

Conceptual and Institutional Frameworks for Protected Areas, and the Status of Indigenous Involvement: Considerations for the Bering Strait Region of Alaska

Julie Raymond-Yakoubian

Abstract The Bering Strait region of Alaska is a culturally, economically, biologically, and politically important area of the Arctic. Like the rest of the arctic, this area is experiencing rapid and dramatic changes, both climate- and development-related. From the perspective of many indigenous residents, there is a growing need for protections – particularly in relation to the marine environment – in the Bering Strait region. This chapter reviews some of the existing protections that are in place and the status of indigenous involvement in them. The pressing need for additional protected areas is considered in light of the diverse issues and challenges facing the area such as commercial fishing, increasing marine traffic, climate change and resource development. I argue that it is critical to include indigenous residents of the region in the development, creation and maintenance of protected areas. I also argue that effective methods for protection can extend beyond typical western understandings of the nature, process and meaning of protection as defining an area where activities are allowed or prohibited.

Keywords Bering Sea • Alaska • Indigenous • Climate change • Vessel traffic • Fishing

1 Introduction

The western portion of Alaska is a remote and sparsely populated area in comparison to other regions of the United States. The Seward Peninsula region of Alaska is the westernmost portion of North America and is directly adjacent to the Bering Strait. Despite its comparative remoteness, the Bering Strait region is receiving increased, and in some cases unwanted, attention as an international strait at the center of expanding global marine commerce and resource development, as well as

J. Raymond-Yakoubian (✉)
Kawerak, Inc., P.O. Box 948, Nome, AK, USA
e-mail: JRaymond-Yakoubian@kawerak.org

experiencing an increase in climatic variability. These conditions have led to increased political attention being placed on the Bering Strait as a critical link in U.S. national security on a variety of levels, as well as being increasingly important to the security of global commerce (Clement et al. 2013). The results of changing climatic conditions, primarily reductions in sea ice extent and a longer ice-free season, have led to more vessels transiting through the Strait and more resource development activities such as offshore oil exploration. The total population of the region is approximately 9,900 people, about 75 % of whom are Alaska Native or Native American (U.S. Census Bureau 2013a). The region is the homeland of three distinct groups of indigenous peoples, Yup'ik, Inupiat and Saint Lawrence Island Yupik (collectively known as "Inuit"). There are 20 federally recognized tribes in the region. The indigenous and non-indigenous residents of the Bering Strait region live in 16 year-round occupied communities and utilize numerous other camps and locations seasonally (Fig. 1). The villages range in size from 120 residents in Little Diomedede to 719 residents in Unalakleet. Nome, which is the largest and the "hub" community for the region, has a population of approximately 3700 (U.S. Census Bureau 2013b).

The marine environment of the Bering Strait and northern Bering Sea region is characterized by high productivity and is a biologically diverse ecosystem (e.g. Hunt and Stebeno 2002; Sigler et al. 2011; Grebmeier 2012). The region is a vital

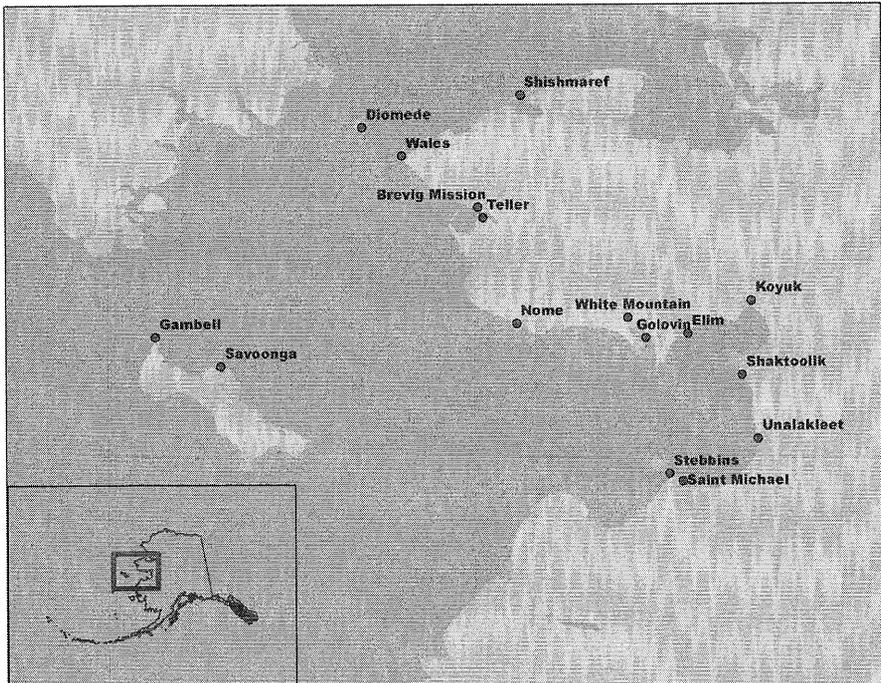


Fig. 1 The Bering Strait region of Alaska

area for marine mammals, sea birds and other marine species (e.g. Smith 2010; Garlich-Miller et al. 2011; Speer and Laughlin 2011; Laidre et al. 2008). The largest marine mammal migrations in the world pass through the region in the fall and spring (associated with ice formation and retreat). The waters of the Bering Strait cover an underwater “bridge” connecting the shallow continental shelves of the Bering and Chukchi Seas. Because of the diversity and productivity of the area, the Bering Strait and Saint Lawrence Island have both been identified as areas that meet and exceed the Convention on Biological Diversity’s criteria for Ecologically and Biologically Significant Areas (EBSAs) and have been called “Super EBSAs” (CBD 2008; Speer and Laughlin 2011; Laughlin et al. 2012; McConnell et al. 2013). These characteristics of the region have also, of course, supported and shaped indigenous cultures for millennia.

Indigenous communities in the Bering Strait region continue to carry out subsistence hunting, fishing and gathering traditions in addition to participating in local cash economies. While no comprehensive statistics exist, the majority of households in the region (indigenous and non-indigenous alike) utilize at least a small amount of subsistence resources thought the year. Some indigenous households utilize thousands of pounds of subsistence foods per year, typically consuming such foods every day (Ahmasuk et al. 2008: 45). Marine mammals in particular are of special significance to the indigenous residents of the region, with some households harvesting over 2600 pounds of marine mammals in a year (Ahmasuk et al. 2008: 189) (see Fig. 2). There are specific traditions and practices related to the harvest and treatment of various animal and plant resources (e.g. Oquilluk 1973; Fienup-Riordan 1994; Kawerak 2013a, b, c). For example, some communities maintain



Fig. 2 Seal meat drying in a Bering Strait region community (J. Raymond-Yakoubian)

traditional beliefs regarding hunting, such as that hunting success is the result of animals giving themselves to hunters who are respectful towards animals (including using well-maintained gear, not being boastful, sharing meat, and other practices). These resources, and the practices and beliefs associated with them, are critical to local definitions of identity and are closely connected to individual and community well-being.

The maintenance of healthy, functioning ecosystems is a priority for the indigenous residents of the region (e.g. Gadamus 2013). Because many of the activities of subsistence practitioners are carried out in marine waters, the integrity of the ecosystem correlates with the ability of residents to continue to harvest resources and practice their subsistence way of life. Hunters and others travel in small boats in challenging conditions, often very far from shore. Hunters pursue very large mammals such as bowhead whales, as well as smaller animals like walruses and bearded seals (which can weigh more than 3500 and 500 pounds, respectively). Hunting activities can be extremely dangerous when all factors are considered (e.g. unpredictable weather, distance from shore, small size of boats, large size of animals, animal behavior, etc.). Region residents also fish in marine waters and gather resources such as seaweed, clams and other marine plant and invertebrate life. Small boats are also used to travel between communities and between communities and camps. Additional, or modified, protected areas, created through consultation and collaboration with indigenous people, may benefit the interests of indigenous communities, conservationists, researchers, and others.

Protected areas have been created in the marine waters of the northern Bering Sea and Bering Strait region. A “protected area” can be broadly defined as an area that has some sort of regulation on the type of activities that take place within its boundaries (this may be a time or space restriction or both). Below, some protected areas that currently exist and what they are meant to protect are described, some threats to the marine environment and communities that utilize it are outlined, and the ways that indigenous people have been and can be involved in the development of protected areas are presented. The varied forms that marine protections could take, and indigenous perceptions of protected areas, are also discussed.

2 Existing Protected Areas

The state of Alaska has jurisdiction over waters from 0 to 3 miles offshore and the federal government of the United States has jurisdiction over waters from 3 to 200 miles offshore. There are multiple protected areas in the marine waters off of Alaska (Witherell and Woodby 2005). The National Marine Fisheries Service (NMFS), North Pacific Fishery Management Council (NPFMC) and U.S. Fish and Wildlife Service (USFWS) are the federal agencies that are most active in the area. Each agency or body has different responsibilities and processes related to establishing a protected area and for consulting with tribes. Below is a discussion of some of the

protected areas that exist in federal waters in the northern Bering Sea and Bering Strait region.

2.1 Northern Bering Sea Research Area

The Northern Bering Sea Research Area (NBSRA) encompasses a large portion of the northern Bering Sea, extending from approximately Saint Matthew Island north up to the middle of the Bering Strait (Fig. 3). The North Pacific Fishery Management Council (a management body authorized by the federal government) created the NBSRA to study the impacts of bottom trawl fishing on benthic and epibenthic fauna (NMFS 2011). Bottom trawl fishing is prohibited in the NBSRA until the NPFMC formally re-opens the area. To reopen the area the NPFMC would need to create a fishery management plan, receive input from its various committees, advisory panels and the public, and take a formal Council-member vote (NPFMC

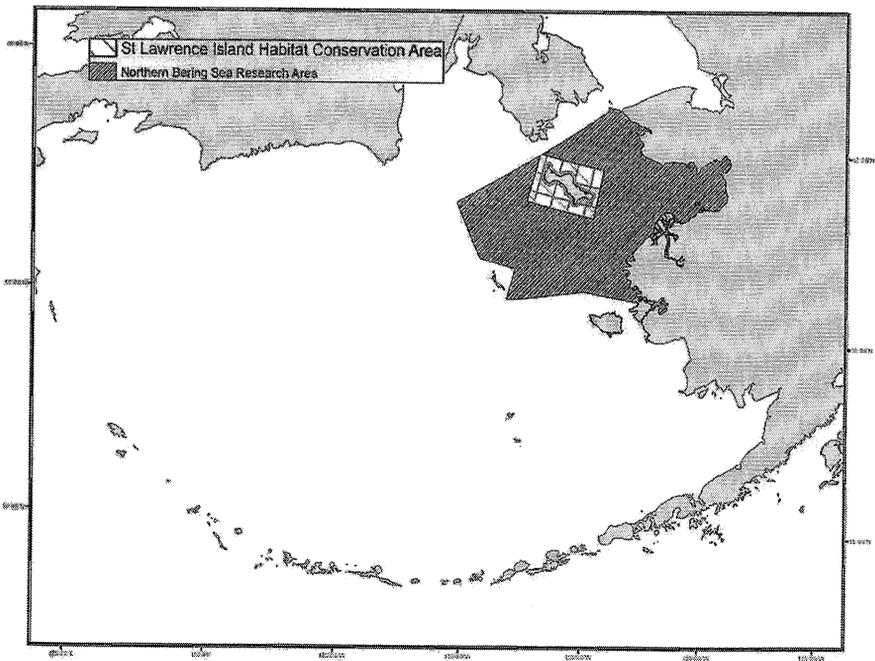


Fig. 3 Northern Bering Sea Research Area and Saint Lawrence Island Habitat Conservation Area (map from NMFS 2008:7)

2009a). Bottom-trawling is a very destructive fishing method that disturbs benthic habitats and fauna (NRC 2002; Stiles et al. 2010) and may cause prey depletions, which can create cascading impacts throughout the water column and entire ecosystem (e.g. Bluhm and Gradinger 2008). Many benthic and epibenthic fauna are important prey sources for other marine life.

2.2 Saint Lawrence Island Habitat Conservation Area

The Saint Lawrence Island Habitat Conservation Area (SLIHCA) is an area around Saint Lawrence Island where bottom trawl fishing is prohibited (Fig. 3). The NPFMC closed this area to conserve blue king crab habitat and to reduce conflict between subsistence fisheries and other activities (NMFS 2012). This area will remain closed to commercial bottom trawl fishing permanently, unless the NPFMC modifies the existing Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area (*ibid.*). This area, along with the NBSRA, is not exempt from “research” activities approved by the NPFMC and research has taken place (see *Tribal Involvement*, below).

2.3 Arctic Management Area

The Arctic Management Area (AMA) was created through the Arctic Fisheries Management Plan (AFMP) and covers all federal waters in the Arctic from the middle of the Bering Strait north and east (Fig. 4). Through the authority of the AFMP, all commercial fisheries are currently prohibited in the AMA until the NPFMC determines there is sufficient scientific information to design a sustainable fishery in the area and the existing plan is modified to allow for the development of new fisheries (NMFS 2009; NPFMC 2009b).

2.3.1 Spectacled Eider Critical Habitat Areas

In the northern Bering Sea and Bering Strait region, the U.S. Fish and Wildlife Service (USFWS) has established several critical habitat areas for the spectacled eider in Norton Sound and south of Saint Lawrence Island (USFWS 2001). The spectacled eider is a sea duck that preys on benthic fauna while at sea. The entire world population of the species winters at a polynya south of Saint Lawrence Island. This critical habitat was established under the Endangered Species Act (ESA) and prohibits the destruction or adverse modification of the designated habitat, which has been deemed crucial to the survival of the species. Special consultations under the ESA are required for actions proposed within the critical habitat areas.

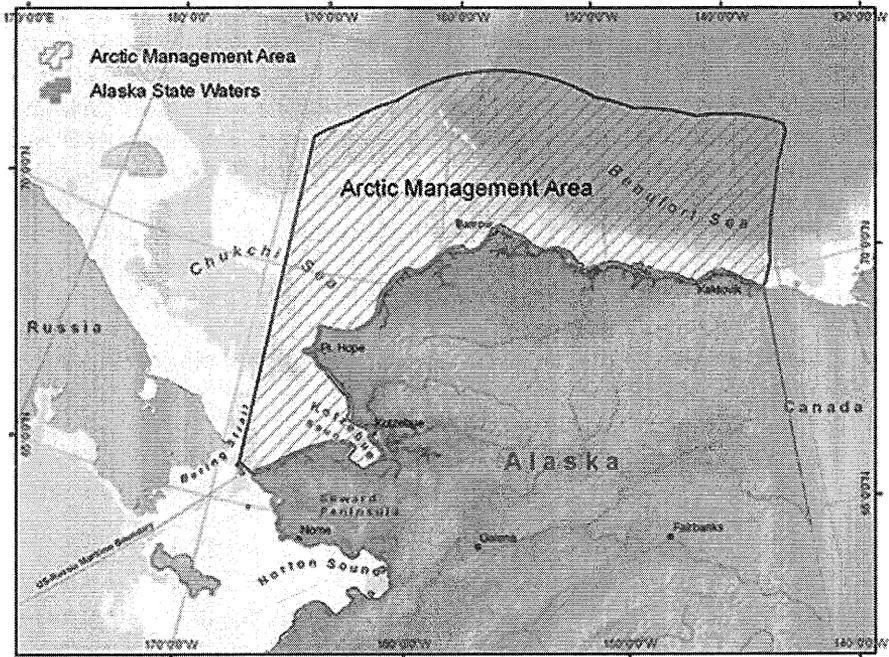


Fig. 4 Map of the area included under the Arctic Fishery Management Plan (from NPFMC 2009b:1)

2.3.2 Tribal Involvement

Some of the major protected areas in the northern Bering Sea and Bering Strait region were outlined above. The level of tribal involvement in the development, implementation and ongoing management of those areas has varied. As noted earlier, there are 20 federally recognized tribes in the Bering Strait region. Federal recognition gives tribes special status as “domestic dependent nations” with “inherent sovereign powers” (Executive Order 13175 [EO 13175]). This status entitles tribes to formal government-to-government consultation with the federal government regarding policies or actions that may impact tribal rights or resources. The State of Alaska, on the other hand, does not recognize tribes as having any special rights to consultation.

Through the consultation process tribes are given the voice they are entitled to under federal policy and regulations – if carried out in a timely and meaningful way. Unfortunately, the tribal consultation process does not always take place, and often when it does it is not conducted in a meaningful or timely fashion. No formal tribal consultation was carried out in conjunction with the establishment of the NBSRA

or the SLIHCA, the AFMP, or during formulation of the spectacled eider critical habitat. Tribes were involved in the various processes as 'stakeholders'.¹

During the process of reviewing the proposal to create the NBSRA and SLIHCA, tribal and community support was given for their establishment. The proposals were supported because it was believed that the NBSRA and SLIHCA would provide protections for subsistence. However, after the NBSRA had been formally established, a bottom trawl research plan was developed. Tribes were not included in discussions about the purpose or need for this trawl research and subsequently strenuously opposed research trawling and supported a permanent ban on bottom trawling in the Area (Bullard 2010). Despite tribal objections and a lack of tribal consultation, the research trawl took place in 2010. Bering Strait region tribes have remained deeply involved in trying to establish a permanent closure of the NBSRA to bottom trawl activities and have demanded tribal consultation on several aspects of this issue (Raymond-Yakoubian 2012).

The Arctic Fisheries Management Plan was created without formal consultation with tribes in the Bering Strait region. "Outreach"² activities were conducted; for example public presentations to tribally-authorized entities, such as the Eskimo Walrus Commission and Kawerak, Inc.³ Overall, tribal entities expressed support for the Management Plan, though they also expressed a desire for formal consultations and a more meaningful role in the process of developing the Plan (NMFSS 2009). If changes to the Management Plan are proposed in the future, tribes would request and expect formal consultation and an active role in the formulation of any new activities in the Arctic Management Area.

No formal tribal consultation was carried out during the designation of critical habitat for spectacled eiders. The USFWS held public meetings in various locales and conducted 'outreach' activities to indigenous communities and individuals. While the USFWS maintains that they have included tribal knowledge in their habitat designation process, tribes did not have the opportunity to formally participate in it through a consultation process (USFWS 2001).

In many cases, federal agencies only minimally engage in the tribal consultation process, which is currently the most effective process by which tribes can meaningfully engage in federal policy and rule making. Unfortunately, there is little account-

¹The term 'stakeholder' generally refers to any member of the public or a group that is interested in a particular action. Tribes that are federally recognized have a higher status when it comes to federal actions that may impact them, and do not want to be treated as 'stakeholders'.

²The NPFMC has argued, and the Department of Commerce (DOC) recently codified, that they are not required to carry out formal tribal consultation activities (DOC 2013). The NPFMC conducts "outreach" activities, as described in the meeting notes from the first meeting of their "Rural Community Outreach Committee" (NPFMC 2009c). This has caused consternation amongst tribes because of the role that the NPFMC plays in decision making in federal marine waters (Raymond-Yakoubian 2012).

³Kawerak, Inc. (Kawerak) is an Alaska Native non-profit tribal consortium serving the 20 tribes of the Bering Strait region. Among other activities, Kawerak conducts independent research and advocates for policies and management actions that are supported by member tribes. For more information see www.kawerak.org

ability for federal agencies that do not carry out consultation appropriately. For example, some agencies will send a letter to all federally recognized tribes and tribal organizations in Alaska briefly outlining an upcoming activity, policy change or other matter; after sending the letter, little or no effort is made to determine which particular tribes may be most impacted or concerned about an action. Agencies often call such activities “tribal consultation,” but it at most constitutes doing the bare minimum to claim this. Rather than a good faith effort to conduct meaningful consultation, these actions could be more appropriately characterized as ‘going through the motions.’ In these cases, if no responses are received from tribes they are then treated simply as ‘stakeholders’ in the process. Tribes are rarely asked to help develop or design policies or actions. Furthermore, in the case of interactions with the NPFMC, tribal input is often received after multiple detailed alternatives have been designed and the NPFMC, along with its parent agency NMFS, are at a point of being unwilling to consider redesign.

3 Challenges from the Perspective of Tribes

Bering Strait region tribes are faced with many threats to their subsistence way of life, especially threats to the marine resources and environment that they rely upon. As interest in the Arctic continues to grow, tribes struggle to maintain their involvement in the myriad issues, processes and policies that will directly impact them and future generations of Bering Strait residents. Tribes are very aware of the interconnections between various parts of the marine ecosystem and how impacts to one part of the food web may cascade through and impact other parts. The threats described below are of greatest concern to indigenous peoples in the Bering Strait region. This information has been obtained by the author during interactions with Bering Strait region tribes at public meetings, tribal consultations, Kawerak Board of Director’s meetings, and other activities such as workshops and Kawerak Social Science Program research activities.

3.1 *Bottom Trawl Fishing*

Bottom trawl fishing activities can be extremely damaging to benthic environments (e.g. NRC 2002; Stiles et al. 2010) which are habitat for marine mammal and migratory bird prey species as well as for corals, sponges and other benthic life that support or provide habitat and prey for multiple marine species. Bering Strait region tribes are extremely concerned about the damage to benthic habitat that trawling may cause, as well as the impacts of that damage up the food chain. They are also worried about the added stress that would be placed on subsistence species if commercial fishing vessels and a bottom trawl fishery were active in the northern Bering Sea. The impacts of the actual fishing may also cause depletions in certain fish

species which could also have cascading effects throughout the marine food chain (e.g. Garcia et al. 2003).

Bering Strait region tribes would like to see the entire northern Bering Sea remain closed to bottom trawl fishing. This desire for permanent protection is in contradiction to the desires of commercial fishers and the intent of the establishment of the NBSRA.

3.2 *Arctic Fishing*

Commercial fishing in the Arctic is currently prohibited under the Arctic Fisheries Management Plan (NMFS 2009; NPFMC 2009b). As discussed above, Bering Strait region tribes supported the creation of the AFMP and AMA by the NPFMC. Many tribes would prefer to keep Arctic waters off-limits to large-scale commercial fishing and supported the creation of this fisheries management plan. Tribes are concerned about the potential for expansion of fisheries northward as climate change modifies the distribution and range of various fish species (e.g. Meuter and Litzow 2008; Stram and Evans 2009; Cheung et al. 2010). The expansion of commercial fisheries northward would place additional pressures on marine subsistence species and subsistence practitioners.

3.3 *Salmon Bycatch*

The Bering Sea pollock fishery, which operates in federal waters, has caught very large amounts of primarily Chinook and chum salmon as bycatch in the past, and has the potential to do so each fishing season. These salmon are caught while large fishing vessels are trawling for pollock, and many originate in western Alaska (e.g. Guthrie et al. 2012; Kondzela et al. 2012). These salmon cannot be legally retained and the majority is thrown back into the ocean dead or dying. Salmon returns in the Bering Strait region (Seward Peninsula and Norton Sound areas) have been declining for several decades and many restrictions on subsistence salmon harvests have been enacted. Tribes believe that salmon bycatch in commercial fisheries is likely playing a role in these declines in salmon returns.

Various measures have been put in place by the NPFMC in an attempt to stem salmon bycatch in the pollock fishery. These measures have included time and area closures, including rotating hot spots, and salmon bycatch caps (NPFMC 2009d; NPFMC 2012). Tribes are extremely concerned about salmon bycatch in the pollock fishery and its impact on residents' ability to harvest salmon for subsistence. Tribes have argued for more and stronger measures surrounding the pollock fishery and have been involved in the development of some of these measures, but not to the degree that they have requested and wanted to be. Many of the alternatives that were eventually chosen for implementation were developed prior to any formal tribal

consultation being conducted. Bering Strait region tribes are concerned that poor salmon returns have and will continue to contribute to loss of a nutritionally and economically important food, a culturally preferred food, and to the loss of cultural traditions and knowledge because they are not able to carry out traditional salmon fishing practices.

3.4 Increasing Vessel Traffic

Vessel traffic through the Bering Strait region is increasing at a steady rate and is predicted to continue to increase (Laughlin et al. 2012; McConnell et al. 2013; CMTS 2015). Tribes in the region have multiple concerns about existing ship traffic and the likelihood of it increasing. Some of the threats related to ship traffic that Bering Strait region tribes have identified include pollution (ship discharge into the water and air, spills) that will contaminate the marine environment and subsistence foods, noise disturbance negatively impacting marine mammals, shipping lanes disturbing marine mammal migrations, ship strikes to marine mammals, lack of spill response infrastructure in the region, subsistence hunter/small boat collisions with or interference from large ships, and lack of tribal participation in shipping-related policy development (e.g. Kawerak 2013d). The majority of decisions regarding vessel traffic through the strait are made in Washington, D.C. or in international contexts – typically far from the communities that are and will experience impacts from such traffic. As a result, Bering Strait region tribes have been very minimally involved in planning and policy development related to increasing vessel traffic. Tribal entities have submitted comments to various entities (e.g. Ray 2011, 2012; Kawerak 2013d; 2015; Raymond-Yakoubian 2013b) about their concerns and the need for shipping-related protections and have continually expressed their desire to be meaningfully involved in policy development and other processes surrounding this issue.

3.5 Resource Development

Offshore resource development activities are taking place in both the northern Bering Sea and north of the Bering Strait. Multiple corporations are pursuing oil exploration and development activities in the Chukchi and Beaufort Seas. Tribes are concerned about oil spills, drilling-related ship traffic, noise from drilling-related rigs and ships disturbing marine mammals, icebreaker noise and disturbance of sea ice habitats, and lack of spill response infrastructure in the area (e.g. Kawerak 2013d). These concerns were exacerbated by the events of 2012 involving Shell Oil Company in which one ship dragged anchor and drifted while in harbor, their drilling operation in the Chukchi Sea was forced to shut down the day after it began because of sea ice, and a drilling rig broke free of its tow lines and ran aground

(Clement et al. 2013: 16, 19). Bering Strait region tribes have been minimally involved in the environmental and regulatory process surrounding oil exploration and development. Federal regulators and oil corporations have focused on engagement with tribes physically closer to the development activities, rather than on the extent of impacts to species connected to communities in the Bering Strait region.

In the Norton Sound area, in the vicinity of Nome, offshore gold dredging activities have increased over the past several years. These floating dredges use large suction hoses to suck up benthic sediments and then pass them through sluices to obtain gold. These are mostly small operations, but their number has increased and there is an interest by larger mining corporations in developing larger offshore operations (e.g. Jewett et al. 2013). Tribal concerns related to dredging include the impacts to salmon from the turbidity caused by dredging, the re-introduction of settled contaminants into the water column (such as mercury), and dredge interference with nearby subsistence salmon fishing activities (i.e. dredges becoming entangled in salmon nets) (e.g. Bullard 2012).

3.6 Climate Change

The Arctic is experiencing a variety of climate change-induced effects (ACIA 2005; NCADAC 2013; IPCC 2013). Residents of the northern Bering Sea and Bering Strait region have experienced changes to fisheries, to sea-ice, to storm severity, in wind patterns (i.e. strength, direction and seasonality), as well as to other aspects of the environment (e.g. Oozeva et al. 2004; Kwok et al. 2009; Krupnik et al. 2010; Raymond-Yakoubian 2009; 2013a; Raymond-Yakoubian et al. 2014). All of these changes, particularly changes to sea ice, have wide-ranging impacts on the indigenous residents of the region and on the threats they are experiencing, which were discussed above. These changes also create new challenges related to the gathering and processing of traditional food sources. Climate change impacts can magnify the effects of threats such as commercial shipping and resource development activities (e.g. Overland et al. 2011) by increasing the ice-free season in which activities can take place, for example.

4 Tribal Frameworks

There are four aspects of tribal engagements with protected areas that will be addressed here: (1) indigenous justifications for protections, (2) examples of existing or proposed protections which have, or would, involve indigenous participation, (3) conceptualizations of protections which have strong significance to tribal members but are not standard to western discourses on protection, and (4) the importance and neglect of relationship-based frameworks in western models of protection.

4.1 *Indigenous Justifications*

Tribal solutions to the threats and challenges described above may include a variety of protections and potential protected areas. Many Bering Strait tribes support the maintenance of existing protected areas and the creation of additional protective measures or protected areas. One challenge to developing new protections in the Bering Strait region (as well as other parts of the world) is determining why particular areas should be protected, as well as differing ideas of what “protections” should look like and consist of.

Bering Strait tribal communities are primarily concerned about the protection of subsistence-harvested resources, protection of the ecosystems those resources depend on, and the rights of tribal members to harvest those resources as their ancestors have done for generations. Some tribal solutions for protection of those rights and resources may appear similar to existing western models, but the reasons behind those solutions may often be different. For example, Bering Strait region tribes supported the creation of and support the continuing existence of, the NBRSA and the commercial bottom trawl prohibitions that go along with it. Tribes support this because of their concerns over disturbance to benthic habitats that are important for marine species and their own ability to carry out subsistence practices. The federal government, however, supported the creation of the area as a precautionary measure until it could conduct research to determine how much trawling was feasible in the area (e.g. as a potential precursor to trawling). So while tribes and the government both support the same overall protected area, tribes would like for it to exist in perpetuity, while it is the intent of the government to eventually allow bottom trawl fisheries into the area when feasible. Without proper tribal consultation (or without timely and meaningful consultation) there may be misunderstandings – by all parties – regarding the true intent and operation of various protections.

4.2 *Indigenous Examples*

Bering Strait tribes have proffered various ideas and suggestions as to the protections they would like to see implemented. Some have been implemented (primarily when they match western management and policy ideas) and some have not been implemented or investigated. A recent example of effective community-initiated work in the Bering Strait region comes from Saint Lawrence Island. The tribes of Saint Lawrence Island have created tribal ordinances to enforce proper walrus harvest practices, based on traditional Saint Lawrence Island Yupik values and practices (Metcalf and Robards 2011). These ordinances were developed by tribal members and the Eskimo Walrus Commission to ensure that walrus resources were protected and properly utilized. The USFWS, which is the federal manager of walrus, has agreed to these ordinances and allows tribes to locally enforce them.

Other tribal solutions to some of the current challenges in the region include placing some additional areas permanently off limits to benthos-disturbing activities and/or to vessel traffic (e.g. Kawerak 2013d). For example, tribes have discussed their desire to have protected areas around various islands in the northern Bering Sea, such as Little Diomed Island, which transiting vessels would be prohibited from entering. The purpose of such areas would be to reduce the potential for vessel disturbance to marine mammals and subsistence hunting activities, as well as reducing the potential for ship-island collisions. Additionally, certain times of the year are particularly important for marine mammal migrations, pupping and calving, and other activities. Tribes have also noted their desire to have certain areas in the northern Bering Sea and Bering Strait placed off limits to large vessel traffic during sensitive times of the year. This would likely involve season-specific routing measures for traffic.

Unfortunately, the reality is that we do not have a detailed idea of what 'tribal protections' can look like because the majority of protected areas and protections created in the region have all been imposed by outside entities and have been developed with a 'top-down' approach. There are abundant opportunities for managers and policymakers to collaborate on community-based and community-endorsed protections in the northern Bering Sea and Bering Strait region – protections that are based on both community and ecosystem needs as well as traditional knowledge and western science.

4.3 Alternate Conceptualizations of Protection

Indigenous attachments to place can be extremely strong and meaningful (e.g. Basso 1996; Thornton 2008). For Bering Strait tribal members, ties to place, including the vast expanse of the marine environment, are powerful and related to history, culture, tradition and identity. Relationships with places, like with other people and with animals, are related to cultural ideals of reciprocity and sharing. Indigenous residents of the Bering Strait region take the stewardship of lands, waters and resources very seriously.

One Bering Strait example of this comes from the village of Elim, in Norton Sound. During research with Elim residents on the topic of the importance of various subsistence resources, the author was told time and again about how one of the reasons people loved their community and the surrounding area so deeply was because they own the land (the village corporation is the landowner) and because of the access to subsistence resources that they depend on. Elim people take care of their land and waters because the land and waters take care of them. Ownership of, stewardship of, and a long relationship with, lands and waters, such as what indigenous residents of the Bering Strait have, are powerful means to obtain the protections of such places.

While the indigenous residents of Elim may own the land around them, because of various historical facts of law, indigenous people do not own or technically have

any control over the marine waters of the northern Bering Sea and Bering Strait. They do, however, have millennia-long histories of utilizing and caring for these ecosystems and have longstanding relationships with the marine mammals and other marine resources that are a part of this environment. While some indigenous conceptualizations of importance may fall outside western norms of justifications to protect areas, indigenous residents of the region have significant reasons (nutritional, economic, cultural, spiritual) to be invested in the protection and care of marine waters.

4.4 The 'Relationship'

There is a rich body of literature documenting the importance of reciprocity and relationality to the nature of the interactions and interconnections between northern indigenous people and their environments (e.g. Hallowell 1960; Brightman 1973; Fienup-Riordan 1999; Tanner 1979; Berkes 1999; Cruikshank 2005; Willerslev 2007). This pattern holds true for Bering Strait peoples as well. However, protected areas and related management and policy actions in the Bering Strait, largely driven by non-local processes despite their substantial impact on local peoples, are largely devoid of any concept of the 'relationship'. In terms of human-human interactions, while a legal framework exists for respectful and meaningful relationship-based process of management and policy between indigenous residents on one hand and managers and policymakers on the other hand (the formal tribal consultation process as codified in EO 13175 and elsewhere), in practice this process is only rarely followed as intended. Additionally, in terms of conceptualizations of the environment, indigenous perspectives on the environment – which have long foregrounded concepts of reciprocity and relationality – are largely absent from western scientific, management, and policy discourse (though this has been changing to some degree in more recent times with the growing attention to Traditional Knowledge⁴). Instituting in practice a more relationship-based management and policy 'ecosystem' – in terms of both human-human and human-environment issues – would constitute a great step forward in the involvement of indigenous concerns relating to environmental protection. This would involve taking seriously both existing legal frameworks and human rights on the one hand and indigenous history and culture on the other; at their core both involve recognition of the basic existence and value of indigenous peoples and their knowledge.

In addition to specific protections to various resources and areas in the northern Bering Sea and Bering Strait area, tribes have a strong desire to be direct partici-

⁴Traditional Knowledge can be briefly defined as a holistic body of knowledge, held by a specific group of people, encompassing teachings, observations, experiments and experiences, and based on long-term and intimate contact with the local environment. This knowledge represents a way of life and often includes spiritual teachings, rules about proper behavior and resource use, and is passed on from generation to generation (see also Raymond-Yakoubian and Raymond-Yakoubian 2015).

Table 1 Examples of threats to subsistence and culture in the Bering Strait region, and potential solutions supported by tribes

Threats	Solutions
Bottom trawl fishing	Permanent closure of the Northern Bering Sea Research Area to commercial bottom trawl fishing
	No research trawl activities without prior, formal government-to-government tribal consultation
Arctic fishing	Permanent closure of the Arctic Management Area
Salmon bycatch	Very low hard-caps on salmon bycatch, which would result in immediate closures of the pollock fishery when met
Increasing Vessel Traffic	Strict regulation of ship discharge and noise
	Routing measures
	Creation of areas to be avoided permanently or seasonally
	Marine mammal observers on-board
	Sufficient response gear deployed in region
	Spill response and search and rescue training for village residents
	Free community access to ship location data (Automated Information System)
Resource exploration and development activities	Proven oil spill response plans
	Sufficient response gear deployed in region
	"No discharge" regulations for ships and drill rigs
	Limits on gold dredging activities at certain times of the year (related to salmon)
	Better oversight and enforcement of existing regulations related to gold dredging
Climate change	Implementation of the above solutions
	Global reductions in carbon emissions

pants in the design, justification and implementation of protections. While formal government-to-government tribal consultation is an important method through which to accomplish this, it is not the only way. Tribal experts have extensive and valuable information about Bering Sea and Bering Strait ecosystems, including animals, ocean currents, weather, and how to safely operate boats and equipment in Arctic waters. Agency and researcher partnerships with tribes and tribal entities are an additional way to ensure that tribes are meaningfully involved in region management and policy.

Following from the above, tribal consultation, or other partnerships that directly engage tribal members and their knowledge, have the potential to lead to community-initiated protections that both protect subsistence resources as well as meet the goals of federal, state and international managers and policymakers. Another benefit of such community-based work is the development of long-term relationships and the likelihood that that tribes and tribal members living and working in the region will support and endorse such measures because they had a voice and a hand in developing them (Table 1).

5 Conclusions

The Bering Strait region of Alaska is the home of three groups of indigenous people, all of whom rely on the marine environment to meet their subsistence needs and to fulfill diverse roles in their rich cultural and spiritual lives. Indigenous people are the original residents of the region and have longstanding knowledge of and relationships with the marine environment. This relationship is based on generations of observations, experiences, and knowledge-sharing between individuals, and is the basis for what is often called 'traditional ecological knowledge'.

Various protected areas currently exist in the marine environment of the northern Bering Sea and Bering Strait region. There are critical ecosystems and resources in the Bering Strait region, resources that are important to local tribes and communities, to the United States, and to the global community.

This chapter has argued that, from the perspective of indigenous people, additional protected areas or protections to specific resources are needed in the region. While protection of subsistence resources and a subsistence way of life is the priority for many indigenous residents, and western policymakers and resource managers may have different justifications for protections, this chapter suggests paths for jointly moving forward when engaging these issues. The majority of existing protections were put in place with little formal input from indigenous residents of the region and no formal tribal consultation. Indigenous residents are concerned about many threats to marine ecosystems and their subsistence way of life, have identified connections between various threats, and also have suggestions for solutions to these threats. Any new protected areas or protections, or any modifications to existing ones, must be developed in collaboration and consultation with the indigenous residents of the region. Western managers and policymakers must recognize the indigenous right to participate in policy and management decision making. If agencies and governments take the time to develop relationships with tribes and tribal members in the Bering Strait region it will not only enhance support for protections, but collaboration with tribes and their traditional knowledge base will lead to better decision making regarding the need for protected areas and determining what form protections could most effectively take.

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Thora Martina Herrmann • Thibault Martin
Editors

Indigenous Peoples' Governance of Land and Protected Territories in the Arctic

 Springer

Editors

Thora Martina Herrmann
Département de géographie
Université de Montréal
Montréal, QC, Canada

Thibault Martin
Université du Québec en Outaouais
Gatineau, QC, Canada

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