Implementing Indigenous Data Sovereignty at ELOKA

ARCUS Community and Citizen Science 2024

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Goals of this Presentation

- Introduce concept of Indigenous Data Sovereignty (IDS)
- Explain how ELOKA supports IDS and community data management
- Share a few examples of how to implement Indigenous Data Sovereignty at the project level

Acknowledgements

- Some of the information for this presentation is reused from a presentation co-developed by NNA-CO, ELOKA, and the Arctic Data Center and delivered at Arctic Science Summit week in 2022.
    - *The full training notes are available online:* https://learning.nceas.ucsb.edu/2022-03-assw/workshop-content.html#open-data-ethics
- This training draws on the work of the Global Indigenous Data Alliance and many researchers involved with the Collaboratory for Indigenous Data Governance
    - *We are fortunate to learn from and alongside their work*
- We acknowledge the community partners we work with for the important work they are doing to steward Indigenous knowledge
    - *We are fortunate to learn from and in collaboration with them*
- We acknowledge ELOKA's funder, the National Science Foundation (awards: PLR 2032423 and previous awards including PLR 1513438, ARC 0856634 and ARC 1231638).

Introductions

- Mum is Vanessa Haycock, and is from Brighton, England
- Dad is Alex Chavez, and is Indigenous and Chicano from Arizona
- Parents met on ferry to Alaska
- Born in England, raised in Bellingham WA
- Took the ferry to Alaska right out of high school, went back every summer 2012-2016
- Lived in St. John's, Newfoundland 2018-2020, did research in Sanikiluaq, Nunavut
- Currently in California, building out my van named Benny
- Love hiking, reading sci fic, cooking, eating (food is a love language), and dog sitting

ELOKA

Indigenous Data Sovereignty is the right of Indigenous peoples, communities, and individuals to control data about themselves, their land, communities, and nations, and to use this data to support governance of their lands, territories, and waters

Indigenous Data

- Data is any knowledge or information that is about or from Indigenous peoples, nations, and communities
- Data can be in any format
- It can be at the collective level or individual

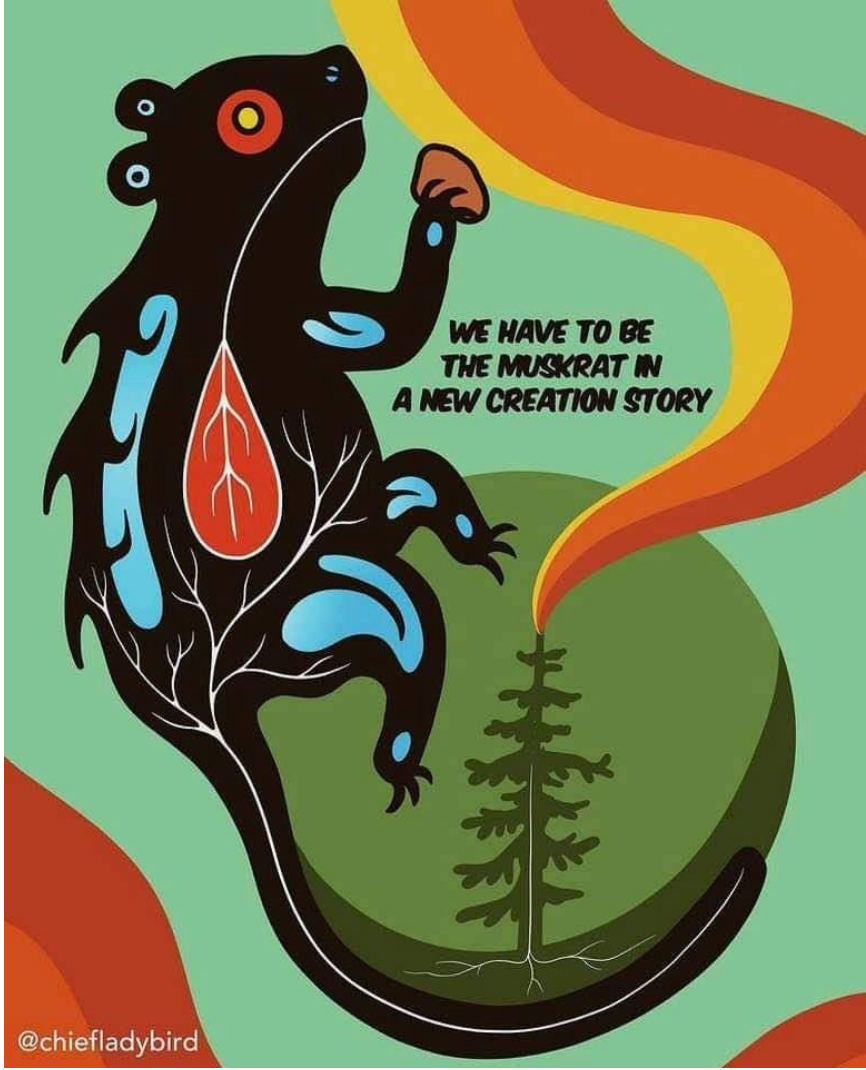
Ray Waska speaks into a recorder with Peter Moore and Mark John sitting to his side.
Credit: A Riordan

Indigenous Data Sovereignty

“Nothing about us, without us”

Knowledge holders, communities and nations have control over:

- How their data is shared
- How it is used
- Who has access to it



IDS Networks and Initiatives

- **Global Indigenous Data Alliance**
  - A global network to advocate for Indigenous Data Rights
  - Created in 2019 at the “International Law, The United Nations Declarations on the Rights of Indigenous Peoples (UNDRIP) and Indigenous Data Sovereignty” workshop
- **Collaboratory for Indigenous Data Governance**
  - The collaboratory develops research, policy and practice innovations for Indigenous Data Sovereignty
  - Based at the University of Arizona
- **International Indigenous Data Sovereignty Interest Group**
  - Seeks to create a global community to develop and adopt infrastructure that promotes data-sharing, data-driven research, and data use

Exchange for Local Observations and Knowledge of the Arctic (ELOKA)

- ELOKA…
  - Is a program at the National Snow and Ice Data Center funded through a series of NSF grants;
  - Facilitates the collection, preservation, exchange, and use of local observations and Indigenous Knowledge of the Arctic;
  - Develops digital tools for knowledge sharing in collaboration with our partners;
  - Fosters collaboration and capacity-sharing through a network of community partners;
  - Provides training to support community ownership of data and data-sharing tools.

Diving Deeper into ELOKA Data Services at NSIDC

NSIDC PROVIDES A PLATFORM TO STORE AND DISTRIBUTE ELOKA DATA

Where are ELOKA data hosted?

ELOKA servers are hosted on NSIDC infrastructure & managed by ELOKA staff.

NSIDC hosts ELOKA web applications for community-gathered data.

How are ELOKA data secured?

Publicly available data are read-only by external users.

Access to data is controlled by tightly regulated Access Control Lists (ACLs); data are managed by approved staff & users.

The entirety of the ELOKA infrastructure is backed up daily using an internal tape library.

The University of Colorado further supports NSIDC through high-speed network access & additional security like firewalls to minimize malicious activity.

How are ELOKA data findable?

The ELOKA data catalog is available and searchable through both the ELOKA and NSIDC websites.

NSIDC staff support the ELOKA website and its data products.

Implementing data sovereignty at ELOKA

Building long-term partnerships/relationships

- Education, training & capacity-sharing
  - Teaching project staff and community members how to use/add to atlases and databases
  - Opportunities for exchange and shared learning (working groups & partner meetings)

- Responsive to changing needs of partner/community
  - “Agile” software development
    - Tailored to specific requirements of partner
    - Adapt or enhance tool based on changing needs

Implementing data sovereignty at ELOKA

Data and data sharing tools belong to our partners/communities

- Data hosted at NSIDC can be returned at any time by request
- Data sharing tools (atlases, databases) are open source and can be moved to a partner/local server at any time

How can data/tools be returned to community?

What is needed:

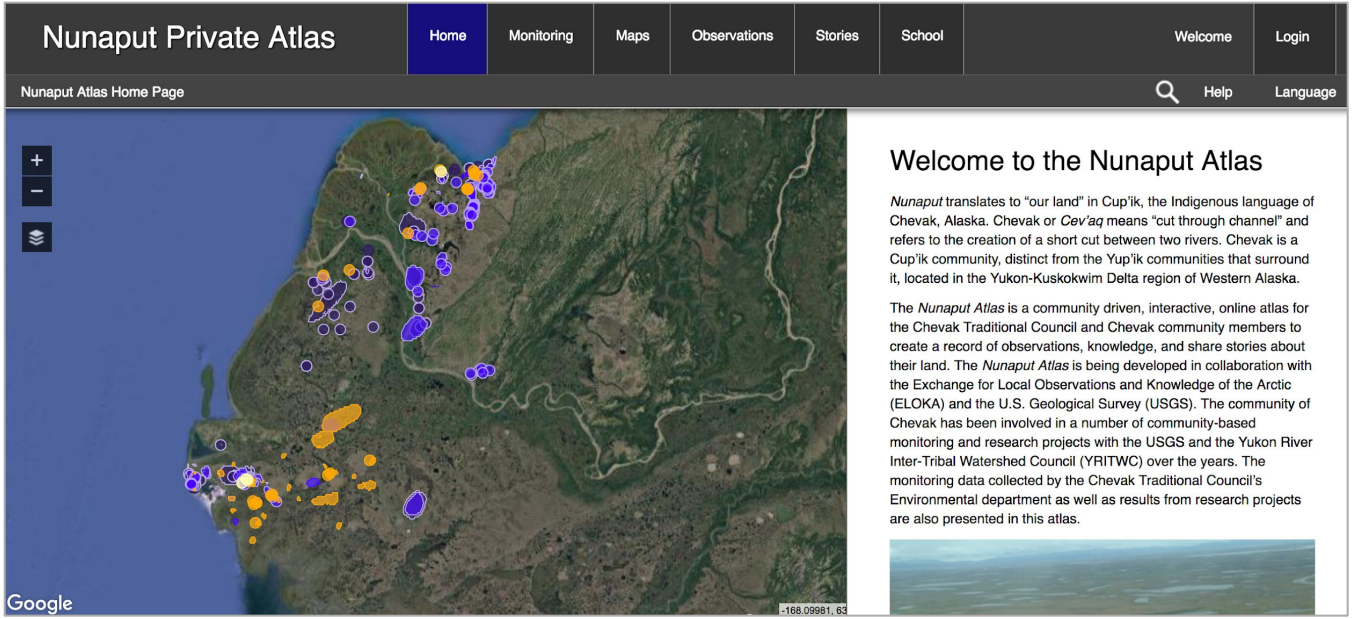
- Local server & expertise to maintain it (backup, prevent unauthorized access)
- Software development expertise (to maintain/upgrade software)

ELOKA team would provide support /training to help

Implementing data sovereignty at ELOKA

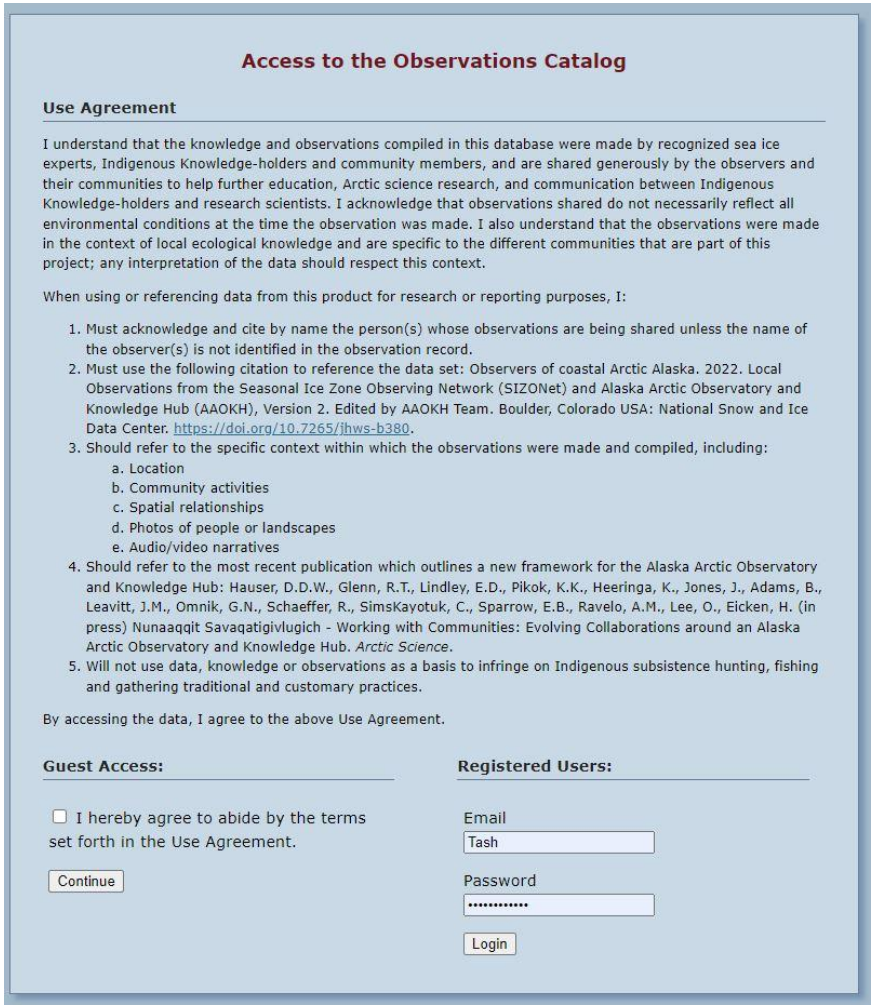
Work with partners to identify and protect sensitive data

- Ability to create “tiered” access through password protection, public and private versions of data sharing tools



Implementing data sovereignty at ELOKA

Support partner development of data use agreement, citation and relevant metadata (context)



Access to the Observations Catalog

Use Agreement

I understand that the knowledge and observations compiled in this database were made by recognized sea ice experts, Indigenous Knowledge-holders and community members, and are shared generously by the observers and their communities to help further education, Arctic science research, and communication between Indigenous Knowledge-holders and research scientists. I acknowledge that observations shared do not necessarily reflect all environmental conditions at the time the observation was made. I also understand that the observations were made in the context of local ecological knowledge and are specific to the different communities that are part of this project; any interpretation of the data should respect this context.

When using or referencing data from this product for research or reporting purposes, I:

1. Must acknowledge and cite by name the person(s) whose observations are being shared unless the name of the observer(s) is not identified in the observation record.
2. Must use the following citation to reference the data set: Observers of coastal Arctic Alaska. 2022. Local Observations from the Seasonal Ice Zone Observing Network (SIZONet) and Alaska Arctic Observatory and Knowledge Hub (AAOKH), Version 2. Edited by AAOKH Team. Boulder, Colorado USA: National Snow and Ice Data Center. https://doi.org/10.7265/jhws-b380.
3. Should refer to the specific context within which the observations were made and compiled, including:
    a. Location
    b. Community activities
    c. Spatial relationships
    d. Photos of people or landscapes
    e. Audio/video narratives
4. Should refer to the most recent publication which outlines a new framework for the Alaska Arctic Observatory and Knowledge Hub: Hauser, D.D.W., Glenn, R.T., Lindley, E.D., Pikok, K.K., Heeringa, K., Jones, J., Adams, B., Leavitt, J.M., Omnik, G.N., Schaeffer, R., SimsKayotuk, C., Sparrow, E.B., Ravelo, A.M., Lee, O., Eicken, H. (in press) Nunaaqqit Savaqatigivlugich - Working with Communities: Evolving Collaborations around an Alaska Arctic Observatory and Knowledge Hub. *Arctic Science*.
5. Will not use data, knowledge or observations as a basis to infringe on Indigenous subsistence hunting, fishing and gathering traditional and customary practices.

By accessing the data, I agree to the above Use Agreement.

Guest Access:

☐ I hereby agree to abide by the terms set forth in the Use Agreement.

Continue

Registered Users:

Email

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Login

General tools/approaches for IDS (project level)

1. Relationship building – support for maintaining relationship of individuals and communities to their knowledge
2. Memorandum of Understanding
3. Data use and sharing agreements
4. Development of good metadata and other ways to share context
5. Identify community priorities for data use and make sure that products and tools developed through the project support those priorities
6. Include training and support capacity
    a. Infrastructure access
    b. Data access – availability, format

http://www.eloka-arctic.org

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ELOKA thanks the community members and organizational partners who have contributed their time and knowledge as partners in this work.

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NSIDC CIRES University of Colorado **Boulder** NSF ELOKA