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Incorporating Indigenous Rights and Environmental Justice into Fishery Management: Comparing Policy Challenges and Potentials from Alaska and Hawai'i

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Abstract Colonial processes including the dispossession of indigenous lands and resources and the development of Western management institutions to govern the use of culturally important fish resources have served in many ways to marginalize indigenous interests within the United States fisheries. In recent years, several US fishery institutions have begun to develop policies that can confront this colonial legacy by better accommodating indigenous perspectives and rights in fishery management practices. This paper analyzes two such policies: the 2005 community quota entity program in Alaska which permits rural communities (predominantly Alaska Native villages) to purchase and lease commercial halibut fishing privileges and the 1994 State of Hawai'i community-based subsistence fishing area (CBSFA) legislation through which Native Hawaiian communities can designate marine space near their community as CBSFAs and collaborate with the state of Hawai'i to manage those areas according to traditional Hawaiian practices. The analysis reveals a striking similarity between the trajectories of these two policies. While they both offered significant potential for incorporating indigenous rights and environmental justice into state or federal fishery management, they have so far largely failed to do so. Environmental managers can gain insights from the challenges and potentials of these two policies. In order to introduce meaningful change, environmental policies that incorporate indigenous rights and environmental justice require a commitment of financial and institutional support from natural resource agencies, a commitment from indigenous groups and communities to organize and develop capacity, and careful consideration of contextual and cultural factors in the design of the policy framework.

Keywords Indigenous · Environmental justice · Community-based management · Co-management · Fisheries

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Introduction

United States fisheries managers face an array of challenges. They need to make decisions about fish resources while balancing a range of biological, social, and economic concerns. They must make difficult choices about the allocation of limited resources to a variety of competing user groups. In addition, managers often need to make rapid decisions based on incomplete information. Given the day-to-day challenges and immediacy of fisheries management, it can be difficult for managers to take a long range view and consider the historical processes that brought their particular management regimes into power. A historical lens reveals that US fisheries management at both the state and federal levels has significant colonial roots (Nesper 2002; Wilkinson 2006; Richmond 2011). To acquire new territory in the continental United States and later in Alaska and Hawai'i, the United States government, often without the permission or knowledge of indigenous groups, claimed control over lands and resources that had been occupied and utilized by those groups for thousands of years. Over time, the United States developed Western management institutions to govern the use of these natural resources, including fish. These management structures, which tended to contrast with indigenous ideas about resource use, have worked in subtle and overt ways to marginalize indigenous interests in historically and culturally important fisheries.

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Far from being a historical artifact, the colonial legacy of fisheries management continues to impact the lives and activities of indigenous fishermen and communities in the present. Governmental restrictions on resource use have been shown to disrupt indigenous cultural practices as well as impede the ability of subsistence fishermen to feed their families (Huntington 1992; Nesper 2002; Sepez-Aradanas 2002). Erosion of indigenous commercial fishing access under Western management regimes has contributed to cultural and economic hardships for indigenous communities with a history of commercial fishing, including, in some cases, outmigration from these places (Carothers 2007; Reedy-Maschner 2007; Carothers and others 2010). Centralized management of natural resources has alienated many indigenous groups from participation in the stewardship of local fish populations; in many cases this has contributed to declines in culturally important fish resources as a result of a variety of external pressures (Yoshiyama and others 1998; Sepez-Aradanas 2002; Kittinger and others 2011).

As it developed, the field of environmental management was primarily concerned with developing mechanisms to conserve and protect ecological entities such as fish stocks, forest stands, and water resources. In the 1990s, environmental and human rights narratives began to converge, leading to greater consideration of concepts of environmental justice. Environmental justice impacts occur when a regulation disproportionally delivers adverse effects to "minority populations and low income populations" (Clinton 1994). This increased attention to environmental justice requires environmental mangers to consider the social and distributive implications of management strategies in addition to the ecological ones. Developing strategies to overcome the marginalization of indigenous interests within the nation's fisheries is an important part of restoring environmental justice to U.S. fishery management. This requires managers and policy-makers to better understand and incorporate indigenous rights into their management activities.

Due to significant efforts by indigenous groups throughout the US, concepts of indigenous rights have become more visible in fishery management circles (NMFS 2009; WPRFMC 2009; Sepez-Aradanas 2002). Several US fishery institutions have begun to develop policies to better accommodate indigenous perspectives and rights within a framework of sustainable fisheries management. Policies have included:

(1) Subsistence fishing designations for indigenous groups that include a broad range of fishing activities (Fall 1990; Sepez-Aradanas 2002; CFR 2003).
(2) Community quota programs where indigenous communities can allocate shares of commercial fish resources to community members (Tryon 1993; Carothers 2011).
(3) Traditional ecological knowledge initiatives that incorporate indigenous knowledge into natural resource management activities (Eamer 2006; Huntington 2011).
(4) Frameworks for indigenous or tribal consultation during the development of fisheries policies (NMFS 2009; WPRFMC 2009).
(5) Indigenous and community-based marine protected areas (King and Fa'asili 1999; Pollnac and others 2001; Johannes 2002; Sauafea-Ainu'u 2002; Higuchi 2008).

These environmental management initiatives are unique because they seek to address social, cultural, and distributive concerns in fishery management rather than solely focusing on ecological or economic concerns. The proliferation of fisheries policies focused on indigenous interests in particular is exciting because many of these policies have been developed voluntarily by state and federal institutions without pressure from legal mandates which have tended to guide much of indigenous policy within the United States. However, before these policies can be seen as contributing to a broader shift in the fishery management community to better address indigenous environmental justice concerns, it is important to examine how particular policies have fared once implemented on-the-ground.

In this paper, I examine the implementation of two fisheries policies that had the potential to either directly or indirectly address issues of indigenous rights and environmental justice in U.S. fishery management: the 2005 *community quota entity (CQE) program* in Alaska which permits rural communities (predominantly Alaska Native villages) to purchase and lease commercial halibut fishing privileges and the 1994 State of Hawai'i *community-based subsistence fishing area (CBSFA)* legislation through which Native Hawaiian communities can designate marine spaces near their communities as CBSFAs and collaborate with the state of Hawai'i to manage those areas according to traditional Hawaiian practices.

In addition to the two policies examined in this paper, there have been many fisheries initiatives with the potential to address indigenous rights and environmental justice in Alaska and Hawai'i (Fall 1990; Sepez-Aradanas 2002; FR 68 18145, April 15, 2003; NMFS 2009; WPRFMC 2009). Most notably, in Hawai'i there has been a movement to revitalize a traditional Hawaiian institution of resource management—referred to as the 'Aha moku council—and have that body act in an advisory capacity to the state's Department of Land and Natural Resources (DLNR) (Act 288 (12), Hawaii State Legislature 2012). The CQE program in Alaska and the CBSFA legislation in Hawai'i were selected for specific analysis because they highlight the breadth of possible initiatives that could incorporate

indigenous rights and environmental justice into fishery management. The CQE program has the potential to increase Alaska Native access to the commercial harvest of pelagic fish resources important to their communities, while the CBSFA legislation seeks to develop an avenue for Native Hawaiian communities to have a more direct role in the management of their nearshore subsistence resources. They were also selected because despite coming from such different resource and institutional contexts, they have experienced common challenges and these are challenges that have been evident in many similar policy initiatives.

This paper provides institutional analyses of these policies to examine the process through which they were implemented and evaluate their success in terms of addressing indigenous rights and environmental justice. Analyses of the two policies draw on a variety of methods: participant observation of key meetings and community activities over seven years of research in the fisheries of Alaska and Hawai'i, including over a year of living in the Alaska Native fishing village of Old Harbor; semi-structured interviews with individuals involved in all aspects of the specific policies including indigenous community representatives, policy-makers, agency staff, and representatives of environmental and indigenous non-governmental organizations (cited as author interviews in the text); and an extensive review of government, academic, and community materials surrounding the policies.

The analysis reveals striking similarities between the trajectories of these two policies. While they both offered significant potential for incorporating indigenous rights into state or federal fishery management, they have so far largely failed to do so. A collective assessment of these two policies can provide insights for efforts to better incorporate indigenous rights and environmental justice into practices of environmental management.

Indigenous Rights and Environmental Justice in a Fisheries Context

This paper draws from specific legal and theoretical frameworks when discussing concepts of indigenous rights and environmental justice in fisheries management. The United Nations Declaration on the Rights of Indigenous Peoples was adopted by the UN General Assembly in 2007 with endorsements from 143 nations and was later, in 2010, endorsed by the United States. The Declaration includes several references to indigenous rights with respect to resources such as fish. Article 26 of the declaration states that "Indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired" (United Nations 2008). For indigenous fishing communities, this would include rights to traditionally used fish resources. The Article goes on to state that legal recognition of these rights "shall be conducted with due respect to the customs, traditions and land tenure systems of the indigenous peoples concerned" (United Nations 2008), emphasizing that efforts to address indigenous rights be relevant to Indigenous cultural orientations toward resource use. Article 29 of the declaration states that "Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources" (United Nations 2008). In a fisheries context, this would mean that indigenous groups have the right to ensure and be involved in the sustainable management of traditionally used fish resources.

In a 2002 paper, Jennifer Sepez-Aradanas highlights the growing use of concepts of "cultural rights" or the "right to culture" in environmental management practices that affect indigenous groups in the United States. She describes how for many indigenous groups, use of natural resources (including fish) has been an important aspect of their culture and economy (Sepez-Aradanas 2002). Loss of access to resources either through a decline in resources due to a "variety of pressures unrelated to subsistence use" or due to restrictive harvest regulations can lead to disproportionate hardships to indigenous groups who rely on the resource for specific cultural purposes. Fishery management activities that deliver disproportionate impacts to indigenous communities with historical and cultural ties to resources represent environmental justice concerns (Clinton 1994).

The treaty rights cases involving American Indian tribes in the continental United States can provide an important legal precedent for efforts to incorporate indigenous rights into fishery management. Through a series of cases, most significantly the 1974 Boldt Decision (US vs. Washington) and the 1990 Crabb Decision (US vs. Wisconsin), courts ruled that tribes who had signed treaties with the US government with explicit clauses protecting hunting, fishing, and gathering rights were entitled to up to half of the fish resources in the ceded areas (Satz 1996; Nesper 2002; Wilkinson 2006). In addition to allocating treaty tribes a portion of harvestable fish resources, the courts established co-management arrangements through which treaty tribes and state governments work together to manage shared resources (Nesper 2002; Wilkinson 2006).

Indigenous groups in Alaska and Hawai'i have different political histories from those in the continental United States and as a result did not sign treaties. This means that they have had to seek other legal and policy avenues to protect their rights and importantly their cultural practices associated with fish harvest. The United Nations Declaration on the Rights of Indigenous Peoples, the concept of

cultural rights, and rulings from treaty rights cases can all provide important guidance as to what meaningful incorporation of indigenous rights into U.S. fishery management could look like. These frameworks highlight three important elements:

(1) Indigenous rights include appropriate access to or allocations of fish resources traditionally used by indigenous groups.
(2) These rights also encompass indigenous involvement in the management and stewardship of traditional fish resources.
(3) Involvement of indigenous groups in management and allocation of traditional fish resources should be culturally relevant.

Analysis of Policies

Gulf of Alaska Community Quota Entity Program

Alaska Natives experienced a process of double colonialism, first by Russians and later by the United States. Beginning in the mid-1700s, the Russian period was brutal for Alaska Natives, many of whom were conscripted as slaves into the fur seal industry. It is estimated that during that period, Alaska Native populations declined by as much as 80 % (Alaska Native Heritage Center 2009). In 1867, without any consultation with the Native inhabitants, Russia sold Alaska to the United States (Case and Voluck 1984). Even throughout this changing political landscape, fishing has played a central role in the diet, culture, and economy of coastal Alaska Native communities for thousands of years (Fitzhugh 2003; Steffian and others 2006).

There are various state and federal regulations in place that serve to protect Alaska Native subsistence use of fish resources (CFR 2003; United States Congress 1980). However, many scholars and community representatives have argued that in contemporary Alaska Native life, the protection of only subsistence fishing rights can be very limiting. Archival and oral historical information reveals that in addition to subsistence fishing, commercial fishing has been a central component of the economies and cultures of coastal Alaska Native villages, many of which are small and remote (Mishler 2007; Carothers 2008; Langdon 2008; Reedy-Maschner 2010). Archeological evidence suggests that aboriginal fishermen from the Gulf of Alaska region have been involved in fishing activities not just as a means of subsistence, but also as a source of labor, social status, and integration into a wider economy of trade for over 800 years (Fitzhugh 2003). Coastal Alaska Native communities in Southeast and Southcentral Alaska have been involved in large-scale commercial fishing since salmon canneries began to be established in the late 1800s (Roppel 1986; Carothers 2008). Anthropologists have described these Alaska Native communities as participating in a mixed subsistence-cash economy where subsistence harvest of resources is supplemented with cash to fund the purchase of fuel, boats, gear, food, and other amenities (Wolfe 2000; Langdon 2008). Due to their remoteness, commercial fishing is one of the few economic opportunities available in these Alaska Native villages and continued participation in commercial fishing is central to the persistence of these communities (Carothers 2007, 2008; Langdon 2008). Commercial fishing has also become a central component of the culture of these communities (Langdon 2008; Richmond 2011). In an interview, a resident from Old Harbor, an Alaska Native community in the region, stated "to become skippers [of commercial fishing vessels]…was always our goal and our dream when we were little kids." (Author interview #1 2008).

Prior to privatization, which changed the landscape of the fishery, the commercial harvest of Pacific halibut was a significant part of the livelihood and cultures of Alaska Native villages in the Gulf of Alaska; as a species, halibut's importance was likely second only to salmon (Langdon 2008). Before 1995, any US citizen who purchased an inexpensive license could participate in Alaska's halibut fishery. The fishery was managed through seasonal closures with the goal of limiting harvest to an annual catch limit. As more and larger vessels began to enter the fishery, managers were forced to shorten the length of the season. By the early 1990s participation in the fishery was so high that the commercial halibut season was reduced to two or three single day openings, often referred to as derbies (Berman and Leask 1994). Under this system, small-scale enterprises could participate in the fishery because little capital was needed to enter. Prior to 1995, many Alaska Native fishermen from the Gulf of Alaska region participated in the fishery (Langdon and Miller 1983). These Alaska Native participants represented a range of operational sizes from large salmon seining vessels to small skiffs (Langdon and Miller 1983; Author interview #1 2008).

In the early 1990s managers began to observe some troubling economic, safety, and conservation concerns suggesting that this derby form of management might not be sustainable (Richards 1987; Berman and Leask 1994, Pautzke and Oliver 1997). In 1995, the North Pacific Fishery Management Council decided to dramatically alter the management regime of the commercial halibut fisheries through a form of privatization called an Individual Fishing Quota (IFQ) system (NOAA Fisheries Service 1993). At the same time the Council privatized the sablefish fishery; however, the bulk of this analysis will focus on activities in the halibut fishery. The program granted the right to fish a

set amount of halibut to individual fishermen in the industry based on their fishing history. These fishing privileges or IFQs then became commodities that could be bought or sold among fishermen with at least 150 days of crew experience on a commercial fishing vessel. Fishery privatization created a boon for historical vessel operators who were granted access rights to halibut resources at no charge, while any new fishermen would have to secure financial backing to purchase quota shares.

The fishery privatization scheme was not received equally by all fishermen. Research reveals that the program has increasingly marginalized rural, community-based fishermen who lack the resources to purchase fish shares (Carothers 2007, 2008; Carothers and others 2010). An analysis of quota transfer patterns revealed that in the Gulf of Alaska, indigenous fishermen were disproportionately affected by the program, with residents of Alaska Native fishing villages having an increased likelihood of selling quota (Carothers and others 2010). From 1995 to 2009, small remote fishing communities in Alaska lost on average 45 % of their initially allocated quota shares (NPFMC 2010). This loss in quota shares was linked to a variety of complex factors including sale of IFQs to outsiders, seizure of IFQs to pay tax related debts, and outmigration from villages by IFQ shareholders (Carothers 2008, Author interviews #2 #3 2008). For many Alaska Native fishing villages, this meant that rights to fish halibut resources had been transferred out of their community. These changes delivered profound impacts to Alaska Native communities including the loss of fishing careers and reports of increased outmigration from villages to areas with better economic opportunities (Carothers 2007, 2008; Langdon 2008).

The IFQ program raises environmental justice concerns because research reveals that the policy has marginalized Alaska Native fishermen who have traditionally relied on commercial halibut resources for economic and cultural purposes (Carothers and others 2010; Richmond 2011). From the standpoint of indigenous rights, by facilitating disproportionate losses of halibut quota shares from Alaska Native communities, the IFQ program has contributed to a decline in indigenous access to traditionally utilized resources. Certain Alaska Native communities have taken issue with US managers for failing to consider aboriginal claims to marine resources in the outer continental shelf (3–200 miles) during the allocation of fishing privileges under the IFQ program (No. 98-1437 Native Village of Eyak, and others, Petitioners vs. William M. Daley, Secretary of Commerce).

In response to the negative impacts they observed in their communities, members of remote fishing villages in the Gulf of Alaska began to work together to develop a political strategy to address the inequalities associated with the IFQ program (Carothers 2011). After years of political advocacy from Gulf of Alaska communities, in 2005, the NPFMC established a CQE program for the Gulf of Alaska region in the halibut and sablefish fisheries. The CQE program allows a community-based entity, a non-profit organization designed for this purpose, to purchase a large amount of halibut or sablefish quota. This entity is then able to lease the purchased quota to residents of the small community in a manner that they see fit. The CQE program mirrors a successful program established in 1992 in the Bering Sea region called the Community Development Quota (CDQ) program, which enabled the allocation of fish resources to non-profit associations representing small, predominately Alaska Native communities from that region (National Research Council 1999). The CQE differed from the CDQ program in one fundamental way—in the CQE program communities must purchase quota shares, whereas in the CDQ programs shares were allocated to communities at no cost. Essentially, the CQE program provided a vehicle through which communities could buy back fishing privileges that they had lost following IFQ implementation.

By using the term "community," the CQE program does not specifically target Alaska Native participants in the fishery and for the most part indigenous discourses were not utilized to advocate for the development of the program. However, through the definition of community, Alaska Native communities have been the primary recipients. To be eligible for inclusion, Gulf of Alaska communities must have a population of less than 1,500 people, no road access to larger communities, direct access to salt water, and documented historic participation in the halibut or sablefish fisheries (NPFMC 2010). Through this criteria, 42 eligible communities were identified; of those, 33 (79 %) were predominantly Alaska Native (Langdon 2008). The NPFMC primary objective for the program was to help these communities "ensure access to and sustain participation in the commercial halibut and sablefish fisheries." (NPFMC 2010, p. 2). Designers of the program hoped that through leasing halibut quota from the CQE, community-based fishermen would "gradually be in a position to purchase their own quota share" (NPFMC 2010, p. 2).

The CQE program appeared to be an exciting new initiative for indigenous and rural fishermen in Alaska. The CQE policy had the potential to redress environmental justice concerns from IFQ management of the fishery and increase indigenous and rural community access to fish resources. In practice, however, the CQE program encountered a number of challenges. In the 9 years since its inception, it has largely failed to achieve its goals (Langdon 2008; NPFMC 2010; Carothers 2011). By 2010, 20 CQEs had been formed representing 21 of the 42 eligible communities, indicating widespread interest in the

program (NPFMC 2010). But, due to many barriers, only two of those CQEs, Old Harbor (30,268 pounds in 2006) and Ouzinkie (8,270 pounds in 2011), have actually been able to purchase halibut shares (Carothers 2011). Both Old Harbor and Ouzinkie are Alaska Native (Sugpaiq) communities on Kodiak Island. This represents less than 0.01 % of the approximately 6.5 million pounds that all 42 communities are eligible to purchase under the program caps (NPFMC 2010).

Some of the key challenges faced by CQE communities were the high cost of halibut quota shares, the limited availability of quota shares for purchase, and the lack of viable financing options to purchase them (Langdon 2008; NPFMC 2010; Carothers 2011). As an example, Old Harbor paid "in the neighborhood of $500,000" for their CQE shares (Langdon 2008, p. 179; Carothers 2011). Such high costs required communities to seek significant financing for CQE purchases. Many communities that did encounter shares to purchase found that the financing options available including state and private loans were limited and unfavorable, many with high interest rates (Langdon 2008). At least one community had quota shares and financing lined up for purchase, but were forced to back out of the agreement when they learned the terms of the loan (Langdon 2008).

Another challenge of the CQE program was the policy's definition of who was included in any given "community." The policy states that to be eligible to lease CQE halibut quota, an individual must have "maintained a domicile in a rural community…for the 12 consecutive months immediately preceding the time when the assertion of residence is made" (50CFR 679.41(g)(6)). Interview and oral historical accounts indicate that this fairly rigid definition of community differs from the more flexible way many residents of Alaska Native villages have understood communities. Residents of Kodiak Island villages traditionally moved among different communities on Kodiak Island for seasonal fishing activities, so residency for 12 continuous months in one village was uncommon (Richmond 2011). In addition, in part due to the loss of fishing opportunities from regulatory changes like the IFQ program, many community members of rural villages in the Gulf of Alaska have since moved out, yet they maintain connections to their communities by visiting frequently (often for entire seasons), sending back financial support and supplies, and hosting village residents when they travel out of the community (Richmond 2011). Under the current definition, these types of community members would not be eligible to lease CQE quota.

A coalition of Gulf of Alaska Coastal Communities (GOAC3) has petitioned for the North Pacific Fishery Management Council to alter these rigid residency requirements. In their proposed amendment, they stated that "the current rules erect an unreasonable barrier to those who are not current CQE community residents but who would move back to the community if adequate fisheries opportunities were available" (GOAC3 2009).

The first and longest running CQE program is located in the Alaska Native community of Old Harbor on Kodiak Island. Old Harbor was able to finance the purchase of approximately 30,000 pounds of halibut quota through a creative use of funds from their village corporation, which was established under the 1971 Alaska Native Claims Settlement Act (ANSCA). ANSCA settled Alaska Native aboriginal claims to lands and resources in the state through the provisioning of lands and monetary compensation to Alaska Native groups. Village and regional corporations were established to invest the settlement money and oversee use of the lands (Jones 1981). Loan repayment is made to the Old Harbor Native Corporation by charging fishermen a lease rate of 45 % of gross earnings (Cape Barnabus, Inc. 2009).

The board of directors developed a ranking system to distribute the quota shares to resident fishermen who applied for them. They established two pools of quota, a "General Quota Pool" for more experienced fishermen and an "Entry Level Quota Pool" to encourage new fishermen to lease quota and enter a career of fishing (Cape Barnabus, Inc. 2009). They developed a point system for applicants that reflected the community's unique values including additional points for applicants who "employ Old Harbor residents" as crew (Cape Barnabus, Inc. 2009). Between 2006 and 2009, the CQE leased quota to 5–10 participants using 3–5 vessels each year (NPFMC 2010). All leases and the majority of the crew on these fishing trips were Old Harbor residents. Several residents who participated in the program stated that it has helped to provide them with "a little bit extra" income, but given the small number of shares available and the high lease rates, at this stage it cannot constitute a large share of a fisherman's needed yearly earnings (Author interview #4 2009). The original goal of the CQE program that fishermen could use income from the program to eventually purchase their own halibut shares and enter the fishery has not been realized in Old Harbor. Achieving that goal seems even more distant for the 19 communities who have formed CQEs but not purchased quota shares and the 20 eligible communities that have not even formed CQEs.

The CQE had the potential to address concerns of indigenous rights and environmental justice by increasing access to commercial halibut resources among Alaska Native communities. However, given the challenges that the program has faced and the limited number of communities that have been able to purchase quota shares, it appears that the program has failed to increase rural and Alaska Native community access to commercial halibut resources in a meaningful way.

Community-Based Subsistence Fishing Area Legislation in Hawai‘i

Hawaiians have a different political history and face a different marine resource context from Alaska Natives. However, there have been similar efforts to increase Hawaiian involvement in the management and allocation of Hawai‘i’s fish resources. Transfer of the authority over the Kingdom of Hawai‘i to the US government took place against the wishes of the Hawaiian people through what has come to be called the 1887 Bayonet Constitution because King Kalākaua was forced to sign the constitution amid fears that he and the Hawaiian government would be removed by force (Silva 2004). The indigenous descendants of this Kingdom of Hawai‘i are commonly referred to as Native Hawaiians in policy language; however, many representatives prefer to use the terms Hawaiian or kānaka maoli to describe their people. Therefore, throughout this paper I will use the term Hawaiian. Hawaiians are not currently federally recognized. As a result, they have few avenues to advocate for resource rights in federal courts. However, Native Hawaiians are recognized by the state of Hawai‘i and the state’s constitution includes provisions designed to protect the interests of Hawaiians.

Hawaiians have not become as involved in the large-scale commercial harvest of Hawai‘i’s marine resources as their Alaska Native counterparts. Traditionally and at present, Hawaiians have harvested both pelagic and nearshore reef species for subsistence, cultural, and economic purposes (Kahā‘ulelio 2006; Hospital and others 2011). Currently, the state of Hawai‘i has only two legal categories of fishing—commercial and non-commercial. To sell any fish in Hawai‘i, residents are required to obtain a $50 commercial marine license; however, a license is not needed for any other kind of fishing in the state—sport, subsistence, or recreational. A recent survey found that nearly 24 % of a sample of small boat pelagic fishermen holding a commercial marine license were Hawaiian or part Hawaiian (Hospital and others 2011). The survey found that many of these small boat fishermen conducted a variety of different types of fishing—subsistence, recreation, commercial—even on a single trip (Hospital and others 2011). Many practiced expense fishing where they would sell one or two fish to help offset the fuel costs from the trip but would give the rest away to friends and family (Hospital and others 2011). This type of flexible fishing is possible due to the low cost of a commercial license.

While pelagic fishing has been important to Hawaiians, much of Hawaiian advocacy and attention has been directed toward the management of nearshore reef resources including fish, seaweed, and mollusk species which are important to Hawaiian diet and culture. Efforts to revitalize traditional Hawaiian fishing and management practices have tended to focus on reef resources as well (Friedlander and others 2002; Poepoe and others 2003). In interviews, community representatives and organizers mentioned that within many Hawaiian fishing communities any sale of nearshore marine resources is considered taboo, so harvesting of these resources tends to be linked to subsistence and cultural purposes such as practices of consuming, sharing, and bartering within the local community (Author interviews #6 #7 #8 2010 & #9 2011). Since nearly all reef resources fall within state waters (0–3 mi), Hawaiian advocacy for the protection of culturally important reef resources and traditional fishing practices has been directed toward the state government. There are legal grounds for this advocacy as the Hawai‘i state constitution has a broad provision that directs the government to protect Hawaiian traditional and cultural rights including subsistence activities:

> The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by Mil tenants who are descendants of Native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights. [Article 12, Provision 6: Add Const Con 1978 and election Nov 7, 1978].

Traditionally, Hawaiians subsisted on the islands by instituting a set of cultural practices that emphasized “conservative use of the islands finite resources” (Carl 2009, p. 203). Central to these practices was a form of land and marine tenure that is contemporarily referred to as *ahupua‘a*-based management (Chinen 1958). Under this system islands were divided into large parcels, called *moku* (Fig. 1). These *moku* were further broken down into smaller tracts of land called *ahupua‘a* which were each overseen by a chief or *ali‘i*. Typically, *ahupua‘a* were thin strips of land that stretched from the top of the mountain to the sea and contained a stream (Fig. 1). *Ahupua‘a* supported the production of a variety of foods which were shared among its residents—agricultural production in the uplands and the harvest and cultivation of marine resources in the coastal areas (Carl 2009).

Fishing played an important role in the culture and subsistence of Hawaiians. Fish resources were conserved through the institution of *kapu*. *Kapu* were part of a larger belief system and spiritual practice and they contained policies that dictated when resources could be gathered and included the establishment of closures of particular fisheries during spawning periods or times of overharvest; *kapu* were often linked to the lunar calendar (Poepoe and others 2003). *Kapu* were strictly enforced by overseers (*konohiki*) and punishment for breaking them was severe, including execution (Poepoe and others 2003; Carl 2009).

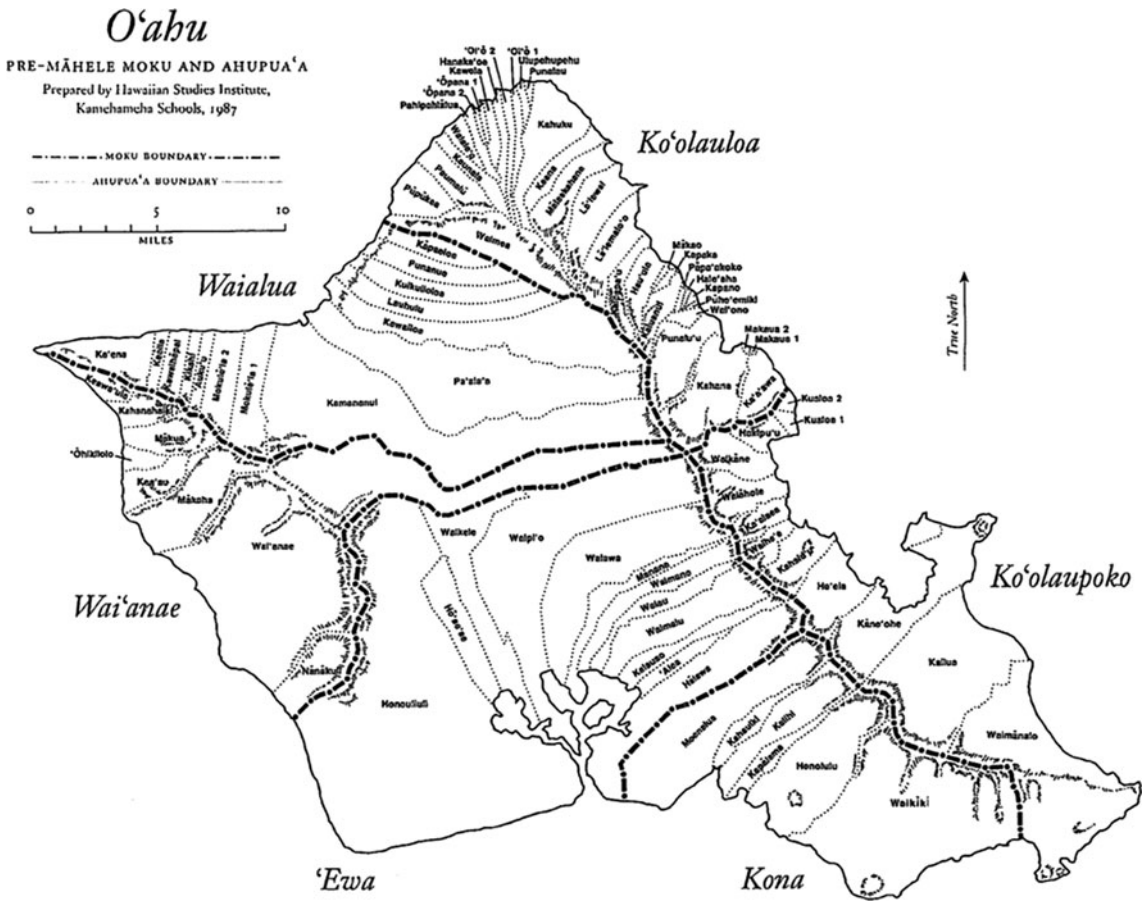

Fig. 1 Moku and Ahupua'a boundaries on O'ahu island from pre-māhele period. Prepared by Hawaiian Studies Institute, Kamehameha Schools, 1987

Ahupua'a-based management was also rooted in practices of exclusion; families that lived in one *ahupua'a* could not harvest resources from another *ahupua'a* without first receiving permission (Cordy 2000, 2009).

This Hawaiian system of land and marine management was highly effective, persisting for over 1,500 years and supporting human populations of 400,000–800,000 without the need for imported food (Carl 2009; Kittinger and others 2011). Processes of colonization beginning with the arrival of Captain Cook in 1778 contributed to the decline of this traditional system of government and resource management. The import of diseases decimated the Hawaiian population, the influx of Westerners looking for lands encouraged the development of private property systems of land ownership, and an increased global presence contributed to the conversion from an economy of subsistence to one of international trade (Carl 2009).

The decline of the traditional system of marine tenure has contributed to environmental justice and indigenous rights concerns in Hawai'i's fisheries. First, without cultural protections in place, resources became overexploited leading to severe declines in the populations of marine resources that were important to Hawaiian culture and subsistence (HDAR 1988; Maly and Pomroy-Maly 2003; Kittinger and others 2011). Second, the loss of these traditional systems of tenure broke connections with the cultural and spiritual practices of subsistence and management that were important to Hawaiian people (Moloka'i Subsistence Task Force 1994). The findings of a Hawai'i governor's subsistence task force stated that "subsistence has also been critical to the persistence of traditional Hawaiian cultural values, customs, and practices" (Moloka'i Subsistence Task Force 1994, p. 5).

Although the Hawai'i constitution specifically calls for the protection of Hawaiian traditional subsistence rights, by the 1990s there were increasing concerns that these protections were not being met. In 1993, the Hawai'i governor appointed a Moloka'i Subsistence Task Force "to document how important subsistence is to Moloka'i families… to determine the problems that were making it harder to do subsistence hunting, fishing, and gathering on Moloka'i, and to recommend policies and programs to improve the situation" (Moloka'i Subsistence Task Force 1994, p. 16). Moloka'i Island is very rural and has a strong Hawaiian

presence as well as high levels of subsistence practice. The task force found that practice of subsistence activities on Moloka‘i faced important threats including resource decline and loss of cultural continuity with traditional Hawaiian practices (Moloka‘i Subsistence Task Force 1994).

The efforts and findings of the Moloka‘i Subsistence Task Force led to the passage of a groundbreaking bill that would enable increased Hawaiian participation in the management and protection of subsistence resources important to their communities. The 1994 act allowed for designation of CBSFAs “for the purpose of reaffirming and protecting fishing practices customarily and traditionally exercised for the purposes of Hawaiian subsistence, culture, and religion” (Hawai‘i Revised Statutes Chapter 188-22.6). Once designated, the communities could work with agency officials to manage the areas according to traditional Hawaiian practices.

The legislation does not facilitate increased access to marine resources for Hawaiians. Instead, it aims to give Hawaiians a more central role in the management of resources near their communities, with the idea that to protect subsistence resources, communities would develop regulations that were more restrictive and more culturally relevant than those currently in place. The legislature also established the community of Mo‘omomi on Moloka‘i as a pilot project area. Eligible communities can achieve CBSFA through two processes: either by seeking designation from the State of Hawai‘i DLNR or through the passage of an act by the state legislature.

Following the passage of the act there has been widespread interest by Hawaiian fishing communities in seeking CBSFA designation. Many communities had observed troubling declines in marine resources near their communities and were looking for ways to regulate overharvest of community resources by external pressures (Author interviews #7 #8 2010 and #9 2011). However, upon implementation, the act met a number of challenges. Despite interest from over 19 communities, in the more than 15 years since the act was passed only two communities (Miloli‘i on Hawai‘i Island and Ha‘ena on Kaua‘i) have been able to designate CBSFAs and none have an approved management plan (Higuchi 2008). This means that there are no rules for the designated CBSFAs that make them any different from other sections of Hawai‘i’s coast. The community of Mo‘omomi experienced many frustrations and decided to abandon the state process and instead work on their own to develop local management capabilities (Poepoe and others 2003). As a result, Mo‘omomi did not achieve permanent CBSFA designation after the pilot project concluded in 1997 (Poepoe and others 2003). However, Mo‘omomi has been very successful in revitalizing and implementing traditional practices outside of the state system, leading to conservation of reef habitat and resources in the area (Friedlander and others 2002; Poepoe and others 2003).

An important challenge of the legislation has been difficulty by the DLNR in defining and working with communities. The CBSFA legislation was concise and gave very little guidance about how CBSFAs were to be selected and implemented or how communities were to be defined and this has contributed to some procedural difficulties (Author interviews #5 #6 #7 2010). Unlike the villages of Alaska which have municipal governments (and in the case of Alaska Native communities tribal councils and Native corporations), Hawai‘i communities do not have community-level governance institutions with which natural resource agencies could consult. For example, despite the large number of communities on O‘ahu, all of the population technically lives in the City and County of Honolulu, with a single Mayor. Also, communities cannot be easily bounded through residency definitions because they often bleed into other surrounding areas. Additionally, many coastal areas proposed for CBSFAs are regularly utilized by individuals who do not live in the adjacent community and these individuals might also seek a role in the management of CBSFAs.

Several agency, NGO, and community individuals who attended a 2008 public meeting to solicit comments on a proposed management plan for the Miloli‘i CBSFA reported that it was not a pleasant experience (Pers Comm, four meeting participants, 2011). A community activist developed a management plan that would ban several kinds of fishing in the CBSFA. He told the DLNR that it had broad support within the community, but during the meeting many community members reported that they had neither seen nor approved the plan. A broad range of stakeholders who attended the meeting including local and outsider fishermen, recreational operators, and community members expressed outrage and surprise over the contents of the plan and the proceedings quickly deteriorated (Command 2008). The West Hawai‘i Today newspaper reported that, “following an emotional vetting, a consensus was reached: do nothing” (Command 2008) and in the 4 years since this meeting, the Miloli‘i CBSFA remains without an approved management plan.

Many reports indicate that CBSFA legislation has not received strong or consistent support from the DLNR, which is the state agency charged with implementing the legislation (Author interviews #6 #7 #8 2010 & #9 2011). The only designated CBSFAs were created through legislative actions. In 2008, a group of four communities including Ho‘okena on Hawai‘i proposed legislation to designate CBSFAs in each of their communities, but, in part due to apparent lack of support from the DLNR, this legislation did not pass (Author interviews #8 2010 & #9

2011). A representative from a non-profit that had been helping Ho‘okena organize said that she has “never seen a community so defeated” than after the failure of this CBSFA legislation they had worked for years to develop (Author interview #8 2010).

The DLNR had logistical and constitutional reasons for resisting the development of CBSFAs. The legislation calls for the DLNR and communities to work together to develop rules and management plans for CBSFAs. However, staff of the DLNR had little capacity to work with communities and the legislature did not provide additional funding to hire personnel who could coordinate with communities. A community organizer from Ho‘okena said that he felt the state did not want to open what he called “the Pandora’s box of the communities” (Author interview #9 2011). With this statement he meant that working with communities could be a messy and unpredictable process. The DLNR is notoriously underfunded and the legislation added an additional and difficult task to the stretched-thin department.

Although the CBSFA legislation calls for communities to develop management plans for their CBSFAs, it also states that all rules must be made pursuant to the state’s Chapter 91 rule-making process. Chapter 91 codifies a convoluted and slow process for how state agencies develop rules. The DLNR is responsible for bringing CBSFA rules through the Chapter 91 process and they can reject or revise rules, giving them tremendous input over what rules are proposed for CBSFAs. Additionally, the Chapter 91 rule-making process requires DLNR officials to consider broad public input from many stakeholders, not just the community. Therefore, no matter how community is defined, outsiders will have the ability to influence the direction of CBSFA management. In this way, the legislation does not really establish community-based management (Johannes 2002), but rather a form of collaborative management between communities, the DNLR, and any other interested stakeholders.

It has been difficult for communities to convert their ideas for the management of CBSFAs into a set of rules that would pass through the state’s process. Many of the concepts of traditional Hawaiian resource management are not compatible with the state’s framework of laws. Many of the Hawaiian communities interested in developing CBSFAs were seeking a means for preventing outsiders from overharvesting community resources (Author interviews #8 2010 & #9 2011). In *ahupua‘a*-based management, residents from outside the *ahupua‘a* were excluded from gathering resources in that *ahupua‘a* without first seeking permission. The state of Hawai‘i Constitution, however, has an equal access clause, which means that all coastal regulations must apply equally to all state residents. Communities cannot develop rules that apply differently to outsiders than to community members and they cannot exclude non-community members from access to CBSFAs (Author interviews #6 #8 2010).

A community organizer says that she generally has communities start by listing what they want for management of their CBSFA and then they work to turn those desires into a set of passable rules (Author interview #8 2010). A community member from Ho‘okena says that this process led to a management plan that was “so watered down” compared to what the community desired (Author interview #9 2011). The community of Ha‘ena worked to develop a creative set of rules that could also help them achieve their goals, including gear restrictions that only permit fishing gear used traditionally in the community (Author interviews #8 2010 #10 2012). These rules were recently submitted to the DLNR; so far it is unclear how they will hold up through the process.

Since 1994, many Hawaiian communities have worked to attempt to designate and develop rules for CBSFAs near their communities. A community organizer estimated that communities interested in CBSFA designation and planning have spent approximately 1,500 h per participant doing background research and work, 100 h per participant in meetings, and 1,000 h of meeting and planning facilitation (Author interview #10 2012). Most communities have partnered with NGOs to assist them with many parts of the process including administration, meeting facilitation, grant writing, and legal support.

Given the tremendous effort that communities have put into this process, the lack of progress in designation and management of CBSFAs is disappointing. However, through this process, many communities have self-organized, codified what they want out of resource management, and learned a great deal about the legislative process. As coral reef resources continue to decline and threaten the persistence of a Hawaiian subsistence way of life, interest in the legislation and pressure on the DLNR will likely continue to grow. The CBSFA legislation was vague and created procedural challenges, but if the DLNR takes initiative, there is potential for communities and the state to develop a network of managed CBSFAs that at least to some extent protects subsistence resources and cultural practices vital to Hawaiian communities.

Discussion

Compared to the standard for indigenous involvement established by the UN Declaration on Indigenous Rights and in the treaty rights cases of the continental United States, it is hard not to view these two fisheries policies as marginalized opportunities; opportunities which provided the hope of improving indigenous involvement in traditional fisheries, but failed to deliver meaningful change for

indigenous fishermen and fishing communities. In both initiatives, only two out of a large number of eligible communities have been able to implement the program and successes, even among communities with implementation, have been modest at best. Despite coming from different resource, institutional, and historical contexts, the trajectory of these programs has been quite similar and they have faced a number of common challenges.

Challenges Working Within Western Systems of Resource Management

Legal and theoretical frameworks of indigenous rights highlight the importance that the management of natural resources important to indigenous groups be culturally relevant. However, both of these programs experienced challenges translating indigenous and community-based ideas for fish use and management into state and federal systems of law. The development of these spaces for indigenous ideologies within Western resource management regimes has been fraught with challenges and it has required, mainly on the part of indigenous groups, the sacrifice of important desires and goals.

Through the CQE program, fishing communities can gain back access to commercial fish resources, but they must do so within a Western privatized system of fishery management that differs in many ways from their historical conceptions and practices of fishing (Carothers 2010, 2011). This has required communities to negotiate complex financial arrangements, a process that has hindered many communities. A fundamental element of traditional Hawaiian marine management and tenure—practices of exclusion—would not be legal under Hawai'i's current state constitution, which contains a right to access clause. In many ways the state of Hawai'i and traditional Hawaiian concepts of law and management are incompatible. Additionally, Hawai'i's constitution appears to have competing imperatives, on the one hand calling for the protection of traditional Hawaiian subsistence practices while on the other hand, in the equal access clause, leaving no room for granting specific fishing privileges to Hawaiians.

Aligning Indigenous with Community

Both policies share a common thread in that they are directed toward and use the word "community" rather than specifically referencing or supporting indigenous groups. In Alaska, data revealed that the privatization of the halibut fishery affected nearly all remote fishing communities, Native and non-native, so the policy sought to address the needs of all these communities. In Hawai'i, the CBSFA legislation is clearly written to support the revitalization of traditional Hawaiian subsistence practices, but with the title, it is directed at Hawaiian "communities." These policies seem to be part of a larger trend where indigenous interests tend to be aligned or lumped with "community" considerations in natural resource management. The concept of community has a certain romantic connotation in its implications of rural and small-scale groups of people, but it also can be quite vague. There may be certain advantages as well as drawbacks to indigenous groups aligning with the concept of community while advocating for their rights and interests in fishery management arenas.

The term "community" has recently become more salient in the realm of fisheries management (St. Martin 2006). In 1996, Congress added National Standard 8 (NS8) to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) which states that fishery management measures must "take into account the importance of fishery resources to fishing communities" (50 CFR 600.345(a)). This provides an opportunity for "communities" and community interests to play a larger role in fishery policy and management processes. In this respect, indigenous groups may see some political benefit to working within the concept of community.

Additionally, the concept of community allows indigenous groups to align with non-native groups who may have similar interests and be experiencing similar challenges. The CQE program emerged largely through the efforts and advocacy of an NGO formed following the privatization of the halibut fishery, called the Gulf of Alaska Coastal Communities Coalition (GOAC3). Although many of the founding members of that group came from Alaska Native villages, they made a conscious decision from the beginning to make the organization and the movement broader to include all rural communities from the Gulf Alaska, rather than solely Alaska Native ones (Carothers 2011).

It is also important to consider what might be lost as indigenous interests in environmental management become wrapped up in the concept of community. While aligning with non-indigenous groups may give certain fisheries advocacy more strength, it might also require indigenous groups to compromise some of their interests—particularly those linked to cultural or historical factors including aboriginal claims to resources. This may work to shift indigenous advocacy within fisheries toward being based on needs, such as economic development, rather than based on rights. This phenomenon has been described in other contexts in the indigenous studies literature (Sepez-Aradanas 2002; Kauanui 2008; Sikor and Stahl 2011). In addition, while federally recognized tribes have a government to government relationship with the United States and its management regimes, community entities do not have as legally clear or powerful a relationship. The concept of community also might align indigenous groups with static or romantic concepts of indigenous "authenticity" where

indigenous peoples are viewed as stuck in time or not wholly part of the modern world (Latour 1993; Raibmon 2005; Deloria 2006). Both of these policies only apply to indigenous people who continue to inhabit rural communities. For example, Alaska Natives who have relocated to urban areas, but may return to villages on a seasonal basis are not eligible to lease CQE quota and Hawaiians who live in areas that are more ethnically mixed such as the city of Honolulu, but still seek to revitalize and participate in subsistence practices, may not directly benefit from the CBSFA program.

Difficulties with Funding and Follow-through

These two policies share another common element: they were promising ideas in theory that experienced challenges and largely were not followed through upon implementation. The Hawai'i CBSFA legislation was passed chiefly through the efforts of a state legislator who was retiring and wanted the act to be part of his legacy as an advocate for Hawaiian communities. The North Pacific Fishery Management Council was keenly aware of the challenges that rural fishing communities were facing following the implementation of fisheries privatization; the CQE act was a way to show that they were working to address those distributive concerns. While these acts were easy to pass as a gesture to marginalized communities, it appears that less attention was given to how they could be effectively implemented to introduce meaningful change.

The Hawai'i CBSFA legislation provided no additional financial or institutional support to the DLNR who would ultimately be charged with implementation. In addition, the CBSFA legislation itself was vague and provided little guidance for how communities and the state could achieve its lofty goals. The CQE program was intended to address the loss of fisheries access by remote fishing communities where many individuals lacked the capital and access to financial systems to purchase quota shares and enter the fisheries themselves. Given that difficulties in financing the purchase of quota shares had been such a challenge for communities prior to the CQE program, the establishment of stable and reasonable sources of financing should have been central to the development of a successful program. Allowing communities to purchase back quota shares is likely one of the most politically easy solutions that the management council could have developed (and indeed the watered down shape of the program was the result of political wrangling where other options were rejected). However, a real commitment to returning access rights to small fishing communities would have come with financial support—either through the development of cheap loan programs or through a process that would allocate quota shares to communities outright, as occurred in the CDQ program.

Conclusions

These two policies were passed in response to environmental justice concerns in the fisheries of Alaska and Hawai'i. The CQE program was developed to assist rural communities (many of which are Alaska Native) who were disproportionately affected by fisheries privatization. In Hawai'i, the CBSFA program has the potential to address disproportionate cultural impacts to Hawaiian communities who were experiencing declines in subsistence resources and the cultural practices associated with management and harvest of those resources. In many ways, the path to increased success on these initiatives is clear even to the agencies who have worked to implement them (Author interviews #2 2008 & #5 #6 2010). In the CQE program better funding mechanisms or direct allocations of quota shares as in the CDQ program are needed while the CBSFA program requires a substantial increase in financial and institutional support from the DLNR. Yet, despite understanding what is needed, agencies do not appear to be taking broad or swift initiatives to make these programs successful.

The environmental management community can glean important lessons from both the potential and lack of progress exhibited in these policies. The policies show that it is possible to take political actions to address concern over environmental justice and indigenous rights in the management of natural resources that are important to indigenous groups. But, for policies such as these to be successful, they require perseverance beyond the passage of an act. They require a commitment of funding, dedicated staff time, and institutional support from within natural resource agencies as well as adaptability as new issues and challenges emerge. The cases illustrate that implementation of these policies also requires considerable effort from indigenous groups to organize and apply continued pressure to agencies implementing the initiatives. In addition, the content and institutional arrangements developed in the policies themselves are important; policies have to be designed with the cultural traditions and context in mind or, even if they are implemented, they may fail. To successfully address issues of environmental justice and indigenous rights, managers and policy-makers need to become better educated about the social, cultural, and historical dynamics of the resources they manage and develop capacity to work with diverse communities. Without all of these elements, an initiative to better incorporate indigenous rights and environmental justice into environmental management runs the risk of becoming a paper policy only that does not help to address the real issues.

Finally, despite challenges, these experiences in Alaska and Hawai'i demonstrate that indigenous activism within the

fisheries realm has the potential to change fisheries management in ways that are positive for many stakeholders beyond indigenous groups. Through the CBSFA program, Hawaiian communities have worked to force the state government to better address declines in reef resources and to develop local and place-based systems of management that provide for improved stewardship and sustainability of Hawai'i's coastal resources. The CQE program invents a new mechanism for consolidating fishing privileges based on community protection and economic development; this shifts the dominant narrative of fisheries privatization and benefits many rural fishermen. Finally, both of these policies are or can be situated within systems of sustainable fisheries management, at least hinting at the potential for frameworks of environmental management that are both ecologically sustainable and socially just.

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