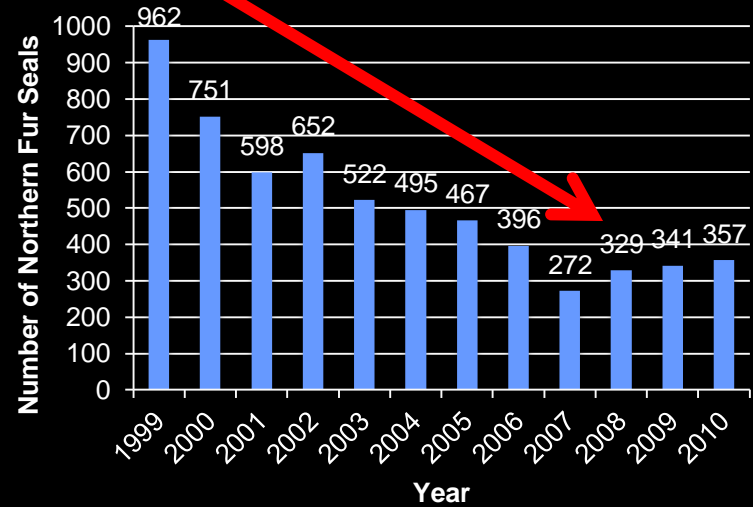
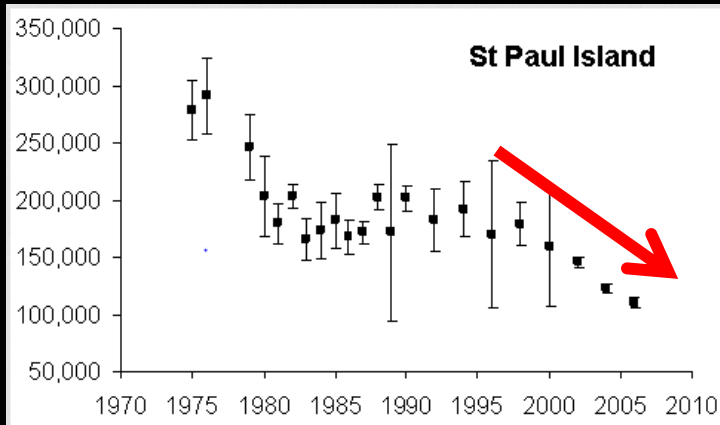


amazon **Prime**



- To Clyde River, Nunavut: 20-kg parcel, regular mail (13 days), \$140.70

# What makes for different responses to change?



Fur seal harvest data: Aleut Gov't of St. Paul Island

Fur seal data: NOAA

St. Lawrence Island whaling data: Noongwook et al. 2007, *Arctic*

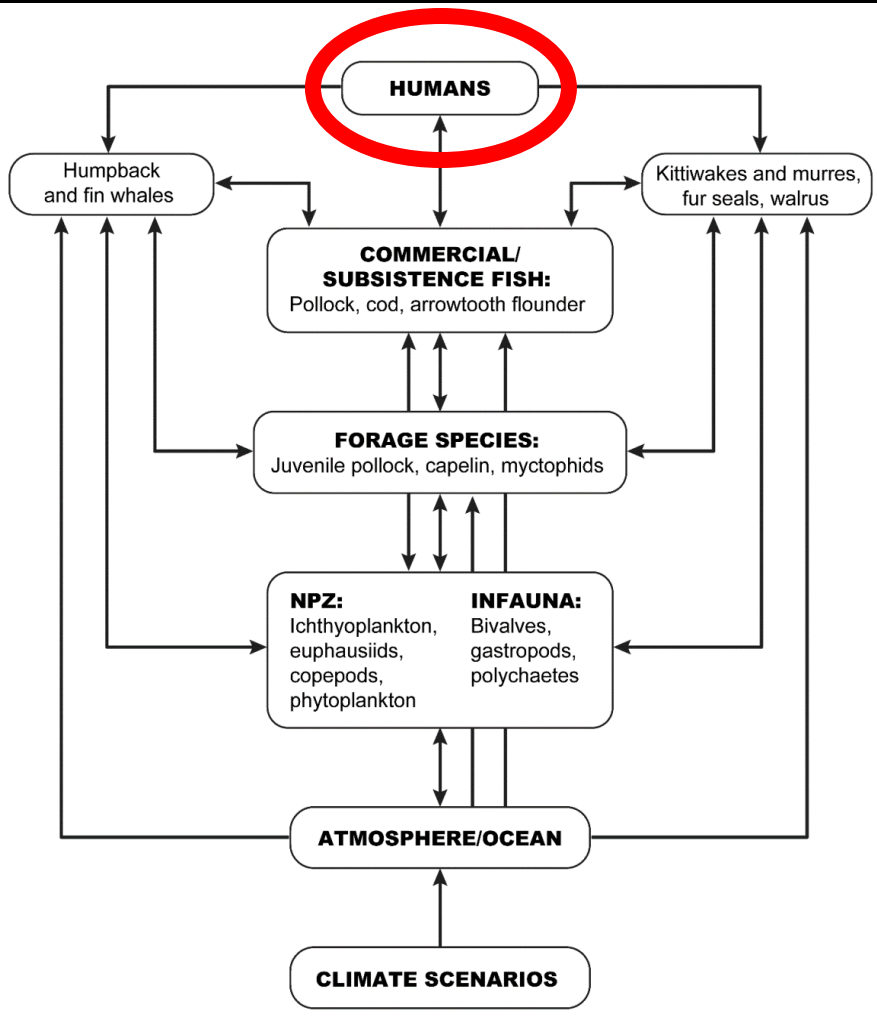
Kivalina whaling data: IWC

# Hypotheses

- Ecosystem change hasn't been that big (SNP)
- Many human-environment connections reduce the importance of changes to any single connection (SVA/KVA)
- It's not all about the ecosystem: politics, economics, society, culture, technology, etc., all play a role (SHH, TOG)

(Adapted from Haynie & Huntington, In press, Ecology & Society)

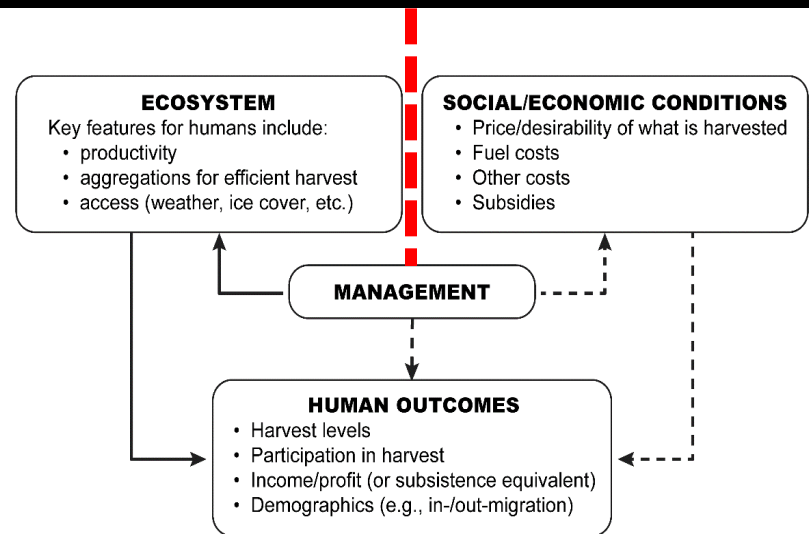




The main Bering Sea Project model

# Models

from Haynie & Huntington, In press



“Is \_\_\_\_ change bad for communities?”

- Simple vs. simplistic, BUT
- What do we ask from others?
- How do we combine insights, expertise, perspectives?
- What are the key questions, beyond the standard story?

# Many disciplines ...

| Attachment   | Alternatives  | Buffering  | Overall   |
|--|---|--|---|
| <b>Ethnography</b> to better understand individual decisions to stay in, leave, or return to a community | <b>Ethnography</b> to better understand choices, sharing of ideas and resources                               | <b>Ethnography</b> to assess awareness of buffers and how people use them  | <b>Ethnography</b> to better understand how people use the components of the system to their advantage, and also what barriers they find                |
| <b>Economics</b> to understand costs of staying put  | <b>Economics</b> to better understand the role of the informal economy, how money and labor are actually used | <b>Economics</b> to better enumerate buffers and understand the implications of their stocks and flows across the system | <b>Economics</b> to better understand the magnitude and impacts of subsidies  |
| <b>Policy studies</b> to address justice and ethics of the burdens of attachment                         | <b>Policy studies</b> to determine how innovation and adaptation can be fostered                              | <b>Policy studies</b> to assess how buffers are viewed by policy-makers, for both intended and unintended consequences   | <b>Policy studies</b> to consider implications of how the system currently works and is managed, together with ideas for how it might be managed better |
| <b>Public health studies</b> to consider health impacts of attachment                                    |   |  |   |

... but handoffs are still a problem

# The challenge for social sciences

- Moving from the specific to the general, without losing nuance
- Building towards a better collective understanding, which is different from better individual understandings
- Explaining how the “social” side of social-ecological actually functions
- Developing a new model, new paradigm
- Taking the initiative

Thank  
you!



# Thank You!

- Please join us online 27 September 9-11:30am ET for two panel presentations on Arctic Science, Education, and Citizen Empowerment:

<http://bit.ly/2bm5OPH>

- ARCUS Seminar Series recordings are online at:

<https://www.arcus.org/research-seminar-series>

- Please consider joining ARCUS as an individual member! More info:

<https://www.arcus.org/arcus/member-information>



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