IUCN/NRDC/UAF

Workshop to identify several viable options for the protection of Ecologically and Biologically Significant Areas (EBSAs) from the possible negative effects of shipping and other maritime activities in the Bering Strait Region

Workshop Report

June 26-28, 2012

Nome, Alaska, USA

Supported by:

J.M. KAPLAN FUND

MacArthur Foundation

OAK FOUNDATION

Workshop Report

Prepared by Thomas L. Laughlin, Lisa Speer and Lawson W. Brigham

September, 2012

The authors would like to thank the following individuals for their valuable contributions and assistance: Martha McConnell, Dorothée Herr, all the workshop participants and report reviewers.

IUCN, NRDC and UAF would like to thank the J.M. Kaplan Fund, the John D. and Catherine T. MacArthur Foundation and the Oak Foundation for their generous support for this project.

Photo credit: NASA

Table of Contents

1. Introduction

1.1 IUCN/NRDC/UAF Project on Expanded Shipping and Other Marine Activities and the Ecology of the Bering Strait Region

Warming ocean temperature and the dramatic loss of ice cover is opening Arctic waters to new and expanded shipping, fishing, research, offshore oil development, and other economic activities. Trans-Arctic and "destinational" [1] shipping will likely grow substantially in number as summer sea ice continues to retreat and Arctic economic activity accelerates. All trans-Arctic and much destinational shipping will necessarily transit the Bering Strait, a relatively narrow 53 mile wide passage which provides the only connection between the Pacific and Arctic Oceans.

A workshop[2] held in November 2010, organized by the International Union for Conservation of Nature (IUCN) and the Natural Resources Defense Council (NRDC), identified four "super-EBSAs" (Ecologically or Biologically Significant Areas)[3] in the Bering Strait region using criteria developed under the auspices of the Convention on Biological Diversity (CBD). The workshop identified the Bering Strait region as perhaps the single most productive and diverse marine area in the Arctic. The region provides critical habitat for walrus, seals, fish, several types of whales, and immense numbers of birds. It has an ancient human history and an enduring cultural heritage significance for all, especially the indigenous peoples who live there. This regional indigenous culture and its subsistence hunting and fishing traditions continue to be vibrant today.

In March 2012, an international group of experts working under the auspices of the Arctic Council Working Group on Protection of the Arctic Marine Environment (PAME) completed a draft report identifying Arctic areas of heightened ecological significance. The report was prepared pursuant to Recommendation IIC of the Arctic Council Arctic Marine Shipping Assessment (AMSA). That report similarly identified the Bering Strait region as globally significant for a number of species, as did the Arctic Marine Synthesis report prepared by Audubon Alaska and Oceana.[4]

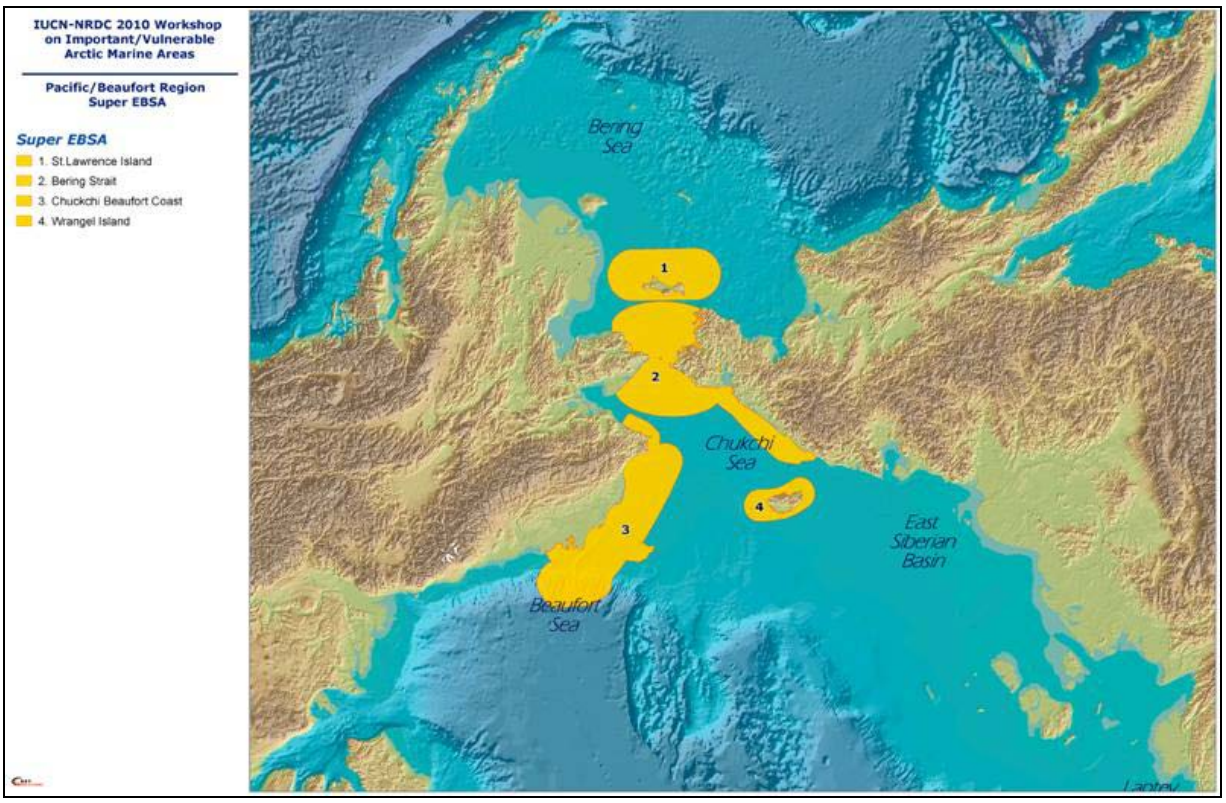
A depiction of the Bering Strait and areas adjacent to the north and south may be seen in the IUCN/NRDC "super EBSA" map, below.

[1] Shipping that supports human activity in the Arctic

[2] Workshop report can be downloaded at http://data.iucn.org/dbtw-wpd/edocs/Rep-2011-001.pdf.

[3] The workshop defined "super-EBSA" as an area meeting six or seven of the seven CBD EBSA criteria.

[4] Smith, M.A., 2010. Arctic Marine Synthesis: Atlas of the Chukchi and Beaufort Seas. Audubon Alaska and Oceana: Anchorage.



Map 1: Super EBSAs in the Pacific/Beaufort Region

IUCN, NRDC and the University of Alaska-Fairbanks (UAF) are undertaking a cooperative project to identify measures that could be adopted to protect the EBSAs of the Bering Strait region, and to explore ways in which such measures might be implemented.

1.2 Project Methodology

The project involves two workshops. The first workshop, held 26-28 June 2012 in Nome, Alaska, included 35 local, governmental, scientific, indigenous and environmental experts. Following introductory presentations, the workshop focused on identification of a range of potential measures to manage and protect important areas. The meeting agenda and list of participants are attached as annexes to this report. Views expressed at the workshop were not for attribution. This report reflects a meeting summary prepared by IUCN/NRDC/UAF. Although workshop participants had the opportunity to review and comment on a draft report, the final report does not necessarily reflect the views of individual participants.

A second workshop, to be held in the fall of 2012, will focus on the most effective means of implementing the measures identified.

2. Background

2.1 Ecological Characteristics of the Bering Strait Super EBSAs

The geographical focus of the meeting was on three of the super EBSAs of the Bering Strait region: St. Lawrence Island; The Bering Strait and Wrangel Island. The outstanding ecological characteristics of these three areas identified by participants at the November, 2010 workshop report are set forth below.

1. *St. Lawrence Island:* The polynyas south of St. Lawrence Island likely support nearly the total world population of Spectacle eiders for six months of each year. The polynyas also provide key habitat for Alcids, Kittiwakes, Shearwaters, overwintering Pacific walrus, bowhead whales, ice seals and polar bears, and are an important subsistence hunting area. This area is partially protected by the Saint Lawrence Island Habitat Conservation Area.

2. *Bering Strait*: This area met all CBD criteria, as it exhibits the highest levels of productivity and diversity in the Arctic. This narrow strait is the only connection between the Pacific and Arctic Oceans, making it a hotspot of global significance. The Bering Strait/Anadyr Current region provides key breeding, pupping, feeding, and/or migratory habitat for many species of marine mammals, including bearded, ringed and spotted seals; Pacific walrus; gray, bowhead, and beluga whales, all of which pass through the Strait twice per year when migrating between the Bering and Chukchi Seas. Arctic cod (*Boreogadus saida)* and other species of forage fishes are abundant and important to many marine predators, and the region supports populations of whitefishes and char which are important seasonally for native community subsistence. The region also supports immense numbers of seabirds during most of the year for breeding, migration, and/or foraging, including Least and Crested auklets; Tufted and Horned puffins, Black-legged kittiwakes; Short-tailed shearwaters, Spectacled and King eiders, Thick-billed and Common murres; Ivory and Ross's gulls; Black guillemot, and at least 30 additional, abundant species of seabirds, sea ducks, geese, loons and phalaropes; and the only nesting sites of Little auks, which are endemic to the Northwest Atlantic, in the Western Arctic.

3. *Wrangel Island*: The polynyas, leads and coastal waters around Wrangel Island provide important spring and summer feeding habitat for polar bears, migratory and feeding habitat for Pacific walrus, and breeding and feeding habitat for extensive seabird colonies including Thick-billed and Common murres, Black-legged kittiwakes, Horned puffins and Black guillemots.

   Wrangel Island is one of the three most important biological areas of Russian Beringia. It was established as a Regional Wildlife Reserve in 1960 and as a Republic Wildlife Reserve in 1968. In 1976, the island was designated as a State Strict Nature Reserve (Zapovednik).

   Twelve nautical miles of the marine area around the island were included in the Wrangel Island State Nature Reserve in 1997, adding 1.4 million hectacres to the Reserve. This was supplemented in 1999 with the addition of a 24 nautical mile buffer zone. In 2004, the area

(without the buffer zone) was designated as a World Heritage Site. In 2009, the buffer zone was abolished by the regional government.

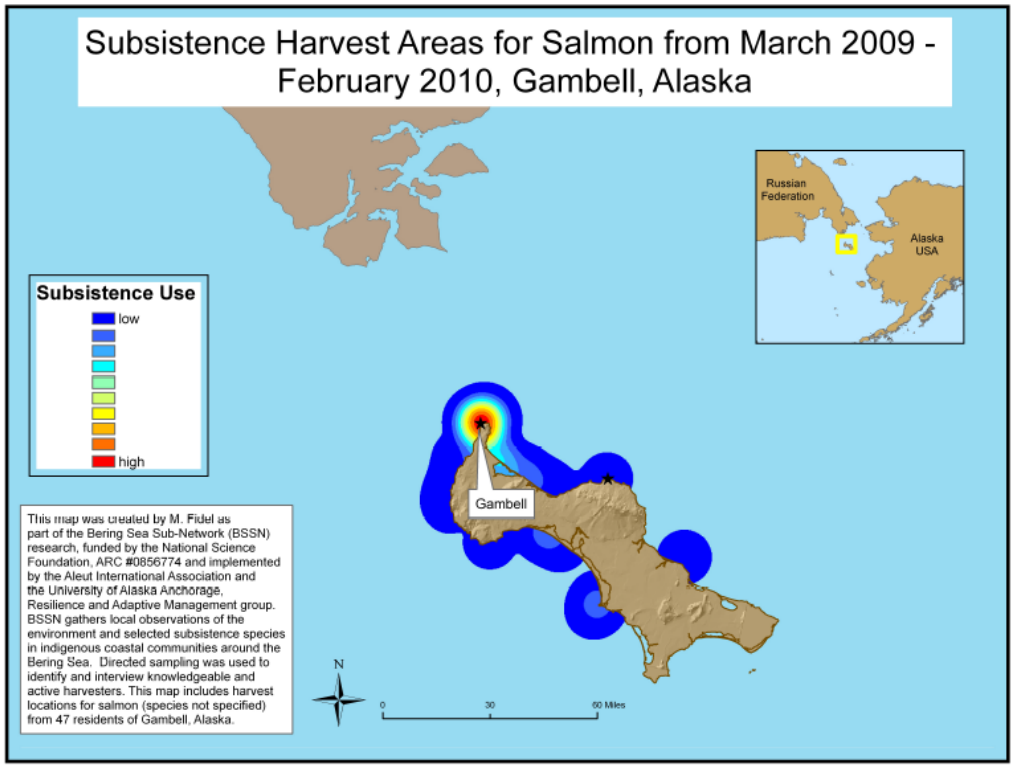
2.2 Subsistence Use of the Bering Strait Region

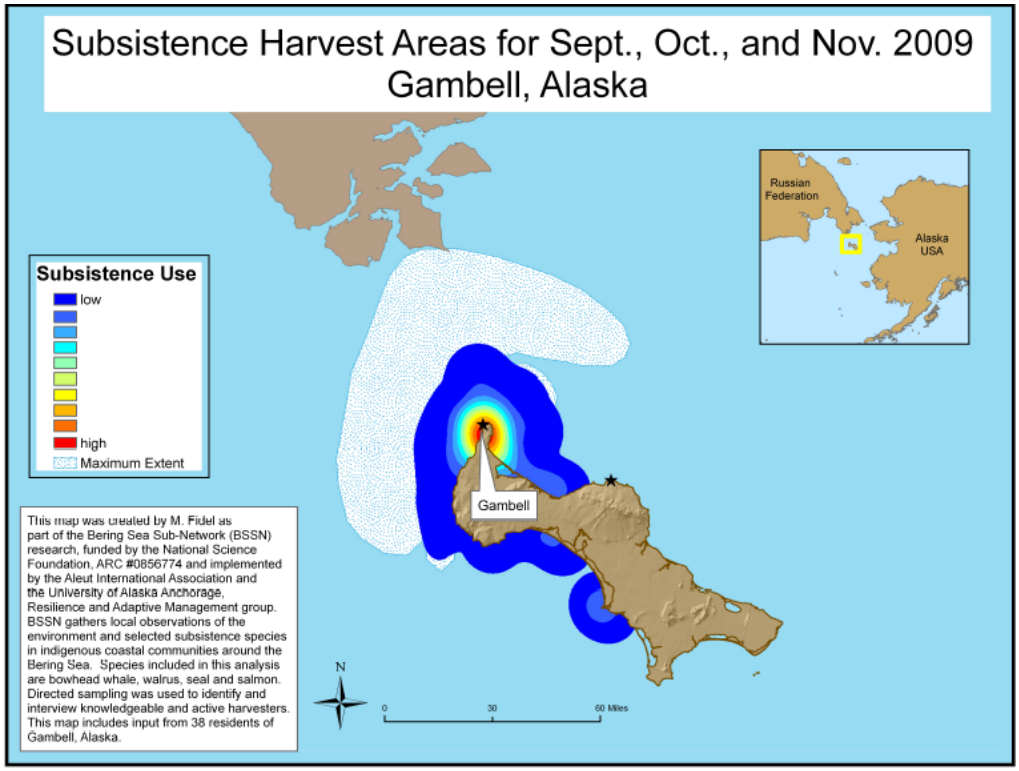
Fish, seals, walrus and whales are key components of indigenous diets, as they have been for over 1000 years. The presence of these animals is dependent on the rich primary productivity associated with sea ice and the confluence of major oceanographic currents through the Bering Strait. In spring, hunters may have to go long distances (up to 50-80 nautical miles from shore) in small boats to find prey. Certain key areas, e.g. marine mammal haul out areas, ice edges, nutrient upwellings and coastal wetlands and surrounding waters support healthy populations of fish, birds and marine mammals. The spring subsistence harvest is key to the survival of indigenous communities in the area. During this period, both hunters and passing ships are likely to use the same open water areas. Industrialized human activity can have a range of deleterious effects on these species. The noise and speed of boats can drive off animals and compromise the safety of hunters in small boats. Marine pollution has negative effects on human, animal and ecosystem health.

Kawerak, Inc. is conducting a major study to prepare maps showing seasonally defined habitat and subsistence use areas for seals and walrus on the U.S. side of the Bering Strait. The study involves collaboration with nine federally recognized tribes and, to date, has solicited information from 81 local experts. Once completed and supplemented by information from other indigenous groups in the area, these detailed maps (by hunting and season) will help inform decisions on appropriate protective measures.

The Bering Sea Sub Network, a U.S. National Science Foundation-funded project gathering local observations on the environment and subsistence harvest in coastal Russian and U.S. communities around the Bering Sea, utilizes the density mapping method to develop spatial data of subsistence areas. These maps show aggregated data by species and season. They can be correlated with other types of data, such as ice extent. For the village of Gambell on St. Laurence Island the data include walrus, seal, whale and salmon harvest and will have covered the period from 2009 to 2013. In Gambell, about two hundred respondents gave about one thousand interviews as of summer 2012. The spatial data is one of three data sets where project data are accumulated. The other two are qualitative and quantitative sets containing respective information gathered during semi-structured interviews. These data provide important information on socio-environmental coupling occurring in this area that can be useful in the design of protective measures.

Two examples of the map products developed by this project are below:



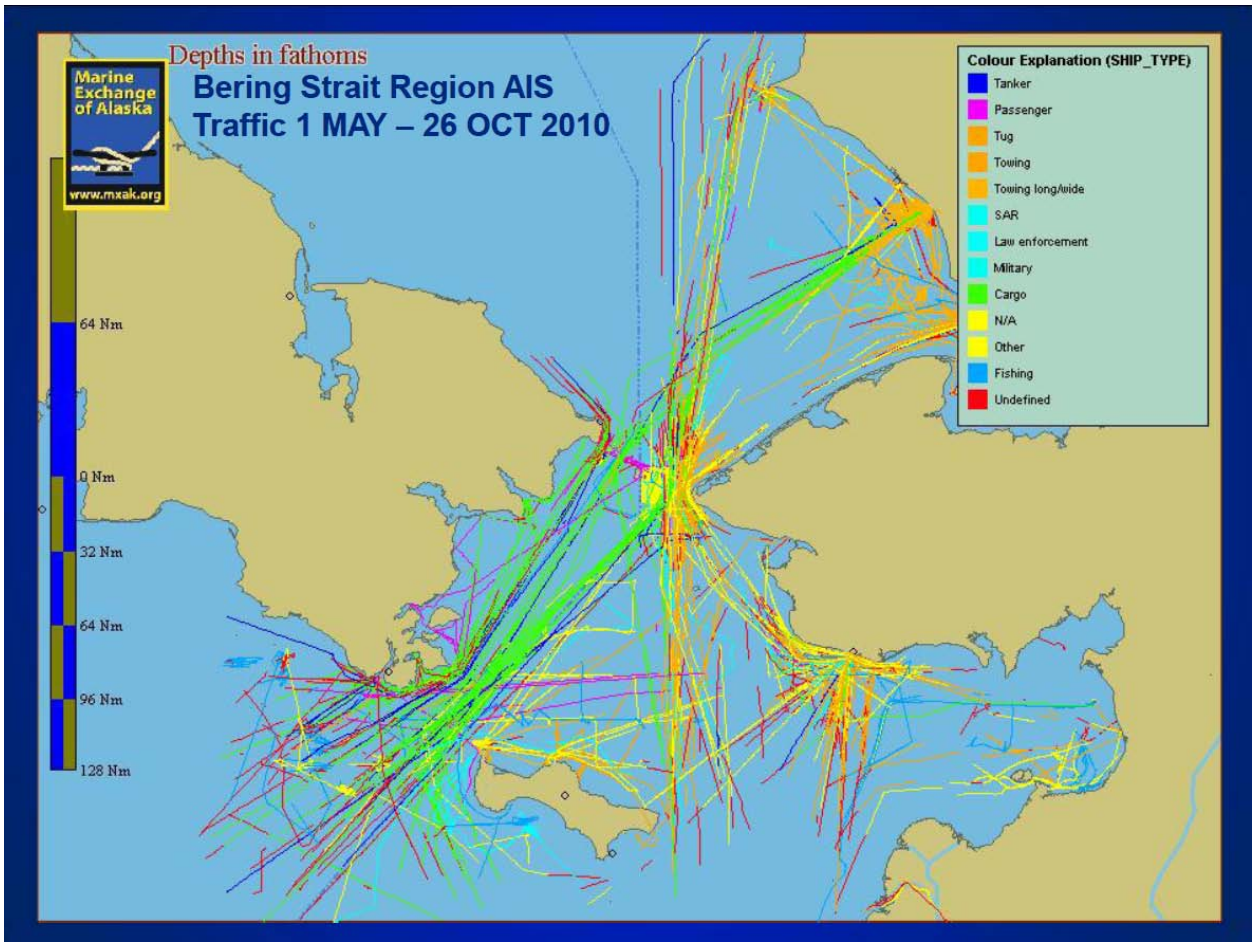


Map 2 and 3: Subsistence Harvest Areas, Gambell, Alaska. Source: Gofman, Alessa, Kliskey.

2.3 Shipping in the Bering Strait Region

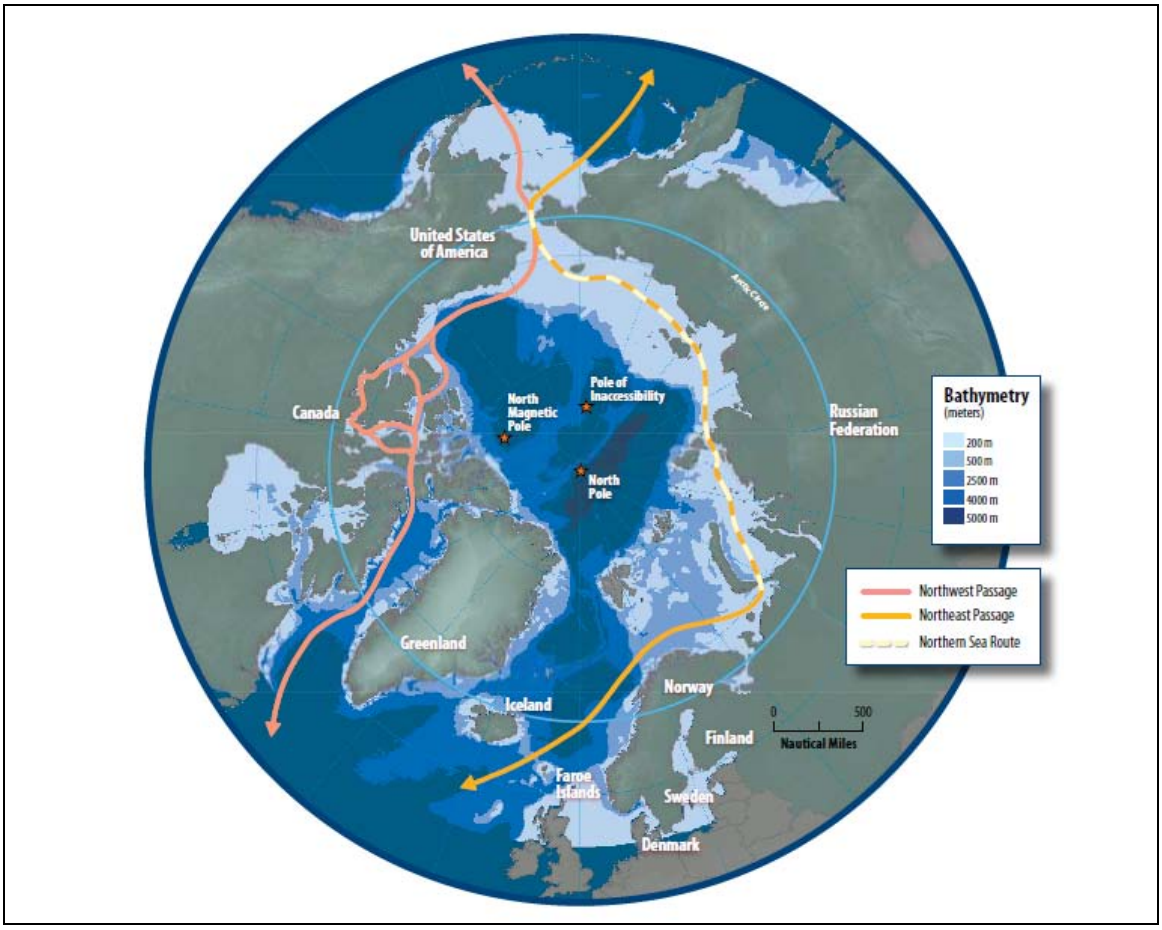
Arctic marine shipping has been the focus of considerable attention and study in recent years. The most comprehensive study to date is the Arctic Marine Shipping Assessment of 2009, prepared under the auspices of the Arctic Council. The summary Report of this study was adopted by the Arctic Council. The study addresses the full range of relevant topics, including: Arctic marine geography, climate and sea ice; history; governance; current use; scenarios for 2020 and 2050; human dimensions; environmental impacts and infrastructure. The report makes seventeen Recommendations with respect to these areas of focus. All these Recommendations are relevant to the current work. Three are of particular importance: Recommendation II A, calling for a survey of Arctic indigenous marine use; Recommendation II C, calling for identification of areas of heightened ecological and cultural significance and Recommendation II D, asking Arctic States to explore the need for internationally designated areas for the purpose of environmental protection of the Arctic Ocean.

Ships transiting the Arctic Ocean and all traffic supporting industrial activity in the Beaufort and Chukchi Seas must pass through this area. This traffic is expanding, but it is already considerable today. U.S. Coast Guard figures indicate 400 Bering Strait transits in 2011. A recent map prepared by the Marine Exchange of Alaska (Map 2) shows traffic through the region for the period 1 May to 26 October 2010. Based on AIS (Automatic Identification Systems) data from the Marine Exchange Arctic vessel tracking system, there were approximately 240 transits of the Bering Strait by commercial vessels in 2010. About half of these were domestic vessels (tugs, barges, fishing boats and landing craft); 20% cargo vessels calling on the Red Dog Mine; 3% tankers, with the balance being passenger vessels, icebreakers and research ships.



Map 4: Bering Strait Region – Traffic 1 May – 26 October 2010
Source: Marine Exchange of Alaska

The Northern Sea Route (NSR), along Russia's Arctic border from Kara Gate to Bering Strait, has a history which stretches back to 1525, when the idea was first expressed by a Russian diplomat (D. Gerasimov). The first west to east NSR transit was accomplished in 1878-79 by the Swede Nordenskiold in his ship *Vega*.



Map 5: Northern Sea Route.
Source: AMSA

The Northern Sea Route was officially designated as a national seaway of transport and communication in 1990, at which time a set of governance rules were adopted by the Soviet government. The route has the potential benefit of a significant reduction in days at sea in summer for vessels on trans-Arctic voyages. The NSR most importantly facilitates the shipping of natural resources out of the Russian Arctic to global markets. There are, however, significant draught and beam limitations for vessels. Most vessels are escorted in convoy by Russian icebreakers as an integral part of the NSR operational system.

In summer 2011, the tanker *Palva* (DW 74,940 tons) with 59,313 tons of gas-condensate and a speed of 14 knots, made the transit in 6.5 days. On August 30, 2011, the large-capacity tanker *Vladimir Tikhonov* (DW 160,000 tons) completed an NSR transit of 2,200 nautical miles in 7.5 days.

As reported at the workshop, some experts estimate 1000 vessels per year by 2017 and up to 2000 ships by 2021 could pass through the Bering Strait, using the NSR.

2.4 Concerns related to increased ship traffic in the Bering Strait

Along with the increase in traffic are other concerns about the impacts of shipping on marine ecosystems and the people who depend on them for subsistence as well as cultural and spiritual well-being. Issues discussed at the workshop include:

a. Ship spills and accidents

The potential for spills and accidents in this relatively narrow Strait raises serious concerns, given that containment and cleanup operations can remove only a small percentage of oil spilled in the ocean even under the best of circumstances. High winds, poor visibility, sea ice, major storms and the lack of spill response infrastructure in the Bering Strait region will likely render effective response extremely difficult if not impossible, especially if the region is ice-covered. Spills would pose considerable risk to human health given the high levels of marine mammal consumption in the region, the important role of marine mammal oils in local diets, and the potential for contaminants to bioaccumulate in marine mammal blubber. Related issues surround possible measures that could become necessary in the event of a spill to restrict subsistence hunting to protect human health or affected marine animals.

b. Disturbance of animals and disruption of hunting

Workshop participants identified disturbance as a major issue of concern. Many marine mammals and birds are extremely sensitive to noise. Noise, particularly from icebreaking ships, may travel long distances and could further disrupt migration patterns already changing as the result of ocean warming and changing patterns of sea ice development in the fall and melt in the spring. Higher volumes and greater incidence of noise may also degrade the environment. Such disruptions could severely affect hunting, particularly if disturbance shifts marine mammals from one nation's waters into the others, or if hunters must travel greater distances to find animals (compromising safety and increasing costs.) Due to border controls between the U.S. and Russia, hunters are not currently able to pursue animals that become diverted into waters controlled by another country.

c. Discharges and invasive species

Pollution and contamination of the marine environment and their impacts on subsistence resources are major issues for coastal communities in the region. Concerns were raised about further pollution from more ships as well as the introduction of invasive species.

d. Participation in developing regulations and controls, and information sharing

Issues related to availability and control of information, ability to influence where ships go and what operating measures they need to take, and sharing of information are very much at the forefront of community concerns. The timeliness and effectiveness of communication is a concern at all levels, from intergovernmental (between Russia and the U.S.) to communication between vessels, villages and hunters. There is also a need for greater clarity with respect to agency responsibilities and contact points.

3. Workshop Outcomes

The workshop identified four broad categories of potential activity, including:

1. Communications/outreach;
2. Tools for area protection;
3. U.S./Russia bilateral opportunities; and
4. The polar code for ships being developed by the International Maritime Organization (IMO)

In addition, valuable recommendations were made for a set of miscellaneous activities.

3.1 Communications/Outreach

A number of different information and communications needs and existing resources were discussed at the workshop. In order to plan hunting and other trips at sea, communities indicated that information on expected vessel transits through the region 3-5 days out would be very helpful. Real time tracking information would help avoid potential interactions between vessels, including subsistence fishing boats. Improving emergency communications, including between the U.S. and Russian governments, was also identified as a need.

It was noted that various communications and vessel tracking systems already exist or are in development in many Bering Strait communities.

Possible next steps on communication could include:

- Conduct an assessment of what communications technologies are available that might be suitable to meet needs not currently covered by existing and planned systems;
- Discussions with communities to compare current systems with community needs and to identify the best ways to improve and consolidate different existing and planned communication systems between and among vessels, communities, the Coast Guard, and Russian counterparts, recognizing that some changes and additions are likely already underway;
- Conduct an experimental demonstration project applying one or more communications techniques, followed by a regional “lessons learned” workshop.

In combination, these actions will enable local decisions about the creation of multi-function communications networks.

3.2 Tools for Area Protection

a. Mapping

Development of a set of maps showing subsistence use of the Bering Strait marine region was identified as a critical information gap that, if filled, could help inform vessel traffic management to minimize effects on communities. Efforts are currently under way to produce such maps for some species in some areas on the U.S. side of the Strait. Further mapping is needed to fill in gaps and cover all important hunting areas on both the U.S. and Russian coasts of the Bering Strait region.

Areas to be Avoided (ATBAs) were identified as a mapping need. Efforts are underway to bring together Western science data on physical (navigational hazards) and biological features (seabird colonies, walrus haul outs, bowhead whale migration patterns) to suggest where ATBAs should be located.

b. Voluntary measures

Such maps could form a basis of a set of voluntary measures to protect critical areas from the possible negative effects of shipping. One important advantage of voluntary measures is that they may be developed far more quickly than mandatory regulations. Moreover, they lend themselves more readily to bilateral agreement between the two Bering Strait States. Once developed, these measures would be shared with shippers operating in the region via appropriate government agencies (e.g. in the U.S., the U.S. Coast Guard).

c. Technology

In the last decade new vessel tracking technologies have come online that can aid the monitoring of vessels' compliance with risk reduction measures in the region as well as aid emergency response. Automatic Identification System (AIS) required to be carried on most commercial vessels, satellite tracking and HF Radar are all relatively new technologies that can aid safe and environmentally sound maritime operations through ensuring regulatory oversight. Additionally, AIS is capable of transmitting environmental data and safety information to vessels that can also aid safe operations.

d. Mandatory measures

Several mandatory measures to protect key areas were considered at the meeting. The following box illustrates the range of these options.

RANGE OF MECHANISMS FOR PROTECTING MARINE AREAS

International

- Particularly Sensitive Sea Areas (PSSA) - Demonstrate threats and use; must satisfy one IMO criteria that the region is at risk
- Special Area (SA) - For sewage, garbage, oil, air emissions; under IMO MARPOL Convention
- Convention on Biological Diversity (CBD) - Eco-bio criteria; reporting and enforcement
- Associated Protective Measures (APM) - ATBA (category of ships), mandatory ship routing and reporting, no anchor areas, pilotage, discharge can be an APM under PSSA
- World Heritage Sites (45 marine), UNESCO - Wrangel Island Reserve & Alaska's Glacier Bay
- Biosphere Reserve

Domestic

- National Marine Sanctuary Designation - Beyond state waters, but can include state waters
- Marine Protected Areas (MPA)- National Parks, National Monuments (Antiquities Act provides Presidential Authority)
- National Wildlife Refuges – Alaska Maritime National Wildlife Refuge
- National Estuarine Research Reserve System
- Endangered Species Act (Section 7) - Critical habitats (birds, lighting on rigs)
- Fisheries Management Areas – Federal enforcement and regional management
- Russian Buffer Zone (24 nautical miles) - Permission necessary to pass through
- Russian Regional Protected Areas - Small areas (e.g. 24 nautical miles long), designated walrus haul out areas
- Alaska State measures - Out to 3 nautical miles

Joint US/Russia Cooperation

- PSSA / SA / APM – Possible joint submissions to the IMO
- Article 234 UNCLOS – Coastal state protection measures in ice-covered waters
- Joint sanctuary - Between two coastal states across the maritime border

Of these options, the one that had the greatest attraction for the meeting participants was Particularly Sensitive Sea Areas (PSSA) designation by the International Maritime Organization.

A PSSA is defined as "… an area that needs special protection through action by IMO because of its significance for recognized ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities."[5] The types of protective measures that may be applied in PSSA's include: compulsory piloting; ship routing measures; mandatory reporting; no anchoring areas; IMO Special Areas and identification of areas to be avoided.

The advantages of PSSA designation include the requirement that international shipping meet recognized management measures established by the IMO, as well as the ability to create mandatory

[5] www.imo.org

measures under a PSSA to reflect social, cultural and economic considerations. Major disadvantages of the PSSA approach are the degree of effort and length of time such designation requires. Another disadvantage with respect to PSSA designation in the Bering Strait region is the lack of direct access for indigenous groups to IMO decision-making processes. Lastly, establishment of a PSSA in the region would require the creation of domestic authority through which it would be implemented.

Since a PSSA proposal must be based on a risk assessment, a useful first step would to be to proceed with an initial assessment as soon as possible of the vulnerability of the Bering Strait to the possible negative effects of international shipping. Risk assessments can include many key themes: the severity of the consequences; categories of risk; changing behavior of the stakeholders; risks to the environment as well as risks to the ships (ship safety); spatial and temporal risks; coastal community risks; and comparing the risks to other marine areas**.** A completed risk assessment must accompany any PSSA proposal to the IMO. A preliminary risk assessment could identify the key threats to human safety, environment and local cultures from commercial shipping in the Bering Strait region, drawing on experiences elsewhere in the world. As a preliminary effort, such an assessment could also identify further steps that could and should be undertaken to improve the quality and scope of a more thorough assessment, should such an assessment be desired. The scope of the preliminary effort will be determined by the resources available, but even a modest effort will be a good step forward. The assessment should include participation by indigenous peoples to assure the inclusion of their expert knowledge. It is important to note, however, that the assessment of risk must be based on an analysis of international shipping for the measure to be considered by IMO.

3.3 Bilateral U.S./Russia Opportunities

There was broad agreement that any measures taken to address the problems raised by increased vessel traffic in the Bering Strait would require actions on both sides of the Strait. While this workshop focused primarily on potential protection measures on the American side, it was agreed that Russian authorities needed to begin considering similar steps and that increased bilateral cooperation between the Russian and American governments should be encouraged.

Participants in the workshop were briefed on the general status of U.S.-Russian cooperation, which was described as broadly good, especially concerning practical cooperative measures, such as search and rescue and emergency response. At the regional level, it was noted that there has recently been good progress between parties on fisheries cooperation. Both sides have joined forces to pursue illegal fishing in the boundary areas, including good cooperation between enforcement agencies, which bodes well for progress in traffic and vessel management schemes. There has also been progress in establishing the principle that there should be no fishing in Arctic regions until adequate information on the available resources is available. This is especially important as more ice-covered areas become accessible due to the shrinking Arctic sea ice cover. The successes of the Agreement between the Government of the United States of America and the Government of the Russian Federation on the Conservation and Management of the Alaska-Chukotka Polar Bear Population (International Agreement on the

Conservation of Polar Bears, 1973), as well as progress on visa-free travel by indigenous groups were pointed to as examples of local successes.

On a broader level, President Obama and then-President Medvedev issued a joint statement in 2011 signaling their desire to expand on cooperation in the Bering Strait region:

> [We] declare an intention to deepen cooperation between the United States of America and the Russian Federation in the cross-boundary Bering Strait region, including the expansion of interaction between the national agencies that are responsible for the specially protected natural territories/areas of both countries in the State of Alaska and the Chukotka Autonomous District, including their commitment to developing a dialogue with native peoples to help determine the specific goals and methods for such cooperation.[6]

Russian participants did point out, however, that the engagement of federal officials (i.e., Moscow) was generally required to produce the appropriate commitment by local or regional governments. It was also noted that the approach of a high level bilateral summit often encourages the signing of lower level agreements.

Several near-term opportunities for strengthening U.S.-Russia cooperation were identified. These include:

- Hold a workshop of Russian local community and indigenous groups, similar to the Nome workshop, in the Chukotka region, drawing on both the participants and the lessons learned from the meeting agenda;
- Seek Russian cooperation on and participation in the development of the above-mentioned voluntary measures for regional shippers, based on information developed on subsistence use. If such measures were to be supported by both governments, the impact is likely to be significant, even if the measures are voluntary in nature. Such an exercise could lead to a "Joint Vessel Traffic Handbook," or a virtual manual. Recent Duma decisions changing the designation of the NSR from a national to an international waterway may create a window of opportunity in this regard;
- Develop a bilateral PSSA proposal to the IMO. A constructive exploratory step in this regard would be to seek bilateral cooperation on the conduct of a preliminary transboundary risk assessment in the Bering Strait region;
- Expand the USCG Port Access Route Study (PARS) to be bilateral;
- Explore opportunities for increased scientific cooperation (difficulties in marine research access approvals have been a constant irritant in scientific research in Russian maritime zones);

[6] http//www.whitehouse.gov/the-press-office/2011/05/26/joint-statement-president-united-states-america-and-president-russian-fe

- Explore possible common approaches to the creation of marine buffer zones for Wrangel, Diomede and St. Lawrence Islands; and
- Explore the possible use of the 1990 U.S.-USSR Agreement on the Berignia transboundary park as a vehicle to promote greater cooperation.

3.4 International Maritime Organization Polar Code

Work has begun in the International Maritime Organization (IMO) on a Polar Code for ships navigating in polar waters. However, discussion of environmental provisions has been temporarily set aside. The Code would contain both mandatory and voluntary parts. Two principles guide the development of the Code:

- it is to be risk-based in determining scope
- it is to be holistic to mitigate risks to acceptable levels

Hazards and risks have provisionally been consolidated into four main categories: environmental conditions (ice, temperature); high latitude (communications issues); environmental sensitivity (slow recovery from damage), and remoteness (e.g. search and rescue and environmental response). The Polar Code is to include sections on the structural standards/requirements of ice-going ships, marine safety equipment, and required training/experience for ice navigators in the pilothouse.

Very little work has been undertaken to assess the level of risk associated with each hazard, for the different types of polar operation that may be conducted. As a result the justification for the imposition of new requirements is not clear.

Workshop participants recognized the importance of the development of the Polar Code. Slow progress in this regard lent support to the early development of a set of voluntary measures for the Bering Strait region which might be agreed and promulgated in the interim and which may continue as supplemental to the content of an IMO product.

3.5 Additional Action Options

a. Emergency Response

A proof-of-concept exercise on community-based response to an oil spill or similar accident could help engage Bering Strait communities in preparation activities, identify what can be done with existing resources (e.g., small boats and local residents), and determine what additional resources should be put in place (e.g., oil containment boom, staging and tracking of emerging towing vessels, etc.)

Additionally, there would be value in holding a table top spill drill in Nome for a hypothetical spill in the Bering Strait. This should focus specifically on inviting community people/organizations (regional entities

such as Kawerak, as well as village organizations such as Savoonga IRA) to the exercise to better understand oil spill response and how oil spill contingency plans work in practice. This exercise would also highlight potential gaps in spill response for the Bering Strait.[7]

b. Regional Citizens Advisory Council

One possible option for organizing the participation of local residents in shipping-related decision-making is the creation of a Regional Citizens Advisory Council (RCAC). Such councils have been created for the Prince William Sound and Cook Inlet areas of Alaska in response to the Exxon Valdez spill. They have been very successful in influencing policy decisions and overseeing government and industry's attention to environmental protection.

c. Oil Spill Response Organizations

Oil Spill Response Organizations (OSROs) have proven to be effective in planning the response to oil spill incidents in particular regions. These organizations have the ability to rapidly respond to a variety of oil spill incidents with trained personnel, and appropriate equipment specific to that site. While oil spill response organizations have been established for places like the North Slope of Alaska, Cook Inlet, Valdez and Western Alaska, there is no OSRO specifically focused on providing spill response capability in the Bering Sea region. To increase capacity to respond to oil spills in this region, an Oil Spill Response Organization located and tasked with responding to that region should be considered.

[7] Coastal Response Research Center (CRRC) is planning on holding a workshop in Nome similar to the one held in Kotzebue recently (see: http://www.crrc.unh.edu/workshops/nwab_12/index.html). The goal of the Kotzebue meeting as stated on the website was:

The goal of this meeting will be to discuss community involvement in spill response and natural resource damage assessment (NRDA); to integrate local community knowledge into Environmental Response Management Application (ERMA); and to enhance relationships between local communities and government agencies regarding planning and preparation for potential oil spill response and restoration.

Annexes

Annex 1 - Participants List

Angnaboogok, Vernae, Social Science Intern, Kawerak, Inc.

Arnaudo, Ray, Office of the Secretary (Policy Planning), U.S. Department of State

Ashenfelter, Roy, Natural Resource Advocate, Kawerak, Inc.

Barr, Brad, Senior Policy Advisor, Office of National Marine Sanctuaries, NOAA

Behe, Carolina, Traditional Knowledge & Science Advisor, ICC Alaska

Boda, Ken, LCDR Strategy Analyst, USCG

Brigham, Lawson, Advisor US Arctic Commission, University of Alaska Fairbanks (UAF) Geography Program

Burn, Douglas M., Coordinator, Aleutian and Bering Sea Islands LCC, U.S. Fish and Wildlife Service

Coon, Cathy, Marine Biologist- Environmental Studies and Management Mgt Section, Alaska Region, Bureau of Ocean Energy Management

Fraser, Drummond, Chief of Regulations, Compliance and Licensing, Transport Canada, Office of Boating Safety

Gavrilo, Maria, Research director, National Park Russsian Arctic

Gofman, Victoria, Collaborative Research & Consulting

Herr, Dorothée, Marine Program Officer, IUCN

Houck, James, CDR D17 Waterways Management Branch Chief, USCG

Hughes, Layla, Senior Program Officer, WWF

Huntington, Henry, Science Director Arctic Program, PEW Environment Group

Krenz, Chris, Arctic Project Manager, Oceana

Laughlin, Thomas, Senior Arctic Advisor, IUCN

MacCracken, James G., US Fish & Wildlife Service, Marine Mammals Management

McConnell, Martha, Polar Manager, IUCN

Metcalf, Vera, Director Eskimo Walrus Commission, Kawerak, Inc.

Page, Ed, Executive Director Marine Exchange of Alaska (USCG Ret)

Ray, Lily, Social Scientist, Natural Resources, Kawerak, Inc.

Raymond-Yakoubian, Julie, Social Science Program Director, Natural Resource Division, Kawerak, Inc.

Robards, Martin, Arctic Beringia Program Director, Wildlife Conservation Society

Rosa, Cheryl, Deputy Director, USARC

Sheffield, Gay, Agent, Alaska Sea Grant MAP

Skaridov, Alexander, Dean of the Law Faculty, Admiral Makarov State Maritime Academy

Smith, Melanie, Landscape Ecologist, Audubon Alaska

Speer, Lisa, Director International Oceans Program, NRDC

Springer, Alan, Marine Ecologist, University of Alaska

Stishov, Mikhail, Arctic Biodiversity Coordinator, WWF Russia

Thomson, Jorgen, Director of Conservation and Sustainable Development, MacArthur Foundation

Thurston, Dennis Bureau of Ocean Energy Management, Alaska Region

Topkok, Meghan A, Beringia Center of Culture and Science Intern, Kawerak, Inc.

Annex 2 – Workshop Agenda

TUESDAY, 26 JUNE

8:30	Welcome and Introductions *Denise Michels, Mayor of Nome* *Thomas Laughlin, IUCN*
9:15-9:35	Description of the Areas *Lisa Speer, NRDC*
9:35-9:55	Results from Interviews with Bering Strait Region Seal and Walrus Hunters *Lily Ray, Kawerak*
9:55-10:20	Shipping Activities *Lawson Brigham, UAF*
10:20- 10:45	COFFEE BREAK
10:45-11:10	Traffic Patterns *Ed Page, USCG Ret*
11:10-11:30	Port Access Route Study (PARS) *James Houck, USCG*
11:30-12:00	Indigenous Concerns and Proposed Measures *Martin Robards, WCS* *Vera Metcalf, Kawerak*
12:00 – 1:15	LUNCH
1:15-1:35	Understanding Subsistence Location Dynamics for the Development of New Regulation *Victoria Gofman, Collaborative Research & Consulting*
1:35-1:50	Multilateral Options-IMO *Drummond Fraser, Transport Canada, Office of Boating Safety*
1:50-2:05	Bilateral Options *Ray Arnaudo, US Department of State*

2:05 – 2:35 National Options
Russia: Mikhail Stishov, WWF
USA: Brad Barr, NOAA

2:35 – 2:50 COFFEE BREAK

2:50 – 3:15 Update on Developing Rules for NSR and Russian Perspectives on Use of the Bering Strait Region
Alexander Skaridov, Dean of the Law Faculty, Admiral Makarov State Maritime Academy

3:15 – 5:00 Breakout groups

After the workshop: Reception at the Carrie M. McLain Memorial Museum, Nome

WEDNESDAY, 27 JUNE

8:30-10:30 Report from the breakout groups and discussion

10:30 – 11:00 COFFEE BREAK

11:00-12:00 Breakout groups refine and package measures

12:00 – 1:00 LUNCH

1:00 – 3:00 Breakout groups continue

3:00 – 3:20 COFFEE BREAK

3:20-5:00 Breakout groups continue

Thursday, 28 JUNE

8:30-10:30 Plenary conclusion

COFFEE

IUCN Washington, D.C.
1630 Connecticut Ave NW, Ste 300
Washington, DC 20009

Natural Resources Defense Council
40 West 20th Street
New York, NY 10011

University of Alaska Fairbanks
505 South Chandalar Fairbanks
AK 99775, United States