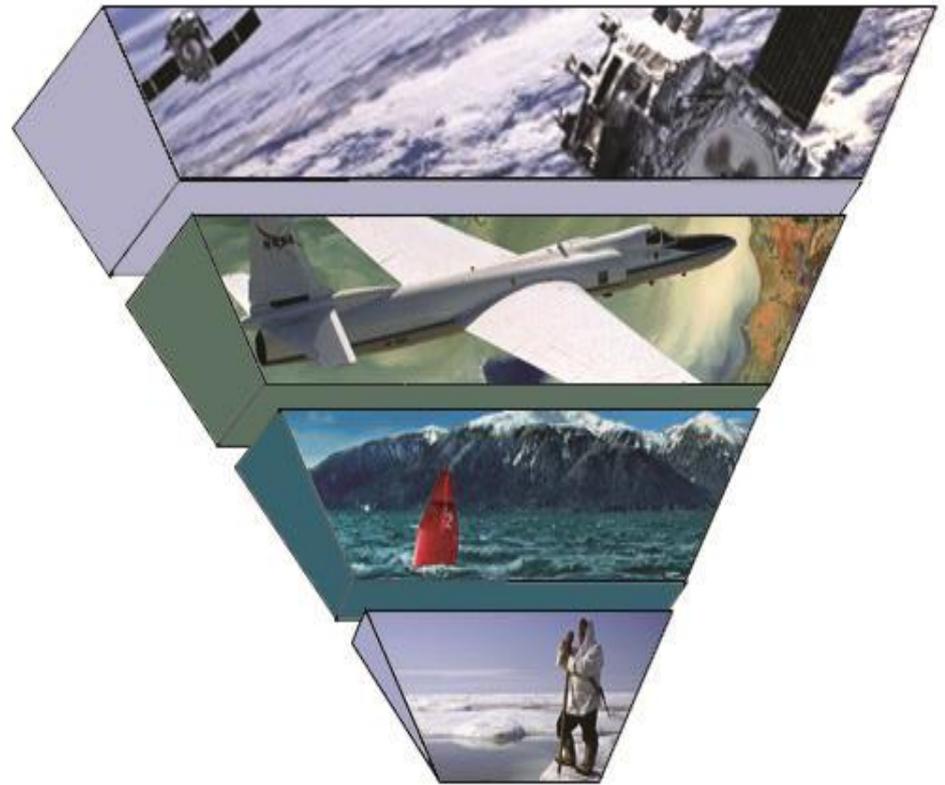


Why CBONS? Place Not Race!

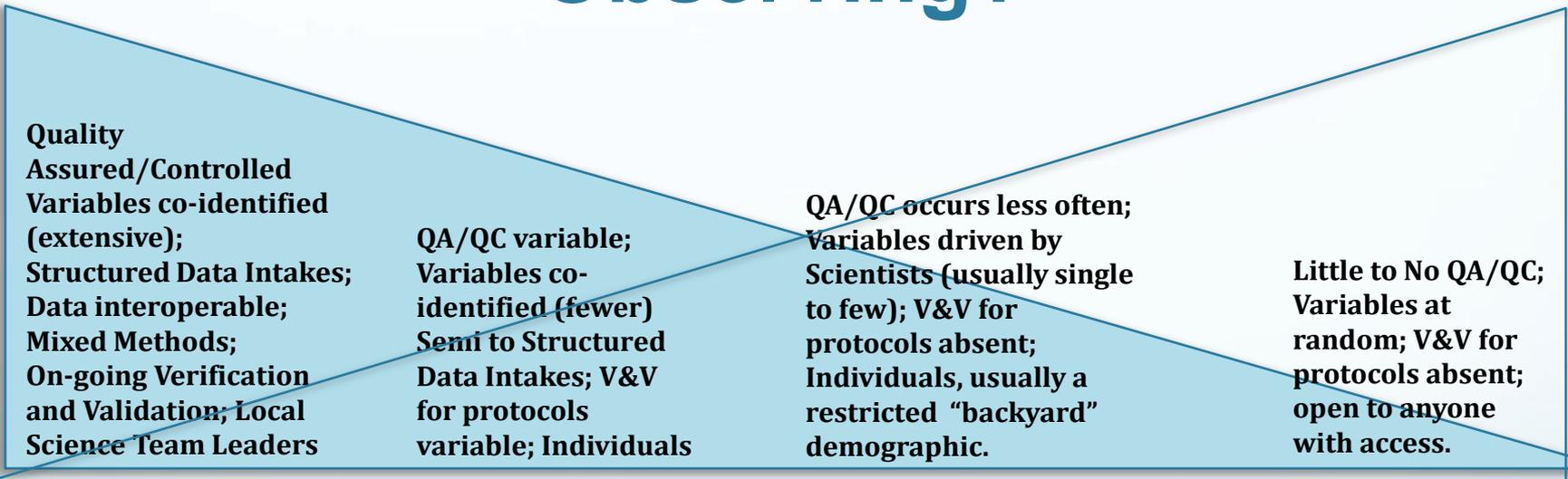


- **Systematic, long term (series) of observations using reproducible, standardized collection methods;**
- **Local science teams work as partners with Academic/Gov't science teams to form a SSC.**
- **Rigorous methods to co-identify and monitor meaningful indicators that can be used to guide adaptation and responses on the ground.**

What is Community Based Observing?

Data Interoperability/Authoritativeness

Accessibility



CBONS

CBM

Citizen Science

Observer Blogs

Quality Assured/Controlled Variables co-identified (extensive); Structured Data Intakes; Data interoperable; Mixed Methods; On-going Verification and Validation; Local Science Team Leaders

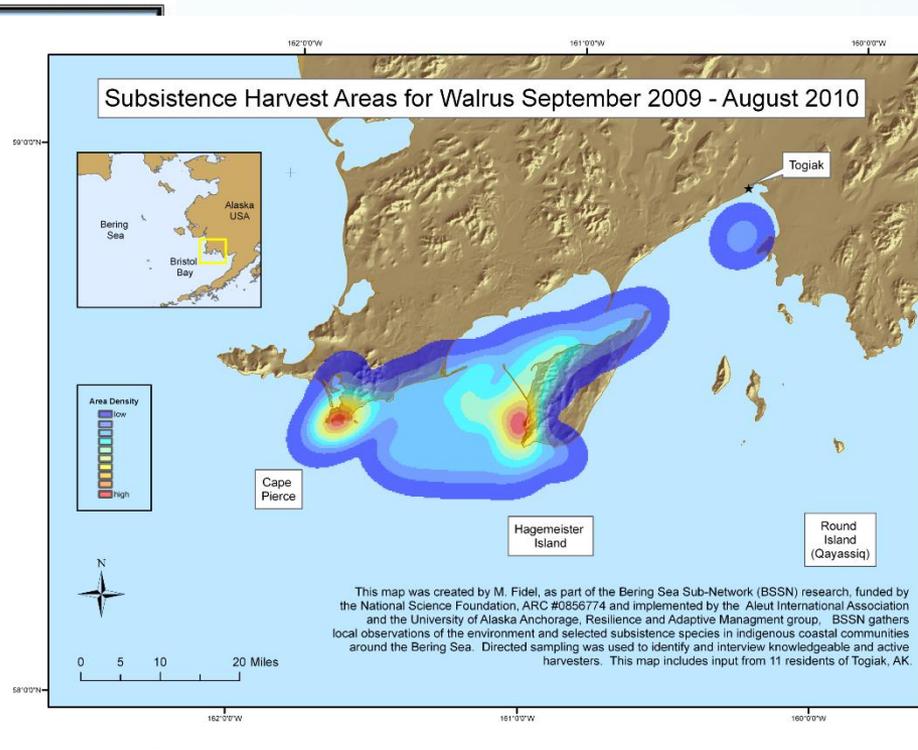
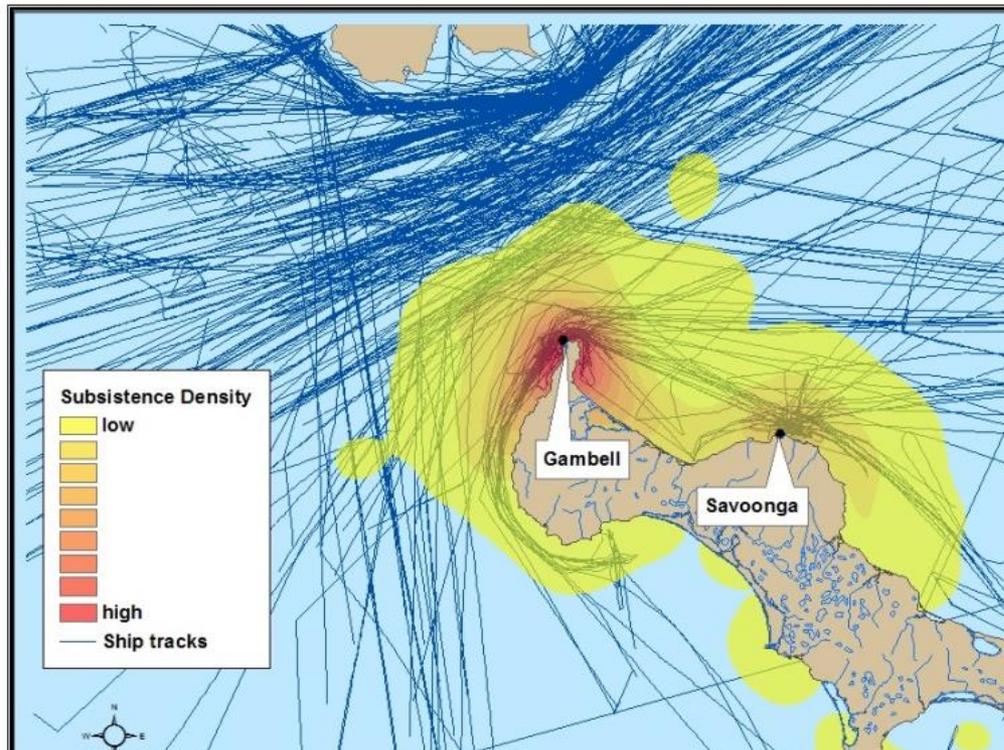
QA/QC variable; Variables co-identified (fewer) Semi to Structured Data Intakes; V&V for protocols variable; Individuals

QA/QC occurs less often; Variables driven by Scientists (usually single to few); V&V for protocols absent; Individuals, usually a restricted "backyard" demographic.

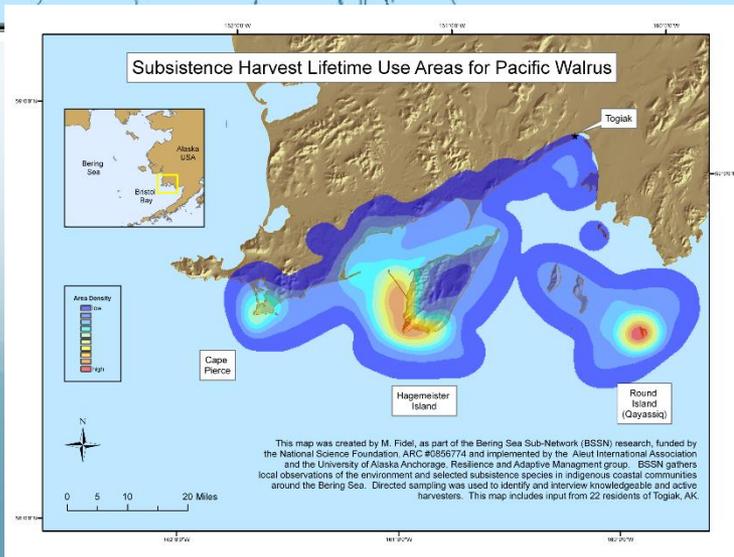
Little to No QA/QC; Variables at random; V&V for protocols absent; open to anyone with access.

Building a Science of CBO

- **Methods and outcomes from CBO and CBONS help us develop a Science of Community Based Observing;**
- **Allows us to better translate data to decisions, because context is powerful.**
- **White Paper proposing a permanent CBO sub-group within CON has advanced through the Arctic Executive Steering Committee (White House).**
- **Allows us to harmonize methods and hence, data interoperability across Nations while respecting local cultures and practices.**



This map was created by M. Fidel, as part of the Bering Sea Sub-Network (BSSN) research, funded by the National Science Foundation, ARC #0856774 and implemented by the Aleut International Association and the University of Alaska Anchorage, Resilience and Adaptive Management group. BSSN gathers local observations of the environment and selected subsistence species in indigenous coastal communities around the Bering Sea. Directed sampling was used to identify and interview knowledgeable and active harvesters. This map includes input from 11 residents of Togiak, AK.



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The screenshot shows the AOS Arctic Data Integration Portal interface. At the top, there is a search bar and navigation options like 'Catalog', 'Portal', and 'Layers'. The main map area displays a grid of hexagonal cells representing harvest effort, with a color scale from dark red to light red. A 'Legend' panel on the right is titled 'Subsistence Harvest Efforts' and includes filters for 'Climatology' (set to Autumn), 'Species' (set to Bowhead Whale), 'Village' (set to All), and a 'Polygon tool' checkbox. Below the legend, it identifies the data as 'Arctic Marine Shipping Assessment U.S. Alaskan Arctic Shipping Routes'. At the bottom, a 'Time control' bar allows for navigating through a timeline from 2009 to 2013.

CBONS

- **Enormous effort on “resilience” and “adaptation” but few tangible pathways to convert data to action.**
- **CBONS offer a systematic set of observations which are interoperable with other instrumented networks.**
- **CBONS allow information to be placed in a local and regional societal context. From this we can derive critical indicators.**
- **Indicators are a globally applied approach to guiding successful adaptation and avoiding harm.**
- **Indicators, in turn, help guide which variables are monitored at different scales.**
 - **What are we observing and why?**