Co-management of marine mammals in Beringia

Institutional analysis on Arctic subsistence

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BACKGROUND:

Anthropogenic Climate Change is dramatically and rapidly changing the Bering Sea and its coastal landscape. The Indigenous communities populated on both sides of the Bering Sea rely on the resources harvested here for subsistence.

Indigenous collaboration is vital to the success of convergence research. Indigenous contributions to adaptive management begins at understanding the current co-management governance and their institutions.

September 24, 2019

Sink hole in the permafrost along the Norton Sound coastline, south of Unalakleet, Alaska. Jerry Ivanoff from Unalakleet observed this as one of three large sinkholes that appeared along this stretch of coastline during summer 2019. Jerry Ivanoff's 22-foot boat can be seen offshore, at left, for scale. (Photo by Mwita Chacha)

METHODS

1. **Analytical Research**

   Many sources of ethnographies and access to current policies exist for the more populated areas of Alaska but grow outdated and require re-evaluation on relevance and appropriateness to current circumstances and climate. We found difficulty in acquiring thorough ethnographies on subsistence institutional governance structures in our study of populations in Russia.

2. **Fundamental Research**

   Our main objective has been compiling qualitative data to understand historical and current governance institutions. The hermeneutics assayed contribute to our understanding of Arctic identity and geopolitical transformation.

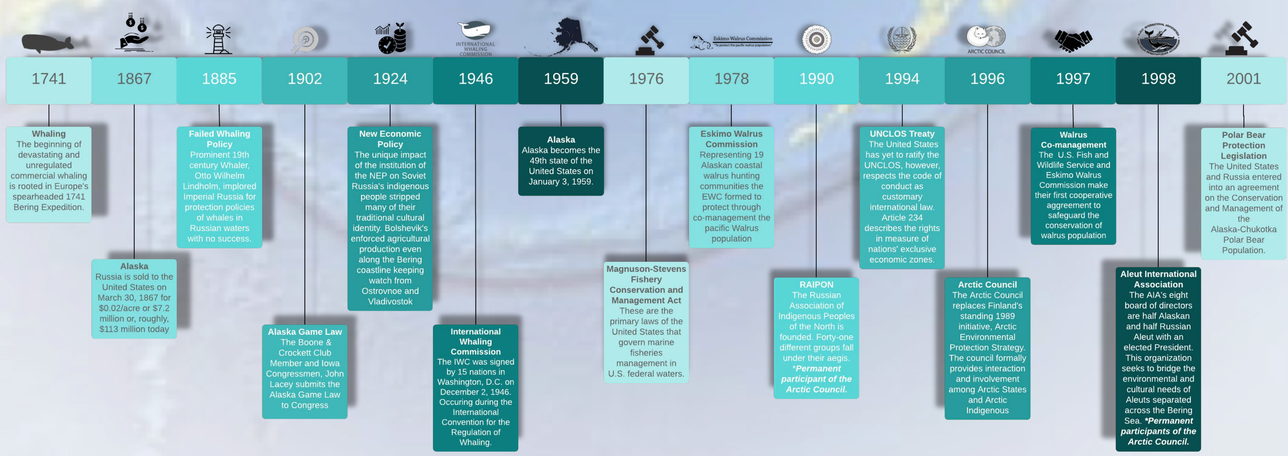
3. **Institutional Analysis**

   Through the Ostrom IAD framework we developed the current action arena understanding the power each actor has and lacks under the various challenges of Climate Change.

Climate change impacts across the Bering Sea necessitate **adaptive co-management** governance, consistent with local knowledge of local conditions.

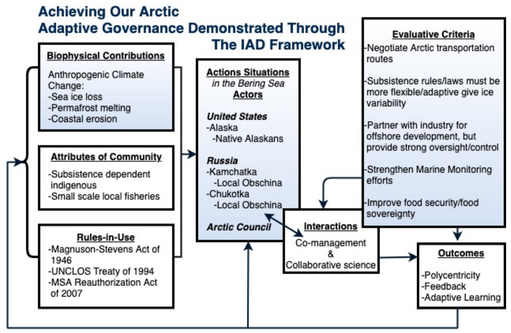
Points of Policy Convergence

18th to 21st Century Bering Sea



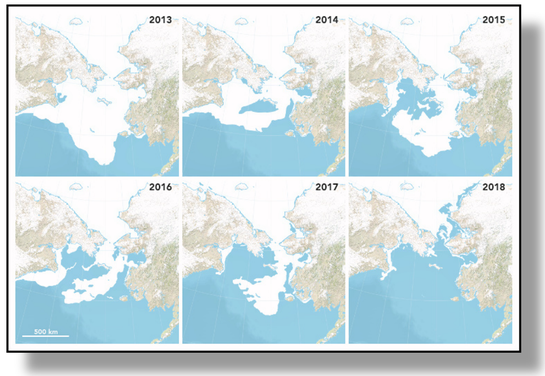
Take a picture for a 2-minute presentation

RESULTS



Sea ice extent in the Bering Sea.

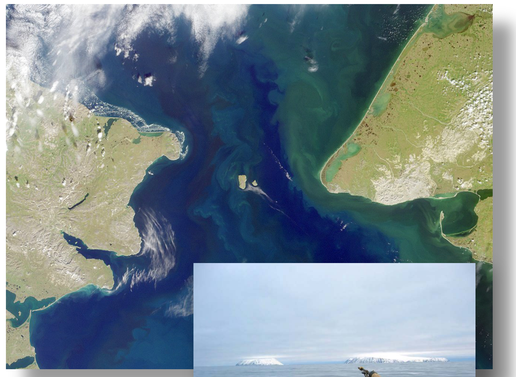
Recorded annually each April 29th. Images made through NASA's Earth Observatory using data from the National Snow and Ice Data Center. Submitted May 2, 2018.



August 18, 2000

The boundary between the US and Russia lies between Big and Little Diomede Islands, which are visible in the middle of the Bering Strait. The Artic Circle, at 66.5 degrees north latitude, runs through the Arctic Ocean in the top part of this image. This circle marks the southernmost latitude for which the Sun does not rise above the horizon on the day of the winter solstice. At the bottom of this image is St. Lawrence Island. Situated in the Bering Sea, it is part of Alaska and home to Yupik Eskimos.

Image courtesy NASA/GSFC/JPL, MISR Team.



An ocean-going umiak, made from walrus hide, heads toward Little Diomede Island. Big Diomede (Russian Federation) is on the right.

Image Credit: E. Shoolook

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Citations

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-Photo and caption of coastal erosion used "as is" from article with respect and credit to the author.

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-Image of Bering Sea Ice annual extent was modified to boost color only.

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-The aerial image of Little Diomede and Big Diomede above St. Lawrence Island in the Bering Sea taken from MISR was cropped. I used the exact words from the article for the caption.

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-The umiak image taken by E. Shoolook has been unaltered and original caption retained from article with respect for author and credit to photographer.