MA KAHANA KA 'IKE, LESSONS FROM KAHANA, O'AHU: BUILDING CAPACITY FOR COMMUNITY-BASED COASTAL RESOURCE MANAGEMENT

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ABSTRACT

Coastal resource governance is developing towards more inclusive, community-driven frameworks as centralized government approaches struggle to manage declining resources. I explore a case of long-enduring local level management in which a rural Hawai'i fishing community is reclaiming their role as caretakers despite changes in land and sea tenure, governance, access, and use. Focused on Kahana, O'ahu, this research details the evolving institution of konohiki, specifically local level fisheries management led by a head fisherman in modern times (1850-1965). Findings also identify sources of conflict underlying statecommunity collaboration, yet informal ways in which fishing families continue to care for their coastal resources. Emerging from this research are important considerations for communitybased collaborative management. These include: 1) understanding historical context for enhancing institutional fit, 2) fostering community ability to manage coastal resources through informal and formal processes, and 3) balancing rights and responsibilities of community and the public.

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INTRODUCTION

The ability of communities to self-organize and develop effective local level institutions has been substantively demonstrated worldwide. How these institutions are maintained and adapted over time offers lessons for fostering more balanced human-environment relationships-an increasingly critical need as centralized governance systems struggle to manage declining coastal resources worldwide. I explore a case of long-enduring local level management in which a rural Hawai'i fishing community is reclaiming their role as caretakers despite changes in land and sea tenure, governance, access, and use. Focused on Kahana, O'ahu, this research provides a historical perspective of coastal resource governance, covering the transition from konohiki (local level fisheries management led by a head fisherman) to state level management, to an emerging collaborative arrangement led by community. Drawing from in-depth interviews, archival records, and government and academic publications, this research addresses four questions: 1) How were Hawai'i's coastal resources managed at the local level (prior to the loss of konohiki managed fisheries)? 2) How have relationships with place and local governance continued despite changes in land and sea tenure? 3) What are key needs, challenges, and opportunities for collaborative management? 4) How can customary systems inform contemporary management of coastal resources?

Findings from this research detail the evolving institution of konohiki in modern times (1850-1965), including key features conferring social-ecological resilience. Research findings also identify sources of conflict underlying state-community collaboration, yet informal ways in which Kahana fishing families continue to care for their coastal resources. Emerging from this research are important considerations for community-based collaborative management. These include understanding the historical context of social-ecological systems for enhancing institutional fit, fostering community ability to manage coastal resources through informal and formal processes, and balancing rights and responsibilities of community-based collaborative management, Further discussion of these findings adds to the literature on institutional fit, community-based collaborative management, and Hawai'i's konohiki system, specifically as it operated in the twentieth century. This contribution is timely as efforts to restore local level governance of natural and cultural resources continue to grow in Hawai'i, throughout the Pacific and across the globe.

This thesis is organized as follows: First, I review relevant literature on social-ecological systems, commons, local and traditional ecological knowledge, resilience, institutional fit, community-based collaborative management, and a brief history of Hawaiian coastal resource management. I then provide background information on the study site as well as methods for data collection and analyses. This is followed by research findings, which details how fisheries management has evolved in Kahana, and ends with a discussion connecting the case study to literature on institutional fit, community-based co-management, and konohiki.

LITERATURE REVIEW

Managing Social-Ecological Systems

Over the past century, social and ecological systems have branched into increasingly disconnected and specialized disciplines within Western resource management paradigms. Research on coastal resource systems has largely focused on their ecological components, creating a gap in understanding the human dimensions and how they influence (and are influenced by) ecological function (Kittinger et al. 2012). However, humans are an integral part of the natural world; their separation in theory and practice is "artificial" and "arbitrary" (Berkes 2015: 50). "Social-ecological system" (SES) is a term used to highlight the inherent interdependence of human and natural systems and the complexities of their interactions at various nested scales (Berkes and Folke 1998; Ostrom 2009; Kittinger et al. 2012). This broader level of analysis provides a more comprehensive understanding of resource systems as a whole, allowing for better informed decision-making and the potential for more sustainable outcomes. Only in recent decades have resource managers and researchers in the natural and social sciences begun to appreciate the dynamic interconnectedness of coastal SESs, as failure to do so has led to poor fisheries governance on an increasingly global scale (Hughes et al. 2010; Folke et al. 2011; Berkes 2015).

Global Status of Marine Fisheries

Coastal communities worldwide rely on marine fisheries for food security, livelihoods and socio-cultural values, among other ecosystem services threatened as fish stocks continue to decline (Holmlund and Hammer 1999; MEA 2005; Costello et al. 2012). Global marine fisheries

landings in 2014 were estimated at 81.5 million tons, following a downward trend since they peaked in the 1990s despite increased fishing effort (FAO 2016). Currently, one-third of the world's marine fish stocks are considered overfished (Ibid), contributing to declines in mean size and average trophic level of global catches (Pandolfi et al. 2003; Estes et al. 2011). In addition to overharvesting, fisheries are threatened by a myriad of local and global stressors, including habitat degradation, invasive species introductions, land-based pollution, and climate change (MEA 2005; Jackson 2008; Mooney et al. 2009; Lubchenko and Petes 2010). These stressors are in turn influenced by structural traits of social systems, such as demography, perceptions and values, economies, and institutions and governance systems (Kittinger et al. 2012). A limited understanding of these social-ecological interactions coupled with the declining status of global fisheries has compelled reassessment of contemporary management strategies.

Effective Local Level Governance of Commons

Failure to mitigate fisheries depletion and the degradation of coastal ecosystems is increasingly attributed to the ineffectiveness of top-down governance regimes (Costanza et al. 1998; Jentoft et al. 1998; Janssen et al. 2007; Ruddle and Hickey 2008; Chuenpagdee and Song 2012). Fisheries are frequently described in terms of the tragedy of the commons, wherein resource users driven by the "rational" choice to maximize their individual benefit eventually deplete collectively owned resources (Hardin 1968). Common-pool resource systems (CPRs), or commons, are defined by their subtractability (i.e., the condition in which use by each user subtracts from the welfare of other potential users) and difficulty of exclusion (Ostrom et al. 1999). Together, these characteristics create the incentives for resource users to shirk maintenance, free ride and overharvest (Ostrom 1990), which Hardin (1968) asserts can only be resolved by selling commons off as private property or allocating the right to enter them as public property. This narrative has long been used to justify centralized government control over fisheries; however, is criticized for its oversimplification of contextualized SESs and overlooking of the fact that many Indigenous communities have persisted in place for millenia (Ostrom 1990; Feeny et al. 1990; Dietz et al. 2003). Rather, top-down directives often fail, and in many cases, have exacerbated fishery decline (Mason 2002; Kompas and Gooday 2007; Ruddle and Hickey 2008; Turner et al. 2013).

Hundreds of case studies reveal that tragedy is not inevitable. Communities around the world have demonstrated the ability to self-organize, self-govern, and develop long-enduring local level institutions for managing commons (Ostrom 1990; NRC 2002; MEA 2005; Waylen et al. 2010; Berkes 2012). Societies settled in a particular place for a long period of time tend to co-evolve with their environment, learning their limitations and adjusting resource use to patterns of natural disturbance (Janssen et al. 2007). This built knowledge of place informs collective decision-making, which over time shapes institutions, or rules-in-use, that are compatible with local social-ecological settings (Berkes and Turner 2006). In recognizing this capacity of communities to prevent tragedy, greater attention has focused on local level (or community-based) institutions, and the enabling conditions that influence their success (Ostrom 1990; Pomeroy et al. 1998; Agrawal 2003; Cox et al. 2010; Cinner et al. 2012; Vaughan 2018).

Valuing Local and Traditional Ecological Knowledge

Traditional and place-based institutions and the generations of knowledge that inform them—when incorporated in their complete context—are essential to achieving sustainable fisheries. Local and traditional ecological knowledge (TEK) can be defined as a cumulative, adaptive and culturally transmitted knowledge-practice-belief system about the relationships between living beings and their environment (Berkes 2012). More than just knowledge of how to live, TEK encompasses the actual living of life and the way in which a people culturally and spiritually relate to their environment (McGregor 2004). Although not all traditional knowledge systems intentionally or effectively conserve natural resources, many have been recognized for their conservation values and practices (Ostrom 1990; Johannes 2002; Turner and Berkes 2006; Berkes 2012). Due to assimilation and rapid environmental change, these time-tested systems have become fragmented or displaced (Turner et al. 2008; Eckert et al. 2018). However, many rural and Indigenous communities-with slow but growing support among governing bodies and resource managers—are working to revive TEK systems and adapt them to fit contemporary circumstances (Johannes 2002; Stephenson et al. 2014; Vaughan et al. 2016; Hui Mālama o Mo'omomi 2017). TEK is increasingly valued for its role in improving the management of target fish stocks and rebuilding marine ecosystems (Johannes et al. 2000); providing locally valid models for sustainability, educating society how to achieve a more harmonious relationship with the environment (Turner et al. 2000); enhancing the voice of communities, strengthening

cultural norms and practices (Berkes 2012); and building adaptive capacity and community resilience (Turner and Spalding 2013; McMillen et al. 2017).

Building Resilience and Adaptive Capacity

Empowering coastal communities to build upon local knowledge systems and institutions has the potential to strengthen SES resilience and adaptive capacity (Colding et al. 2003; Berkes and Turner 2006; Ruiz-Mallén and Corbera 2013; Stephenson et al. 2014). Regarding socialecological systems, "adaptive capacity" is the ability of the social system, in particular, to manage resilience by taking advantage of opportunities and adjusting to potential damage (Pachauri et al. 2014). Adaptive capacity relies on flexible institutions and the ability of people to collectively learn, innovate and adapt (Folke et al. 2002; Armitage 2005). "Resilience" characterizes a system that can cope with natural and human perturbations while maintaining its fundamental structure, identity, function and feedbacks (Walker et al. 2004). Resilience theory recognizes that SESs do not persist in stable states but are subject to continuous change and cycles of reorganization and renewal (Colding et al. 2003; Berkes 2015). Thus, resource management should focus on building SES resilience by strengthening the adaptive capacity of place-based communities (Walker et al. 2004; Lebel et al. 2006; Folke et al. 2011).

Understanding Institutional Fit

Resilient SESs depend on institutional fit. "Institutions" are the formal and informal rules that guide human interactions with natural resources (Ostrom 2005). Thus "institutional fit" refers to how well institutions match a local SES (Folke et al. 2007); i.e., institutions which are specifically designed for coupled systems of people and nature (Epstein et al. 2015). Fit is often discussed in terms of matching institutions to the appropriate spatial, temporal and functional contexts of a particular SES (Young 2002; Cumming et al. 2006; Cash et al. 2006; Folke et al. 2007; Epstein 2015). Centralized management approaches are in many cases unfit for dealing with the complexity and dynamics of coastal SESs. Institutions for managing fisheries at very large scales tend to be incapable of addressing local heterogeneities and ecological changes (Hughes et al. 2005), and lack participatory decision-making processes which results in low credibility and compliance (Costanza et al. 1998; Dietz et al. 2003). Conversely, local level

institutions tend to bring ecological information into management considerations at appropriate spatial and temporal scales (Costanza et al. 1998) and involve greater user participation, enhancing the legitimacy of fisheries regulations (Jentoft et al. 1998). However, local level institutions alone are not always necessarily the best fit. It is important to consider that communities are no longer as isolated and have consequentially become more susceptible to external drivers of change, such as centralized government policies and growing market demands (Berkes 2006; Kittinger et al. 2013). In such cases, community capacity to manage local fisheries is limited without the support of higher levels of organization (Berkes 2006).

Towards Community-based Collaborative Management

Community-based collaborative management, or co-management, offers an alternative approach to managing fisheries with the potential to enhance institutional fit. Co-management involves the sharing of management authority and responsibility, often between local communities and government agencies (Pomeroy and Berkes 1997). Such partnerships may also involve other parties, including non-governmental organizations, and can assume many configurations with varying goals, initiatives, levels of governance and degrees of power sharing (Pomeroy and Rivera-Guieb 2006; Berkes 2010). Through community-based co-management, the people themselves are empowered to define their own needs and goals, and can effectuate decisions that influence their own well-being (Pomeroy and Rivera-Guieb 2006). "Community" can be a convoluted term; however, here it is meant as "a well defined people or community [that] possesses a close and profound relation with an equally well defined site... This relation is embedded in local culture, sense of identity and/or dependence for livelihood and well being" (Corrigan and Hay-Edie 2013).

Through decentralization, community groups can assume a greater role in fisheries management, which in turn can support short-staffed and underfunded government agencies to improve management of complex coastal SESs (Berkes 2010). Other benefits of co-management include the potential to empower local communities, customize rules for local conditions (Jentoft et al. 1998); provide equitable distribution of power (Pomeroy and Berkes 1997); promote social learning and adaptive processes (Berkes 2009); encourage responsible fishing and compliance (Gutiérrez et al. 2011); and increase standing biomass of fish stocks (Cinner et al. 2006). However, none of these benefits are guaranteed. Many co-management arrangements face

various ecological, social, economic and political challenges (Nadasdy 2003; Cinner et al. 2012; Vaughan and Caldwell 2015; Ayers et al. 2017). To best address such complexities, adaptive comanagement offers a flexible, joint learning-by-doing approach in which traditional and placebased knowledge plays a crucial role (Olsson et al. 2004; Armitage et al. 2007; Berkes 2015).

A Brief History of Hawaiian Coastal Resource Management

Although Hawai'i's coastal fisheries are currently managed by a centralized state authority, Hawai'i has a long history of adaptive, community-based collaborative management. Since the arrival of the first inhabitants of the Hawaiian Islands, Hawaiian knowledge, practice and beliefs have evolved through a deep connection with and reliance on the natural resources. Hawaiian TEK is based on reciprocal relationships with 'āina (land, sea, and resources therein), thus use of marine resources is not separate from the responsibility to respect and nurture them-not only for one's own benefit but also for future generations and for the resources themselves (Poepoe et al. 2003). With fish serving as the primary source of protein, Native Hawaiians developed specialized harvesting practices, an in-depth understanding of their nearshore environments, and a sophisticated socio-political system organized around land and sea cultivation (Titcomb 1972; Jokiel et al. 2011; McGregor and MacKenzie 2014). Nested land divisions provided a framework for systematic management of natural and cultural resources, with islands, which were governed by a Mō'ī (supreme chief), first divided into moku (districts or regions), then ahupua'a, and other smaller land divisions (Winter et al. 2018). The land and sea were not owned, but communally accessed and cared for at the local level, for example, within ahupua'a, defined as a "culturally appropriate, ecologically aligned, and place specific unit with access to diverse resources" (Gonschor and Beamer 2014: 71).

Within ahupua'a, residents shared stewardship responsibilities and harvest rights with konohiki, who were traditionally appointed by ruling chiefs to oversee the well-being of ahupua'a resources and residents (Steele 2015; Akutagawa et al. 2016). Konohiki had to have extensive knowledge of the local conditions, natural cycles, and interacting ecosystems and species in order to effectively monitor and manage fisheries, caring for them "as if they were extensions of the gardens" on land (Andrade 2008: 30). Working with local elders and expert fishermen, the konohiki determined when it was appropriate to place kapu (restrictions) on certain species or areas to protect their replenishment (Jokiel et al. 2011). While kapu were

strictly enforced, adherence to these regulations was additionally motivated by shared cultural, social and spiritual values (Titcomb 1972; Jokiel et al. 2011). Konohiki, which translates as "to invite ability," also had to be well-liked and respected by ahupua'a residents in order to garner their support in communal efforts, such as hukilau, a surround net fishing method that required many hands to help pull nets full of fish to shore (Andrade 2008; Vaughan and Ayers 2016). If konohiki did not treat the people fairly, residents, who tended the land and sea, were free to move to a different ahupua'a (Steele 2015; Akutagawa et al. 2016). Thus 'āina momona, or abundant lands, was an indication of balance and harmony between konohiki and ahupua'a residents (Akutagawa et al. 2016).

As Western influences encroached upon Hawaiian lifeways, King Kamehameha III and his council sought to protect Native Hawaiians' rights to their lands and resources (McGregor and MacKenzie 2014). Within the 1839 Declaration of Rights, shortly followed by the Constitution of 1840, the ancient practice of konohiki fishing rights was given official written recognition, designating fishing grounds "for the landlords [i.e. konohiki], and for the tenants of their several lands, but not for others (Kosaki 1954:2 or 31). To secure Native Hawaiians' inherent rights to their lands, the Māhele of 1846-1855 apportioned the land among the king (Mō'ī), ruling chiefs (ali'i) or konohiki, and the common people (McGregor and MacKenzie 2014). The Kuleana Act of 1850 granted fee simple titles for kuleana lands to ahupua'a residents, upon proving two-year occupancy of the land, providing two corroborating witnesses who "knew" the land, and acquiring approval of the konohiki (Stauffer 1990). However, with Hawai'i's increasingly foreign-controlled government and new laws enabling wealthy foreigners to acquire Hawaiian lands, creation of land titles instead made land more readily transferable to outside interests. For example, with the "mortgage" act of 1874, "the real tool of land loss," individuals were able to issue loans to kuleana land owners at high interest rates with very short terms, then privately auction off the deeds without due process or judicial oversight (Stauffer 2004: 92). Thus the Māhele marks transition from a communal Hawaiian land tenure system to a private property regime that alienated Native Hawaiians from their ancestral lands.

Konohiki fishery laws remained intact throughout the Māhele, and were codified in sections 387-395 of the Civil Code of 1859, however also faced challenges with Western encroachment (Kosaki 1954). By law, konohiki fisheries extended from the shoreline to the reefs, or where there were no reefs, one mile from the shoreline at low tide (Civil Code of 1859). The konohiki

could legally regulate the fishery by placing a kapu each year on one species for his (or her) own use, or upon consultation with land tenants, by prohibiting all fishing during certain months of the year and taking one-third of the catch once the season opened (Ibid). However, many konohiki fisheries were lost with the passing of the Organic Act in 1900, which established Hawai'i as a territory of the United States following the illegal overthrow of the Hawaiian monarchy. The act required those with vested rights to register their fishery within two years of the acts' passage, lest their rights be revoked and their fishery opened for public use (Kosaki 1954; Higuchi 2008). Approximately 101 of the estimated 300-400 known konohiki fisheries were successfully registered to 35 owners (Ibid)¹. Many of these owners were no longer the original ahupua'a tenants or konohiki but influential business men and women who were rapidly accruing lands across Hawai'i (Territory of Hawai'i 1949; Meller 1985). Registered konohiki fisheries were still subject to condemnation by decision of the attorney general and "upon making just compensation" (Kosaki 1954: 4).

In the following decades, the Hawaiian territorial and state governments sought to systematically condemn all konohiki fisheries to open for public access. In total, 60 registered fisheries were acquired by condemnation or deed, with 42 registered fisheries remaining outstanding as of 1970 (Meller 1985). Today questions still remain as to the legality of these condemnation proceedings, whether "just" compensation was provided and whether tenants should also be compensated given their equal right to the fishery, and whether or not all konohiki fisheries were officially condemned (Kosaki 1954; Meller 1985; Murakami 1991). Although these questions linger, the State of Hawai'i exercises authority over all coastal resources. The Department of Land and Natural Resources (DLNR) manages Hawai'i's 750 miles of coastline and 1.3 million acres of state lands and coastal waters extending 3 miles offshore (DLNR 2017). This top-down management of Hawai'i's coastal resources starkly contrasts the communitybased konohiki system that maintained fishery abundance in past generations (Jokiel et al. 2011; Friedlander et al. 2013). Hawai'i's fisheries have since considerably declined under DLNR (Shomura 1987; Friedlander and Rodgers 2008; McClenachan and Kittinger 2012), in part due to insufficient funds, staffing, and place-based knowledge tailored to local level complexities (Jokiel et al. 2011; Friedlander et al. 2013; Vaughan and Ayers 2016). As a result, communities

¹ Based on the approximate number of ahupua'a and 'ili (smaller land divisions within ahupua'a), there may have actually been 1,200-1,500 konohiki fisheries that once existed (Meller 1985).

across Hawai'i, including Kahana fishing families on the island of O'ahu, are working to restore local level governance through revitalizing local knowledge systems and strengthening their influence in caring for coastal resources.

STUDY SITE AND METHODS

Study Site: Ahupua'a o Kahana, Ko'olauloa, O'ahu



Figure 1: Location of the study site, the ahupua'a of Kahana.

Kahana ("turning point") is located in the Ko'olauloa moku (district), on the windward side of the island of O'ahu. It encompasses approximately 5,200 acres, and is defined by its steep surrounding ridges, broad valley, and sandy embayment. With a mean annual rainfall of 240 inches towards the back of the valley and 40 inches near the coast, Kahana is considered one of the wettest ahupua'a throughout the Hawaiian Islands (Yeung and Fontaine 2007). Kahawainui ("the big water"), better known as Kahana Stream, flows perennially into Kahana Bay, along with comparable amounts of submarine groundwater discharge (Garrison et al. 2003). The brackish water condition this creates provides ideal spawning and nursery habitats for many native and endemic aquatic species (Fitzsimmons et al. 2005).

Prior to Western contact, Kahana's abundance of freshwater allowed for a thriving farming and fishing community of an estimated 600 to 1,000 Native Hawaiians (Handy et al. 1972; Mogi 1978; Jaworowski 2001; Stauffer 2004). One archaeological study indicates Kahana's most recent settlement began around A.D. 1200, putting community in place for about 800 years (Beggerly 1990). Another study, of a site along the northwest facing wall of Huilua Fishpond, a stone wall enclosure traditionally used for aquaculture, dates human habitation to around A.D. 1667 (Rothwell et al. 1980). However, carbon dating of other Hawaiian fishponds indicates construction may have occurred as early as the 1400s (Kikuchi 1976). Moʻolelo (oral stories) inform that Huilua Fishpond was constructed by menehune² (Wyban 1992). Kahana's long history of Native Hawaiian presence is further evidenced by its many moʻolelo of Hawaiian deities³ in Kahana dating from time immemorial, as well as by its cultural landscape (McAllister 1933; Handy et al. 1972; Sterling and Summers 1978; Rothwell et al. 1980; Wyban 1992; Hommon and Berrera 1971; Masterson 2010).

Historically, Kahana was well known for its productive lands, extensive lo'i (flooded taro field) cultivation, and a rich fishery with large runs of akule (big eye scad, *Selar crumenopthalmus*) and 'ama'ama (striped mullet, *Mugil cephalus*) (Handy et al.1972). In addition to Kahana's wealth of natural resources, numerous wahi pana (sacred and storied places) and other culturally important areas remain along its coast. These include Huilua ("twice joined") Fishpond; kilo i'a (fish-spotting) lookouts; 'auwai (traditional irrigation ditches); Kapa'ele'ele Ko'a, a fishing shrine associated with akule; and storied places such as Kalehualoa (Kahana Beach), where ali'i were adorned with lehua leis upon boarding their canoes (Masterson 2010). Mo'olelo tell of Kahana's cultural resources and the importance of maintaining reciprocal relationships with the akua (gods), land and sea, and each other lest the resources disappear (McAllister 1933; Sterling and Summers 1978; Kelly 1979; Rogers n.d.; Wyban 1992).

Since the arrival of the first European, British explorer James Cook, in 1778, Kahana has endured significant social-ecological change (Appendix C). Like other Native Hawaiian

² Menehune are a legendary race of small people who constructed fishponds, roads, and temples overnight (Pūku'i and Elbert 1986).

³ Moʻolelo of Kahana include stories of Hiʻiakaikapoliopele, Kamapuaʻa, Kane and Kanaloa (Fornander 1919, Sterling and Summers 1978, Rogers n.d., Wyban 1992, Masterson 2010).

communities, Kahana experienced shifting community dynamics as result of foreign introduced diseases, shift to a new cash economy, a private property regime, and purchase of Hawaiian lands by foreigners (Stauffer 2004). Consequently, Kahana has incurred lasting impacts from historical land use changes. Between 1913 and 1916, O'ahu Sugar Company constructed the 25mile long Waiāhole ditch system, and for nearly a century, diverted an average of 27 MGD of water from windward watersheds, including from Kahana's dike-impounded ground water and surface waters (Yeung and Fontane 2007). Streamflow data from gage stations indicate a significant decrease in baseflow, with long-term impacts on Kahana's estuarine system (Ibid)⁴. Agricultural enterprises pursued by non-Hawaiians transformed Kahana's ecologically-aligned system of 'auwai (traditional irrigation ditches), lo'i (flooded taro fields), and other native crops into rice patties, cattle ranches and sugarcane fields (Handy et al. 1972; Stauffer 2004). The need for laborers brought influxes of Japanese and Filipino migrants, occupying two different labor camps in Kahana. For the transportation of sugarcane from Kahana to Kahuku, the Ko'olau Railway was extended into Kahana by 1908 and was out of business by 1952 (Dorrance and Morgan 2000, in Maly and Maly 2004). The U.S. Army also occupied Kahana, between May 1943 and August 1946, leasing 485.25 acres to establish part of its Pacific Jungle Combat Training Center (Chee 1993). Training exercises involved live ammunition and demolitions, requiring Kahana families in the valley to move towards the bay. Ordnance and expensive waste are still occasionally discovered today (Ibid). Natural disturbances have also had lasting effects, including the tidal waves of 1923, 1946, 1957 and 1960, which caused loss of life and damage to the rock walls of Huilua Fishpond. Regular maintenance and repair of Huilua Fishpond has allowed it to endure over centuries; only in recent decades has it fallen into disrepair (Wyban 1995).

Despite significant social-ecological change with Western encroachment and natural disturbances, the Kahana community upheld their konohiki fishing rights throughout the first half of the twentieth century (Kosaki 1954). In 1965-1969, the State of Hawai'i acquired the ahupua'a of Kahana through eminent domain, establishing it as a state park and opening its konohiki fishery for public access. Kahana families, many with multigenerational and genealogical ties to the area, continue to reside in the park, where just twenty-eight households

⁴ As of 2006, following over a decade of contested case hearings, Hawai'i's Commission on Water Resource Management authorized the restoration of water back into windward streams, including Kahana, to meet instream-flow standards (Group 70 International 2009).

have secured long-term leases with the state. The State of Hawai'i remains the sole owner and managing authority of the ahupua'a of Kahana, including its fishery up to three miles offshore. Following decades of failed planning efforts, state mismanagement and fishery decline, the Kahana community, including residents and fishers from across the district of Ko'olauloa, is working to strengthen local governance and improve coastal resource health.

Data Collection and Analysis

"Perhaps the most fragile and precious source of information available to us, and the one most often over looked (particularly in academic settings) are our elders — kūpuna [elders], those who stand at the source of knowledge (life's experiences), and kama 'āina [native-born residents] who are knowledgeable about the tangible and intangible facets of the 'āina [land], kai [sea], wai [water], lewa [sky], and the resources and history therein. For the most part, the paper trail—the archival-documentary records—can always be located and reviewed, but the voices of our elders, those who have lived through the histories that so many of us seek to understand, are silenced with their passing." - Maly and Maly 2003: ix

Kahana's elders have had the unique childhood experiences of living off the abundance of Kahana's land and sea while konohiki fishing rights were still recognized. It is their stories and those of local fishers who have learned from them that inform a large portion of this research. Interviews were also conducted with resource management personnel with the State of Hawai'i Department of Land and Natural Resources (DLNR), including the divisions of Boating and Ocean Recreation (DOBOR), Conservation and Resources Enforcement (DOCARE), Aquatic Resources (DAR), and State Parks (DSP). Primary data include in-depth interviews with 10 DLNR personnel and 9 of Kahana's elders and fishers, along with informal discussions and time spent over the course of 23 months—from June 2015 to April 2017—participating in 23 community workdays and events, monitoring the bay's usage and conditions, restoring Huilua Fishpond, attending summer fishing camp activities, and maintaining one community elder's lo'i (flooded taro field).

Semi-structured interviews with Kahana elders and fishers (subsistence and commercial) were conducted to document stories of place, stewardship practices, perceived changes and threats to coastal resources, and recommendations for improving management. Using a snowball sampling method (Biernacki and Waldorf 1981), community members helped to identify local

elders and fishers with extensive knowledge of the social and ecological history related to Kahana's nearshore fishery. Their recollections span from as early as the late 1930s. Interviewees representing state agencies were also identified by snowball sampling based on their division's role in managing Kahana and its fishery, as well as having personally worked in Kahana with the residents and fishing community. Interviews with resource management personnel were held in convenient locations, such as offices, and interviews with community members were held outdoors in Kahana or surrounding ahupua'a; for example, by the local boat ramp or a favorite fishing location. Interviews were semi-structured, loosely-guided by developed sets of questions (Appendix A and B) and further prompted by Google Earth images and maps of Kahana. The interviews averaged one-and-a-half hours. Full transcripts of each interview, as well as any video or audio recorded, were given to each community member, for their families and own personal uses. Participants were encouraged to review transcripts to edit content as they considered appropriate. Community members and resource management personnel quoted in this thesis remain anonymous with coded identifiers.

Secondary data include government documents, academic publications, transcripts from previous collections of interviews⁵ with 23 community members from across the district of Ko'olauloa, and archival records including English language newspapers, correspondences, photographs and maps from the Bishop Museum, Hawai'i State Archives and Brigham Young University–Hawai'i. The Mary E. Foster Collection provided a rich source of information on land conveyances in Kahana, Foster's influence through the Hui of Kahana, and the Hui's handling of Kahana's konohiki fishery between 1856 and the 1940s. Newspaper articles were accessed from online repositories, including Chronicling America (1852-1918) and Newspapers (1919-1993). Charmaz' (2014) constructivist adaptation of grounded theory was used as a systematic and flexible approach to collecting and analyzing qualitative data in this study. Codes were derived from interview transcripts, field notes and secondary data to identify conceptual categories related to konohiki, co-management between state and community, and community caretaking, further elaborated in the results.

⁵ Transcripts of previous interviews with Kahana community members came from the Kenneth Baldridge Oral History Collection and Clinton Kanahele Collection at Brigham Young University-Hawai'i; the University of Hawai'i at Mānoa Center for Oral History; Maly and Maly 2003; Maly and Maly 2004; and unpublished interviews shared by a Kahana community member.

RESULTS

This thesis explores the role of community in coastal resource management, in the context of one rural Hawai'i fishing community. With focus on Kahana, O'ahu, this research details the evolving institution of konohiki and its enduring features following the Māhele. These features include the persisting role of konohiki to invite ability, managing land-sea connectivity, protecting spawning behavior, sharing responsibility, and supporting communal benefit. This research also examines the transition from local to state level fisheries management, and identifies sources of conflict underlying state-community relations and ability to collaboratively manage land and sea. These sources are identified as: the loss of community rights and agency, perils of non-participatory planning and inaction, prioritization of public benefits, and limited state capacity to effectively manage coastal resources. Finally, this research documents community resilience, as families work to revive and strengthen konohiki principles to improve management of their coastal resources at the local level.

Evolving Institution of Konohiki

Although Kahana formally maintained local level konohiki fishing rights through the mid-1960s, over half a century longer than most communities in Hawai'i, the modern konohiki system detailed in this case study operated within a very different context than during pre-contact times (Appendix C). The konohiki, who are remembered by community elders, operated between the 1920s and mid-1960s within a changed system of Western land privatization, commercial use of the nearshore fishery, and the ability to lease konohiki fishing rights. Transition to a private property regime following the land division process of 1846–1858 brought new interpretations of the role and responsibilities of konohiki (Jokiel et al. 2011). Once a position held by wellrespected individuals appointed to oversee the well-being of ahupua'a residents and resources, konohiki of the late 19th and early 20th centuries enjoyed the benefits of owning particular lands while no longer accountable for ensuring their provision of abundance. Caesar Kapa'akea is the first non-traditional konohiki (i.e. landlord) for whom there is a record in Kahana. As a result of the Māhele, the Land Commission awarded around 200 acres of kuleana lands to 34 claimants in Kahana (Stauffer 2004). The remaining approximately 5,050 acres was awarded as konohiki land to Chiefess Keohokālole⁶, the wife of Kapa'akea—hence the reference to Kapa'akea as konohiki in land claim documents—and mother of Hawai'i's last king, David Kalākaua, and queen, Lili'uokalani (Figure 2). Also recorded in Kahana's Māhele documents was a "konohiki agent" named Kuamo'o. In this role, Kuamo'o acted as witness to 11 of Kahana's 37 claimants providing testimonies, bearing the responsibility to approve or object claims in Kapa'akea's absence (Figure 3; OHA 2017).

Claim 5220. Kapapa. Naiawahia, Sworn, says he knows the land daimed by Kapapa in Kahana. It consists of one kalo patch and 2 pieces of kula land in which is his House site. The whole form one fiece, bounded ou Kaneshe side and marka by the Konshike, on Punaleur side by the pali- makai by Pine's land. The House site is included. Makuku, sworn, says he knows the land of Kapapa. It consists of 2 pieces of kula land and one kalo patch between as stated by the last withop. Claimant derived the land from his parents. Kapaakea, the Konshiki, had no objections to make to this claim.

Figure 2: Kapapa's Kahana land claim document, #5220, reads "Kapaakea, the konohiki, had no objections to make to this claim" (OHA 2017).

⁶ Keohokālole submitted her land claims, which included the ahupua'a of Kahana, on February 5, 1848, and was awarded on August 27, 1850 (Stauffer 1990).

114 Kahana 12 Sept. 1850 blaim 3948. Autri. Kalimaone, sevon, says he knows the land claimed by Auhi in Kahana. It consists of ten kalo patches and a piece of culti= vated kula land, in which is claimant's House lite. The ten kalo patches form one piece, bounded on Kaneshe side by a Stream, - marta by the land of Poeakera, - on Prenaleur side and makai by a pali. The kula land is bounded on all sides by a pali. The House site is separate from the law. It is not enclosed. There is one house on it. claimant has lived on the land for about 18 years. Kahae, swoon, says he knows the land of claimant. It consists of a mos of teals land, founded as described by last witness He knows the kula land, it is cultivated. He confirms the testimony of the last with nep. Ruamos, agent of the Konstrike, had no

Figure 3: Nuhi's Kahana land claim document #3948, reads "Kuamoo, agent of the konohiki, had no objections to make to this claim." Dated September 12, 1850 (OHA 2017).

According to Stauffer (1990), it is possible that Kuamo'o himself was the konohiki prior to the land division process. In addition to his role as konohiki agent for some of the hearings, Kuamo'o's own claim document indicates he was a resident of Kahana for more than twenty years, his claims were supported by the most number of witnesses, and he was awarded the most number of parcels—some of which were reportedly uncultivated for 8 to 10 years (Appendix D). Kuamo'o's claim to a former konohiki's land is particularly notable. His testimony reads: "Witness knows the river claimed by Kuamoo. It comes from some springs about a mile from the sea, into which it empties near claimant's house. (Claimant stated that Pule, a former konohiki gave this river to him some 12 years ago. The land on both sides of it belongs chiefly to the konohiki)" (Appendix D). Although this particular claim indicates confirmation by a witness, the

land commissioner, George M. Robertson, did not believe it could be sustained and Kapa'akea objected it (Stauffer 1990). Record of Kahana's konohiki in English language documents seem to pause here until around the 1930s, when interviews with community members capture their personal experiences growing up in Kahana. The record does reveal, however, that the division of land and subsequent changes in ownership had significant influence in determining the future of Kahana's konohiki fishery and who came to hold the fishing rights.

Konohiki Fishing Rights Acquired with Land Ownership

lua side by the Ahupuaa of Funaluu, together with all and singular, the Sea, the fish ponds, the tenements hereditaments and appurtenances, thereunto in anywise belonging with the rents, issues, and profits thereof, and also all the right, title, interest, claim or demand whatsover in law or in equity, and all curtesy or right of curtesy, dower,or right of dower of the said parties of the first part or of either of them therein or thereto excepting and reserving however from the above granted premises such portions as have been duly awarded to third parties by the Board

of the Land Commissions.

Figure 4: Excerpt from certified deed conveying Kahana's konohiki land, along with the sea and fishponds, from A. Keohokālole and K. Kapa'akea to Ahsing (aka Apakana), dated May 13, 1857 (Hawai'i State Archives, Mary E. Foster Collection M-433, 1. Ahupuaa of Kahana Deeds: Certified copies 1856-1881).

According to certified deeds, purchase of Kahana's konohiki land (i.e. the ahupua'a less the kuleana lands claimed by Kahana residents) came with the rights to Kahana's konohiki fishery and fishponds⁷. In the 1857 certified deed conveying the konohiki land from Chiefess Keohokālole to Ah Sing, a Chinese buyer, it explicitly states that the land "together with all and singular, the Sea, the fish ponds, the tenements hereditaments and appurtenances,... have been duly awarded to third parties by the Board of the Land Commissions" (Figure 4, Appendix E). In the same manner, Ka Hui Kū'ai i ka 'Āina o Kahana (Hui of Kahana, or Hui) acquired the rights

⁷ Historically, Kahana had three known fishponds—Wailua, Pukoko, and Huilua (Wyban 1995).

to the konohiki fishery and Huilua Fishpond upon purchase of Kahana's konohiki land from then owner, H. Ahmee (Hawai'i State Archives, Mary E. Foster Collection M-433, 1. Ahupuaa of Kahana Deeds: Certified copies 1856-1881). The Hui of Kahana was a group of 95 mostly Native Hawaiians from Kahana and surrounding ahupua'a, including many who left Lā'ie during the 'Awa Rebellion.⁸ As a collective, the Hui was able to purchase Kahana's konohiki land by splitting the cost among 115 shares⁹, and in so doing, restore communal access to ahupua'a resources, including the konohiki fishery (Stauffer 2004). Each member held at least one share of Hui land and followed carefully crafted bylaws to protect their cooperative interests. However, these shares were eventually sold outside of the Hui, with the first external conveyance occurring in 1887 (Ibid). One by one, Hui shares along with kuleana lands were sold to individuals outside of the Kahana community, including William R. Castle (owner of Kane'ohe Ranch Co.), the McCandless brothers (developers of the Waiāhole ditch system), and Mary Foster (1834-1930) of the wealthy Robinson family. By 1903, Foster accumulated 73% of the Hui shares (Ibid) and by the time she passed away in 1930, she owned 99% (all but 6 parcels) of Kahana (Jaworowski 2001). By acquiring majority shares of the Hui, Mary Foster was able to gain significant power over Kahana's konohiki land, and with it, the konohiki fishing rights.

Commercialization of Konohiki Fisheries

From 1905 to around 1965, Kahana's konohiki fishery appears to have operated under Mary Foster or her estate—having majority rule on Hui decisions—for commercial production, while ahupua'a residents continued to exercise their legal right to the fishery for subsistence. Records of Hui receipts indicate payment of \$70 to M.D. Monsarrat to survey the fishery (Figure 5; Appendix F) and at least \$239 for attorney services required in Circuit Court (Appendix G) for registering Kahana's konohiki fishery in accordance with the Organic Act. On March 30, 1905, the court adjudged that the Hui of Kahana held vested right as owners of Kahana's konohiki

⁸ In 1874, Frederick Mitchell, a newly appointed mission president and plantation manager of the Lā'ie Mormon community, imposed a kapu on 'awa (kava) production, as a tactic to gain economic control. The traditional root crop financially supported Hawaiian families in the new cash economy, prompting nearly half of the Lā'ie plantation members to move to Kahana in an act of resistance (Compton 2007).

⁹ On behalf of the Hui, George William Kamakaniau signed an intent to purchase the konohiki land from Ahmee on August 1, 1874 with a \$1,000 down payment and balance of \$5,000 to be paid within one year. On May 15, 1875, the balance was paid by borrowing \$3,000 from a British businessman named Stephen Spencer. Over time, Kamakaniau collected payments from Hui members and finalized payment of the mortgage on October 31, 1881 (Stauffer 1990; Hawai'i State Archives, Mary E. Foster Collection M-443).

fishery (Figure 6; Appendix H). Public notices were then drafted on behalf of the Hui to place a kapu on akule (Figure 7), and henceforth, hauls of the commercially prized akule were frequently harvested from Kahana Bay to sell in Honolulu's Chinatown markets. Foster even had a "monster net" built in 1916 specifically for hukilau in Kahana, with "wings 200 feet in length, a 'pocket' 62 feet long and with a 64-foot surface, with three 'purses' inside the pocket" (Appendix I). According to Stauffer's (2004) research, Kahana saw akule harvests amounting to 17,200 pounds during the 1925 season, 38,950 pounds in 1935 and 17,850 in 1936. Notably, Kahana's fishery produced \$10,000 in revenue in 1947 (approximately \$117,620 in 2018 dollars¹⁰), earning its status as one of the most valuable and well-known konohiki fisheries still in operation on O'ahu (Appendix J). Kahana's konohiki saw significant change in harvesting practice as the fishery became increasingly used for commercial profit.

Lease of Konohiki Fishing Rights

To operate commercially, Mary Foster and her estate, acting on behalf of the Hui, leased the fishery to individuals who were capable of leading large fishing efforts with the community-a role traditionally held by konohiki. Upon registering Kahana's konohiki fishery, a Hui receipt dated July 3, 1905 indicates payment for legal services to draft a "Sea Fishery Lease to Kurihara" (Hawai'i State Archives, Mary E. Foster Collection M-433, 89. Hui of Kahana Receipts 1901-1930). A 1906 newspaper article even references legal protections of this leased fishing right, reporting on a warrant sought for the arrest of "Manu and seven other natives" who "invaded" Kurihara's right by capturing 8,000 akule in Kahana (Appendix K). The article also reveals that Kurihara was leasing the fishing right for an annual payment of \$310. Other newspapers include advertisements purchased by the Hui in 1912 and 1919, announcing the availability of five-year leases to the "highest responsible bidder" for the fishpond and fishery, as well as for harvesting 'awa root grown on Hui land (Figure 8). Although the fishing rights were presumably leased to individuals offering the highest dollar, community interviews reveal that lessees were still expected to fulfill the traditional responsibilities of a konohiki. A previous interview with Samuel Kekuaokalani, who lived in Kahana as a child, explained that "one man is appointed as a head fisherman, by the estate [of Mary Foster], someone that they can depend on.

¹⁰ Dollars were adjusted using the United States Department of Labor's CPI Inflation calculator: https://www.bls.gov/data/inflation_calculator.htm

It has to be done through that way. The village seems to support the person who they think can handle it" (Kekuaokalani 1978). That is, even in this new capitalist era, lessees still had to earn and maintain the respect of the community as well as have the in-depth knowledge and experience in order to guide communal surround net harvests.



Figure 5: Map from M.D. Monsarrat's survey of Kahana's konohiki fishery, dated January 28, 1902 (Hawai'i State Archives, Mary E. Foster Collection M-433, 109. Kahana Fishery 1902-1942).



Figure 6: Court document adjudicating the Hui of Kahana as vested owner of Kahana's konohiki fishery, dated March 30, 1905 (Hawai'i State Archives, Mary E. Foster Collection M-433, 109. Kahana Fishery 1902-1942).



Figure 7: Receipt for drafting notice of the Hui's kapu on akule, dated April 24, 1905 (Hawai'i State Archives, Mary E. Foster Collection M-433, 109. Kahana Fishery 1902-1942).



Figure 8: Newspaper advertisement on behalf of the Hui of Kahana for five-year leases of the fishpond, konohiki fishery, and the right to remove 'awa root growing on Hui land. This advertisement was placed in the Hawaiian Gazette, dated May 8, 1912. (Hawai'i State Archives, Mary E. Foster Collection M-433, 89. Hui of Kahana Receipts 1901-1930).

Persisting Role of Konohiki to Invite Ability

As the institution of konohiki continued to evolve with private property ownership and the commodification of coastal resources, the role of konohiki to "invite ability" remained an important aspect of life in Kahana. Community interviews recall at least three konohiki operating in Kahana, some at the same time. While it is not known how two of these 20th century konohiki

came to assume their roles, it is possible that they leased the fishing rights from the Hui, as archival records indicate may have been the practice in previous years (1905-1919). As described in interviews, each konohiki had a different relationship to the place and community in Kahana, yet they were able to build and maintain their relationships throughout their tenures.

The konohiki who interviewees remember most-whether they grew up with him or heard stories—is Samuel Pua Ha'aheo (1887-1953). Elder interviewees grew up with Pua as Kahana's konohiki during the 1930s and early-1940s, though it is possible he assumed this role as early as 1924, when previous accounts inform he became the caretaker of Huilua Fishpond (Kelly 1979). He was also well-known for his roles as a local policeman, ordained member of Kahana's Mormon Church, and beloved hula teacher who helped to keep the hula kahiko (ancient) style alive (Figure 9). Pua, of Chinese-Hawaiian ancestry, was born in Lā'ie¹¹, also located in the district of Ko'olauloa, and eventually married Ahmoe Kawaiahao from Kahana. As of 1914, prior to assuming his role as konohiki, Pua was living in Kahana (Kelly 1979), and as of 1920, he was renting a 0.51 acre house lot as well as 1.2 acres of taro land from Mary Foster (Hawai'i State Archives, Mary E. Foster Collection M-433, 94. Hui of Kahana: Reports on Leases 1922). Pua lived by the fishpond. He would kilo i'a (observe fish), say when it was time to hukilau, guide the fishers from the shoreline, and oversee the distribution of the catch. Some accounts attribute Pua's exceptional fishing abilities to his honoring of Native Hawaiian traditional and customary practices. He is remembered for his chants reverberating across Kahana Valley, his 'aumakua (deified ancestors) who took the shape of manta rays and helped him to surround fish, and his taking good care of the ko'a (fishing shrines). One Ko'olauloa resident with family roots in Kahana shared, "[Pua] took care of all of the fish that needed watching, and he took care of the old folks, because the old folks would care for the young ones" (Clarence Au, Maly and Maly 2003: 179). Pua left his roles as Kahana's konohiki and fishpond caretaker after the 1946 tidal wave event took the lives of his three grandchildren.¹²

¹¹ There are varying accounts of Pua Ha'aheo's place of birth. According to a U.S. military draft registration card (serial number 542), he was born in Lā'ie on January 22, 1887.

¹² The three children of Pua's daughter, Mamo Ha'aheo Kanakanui, were William Isaac (born January 29, 1943), Samuel Pua Ha'aheo (born May 8, 1944), and Ahmoe Kawaiahao (born July 30, 1945). They are buried at Kahana's Mormon Church cemetery (Kelly 1979).



Figure 9: Pua Ha'aheo (left) with students of his hula hālau in Kahana (Photo shared by the Division of State Parks).

According to the eldest community member interviewed in this study, after Pua left, a longtime resident of Kahana named Peter Kau (also known as Tūtū Man) briefly held the fishing right, though was never considered a konohiki (GC, 7 November 2015). This is supported by a brief mentioning by Peter Kau in a previous interview stating, "...that was my business enterprise in 1943 to fish akule in these waters which were formerly my franchised. Before then Pua Ha'aheo had this fishing business¹³" (Kau 1970). Aside from the conflicting timeline, Peter's reference to Pua operating the fishery as a business is supported by the 1940 census, where Pua's occupation and industry are listed as "fisherman" and "own business" respectively (Bureau of the Census 1940). It is possible that Pua (and the konohiki after him) acquired the fishing rights by lease from the Hui. Perhaps it was Pua's depth of knowledge or the respect that the community held for him, in addition to having the fishing rights, that earned him and others the title of konohiki.

¹³ Note the timeline discrepancy, as all other sources indicate that Pua operated as konohiki as early as 1924 and through 1946.

Following Pua's tenure, most community members remember the Kamake'eāina family, and in particular, Uncle or Papa 'Āina Pahumoa Kamake'eāina (1899-1983). The Kamake'eāinas are said to be the last konohiki of Kahana. This family was from Lā'iemalo'o (Figure 1) and simultaneously held the title of konohiki at Pahumoa Beach, better known today as Lā'ie Beach Park or Pounders. Well known for their skillful fishing, though more commercial style, the Kamake'eāina family continued the local custom of hukilau for akule. One of the eldest interviewees described the first time the Kamake'eāinas surrounded akule in Kahana, how not a single resident went to the beach to help (GC, 7 November 2015). So they visited each house in the valley to gift the fish that they were able to catch and yet still no one would join in their fishing efforts. However, younger interviewees only remember doing communal surrounds with the Kamake'eāinas and recall Uncle 'Āina as a person who always gave fish. Together, these varied accounts suggest the Kamake'eāinas were able to build relationships with the Kahana community over time, garnering their support and mobilizing efforts for hukilau.

During both Ha'aheo's and the Kamake'eāinas' tenures as konohiki, Nicholas Peterson (1890-1960) was also present as "the caretaker of Kahana." He is referred to by some community interviewees as a "konohiki" while others considered him to be more "like a deputy." In census records, he is documented as a "foreman" (Bureau of the Census 1940), as he was hired to look after Mary Foster's property holdings, which he did for 35 years until he passed away in 1960 (The Honolulu Advertiser 1960). Peterson was part Hawaiian and born in Honolulu, however, he lived in Kahana with his wife, Amelia. As one grandniece of Amelia's clarified, "Uncle Nick wasn't really the People's konohiki, so they say, but for Mary Foster... He had to make sure that he made the bucks out of the fishing and make sure that she had revenues coming in" (BD, 8 February 2016). Peterson's role differed from that of Pua Ha'aheo and the Kamake'eāinas in that he did not hold the fishing right or lead communal surround net harvests. Instead, community interviewees recall Peterson's responsibilities were to collect rent from the residents, make sure people took care of the land and complied with Kahana's kapu on akule, and drive the baskets of fish surrounded from hukilau to Chinatown to sell (Figure 10). Whether responsible for the fishing effort or ensuring reliable harvests, Kahana's 20th century konohiki continued to mobilize community efforts around cultivating and harvesting abundance.

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Figure 10: Auction record from Hawaii Suisan Kaisha Limited for 1,273 pounds of akule sold for a total of \$186.42 on February 8, 1934 and signed by Nicholas Peterson (Hawai'i State Archives, Mary E. Foster Collection M-433, 109. Kahana Fishery 1902-1942).

Managing Land-Sea Connectivity

"They say we're overfishing, but to me, I don't think so. The reason is—I can go back in the 40s or 50s when I was growing up... all the rivers were all clean. They clean the ditches, good water coming out." – YB, 6 February 2016

One way in which Kahana's konohiki maintained the health of the nearshore fishery was by managing it at the ahupua'a level, taking care of the land and streams, which affect coastal resources. It was Peterson, primarily, who oversaw the whole ahupua'a. As one long time resident describes, Peterson would make sure people were "keeping their yards clean, make sure they came out and did what they're supposed to, make sure the rivers were clean, the stream beds, and just responsibilities and kuleana that belong to our people anyway" (BD, 6 February

2016). Elders collectively remember Kahana being well cared for under konohiki management, commenting in particular on how the invasive hau (*Hibiscus tiliaceus*) tree never grew close enough to reach the stream's surface. In recent decades, hau roots and branches have grown in dense thickets in, above and around Kahana Stream, changing flow dynamics, reducing water quality, disrupting flood pulses which act as spawning cues, and blocking migratory pathways of endemic anadromous species such as 'o'opu (goby) and 'ōpae (shrimp) (Mueller-Dombois and Wirawan 2005; Uyeno 2013).

In addition to keeping the stream clean, the importance of managing land-sea connectivity is emphasized in the Hui's requirement of the Kamake'eāinas, as non-residents, to cultivate one lo'i (flooded taro field). According to one respected elder, the Kamake'eāinas had to do this in order to hold the fishing right in Kahana (GC, personal communication, 27 February 2016). Although the Kamake'eāinas and Ha'aheo were primarily responsible for leading hukilau, both took care of lo'i, which function as sediment traps (Filho 2018). Water which is diverted from a stream flows slowly through lo'i, allowing sediment particles to settle and the water to return the stream filtered. Residents also cared for their own lo'i and home gardens, and collectively recall how "from time to time, everyone went up the valley to clean the 'auwai [traditional irrigation ditches]. We never let the 'auwai get dirty or blocked with rubbish. We all cleaned it together" (Hui 1979: 13). In these various ways, Kahana's konohiki and the community actively managed the land and sea as an integrated unit, recognizing that fisheries management begins on land.

Protecting Spawning Behavior

"We had rules. There were times to fish and times not to fish. Our fishing was to conserve, so there would be fish for the next generation, and the next." – Hui O Kanani O Kahana 1979: 18

Kahana's konohiki also protected natural processes that replenished the fishery, such as spawning. Kahana Bay is known among local families as an important spawning and nursery ground for many of Hawai'i's native aquatic species, including hammerhead sharks, manta rays, moi (*Polydactylus sexfilis*; Pacific threadfin), āholehole (*Kuhlia xenura*; Hawaiian flagtail), and 'ama'ama. However, Kahana is most famous for the large schools of akule that frequently aggregate in the center of its bay to spawn. Documentation as early as 1852 and as recently as 1942 reveal that Kahana's konohiki actively claimed exclusive rights to harvest akule (Figures

11-12). According to interviewees, these rights were exercised as recently as 1965-1969. Kahana Bay's establishment as a konohiki fishery protected it from overuse by preventing entry of non-residents. The kapu on akule further protected replenishment of the fishery by not only restricting harvest of akule but also access to the center of the bay where akule aggregated to spawn. This local practice likely supported the populations of other species as well, not just akule. One elder described how, "Nobody [went] fishing in the bay except for the people in Kahana that got the fishing right. Even [the residents]—we own [a] boat, we cannot go inside the bay" (GC, 7 November 2015). He further explained, "If you want to go fishing out, we got to go stick to the side of the bay and then go out. They don't like us in the middle, because we going chase the akule away. Chase the fish away." When asked how the kapu was enforced, he responded that Peterson would "chew you out" but also that residents simply did not fish from the center of the bay. Ahupua'a residents still shared equal right to the konohiki fishery, thus could fish along its edges and the fringing reefs where interviewees shared stories of harvesting reef fish, lobsters, crab and octopus for home consumption.

The rule of non-entry was intended to prevent disruption of spawning times, yet surround net harvests of akule were easiest when schools aggregated in the bay to spawn. One Kahana fisherman shared, "I don't think they used to just go out there every time the pile came in and just kill the whole pile. I mean, they must have let it rest, let the pile stay there, let them breed enough where when after that, take it—not just as soon as they come in, take the fish" (WG, 7 February 2016). Another fisherman explained how protection of spawning times was practiced in general: "They leave it alone. Hawaiians know when the fish spawn and when [they do] not spawn... So certain times of the year they were supposed to be protected. You cannot go get them until they drop their eggs" (MP, 28 February 2016). The protection of spawning times by way of limiting disturbance and timing harvests were effective methods of fisheries management to which elders attribute having a highly productive konohiki fishery.

NOTICE. In accordance with the provisions of section 4, Art. 5, of part first of the act to organize the Executive Departments; notice is hereby given that the following fish have been set apart by the land-lords for themselves, viz :--By S. Kaapuiki ; the oweoweo for Kannalla, Koolauloa. By Kaniau ; Hehce, Hansken, Waiohole, By Kahanamaikai ; Anae, Keahua, Ewa, By Kekukahiko ; Kala, Kaalawai, Waikiki. The above named Konohikis only have complied with the law referred to. His Highness the minister of the Interior has imposed a kapu upon the Kala ku o Waimea, th Akule ku o Waialua and the Akule ku o Kahana island of Oahu, expire to May 1st 1852. W. GOODAL Clerk Int. Dept. Home Office, Jan. 8, 1812-1t-35

Figure 11: Notice of a kapu on akule in Kahana, imposed by "his Highness the minister of the Interior," and dated to expire May 1, 1852. Published in The Polynesian on Saturday, January 10, 1852 (Accessed from Chronicling America).

NOTICE The Hui of Kahana hereby gives Notice that in its Frivate Fishery in the Bay of Kahana, Koolauloa, it has reserved for the year 1942 the fish known as "AKULI" or "HAHALALU". HUI OF KAHANA (Owners) By: E. K. Sodel Honolulu, T. H. January 2nd, 1942.

Figure 12: Notice of kapu on akule in Kahana, dated January 2, 1942, signed by the Hui of Kahana Treasurer, E.H. Wodehouse (Hawai'i State Archives, Mary E. Foster Collection M-433, 109. Kahana Fishery 1902-1942).

Sharing Responsibility

"Today everybody is more or less on their own, but before when I was growing up, when there was a hukilau, all of the people of Kahana would come out and they would participate to fix the net, to load the net on the boat, get it ready, and then they would oar the boat out, surround the fish, and everybody would huki [pull] the net in." – GC, 5 October 2013

In addition to sharing in the responsibilities of managing land-sea connectivity and protecting fishery replenishment, residents also contributed to communal fishing efforts. Surround net harvests of akule required the help of the whole community to fulfill various roles including fish spotting, rowing, diving, pulling the net in, and cleaning. Nearly every community member interviewed in this study and in previous studies discussed hukilau for akule, or "hukihuki" as one elder says it was called in Kahana (GC, 7 November 2015). Hukilau is a traditional Hawaiian fishing method in which lau (ti leaf) is intertwined with rope and used to guide schools of fish towards the shore. In modern practice, nets were also used and attached to the rope.

The surround was initiated by the konohiki and began with a kilo i'a (fish spotter), sometimes the konohiki himself, who climbed up the ridges on either side of Kahana Valley to watch for schools of fish—following the sun's direction, from the Ka'a'awa side in the early morning then the Punalu'u side in the afternoon. The kilo i'a had to have excellent eye sight and knowledge of what species he was seeing based on the color, size, and behavior of the school of fish. One lifelong fisherman of Kahana explained, "You got to be trained for that. You know, you got to come out all the time. You got to know the color of the fish, how they move... We learn from the old timers" (YB, 6 February 2016). The kilo i'a also had to know when the right time was to signal, as akule tend to accumulate at the papa (reef) or "the island," located on the outer edges of the bay, before moving towards the bay's center to spawn. "Eyes would be focused on that hill where the spotter was," watching for him to signal by waving a white sheet, then the whole community would head to the beach, bringing the two row boats from the boat house and loading the larger boat with the net from the net house (Kau 1970). With the guidance of the konohiki, the larger boat headed in first with a few paddlers and one person steering, then paddled around the school of akule to surround them. Divers then assembled the net, placing poles on both ends and tying the long ropes to each. The smaller boat rowed out with the strongest men and women, and with both boats on either side of the net, they proceeded to pull the net in, row the boats towards the shore, then anchor the boats to again pull the net in,
repeating this a few times until they reached the beach. Once in shallow water, the school was then fenced in with a smaller net and left over night, since by that time the sun would be on its way down. Early the next morning, everyone was back on the beach, scooping up fish with bags, placing them in baskets and loading them onto a truck¹⁴ headed to the market. There might have been a total of 150 baskets from one surround, of which the truck could only hold about 50 (Kekuaokalani 1978). Another source claims "Kahana was one place that caught 300 to 400 baskets in one haul" (Hui 1979:8). Finally, everyone would help to clean the boats and nets, patch the nets, cut and gather wood to build makeshift racks for the nets to dry on, and once all that was done, store everything back in the net house and boat house, ready for the next surround. All of this work was coordinated by the konohiki.

Supporting Communal Benefit

"In those days, if you came and you participate in the hukilau, you would get a share." – BD, 6 February 2016

The konohiki who led the fishing effort was also responsible for overseeing the distribution of catch from each surround, making sure that everyone—workers, community members and even visitors—had fish to bring home to their families (Figure 13). According to current and previous interviews, the konohiki set aside baskets full of akule for those who helped and for malihini (visitors), before loading the rest onto the truck to sell at the market. One Kahana elder described how they would form a circle and "...all the workers [would] get fish evenly. Maybe five fish here, five fish there. Everybody get the same amount of fish. And that's it for the day. I mean, that's a whole lot of fish too. Sometimes you take half a bag of fish… you know, burlap bags? Half a bag of that full of fish!" (GC, 7 November 2015). Taking care of the residents' well-being was an important responsibility of the konohiki. Beatrice Soga, born and raised in Kahana, shared of Pua Ha'aheo, "No matter how big the school or how small the school… each resident had their share of fish to go home with. That's how it was. So that's how he maintained the fishing rights over here" (Soga 1992). Interviews also detailed how everyone received a share of the money earned from selling akule at the market. Mary Foster and the owner of the net, Pua Ha'aheo or the Kamake'eāinas, would split the money fifty-fifty. Then Pua Ha'aheo "would split

¹⁴ Some interviewees say the truck was operated by Nick Peterson. This is further evidenced by Peterson's signature on receipts from akule sales in Chinatown markets.

the money up so everybody got money... It would depend on how old you were, and how much work you did, you got paid. So even if you got a couple dollars, it was a big thing" (GC, 5 October 2013). Through coordinating everyone who took part in cultivating, harvesting, and sharing, and by ensuring that the community's needs were well provided for, Pua Ha'aheo and the Kamake'eāinas maintained their roles as Kahana's konohiki.



Figure 13: Akule drying on a line, in Kahana, circa 1970s (Photo by Norman Shapiro ©2017). In a previous interview, Peter Kau shared how, "The people of this land dried their fish at the beach without one fish being lost" (Kau 1970).

Even as new land owners and the commercialization of Kahana's nearshore fishery brought change in use of land and sea, Kahana's konohiki and the community continued to manage landsea connectivity, protect natural processes, and share in the responsibilities and thus benefits. The majority of Kahana's land, along with the fishpond and konohiki fishery, was largely controlled by a wealthy individual otherwise disconnected from Kahana. Yet some of the traditional responsibilities and management practices of konohiki persisted. Interviewees recall three konohiki between the approximated years of 1924 and 1965. While it is not determined how Pua Ha'aheo and the Kamake'eāina family were able to assume their roles as konohiki, it is likely that they leased the fishing rights from the Hui of Kahana, and earned the respect of the Kahana community with their skillful fishing and care for the well-being of the residents. Kahana's elders have fond memories of growing up, despite being "poor," living off the land and sea, and sharing in the abundance such that "there was never any want" (BD, 6 February 2016). However, transition from a konohiki to state regulated fishery, along with Kahana's establishment as a state park, brought stark change to life in Kahana. Management efforts have since been challenged with competing uses of the bay, habitat change, species decline, and strained relations between state and community.

Strained State-Community Relations

"Because we know the State of Hawai'i is not equipped to [manage the resources] properly and fairly, with any consideration for Hawaiians." - JR, 28 February 2016

"I would've liked to have come together more and been able to work a little closer and have that—I don't know if it's trust or what it is." – DLNR Staffer, 26 September 2016

The State of Hawai'i's acquisition of Kahana in 1965-1969 continues to have lasting impacts on the community and their coastal resources. The state's strained relationship with Kahana residents began with initial state plans to evict families, many with ancestral ties to the land, in order to establish Kahana as a "world famous" recreational park (Appendix L). While residents were eventually allowed to stay, a long history of planning efforts focused on public benefits has further exacerbated longstanding issues between state and community. Additionally, with state ownership community fishing rights were revoked through the opening of Kahana's konohiki fishery for public access, a contributing factor in coastal resource decline. Challenges underlying state and community efforts to collaboratively manage coastal resources include historic harms that have carried through the generations: the loss of community rights and agency, decades of non-participatory planning, prioritization of public recreational benefits, and limited state capacity to effectively manage coastal resources. Loss of Community Rights and Agency

"Our people got screwed... When I look at what has happened, exactly what the United States did by the overthrow of the Kingdom is exactly what the State of Hawai'i did to the people of Kahana." – BD, 6 February 2016

"Same thing, no matter where you go, the big fish always eats the little fish... They like our resources, they like our culture, everything, and they only make pilau [garbage]." – MP, 28 February 2016

In past and present interviews, community members frequently discuss the loss of rights to their land, water and fishery, along with a loss of agency, or the ability to determine their own lives within the state park. As early as 1950, the City and County of Honolulu's Board of Public Parks and Recreation expressed interest in acquiring Kahana's beach lands for establishing a public beach park (Figure 14). In January 1962, after 12 years of legal research and appropriation of funds, the City purchased Kahana's 8.154 acres of beach land for around \$307,718 from the heirs of Mary Foster (Hulten 1965:36). By April 1962, the Kahana boat ramp and parking area were constructed, and boating and fishing enthusiasts reportedly "began taking to the water in droves" (Appendix M). City Council members anticipated the potential legal issues in establishing public beach lands fronting a konohiki fishery, and in 1961, submitted a resolution requesting the Governor and Attorney General to condemn Kahana's konohiki fishery (Figure 15). Throughout August and September of 1965, legal notices were published in local newspapers to inform all persons claiming right to Kahana's konohiki fishery that the state would commence condemnation proceedings at a court hearing scheduled for October 11, 1965 (Figure 16; Public notice with full list of identified owners in Appendix N)¹⁵. Although numerous newspaper articles detail the state's intention to condemn Kahana's konohiki fishery, documentation of these condemnation proceedings or the state's payment of "just compensation" were not discovered through this research.¹⁶

¹⁵ As of 1965, Kahana was one of 47 registered konohiki fisheries yet to be condemned, 30 of which were on O'ahu (Appendix J).

¹⁶ State resource management personnel interviewed in this study could not reference these documents or where they might be located, nor were these details of condemnation found in this research through the Hawai'i State Archives, online newspaper repositories, Circuit Court (O'ahu First Circuit) records office, or Supreme Court Law Library. Mogi (1974) explicitly states that the valley "including water and konohiki fishing rights, were condemned and purchased for park use between 1965 and 1969". An EIS drafted for navigational improvements states that konohiki rights were condemned in 1970 (USACE 1985). However, neither source provides further detail or citation.

Beautiful Kahana Bay May Become Dahu's Finest Public Beach Park

By SHUREI HIROZAWA

Kahana Bay is on its way to becoming a public beach park after seven years of complex legal work untan-gling the ownership of the 4.7-acre the sandy strip along the inner curve strip.

A resolution for permission to begin condemnation proceedings was to be introduced at the Supervisors' meeting today by Vernon Tashima, deputy city attorney.

The Board of Public Parks and Recreation reports there are about 125 heirs of the Mary E. Foster Estate scattered around the world, including some in Great Britain and Africa, which has made it extremely difficult to establish ownership.

For this reason the idea of a park at Kahana, born in 1950, has not grown very fast.

With reactivation of interest this year by the parks board, Norman Chung, city attorney, pushed for completion of legal groundwork as soon as possible.

Tashima said his research shows of the bay which the parks board desires.

The beach is of white sand and the water shallow and clear, with reef over a large portion of the bay bottom. Individual holdings of property by



the heirs range from 32 parts in 5,700 up to 300 parts in 5,700, Tashima said.

If the address of an individual owner is known, a summons will be sent to him by registered mail to notify him of the City's intention to condemn the land.

For those who cannot be located, the law requires publication of notice of condemnation proceedings in a paper here.

If the owners don't respond, the City may go ahead on the basis of a default, Tashima said.

The 1951 Legislature appropriated \$100,000 for acquiring the land but parks board officials feel that will not be sufficient today.

But if they are successful in obtaining the property, parks board officials believe they will be able to develop the most beautiful park on Oahu-a spot that inspired writing of the song Beautiful Kahana.

Figure 14: A Honolulu Star Bulletin article reporting on the Board of Public Parks and Recreation's intentions to acquire Kahana Beach for a public beach park, dated October 1, 1957.

Fishing Rights Sought for Kahana Park

Konohiki (fishing) rights at the establishment of the new corporation counsel, has pre- the Governor and the Attor- park. Kahana Bay have become a Kahana Bay Beach Park. pared a resolution for the City concern in relation to Donald K. Iwai, deputy City Council which would ask



ney General to condemn the private fishing rights at Kahana Bay.

The City is without authority to condemn konohiki Kahana Bay Beach Park, it is rights in the area, where 4.7 condemnation for the new public," the resolution states.

Under the Organic Act. only the Attorney General may condemn konohiki rights. "For full enjoyment of the

necessary that fishing in Kaacres have been acquired by hana Bay be opened to the

Figure 15: Article published in the Honolulu Star Bulletin on September 20, 1961 describing the City's interest in condemning Kahana's konohiki fishery for "full enjoyment" of the newly established Kahana Bay Beach Park.

Legal Notices

CIVIL NO. 16614

IN THE CIRCUIT COURT **OF THE FIRST CIRCUIT** STATE OF HAWAII **CIVIL NO. 16614**

EMINENT DOMAIN:

General Cullom, Kulamanu Henke-Attorney its BERT T. KOBAYASHI, nius Stewart, Mary Ellen Plaintiff, vs. MARY KA-PUAHAULANI H A R T ROBINSON, CHINN HO May Robinson: Heirs of: E. H. and HERMAN G. P. LEMKE, Trustees under Wodehouse, W. L. Wilcox, the Will and of the Es- Mrs. E. K. Wilcox, W. R. tate of Mark Alexander Robinson, deceased; CURTIS WARD HUS-TACE, FRANK WARD HUSTACE, JR. and ED-WARD CI. A. B. E. K. WIICOX, W. R. Castle, S. Kapali (k), Em-ma Keakahiwa (w). Noka (k), Hana Nainoaelua (w), Puali Keawe (w), Pelani (w), Kukapu (k), Pua (w), WARD CLARENCE Keawekaleo (k), Kahala-HUSTACE, Trustees un-HUSTACE, Trustees un-der the Will and of the Kela (k), Kaaikaula (k), der the Will and of the Kela (k), Feter Makia Estate of Mellie Eliza-(k), Kenoi (k), Koeleele beth Hustace, deceased; (k), Nawelu (k), Melee A. FRANK MAHN, ED. (w), Makanoa (k), Uluha-WARD CLARENCE ni (k), Poalomaka (k), HUSTACE and HAWAI-Kasikaula (w), Nawahine (w), Keawe Kanakaole IAN TRUST COMPANY, (w), Keawe Kanakaole LIMITED, Administra-tors of the Estate of Hat-tie Kulamanu Ward, de-ceased; A. F R A N K Keawekalanui (k), Moku-MAHN. CLARENCE HUSTACE kaliilii (w), Kamea and HAWAIIAN TRUST COMPANY, LIMITED, All Persons claim Administrators of the rights in the Sea Fishery Estate of Lani Booth, al- of Kahana, at Kahana, Koso known as Keakealani K. P. Booth, deceased: CENRIC NOURSE John Doe 1 to John CENRIC NOURSE John Doe 1 to John WODEHOUSE: FRANK Doe 100, inclusive: Mary W. HUSTACE: CURTIS Roe 1 to Mary Roe 100, HUSTACE: HENRY inclusive; and Doe Corpo-HUSTACE; A. FRANK tion 100, inclusive HUSTACE: MAHN, EDWARD C. YOU ARE HEREBY HUSTACE and HAWAI. NOTIFIED that the State IAN TRUST COMPANY, of Hawaii, plaintiff, has LIMITED. Administra- commenced proceedings in tors of the Estate of Vic- eminent domain against toria Kathleen Ward, de- you in the above entitled ceased; RANDALL court and has prayed that JAEGER WORTHING- the court vest title in TON: FRANCES MI- plaintiff, for the use of the TSUE McWAYNE: public in perpetuity, all CHARLESANDREW private fishing rights in MCWAYNE: BISHOP the Sea Fishery of Kaha-TRUST COMPANY, ns. located at Kahana, Ko-LIMITED. Trustee un-olauloa, Island of Oahu, State of Hawaii said fish-

LY SERVED WITH SUMMONS AND IN PARTICULAR TO:

Kulamanu McWayne Nash. Pualeilani Watty Welch, Jaeger Paloma Kuhn, Bernice Jaeger Wolters, James Herman Wol-STATE OF HAWAII, by ters, Melitta Henkenius

> E D W A R D hia (k), Kalualiilii (k), Lu-Kamealani All Persons claiming HAROLD ration 1 to Doe Corpora-

Figure 16: Excerpt from public notice published in the Honolulu Star Bulletin on August 12, 20, 27, and September 3, 1965, informing all vested owners of Kahana's konohiki fishery of eminent domain proceedings to commence on October 11, 1965 (See Appendix N for complete notice).

Although it was the City and County of Honolulu that first took action in acquiring Kahana lands, state plans to establish a recreational park in Kahana began as early as 1961, as part of a broader initiative to expand state park development on each of the four major islands (Appendix O). A sketched layout of the state's plans for what would become Kahana Valley Park was published in a 1962 newspaper, depicting designated areas for a horse riding academy, manmade lake and youth camp, among other activities (Appendix O). It also described the need to purchase the land outright, including buying beach property from the city. A follow up costbenefit analyses covering park development was prepared for DLNR by John Hulten in 1965, complete with a budget schedule (Hulten 1965). The report explained that Kahana's scenic beauty and rural nature were ideally suited to meet the recreational needs of Hawai'i's burgeoning tourism industry. In anticipation of receiving over 1,000,000 visitors annually, the proposed plan included dining and shopping facilities, a botanical garden, a 45-acre man-made lake, over 1,000 camp sites, and parking accommodations for 1,500 cars. The report also identified the opportunity to capitalize on Kahana's abundance of freshwater. The state could sell the valuable resource to the City and County of Honolulu to service a growing Windward O'ahu population¹⁷ as well as double the Waiāhole Water Company's annual payments upon contract renegotiation. To meet these objectives, the report reasoned it would be necessary to acquire fee simple titles of the entire ahupua'a¹⁸ for the estimated total value of \$3M for the land¹⁹ and \$2.45M for the water rights, specifically referring to Kahana's dike-impounded groundwater or "water which can be drawn from the land"²⁰ (Hulten 1965: 35). The local newspaper published legal notice to owners and heirs entitled to real property in Kahana that eminent domain proceedings would commence on October 22, 1968 (Appendix P). The state appropriated its first \$1M in 1965, and finalized payment of the approximate total of \$5M in 1969 (Jaworowski 2001).²¹ According to Patria (2005), a Native Hawaiian with ancestral ties to Kahana, most

¹⁷ The projected water needs of Windward O'ahu for 1986 were estimated to be an additional 15 MGD, totaling 27 MGD (Hulten 1965: 38).

¹⁸ Individual interests to be acquired are listed under "H. Separate Interests in Kahana Land" in Exhibit B of the 1965 report and include 5,158.3 acres from the Hui O Kahana, 92.73 acres from Mary E. Foster, and the remaining acreage split among 6 parcels that belonged to Arthur Keawe, Kahuku Plantation Co., Lydia de la Cerne, Harry Makanoa, Martha Grube, and Hohoiea Estate (Hulten 1965: 86).

¹⁹ \$63,429 of the \$3,059,110 was the total estimated value for the six individual parcels (not owned by the Hui or Foster estate).

²⁰ There is no reference to the konohiki fishery or konohiki fishing rights in the Hulten (1965) report.

²¹ According to Patria (2005) as well as a former state planner interviewed in this study, the state does not technically hold clear title to the land because one woman, now deceased, never accepted compensation.

attorneys in Honolulu believed that efforts to challenge the state's use of eminent domain would be futile, thus rightful owners refrained from taking legal action. Similarly, one of the earlier park plans affirms that, "Initially, almost all Valley residents viewed their eventual eviction as inevitable, and a number, especially the more financially able, left Kahana" (Mogi 1974: 2).

However, many residents took action against the first park plan (Tongg Associates, Inc. 1970) that was drafted following the state's purchase of Kahana and which entailed eviction of residents and significant development of the valley. This plan called for dredging and rerouting Kahana Stream to make three lakes for recreational fishing of imported bass and catfish, as well as a dam to create a "Kahana Falls". It also included widening the stream to make room for a boat marina and five islands with "nationality gardens," and constructing cement stadium seats along the streambed for viewing water pageantries and sports. In response, the community formed the Hui o Kanani o Kahana, organized demonstrations, and lobbied the state legislature to remain on the land and prevent commercial development (Jaworowski 2001). As a result, Senate Resolution 186 called on DLNR to allow residents to stay in Kahana "by lease or otherwise at reasonable rates" (OHA 1984: 5). Governor Burns appointed the 22-member Kahana Valley Task Force²² to sort out the details. This eventually led to the conception of a "living park" for the purpose of benefitting the public through fostering Native Hawaiian culture and values (OHA 1984; Jaworowski 2001).

While residents have been able to continue to live on the land with relatively minimal development²³, the state's ownership of Kahana and control over the fishery has limited the community's ability to determine their own lives and the health of their resources. One Kahana fisherman expressed how residents were unable to perpetuate caretaking practices following state acquisition: "I don't think [state personnel] were into trying to take care of the valley. They were just more of trying to take it away from the people to get the water rights... the people that were living there were busier trying to fight the state, trying to get back what was theirs to begin with. They [weren't] really thinking about trying to preserve anything" (WG, 7 February 2016). As a consequence of the state's opening the fishery to the public, another lifelong fisherman of Kahana simply stated, "you can't do nothing" (BC, 4 December 2015). The loss of konohiki

²² The Task Force was comprised of legislators, State and County officials, members of community organizations, and Kahana residents (OHA 1984).

²³ Other entities and individuals were also interested in developing Kahana, including the heirs of Mary Foster who had a plan drafted in 1955 (Belt, Collins and Associates, LTD. 1955), Doris Duke who was seeking a location for building a museum, and an anonymous buyer who offered families \$5.3M (Patria 2005).

fishing rights has meant the nearshore fishery is no longer safeguarded from overuse by nonresidents and that there is no longer an observed kapu to prevent disturbance to spawning times and other natural processes. Community interviewees feel these changes have driven the decline of Kahana's fishery. Initial plans to evict the residents and change the natural setting of Kahana to "become world famous as a park" (Appendix L) disregarded the community, their historical and familial ties to place, and their ability to sustain their families from the land and sea. The decades following condemnation have further strained state-community relationships through planning efforts that continue to disregard the community.

Perils of Non-Participatory Planning and Inaction

"We have repeatedly demonstrated our willingness to work with the [DLNR] to both develop a realistic park plan and to work in the cultural park. We feel the inaction of the State goes beyond neglect... Children have grown, become adults and established their own households. Kupunas [Elders] who worked for and dreamed of security for their ohana [family] have passed away." (OHA 1984: 13)

> *"We have been planned to death, but nothing ever happens."* – *Kahana resident (Rodrigues 1992: 34)*

Nearly half a century has passed since the state acquired Kahana, yet there is still no master plan or shared state and community vision for the park. Kahana has a long history of park planning in part due to the state's failure to meaningfully engage residents early on and throughout planning processes. Many of the state's park plans were created by consulting firms unfamiliar with Kahana, with limited (if any) input from the residents, while community-driven plans were dismissed by the Board of Land and Natural Resources without any justification (Jaworowski 2001; Appendix Q). Residents have endured decades of meetings, surveys and interviews involved in at least eight master planning efforts²⁴ and the development of various park programs, status reports, environmental impact statements (EIS), and state-funded studies (Jaworowski 2001). Rather than building state-community relations to better understand

²⁴ These include the broader master planning efforts by Tongg Associates, Inc. (1970), Mogi (1974), Hui Mālama 'Āina o Kahana (1976), Mogi (1978), Hui o Kanani o Kahana (1977), 'Ohana Unity Council (1979), Kahana Advisory Council (1985), and Townscape, Inc. (2017). Not counted are the numerous plans for various park programs and activities, as well as broader plans created prior to condemnation, including Belt, Collins & Associates, LTD (1955), "The State" (1962), and Hulten (1965). See Appendix Q.

community perspectives and working together to co-develop a shared vision for Kahana, state planning proceeds through hired consultants with the expectation of different results.

Kahana's decades of park planning are also a result of slow bureaucratic processes and state inaction. One example of this is the delayed issuance of long-term residential leases. For about 24 years following condemnation, families lived on revocable month-to-month permits (Jaworowski 2001). One elder describes of her own family's experience: "I've been involved since 1972 in the fight for our people to go from revocable permits to long-tenure leases... my father was going through all this struggle, and he kept telling me... 'You got to come home!' He said, 'I can't do this anymore!' He was getting so upset with what the state was doing" (BD, 6 February 2016). It was not until 1993 that 31 families were able to secure 65-year leases. This excerpt from a status report on park development prepared by the Office of Hawaiian Affairs (1984) captures the toll that planning efforts, lack of follow-through, and delays took on families:

"People in Kahana have lived with the uncertainty of month to month leases (permits) for close to one whole generation. Committees have been appointed by the State government, elaborate plans have been prepared by 'experts', scores of meetings have been held, reports have been issued, newspaper stories have been written, thousands of dollars of taxpayers funds have been spent, piles of paper have been accumulated, minutes have been taken and years have gone by, but the fundamental questions which have to do with the lives of people, whose ancestral home Kahana is, have been postponed, deferred, considered, reconsidered, debated, reviewed and delayed. The only decision which has been made about the people of Kahana is that no decision about them has been made. Delay has bred inertia, inertia has fostered decay, disillusionment, dilapidation, frustration, anger and not a small amount of despair. All these things have sapped the strength and vitality of the people of Kahana. Delay is both cruel and inhumane" (OHA 1984: 12).

Kahana's history of non-participatory processes and delayed state action continues to affect planning efforts today, as one state planner describes:

"I realized that they had talked to so many different people over the years. But then you got to begin to forget what happened and try to move forward and not get held because of what happened in the past. Even today, we have meetings and nobody shows up and yet even our own council members will bring up stuff that happened years ago. Just over and over. You just hear the same thing and then you get stuck, and there's no movement anymore" (DLNR Staffer, 9 August 2016). Issues that have carried through the generations remain unresolved and overlooked as planning efforts forge ahead with outside consultants. In 2015, State Parks contracted a planning agency to conduct a "scope and cost estimate" study for initial phases of master planning, to determine strategies for resolving issues related to the living park, lease agreements, and management entity (Townscape, Inc. 2017).²⁵ A few state interviewees expressed hope that this time, the planning process would result in a master plan that would stick. One interviewee acknowledged that even if it did, it would still take another ten to twenty years before preliminary studies, master planning, and environmental impact statements of proposed activities would be completed.



Figure 17: Fisherman walking along Kahana's shoreline with a pole and squid box for harvesting he'e (octopus), while a car full of visitors wave from the highway. Photo captured in July 1959 (Hawai'i State Archives, PP58-10.016).

²⁵ Townscape, Inc.'s contract was not renewed in 2017.

Prioritization of Public Benefits

"What we are trying to do at Kahana is to proceed with the recreational facilities and develop a cultural program, and then work on the resident problem."
James Yamashiro, DSP Administrator, Honolulu Star Bulletin, 6/30/1980

"First and foremost, to me, it's a public resource and it was acquired for a public benefit." – DLNR Staffer, 26 September 2016

"I think the general public has to have an awareness as to why we need to protect this resource, how we're all going to share in protecting this resource, what our roles are, what our responsibilities are to help." – JR, 28 February 2016

Another factor straining state-community relations involves the state's prioritization of public recreational benefits and the expectation of Kahana residents to provide this public service. A current DLNR staffer shared, "I like the idea of the cultural living park. I thought 'That's really a neat idea if it would work,' because I really feel like there needs to have some kind of public benefit to having the residents in the park" (26 September 2016). The purpose of the "living park," as determined by Senate Resolution No. 264, S.D. 1, Regular Session of 1977, is to "nurture and foster native Hawaiian culture and spread knowledge of its values and ways." Through Act 5, the living park concept was effectuated by authorizing DLNR to issue 65-year leases to "persons long associated with Kahana Valley who are knowledgeable and qualified to interpret for the general public the significance of these resources for the public's benefit and enjoyment" (Act 5).²⁶ "Exhibit C" of the lease agreements signed in 1993 details the requirement of residents to contribute 25 hours of interpretive services each month in lieu of lease payments (KAC 1999). However, prioritizing public recreational benefits has resulted in "...a pervading belief that efforts to develop a 'park' have taken precedence over the nurturing and fostering of Hawaiian culture" (Shafer et al.1998: 10).²⁷

The majority of community members and state personnel interviewed in this study agree that the living concept is no longer viable. The same finding was determined by Townscape Inc. (2017), with over 70% of the Kahana leases in arrears in their interpretive service hours. One DLNR staffer shared his perspective on why it has not been successful, simply stating, "I think

 ²⁶ Although Act 5 was enacted in 1987, the monthly requirement of interpretive service hours did not commence until February 1996 (Jaworowski 2001).
 ²⁷ Other issues with the interpretive service hours include problems with previous park managers, their demeanor

²⁷ Other issues with the interpretive service hours include problems with previous park managers, their demeanor towards residents, lack of transparency, and favoring of certain residents over others; scheduling conflicts; ambiguity as to what counts as an "interpretive service"; inadequate supplies; inability to count hours for children engaged in cultural education; and successorship (Shafer et al. 1998).

it's forced" (9 December 2016). Another state personnel shared how some individuals from the grandkid's generation (i.e. adults in their 20s and 30s) "get the concept of culture and they get the concept of kuleana [responsibility] and they don't necessarily feel like 'We have to do a land ownership' but 'It is our kuleana to be stewards of the land' and that they don't feel like they have to monitor 25 hours because they're doing it anyway. That's the way of life" (23 August 2016). Further, requiring community members to provide educational and experiential services to the public about their own lives in the state park puts the community and their way of life on display. In grappling with this issue, one staffer has realized the need to "...find that balance between offering opportunities for the public to experience Kahana and respecting those who live there and letting them practice their cultural traditions, live their lives, as they say, without feeling like they're in a fish bowl" (DLNR Staffer, 26 September 2016).

Prioritization of public benefits extends beyond the park. Community interviews also express concern about public use of Kahana's coastal resources. Identified threats include disturbance caused by jet skis, commercial fishing and overfishing in general, and new runoff pathways created by a growing number of hikers making their own trails, particularly up Kauhi'īmakaokalani²⁸. Among these, jet skis and overfishing were the two greatest causes of concern shared in community interviews²⁹. In recognizing the ecological importance of Kahana's estuarine system, one longtime resident explains the threat imposed by jet skis and other physical disturbances: "Hawaiian fish cannot reproduce in salt water or fresh water, [only] brackish. So now, the fish cannot come into the bay because we have guys jet skiing-they're the worst offender—and just the general population as a whole, and you know, puts a lot of pressure. And if fish cannot reproduce, well, what's going to happen to the resource?" (JR, 28 February 2016). On August 15, 1988, Kahana Bay was designated as part of the Windward O'ahu Ocean Recreation Management Area (ORMA) which extends 3,000 feet seaward and stretches from the northwest boundary of Kahana Bay down the windward coast to Makapu'u Point (HAR 13-256). Recreational users with personal watercraft (i.e., jet skis, thrill craft, etc.) are required by law to proceed at a "slow-no-wake"³⁰ speed within 300 feet from the shore, after which they can "do

²⁸ More commonly known today as Crouching Lion, located on the Ka'a'awa side of Kahana Valley.

²⁹ Other identified threats to coastal resources include the introduction of invasive species, such as ta ape, to au, roi, and tilapia, as well as mangroves and hau bush, which have significantly changed native habitat.

³⁰ "Slow-no-wake" means as slow as possible without losing steerage way so as to make the least possible wake, usually less than five miles per hour. Personal watercrafts must travel at a slow-no-wake speed within 300 feet of any shoreline (HAR 13-256-17) and 200 feet of any moored vessel, swimmer or diver's flag (HAR 13-244- 9).

whatever they want" within the ORMA (DOBOR staffer, 8 December 2016). However, Kahana has frequent incidences of jet skiers illegally meandering within the 300 feet coastal zone, joyriding around the bay and anchoring near the boat ramp. Therefore, this issue persists in part due to poor enforcement.

By opening access to the public, Kahana Bay has also become vulnerable to overfishing, particularly by commercial fishers. Akule remains a highly prized commercial fishery in Hawai'i. As of 2000, commercial catch data reveal that akule along with 'opelu (Decapterus spp.) accounted for nearly 80% of Hawai'i's coastal catch by weight (Friedlander 2004). Describing the pressure that commercial fishing has on Kahana's resources, one elder fisher emphasized how it is an "Every day thing that they're fishing. Five days, maybe you rest two days, but every day. Every day there's commercial [fishermen] catching the akule... That's their livelihood" (YB, 6 February 2016). Kahana fishers shared concern about how the fish "don't have time to come and rest" anymore, because other commercial fishers surround them as soon as they can, often before the schools of akule are able to enter the center of the bay where they are known to spawn (KV, 6 February 2016). The only laws protecting akule include mesh net size restrictions and a statewide seasonal closure on halalū (juvenile akule), which local fishers inform is inadequate. Prioritizing public recreational benefits within the park and Kahana's fishery precludes efforts to nurture and foster Native Hawaiian culture, positions residents to be in service of the public, puts community and their way of life on display, and negatively impacts coastal resources.

Limited State Capacity to Effectively Manage Coastal Resources

"But our problem with Kahana is we don't manage any of the resources – we don't even manage the watershed or the streams." – DLNR Staffer, 9 August 2016

"We get lot of people came from the mainland. They never even fish their life. They want to tell us what to do... Don't come over here and turn us down. These are our kuleana [responsibility] here. These belong to our family." -BC, 4 December 2015

Another underlying issue influencing state-community relations is that the state maintains authority to manage Kahana's coastal resources yet has limited capacity to do so effectively. In

contrast to konohiki management, land and sea are managed separately by various subagencies within the Department of Land and Natural Resources. These subagencies include the Division of Forestry and Wildlife (DOFAW), which manages forest resources and hunting permits; the Division of Aquatic Resources (DAR), which is responsible for the stream, estuary and nearshore fishery; the Division of Boating and Ocean Recreation (DOBOR), which is responsible for Kahana's boat ramp and watercraft activity; and the Division of Conservation and Resources Enforcement (DOCARE) which deals with regulatory violations pertaining to the natural resources. However, the Division of State Parks (DSP) is the primary agency responsible for managing the ahupua'a of Kahana, including its natural and cultural resources. One staffer explains how State Parks came to assume this role:

"[State Parks'] thing is recreation. I mean like outdoor recreation: camping, scenic viewing, things like that. To have 31 families that you got to manage full time, it's a big task... I used to think, you know, the pressure is on. I mean, when the legislature says you got to do stuff, you got to do it. But I used to think there were tons of other groups and people with greater minds than ours that couldn't figure it out, so how do they expect us to figure it out, you know?" (9 August 2016).

One of the findings from the recently published "scope and cost estimate" study by Townscape Inc. (2017) concludes that State Parks does not have the manpower or expertise to manage Kahana's natural and cultural resources. As explained by one DLNR staffer, "[DSP doesn't] have resource people per say... [they] have a couple archaeologists but otherwise it's property managers, planning and development, administration, clerical, and that's kind of it, and then park caretakers out in the field. So in-house, [they] don't really have the capability" (26 September 2016). State Parks staff admit they do not manage any of Kahana's natural resources and instead rely on their sister divisions. However, staff also acknowledge that collaboration between divisions rarely occurs³¹: "I guess only when there's a crisis happening then we work together, but I think for Kahana, it's pretty much the other agencies feel it's a hands off thing. You know, that it's our kuleana [responsibility] and they won't get involved unless they're asked. And State Parks is not—you know, we got like 52 other parks that we deal with and to focus all our attention on one...we can't do it" (9 August 2016).

³¹ In recent years, however, the Commission on Water Resource Management (CWRM) has spearheaded a stream restoration project in Kahana with a grant through Fish and Wildlife Service, in collaboration with DSP (Uyeno 2013). They began removal of hau in the lower reaches of the estuary, and planting the stream beds with native riparian vegetation.

Other DLNR divisions echo State Parks' difficulty in allocating agency resources across the state. The Division of Aquatic Resources minimally manages Kahana's fishery with the same statewide regulations, such as gear restrictions, bag limits and seasonal closures for aquatic species. One DLNR staffer stated, "...they don't actively do anything" (9 December 2016). He elaborated, "I guess it's DAR's responsibility to make sure that that akule fishery is protected as well. I don't think DAR has a big role to play there... responsibility, yes. But they have a responsibility out to three miles from the shoreline. There's no fire there." DOBOR is responsible for the maintenance of Kahana's boat ramp area and ocean recreation safety; however, they have also been largely inactive as evidenced by Kahana's run-down pier and parking area. Regarding the parking lot's potholes, one DOBOR staffer explained, "It's almost beyond repair. I mean you have to go in and dig it up and put new base parts and put in new pavement. It's not where you can just fill it in with patch... the next time it rains, just pop right back up. That's why our maintenance guys, they kind of gave up" (8 December 2016). Regarding DOCARE, nearly every interview with state personnel across agencies discussed inadequate staffing, and in some cases, issues with inconsistent enforcement. One employee working in DLNR for nearly twenty years shared how at a recent statewide staff meeting, "The number one problem that everybody was facing was enforcement, and that's always been the case as long as [she's] been working at DLNR" (9 August 2016). Interviews with state resource management personnel highlight their inability to protect Hawai'i's coastal resources due to insufficient funding and staff with the appropriate expertise. Limited financial and human capital is therefore only dedicated when there is a "crisis" or "fire" to put out.

Kahana elders express dissatisfaction with the way the state manages coastal resources, identifying the 1960s as the time during which they began to notice Kahana's fishery declining. One elder describes the stark change he's observed in Kahana's fishery within his lifetime: "Today, you're not going find akule. Not like before. Akule come in, but just small pile, kind manini pile... Before they used to catch akule by the tons, now they catch them by the pounds" (GC, 7 November 2015). Perhaps most notable is the decline in schooling akule and 'ama'ama³²; however, interviews also reveal a decline in moi; lobster; limu (macroalgae), specifically 'ele 'ele, huluhuluwaena, waewae'iole, and manauea; and endemic stream species, including 'o'opu,

³² One contributing factor is the fact that commercial fishers often surround schools just outside of Kahana Bay, before they have a chance to swim into the bay to spawn.

'ōpae, and hihiwai. It is important to note that based on commercial catch data, coastal fisheries throughout Hawai'i have declined significantly since the early 1900s, in large part due to the shift from subsistence to a cash economy and the commercialization of Hawai'i's fisheries (Cobb 1906; Shomura 1987; Friedlander and Rogers 2008). However, Kahana's elders share how their nearshore fishery, even as it was being used for both subsistence and commercial purposes, was still well cared for and plentiful throughout their childhoods. These elders talk about how schools of fish visited the bay more frequently, in greater numbers and with larger individuals. Many community interviews attribute Kahana's declining coastal resources to the state's opening the fishery to the public—one elder points specifically to the boat ramp's construction (1962) while others point to when the state took ownership of Kahana (1965-1969).

Like many coastal fisheries throughout Hawai'i, the loss of konohiki fishing rights and opening of the fishery for public use made Kahana yet another example of the tragedy of the commons. Today, the fishery is vulnerable to significantly greater fishing pressure by commercial fishers, as well as disturbance by jet skis and other recreational activities. State management efforts have primarily focused resources on park development for public recreational benefit, and state resource management personnel have acknowledged their limited capacity to effectively care for coastal resources. To fill in these management gaps, Kahana fishing families are organizing their community around efforts to enhance coastal health and restore local level governance.

Reviving and Strengthening Local Institutions

"Remember the name "Ka – Hana". Kahana is bust ass! You got to do your stuff every day. Just taking care of the taro patch: mowing the grass, weed whacking, cutting, if not that, I'm chain sawing. There's always something to do, and it don't get any easier." – JR, 28 February 2016

"Kahana means a lot to me. You know, I basically fought for it a long, long time. Sometimes I go to sleep and I have nightmares because I think to myself 'What is it that I didn't do? What is it that I didn't finish?" – BD, 6 February 2016

Following decades of planning with little in the way of results, families have been working to realize their own vision for Kahana through reviving and strengthening local knowledge,

practices and values. The grandchildren of those who fought for their families to remain in Kahana at the time of state acquisition are now driving community caretaking efforts. In acknowledgement of these young leaders, one state planner commented, "Everybody's looking to the youth... They're looking to them to help bring it back to what it was or have at least more of a commitment to a future and what type of future" (9 August 2016). Despite the limitations imposed within a state managed park and fishery, Kahana families continue to find creative ways to manage their coastal resources through reviving ahupua'a health and food systems, restoring customary harvesting practices, teaching across generations, and rebuilding community relationships and capacity to manage.

Restoring Ahupua'a Health & Food Systems

"I used to go up there with my grandmother and sit on the side of the mountain and see the fish from there... I want to take my kids up there and share this with all the children. I want to bring it back and tie it in with growing taro." – Kahana taro farmer, 31 October 1996 (Ramirez 1996)

Kahana families are restoring ahupua'a health and food systems by cultivating lo'i (flooded taro field), restoring Huilua Fishpond, and stewarding the bay. In doing so, they have reinstituted the practice of managing the ahupua'a as an integrated unit inclusive of the land and sea. With the help of younger residents and Ko'olauloa families, elders have restored and continue to maintain lo'i that were cared for within their families for generations. One elder, who grew up taking care of his family's lo'i, left Kahana when he joined the U.S. military as a young adult (GC, 7 November 2015). After serving in the army for two decades, including a tour in Vietnam, he returned home to what was suddenly a state park. He no longer had access to his family's place of sustenance, nor could he take residence in the place he knew to be home. Instead of turning away, he proceeded to hike into the valley every day to remove the invasive hau bush that took over. With the help of many hands, he has since revived the lo'i, grown it five times its original size, and continues to share it with the broader community, serving as a space for learning and reconnecting. Another Kahana farmer has also restored and continues to maintain his family's lo'i, which he says has "...put poi [cooked taro] on my family's table for a while... six generations" (JR, 28 February 2016). This brackish water lo'i also provides important habitat for endemic 'o'opu (goby) and 'opae (shrimp). He continues to host individuals and student

groups from around the island who visit to learn and contribute through workdays. These taro farmers also work together to upkeep the 'auwai that feed their lo'i with fresh, cool stream water. Efforts to restore other lo'i sites have also been under way. Restoration of these traditional agriculture systems nourish families and communities, while perpetuating cultural practice and improving downstream and nearshore ecosystems.

Fishponds are also important components of healthy ahupua'a that contribute to community self-sufficiency and well-being. Huilua Fishpond is fed by freshwater springs and has features of loko kuapā (fishponds located on an ocean reef flat, with a seawall enclosure) and loko pūone (inland fishponds often formed behind sand dunes) (Wyban 1995). The fishpond once functioned as a community food source, of native mullet primarily, and is estimated to have produced one thousand pounds of food annually (Kelly 1979; Wyban 1995). Under state ownership Huilua fell into disuse, and requires significant restoration effort to address its broken seawalls, sand deposition, and overgrowth of hau and mangrove. Following numerous studies, plans, proposals and years of effort on behalf of the community to cut through "lengthy red tape" (Shafer et al. 1998), restoration of Huilua Fishpond is finally underway. Young leaders in the role of kia'i loko (fishpond caretakers) worked with DSP to obtain a permit in 2015 for reconstructing the fishpond, being the first in the state to do so through the new streamlined permitting process (Watson et al. 2016). They continue to hold workdays to steadily, by hand, repair the pond's 1,000-foot wall and remove invasive species and sand buildup.

Other young community members have taken on the role of stewarding the bay. In 2014, Kahana's fishing families created the community-based nonprofit organization, Kahana Kilo Kai, and formally enrolled in the "Adopt-a-Harbor" program their first year to restore area facilities long neglected by Boating and Ocean Recreation. They also worked with the agency to post signage reminding jet skiers of the state's "slow-no-wake" laws, to minimize disturbance to fish spawning behavior and other natural processes. Over the course of this study, Kahana families gathered at the pier regularly to monitor recreational activities, record fish catches and spawning times, build relationships with fishers, and educate the public about both state regulations and local values for using area resources responsibly. Such gatherings also serve as a way for the community to come together, organize, discuss and create a shared vision for Kahana's future.

Through restoring traditional agriculture and aquaculture, and promoting responsible use of the fishery, the Kahana community is reintegrating land and sea management while reasserting their role as caretakers. In recognition of these community-led efforts, one state manager stated, "They don't just suggest things. They don't just plan things. They're doing it. They're working in the taro patches, they're carrying pōhaku [rocks] at the fishpond... they can walk their talk" (23 August 2016).

Reviving Customary Harvesting Practices

"Although our konohiki fisheries have changed drastically, by being thrown open to the public realm, our Kahana community continues to stand firm and fish together on the opening of the 'ama'ama [mullet] season for our annual community hukilau." – Kahana Kilo Kai, Facebook post, 1 April 2015

"It's not the fish; we have to change." – BC, 4 December 2015

Kahana fishing families are also reviving other customary nearshore management and fishing practices, such as hukilau or communal surround net fishing. Kahana is most remembered for its large communal surrounds of akule, which according to community interviews ended in the mid-1960s. Despite faster and easier ways to surround fish, over the past ten years, Kahana families have been working with one respected elder in particular to revive hukilau, for 'ama'ama (striped mullet). This harvesting practice, in which everyone who participates can contribute, strengthens community through relearning, reconnecting, and working together. Whereas Kahana was once a site where communal surrounds provided for the community, visitors and market, with fish still leftover to release back into the bay, the 2016 surround amounted to half a cooler of fish. In keeping with customary values, the catch was given to community elders. As one fisherman explained, "[Kahana fishers] always give the kūpuna [elders] who around. Local people, they always throw their fish to [them], because you know they love fish. That's why they're here but they cannot go out and get them. So our concept as Hawaiians is to share" (MP, 28 February 2016).

Community interviews also highlight potential rules for future local level fisheries management that draw upon customary practices. Every community interviewee expressed deep concern about the impacts of jet skis, with interest in either designating a pathway along the edges of the bay for them to travel slowly or outright banning their use. One elder believes the

most effective solution would be to simply rid of the boat ramp altogether. Many interviewees, including the commercial fishermen, also shared a desire to limit commercial fishing in Kahana Bay. One lifelong commercial fisherman expressed the need for an O'ahu-wide kapu saying, "You guys got to hear me this, fishermen especially. We're going to have to close akule March, April, May, June, so the halalū can come out... I hope the [DLNR] can hear what I'm saying, because I say this too long... in the long run, our young generations going to be happy" (BC, 4 December 2015). Other fishers agreed that this would be effective, with one expressing the need for flexibility in placing an additional annual kapu, since Kahana experiences a second, less predictable akule spawning period. Guided by elder knowledge and recommendations, the Kahana community is relearning harvesting and caretaking practices of konohiki to improve management of their nearshore fishery.

Teaching Across Generations

"You got to teach [the younger generations] how to not only catch the fish, you got to show them how to clean them, how to eat them, how to prepare them. You got to do all that." – BC, 4 December 2015

"Come here, watch how I do. The next time, you do them, I'll watch you. That way, you make mistake, I correct you. I'm not going to write a piece of paper I give you... Some might follow us; majority, I don't think so. But when they start eat the fish, if we feed them, maybe a different story." – YB, 6 February 2016

Another way in which the Kahana fishing community is strengthening local governance is through teaching across the generations. Knowledge sharing occurs on a day-to-day basis, at community workdays, and at gatherings such as Kahana Kilo Kai and Lawai'a 'Ohana Camps. Lawai'a Camps are specifically organized for the purpose of educating youth about natural and cultural resources, responsible harvesting practices and caretaking values. Kahana has hosted these multi-day summer camps over the past several years for families within Kahana and across Ko'olauloa, with more families participating year-after-year. The camps integrate Indigenous and Western knowledge systems through activities such as sewing and patching fishing nets, monitoring ecological conditions using the Hawaiian lunar calendar, and analyzing fish gonads to document spawning times. Learning is multidirectional, as one Kahana elder shares, "A lot of the things that I've been taught today [through Lawai'a Camp and other community gatherings] was never ever taught to our young ones or even to our old ones" (BD, 6 February 2016). Logistically, hosting the camps in Kahana requires Special Use permits to be filed with the Division of State Parks at least 45 days in advance. Aside from general rules for use of the area, these permits secure space for families, many of whom no longer live in Kahana, to gather, teach, and learn together on the land. These camps also provide opportunities to build relationships with nonprofit and state resource management personnel, who can help participate in and conduct activities, where appropriate.

Rebuilding Community Relationships and Capacity to Manage

"It doesn't matter what you need to do, if you can build a relationship you can get through any process." – DLNR Staffer, 29 September 2016

Kahana families are building their capacity to manage coastal resources through organizing their community around caretaking of coastal resources. By dedicating time together to maintain lo'i, restore the fishpond, monitor activities in the bay, revive hukilau, and pass caretaking practices and values onto the next generation, families are not only building their knowledge but also their relationships with each other and with place. The Kahana community is also growing their capacity to manage their coastal resources through building partnerships and sharing knowledge across local and global community networks. Through the nonprofit organization, Kua'āina Ulu 'Auamo (KUA), representatives from Kahana participate in a knowledge sharing and support network with 33 other communities across the Hawaiian Islands. In 2016, KUA extended this network to include over 100 Indigenous and community leaders, practitioners and supporters from 35 nations. The gathering was organized to build solidarity among Indigenous attendees of the IUCN (International Union for Conservation of Nature) World Conservation Congress, held in Honolulu in 2016. As part of the gathering, international participants spent one of their days together at Huilua Fishpond. They passed rocks-some so heavy it required two to three people to carry—in an assembly line ending at the fishpond wall. Smaller rocks were gathered within the fishpond to build small enclosures called imu kai (fish houses), which provide shelter for juvenile fish and substrate for limu (seaweed) to grow on. Participants also helped to replant huluhulu waena (Grateloupia falicina), a dark-red, edible limu which according to elders, once flourished in the bay. On the last day of the eventful, week-long gathering, many

participants reflected back on the fishpond workday and how it symbolized the challenges of their individual efforts to care for their homelands yet the power that everyone shares through working as a collective.

The Kahana community has endured considerable social-ecological change over the past two centuries with the gradual shift from local to state level management. The modern konohiki system (1850-1965) detailed in this case study operated within a vastly different context compared to pre-contact times, with the introduction of land privatization, a cash economy, commercialized fisheries, and the practice of leasing konohiki fishing rights. Despite such changes, the Kahana community maintained formal recognition of their konohiki fishery, along with key practices and values for sustaining their coastal resources. It was not until 1965-1969 that these rights were lost, when the State of Hawai'i exercised eminent domain to acquire the ahupua'a, establishing it as a state park and opening the fishery for public access. Under state management, decades of planning efforts have focused on developing Kahana's land and fishery for public use, meanwhile coastal resources continue to decline. Demonstrating the community's resilience, Kahana families are finding creative ways to manage their coastal resources, through reviving place-based knowledge, values, and stewardship practices. Although the Kahana community lacks formal government recognition of local management rights or co-management agreements, these informal efforts demonstrate community action and commitment. State resource management personnel across agencies have begun to take notice and lend their support. Within the timeframe of this study, state personnel attended Lawai'a Camp activities to give talks to the youth, helped to pull hukilau nets in to shore, and passed rocks at the fishpond alongside community members. These means of informal engagement are beginning to repair state-community relationships, while also building community connections and ability. Here, informal caretaking efforts hold promise for collaborative coastal resource management driven by community objectives and needs.

"Take a step back and let's jointly manage the resource, like I said with the priority being to traditional and customary practices... But everybody has a stake in this and everybody has input into how we're going to manage it... The way the concept is going to work, I think, in the end is by making everybody participate in it." – JR, 28 February 2016

DISCUSSION

"Ma Kahana ka 'ike. In Kahana one learns." – Kalani Quiocho, adapted from the Hawaiian proverb, "Ma ka hana ka 'ike," which translates to "In working one learns" (# 2088, Pūku'i 1983: 227).

This thesis explores a long-enduring case of local level management in which a rural Hawai'i fishing community is reclaiming their role as caretakers despite changes in land and sea tenure, governance, access, and use. Focused on Kahana, O'ahu, this research details the evolving institution of konohiki in modern times (1850-1965), including key features conferring social-ecological resilience. Findings also identify sources of conflict underlying state-community collaboration, yet informal ways in which fishing families continue to manage their coastal resources. Emerging from this research are key considerations for community-based collaborative management. These include: 1) understanding historical context for enhancing institutional fit, 2) fostering community ability to manage coastal resources through formal and informal processes, and 3) balancing rights and responsibilities of community and the public. Further discussion of these findings adds to the literature on institutional fit, community-based collaborative management, and Hawai'i's konohiki system, as it operated in the twentieth century.

Understanding Historical Context for Enhancing Institutional Fit

Understanding social-ecological systems from a historical perspective is critical in designing effective fisheries institutions. Institutions are systems of rights, formal and informal rules, and decision-making procedures that guide human-environment interactions (Young 2002). Institutional fit refers to how well institutions match a particular social-ecological system, often in terms of their spatial, temporal, and functional contexts (Cumming et al. 2006; Folke et al. 2007; Epstein et al. 2015). Findings from this research emphasize that design of fisheries institutions must also factor in the historical contexts of a social-ecological system. Here, historical context refers to the traditional and place-based institutions that historically operated within a particular place, as well as the history of interactions among collaborating partners.

This research highlights the importance of understanding the traditional and place-based institutions historically practiced for sustaining coastal resources. Konohiki management was tailored to local socio-cultural contexts and ecological systems, including prime spawning habitat

and the impacts of land-based activities on the nearshore fishery. According to elders, the konohiki system was highly effective for maintaining healthy fish stocks well throughout the first half of the twentieth century, even as Kahana's fishery was being used for both subsistence and commercial purposes. Their first recollections of resource decline begin when the state assumed management authority and opened the konohiki fishery for public access. This experience of resource decline and mismanagement is shared across Hawai'i (Maly and Maly 2003; Jokiel et al. 2011), the Pacific (Johannes 1978; Ruddle and Hickey 2008), and other parts of the world (Stevens 2014; Eckert et al. 2018) where Western models and concepts of resource management have replaced traditional and place-based institutions. Not only have management failures negatively impacted natural resources, but also the Indigenous and place-based communities who rely upon them, resulting in considerable losses such as culture/lifestyle, identity, knowledge and overall community resilience (Turner et al. 2008). Still, a wealth and diversity of traditional and place-based knowledge systems endure, and can be adapted within contemporary contexts to improve coastal resource management (Johannes 2002; Poepoe et al. 2003; Berkes 2012; Aswani and Ruddle 2013; Stephenson et al. 2014; Vaughan et al. 2016). Rather than simply replicating known features of these time-tested institutions, it is important to understand their foundational principles and operational designs, the key functions they fulfilled, and how they can be adapted to address future social-ecological complexities.

Design of institutional arrangements for managing coastal resources also depends, in part, on how shared histories shape state-community relationships and ability to work together. In Kahana's case, historical harms—including the loss of community rights and agency with state acquisition of land—were perpetuated over several decades through non-participatory planning efforts, bureaucratic delays, and state inaction. After fifty years, there is still no final master plan or shared state and community vision for Kahana. State organized meetings see low attendance of community members, with meetings often mired by long-standing grievances. Ignoring past injustices to forge ahead with planning efforts risks exacerbating cross-generational harms, exhausts community willingness to collaborate, and stalls progress on management objectives. Instead, government personnel and planners should seek to understand history from the community's perspective, create an environment of trust and open dialogue, respect cultural values, and engage in community-led planning (Umemoto 2001). Through participatory processes and a common understanding of their shared histories, government and community

partners can build towards long-term, collaborative partnerships for more effective environmental management and decision-making (Berkes 2010; Finkbeiner and Basurto 2015).

Fostering Community Ability to Manage Coastal Resources through Formal and Informal Processes

This case study demonstrates the power of informal co-management for fostering community ability to lead caretaking efforts. Co-management comprises a variety of institutional arrangements shaped by different goals, partners, knowledge systems, and degrees of power sharing (Borrini-Feyerabend et al. 2004; Olsson et al. 2004; Pomeroy and Rivera-Guieb 2006; Berkes 2015). Such arrangements are negotiated and acknowledged through a formal (e.g. legally recognized) or informal (e.g. verbally accepted) agreement among partners (Pomeroy and Rivera-Guieb 2006). Under state control, Kahana's nearshore fishery has been minimally managed with archipelago-wide species-specific regulations, while formal state park leases focus on community service to educate visitors. However, within the last decade, Kahana families have been reclaiming their role as caretakers through informal means of managing their coastal resources. Many of these caretaking activities require state approval (e.g. by way of issuing special use permits), and increasingly engage state resource management personnel.

Informal co-management allows communities the flexibility to self-organize, determine their own management objectives, and act upon them within their own time frames. By working within informal co-management arrangements, collective governance of fisheries, along with feelings of empowerment and shared responsibility, can be achieved and lead to effective management practices (Hauzer et al. 2013). Informal caretaking efforts in Kahana highlight the importance of creating the space for families to spend time together and build upon generational knowledge. Community members proactively engage in resource management through caretaking activities such as fishpond workdays and collective surround net fishing, in which they learn by doing the work and adapt accordingly. Traditional activities provide not only a way to renew relationships with people, place and practice, but also a foundation for cultural resurgence and resilience (Corntassel 2012; Vaughan 2018). Through organizing around caretaking activities, community members can meaningfully engage in coastal resource management while building their capacity to lead conservation efforts.

Still, this study recognizes the need for higher levels of governance to formally complement and support community caretaking efforts. Informal co-management can be limited in confronting broader threats such as unsustainable fishing and recreational activities, and may necessitate legal pathways (Berkes 2015). The long-term sustainability of social-ecological systems requires place-specific rules, the ability of communities to recognize and respond to change, and support from higher levels of organization (Olsson et al. 2004; Ostrom 2009; Stephenson et al. 2014). In this case, as in others, informal efforts can strengthen relationships that pave the way for more formal co-management agreements (Borrini-Feyerabend 2004; Vaughan 2018).

Balancing Rights and Responsibilities of Community and the Public

Co-management, formal or informal, can provide a vehicle for community groups to exercise their rights and responsibilities to their lands and waters. Maintaining collective benefit through balancing rights and responsibilities was an important feature of konohiki management. Konohiki carried unique responsibility to oversee harvests, facilitating a system in which everyone who contributed to collective work would in turn receive the benefits of reliable harvests (Steele 2015; Akutagawa et al. 2016). Emerging literature on co-management emphasizes the need to maintain a balanced distribution of rights and responsibilities, obligations, and benefits amongst all resource users (Aswani and Ruddle 2013; Gavin et al. 2015; Vaughan 2018). One key challenge to fisheries co-management in Hawai'i is that traditional management rested upon reserving distinct rights for area residents, whereas the state constitution protects public access (Vaughan et al. 2016). Under open access, the public is free to use and harvest coastal resources with no expectation to care for them, cultivate their abundance, or give back in any way. This decoupling of rights and responsibilities has resulted in coastal resource decline worldwide (Costanza et al. 1998; Ruddle and Hickey 2008; Friedlander 2018). Rights and responsibilities for all resource users need to be balanced and based upon contributions to collective efforts and caretaking (Gavin et al. 2015).

This research presents a case in which families with ancestral and multigenerational ties to Kahana maintain their presence upon land designated as a recreational state park. Though not without challenges, residents are reclaiming their rights and responsibilities, and restoring Indigenous practices to improve resource health. Displacement of Indigenous communities

throughout the world to establish parks, uninhabited wilderness (Stevens 2014), and marine protected areas (Ruddle and Hickey 2008) violates customary rights and prevents communities from exercising their distinct responsibilities to care for ancestral lands (Indigenous Circle of Experts 2018). Managing areas devoid of the people who have long cared for them limits community ability to continually interact with, eat from, perpetuate knowledge of, and govern resources for which they are responsible (Turner et al. 2008). This research contributes to a global movement towards creating new kinds of protected areas, such as state parks, that are inhabited by and managed with Indigenous and place-based communities (Nepal 2002; Borrini-Feyerabend et al. 2004; Stevens 2014; Indigenous Circle of Experts 2018). In Canada's Tribal Parks, for example, Indigenous peoples govern and manage existing state-run protected areas and newly established areas within their territories (Indigenous Circle of Experts 2018). Many of these Tribal Parks were created, in part, to protect lands from unsustainable resource industries, including oil and gas, logging, mining, and agriculture. Community managers are exercising their rights and responsibilities over their lands, while creating more sustainable livelihoods in ecotourism, renewable energy, fish hatcheries and other non-timber products (Plotkin 2018). Other examples of community managed protected areas include Te Urewara, a former national park in New Zealand now co-managed by the Tūhoe people (Te Urewera Act 2014; Ruru et al. 2017); Australia's Indigenous Protected Area system comprised of Indigenous owned and managed areas (Davies et al. 2013); and community-based marine protected areas throughout Oceania (Johannes 2002; Friedlander 2018). Conservation led by Indigenous and place-based communities is increasingly recognized for achieving more positive biodiversity outcomes compared with state-regulated processes (Indigenous Circle of Experts 2018; Plotkin 2018). By affirming Indigenous peoples' territories, diverse cultures, self-governance, rights and responsibilities, conservation of the world's biodiversity can be enriched and made more socially just (Stevens 2014; Eckert et al. 2018). As a result, everyone stands to benefit, from healthier ecosystems, cleaner air and waters, mitigation of risks from climate change, and more balanced human-environment relationships (Indigenous Circle of Experts 2018).

CONCLUSION

Understanding how Indigenous and place-based institutions historically operated and adapted to social–ecological change, and how they can be reinvigorated within contemporary contexts, is essential for biocultural restoration (Colding et al. 2003; Aswani and Ruddle 2013; Gavin et al. 2015). This study provides a historical perspective of coastal resource governance within one rural Hawai'i fishing community, covering the transition from local to state level management, to an emerging collaborative arrangement led by community. This study demonstrates how informal collaboration and community initiative to learn by doing the work, ma ka hana ka 'ike, can be more powerful than formal co-management arrangements for building community ability. Findings also emphasize the value of understanding historical institutions that adapted to local socio-cultural and ecological contexts, and balancing rights and responsibilities among all resource users. Effective coastal resource governance requires true partnerships, formal and informal, that value Indigenous and place-based knowledge systems and create the space for communities to build enduring relationships among people, place and practice.

Appendix A: Community interview question guide approved by the University of Hawai'i Institutional Review Board (IRB). (Continued on next page)

KAHANA: Lessons from Past Practices, Knowledge, and Values Community Member Interviews (to be conducted on site, or using a map):

- 1. Can you please tell me your name and where you are from?
- 2. Can you tell us a little bit about your connection to this area (Kahana)?
- 3. What was it like when you were growing up?
- 4. Who was the community here and what was life like?
- 5. Any stories or place names you would like to share about the area?
- 6. What were some key resources of the area (fish, limu, fresh water, etc.?)
- 7. How were they harvested and used?
- 8. How were these resources cared for? By who?
- 9. How have these resources and their health changed? When do you remember seeing these changes?
- 10. What do you think caused these changes? (threats)
- 11. What are your recommendations for the future of this place (to increase the health of resources)?
- 12. Can you tell us a little about konohiki in this place?
- 13. How do you feel about the "living park" concept? How has it had an influence on the community and the area's resources?
- 14. What would you like your grandchildren/the younger generation to know about this place?
- 15. Anything else you would like others to know about this area?
- 16. Before we end, can I record some information about you age, length of residence (in Kahana/on Oahu), occupation, ethnicity, gender?
- 17. Is there anything you have told us today that you don't want shared further?

If using map:

- 1. Can you show me on this map the place you grew up?
- 2. Could you indicate some of the places on this map where your family went to regularly (at least once a month) when you were growing up?
- 3. What names did you use to describe that place?
- 4. What was it like there?
- 5. What did your family go to this area for? What did your family do there?
- 6. Could you share a story about a time at that area?
- 7. Is there anything your family did to take care of that area when you went?
- 8. Who else went to that place and/or took care of it?
- 9. Who would you describe as "the community" of that area?
- 10. What were some of the important resources there?
- 11. Did your family gather any resources there? How? When? How often?
- 12. What were some of the informal rules (what was pono or not pono) that you learned for harvesting these resources in that area?
- 13. What were some other ways you learned about taking care of these resources? How did you learn these?
- 14. How were these practices enforced?
- 15. How did you decide how much to take?
- 16. What did your family do with these resources? How did these resources contribute to the wellbeing of your family?
- 17. Did you share them with others? Who?
- 18. Where else did your family go to get these same resources?
- 19. Do you remember seeing any changes in these resources in that area? When did you start seeing these changes and what do you think caused them?
- 20. When was the last time you went to that place?
- 21. Can you describe if/how the place has changed? Have the resources (type and abundance) changed?
- 22. If you no longer go to that place, when did you stop and why?
- 23. What would you like your grandchildren to know about that place?
- 24. Would you like your grandchildren to continue to go to that place why or why not? If so, what do you want it to be like?
- 25. Does your family still get these resources? How? Where or from whom? How often?
- 26. Nowadays, which areas on this map do you and your family go to regularly (at least once a month)?
- 27. Anything else you want me to know about any of the places we have talked about today?

Repeat questions 3-24 for each of the different places indicated as regular places the family accessed.

Appendix B: State resource management personnel question guide approved by the University of Hawai'i Institutional Review Board (IRB).

KAHANA: Lessons from Past Practices, Knowledge, and Values Policy- and Decision- Maker Interview

1. Can you please tell me your name and where you are from?

2. Can you tell me about your department/division and your job position?

3. How long have you worked for this department/division and in this field of work?

4. How would you define "management" in terms of Hawaii's nearshore fisheries?

5. What have been some successful strategies and some unsuccessful strategies in managing Hawaii's nearshore fisheries?

6. In general, where are some areas for improvement that you've noticed?

7. What is your department/division's role in managing Hawaii's nearshore fisheries?

8. What do you see as the role of local communities?

9. In what ways do you see the sharing of authority and responsibility between State and community in managing nearshore fisheries?

10. Can you tell us a little bit about your work experience with Kahana?

11. How is this area and its fishery currently being managed?

12. What are some of the threats to the resources that have been identified in this area?

13. What have been some of the challenges in managing this particular fishery?

14. What gaps in knowledge or research could be addressed to better inform management decisions for this area?

15. What is the department/division's vision for this area?

16. Is there anything else you would like to share with us?

Appendix C: A Social-Ecological Timeline of Kahana, O'ahu (1200–2017). (Continued on next two pages)

	1200	≈1200	Kahana's first settlement occurred 430–30 B.C.; most recent	Beggerly 1990
ct	1300		continuous settlement segun around A.S. 1200.	
Pre-Conta	1400	≈1400-1600	Fishponds throughout Hawai'i are built ≈1400 A.D.; a site along Huilua Fishpond's NW facing wall dates human habitation in Kahana around A.D. 1667.	Kikuchi 1976; Rothwell et al. 1980
	1700	1778	The first European, British explorer James Cook, arrives in the Hawaiian Islands; Kahana is a thriving farming and fishing community of an estimated 600–1,000 Native Hawaiians.	Mogi 1978; Jaworowski 2001; Stauffer 2004
m of Hawai'i		1795	King Kamehameha unites the Hawaiian islands, except Kaua'i and Ni'ihau.	McGregor and MacKenzie 2014
	1800	1816	Hawai'i's kapu system is abolished.	Kame'eleihiwa 1992
		1839	First written recognition of konohiki fishing rights In the Kingdom of Hawaiʻi's Declaration of Rights	Kosaki 1954
		1840	Konohiki fishing rights are recognized in the Kingdom of Hawai'i Constitution.	Kosaki 1954
		1846-1855	The Māhele divides Kahana into ≈5,050 acres of konohiki land, awarded to Chiefess Keohokālole, and ≈200 acres of kuleana land awarded to 34 Kahana residents; Kapa'akea is referred to as konohiki in Māhele documents.	Stauffer 2004; OHA 2017
		1857	Keohokālole sells Kahana's konohiki land, with the rights to the konohiki fishery and fishpond, to AhSing, a Chinese businessman.	Hawaiʻi State Archives
요		1859	Konohiki rights are codified in Hawai'i's Civil Code.	Kosaki 1954
lingo		1868	AhSing sells Kahana's konohiki land to J.A. Chuck.	Hawai'i State Archives
×		1872	J.A. Chuck sells Kahana's konohiki land to H. Ahmee.	Hawai'i State Archives
		1874	Ka Hui Kūʻai i ka ʻĀina O Kahana (Hui of Kahana) purchases the konohiki land from H. Ahmee, with 95 mostly Native Hawaiian members from the area holding 115 shares.	Stauffer 2004
		1887	The first share of the Hui of Kahana is sold externally.	Hawai'i State Archives
		1893	American businessmen backed by the U.S. military illegally overthrow the monarchy.	Chock 1995
	1900	1900	The Organic Act establishes Hawai'i as a U.S. territory; repeals konohiki laws except for registered fisheries.	Kosaki 1954; Meller 1985
		1905	Kahana's konohiki fishery is successfully registered to the Hui of Kahana, March 30.	Hawai'i State Archives
		1908	Koʻolau Railway extends the railway from Kahuku to Kahana Valley, for transporting sugarcane.	Maly and Maly 2004
		1910–1918	Kai'apa and Pua are the caretakers of Huilua Fishpond.	Kelly 1979
		1913-1916	Oahu Sugar Co. constructs the Waiāhole ditch system to divert 27 MGD ground and surface water from windward watersheds, including Kahana.	Yeung and Fontaine 2007
I	l i		5	

Territory of Hawai'i

	1918-1923	Louis Kawehi (also a kilo i'a) becomes caretaker of Huilua	Kelly 1979
-		Fishpond.	
	1923-1924	Tidal waves break the NW wall of Huilua Fishpond; Pua Ha'aheo steps into the role of fishpond caretaker.	Kelly 1979
	1925	Nick Peterson becomes the foreman of Mary Foster's property holdings.	The Honolulu Advertiser 1960
-	1930	Mary Foster passes away with 99% ownership of Kahana (less	Jaworowski 2001
-	1943–1946	The U.S. Army leases 485.25 acres for establishing the Pacific Jungle Combat Training Center, moving Kahana Valley families to live closer towards the bay.	Chee 1993; GC, 2015
	1946	April 1 tidal waves take the lives of Sam Pua Ha'aheo's three grandchildren; Pua leaves his roles as konohiki and fishpond caretaker; the Kamake'eāina family assumes the role of konohiki; Joseph Kekona leases Huilua Fishpond.	Interviews, 2015- 2016; Kelly 1979
	1947	Kahana's konohiki fishery earns \$10,000.	(See Appendix I)
-	1955	Mary Foster's Estate contracts a planner to develop a resort village plan.	Belt, Collins & Assoc., LTD 1955
-	1957	A tidal wave event causes further damage to Huilua Fishpond.	Kelly 1979
	1959	Hawai'i is admitted into the union as the 50 th state.	McGregor and Mackenzie 2014
-	1960	Tidal wave event; Nick Peterson passes away.	Kelly 1979; The Honolulu Advertiser 1960
_	1961	State expresses interest in Kahana to establish a state park.	(See Appendix M)
	1962	The City and County of Honolulu purchases 8.154 acres of beach land from Mary Foster's heirs; Kahana boat ramp is built.	Hulten 1965; (See Appendix N)
•	Mid- to late- 1960s	Kahana's nearshore fishery begins to decline.	Interviews, 2015- 2016
-	1965	Public is notified of condemnation proceedings for Kahana's konohiki fishery; State pays first \$1M to develop water resources and a state park in Kahana.	(See Figure 15); Jaworowski 2001
-	1968	Public is notified of condemnation proceedings for the ahupua'a of Kahana.	(See Appendix N)
-	1969	The State finalizes its \$5M purchase of Kahana and the konohiki fishery is opened to the public; Harrison Thurston leases the fishpond.	Jaworowski 2001; Kelly 1979
	1970	A park plan details significant development and eviction of residents; residents successfully lobby the state legislature to remain on the land.	Tongg Associates, Inc. 1970; OHA 1984
	1971	The Board of Land and Natural Resources adopts the "living park" concept, March 25.	OHA 1984
	1987	Act 5 authorizes 65-year leases for residents in Kahana Valley State Park.	Hawaiʻi State Legislature 1987
	1989	The state hires the first park manager.	DSP n.d.
	1993	The Department of Land and Natural Resources enters into 65- year leases with 31 families and appropriates funds to provide 26 lessees with low-interest home construction and mortgage loans for required rebuilding outside of the flood zone.	Act 15

	1996	The requirement of 25 hours per month of interpretive service hours commences.	Jaworowski 2001
2000	2003-2005	Three leases are forfeited and one is auctioned.	DSP n.d.
	2006	After a decade of contested case hearings regarding diverted waters for the Waiāhole ditch system, the Commission on Water Resource Management authorizes 15 MGD for non-	Group 70 International 2009
		Waianu and Waiāhole Streams.	
	2008	DLNR issues eviction notices to six families.	DSP n.d.
	2009	Act 15 creates a two year moratorium on evictions, authorizes DLNR to issue new leases, and calls on the living park planning council to develop a master plan.	Act 15
	2015	The Office of Conservation and Coastal Lands issues a tier one permit for Kahana fishpond practitioners to begin restoring the rock walls of Huilua Fishpond.	Watson et al. 2016
		State Parks commissions Townscape, Inc. to conduct a "scope and estimate" of current issues for a master plan.	Townscape, Inc. 2017
	2017	Townscape, Inc.'s contract is not renewed.	Personal communication 2017

Appendix D: Kuleana land claim # 5706, dated September 18, 1850, detailing witness testimony of Kuamo'o's claimed land including a house lot, kalo patches and kula lands—all approved by Kapa'akea except for a spring-fed river that Kuamo'o claimed to receive from a previous konohiki (OHA 2009). (Continued on next page)

128 Kahana 18th Sept : 1850 . blaim 5406. Kuamoo . Makuku, Sworn, Says he knows part of the land claimed by Kuamoo in Kahana. Knows of I kalo patches near the Bridge, but they have not been planted for 8 or 10 years. withip knows the House Lot of claimant. It is enclosed. It is on the Road side. claimant has lived there over 20 years. Kakuiholahola, Sworn, days he knows of 2 kalo patches of claimant, manka of his House Lot. These two patches are in bad order at present, owing to the want of water. They are bounded on Kaneohe side by makuku's land, - manka by Ku kuiholaholais land, - on Punalun side by a watercourse .- makai by makuku's land. Kalimaani, sworn, days he knows one kalo patch belonging to Knamoo. It is bounded on Kaneshe side by Punces and Kanaina's lands, - mauka by Kanaina's land, - on Punalun side by the Konshike, - makai by Punci land. Knows one piece of cultivated kula land claimed by Kuamos. It is bounded on Kaneshe side by a watercourse, - manka by Napela's land, - on Punalun side by Hoikan's land - makai by Kalimalu's and Kapena's lands. Hua, Swarre, Saus he knows the 3 kalo hatches claimed by Knamos manka. They are bounded on Kaneshe side by Kaspais land - marka by Knapenis land - on
Punalen, side by Kaluaai's land, - makai by the Kowshiki. Maiawahia, Sevore, says he knows the other piece of cultivated kula land claimed by Kiramoo. It is bounded on Kancohe side by Kekein's land, - manka by Kekein's and the Konshike, - on Punalue side by the Ko= nohiki, - makai by Kapapai land. withe knows the River claimed by Knamos. It comes from some springs about a mile from the dea, into which it empties near daimant's house. (Claimant stated that Fule, a former tonohike gave this River to him some 12 years ago. The land on both sides of it flongs chiefly to the Koushitei !. (The Commissioner &. M. Robertson, was of opinion that this claim for a river could not be sustained]. Kapaakea, the Koushike, had no objections to make to this claim, except to the siver.

Appendix E: Certified deed conveying Kahana's ali'i land from A. Keohokālole and K. Kapa'akea to Ahsing, recorded with the Registry of Conveyances for the Territory of Hawai'i on May 13, 1857 (Hawai'i State Archives, Mary E. Foster Collection M-433, 1. Ahupuaa of Kahana Deeds: Certified copies 1856-1881). (Continued on next page)

This Indenture made this fifteenth day of May A D One thousand, eight hundred and fifty seven Between A Kechokalole and K Kapaakea her husband of Honolulu, Oahu Hawaiian Islands of the first part and Ahsing (Apakana) a Chinese Merchant of Honolulu aforesaid of the second part,

Witnesseth :-

That the said parties of the first part, for and in consideration of the sum of Two Thousand, five hundred dollars to them in hand paid by the said party of the second part the receipt whereof is hereby acknowledged and wherewith they are . fully contented, satisfied and paid, have granted bargained, sold conveyed & confirmed and by these presents do grant bargain, sell, convey and confirm unto the said party of the Second part his heirs and assigns forever, all and singular that certain tract or Ahupuaa of land situate in Koolau Island of Oahu, Hawaiian Islands and known as the land of Kahana containing three thousand acres more or less as the same is enclosed by its ancient and natural boundaries, viz : on the makai side by the Sea, on the Koolaupoko side by the Ahupuaa of Makaua on the mauka side by the - dividing ridge which separates Koolauloa from Kona, and on the Waialua side by the Ahupuaa of Funaluu, together with all and singular, the Sea, the fish ponds, the tenements hereditaments and appurtenances, thereunto in anywise belonging with the rents, issues, and profits thereof, and also all the right, title, interest, claim or demand whatsover in law or in equity, and all curtesy or right of curtesy, dower, or right of dower of the said parties of the first part or of either of them therein or thereto excepting and reserving however from the above granted premises such por-· tions as have been duly awarded to' third parties by the Board

of the Land Commissions.

To have and to hold all and singular the above mentioned and described premises with the hereditaments and appurtenances subject only to the reservation above made unto the said party of the second part his heirs & assigns forever.

69

And the said parties of the first part, the said Kechokalole for herself and her heirs and the said Kapaakea for himself and his heirs, do covenant and agree to and with the said party of the second part his heirs and assigns to warrant & defend the above , granted and bargained premises unto the said Ahsing his heirs and assigns forever against the lawful claims of all persons.

In Witness whereof the said parties of the first part have hereunto set their hands & seals this thirteenth day of May A D 1857

A Kechokalole K Kapaakea

Register Office) : O A H U)

SS. On this 13th day of May A D 1857 personally appeared before me Kapaakea & acknowledged that he executed the

foregoing Deed for the purposes therein set forth.

Thomas Brown

Deputy Registrar of Conveyances

. Hawaii, Hawaiian Islands May 22nd 1857

Fersonally appeared before me A. Kechokalole and acknowledged that she had executed the foregoing instrument for the purposes therein set forth and that she did so of her own free will

F. Cumings

Agent for taking acknowledgments on Hawaii.

Recorded and Compared this 3rd day of June A D. 1857 at 11 Oclock

A. M.

Thomas Brown

Appendix F: Survey of Kahana's konohiki fishery by M.D. Monsarrat on January 28, 1902 (Hawai'i State Archives, Mary E. Foster Collection M-433, 109. Kahana Fishery 1902-1942). (Continued on next page)

DESCRIPTION OF KAHANA FISHERY KOOLAULOA OAHU Commencing at a point on the makai side of the Covernment road on the boundary of Kahana and Punaluu From which point the West angle of the- Kahana bridge bears S. 81º 88' E true 3820 feet and running: 1. N 67º 35' E true 1850 feet along the Duralin fishdary to roint on reaf. 2. S 76° 40' E true 1600 feet to point on reef Thence S. S 17º 00' E # 1840 feet to point on shore on boundary of Kahana and Makaua Grant 1305 Thence 4. S 88º 28' W true 101 feet along shore 910 5. S. 38° 20' W .11 # to angle of fish tem 6. S 77º 15' W 12 1100 11.1 Thence nond 7. S 14º 15' N true 740 feet along shore 480 8. 5 26° 20' W to West wigle of 9. 5 79° 00' W 535 11 Kahana bridge 10. N 68º 20' W true 1980 feet along shore 620 11. N 18º 15' W 18. N 20º 00' B OBE st. 12 to initial point. 13. N 6º 40' E 1375 Ares 270 Acres m. 10.1 nousanah Surveyor Honolulu January 28, 1902.



Appendix G: Legal expenses amounting to \$239 paid to Kinney, McClanahan & Cooper law firm on behalf of the Hui of Kahana for registration of Kahana's konohiki fishery (Hawai'i State Archives, Mary E. Foster Collection M-433, 89. Hui of Kahana Receipts 1901-1930).

Nov. 10th. 1904 Received from E. H. Wodehouse Trus Huiofkah Thirty Nine ____ Dollars. Sepenses re Kahana Fishery Case _ Kinney, Mc Clanahan + Cooper. 839.00 Honolulu, November 25, 1904 E. H. Wodehouse, Treasurer of the Hui of Kahana, To Kinney, McClanahan & Cooper, Dr. ATTORNEYS-AT-LAW TO PROPENSIONAL SERVICES Services in re Fishery of Kahana, including services required in Circuit Court 200.00 Received payment, Kinney, Me Clanahan + Cooper.

Appendix H: Court document for adjudication of the Hui of Kahana as owner of Kahana's registered konohiki fishery, dated March 30, 1905 (Hawai'i State Archives, Mary E. Foster Collection M-433, 109. Kahana Fishery 1902-1942). (Continued on next two pages)



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Term of this court, and the parties having appeared and being at issue before the court, a jury being waived, the court having considered the evidence finds for the plaintiffs, and it is hereby adjudged that the Hui of Kahana, comprised of the plaintiffs herein, has a vested right as owner of all that sea fishery known as the sea fishery of Kahana in said District of Koolaulos, bounded and described as follows:

Commencing at a point on the makai side of the Government road on the boundary of Kahana and Punaluu From which point the West angle of Kahana bridge bears 3. 21 38' E true 3820 feet and running:

1. N. 67 35' E true 1950 feet along the Punaluu fishery to point on reef. 2. S. 76 40' E true 1500 feet to point on reef Thence 3. S. 17 00' E true 1840 feet to point on shore on boundary of Kahana and Makaua Grant 1305 Thence 4. S. 89 28' W true 191 feet along shore 18 = W ** 910 11 5. 8. 39 20' 6. S. 77 15' W " 1100 " " " to angle of fish pond Thence 7. S. 14 15' E true 740 feet along shore 430 " W ** 8. 8. 26 20' 9. S. 79 00' W " 535 " " " to West angle of Kahana bridge 10. N. 68 20' W true 1990 feet along shore 18 . 11 15' W " 620 11. N. 18 -12. N. 29 00' E " 955 11 19 13. N. 6 40' E " 1375 " " " to initial point Area 270 Acres.

And it is further adjudged that the Hui of Kahana, comprised of the plaintiffs herein is entitled each year to set apart for itself for its sole and exclusive use upon the grounds within the metes and bounds above set out, one given species or variety of fish natural to said fishery, giving public notice of the kind and description of the fish so chosen or set spart; and also to the right in lieu of setting apart some particular fish to its exclusive use, to prohibit, upon consultation with the tenants of said land, all fishing upon the fishing grounds within the metes and bounds above set forth during certain months of the year; and during the fishing season to exact from each fisherman one-third of all the fish taken upon said fishing grounds.

Entered this 30th day of March, A.D. 1905.

(SEAL)

BY THE COURT

hund

(Sgd) P.D. KELLETT, Jr., Clerk of the Circuit Court of the First Judicial Circuit

I do hereby early the star foregoing in a full, true and course file in this office. original on

rt, First Circuit, Territory of Hawaft,

Clerk, Circuit

Appendix I: Article in the Honolulu Star-Bulletin, dated August 21, 1916, detailing the construction of Mary Foster's net to be used for hukilau in Kahana. Accessed from: chroniclingamerica.loc.gov.



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Appendix J: Article titled "State still hasn't reeled in old fishing rights custom" in the Honolulu Star Bulletin on Wednesday, September 1, 1965. It references Kahana's fishery's \$10,000 worth in 1947, which made it "probably the better known and more valuable" of the 30 remaining konohiki fisheries on O'ahu. Accessed from: newspapers.com. (Continued on next page)

By George West (First of Two Articles)

An old Hawaiian fishing custom—ruled out 65 years ago—is taking a long time to die.

This was the practice which granted exclusive fishing rights to Hawaiian chiefs or noblemen, and their tenants who lived on lands with ocean fisheries attached to them.

The private fisheries—extending from the beach to the reef, or in the absence of a reef, a mile out to sea were known as konohikis.

The exclusive rights were

given by the kings of Hawaii as rewards for military service or other forms of loyalty

There are still many konohikis in the State today. Until they are condemned and acquired by the State, it is illegal to fish in them.

There also are many owners who do not enforce their rights and look the other way when fishing is carried on.

Rights passed on

The konohiki rights passed on to heirs and others to whom the heirs sold or leas-

ed their properties.

Fishing within the areas was restricted to the landlords or the chiefs and the hoaainas, or tenants on the land.

Outsiders caught fishing in the konohikis in the days of the monarchy were punished, either by being deprived of all fishing privileges or forbidden entry into any or all fishing grounds.

The first king to institute written laws establishing the konohiki system was King Kamehameha III, in 1839.

This was nine years before the Great Mahele, or the great land division. In the 1839 edict, the monarch seized all the fishing grounds and reserved onethird for himself, one-third for the people and one-third for the chiefs and noblemen, the konohikis.

Fishery powers

The konohikis also were given powers to regulate fishing within the private fisheries.

They were empowered to place a tabu on a specific species of fish for their exclusive use. Even the tenants who shared konohiki rights were prohibited from catching the forbidden species.

They could also, after talking it over with tenants, invoke a prohibition on fishing during certain months of the year.

They had power, too, to exact one-third of the catch of each tenant during the fishing seasons.

Some of the species of fish which were favorite tabus included the akule, mullet, moi, weke and nehu.

M a n y of the konohiki rights have been strictly enforced through the years by the title holders.

Even the U.S. Supreme Court, after the annexation of Hawaii in 1900, upheld the fishing rights as legal, property rights.

But the annexation of Hawaii, with the Hawaiian Organic Act which provided for governing of the Islands, was the undoing of the konohiki customs.

The framers (the U.S. Congress) of the Organic Act ordered a swift elimination of the konohiki system with restoration of the fishing grounds to the free use of the public.

The law also directed that the holders of konohiki rights were to be compensated for the condemnation of their private fisheries.

The konohikis also were given two years in which to establish and register their konohiki rights, in order to receive damages.

Those who failed to take these measures were forever barred from any compensation.

At the time of annexation, there were an estimated 300 to 400 konohikis throughout the Islands

Only about 100 of the konohiki holders bothered to register their claims.

The State Constitution of Hawail, which became ef-fective with Statehood in 1959, also included provisions outlawing the konohiki fisheries and payment of damages to the owners.

Of the 100 konohikis registered in 1900, a total of 53 have since been condemned by both the Federal Government and the State government.

Those condemned by the U.S. were konohikis in Pearl Harbor.

47 remain

After 65 years of eminent domain activities in this area, there are 47 konohikis in the State still to be condemned.

Some of the causes blamed for the delays in the condemnation program are the high appraisals of konohikis and costs of financing the legal actions.

Appraisals for some of the konohikis in Pearl Harbor in 1934 ranged from \$13,000 to \$64,000

The Federal court allowed \$30,000.

It's expected that today's appraisals may reach far lower figures because of the

in many of the konohikis.

Other reasons

Other reasons given for the slow process in con-demnation of the fisheries were problems in locating heirs and tenants and the cost of services for surveyors, attorneys and apprais-PTS.

Of the 47 konohikis in the State still to be condemned, 30 are on Oahu, eight on Hawaii, one on Maui, three on Molokai, one on Lanai and four on Kauai.

This is the 1965 inventory now on file in the offices of

depletion of fish resources James M. Dunn, the State's chief surveyor.

Of the 30 on Oahu to face court hearings soon, the Kahana Bay fishery is probably the better known and more valuable of the lot.

The hearing to determine its fair market value, and the "just compensation" for the owner, is set for October 11 in circuit court.

The 270-acre Kahana konohiki at one time in 1947 commanded a worth of \$10,-000, For years it had been a favorite spawning ground for the akule, a mackerel prized by both commercial and home consumption fishermen.

Appendix K: Article in The Hawaiian Star, dated May 21, 1906, referencing a violation of leased fishing rights in Kahana. Accessed from: chroniclingamerica.loc.gov.

KEKAUUHA RENT TOO FOR HIM TO MAKE ARRESTS-"TECHNICAL" RULING BY KOO-LAU OFFICIAL IS THE LIMIT. Another complaint, against Deputy Sheriff George K. Kekauoha has been filed with Sheriff Brown. Kekauoha is in effect, charged with ignorance. The allegation as made to the Sheriff are: Last Friday Kulhada who with some natives has leased the fishing rights at Kahana for \$310 yearly rental, were told that Manu and seven other natives invaded their fishing rights and captured about \$600 abules. Deputy Sheriff Kekauoha was hunted up and asked to issue a warrant for the arrest of the eight natives on charges of violating the fishing rights of Kuihara and his partners. But Kekauoha smiled and said no. It was beyond his jurisdiction. He said that the limit was too high for him. "If the yearly rental for the fishery rights had been \$300 then he could take cognizance of the matter and issue the desired warrants, but as it was \$310 a year, that sum made it \$10 over the limit of his authority and he could do nothing. But he was very sorry for the people who claimed that their fishing rights had been invaded. A representative of the lessee came to Honolulu last Saturday and made complaint to the authorities about the matter. They had a communication drawn up making the allegations as given, and presented to Sheriff Brown. Seven natives who are partners with Kulhara signed the document against Kekauoha. A warrant was issued this morning by District Magistrate Dedby for the arrest of the eight natives who are alleged to have violated the fishing rights of the Kahana lessees. Sheriff Brown stated today that he could amign no other reason for Kekauoha's conduct, than that the Deputy Sheriff had gotten confused in the matter of the civil and criminal laws. "There is no such thing as any limit of amount in a oriminal case,' 'said the Sheriff. "Kekauoha probably thought that as the law places \$300 as the limit of a civil action that can be brought before a District Court, the same limit Appendix L: Article in the Honolulu Star Bulletin, detailing the status of the state's third appropriation of Kahana as of April 13, 1967, and describing how Kahana would become "world famous as a park". Accessed from: newspapers.com. (Continued on next page).

3rd appropriation seen for purchase of Kahana

ed to pass an appropriation to enable the State to make a third payment toward the purchase of Kahana Valley and push forward the development of the valley as a State Park.

Two years ago the first appropriation was made to buy the 5.267 acres of land.

A total of five appropriations, each of approximately \$1 million is expected to complete the transaction.

Kahana Valley is located on the north shore of Oahu. about 25 miles from Honolulu.

The valley brings together rugged mountains which encircles a pleasant flat valley with lush tropical growth. rolling hills, a winding stream and a sandy beach surrounding a peaceful bay. It is the idyllic South Seas setting.

previous bills which brought appropriations for the two payments already made and he has introduced the third bill in this session.

Kahana State Park has become a pet project of his.

"Kahana Valley is one of the most magnificent settings anywhere. It will become world famous as a park." Hulten said.

"Oahu badly needs outdoor recreational facilities. What we have now is over-used and with a constantly growing population, public areas will become more crowded.

"Kahana will offer facilities not available elsewhere. It will be a big help."

Located approximately half way between Kahuku and K a n e o h e. Kahana is ideally situated as a stop for tourists on around-the-island trips.

The Legislature is expect- Hulten introduced the two of the Department of Land and Natural Resources believes that facilities will include camping sites, fresh water fishing in a proposed lake and hiking and horse trails.

> Close estimates of development costs are difficult to arrive at since it has not yet been determined exactly what avenues will be followed. Currently such improvments are expected to come to \$3.5 million.

> This sum would be in addition to expenditures made by the Southeast Asia Foundation and the Pacific Tropical Garden Foundation.

The first area to be improved will be the section along the ocean which is now owned by the City and County of Honolulu. The present highway will be re-routed to allow a larger beach area.

setting. Senate President John J.

trips.

Thai Village

One tentatively scheduled feature of the new park is a reconstructed T h a i village, which would be assembled through a grant from the Southeast Asia Foundation.

The village would be set on an island in the valley and be accessible only by boat. Focal point of the village would be a temple, surrounded by Thai homes and other buildings.

Also in the talking stage for the new State park is an extensive tropical botanical garden to be undertaken by the Pacific Tropical Garden Foundation.

The State Parks Division

Water rights

A source of income for the State will be the water rights to the valley. These rights could be developed by the Board of Water Supply for use on the Windward side. The head of Kahana Valley is the wettest spot on Oahu, with a flow of water for the past several years which has averaged 2200 million gallons per year.

After the purchase has been completed, the State will get back 30 percent of the total purchase price through assistance from the Federal government.

Thus the cost of the property for the State will be approximately \$3,544,400. **Appendix M:** Article published in the Honolulu Advertiser on April 13, 1962, reporting on the opening of the \$30,000 boat ramp and parking area in Kahana. Accessed from: newspapers.com.

Boaters Go Where The Ramps Are

Windward Oahu boating and fishing enthusiasts began taking to the water in droves 1 a s t weekend as two public park small boat launching ramps were completed.

The ramps are located at Kailua Beach Park and Kahana Bay.

* *

THE KAHANA ramp is a \$30,000 project that created a wide macadam parking area with breakwater and ramp on the Punaluu side of the scenic bay.

The facility joins the beach which was recently acquired by the City. Residents of the area have provided a picnic area. **Appendix N:** Legal notification published in the Honolulu Star Bulletin on August 12, 20, 27, and September 3, 1965, informing all vested owners of Kahana's konohiki fishery regarding eminent domain proceedings to commence on October 11, 1965 in civil case number 16614. Accessed from: newspapers.com. (Continued on next two pages)



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olauloa, Island of Oahu, State of Hawail, said fishery being described as follows:

Commencing at a point on the makai side of the Government road on the boundary of Kahana and Punaluu from which point the West angle of Kahana bridge bears S 21" 38' E. true 3820 feet and running:

- 1. N. 67° 35' E true 1950 ft. along the Punaluu fishery to point of reef:
- 2. S. 76° 40' E true 1500 ft. to point on reef, thence:
- 3. S. 17° 00' E true 1840 ft. to point on shore on boundary of Kahana and Makaus Grant
- 1305, thence; 4. S. 89° 28' W true 191 ft, along shore;
- 5. S. 39º 20' W true 910
- ft. along shore; 6. S. 77° 15' W true 1100 ft. along shore to angle of fish pond, thence:
- 7. S. 14º 15' E true 740 ft. along shore; 8. S. 26° 20' W true 430
- ft. along shore;
- 9. S. 79° 00' W true 535 ft. along shore to West angle of Kahana
- bridge; 10. N. 65° 20' W true 1990
- ft. along shore; 11. N. 18° 15' W true 620
- ft, along shore; 12. N. 29° 00' E true 955
- ft. along shore; 13. N. 6° 40' E true 1375 ft. along shore to initial point.

AREA 270 ACRES. YOU ARE FUR-THER NOTIFIED that plaintiff has also prayed that you be duly summoned to appear and answer its complaint according to law; that the above entitled court adjudge that the acquisition by con-demnation of said private fishing right is for public use and is authorized by section 9, Article XVI of SON: ELIZABETH HE-LENIHI VALANT; DAI-SY H. LUNING: DOR-IS H. HOSTETLER; WILLIAMS. HELE-NIHI; ADAM S. HELE-NIHI: ALFRED L. HE-LENIHI: FREDERICK K. HELENIHI: BARBA-RA PREGIL; La-VERNE PREGIL; BEA-TRICE PREGIL; AL-FRED PREGIL; LAEA AU QUAN YAN; Heirs of E. H. Wodehouse, W. L. Wilcox, Mrs. E. K. Wilcox, W. R. Castle, S. Kapali (k), Emma Keakahiwa (w), Noka (k), Hana Nainoaelua (w) Puali Keawe (w), Pelani (w), Kukapu (k), Pua (w), Keawekaleo (k), Kahalawai (k), Kaaikaula (k), Kela (k), Peter Makia (k), Kenoi (k), Koeleele (k), Nawelu (k), Mele (w), Maka-noa (k), Uluhani (k), Poalomaka (k), Kaaikaula (w), Nawahine (w). Keawe Kanakaole (k), H. Kauaihilo (k), Punee (k), Frank Pahia, David Watson, C. B. Maile, Keawekalanui (k), Mokuhla (k), Kalualiilii (k), Lukaliilii (w), Kamea-lani (w), and Poloiea (k); All Persons claiming rights in the Sea Fishery of Kahana, at Kahana, Koolauloa, Island of Oahu, State of Hawaii: JON DOE 1 to JOHN DOE 100, inclusive; MARY ROE 1 to MARY ROE 100, inclusive; and DOE CORPO-RATION 1 to DOE COR-PORATION 100, inclusive, Defendants.

SUMMONS

STAT	TE OF	HAWA	II
TO:	ALL	OF	THE
	ABO	VE	NAMED
	DEF	ENI	DANTS
	WHO	HAV	E NOT
	BEEN	I PEI	RSONAL-

the Constitution of the State of Hawaii; that said court determine any and all claims to said property and the amount of compensation or damages, if any, to be awarded and to whom such compensation or damages, if any, is or are to be paid.

YOU ARE HERE-BY SUMMONED to be and appear before the above entitled court at the time hereinbelow d e s i g n a ted for the trial of this action to show cause why judgment as prayed for should not be awarded plaintiff; otherwise, you will be declared to be in default.

The court has set said cause for trial on Monday, the 11th day of October, 1965, at 9:00 o'clock a.m.

WITNESS the Honorable Presiding Judge of said court this 11th day of August, 1965.

M. K. YOUNG Clerk, Circuit Court of the First Circuit, State of Hawaii. (SEAL) Bert T. Kobayashi Attorney General

Nobuki Kamida Deputy Attorney General

Attorneys for Plaintiff (S.-B.: August 13, 20, 27; September 3, 1965) **Appendix O:** Preliminary state plans for developing Kahana as a recreational park, published in The Honolulu Advertiser, February 10, 1962. Accessed from: newspapers.com. (Continued on next page)



program in Kahana Valley, ing Wainapanapa Caves Park a showing of preliminary on Windward Oahu, was outlined yesterday as the State hakuloa Park or developing each of the four major Is-Land Board approved presen- Honokahau Park on the Big tation of a State Park devel- Island. opment program to the Legislature this month.

The total program includes \$4.8 million to be spent over six years in Kahana Valley and at three sites on Neighbor Islands. The Neighbor Island projects are:

Expanding facilities at Ko-

'62 License **Outlets Set** For 2 Areas

Facilities for the issuance of 1962 automobile license stickers and trailer, hicycle and dog tags will be set up at the Waialua Agricultural Co.'s administration, building and at the Kahuku flanta-tion office tomorrow from 9 a.m. to 3 p.m.

Persons applying for 1962 automobile license stickers or other vehicle license tags should present their 1961 Honolulu certificates of registration. Original and initial Honolulu registration and transfers of car ownership will be handled only at the main office in Honolulu.

Application forms for bicycle and dog tags will be furnished at the Waialua and Kahuku locations.

A \$4 million development kee Park on Kauai, develop- quested in their 1961 session on Maui, and expanding Po- plans for a State park on

> . THE KAHANA Valley project would cost \$500,000 the first year. All 5,000 acres would have to be purchased from private owners.

Beach property along Kahana Bay would have to be acquired from the City.

Plans call for overnight camping facilities, large daytime picnic areas, bridal paths and foot paths, arboretum (botanical garden), a lake and cabins in the mauka area.

Richard C. Dunlap, State parks director, told the board that the park program is part of the Governor's capital improvement program.

"THE PROGRAM calls for spending \$740,000 the first year," Dunlap said. "Development plans are still preliminary and could change, but this is how it will look when we go before the Legislature."

Dunlap explained why most of the money would be spent for Kahana Bay.

"Oahu has 80 per cent of the population and this is a case of having to provide for lots of people," he said. "The land costs will be high since all the land would have to be acquired."

THE LAWMAKERS had re-

lands.

Here is a synopsis of the other proposals

Kokee - Cost, \$40.000 the first year; \$230,000 total. Improvement of camping facily ties, trail improvements and expansion in the lookout areas.

Wainapanapa Caves-Cost. \$30,000 the first year, \$210,-000 total. Picnic and camping areas. This park is near Hana. Future consideration also north of the existing Kona is being given to a park near Lahaina.

Pehakuloa - Cost. \$40,000 the first year; \$200,000 total. Island's population center.

Additional hunters' c a b i n s and improvements to those existing. Development of general picnic and camping facilities.

Honokahau - Cost, \$80,000 the first year: \$235,000 total. Overnight camping, daytime picnic area, cabins and marina. Restoration of existing historic sites. Area has a fine beach.

Honokahau is an alternative to Pohakuloa. Dunlap peinted out that Honokahau effers an ideal park site (just airport), but unlike Pahakuloa, isn't centrally located and is a long drive from Hilo, the

Appendix P: Legal notice published in the Honolulu Advertiser on September 4, 11, 18, and 25, 1968, informing all owners and heirs entitled to real property in Kahana of eminent domain proceedings to commence on October 22, 1968 in civil case number 19807. Accessed from: newspapers.com. (Continued on next page)

LEGAL NOTICE	LEGAL NOTICE
CIVIL NO. 19807	to "A-27" attached to the
IN THE	Complaint filed heretofore
CIRCUIT COURT	in the above cause and by
OF THE	reference made a part
STATE OF HAWAII STATE OF HAWAII, by its Attorney General, BERT T. KOBAYASHI, Plaintiff.	hereof. YOU ARE HEREBY SUMMONED to be and appear before the above- entitled Court at the time hereinhelow set for trial of
VS.	said action, to show cause
LYDIA DELA CERNA:	why judgment as prayed
H A R R Y MAKANOA;	for should not be awarded
SAMUEL MAKANOA;	said Plaintiff, otherwise
CHARLOTTE, KUULEI	you will be declared to be
WONG; MIRIAM LEI-	in default.
LANI KEAWE; JOSE-	The Court has set said
PHINE KAHUA GRAY;	cause for trial on the 22nd
THEODORE, KIESEL;	day of OCTOBER, 1968, at
FREDERICK KIESEL;	8:30 o'clock, A.M.
HATTIE, KERR, KA	WITNESS the Honora-
HUKU PLANTATION	ble Judge of said Court
CO., LTD.; HEIRS OF	this 30th day of AUGUST,
MARIA K. KAHAWAII,	1968.
KANEALAI, KAUA-	Y. Baba
LUA HOHOIEA.	Clerk of the
KAAUA, DUK AH	above-entitled Court
TOUGH, HUA. KAULU-	(SEAL)
MANU, KAAUA I. KOA-	BERT T.
PAE, AHIA, PAHUKU-	KOBAYASHI
LA, KALIMA, LAHELA.	Attorney General
MALO, LILIPI KEA- KUA, NAPELA, KAPA- HUANIANI and KA- HAI; JOHN DOE 1 TO JOHN DOE 1802 JANE	Iolani Palace Grounds Honolulu, Hawaii
DOE 1 to JANE DOE 100; DOE CORPORA- TION 1 to DOE CORPO- RATION 100;	FRANCIS M. IZUMI T. S. GOO Deputy Attorneys General State Office
SUMMONS	Building
STATE OF HAWAII	465 South King

TO: HEIRS OF MARIA K. KAHAWAII, KANE-ALAI, KAUALUA, HO-HOIEA, KAAUA, DUK AH TOUGH, HUA. KAULUMANU, KAAUA I, KOAPAE, AHIA, PA. HUKULA, KALIMA, LAHELA. MALO, LILI-PI. KEAKUA. NAPE-LA. KAPAHUANIANI and KAHAI: JOHN DOE 1 to JOHN DOE 100; JANE DOE, 1 to JANE DOE 100 and DOE CORPORATION 1 to DOE CORPORATION 100.

YOU ARE HEREBY NOTIFIED that the STATE OF HAWAII, the Plaintiff. above-named has commenced proceedings in eminent domain against you in the aboveentitled Court and has praved that said Court vest title in the Plaintiff by Final Order of Condemnation to those certain parcels of real property designated as Parcels 1, 2, 5, 6, 9, 11, 15, 16, 17, 18, 19, 20, 24, 28, 29, 30, 31, 32, 42, 43, 44, 55, 57, 61, 68-A, 68-B. 70-A. 70-B. 70-C and 70-D for the construction, establishment and development of a state park, towit: Kahana Valley State Park, Kahana, Koolauloa, Oahu, State of Hawaii.

The aforesaid parcels at the above office upon are more particularly described in Exhibits "A-1" Dollars (\$25.00) in curren-

Street Honolulu, Hawaii Attorneys for

Plaintiff

(Hon. Adv.: Sept. 4, 11, 18, 25, 1968)

NOTICE TO CONTRACTORS

SEALED PROPOSALS will be received by the Comptroller, State of Hawall on the fifth floor of the State Office Building. Honolulu, Hawaii up to 2:00 o'clock P.M., OCTO-BER 10, 1968, for furnishing labor and materials "REQUIRED TO RE-ROOF LIBRARY, EWA & KOKO HEAD WINGS OF BUILDING "A" AT KU-ELEMENTARY HIO SCHOOL. HONOLULU. OAHU, HAWAII, D.A.G.S. JOB NO. 02-16-9079.2", and will then and there be opened and publicly read aloud. Bids received after the time fixed for opening will not be considered.

Plans, specifications and forms of contract documents may be examined at the office of the Comptroller in Honolulu, Hawaii, and a set of said plans, specifications and contract forms for the project may be obtained at the above office upon deposit of Twenty-Five Dollars (\$25,00) in curren**Appendix Q:** Chronological Table of Kahana's Park and Program Plans (1955–2017). (Continued on next two pages)

YEAR	AUTHOR	DETAILS OF PARK AND PROGRAM PLANS
1955	Belt, Collins & Assoc., LTD.	<i>"Beautiful Kahana,"</i> prepared for the Robinson Agency Details "all potential commercial uses" including residential development, selling the water resources, resort potential, and agricultural production.
1962	"The State"	<i>"The Comprehensive Plan for Hawaii State Parks"</i> (referenced in Mogi 1974) Includes intensive development of the valley and beach lands.
1965	John J. Hulten, M.A.I.	<i>"Report Covering the Proposed Park Development of Kahana Valley"</i> Includes a cost-benefit analyses for a recreational park with one million annual tourists and for providing for the water needs of a growing windward population. Entails eviction of residents to include dining and shopping facilities, a botanical garden, a 45-acre man-made lake, over 1,000 camp sites, and parking accommodations for 1,500 cars.
1970	Tongg Associates, Inc.	<i>"Preliminary Planning and Research for the Proposed Kahana Valley State Park, Kahana, Koolauloa, Oahu"</i> Entails eviction of residents for tourist attractions, including 3 man-made lakes for recreational fishing of imported bass and catfish, a dam to create "Kahana Falls", a boat marina and 5 islands with "nationality gardens" by widening Kahana Stream, and a cement stadium with seating along the stream bank for viewing pageantries and water sport events.
1972	Department of Education	<i>"Learning About Living in the Kahana Valley Living State Park"</i> Details potential DOE programs and activities to offer Hawai'i's youth within the Kahana Valley Living State Park.
1972	QLCC Liliuokalani Trust	<i>"Socio-Cultural Research: Kahana Valley Living Park"</i> A commissioned study to "describe, identify, and define the concepts of Ohana, Kokua, Hooponopono and a means in which it could be implemented into the proposed Kahana Valley 'Living' Park" (p.2). Stresses that a "spirit of community" exists and can be revitalized to play a major role in the living park.
1974	Hitoshi Mogi	<i>"Kahana Valley State Park"</i> Includes concepts of developing laboratory facilities with resident scientists; growing agricultural crops the "traditional" way by nonresident farmers; instructing visitors how to make nets, spears, fish traps, canoes, as well as ride horses and conduct archaeological studies; and appointing a konohiki (as a park manager).
1976	Hui Mālama 'Āina o Kahana	<i>"Native Hawaiian Lifestyle Living Park"</i> (referenced in Jaworowski 2001). This community plan resulted in the legislature directing a "konohiki" to work with the Hui Mālama 'Āina o Kahana and the Hui o Kanani o Kahana, and to include their input in future plans.
1977	Hui o Kanani o Kahana	<i>"The Residents' Plan for Kahana"</i> (detailed in Jaworowski 2001) This community plan defines "living park" as an integral unit of land and people which is preserved for the purposes of transmitting its distinctive culture. Identifies six necessities: preserve the natural setting, residents stay and develop their unique lifestyle, develop the program around residents' cultures, transmit their relationship between man and land, require that outside assistance be through traditional cultural practice such as 'ohana and kōkua, and allow residents to follow traditional methods.
1978	Hitoshi Mogi	<i>"Revised Environmental Impact Statement"</i> Re-defines "living park" as "to nurture and foster native Hawaiian culture and spread knowledge of its values and ways…" Proposes the need for creating a konohiki (i.e. park manager) position, with resident support; growing patches of

		taro, rice and sugarcane in scale to the length of time they were historically cultivated; conducting archaeological studies with visitors; and creating the Kahana Advisory Board.
1979	'Ohana Unity Council	<i>"The Living Park Plan of Kahana's People"</i> This community plan recommends that Kahana residents plan, construct and operate the park with state support, and focus on restoration, education, and culture; e.g. restoring the fishpond and lo'i kalo; teaching hula, canoe-building, etc.
1980	Hitoshi Mogi	"Traffic Impact Assessment for Kahana Valley State Park" (referenced in Jaworowski 2001).
1983	Board of Water Supply	<i>"Revised Environmental Impact Statement for Kahana '315' Reservoir Project"</i> Assesses the environmental impacts of developing a 6.0MGD reservoir at 285 ft elevation along Kahana's western slopes for the purpose of providing a more stable water system servicing windward communities between Punaluu and Waimanalo.
1985	U.S. Army Corp. of Engineers	<i>"Kahana Bay Navigation Improvement DPR & EIS Statement"</i> Upon request of the Department of Transportation Harbors Division, explores development as well as alternative sites for a light-draft harbor and launch ramp facilities in Kahana.
1985	Kahana Advisory Council	<i>"Kahana State Park Development Plan"</i> A state-supported plan led by the Kahana Advisory Committee; Emphasizes Hawaiian programs, recommends having the park operated by a private nonprofit corporation under a master lease with the State, etc.; Budget was approved by the Board for 1986.
1990	Carol Wyban	<i>"Feasibility Study and Implementation Plan for Huilua Fishpond, Kahana, Oahu"</i> Outlines historical values of the fishpond as an education site through the living park program and details activities for restoration.
1991	James H. Koshi	<i>"Kahana Valley State Park Agricultural Feasibility"</i> (referenced in Jaworowski 2001).
1992	Division of State Parks	<i>"Supplemental Final EIS for Kahana Valley State Park"</i> Addresses the housing requirements of 31 eligible families to live in the park, which moves them mauka, extends sites to 1400 ft in length, changes sewage disposal to septic tanks with leach fields, and accommodates 14 lots on Trout Farm Road.
1992	Beverly D. Rodrigues	<i>"Kahana Valley Program Participation Report and Community Organization Surveys"</i> Survey of resident interest in various interpretive service program finds frustration, anger and "lack of motivation" among residents after 23 years. Recommendations: input from all, ho'oponopono, rediscovery of shared values, participant-driven processes, and validation of action plans through public ceremony.
1992	Carol Wyban	"Interpretive Materials for Huilua Fishpond, Kahana Valley State Park" Collection of stories of Huilua Fishpond, as informed by residents, for interpretive service uses.
1993	Kauahikaua & Chun/Architects	<i>"Restoration of the Mormon Chapel at Kahana Valley State Park"</i> (referenced in Jaworowski 2001).
1995	Carol Wyban	<i>"Environmental Assessment and Restoration/Revitalization Plan for Huilua Fishpond; Kahana Valley State Park, Koolauloa, Oahu"</i> Assesses environmental impacts of restoring, rebuilding and revitalizing Huilua fishpond for interpretive purposes.
1997	Wyatt Designs, prepared for Ka ha'aa heo o Kahana	<i>"Proposed Kahana Bay Cultural Canoe Halau"</i> A resident plan proposed by Ka ha'aa heo o Kahana to construct a hale wa'a using materials found in Kahana, to not only be used as shelter for canoes but also enhance the park area, add new cultural meaning to the beach, and conduct cultural activities such as storytelling and demonstration of Hawaiian crafts.

2005	Martha Yent	<i>"Interpretive Exhibit Plan, Visitor Center (Kam Mon Store), Ahupua'a 'O Kahana State Park, Kahana, Ko'olauloa, O'ahu"</i> A DSP plan to restore a "mom and pop" store, built circa 1910-1920 and converted to a residence in 1959, to be an orientation center with exhibits for welcoming visitors.
2015	DLNR	"Draft Environmental Assessment: Ahupua 'a O Kahana State Park Issuance of Leases for Lots 1-6 and Sewer and Well Repair Improvements Project" Assesses environmental impacts of providing water service from Board of Water Supply water mains, replacing cesspools, and constructing septic systems at 6 existing residential dwellings.
2017	Townscape, Inc.	<i>"Ahupua'a 'O Kahana State Park: Phase 1A Planning Draft Progress Report"</i> Covers the initial phase of master planning with results from resident surveys and interviews indicating majority dissatisfaction with lease terms and with DSP management of leases and resources. Recommendations: (1) rescind the "living park" concept, (2) set general guidelines for new leases, and (3) set guidelines for the management of the new leases.

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