



Bottom-up approaches to building social-ecological resilience in Arctic Marine Ecosystems

The Open Water Season Conflict Avoidance Agreement and the Arctic Waterways Safety Plan

Martin Robards – Wildlife Conservation Society, Fairbanks, Alaska.

Jessica Lefevre – Legal Counsel, Alaska Eskimo Whaling Commission. Washington DC.

Willie Goodwin – Chair Arctic Waterways Safety Committee. Kotzebue, Alaska.

Harry Brower Jr. – Alaska Eskimo Whaling Commission. Barrow, Alaska.

Working in a Social-Ecological Resilience Context?

- The ability to maintain a social-ecological **relationship** in the face of **change**
 - What is that relationship?
 - What is change?





Photo: Peak 3/AEWC



Alaska Business

September 2013

MONTHLY

\$3.95

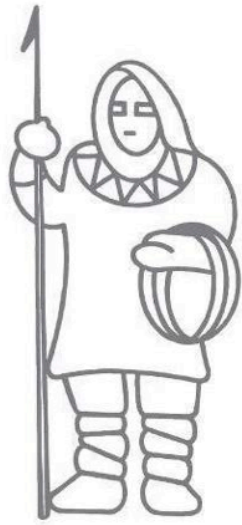
Alaska Native Regional Corporations

An economic powerhouse for Alaska

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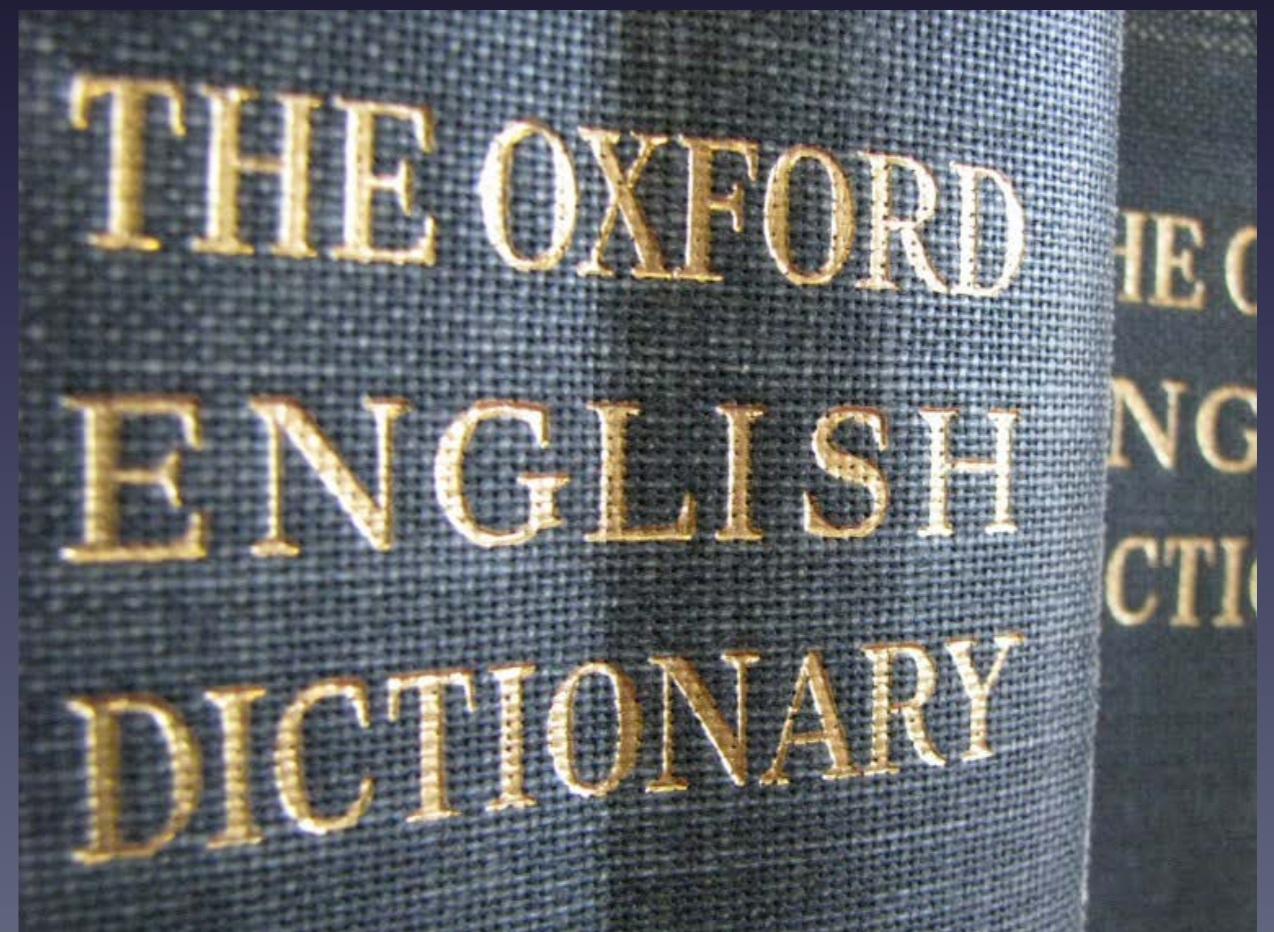


DEVELOPMENT CORPORATION



Thinking about Change

- *To Make or become different*
- *To Take or use another instead of*



June 21, 2012



July 13, 2013



Gambell Meat
Drying Rack





Changes bring ...

- Chronic and Acute Noise
- Physical Disturbance
- New Industries
- New Visitors
- New Community of Species
- Pollution
- Opportunities



Food and
Economic
Security

Conflicts and Opportunities Addressed through Governance

Environmental governance refers “to the set of regulatory processes, mechanisms and organizations through which **political actors** influence environmental actions and outcomes”

Governance at the National and International Levels



Political Actors

Includes the actions of the state and, **in addition**, encompasses actors such as communities, businesses, and NGOs...

Case Studies

1. Open Water Season Conflict Avoidance Agreement
2. Arctic Waterways Safety Plan



Marine Mammal
Hunters bringing
Traditional Ecological
Knowledge and the
Native Voice to Arctic
Governance

The Open Water Season Conflict Avoidance Agreement (CAA)

- Individual hunter or individual village voices can get lost in governance deliberations;
- Voices are strongest when all villages speak together;
- Builds on a history of speaking together on the bowhead whale subsistence quota.

Creating a Common Voice from Individual Concerns

- During the annual CAA meeting, 11 villages each send 3 representatives to meet in Barrow with representatives of the oil and gas industry;
- Meetings are facilitated by AEWC Commissioners, staff, and legal counsel.

The Village-by-Village Approach

- At the annual CAA meeting, the year's offshore oil and gas exploration plans are presented;
- Representatives of each village caucus and decide:
 - what concerns they have about possible impacts,
 - what mitigation measures they need.

One Common Position

- Measures are set out in the CAA, which covers all planned offshore development activities for each year, along with measures to protect subsistence;
- The AEWC Chairman, all villages, and the offshore operators sign the CAA, providing a predictable environment for all parties.

Key Mitigation Measures

I. Communication Centers

Kaktovik

Deadhorse

Barrow

Wainwright

Pt Lay

Pt Hope

Wales

Kivalina

St. Lawrence Is.

Key Measures (cont)

2. Time-Area Closures: mitigate seismic and drilling interference at hunting times.

3. Vessel Movement Restrictions: mitigate risk to whales:

- less than 10 kts near feeding whales or aggregations,
- less than 5 kts within 900 feet of whales.

4. Discharge Limitations: mitigate pollution risks.

ARCTIC WATERWAYS SAFETY PLAN



ARCTIC WATERWAYS
SAFETY COMMITTEE



Published 2015

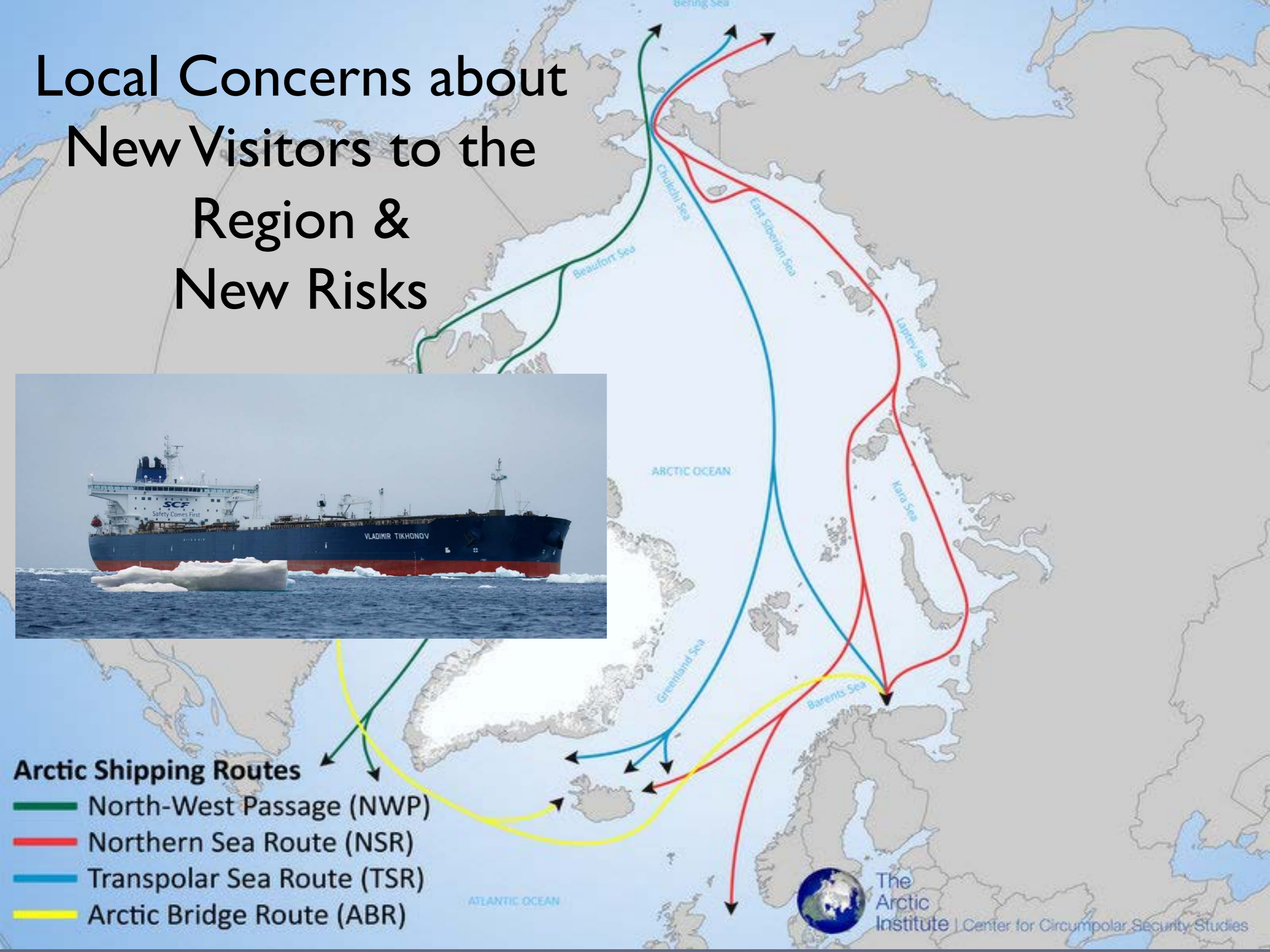
The Role of a Safety Committee



COMMUNICATION + COLLABORATION + COMMITMENT = SUCCESS



Local Concerns about New Visitors to the Region & New Risks



- Arctic Shipping Routes**
- North-West Passage (NWP)
 - Northern Sea Route (NSR)
 - Transpolar Sea Route (TSR)
 - Arctic Bridge Route (ABR)



History of AMMC and AWSC



- March 2012 Anchorage AMMC (*)
- August 2014 Anchorage AWSC
- November 2014 Juneau “
- February 2015 Juneau “
- June 2015 Anchorage “
- December 2015 Anchorage “
- March 2016 Juneau “



ARCTIC WATERWAYS
SAFETY COMMITTEE

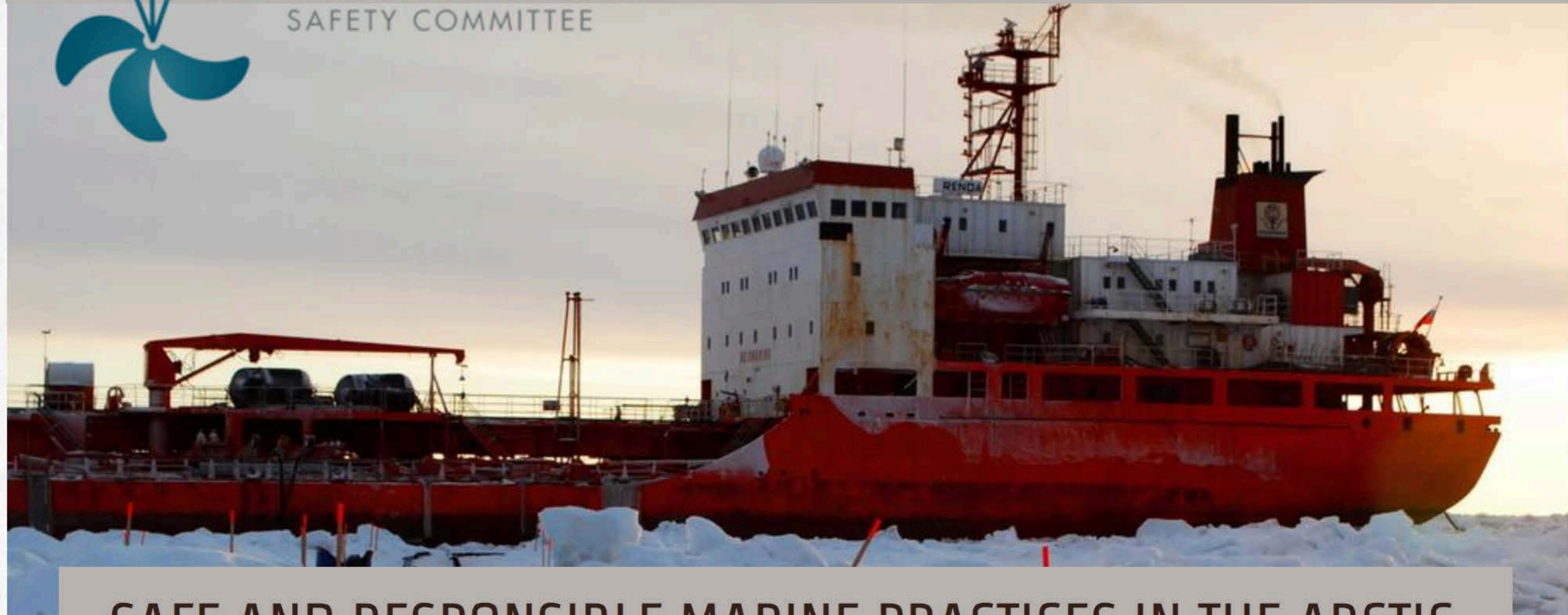
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SAFE AND RESPONSIBLE MARINE PRACTICES IN THE ARCTIC

The purpose of the Arctic Waterways Safety Committee is to bring together local marine interests in the Alaskan Arctic in a single forum, and to act collectively on behalf of those interests to develop best practices to ensure a safe, efficient, and predictable operating environment for all current and future users of the waterways.



ARCTIC WATERWAYS
SAFETY COMMITTEE

Organizational Structure

Officers

Willie Goodwin <i>Chairman</i>	James Boyer <i>Vice Chair</i>	Jack Omelak <i>Treasurer</i>	Wendie Schaeffer <i>Secretary</i>
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Subsistence Hunters

Willie Goodwin <i>Alaska Beluga Whale Committee</i>
Harry Brower *George Noongwook <i>Alaska Eskimo Whaling Commission</i>
John Goodwin <i>Alaska Ice Seal Committee</i>
Jack Omelak *Charles Brower <i>Alaska Nanuuq Commission</i>
Vera Metcalf *Charles Brower <i>Eskimo Walrus Commission</i>

Industry

David George, Shell <i>Oil and Gas</i>
Greg Pavellas, Crowley Jim Dwight, Bowhead <i>Tug & Barge</i>
TBD <i>Regional Economic Development</i>
TBD <i>Commercial Fishing</i>
TBD <i>Tourism</i>

Other

Mayor Denise Michels <i>City of Nome</i>
Wendie Schaeffer <i>Northwest Arctic Borough</i>
Paul Fuhs <i>North Slope Borough</i>
Austin Ahmasuk, Kawerak <i>Regional Tribal Organization</i>
James Boyer <i>Alaska Marine Pilots</i>

Executive Secretary

Jenny Evans

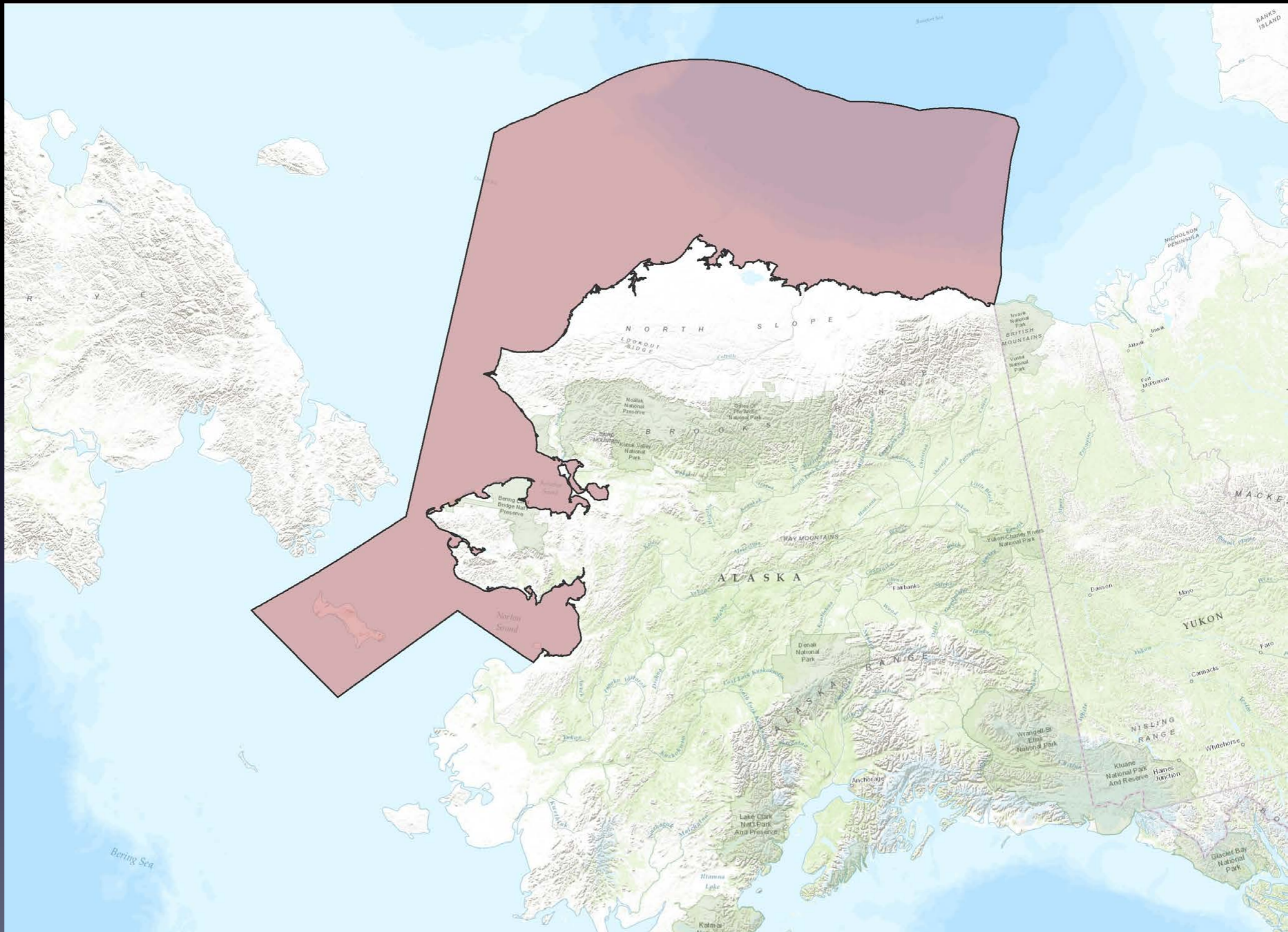
Sub-Committees & Chairmanship

Subsistence: Harry Brower, Jr.
Standards of Lightering and Barge Operations: Jim Dwight & Greg Pavellas
Science: Dr. Martin Robards Infrastructure: Paul Fuhs & Denise Michels

Ex-Officio Observers

David Pikul, <i>State of Alaska</i> ; Capt. Ed Page, <i>Marine Exchange of Alaska</i> ; CDR Hector Cintron, <i>U.S. Coast Guard, Sector Anchorage</i> ; Dr. Martin Robards, <i>Science/NGO</i> ; Bob Poe, <i>University of Alaska</i> ; OSRO/Marine Salvage
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* Alternates



BANKS ISLAND

NICHOLSON PENINSULA

NORTH SLOPE

LOOKOUT RIDGE

Ivuk National Park
BRITISH MOUNTAINS
Yukon National Park

Brooks

Bering Sea
Bering Bridge Nat Preserve

ALASKA

WAY MOUNTAINS

Yukon-Charley Rivers National Park

MACKENZIE

YUKON

Denali National Park

Range

NISLING RANGE

Wrangell-St. Elias National Park

Kluane National Park And Reserve

Glacier Bay National Park

Bering Sea

Lake Clark Nat Park And Preserve

Iliamna Lake

Katmai

Haines Junction

Whitehorse

Carmacks

Dawson

Mayo

Faro

Imuk

Fort McPherson

Anchorage

Noatak National Preserve

Koonak Valley National Park

Shiprock National Monument

Shesha National Park

Chukchi Mountains

Yukon-Charley Rivers National Park

Denali National Park

Wrangell-St. Elias National Park

Kluane National Park And Reserve

Glacier Bay National Park

Yukon-Charley Rivers National Park

Denali National Park

Wrangell-St. Elias National Park

Kluane National Park And Reserve

Glacier Bay National Park

Yukon-Charley Rivers National Park

Denali National Park

Wrangell-St. Elias National Park

Kluane National Park And Reserve

Glacier Bay National Park

Standards of Care

- Procedures and practices, beyond regulatory requirements, that experienced and prudent maritime professionals follow to ensure safe, secure, efficient and environmentally responsible maritime operations;
- ...are “good marine practices” that are developed and published to provide a guide for maritime professionals to consider and incorporate into their decision making process;
- Mariners should be mindful that if they are involved in a maritime incident when not following relevant “Standards of Care” they could be subject to legal action based on a rebuttable presumption of negligence.

AWSC's Standards of Care (in preparation)

- Research Vessel Activities (Progress for 2016 Season)
- Maritime Tourism (Issues in 2016 Season)
- Activities Proximal to Marine Mammals
- Maritime Insurance

Arctic Waterways Safety Plan and the Polar Code

Within the Polar Code, vessel captains are required to:
“minimize threats to marine mammals and indigenous
subsistence hunters by avoiding no-go areas.”



Conclusions

- **Begin all discussions in collaboration with local communities;**
- Set clear goals and objectives for reaching consensus;
- **Recognize that boundaries among the health of the physical environment, wildlife, and human communities are seamless;**
- Embrace the significant length of time required to engage in a meaningful process (>30 years for CAA, >5 years for AWSC);
- **Value the informal and dynamic processes of problem solving that can ultimately support more formal laws and policies.**
- Be creative with funding!

Questions?

